



MEASUREMENT AND INDUSTRIAL CONTROL INSTRUMENTS

CORPORATE CATALOG 2026

High-precision instrumentation, 34+ years supporting Argentine industry.



PRESSURE



TEMPERATURE



FLOW



LEVEL

Table of Contents

97 individual technical data sheets, organized by magnitude and product family

Word from the Founder	3	MAGNITUDE: TEMPERATURE	299
Our Company	4	Bimetal Thermometers	300–309
Why JMH	5	<i>5 data sheets</i>	
Our History	6	Thermowells	310–320
Facilities	7	<i>3 data sheets</i>	
Presence in Latin America	8	Temperature Transmitters	321–339
Online Store	9	<i>4 data sheets</i>	
New in 2026	10	MAGNITUDE: FLOW	340
General Product Gallery	11	Electromagnetic Flow Meters	341–368
MAGNITUDE: PRESSURE	14	<i>4 data sheets</i>	
Mechanical Pressure Gauges	15–35	Flow Switches	369–374
<i>9 data sheets</i>		<i>1 data sheet</i>	
Diaphragm Seals	36–68	MAGNITUDE: LEVEL	375
<i>14 data sheets</i>		Hydrostatic Level Transmitters	376–398
Manifolds and Valves	69–91	<i>4 data sheets</i>	
<i>10 data sheets</i>		Ultrasonic and Radar Sensors	399–410
Accessories	92–102	<i>2 data sheets</i>	
<i>5 data sheets</i>		Level Controller	411–416
Industrial Transmitters	103–210	<i>1 data sheet</i>	
<i>15 data sheets</i>		Technical Services	417
Sanitary Transmitters	211–246	Unit Conversion Table	419
<i>6 data sheets</i>		Technical Glossary	420
Pressure Switches	247–262	Frequently Asked Questions	421
<i>2 data sheets</i>			
Compact Transmitters	263–298		
<i>8 data sheets</i>			

WORD FROM THE FOUNDER

Thirty years building a leadership

Oswaldo Méndez — *Founder of JMH SRL*

It was the early years of the 1990s, and Argentina was going through a time of profound change, of correcting course, which placed its industry in an extremely complex moment. The country's decision seemed already made: productive Argentina was dying and a new one was being born, marked by globalization, where importing was the order of the day.

With that context as our mandate, we decided to reformulate the original project of José Méndez e Hijo and give life to JMH SRL. Since then, and for more than 30 years, I had the pride of leading the different stages of a company that went from being just one among many dedicated to industrial instrumentation, to becoming the undisputed leader of the sector.

During 2020, an unforeseen event kept me away from the company's day-to-day management. It was my children, Cecilia and Gonzalo, the third generation of the Méndez family, who — with the fundamental help of the staff who were always there and continue to be there — gave continuity to this project and today lead, with undisputed success, this important moment JMH is living.

As we set out to do many years ago, every day we are closer to reaching the position of undisputed leadership in the sector in Argentina and throughout the region.

Oswaldo Méndez

Founder of JMH SRL



Oswaldo Méndez, founder of JMH SRL.



Oswaldo Méndez at JMH headquarters, alongside photographs of the plant and milestones of the company's history.

JMHL SRL

34+ years of experience in industrial instrumentation

JMHL is an Argentine company dedicated to the design, manufacture and marketing of industrial measurement and control instruments. Since 1992 we have supported national industry with pressure gauges, transmitters, thermometers and flow and level solutions, combining in-house manufacturing with electronic lines from international partners such as LEEG and Micro Sensor.

Track Record

Decades of experience in the instrumentation market position us as a reference in the sector, driving our export project, which today places our own products successfully across Latin America.

Commitment

We take on a daily commitment to our customers, suppliers and staff to set our work apart through honesty and professionalism, always seeking the continuous improvement of our products and processes.

Customer Satisfaction

Through our technology and technical team we ensure solutions tailored to each customer's needs, with personalized attention by geographic area.

Mission

JMHL works permanently in the pursuit of excellence, positioning itself as a benchmark in the industrial control instrumentation market, reaching quality standards that allow it to compete in a highly competitive market, providing products and services with quality, reliability and technical backing.

Vision

JMHL seeks to consolidate itself as a leading supplier in the region for pressure and temperature measurement instruments, achieving through innovation products of excellence, under international standards, that compete with the world's leading suppliers.

Our Values

- Ethics
- Respect
- Track Record
- Commitment
- Professionalism
- Honesty
- Teamwork
- Social Responsibility

Certifications

- ISO 9001:2015
- INTI-Traceable Standards
- Argentine Industry

Quality Policy

We work day to day with honesty and professionalism, seeking the continuous improvement of our products and processes, and ensuring compliance with market standards, legislation and regulatory requirements. We believe in the inclusion of vulnerable sectors as a driver of social and labor improvement, and we work daily to generate that impact.

Manufacturers of instrumentation, not just resellers

JMH was born in 1992 as successor to José Méndez e Hijo, a firm with 30 years of experience in instrumentation and services. Since then we have been one of the few companies in Argentina that designs and manufactures its own line of pressure and temperature instruments, in our own plant and with a permanent technical team. To that we add representations of international manufacturers such as LEEG and Microsensor, chosen under the same quality standard with which we manufacture: this way we complete a comprehensive catalog without giving up technical backing or traceability.

60+

years of experience in instrumentation

100%

in-house design and machining

ISO 9001:2015

certified management system

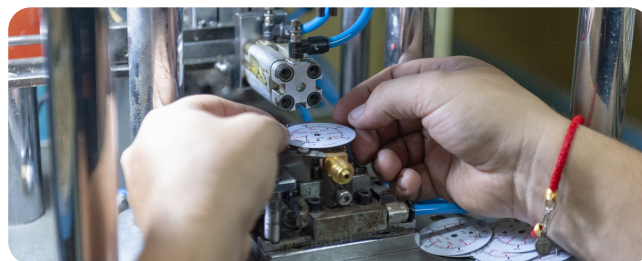
CENI

our own instrument brand



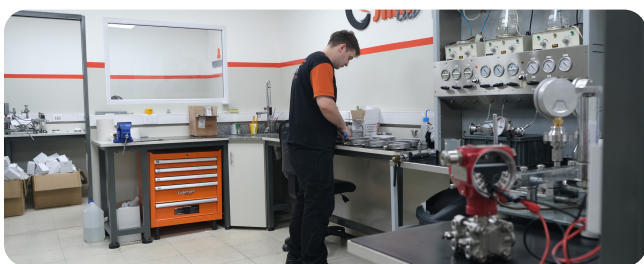
In-house manufacturing, end to end

We machine, assemble and calibrate our pressure gauges, diaphragm seals and thermowells in our own plant in Sarandí. Every instrument goes through our own quality control before it ships, not a third party's.



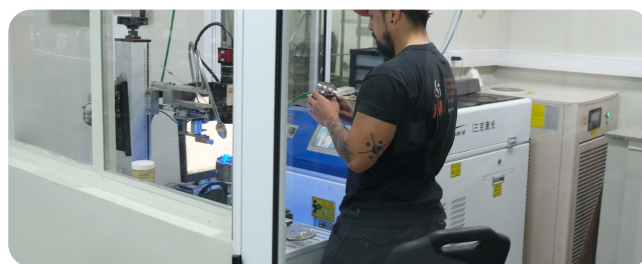
Craftsmanship-level finishing and control

Behind every dial, every needle and every adjustment there are the hands of our technical staff. That manual control, instrument by instrument, is what allows us to stand behind every product that leaves the factory.



Our own calibration laboratory

JMH Lab has calibration standards traceable to INTI to calibrate and repair pressure instruments, both our own and other brands, issuing our own certificates.



Our own laser welding technology

We have incorporated laser welding for joining our diaphragm seals, a process that improves the precision and strength of the seal compared to traditional methods.

Our own brand: CENI



CENI is JMH's own brand for pressure gauges and thermometers: designed, manufactured and controlled entirely by our team, with JMH's technical backing since 1992.

Certified quality



Our management system is certified under ISO 9001:2015 by TÜV NORD, and is backed by calibration standards traceable to INTI.

Our plant



Sarandí, Buenos Aires Province — machining, assembly, calibration laboratory and offices, all under one roof.

Our History

From family workshop to leading national manufacturer

JMH was born in 1992 as successor to José Méndez e Hijo, an instrumentation and services company with 30 years of prior experience. Since then it has established itself as a national manufacturer of pressure gauges and diaphragm seals, added international representations, and today exports to eight countries in the region.



The Workshop



Our Beginnings



The Original Store

Timeline

1992



Birth of JMH

Start of operations of JMH S.R.L., successor to José Méndez e Hijo.

1993



Spanish Representation

Representation of a Spanish-manufactured line of pressure gauges.

1998



Pressure Gauges for CNG

Only local manufacturer of pressure gauges for CNG in Argentina.

2000



Diaphragm Seals

Start of in-house manufacturing of diaphragm seals.

2008



CENI Own Brand

Start of marketing pressure gauges under the own brand CENI.

2016



Internationalization

Start of JMH's internationalization process.

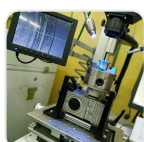
2017



Agreement with LEEG

Commercial agreement with the firm LEEG (China) for its entire instrument line.

2019



Laser Technology

Incorporation of new laser technology for welding diaphragm seals.

2020



ISO 9001 Certification

ISO 9001:2015 certification with TÜV NORD Argentina.

2021



New Laboratory

Construction begins on the new calibration laboratory.

2022



Joined GAPP

Membership in the Argentine Group of Oil Suppliers (GAPP).

2023



JMH Lab

ISO 9001:2015 recertification and inauguration of the new JMH Lab calibration laboratory.

2025

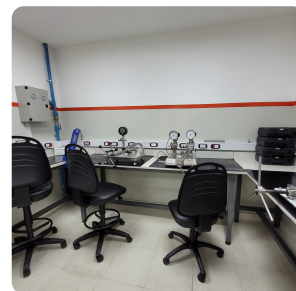


Microsensor Agreement

Commercial agreement with Microsensor for flow meters and level transmitters.

Facilities

National manufacturing of measurement instruments for industry



Machining and In-House Production Area

JMH manufactures diaphragm seals and accessories for pressure and temperature instrumentation in its own plant, with one of the largest diaphragm seal catalogs in Argentina and the region. Chemical seals, thermowells, heat dissipators, flushing rings and capillary extensions are all produced in-house, with CNC machining for high volumes in superior turnaround times.

- In-house manufacturing of diaphragm seals and accessories
- High-production CNC machining
- Diaphragm seal catalog among the largest in the country
- Argentina's #1 manufacturer of the CNG pressure gauge



Argentine industry for the world

Madariaga 830, Sarandí, Buenos Aires · ISO 9001:2015

Calibration Laboratory

A modern laboratory equipped with primary and secondary standards certified by INTI. JMH performs transmission-fluid fills on our own instruments and customers' instruments, tests all types of diaphragm seals, and repairs and calibrates pressure and temperature instruments, including visual instrument management.

- Primary and secondary standards traceable to INTI
- Transmission-fluid fill for our own and customers' instruments
- Repair and calibration of pressure and temperature instruments
- Visual instrument management service



View location on Google Maps

Madariaga 830, Sarandí

Presence Across Latin America

JMH manufactures in Argentina and exports pressure gauges, diaphragm seals, thermowells and accessories to 9 countries in the region. Behind every shipment is the same technical backing and the same quality control that has sustained Argentine industry for decades.

9

Countries with JMH presence

100%

Argentine national manufacturing

ISO 9001:2015

Certified management system

INTI

Traceable calibration standards



What do we export?



Pressure Gauges

Mechanical, for general and industrial use



Diaphragm Seals

Threaded, flanged and sanitary



Thermowells

Threaded, flanged and sanitary



Accessories

Dissipators, siphons, capillaries and more

Want to distribute or buy JMH products in your country?

Write to us and we'll coordinate your export order.

ventas@jmh.com.ar

JMH Online Store

Shop easily, quickly and securely, 24 hours a day

JMH, the reference in Argentine industrial instrumentation, offers you a simple and secure online shopping experience. Register once and access our full catalog of pressure gauges, transmitters, thermometers and flow meters, with pricing, stock and the data sheet of every product just a click away.

Shop in 4 steps

1

Create your account

Go to the store and click "Get a user account." Fill out the form with your details or your company's. An account executive will contact you to activate it — meanwhile you can keep browsing the catalog.

2

Find your product

Browse by category or use the search bar. Filter by brand, price or measuring range, and check each product's data sheet with its characteristics and specifications.

3

Add it to your cart

Choose the quantity you need and add it to the cart. Double-check that the products and quantities are correct before continuing.

4

Complete your purchase

Enter your shipping address, choose a shipping and payment method, confirm the order and you're done: you'll receive an email with confirmation and tracking of your purchase.

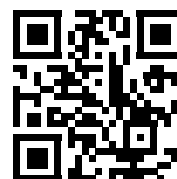
What the store offers you

- Wide range of pressure gauges, transmitters and measurement solutions
- Complete and detailed technical information for every product
- Fast and reliable shipping nationwide
- Easy search with filters by brand, price and measuring range
- Safe and reliable purchasing process
- Personalized attention by geographic area

Watch the video tutorial and create your account

Scan the QR code or go to the link to watch the full video guide and start shopping in a few simple clicks.

<https://tienda.jmh.com.ar>



New in 2026

Every product added to the JMH catalog in this 2026 edition, by magnitude

These are all the models added to the JMH corporate catalog in the 2026 edition: new LEEG and Microsensor transmitter lines, electromagnetic flow meters, flow switches and the multi-channel level controller. Tap the page number to go straight to each product's data sheet.

General Product Gallery

A preview of the entire catalog before the sheet-by-sheet technical detail

PRESSURE

Mechanical Pressure Gauges

9 products



Diaphragm Seals

14 products



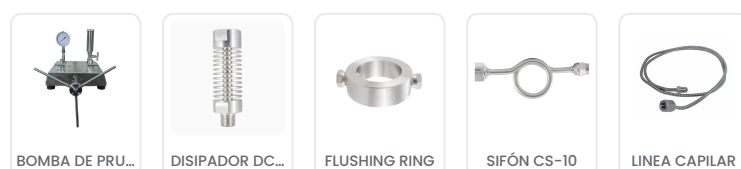
Manifolds and Valves

10 products



Accessories

5 products



Industrial Transmitters

15 products



Sanitary Transmitters

6 products



Pressure Switches

2 products



Compact Transmitters

8 products



TEMPERATURE

Bimetal Thermometers

5 products



Thermowells

3 products



● Temperature Transmitters

4 products



■ FLOW

● Electromagnetic Flow Meters

4 products



● Flow Switches

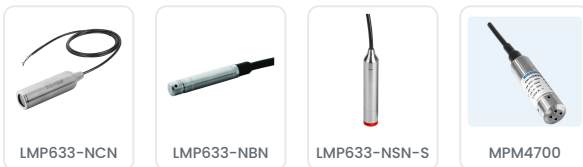
1 product



■ LEVEL

● Hydrostatic Level Transmitters

4 products



● Ultrasonic and Radar Sensors

2 products



● Level Controller

1 product





OPERATING MAGNITUDE

PRESSURE

Pressure Gauges, Diaphragm Seals, Manifolds and Electronic Transmitters

69 technical data sheets in this section



Mechanical Pressure Gauges

9 technical data sheets in this group

WHAT IS IT?

Local-indication instrument that shows process pressure via a needle on a graduated dial, with no need for electrical power.

HOW DOES IT WORK?

A curved Bourdon tube deforms proportionally to the applied pressure; that movement is transmitted through a toothed sector to the indicating needle.

WHEN IS IT USED?

For direct visual monitoring on panels, piping and skids where a reliable, economical reading with no dependence on electrical power is needed.



Selection Table

Comparative guide to JMh mechanical pressure gauge series — the Pg. column shows where to find its full data sheet

SER.	APPLICATION	Dia. (mm)	CASE	BEZEL	WETTED PARTS	WINDOW	BTM .	BACK	MTG.	RANGE	UNIT	CLASS	TYPE	PG.
11	General, pneumatics, welding gases, heating, irrigation, etc.	40, 50, 63, 100, 150	SAE 1010 steel	SAE 1010 steel	Brass	Acrylic	Yes	Yes	Yes	-1.....1000	bar	1.6 / 2.5	Dry	17
22	General, pneumatics, hydraulics, etc.	40, 50, 63, 100	AISI 304 stainless	AISI 304 stainless	Brass	Acrylic	Yes	Yes	Yes	-1.....1000	bar	1.6 / 2.5	Embossed ring, glycerin-filled	19
28	Agricultural spraying	63, 100	AISI 304 stainless	AISI 304 stainless	Brass	Acrylic	Yes	Yes	Yes	5/25...20/60	bar	1.6 / 2.5	Isometric, glycerin-fillable	21
60	Low and very low pressure applications	63	SAE 1010 steel	—	Brass	Polycarbonate	Yes	—	No	-600.....600	mbar	1.6 / 2.5	Capsule type	23
62	Low and very low pressure applications	63, 100	AISI 304 stainless	AISI 304 stainless	AISI 316 stainless	Glass	Yes	Yes	Yes	-600.....600	mbar	1 / 1.6	Capsule type, bayonet closure	25
70	Chemical, food industries, laboratories	63, 100	AISI 304 stainless	AISI 304 stainless	AISI 316 stainless	Glass	Yes	Yes	Yes	-1.....1000	bar	1.6	Embossed ring, glycerin-fillable	27
72	Chemical, oil, food industries, laboratories	63, 100, 150, 250	AISI 304 stainless	AISI 304 stainless	AISI 316 stainless	Tempered glass / safety glass	Yes	Yes	Yes	-1...1000 (2500 on request)	bar	1 / 0.5	DIN case, glycerin-fillable, bayonet closure	29
74	Chemical, oil industries	63, 100, 150	AISI 304 stainless	AISI 304 stainless	AISI 316 stainless	Polycarbonate / Tempered glass	Yes	Yes	Yes	-1.....1000	bar	1 / 0.5	DIN case, solid front, blow-out back, glycerin-fillable, bayonet closure	32
90	Oil, mining industries, etc.	125	Phenolic resin	—	AISI 316 stainless	Polycarbonate / Tempered glass	Yes	—	No	-1.....1000	bar	1 / 0.5	Solid front, blow-out back, glycerin-fillable	34

The company reserves the right to modify the data listed in this catalog without prior notice.



PRESSURE

Pressure > Mechanical Pressure Gauges

SERIE 11



BUY ONLINE

Standard Dry Pressure Gauge

General Purpose

DESCRIPTION

General-purpose pressure gauge for pneumatic and hydraulic systems, irrigation, filters, welding equipment, heating, etc. Must be used with clean, non-crystallizing liquid or gaseous fluids, compatible with the materials specified for the gauge's wetted parts, and within the admissible temperature range. It must not be exposed to ambient conditions incompatible with its construction materials and/or its protection rating.

APPLICATIONS

General

Pneumatics

Welding gases

Heating

Irrigation

etc.



Full technical characteristics, options and dimensions on the next page

SERIE 11



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bourdon tube

MATERIALS

Connection	Brass
Bourdon tube	Copper alloy
Case – Ring	SAE 1010 steel, painted black
Dial	Aluminum, matte white painted
Pointer	Aluminum, black painted
Window	Acrylic

Diameters 40; 50; 63; 100; 150 mm

Connection type Radial · Back (rear)

THREADS

40/50 mm diameter 1/8" · 1/4" NPT or BSP

63 mm diameter 1/4" NPT or BSP

100 mm diameter 1/2" NPT or BSP

Accuracy EN837 class 1.6–2.5%
ASME B40.1 Grade B

Ingress protection IP43

Ranges -1 to 1000 Bar / -30 in.Hg to 15000 PSI

SCALES

Single black on white background

Dual black and orange on background

TEMPERATURES

Ambient min: -20°C · max: 60°C

Process fluid min: -20°C · max: 60°C

Storage min: -40°C · max: 70°C

OPTIONS

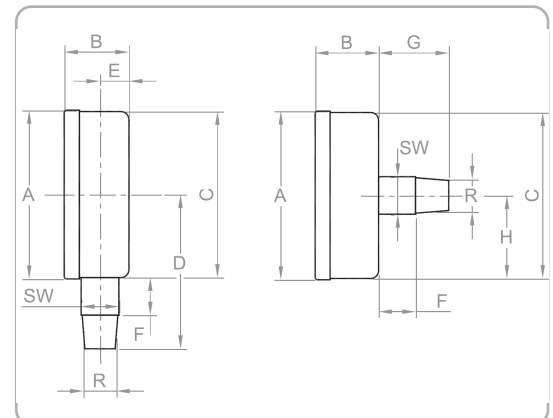
Case	Chrome-plated SAE 1010 steel
Socket	Chrome-plated brass
Mounting	Front flange panel mount (PB), rear connection Rear clamp panel mount (PBS), rear connection
Dial	Custom
Pointer	Color on request

Other customizations available on request.

DIMENSIONS (mm)

	1140		1150		1163		11100
	R	P	R	P	R	P	R
A	42	42	52.5	52.5	63	63	100
B	24	25	28	28	28	28	36.5
C	40.5	40.5	51	51	61	61	98.5
D	37	-	46	-	51	-	80
E	8	-	9	-	8	-	16
F	7	+	10	6	7	6	13
G	-	14	-	19	-	19	-
H	-	21	-	26	-	31.5	-
R	1/8" NPT	1/8" NPT	1/4" BSP	1/4" BSP	1/4" BSP	1/4" BSP	1/8" NPT
SW	11	11	14	14	14	14	22

DIMENSION REFERENCE



Also available in Ø150 mm (dimensions on request). The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/manometros-serie-11



PRESSURE

Pressure > Mechanical Pressure Gauges

SERIE 22



BUY ONLINE

Anti-Vibration Pressure Gauge

Glycerin-Filled

DESCRIPTION

General-purpose pressure gauge for pneumatic and hydraulic systems, irrigation, filters, welding equipment, etc. This is a very robust gauge series, suitable for processes where the variable shows pulsation and/or where the equipment is subject to mechanical vibration. It is supplied filled with damping fluid, which limits the oscillation of its internal mechanism, extending its service life and allowing a stable reading. Must be used with clean, non-crystallizing liquid or gaseous fluids, compatible with the materials specified for the gauge's wetted parts, and within the admissible temperature range. Its sealed stainless steel case allows use under more severe ambient conditions, although it must not be exposed to conditions incompatible with its construction materials and/or its protection rating.

APPLICATIONS

General

Pneumatics

Hydraulics

etc.



Full technical characteristics, options and dimensions on the next page

SERIE 22



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bourdon tube

MATERIALS

Connection	Brass
Bourdon tube	Copper alloy
Case – Ring	AISI 304 stainless steel with embossed ring
Dial	Aluminum, matte white painted
Pointer	Aluminum, black painted
Window	Acrylic
Diameters	40; 50; 63; 100 mm
Connection type	Radial · Back (rear)

THREADS

40/50 mm diameter	1/8" · 1/4" NPT or BSP
63 mm diameter	1/4" NPT or BSP
100 mm diameter	1/2" NPT or BSP

Accuracy EN837 class 1.6–2.5%
ASME B40.1 Grade B

Ingress protection IP65

Ranges -1 to 1000 Bar / -30 in.Hg to 15000 PSI

Damping fluid Glycerin

SCALES

Single	black on white background
Dual	black and orange on background

TEMPERATURES

Ambient	min: -20°C · max: 60°C
Process fluid	min: -20°C · max: 60°C
Storage	min: -40°C · max: 70°C

OPTIONS

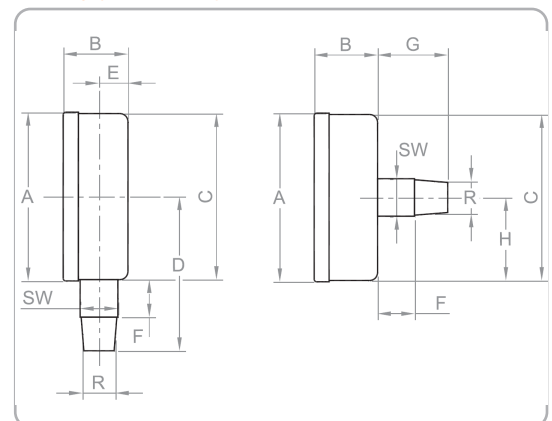
Mounting	Front flange panel mount (PB), rear connection Rear clamp panel mount (PBS), rear connection
Dial	Custom
Pointer	Color on request
Window	Tempered glass

Other customizations available on request.

DIMENSIONS (mm)

	2240		2263		22100	
	R	R	P	R	P	
A	46	68	68	109	109	
B	25.5	30	30	36	36	
C	41	61	61	98	98	
D	38	54	-	81	-	
E	8	9	-	14	-	
F	7.5	13	14	14	15	
G	-	-	26	-	34	
H	-	-	34	-	49	
R	1/8" BSP	1/4" NPT	1/4" NPT	1/2" NPT	1/2" NPT	
SW	11	14	14	22	22	

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/manometros-serie-22



PRESSURE

Pressure > Mechanical Pressure Gauges

SERIE 28



Agricultural Sprayer Pressure Gauge

Expanded Scale

DESCRIPTION

Pressure gauge for use in spraying systems, mainly for agrochemicals. This is a very robust gauge series, designed for demanding use on mobile equipment with high mechanical vibration and pulsating pressure conditions. It is supplied filled with damping fluid, which limits the oscillation of its internal mechanism, extending its service life and allowing a stable reading. It features an expanded scale, which provides adequate resolution in the low-pressure linear zone while also withstanding high pressure peaks within the expanded zone without damage. Must be used with clean, non-crystallizing fluids, compatible with the materials specified for the gauge's wetted parts, and within the admissible temperature range. Its sealed stainless steel case allows use under more severe ambient conditions, although it must not be exposed to conditions incompatible with its construction materials and/or its protection rating.

APPLICATIONS

☉ Spraying



Full technical characteristics, options and dimensions on the next page

SERIE 28



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bourdon tube

MATERIALS

Connection	Brass
Bourdon tube	Copper alloy
Case – Ring	AISI 304 stainless steel with embossed ring
Dial	Aluminum, matte white painted
Pointer	Aluminum, black painted
Window	Acrylic
Diameters	63; 100 mm
Connection type	Radial · Back (rear)

THREADS

Ø 63 mm 1/4" NPT or BSP

Accuracy EN837 class 2.5% – 5%

Ingress protection IP65

Ranges 0-5/25 bar and 0-20/60 bar

Damping fluid Glycerin

SCALES

Single black on white background, with color-differentiated sectors

TEMPERATURES

Ambient min: -20°C · max: 60°C

Process fluid min: -20°C · max: 60°C

Storage min: -40°C · max: 70°C

OPTIONS

Mounting Front flange panel mount (PB), rear connection
Rear clamp panel mount (PBS), rear connection

Dial Custom

Pointer Color on request

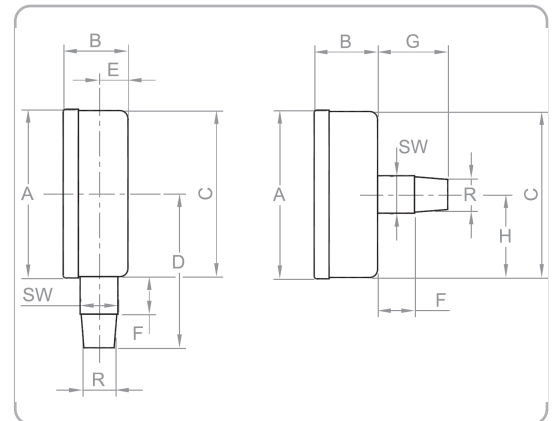
Window Tempered glass

Other customizations available on request.

DIMENSIONS (mm)

	2863
	R
A	71
B	33
C	63
D	56
E	13
F	10
R	1/4" NPT
SW	14

DIMENSION REFERENCE



Also available in Ø100 mm (dimensions on request). The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/manometros-serie-28





PRESSURE

Pressure > Mechanical Pressure Gauges

SERIE 60



Low Pressure Capsule Gauge

Low Pressure

DESCRIPTION

This gauge and vacuum-gauge series is intended for low and very low pressure processes (maximum 0.6 bar). Must be used with clean, non-crystallizing liquid or gaseous fluids, compatible with the materials specified for the gauge's wetted parts, and within the admissible temperature range. It must not be exposed to ambient conditions incompatible with its construction materials and/or its protection rating.

APPLICATIONS

Gas

Low and very low pressure applications



Full technical characteristics, options and dimensions on the next page

SERIE 60



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Capsule (diaphragm)

MATERIALS

Connection	6063: natural brass 6363: chrome-plated brass
Bourdon tube	Copper alloy
Case – Ring	6063: SAE 1010 steel, painted black 6363: AISI 304 stainless steel with embossed ring
Dial	Aluminum, matte white painted
Pointer	Aluminum, black painted
Window	Polycarbonate
Diameters	63 mm
Connection type	Radial

THREADS

Ø 63 mm 1/4" BSP

Accuracy EN837 class 1.6–2.5%
ASME B40.1 Grade B

Ingress protection 6063: IP43
6363: IP65

Ranges –600 to 600 mbar

SCALES

Single black on white background

TEMPERATURES

Ambient min: –20°C · max: 60°C

Process fluid min: –20°C · max: 60°C

Storage min: –40°C · max: 70°C

OPTIONS

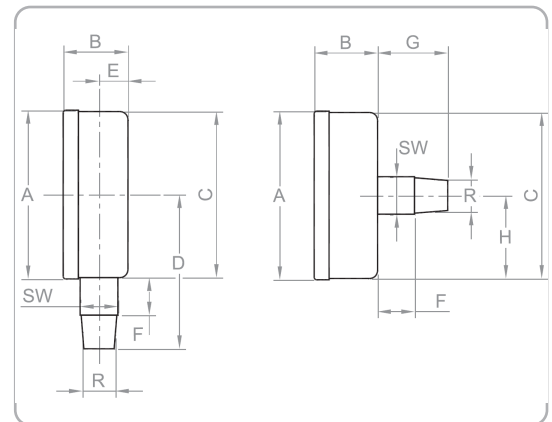
Dial	Custom
Pointer	Color on request

Other customizations available on request.

DIMENSIONS (mm)

	6063	6363
	R	R
A	66	73
B	40	39
C	65	65.5
D	55	55
E	9	9
F	10	10
R	1/4" BSP	1/4" BSP
SW	14	14

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/manometros-serie-60





PRESSURE

Pressure > Mechanical Pressure Gauges

SERIE 62

Very Low Pressure Capsule Gauge

Glass Window



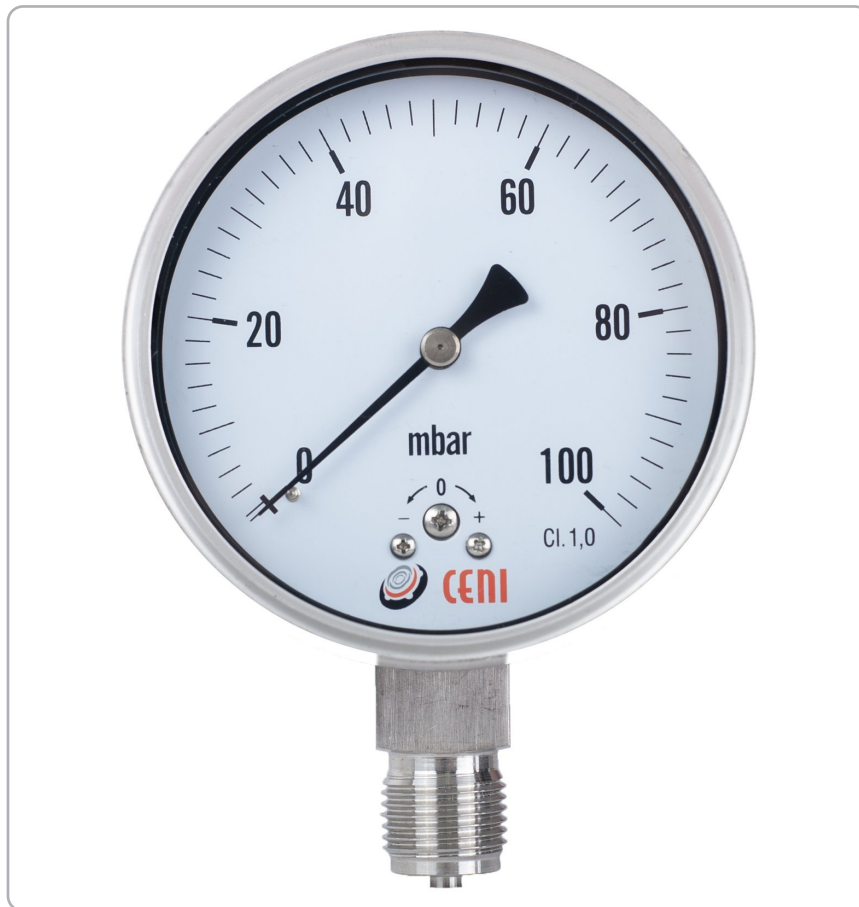
DESCRIPTION

This gauge and vacuum-gauge series is intended for low and very low pressure processes (maximum 0.6 bar). Must be used with clean, non-crystallizing liquid or gaseous fluids, compatible with the materials specified for the gauge's wetted parts, and within the admissible temperature range. It must not be exposed to ambient conditions incompatible with its construction materials and/or its protection rating.

APPLICATIONS

Gas

Low and very low pressure applications



Full technical characteristics, options and dimensions on the next page

SERIE 62



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Capsule (diaphragm)

MATERIALS

Connection	AISI 316 stainless steel
Diaphragm / Capsule	AISI 316 stainless steel
Case – Ring	AISI 304 stainless steel · bayonet closure
Dial	Aluminum, matte white painted
Pointer	Aluminum, black painted
Window	Glass

Diameters 63 mm / 100 mm

Connection type Radial

Zero adjustment Front

THREADS

Ø 63 mm / Ø 100 mm 1/4" / 1/2" BSP

Accuracy EN837 class: 1% (Ø100 mm) · 1.6% (Ø63 mm)
ASME B40.1 Grade B

Ingress protection IP54

Ranges -600 to 600 mbar

SCALES

Single black on white background

TEMPERATURES

Ambient min: -20°C · max: 60°C

Process fluid min: -20°C · max: 60°C

Storage min: -40°C · max: 70°C

OPTIONS

Dial Custom

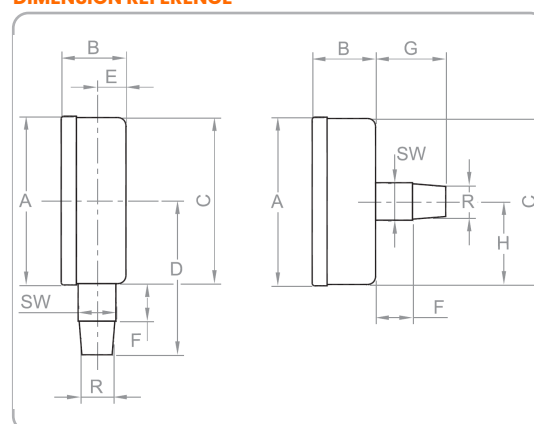
Pointer Color on request

Other customizations available on request.

DIMENSIONS (mm)

	6263	62100
	R	R
A	64	100
B	32	49
C	62	98
D	55	88
E	11	18
F	12	16
R	1/4" NPT	1/2" NPT
SW	14	22

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/manometros-serie-62



PRESSURE

Pressure > Mechanical Pressure Gauges

SERIE 70

All-Stainless-Steel Pressure Gauge

Crimped Bezel



DESCRIPTION

Pressure gauge for use in food, chemical, pharmaceutical, oil & gas industries, etc. This is a very robust gauge series, suitable for processes with severe ambient conditions, aggressive fluids, high vibration and pulsating pressures. It accepts damping fluid filling, which limits the oscillation of its internal mechanism, extending its service life and allowing a stable reading. Must be used with clean, non-crystallizing liquid or gaseous fluids, compatible with the materials specified for the gauge's wetted parts, and within the admissible temperature range. Its sealed stainless steel case allows use under more severe ambient conditions, although it must not be exposed to conditions incompatible with its construction materials and/or its protection rating.

APPLICATIONS

Chemical industries

Petrochemical

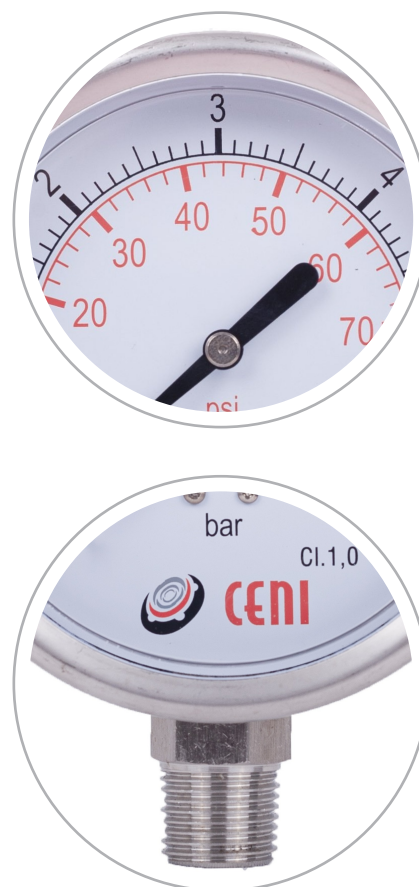
Food industry

Hydraulics

Laboratories

Oil & Gas

etc.



Full technical characteristics, options and dimensions on the next page

SERIE 70



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bourdon tube

MATERIALS

Connection	AISI 316 stainless steel
Bourdon tube	AISI 316 stainless steel
Case – Ring	AISI 304 stainless steel with embossed ring
Dial	Aluminum, matte white painted
Pointer	Aluminum, black painted
Window	Glass
Diameters	63; 100 mm
Connection type	Radial · Back (rear)

THREADS

63 mm diameter	1/4" NPT or BSP
100 mm diameter	1/2" NPT or BSP

Accuracy EN837 class 1.6%
ASME B40.1 Grade B

Ingress protection IP65

Ranges -1 to 1000 Bar / -30 in.Hg to 15000 PSI

Damping fluid Glycerin

SCALES

Single	black on white background
Dual	black and orange on white background

TEMPERATURES

Ambient	min: -20°C · max: 60°C
Process fluid	min: -20°C · max: 60°C
Storage	min: -40°C · max: 70°C

OPTIONS

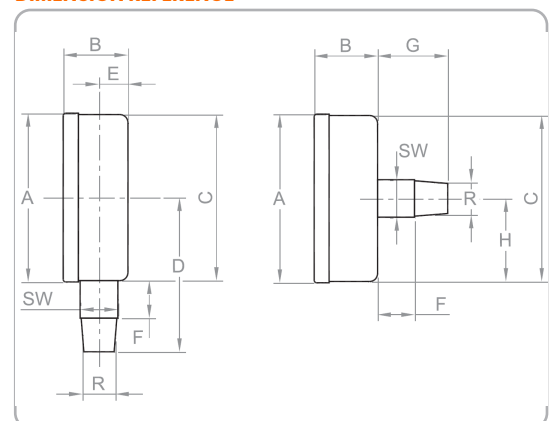
Mounting	Front flange panel mount (PB), rear connection Rear clamp panel mount (PBS), rear connection
Dial	Custom
Pointer	Color on request
Window	Tempered glass

Other customizations available on request.

DIMENSIONS (mm)

	7063		70100	
	R	P	R	P
A	68	68	109	109
B	30	30	36	36
C	61	61	98	98
D	54	-	81	-
E	9	-	14	-
F	13	14	14	15
G	-	26	-	34
H	-	34	-	49
R	1/4" NPT	1/4" NPT	1/2" NPT	1/2" NPT
SW	14	14	22	22

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/manometros-serie-70



PRESSURE

Pressure > Mechanical Pressure Gauges

SERIE 72



BUY ONLINE

All-Stainless-Steel Pressure Gauge, Bayonet Closure

Fast Recalibration

DESCRIPTION

Pressure gauge for use in food, oil, pharmaceutical, chemical industries, etc. This is a very robust series, suitable for processes with severe ambient conditions, aggressive fluids, high vibration and pulsating pressures. It accepts damping fluid filling, which limits the oscillation of its internal mechanism, extending its service life and allowing a stable reading. On request it can be supplied with a mechanical anti-vibration system that avoids the need for damping fluid. Must be used with clean, non-crystallizing liquid or gaseous fluids, compatible with the materials specified for the gauge's wetted parts, and within the admissible temperature range. Its sealed stainless steel case with a bayonet-removable front allows use under more severe ambient conditions, although it must not be exposed to conditions incompatible with its construction materials and/or its protection rating. This removable-front construction allows the gauge to be calibrated and repaired.

APPLICATIONS

Chemical industries

Petrochemical

Food industry

Hydraulics

Laboratories

Oil & Gas

etc.



Full technical characteristics, options and dimensions on the next page

SERIE 72



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bourdon tube

MATERIALS

Connection	AISI 316 stainless steel
Bourdon tube	AISI 316 stainless steel
Case – Ring	AISI 304 stainless steel · bayonet closure
Dial	Aluminum, matte white painted
Pointer	Aluminum, black painted. On 100 and 150 mm diameters, supplied with micrometer adjustment pointer
Window	Tempered glass / safety glass
Diameters	63; 100; 150; 250 mm
Connection type	Ø 63 mm: Radial · Back P (centered) Ø 100/150/250 mm: Radial · Back PE (eccentric)

THREADS

Ø 63 mm	1/4" NPT or BSP
Ø 100/150 mm	1/2" NPT or BSP
Ø 250 mm	1/2" NPT

Accuracy EN837 class 1% (Ø100/150/250 mm) · 1.6% (Ø63 mm)

Ingress protection IP65

Ranges -1 to 1000 Bar / -30 in.Hg to 15000 PSI
Special high pressure: up to 2500 Bar (on request)

Damping fluid Glycerin / Silicone

SCALES

Single	black on white background
Dual	black and orange on white background

TEMPERATURES

Ambient	min: -20°C · max: 60°C
Process fluid	min: -20°C · max: 60°C
Storage	min: -40°C · max: 70°C

OPTIONS

Mounting Front flange panel mount (PB), rear connection
Rear clamp panel mount (PBS), rear connection

Dial Custom
Custom logo
Color-coded scale

Pointer Color on request

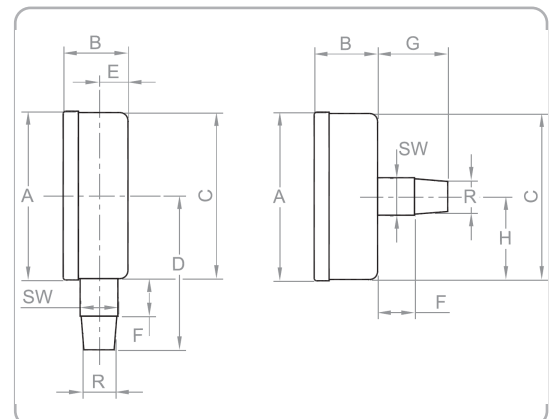
Damping fluid fill Glycerin / Silicone

Other customizations available on request.

DIMENSIONS (mm)

	7363		72100		72150		72250
	R	P	R	P	R	P	R
A	64	64	100	100	161	161	250
B	32	32	49	49	50	50	52
C	62	62	98	98	158	158	246
D	55	-	85	-	117	-	172
E	11	-	18	-	16	-	17
F	12	14	19	20	19	16	26
G	-	26	-	40	-	35	-
H	-	31	-	20	-	51	-
R	1/4" NPT	1/4" NPT	1/2" NPT	1/2" NPT	1/2" NPT	1/2" NPT	1/2" NPT
SW	14	14	22	22	22	22	22

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/manometros-serie-72

SERIE 72



Featured Highlights

The Series 72 Pressure Gauge doesn't just stand out for its rugged stainless steel construction: it incorporates a series of design details engineered to maximize its safety, accuracy and service life.



"Safety Glass" Security Window

High-strength tempered glass that provides additional protection to the user in the event of accidental breakage of the gauge. A crucial feature in environments where safety is a priority.



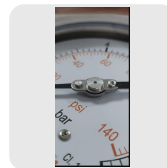
Blow-Out Back

Provides easy access to the inside of the gauge for cleaning, maintenance or calibration. This extends the instrument's service life and reduces maintenance costs.



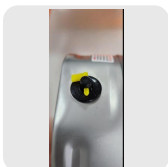
Laser-Welded Stem to Case

State-of-the-art technique that creates a permanent, unbreakable joint between the stem and the case, ensuring total tightness and greater resistance to vibration.



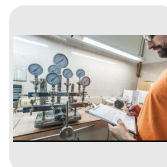
Micrometer Adjustable Pointer

With a high-precision design, the pointer provides an accurate and reliable pressure reading, even under the most demanding conditions.



Glycerin Fill Plug

Prevents leaks and protects the gauge's internal mechanism against humidity and corrosion, extending its service life and ensuring proper operation.



Repairable at Our Laboratory

JMH offers a complete repair service for the Series 72 Pressure Gauge in the event of damage or breakage: your investment is protected and your instrument will remain operational for many years.



Customizable Nameplate

JMH offers the option of adding a plate with the instrument's details: TAG number, pressure range, manufacturing date or serial number, stamped or laser-engraved.



Custom Dial: Color Scale and Logo

The dial can be manufactured with a custom color scale, for clear and quick visual identification according to the working range or the use of each installation. It is also possible to add your company's logo to the dial, reinforcing your brand on every instrument installed.



The Series 72 Pressure Gauge: an invaluable ally for industry.

Source: jmhsrl.odoo.com/blog — Series 72 Pressure Gauge, an invaluable ally for industry



PRESSURE

Pressure > Mechanical Pressure Gauges

SERIE 74



Blow-Out Back Pressure Gauge

Reinforced Safety

DESCRIPTION

Pressure gauge for use in chemical, oil, mining industries, etc. This is a safety gauge series, of very robust construction, with an outer stainless steel case, solid internal front, safety glass and blow-out back, so that in the event of leaks and/or internal explosion, no harm is caused to the operator standing in front of it. Designed for processes with severe ambient conditions, high vibration and pulsating pressures. It accepts damping fluid filling, which limits the oscillation of its internal mechanism, extending its service life and allowing a stable reading. Must be used with clean, non-crystallizing liquid or gaseous fluids, compatible with the materials specified for the gauge's wetted parts, and within the admissible temperature range. Its construction, with front and rear access, allows the gauge to be calibrated and repaired whenever necessary.

APPLICATIONS

⌚ Chemical industries

🔥 Oil industry

🔥 Oil & Gas

⌚ etc.



Full technical characteristics, options and dimensions on the next page

SERIE 74



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bourdon tube

MATERIALS

Connection	AISI 316 stainless steel
Bourdon tube	AISI 316 stainless steel
Case – Ring	AISI 304 stainless steel
Dial	Aluminum, matte white painted
Pointer	Aluminum, black painted, with micrometer adjustment
Window	Safety glass
Diameters	63; 100; 150 mm
Connection type	Radial · Back (rear)

THREADS

Ø 100 mm 1/2" NPT or BSP

Accuracy EN837 class 1%

Ingress protection IP65

Ranges -1 to 1000 Bar / -30 in.Hg to 15000 PSI

SCALES

Single black on white background

Dual black and orange on white background

TEMPERATURES

Ambient min: -20°C · max: 60°C

Process fluid min: -20°C · max: 60°C

Storage min: -40°C · max: 70°C

OPTIONS

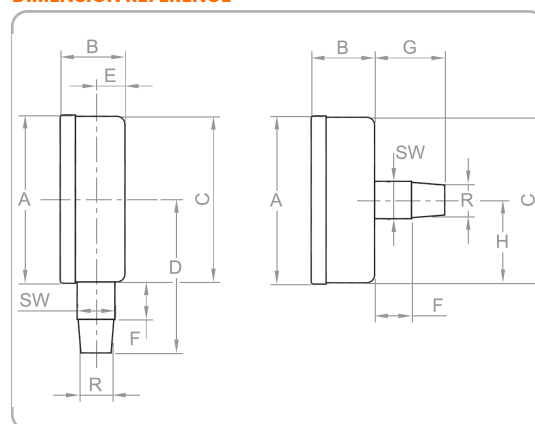
Dial	Custom
Pointer	Color on request
Damping fluid fill	Glycerin / Silicone

Other customizations available on request.

DIMENSIONS (mm)

	74100
	R
A	100
B	56
C	98
D	85
E	24
F	17
R	1/2" NPT
SW	22

DIMENSION REFERENCE



Also available in Ø63 and Ø150 mm (dimensions on request). The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/manometros-serie-74



PRESSURE

Pressure > Mechanical Pressure Gauges

SERIE 90



Phenolic-Case Pressure Gauge

Stainless Wetted Parts

DESCRIPTION

Pressure gauge for use in chemical, oil, mining industries, etc. This is a safety gauge series, of very robust construction, with an outer phenolic resin case, solid internal front, safety glass and blow-out back, so that in the event of leaks and/or internal explosion, no harm is caused to the operator standing in front of it. Designed for processes with severe ambient conditions, high vibration and pulsating pressures. It accepts damping fluid filling, which limits the oscillation of its internal mechanism, extending its service life and allowing a stable reading. Must be used with clean, non-crystallizing liquid or gaseous fluids, compatible with the materials specified for the gauge's wetted parts, and within the admissible temperature range. Its construction, with rear access, allows the gauge to be calibrated and repaired whenever necessary.

APPLICATIONS

⌚ Chemical industries

🔥 Oil industry

⌚ Mining

🔥 Oil & Gas

⌚ etc.



Full technical characteristics, options and dimensions on the next page

SERIE 90



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bourdon tube

MATERIALS

Connection	AISI 316 stainless steel
Bourdon tube	AISI 316 stainless steel
Case – Ring	Phenolic resin · solid front
Dial	Aluminum, matte white painted
Pointer	Aluminum, black painted. Supplied with micrometer adjustment pointer
Window	Safety glass
Diameters	125 mm
Connection type	Radial

THREADS

Ø 125 mm 1/2" NPT or BSP

Accuracy EN837 class 1% · 0.5% (on request)

Ingress protection IP65

Ranges -1 to 1000 Bar / -30 in.Hg to 15000 PSI

SCALES

Single black on white background

Dual black and orange on white background

TEMPERATURES

Ambient min: -20°C · max: 60°C

Process fluid min: -20°C · max: 60°C

Storage min: -40°C · max: 70°C

OPTIONS

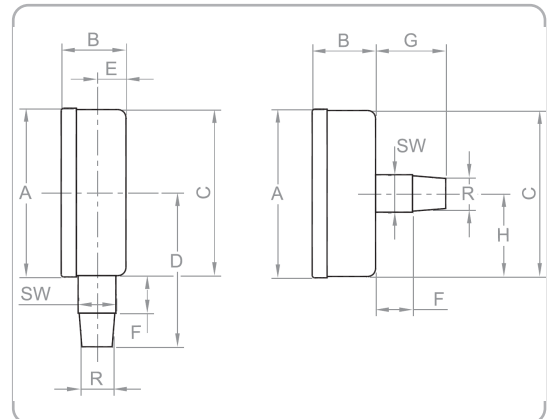
Dial	Custom
Pointer	Color on request Anti-vibration system
Damping fluid fill	Glycerin / Silicone

Other customizations available on request.

DIMENSIONS (mm)

	90125
	R
A	125
B1	73
B2	85
C	148
D	116
E	28
F	19
R	1/2" NPT
SW	22

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/manometros-serie-90





Diaphragm Seals

14 technical data sheets in this group

WHAT IS IT?

Element that physically isolates the instrument from the process fluid, preventing direct contact between the two.

HOW DOES IT WORK?

A flexible metal diaphragm transmits the process pressure to an internal fill liquid (glycerin, silicone or oil), which in turn transmits it to the instrument.

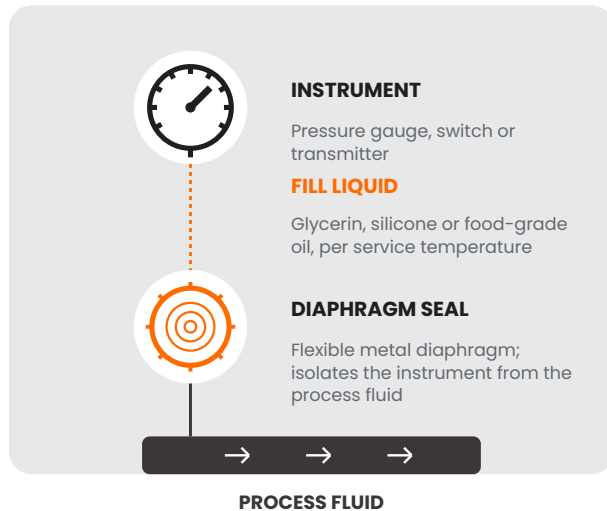
WHEN IS IT USED?

With corrosive, viscous fluids, fluids with solids in suspension, very hot fluids, or fluids that could crystallize and clog the instrument connection.



Selection Table

Comparative guide to JMH diaphragm seal series — the Pg. column shows where to find its data sheet



WHAT IS IT USED FOR?

Element that physically isolates the instrument from the process fluid, preventing direct contact between the two.

WHY IS IT INSTALLED?

With corrosive, viscous fluids, fluids with solids in suspension, very hot fluids, or fluids that could crystallize and clog the instrument connection.

HOW DOES IT WORK?

A flexible metal diaphragm transmits the process pressure to an internal fill liquid (glycerin, silicone or oil), which in turn transmits it to the instrument.

SERIES	MODEL	PROCESS CONNECTION	WORKING PRESSURE	PG.
SANITARY LINE				
SD	Sanitary DIN 11851	DIN 11851 (sanitary round thread)	0 to 40 bar	38
SE	Sanitary DS 722 (Danish)	DS 722 (Danish sanitary round thread)	0 to 40 bar	40
SI	Sanitary Clamp ISO 2852	Clamp ISO 2852	0 to 25 bar	42
SM	Sanitary SMS 1145 (Swedish)	SMS 1145 (Swedish sanitary round thread)	0 to 40 bar	44
SH	For homogenizers	Connection for homogenizer equipment	0 to 600 bar	46
THREADED LINE				
SBR	Threaded	BSP / BSPT / NPT threaded	0 to 700 bar	48
SBF	Threaded with flushing	Threaded, with flush connection	0 to 250 bar	50
SC	Threaded, coupling type	BSP / BSPT / NPT threaded, coupling type	4 to 400 bar	52
SR	Threaded, bushing type	BSPT / NPT threaded, bushing type, flush diaphragm	2.5 to 400 bar	54
SBP	Threaded in plastic materials	1/2" NPT (both ends)	0 to 10 bar	56
FLANGED LINE				
SBA	Flanged ANSI B16.5	Flanged ANSI B16.5, RF face	Per flange rating	58
SBAA	Flush flanged ASME	Flanged ASME B16.5, flush diaphragm	Per flange rating	60
SBLJ	Flanged Lap Joint	Flanged ASME B16.5, Lap Joint type	Per flange rating	63
SW	Flanged wafer type	Wafer mount between ASME B16.5 or EN 1092-1 flanges	Per flange rating	66

All models accept a diaphragm and body in special materials (Hastelloy, Monel, Titanium, Tantalum, Super Duplex Steel, etc.) on request, depending on the fluid, temperature and process conditions. The company reserves the right to modify the data listed in this catalog without prior notice.



PRESSURE

Pressure > Diaphragm Seals

SERIE SD

Sanitary Diaphragm Seal DIN 11851

Sanitary Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SD Series of diaphragm seals comprises models designed for use in sanitary installations (food, pharmaceutical industries, etc.), with quick disassembly for cleaning and a process connection per DIN 11851.

APPLICATIONS

⦿ Breweries

⦿ Juices

⦿ Dairy Beverages

⦿ Food

⦿ Pharmaceutical

⦿ etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SD



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Metal diaphragm seal for sanitary installations, with quick disassembly for cleaning and a process connection per DIN 11851

Working pressure 0 to 40 bar

Working temperature -20°C to +120°C

Accuracy ±0.5% at 20°C, for direct connection

MATERIALS

Membrane AISI 316L stainless steel

Body AISI 304 stainless steel

Transmission fluid Per customer specifications

Process connection DIN 11851 (sanitary round thread)

SIZES

Available DN 25 · DN 32 · DN 40 · DN 50

ACCESSORIES

☐ Weld sleeve

☐ Threaded sleeve

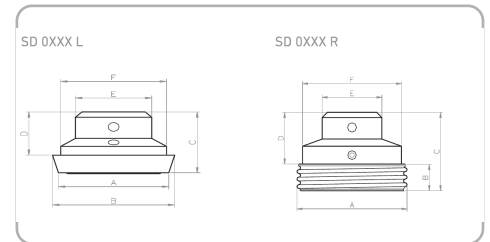
☐ Nut

☐ Gasket

DIMENSIONS (mm)

	SD 0125		SD 0130		SD 0140		SD 0150	
	R	L	R	L	R	L	R	L
DN	25	25	32	32	40	40	50	50
TYPE	Threaded	Smooth	Threaded	Smooth	Threaded	Smooth	Threaded	Smooth
A	52x1/6"	38	58x1/6"	44.5	65x1/6"	50.6	78x1/6"	62.5
B	15	43	15	50	15	56	15	68
C	45	40	45	40	45	40	45	40
D	30	30	30	30	30	30	30	30
E	35	35	35	35	35	35	35	35
F	45	35	50	42.5	58	48.5	70	61
BSP/NPT THREAD	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/2"	1/2"	1/2"	1/2"

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores-serie-sd-din





PRESSURE

Pressure > Diaphragm Seals

SERIE SE

Sanitary Diaphragm Seal DS 722

Sanitary Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SE Series of diaphragm seals comprises models designed for use in sanitary installations (food, pharmaceutical industries, etc.), with quick disassembly for cleaning and a process connection per the Danish standard DS 722.

APPLICATIONS

⦿ Breweries

⦿ Juices

⦿ Dairy Beverages

⦿ Food

⦿ Pharmaceutical

⦿ etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SE



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Metal diaphragm seal for sanitary installations, with quick disassembly for cleaning and a process connection per the Danish standard DS 722

Working pressure 0 to 40 bar

Working temperature -20°C to +120°C

Accuracy ±0.5% at 20°C, for direct connection

MATERIALS

Membrane AISI 316L stainless steel
Body AISI 304 stainless steel

Transmission fluid Per customer specifications

Process connection DS 722 (Danish sanitary round thread)

SIZES

Available 1" · 1¼" · 1½" · 2" · 2½"

ACCESSORIES

☐ Weld sleeve

☐ Threaded sleeve

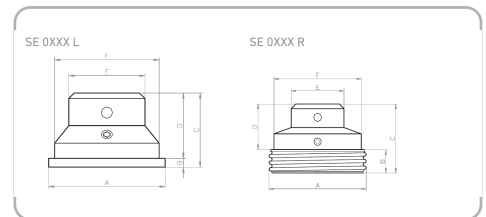
☐ Nut

☒ Gasket

DIMENSIONS (mm)

	SE 0125		SE 0130		SE 0140		SE 0150		SE 0163	
	L	R	L	R	L	R	L	R	L	R
DN	1"	1"	1¼"	1¼"	1½"	1½"	2"	2"	2½"	2½"
TYPE	Smooth Threaded									
A	40	44 x 1/6"	47.5	52 x 1/6"	53.5	58 x 1/6"	67.5	72 x 1/6"	84	88 x 1/6"
B	4	15	4	15	4	15	4	15	4	15
C	35	45	35	45	34	45	35	45	40	45
D	31	30	31	30	30	30	31	30	36	30
E	35	35	35	35	35	35	35	35	35	35
F	35	38	41.5	45	48	50	61	65	75	80
BSP/NPT THREAD	1/4"-1/2 1/4"-1/2 1/4"-1/2 1/4"-1/2 1/4"-1/2 1/4"-1/2 1/4"-1/2 1/4"-1/2 1/4"									

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores



PRESSURE

Pressure > Diaphragm Seals

SERIE SI

Sanitary Diaphragm Seal Clamp ISO 2852

Sanitary Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SI Series of diaphragm seals comprises models designed for use in sanitary installations (food, pharmaceutical industries, etc.), with quick disassembly for cleaning and a process connection per ISO 2852.

APPLICATIONS

Breweries

Juices

Dairy Beverages

Food

Pharmaceutical

etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SI



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Metal diaphragm seal for sanitary installations, with quick disassembly for cleaning and a clamp process connection per ISO 2852

Working pressure 0 to 25 bar

Working temperature -20°C to +120°C

Accuracy ±0.5% at 20°C, for direct connection

MATERIALS

Membrane AISI 316L stainless steel

Body AISI 304 stainless steel

Transmission fluid Per customer specifications

Process connection Clamp ISO 2852

SIZES

Available 1½" · 2" · 2½" · 3"

ACCESSORIES

Weld sleeve

Threaded sleeve

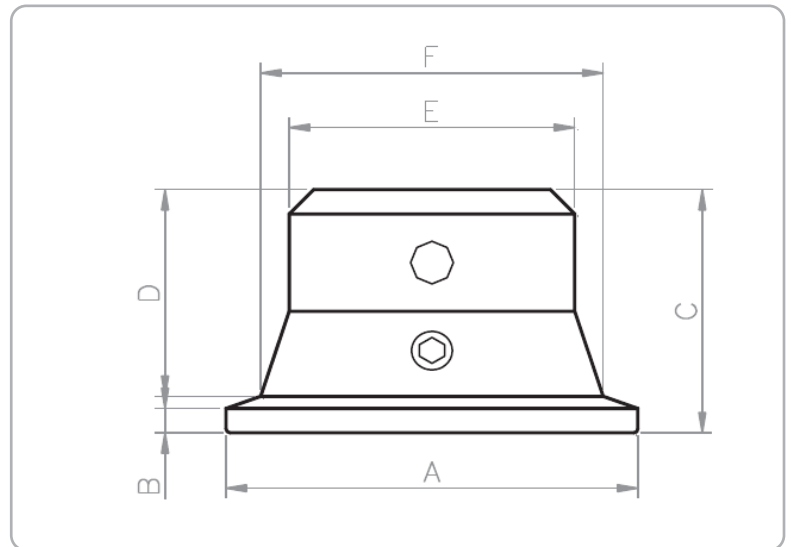
Clamp band

Gasket

DIMENSIONS (mm)

	SI 0140	SI 0150	SI 0163	SI 0175
DN	1½"	2"	2½"	3"
A	50.5	64	77.5	91
B	3	3	3	3
C	30	30	32	35
D	25.5	23.5	26	26.5
E	35	35	35	35
F	42	48	60	70
BSP/NPT THREAD	1/4"-1/2"	1/2"	1/2"	1/2"

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores





PRESSURE

Pressure > Diaphragm Seals

SERIE SM

Sanitary Diaphragm Seal SMS 1145

Sanitary Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SM Series of diaphragm seals comprises models designed for use in sanitary installations (food, pharmaceutical industries, etc.), with quick disassembly for cleaning and a process connection per the Swedish standard SMS 1145.

APPLICATIONS

⦿ Breweries

⦿ Juices

⦿ Dairy Beverages

⦿ Food

⦿ Pharmaceutical

⦿ etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SM



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Metal diaphragm seal for sanitary installations, with quick disassembly for cleaning and a process connection per the Swedish standard SMS 1145

Working pressure 0...1 bar to 0...40 bar (depending on model)

Working temperature -20°C to +120°C

Accuracy ±0.5% at 20°C, for direct connection

MATERIALS

Membrane AISI 316L stainless steel
Body AISI 304 stainless steel

Available 1" · 1¼" · 1½" · 2" · 2½"

Transmission fluid Per customer specifications

Process connection SMS 1145 (Swedish sanitary round thread)

ACCESSORIES

☐ Weld sleeve

☐ Threaded sleeve

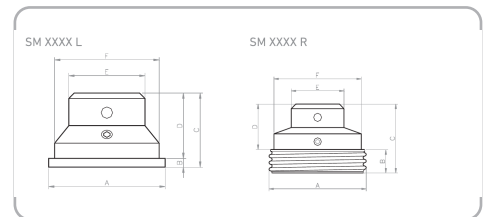
☐ Nut

☒ Gasket

DIMENSIONS (mm)

	SM 0125		SM 0140		SM 0140		SM 0150		SM 0163	
	L	R	L	R	L	R	L	R	L	R
DN	1"	1"	1¼"	1¼"	1½"	1½"	2"	2"	2½"	2½"
TYPE	Smooth Threaded									
A	35.4	40 x 1/6"	43.5	50 x 1/6"	55	60 x 1/6"	65	70 x 1/6"	80	85 x 1/6"
B	4	15	4	15	4	15	4	15	4	15
C	35	35	34	45	34	45	35	45	40	45
D	31	20	30	30	30	30	31	30	36	30
E	32	32	34	34	34	34	34	34	34	34
F	32	32	39.5	42	47.8	52	60	62	73.4	77
BSP/NPT THREAD	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/2"	1/2"	1/2"	1/2"

DIMENSION REFERENCE



The code "SM 0140" appears listed twice, for the 1¼" and 1½" sizes, in the manufacturer's original data sheet — transcribed exactly as it appears there, to be confirmed with JMH. The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores





PRESSURE

Pressure > Diaphragm Seals

SERIE SH

Sanitary Diaphragm Seal for Homogenizers

Sanitary Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SH Series of diaphragm seals comprises models designed for use in sanitary installations (food, pharmaceutical industries, etc.), with quick disassembly for cleaning and a process connection for homogenizer equipment.

APPLICATIONS

⦿ Dairy Industry

⦿ Homogenizers

⦿ Food

⦿ Pharmaceutical

⦿ etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SH



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Metal diaphragm seal for sanitary installations on homogenizer equipment, with quick disassembly for cleaning

Working pressure 0 to 600 bar

Working temperature -20°C to +120°C

Accuracy ±0.5% at 20°C, for direct connection

MATERIALS

Membrane AISI 316L stainless steel
Body AISI 304 stainless steel

SIZES

Available SH-22 · SH-27 · SH-31

Transmission fluid Per customer specifications

Process connection For homogenizer equipment (see model table)

ACCESSORIES

☐ Closed rectangular flange

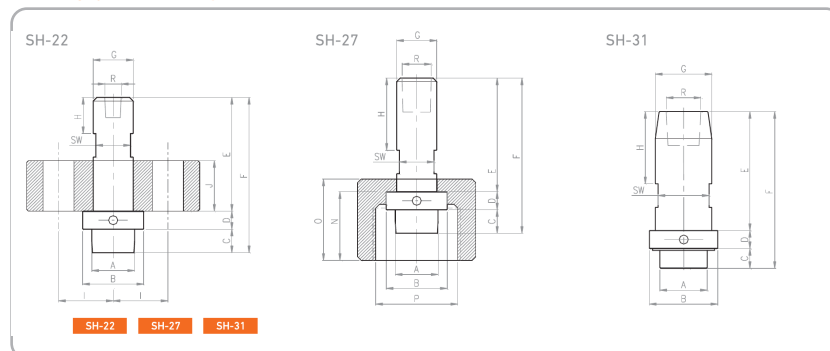
☐ Open rectangular flange

☐ Nut

DIMENSIONS (mm)

	SH-22	SH-27	SH-31
A	23.5	23.5	26
B	33.5	34	37.5
C	13	10	10
D	10	11	11
E	63	65	65
F	85	86	86
G	22	27	31
H	20	45	45
I	30	30	38
J	28	28	32
K	95	95	100
L	40	50	60
M	17	17	19.5
N	38	38	-
O	45	45	-
P	1 1/4" G	1 1/4" G	-
Q	65	65	-
R	1/4" G/NPT	1/2" G/NPT	1/2" G/NPT
SW	19	24	27

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores



PRESSURE

Pressure > Diaphragm Seals

SERIE SBR



Threaded Diaphragm Seal

Threaded Line



IN-HOUSE MANUFACTURING

DESCRIPTION

The CENI SBR Series of diaphragm seals comprises a range of flanged-assembly models with a modular design, developed for a wide spectrum of industries where demanding process conditions call for mechanically robust devices with a threaded process connection, low maintenance and high operational reliability. This line covers a large number of applications across a wide range of working pressures.

APPLICATIONS

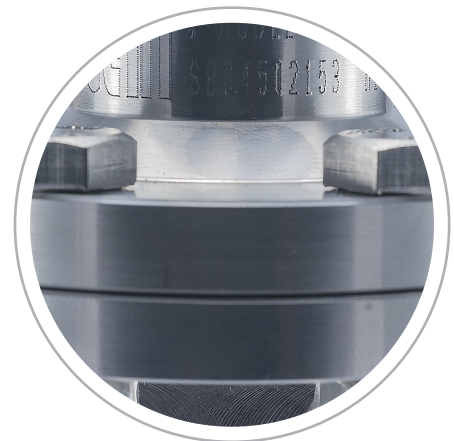
Petrochemical

Hydraulics

General Industry

High Pressure

etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SBR



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle	Flanged-assembly metal diaphragm seal, with a threaded process and instrument connection	Working pressure	SBRL: 0...6 bar · SBRM: 0...40 bar · SBRH: 0...700 bar
MATERIALS		Working temperature	-20°C to +120°C
Membrane	AISI 316L stainless steel	Accuracy	±0.5% at 20°C, for direct connection
Body	AISI 304 stainless steel		
Transmission fluid	Per customer specifications		
Process connection	Process: BSP/BSPT/NPT (see table)		
Instrument connection	BSP/BSPT/NPT (see table)		

OPTIONS

- Body and membrane materials per customer specification
- Other customizations available on request

AVAILABLE SPECIAL MATERIALS

Hastelloy

Monel

Titanium

Tantalum

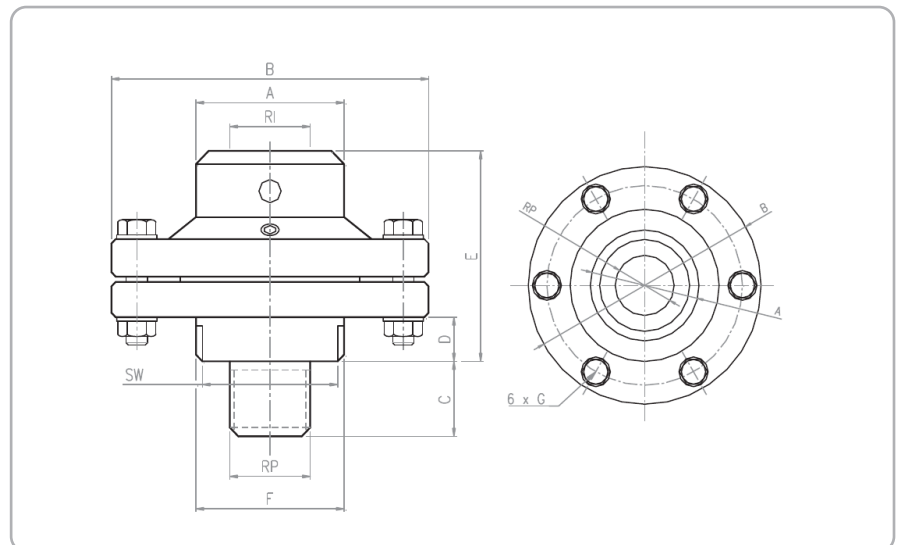
Super Duplex Steel

Construction and diaphragm material is verified based on the process fluid and its temperature before confirming each order.

DIMENSIONS (mm)

	SBRL	SBRM	SBRH
A	35	35	35
B	92	75	75
C	19	19	19
D	14	10	16
E	50	47	76
F	35	35	35
G	M6x1	M8x1.25	M10x1.5
RI	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"
RP	1/2"	1/2"	1/2"
SW	30	30	30

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores



PRESSURE

Pressure > Diaphragm Seals

SERIE SBF

Flanged Diaphragm Seal with Flushing

Threaded Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SBF Series of diaphragm seals comprises flanged-assembly seals with a modular design, developed for a wide spectrum of industries where demanding process conditions call for mechanically robust devices, with a cleaning system integrated through its flush connection, which allows sediment deposited by the process fluid to be drained, reducing maintenance work, with high operational reliability. This line covers a large number of applications, with a wide range of working pressures and threaded process connections.

APPLICATIONS

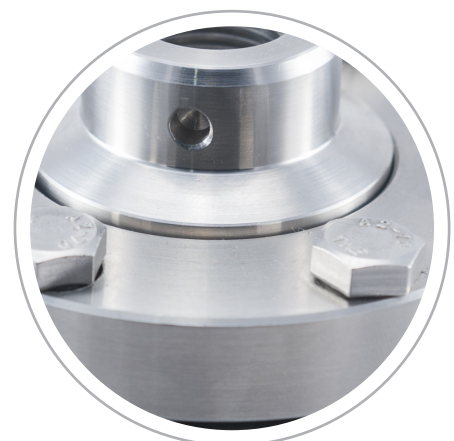
⊙ Petrochemical

⊙ Hydraulics

⊙ General Industry

⊙ High Pressure

⊙ etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SBF



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Flanged-assembly metal diaphragm seal with an integrated cleaning system (flushing) to drain sediment from the process fluid

Working pressure 0 to 250 bar

Working temperature -20°C to +120°C

MATERIALS

Membrane AISI 316L stainless steel

Body AISI 304 stainless steel

Transmission fluid Per customer specifications

Process connection Threaded, with flush connection (see table)

OPTIONS

☉ Body and membrane materials per customer specification

☉ Other customizations available on request

AVAILABLE SPECIAL MATERIALS

Hastelloy

Monel

Titanium

Tantalum

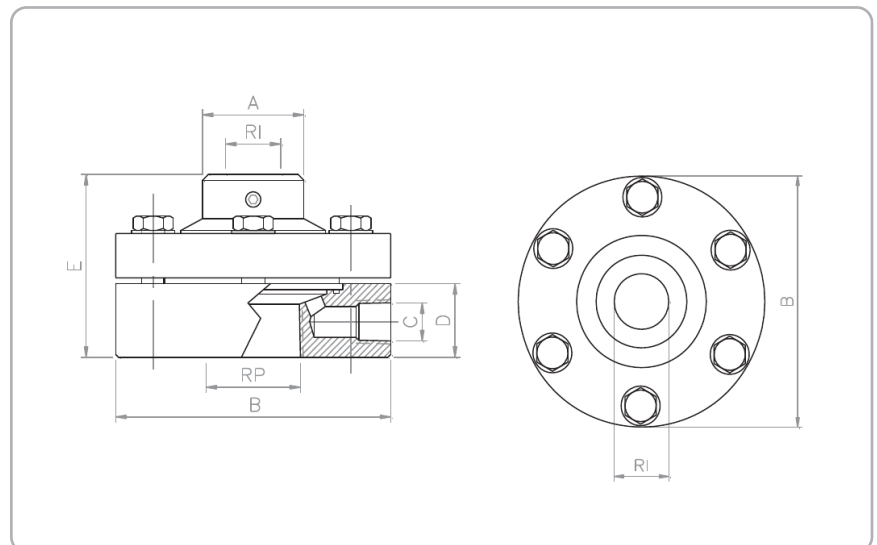
Super Duplex Steel

Construction and diaphragm material is verified based on the process fluid and its temperature before confirming each order.

DIMENSIONS (mm)

	SBF 050	SBF 075	SBF 100
A	35	35	35
B	95	95	95
C	1/4" NPT	1/4" NPT	1/4" NPT
D	25	25	25
E	62	62	62
RI NPT	1/2"	1/2"	1/2"
RP BSP/NPT	1/2"	3/4"	1"

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores


PRESSURE

Pressure > Diaphragm Seals

SERIE SC

Threaded Diaphragm Seal, Coupling Type

Threaded Line


IN-HOUSE MANUFACTURING


DESCRIPTION

The CENI SC Series of diaphragm seals comprises a range of compact, non-disassemblable models, developed for a wide spectrum of industries where process conditions and installation requirements call for robust, compact and economical devices, with a threaded coupling-type process connection, low maintenance and high operational reliability. This line covers a large number of applications, with a wide range of working pressures.

APPLICATIONS

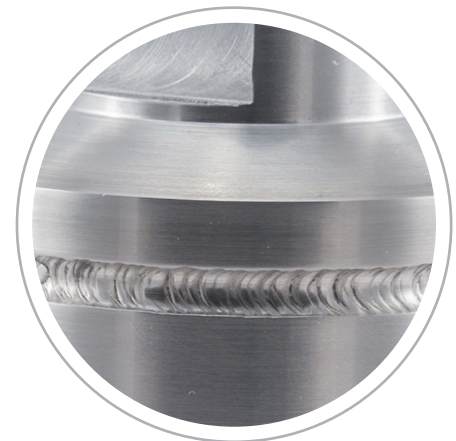
Petrochemical

Hydraulics

General Industry

High Pressure

etc.


Full technical characteristics, accessories and dimensions on the next page

SERIE SC



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Compact, non-disassemblable metal diaphragm seal, with a threaded coupling-type process connection

Working pressure DN25: min. 60 – max. 400 bar
DN40: min. 16 – max. 250 bar
DN50: min. 04 – max. 100 bar

Working temperature -20°C to +120°C

MATERIALS

Membrane AISI 316L stainless steel

Body AISI 304 stainless steel

Transmission fluid Per customer specifications

Process connection Process: BSP/BSPT/NPT (see table)

Instrument connection BSP/BSPT/NPT (see table)

OPTIONS

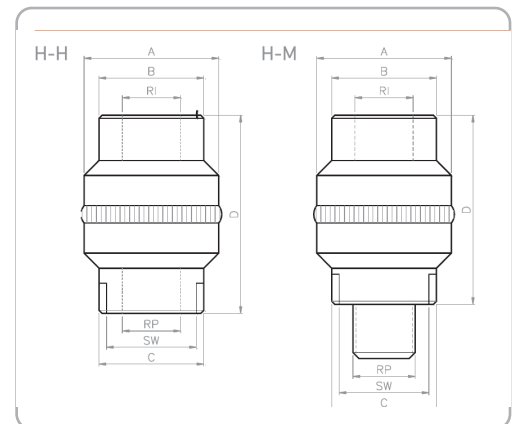
☉ Body and membrane materials per customer specification

☉ Other customizations available on request

DIMENSIONS (mm)

	DN25 HH	DN25 HM	DN40 HH	DN40 HM	DN50 HH	DN50 HM
A	35	35	45	45	57	57
B	35	35	35	35	35	35
C	35	35	35	35	35	35
D	55	52	62	59	62	59
RI	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"
RP	1/2" H	1/2" M	1/2" H	1/2" M	1/2" H	1/2" M
SW	30	30	30	30	30	30

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores





PRESSURE

Pressure > Diaphragm Seals

SERIE SR

Threaded Diaphragm Seal, Bushing Type

Threaded Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SR Series of diaphragm seals comprises a range of compact models with a flush diaphragm, developed for a wide spectrum of industries where process conditions and installation requirements call for robust, economical devices, with a threaded bushing-type process connection, low maintenance and high operational reliability. This line covers a large number of applications, with a wide range of working pressures.

APPLICATIONS

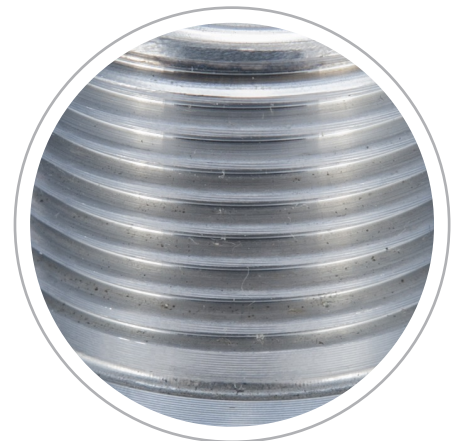
⌚ Petrochemical

⌚ Hydraulics

⌚ General Industry

⌚ High Pressure

⌚ etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SR



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Compact flush-diaphragm metal diaphragm seal, with a threaded bushing-type process connection

Working pressure 1/2": min. 60 – max. 400 bar
3/4": min. 25 – max. 400 bar
1": min. 10 – max. 250 bar
1 1/2": min. 2.5 – max. 100 bar

MATERIALS

Membrane AISI 316L stainless steel
Body AISI 304 stainless steel
Transmission fluid Per customer specifications
Process connection Process: BSPT/NPT (see table)
Instrument connection BSP/BSPT/NPT (see table)

Working temperature -20°C to +120°C

SIZES

Available 1/2" · 3/4" · 1" · 1 1/2"

OPTIONS

⊙ Body and membrane materials per customer specification

⊙ Other customizations available on request

AVAILABLE SPECIAL MATERIALS

Hastelloy

Monel

Titanium

Tantalum

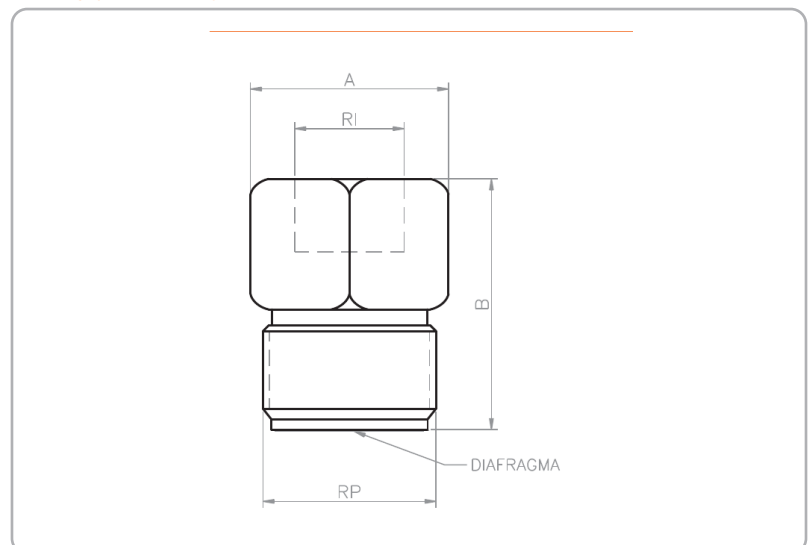
Super Duplex Steel

Construction and diaphragm material is verified based on the process fluid and its temperature before confirming each order.

DIMENSIONS (mm)

	1/2"	3/4"	1"	1 1/2"
A	28.5	28.5	38	50.8
B	50	50	50	55
RI	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"
RP	1/2"	3/4"	1"	1 1/2"

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores



PRESSURE

Pressure > Diaphragm Seals

SERIE SBP



Threaded Diaphragm Seal in Plastic Materials

Threaded Line



IN-HOUSE MANUFACTURING

DESCRIPTION

The CENI SBP Series of diaphragm seals comprises a range of flanged-assembly models, developed for a wide spectrum of industries where devices are needed to withstand corrosive process fluids at medium or low working pressures, at a reduced cost, with low maintenance and high operational reliability. This line is built from plastic materials, offering strong mechanical robustness within the characteristics of those materials.

APPLICATIONS

Chemical

Water Treatment

Electroplating

Low Pressure

etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SBP



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle	Metal diaphragm seal with a body in plastic materials, for corrosive process fluids at low or medium pressures	Working pressure	0 to 10 bar
		Working temperature	Depends on body material (PVC/PTFE/PVDF) — please consult

MATERIALS

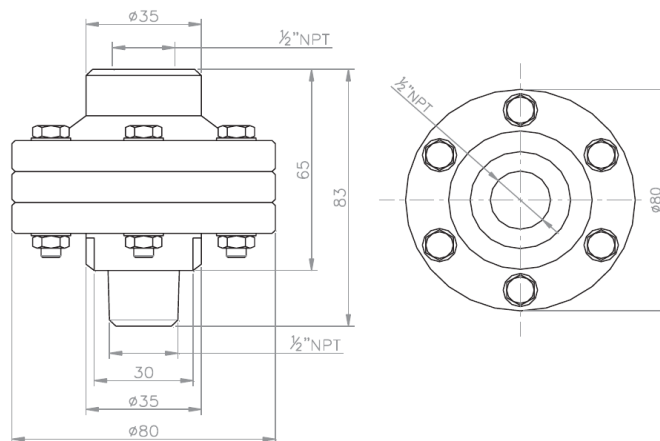
Membrane	AISI 316L stainless steel + PTFE
Body	PVC / PTFE / PVDF
Transmission fluid	Per customer specifications
Process connection	1/2" NPT (both ends)

OPTIONS

- ☉ Body and membrane materials per customer specification
- ☉ Other customizations available on request

DIMENSIONS (mm)

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores





PRESSURE

Pressure > Diaphragm Seals

SERIE SBA

Flanged Diaphragm Seal ANSI B16.5

Flanged Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SBA Series of diaphragm seals comprises a range of models with a flanged process connection per ASME B16.5, applicable across a wide spectrum of industries where demanding process conditions and installation characteristics call for mechanically robust devices, with low maintenance and high operational reliability.

APPLICATIONS

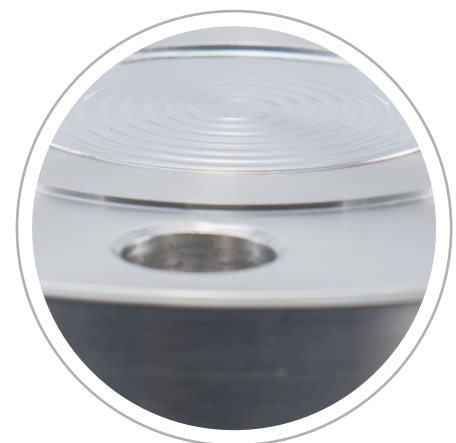
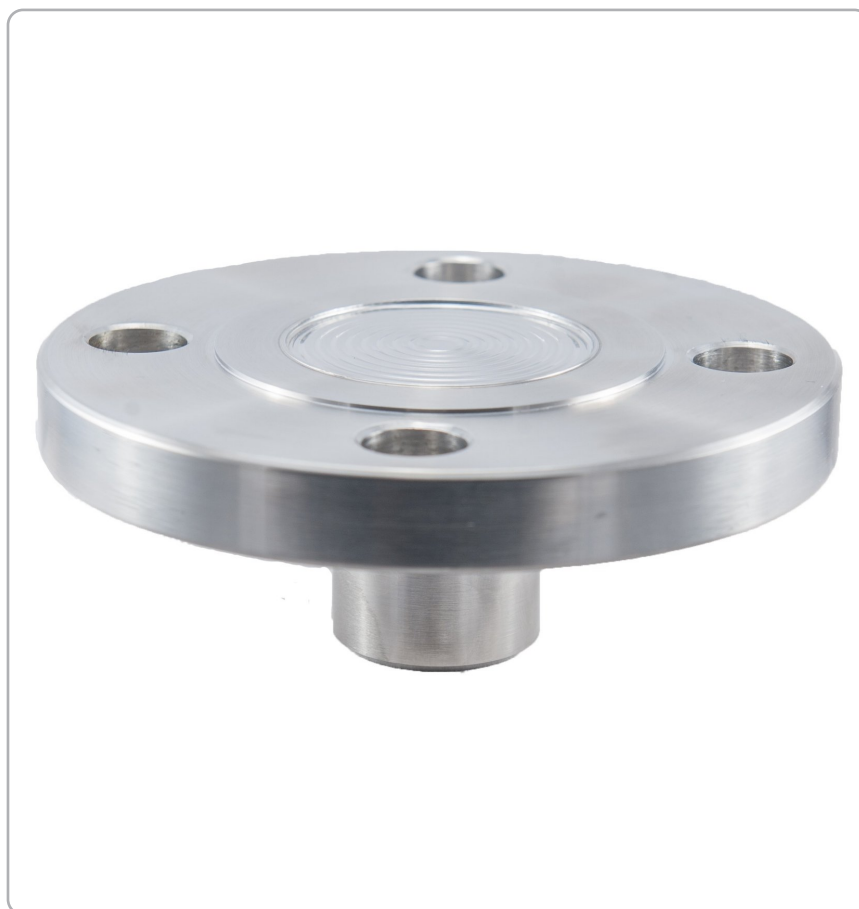
⦿ Petrochemical

⦿ Oil & Gas

⦿ General Industry

⦿ Flanged Processes

⦿ etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SBA



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Metal diaphragm seal with a flanged process connection per ASME B16.5

Working pressure Per flange rating and process temperature

MATERIALS

Working temperature -20°C to +120°C

Membrane AISI 316L stainless steel

Body AISI 316 stainless steel

Transmission fluid Per customer specifications

Process connection Flanged ANSI B16.5 (ratings 150 to 2500 lb)

Face RF

OPTIONS

⊙ Body and membrane materials per customer specification

⊙ Extension capillary

⊙ Flushing Ring

⊙ Ring-Joint grooved face

⊙ Other customizations available on request

AVAILABLE SPECIAL MATERIALS

Hastelloy

Monel

Titanium

Tantalum

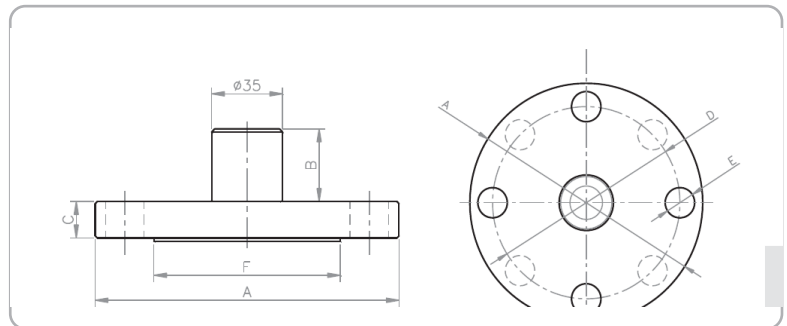
Super Duplex Steel

Construction and diaphragm material is verified based on the process fluid and its temperature before confirming each order.

DIMENSIONS (mm)

		1"	1½"	2"	2½"	3"
SERIES 150	A	110	125	150	180	190
	B	35	35	35	35	35
	C	12.7	15.9	17.5	22.3	22.3
	D	79.4	98.4	120.7	139.7	152.4
	E	4 x 15.9	4 x 15.9	4 x 19.1	4 x 19.1	4 x 19.1
	F	50.8	73	92.1	104.5	127
SERIES 300	A	125	155	165	190	210
	B	35	35	35	35	35
	C	15.9	19.1	20.7	23.9	27
	D	88.9	114.3	127	149.2	168.3
	E	4 x 19.1	4 x 22.2	8 x 19.1	8 x 22.2	8 x 22.2
	F	50.8	73	92.1	104.8	127
SERIES 600	A	125	155	165	190	210
	B	35	35	35	35	35
	C	17.5	22.3	25.4	28.6	31.8
	D	88.9	114.3	127	149.2	168.3
	E	4 x 19.1	4 x 22.2	8 x 19.1	8 x 22.2	8 x 22.2
	F	50.8	73	92.1	104.8	127
SERIES 1500	A	150	180	215	245	265
	B	35	35	35	35	35
	C	28.6	31.8	38.1	41.3	47.7
	D	101.6	123.9	165.1	190.5	203.2
	E	4 x 25.4	4 x 28.6	8 x 25.4	8 x 28.6	8 x 31.8
	F	50.8	73	92.1	104.8	127
SERIES 2500	A	160	205	235	265	305
	B	35	35	35	35	35
	C	35	44.5	50.8	57.2	66.7
	D	108	146	171.4	196.8	228.6
	E	4 x 25.4	4 x 31.8	8 x 28.6	8 x 31.8	8 x 34.9
	F	50.8	73	92.1	104.8	127

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores



PRESSURE

Pressure > Diaphragm Seals

SERIE SBAA



Flush Flanged Diaphragm Seal ASME B16.5

Flanged Line



IN-HOUSE MANUFACTURING

DESCRIPTION

The CENI SBAA Series of diaphragm seals comprises a range of flush-type models, with a flanged process connection per ASME B16.5, applicable across a wide spectrum of industries where process conditions and installation characteristics require the sensing face of the instrument to be inserted into the existing process connection, so as to avoid pockets where product and/or sediment could accumulate, with strong mechanical robustness, low maintenance and high operational reliability being important requirements.

APPLICATIONS

⦿ Petrochemical

⦿ Oil & Gas

⦿ General Industry

⦿ Flanged Processes

⦿ etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SBAA



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Flush-type metal diaphragm seal, with a flanged process connection per ASME B16.5, designed to avoid pockets of product and sediment buildup

Working pressure Per flange rating and process temperature

Working temperature -20°C to +120°C

MATERIALS

Membrane AISI 316L stainless steel
Body AISI 316 stainless steel
Transmission fluid Per customer specifications
Process connection Flanged ASME B16.5 (ratings 150 to 2500 lb), flush diaphragm
Face RF

OPTIONS

- ☐ Body and membrane materials per customer specification
- ☐ Extension capillary
- ☐ Ring-Joint grooved face
- ☐ Other customizations available on request

AVAILABLE SPECIAL MATERIALS

Hastelloy

Monel

Titanium

Tantalum

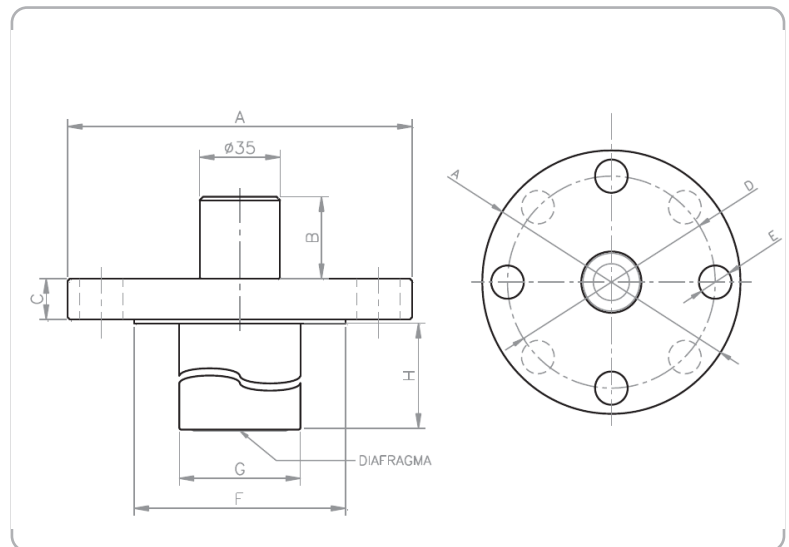
Super Duplex Steel

Construction and diaphragm material is verified based on the process fluid and its temperature before confirming each order.

DIMENSIONS (mm)

	1"	1½"	2"	2½"	3"
SERIES 150	A	110	125	150	180
	B	35	35	35	35
	C	12.7	15.9	17.5	22.3
	D	79.4	98.4	120.7	139.7
	E	4 x 15.9	4 x 15.9	4 x 19.1	4 x 19.1
	F	50.8	73	92.1	104.5
SERIES 300	G*	24	37.8	49	58.7
	A	125	155	165	190
	B	35	35	35	35
	C	15.9	19.1	20.7	23.9
	D	88.9	114.3	127	149.2
	E	4 x 19.1	4 x 22.2	8 x 19.1	8 x 22.2
SERIES 600	F	50.8	73	92.1	104.8
	G*	24	37.8	49	58.7
	A	125	155	165	190
	B	35	35	35	35
	C	17.5	22.3	25.4	28.6
	D	88.9	114.3	127	149.2
SERIES 1500	E	4 x 19.1	4 x 22.2	8 x 19.1	8 x 22.2
	F	50.8	73	92.1	104.8
	G*	24	37.8	49	58.7
	A	150	180	215	245
	B	35	35	35	35
	C	28.6	31.8	38.1	41.3
	D	101.6	123.9	165.1	190.5
	E	4 x 25.4	4 x 28.6	8 x 25.4	8 x 28.6
	F	50.8	73	92.1	104.8
	G*	24	37.8	49	58.7

DIMENSION REFERENCE



SERIE SBAA

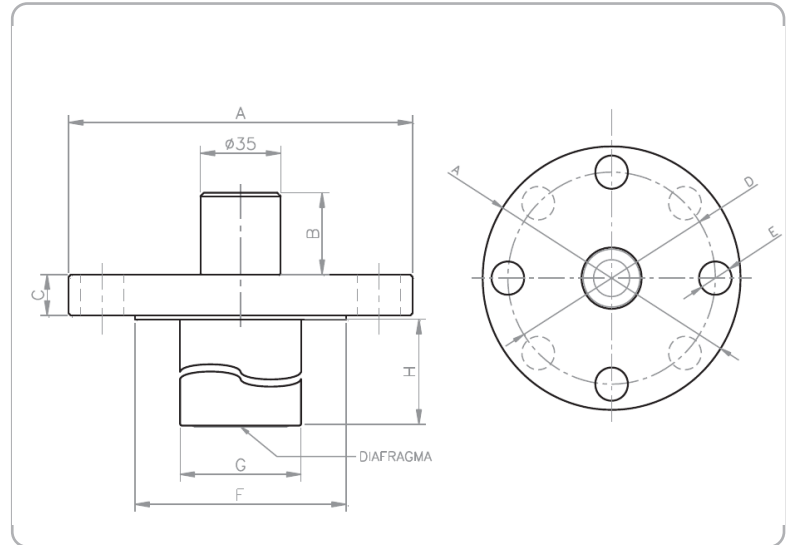


Dimensions (continued)

DIMENSIONS (mm) – continued

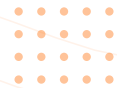
		1"	1½"	2"	2½"	3"
SERIES 2500	A	160	205	235	265	305
	B	35	35	35	35	35
	C	35	44.5	50.8	57.2	66.7
	D	108	146	171.4	196.8	228.6
	E	4 x 25.4	4 x 31.8	8 x 28.6	8 x 31.8	8 x 34.9
	F	50.8	73	92.1	104.8	127
	G*	24	37.8	49	58.7	73.5

DIMENSION REFERENCE



Total length (H) is defined per customer order. The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores





PRESSURE

Pressure > Diaphragm Seals

SERIE SBLJ

Flanged Diaphragm Seal Lap Joint ASME B16.5

Flanged Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SBLJ Series of diaphragm seals comprises a range of models with a Lap Joint-type flanged process connection per ASME B16.5, applicable across a wide spectrum of industries where demanding process conditions and installation characteristics call for mechanically robust devices, with low maintenance and high operational reliability.

APPLICATIONS

Petrochemical

Oil & Gas

General Industry

Flanged Processes

etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SBLJ



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Metal diaphragm seal with a Lap Joint-type flanged process connection per ASME B16.5

Working pressure Per flange rating and process temperature

Working temperature -20°C to +120°C

MATERIALS

Membrane AISI 316L stainless steel
Body AISI 316 stainless steel
Transmission fluid Per customer specifications
Process connection Flanged ASME B16.5, Lap Joint type (ratings 150 to 2500 lb)
Instrument connection 1/2" NPT
Face RF

OPTIONS

- Body and membrane materials per customer specification
- Extension capillary
- Flushing Ring
- Instrument connection per customer specification
- Other customizations available on request

AVAILABLE SPECIAL MATERIALS

Hastelloy

Monel

Titanium

Tantalum

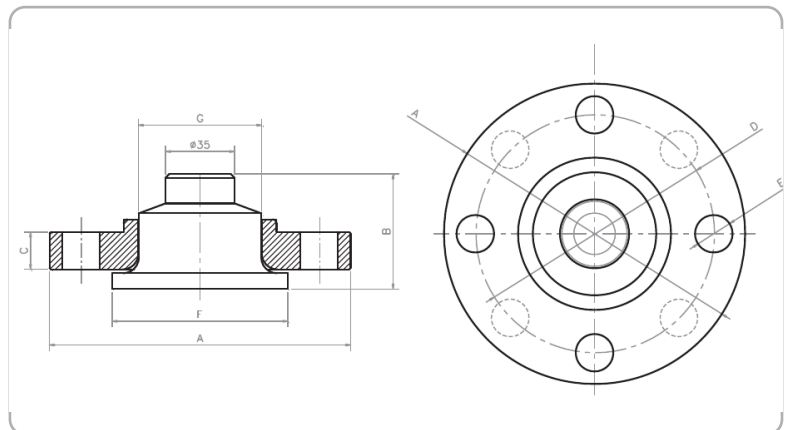
Super Duplex Steel

Construction and diaphragm material is verified based on the process fluid and its temperature before confirming each order.

DIMENSIONS (mm)

		1"	1½"	2"	2½"	3"
SERIES 150	A	110	125	150	180	190
	B	47	52	55	59	60
	C	12.7	15.9	17.5	22.3	22.3
	D	79.4	98.4	120.7	139.7	152.4
	E	4 x 15.9	4 x 15.9	4 x 19.1	4 x 19.1	4 x 19.1
	F	50.8	73	92.1	104.5	127
	G	35	50	62.5	75.4	91.4
SERIES 300	A	125	155	165	190	210
	B	57	60	63	68	76
	C	15.9	19.1	20.7	23.9	27
	D	88.9	114.3	127	149.2	168.3
	E	4 x 19.1	4 x 22.2	8 x 19.1	8 x 22.2	8 x 22.2
	F	50.8	73	92.1	104.8	127
	G	35	50	62.5	75.4	91.4
SERIES 600	A	125	155	165	190	210
	B	57	62	67	71	76
	C	17.5	22.3	25.4	28.6	31.8
	D	88.9	114.3	127	149.2	168.3
	E	4 x 19.1	4 x 22.2	8 x 19.1	8 x 22.2	8 x 22.2
	F	50.8	73	92.1	104.8	127
	G	35	50	62.5	75.4	91.4
SERIES 1500	A	150	180	215	245	265
	B	74	77	90	97	106
	C	28.6	31.8	38.1	41.3	47.7
	D	101.6	123.9	165.1	190.5	203.2
	E	4 x 25.4	4 x 28.6	8 x 25.4	8 x 28.6	8 x 31.8
	F	50.8	73	92.1	104.8	127
	G	35	50	62.5	75.4	91.4

DIMENSION REFERENCE



SERIE SBLJ

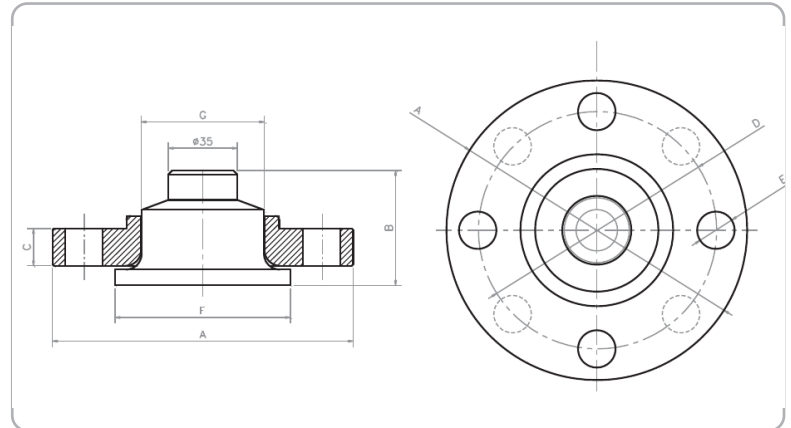


Dimensions (continued)

DIMENSIONS (mm) – continued

		1"	1½"	2"	2½"	3"
SERIES 2500	A	160	205	235	265	305
	B	81	93	103	112	125
	C	35	44.5	50.8	57.2	66.7
	D	108	146	171.4	196.8	228.6
	E	4 x 25.4	4 x 31.8	8 x 28.6	8 x 31.8	8 x 34.9
	F	50.8	73	92.1	104.8	127
	G	35	50	62.5	75.4	91.4

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/sellos-separadores





PRESSURE

Pressure > Diaphragm Seals

SERIE SW

Flanged Diaphragm Seal, Wafer Type

Flanged Line



IN-HOUSE MANUFACTURING



DESCRIPTION

The CENI SW Series of diaphragm seals comprises a range of wafer-type remote-mount models, with a flanged process connection, applicable across a wide spectrum of industries where process conditions and installation characteristics call for the instrument to be mounted at a distance from the tap, using capillary impulse lines protected with a crimped stainless steel flexible tube cover, with strong mechanical robustness, low maintenance and high operational reliability.

APPLICATIONS

⦿ Petrochemical

⦿ Oil & Gas

⦿ General Industry

⦿ Remote Mounting

⦿ etc.



Full technical characteristics, accessories and dimensions on the next page

SERIE SW



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle	Wafer-type remote-mount metal diaphragm seal, for installation between flanges, with an impulse line protected by a crimped stainless steel flexible tube	Working pressure	Per flange rating and process temperature
		Working temperature	-20°C to +120°C

MATERIALS

Membrane	AISI 316L stainless steel
Body	AISI 316 stainless steel
Transmission fluid	Per customer specifications
Process connection	Wafer mount between ASME B16.5 or EN 1092-1 flanges

OPTIONS

- Body and membrane materials per customer specification
- Extension capillary
- Flushing Ring
- Other customizations available on request

AVAILABLE SPECIAL MATERIALS

Hastelloy

Monel

Titanium

Tantalum

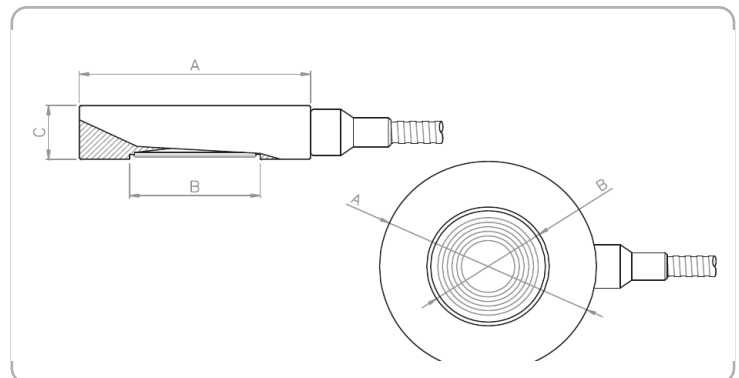
Super Duplex Steel

Construction and diaphragm material is verified based on the process fluid and its temperature before confirming each order.

DIMENSIONS (mm)

		1"	1½"	2"	2½"	3"	4"	5"
ASME B16.5	SERIES	150...2500						
	A	51	73	92	105	127	157	186
	B	25	38	50	65	80	100	125
	C	20	20	20	22	25	25	25
EN 1092-1		25	40	50	65	80	100	125
	PN	10...160						
	A	68	88	102	122	138	162	188
	B	25	38	50	65	80	100	125
	C	20	20	20	22	25	25	25

DIMENSION REFERENCE



The company reserves the right to modify the data listed in this catalog without prior notice.

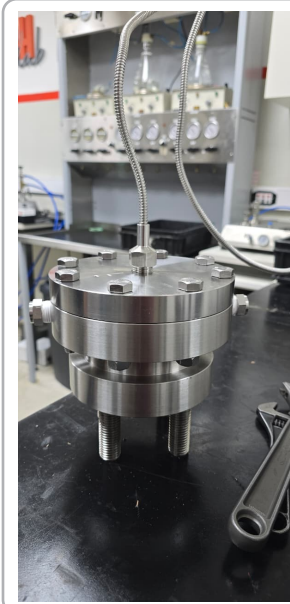
Source: tienda.jmh.com.ar/sellos-separadores



Seal Engineering

Custom, non-standard developments, when the process demands it

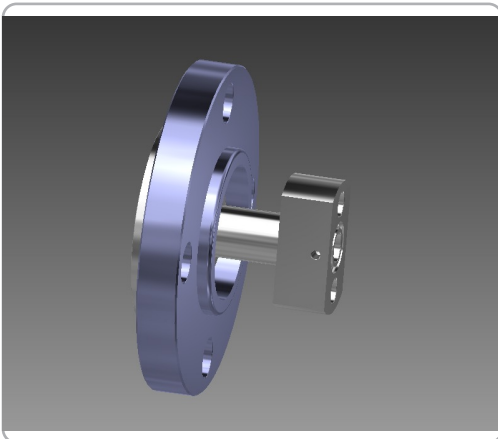
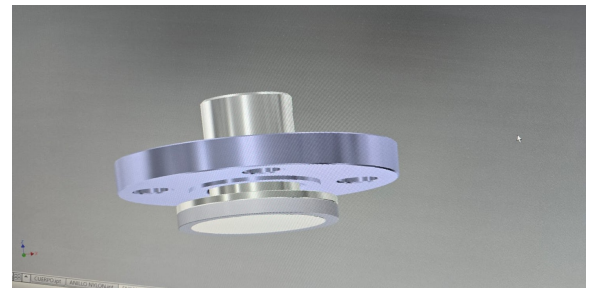
Beyond the fourteen models in this section, JMH designs non-standard diaphragm seals whenever the process requires it: unconventional flange geometries, double-chamber diaphragms, Lap Joint assemblies with rings in special materials, capillaries with custom length and routing, among others. Each development starts from an in-house survey of the fluid to be measured, the working temperature and pressure, and the customer's installation conditions.



Custom seal on the JMHL test bench



Finished custom flanged assembly



3D design of a custom Lap Joint assembly

The design is modeled and validated in 3D before manufacturing, and each assembly is hydrostatically tested on our own test bench before shipping, with the same dimensional and material controls as the rest of the standard line.



TECHNICAL SERVICE

In addition to our in-house manufacturing, JMH repairs diaphragm seals of any brand at our factory: we survey the original assembly, restore the diaphragm and fill liquid, and verify tightness before returning it to the customer.



Manifolds and Valves

10 technical data sheets in this group

WHAT IS IT?

Integrated valve blocks that allow a pressure instrument to be isolated, vented and equalized without interrupting the process.

HOW DOES IT WORK?

Each needle valve independently controls the flow of fluid between the process and the instrument, allowing safe block-and-bleed operations.

WHEN IS IT USED?

Upstream of pressure gauges and transmitters, so they can be calibrated, repaired or replaced without needing to stop or depressurize the main line.



Needle Valve — General Characteristics

Common to the entire MIP Series and V Series manifold/valve line described on the following pages

The MIP Series manifolds and V Series valves simplify the mounting of pressure measuring instruments, with models ranging from the simple block of a pressure gauge to 3- and 5-way solutions for differential pressure transmitters, in their various coupling options. They are built from solid AISI 316 stainless steel blocks of great robustness and careful machining (other materials on request), allowing block, bleed and equalize operations through needle valves and/or threaded plugs. The needle valves provide a secure metal-to-metal seal: they are of the dry-thread type, unaffected by the process fluid, with a non-rotating obturator that cannot be ejected in the event of improper gland disassembly. The bonnet-to-body assembly is threaded, with anti-tamper locking pins.

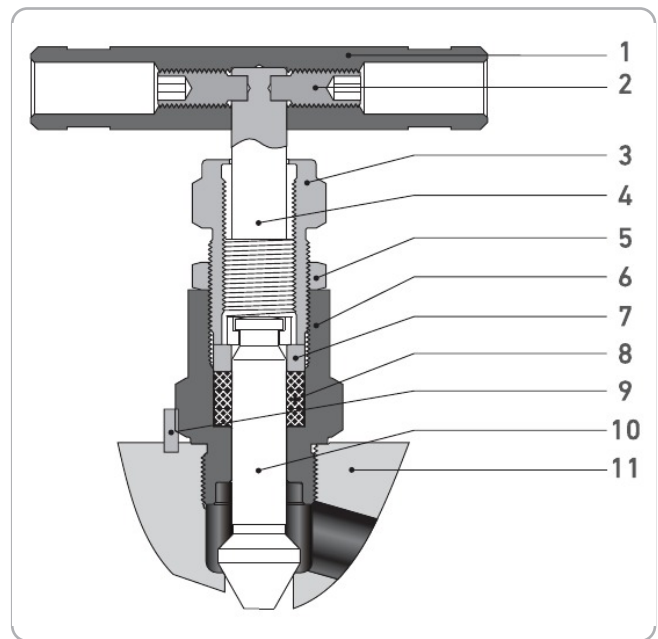
COMMON TECHNICAL CHARACTERISTICS

Working pressure	Up to 400 bar in the standard version (AISI 316) — up to 700 bar in the optional version; see the Temperature vs Pressure table
Working temperature	-50°C to 250°C with PTFE packing · -50°C to 650°C with Grafoil packing (on request)
Stem	Dry thread, isolated from the process fluid by the packing
Obturator	Non-rotating and non-ejectable; in the fully open position it blocks the passage of fluid toward the packing, isolating it from the process
Orifice / Cv	Ø 4 mm — Cv: 0.35
Bonnet-to-body assembly	Threaded, with anti-tamper locking pins

TEMPERATURE vs PRESSURE (AISI 316)

TEMPERATURE	WORKING PRESSURE
-50°C to 50°C	400 bar
100°C	350 bar
150°C	325 bar
200°C	300 bar
250°C	275 bar
300°C	260 bar
350°C	250 bar
400°C	240 bar
450°C	230 bar
500°C	220 bar
550°C	207 bar
600°C	185 bar
650°C	120 bar

NEEDLE VALVE — EXPLODED VIEW



CONSTRUCTION MATERIALS

No.	DESCRIPTION	MATERIAL
1	Handwheel	AISI 316
2	Set screws	AISI 304
3	Gland nut	AISI 321
4	Stem	AISI 316
5	Lock nut	AISI 316
6	Bonnet	AISI 316
7	Packing gland ring	AISI 316
8	Packing	PTFE / Grafoil
9	Anti-tamper pin	AISI 304
10	Obturator	AISI 316
11	Body	AISI 316

The company reserves the right to modify the data listed in this catalog without prior notice.

Selection Table

JMH integral manifolds and block valves — the Pg. column indicates their data sheet

MODEL	DESCRIPTION	PORTS	WORKING PRESSURE	CONNECTION	PG.
MIP-1V	1-Way Integral Manifold	1	Up to 400 bar (700 bar opt.)	1/2" NPT male/female	72
MIP-2V	2-Way Integral Manifold	2	Up to 400 bar (700 bar opt.)	1/2" NPT male/female	74
MIP-2V C	2-Way Compact Integral Manifold	2	Up to 400 bar (700 bar opt.)	1/2" NPT male/female, remote mounting	76
MIP-3V CP	3-Way Conventional Integral Manifold	3	Up to 400 bar (700 bar opt.)	1/2" NPT female, Coplanar® coupling	78
MIP-3V SP	3-Way Compact Integral Manifold	3	Up to 400 bar (700 bar opt.)	1/2" NPT female, standard coupling	80
MIP-3V SPB	3-Way Compact Flanged Integral Manifold	3	Up to 400 bar (700 bar opt.)	1/2" NPT female, normalized flange	82
MIP-5V CP	5-Way Conventional Integral Manifold	5	Up to 400 bar (700 bar opt.)	1/2" NPT female, Coplanar® coupling	84
MIP-5V MRP	5-Way Integral Manifold for Multivariable	5	Up to 400 bar (700 bar opt.)	1/2" NPT female, remote coupling	86
VS	Simple Block Valve	—	Up to 400 bar (700 bar opt.)	1/2" NPT female-female or male-female	88
SERIE V	High-Pressure Valve (v15/v20/v30/v60)	—	1034 to 4137 bar depending on version	Ø 1/4" OD compression tubing (3/8" or 1/2" opt.)	90

The company reserves the right to modify the data listed in this catalog without prior notice.





PRESSURE

Pressure › Manifolds and Valves

MIP-1V



BUY ONLINE

1-Way Integral Manifold

1-Way

DESCRIPTION

Block-and-bleed valve with threaded plug, with 1 female 1/2" NPT outlet, suitable for the mounting and process connection of pressure gauges, pressure switches and/or transmitters, for gauge or absolute pressure measurement.

TECHNICAL SPECIFICATIONS

- Body: solid-block machined AISI 304/316 stainless steel
- Working pressure: up to 400 bar (700 bar optional)
- Working temperature: -50 to 250°C with PTFE packing (up to 650°C with optional Grafoil)
- Process connection: 1/2" NPT male
- Instrument connection: 1/2" NPT female
- Bleed: 1/4" NPT threaded plug

TYPICAL APPLICATIONS

Oil & Gas

Petrochemical

Power Generation

General Industry

etc.



Additional options and full dimensions on the next page

MIP-1V



Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional working pressure 700 bar

Optional working temperature -50 to 650°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

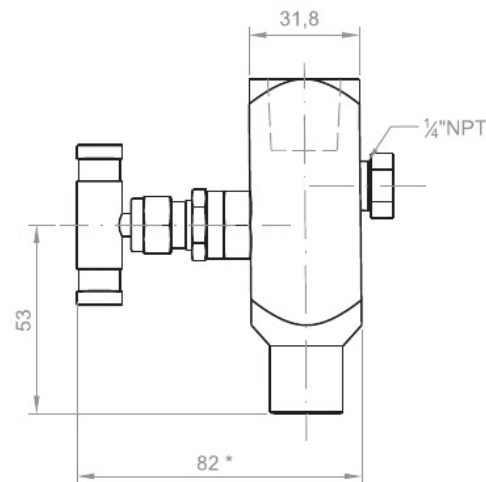
Tantalum

Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS



* CON VALVULAS CERRADAS

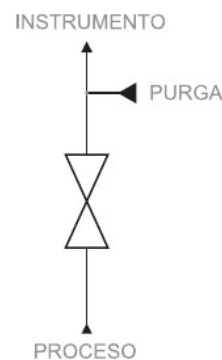
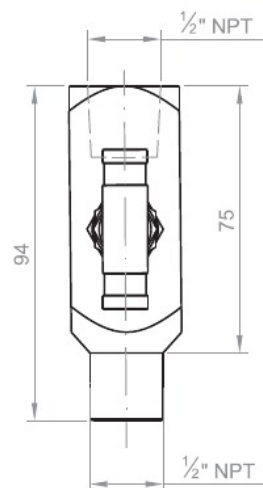


Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



PRESSURE

Pressure › Manifolds and Valves

MIP-2V



BUY ONLINE

2-Way Integral Manifold

2-Way

DESCRIPTION

Manifold with 2 block-and-bleed valves. The bleed outlet can be blocked with a threaded plug or connected to a bleed line via suitable tubing. It has a female 1/2" NPT instrument outlet, suitable for the mounting and process connection of pressure gauges, pressure switches and/or transmitters, for gauge or absolute pressure measurement.

TECHNICAL SPECIFICATIONS

- Body: solid-block machined AISI 304/316 stainless steel
- Working pressure: up to 400 bar (700 bar optional)
- Working temperature: -50 to 400°C with PTFE packing (up to 650°C with optional Grafoil)
- Process connection: 1/2" NPT male
- Instrument connection: 1/2" NPT female
- Side instrument connection available on request

TYPICAL APPLICATIONS

Oil & Gas

Petrochemical

Power Generation

General Industry

etc.



Additional options and full dimensions on the next page

MIP-2V



Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional working pressure 700 bar

Optional working temperature -50 to 650°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

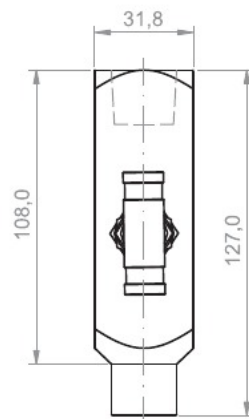
Tantalum

Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS



* CON VALVULAS CERRADAS

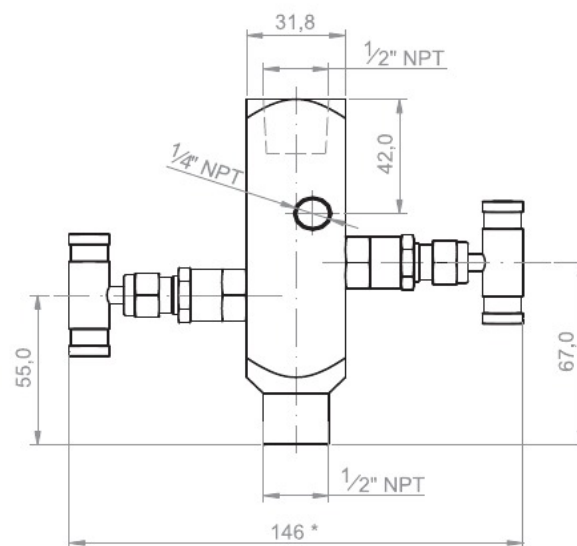


Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



PRESSURE

Pressure › Manifolds and Valves

MIP-2V C

2-Way Compact Integral Manifold

2-Way Compact



BUY ONLINE

DESCRIPTION

Manifold with 2 block-and-bleed valves in a compact version, designed for remote mounting. The bleed outlet can be blocked with a threaded plug or connected to a bleed line via suitable tubing. It has a female 1/2" NPT instrument outlet, suitable for the mounting and process connection of pressure gauges, pressure switches and/or transmitters, for gauge or absolute pressure measurement.

TECHNICAL SPECIFICATIONS

- Body: solid-block machined AISI 304/316 stainless steel
- Working pressure: up to 400 bar (700 bar optional)
- Working temperature: -50 to 400°C with PTFE packing (up to 650°C with optional Grafoil)
- Process connection: 1/2" NPT male
- Instrument connection: 1/2" NPT female
- Compact design, suitable for remote mounting

TYPICAL APPLICATIONS

Oil & Gas

Petrochemical

Power Generation

General Industry

etc.



Additional options and full dimensions on the next page

Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional working pressure 700 bar

Optional working temperature -50 to 650°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

Tantalum

Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS

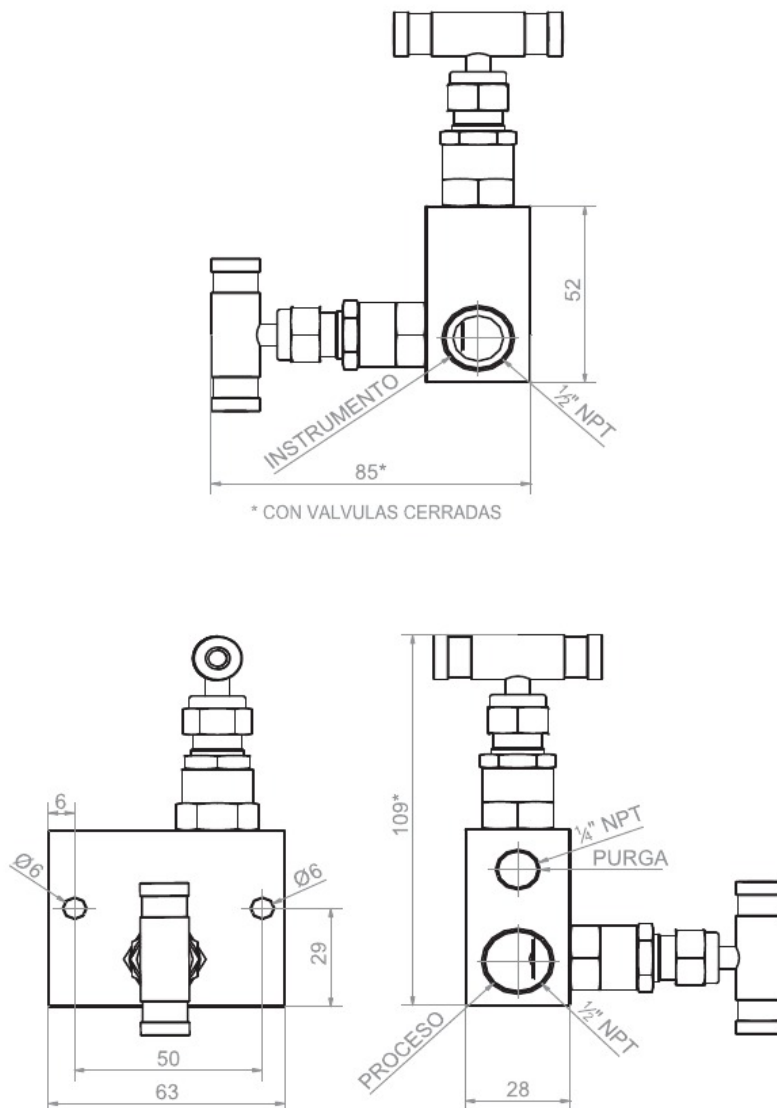


Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



PRESSURE

Pressure › Manifolds and Valves

MIP-3V CP

3-Way Conventional Integral Manifold

3-Way Coplanar



BUY ONLINE

DESCRIPTION

3-way manifold with 2 block valves and 1 equalizing valve, with direct bleeds blocked by 1/4" NPT threaded plugs. Suitable for the mounting and process connection of differential pressure transmitters with direct Coplanar® coupling.

TECHNICAL SPECIFICATIONS

- Body: solid-block machined AISI 304/316 stainless steel
- Bleed connections: 1/4" NPT
- Working temperature: -50 to 250°C with PTFE packing (up to 650°C with optional Grafoil)
- Process connections: 1/2" NPT female
- Working pressure: up to 400 bar (700 bar optional)
- Instrument coupling: 4-bolt Coplanar® pattern

TYPICAL APPLICATIONS

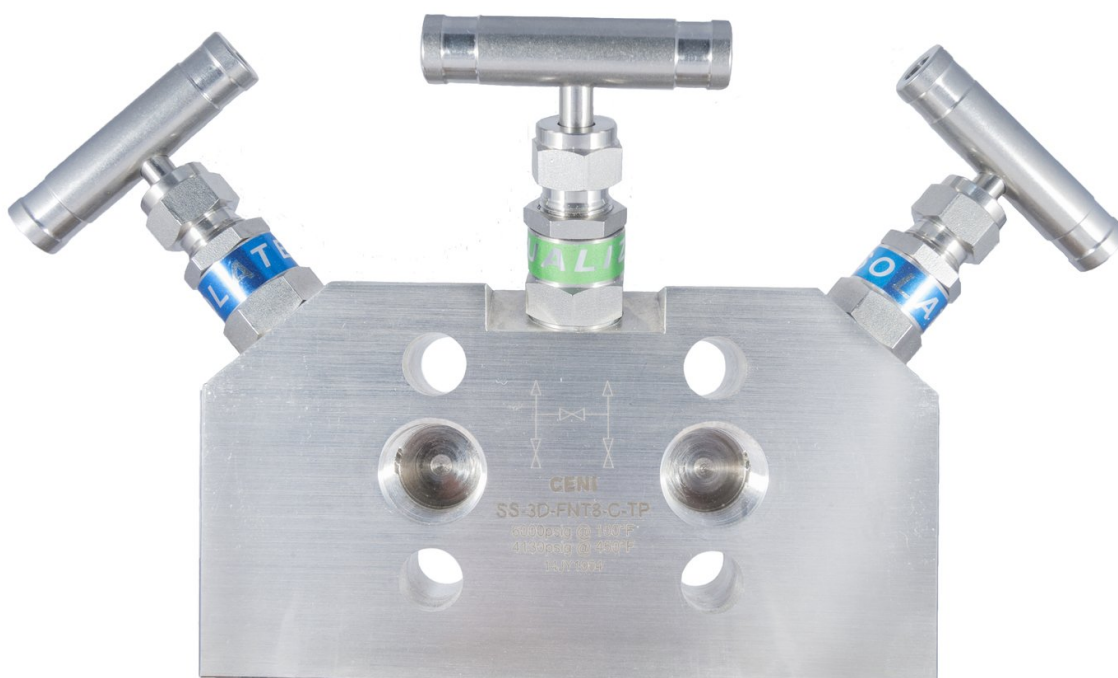
Oil & Gas

Petrochemical

Power Generation

General Industry

etc.



Additional options and full dimensions on the next page

MIP-3V CP



Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional working pressure 700 bar

Optional working temperature -50 to 650°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

Tantalum

Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS

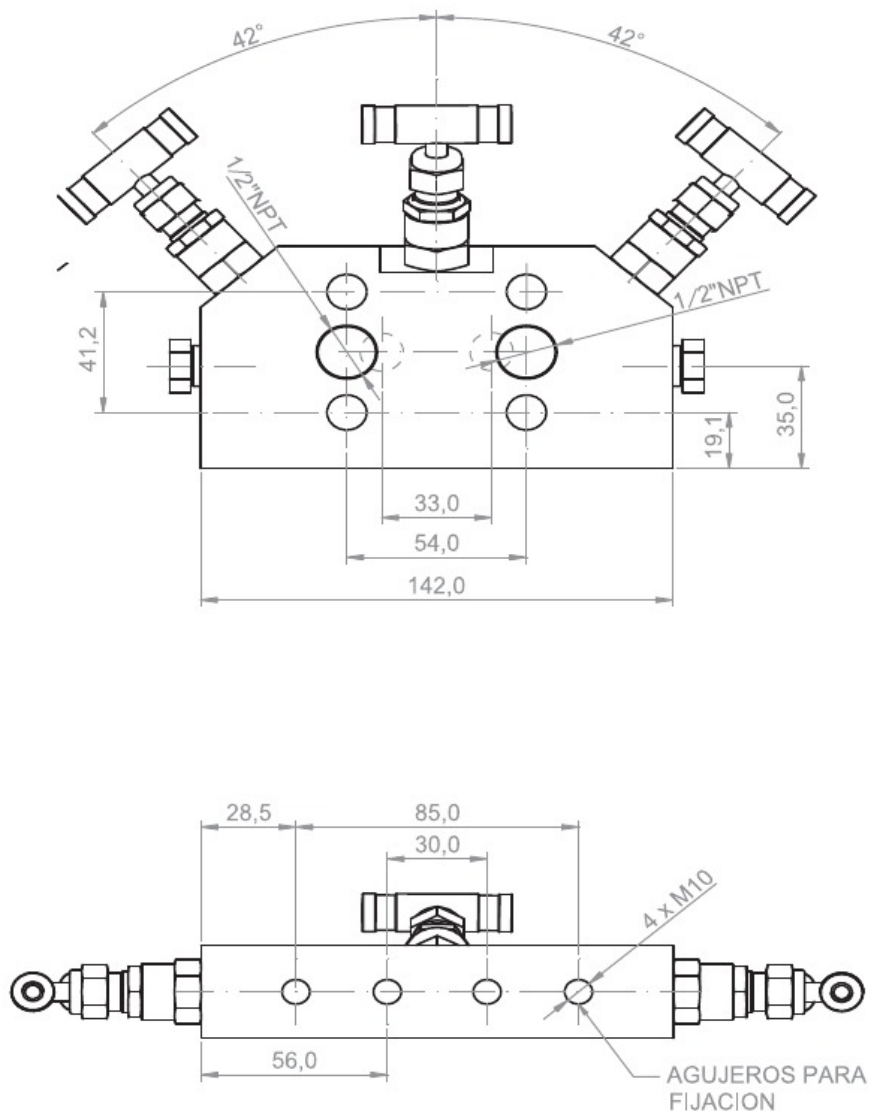


Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



PRESSURE

Pressure › Manifolds and Valves

MIP-3V SP

3-Way Compact Integral Manifold

3-Way Standard



BUY ONLINE

DESCRIPTION

3-way manifold with 2 block valves and 1 equalizing valve, without bleeds. Suitable for the mounting and process connection of differential pressure transmitters with standard direct coupling.

TECHNICAL SPECIFICATIONS

- Body: solid-block machined AISI 304/316 stainless steel
- Working pressure: up to 400 bar (700 bar optional)
- No bleed valves (compact version)
- Process connections: 1/2" NPT female
- Working temperature: -50 to 250°C with PTFE packing (up to 650°C with optional Grafoil)
- Instrument coupling: 4-bolt standard pattern

TYPICAL APPLICATIONS

Oil & Gas

Petrochemical

Power Generation

General Industry

etc.



Additional options and full dimensions on the next page

MIP-3V SP



Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional working pressure 700 bar

Optional working temperature -50 to 650°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

Tantalum

Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS

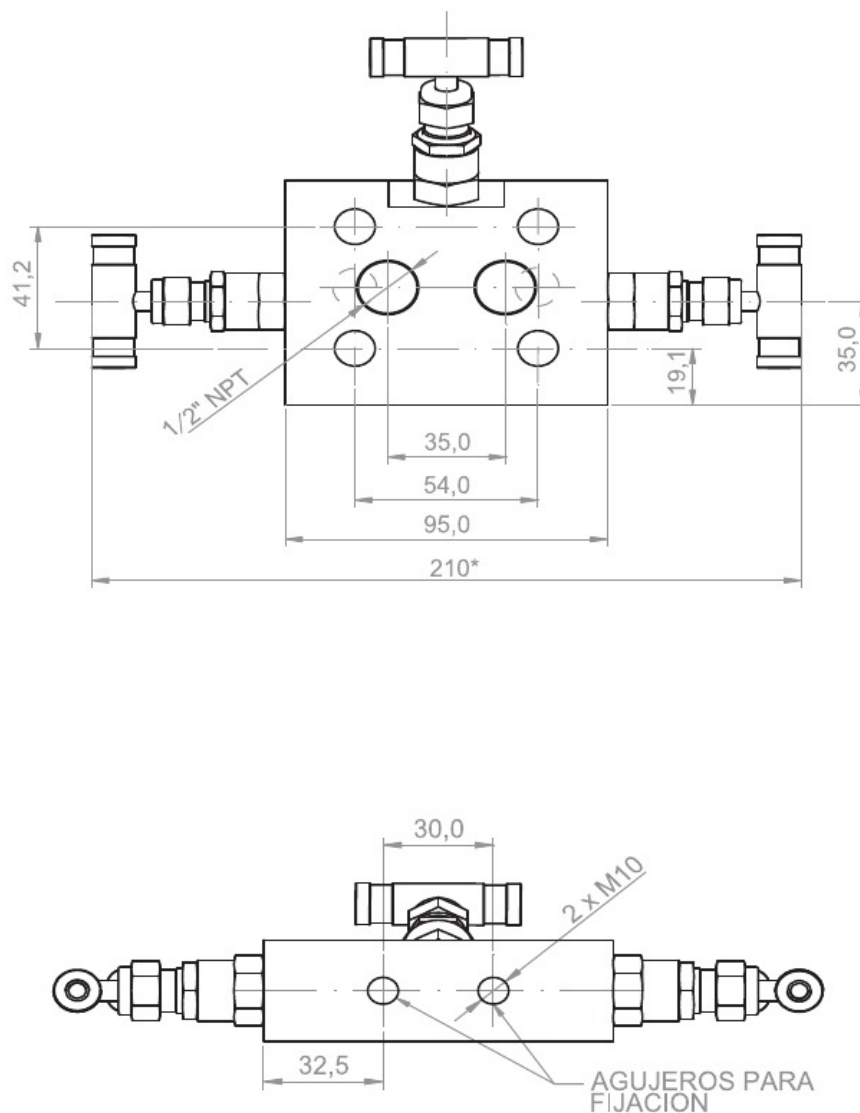


Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



PRESSURE

Pressure · Manifolds and Valves

MIP-3V SPB

3-Way Compact Flanged Integral Manifold

3-Way Flanged



BUY ONLINE

DESCRIPTION

3-way manifold with 2 block valves and 1 equalizing valve, without bleeds, with a standard normalized flange. Suitable for the flanged process connection of differential pressure transmitters.

TECHNICAL SPECIFICATIONS

- Body: solid-block machined AISI 304/316 stainless steel
- Working pressure: up to 400 bar (700 bar optional)
- Flange: standard normalized (consult available rating)
- Process connections: 1/2" NPT female
- Working temperature: -50 to 250°C with PTFE packing (up to 650°C with optional Grafoil)
- No bleed valves

TYPICAL APPLICATIONS

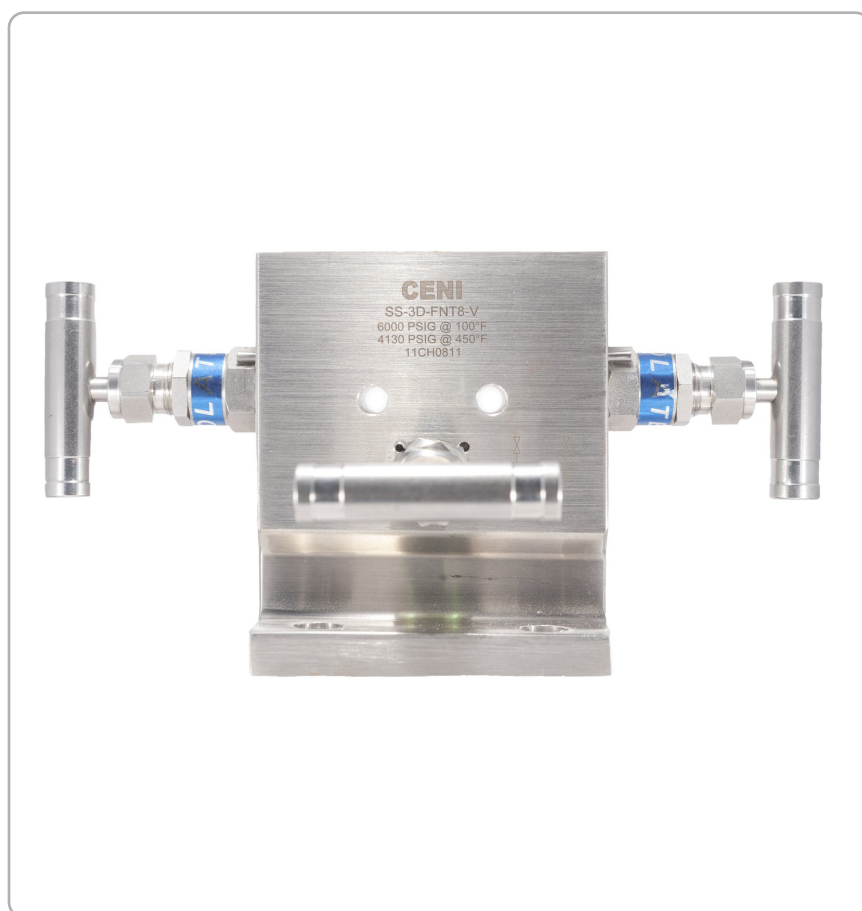
Oil & Gas

Petrochemical

Power Generation

General Industry

etc.



Additional options and full dimensions on the next page

MIP-3V SPB



Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional working pressure	700 bar
Optional working temperature	-50 to 650°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

Tantalum

Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS

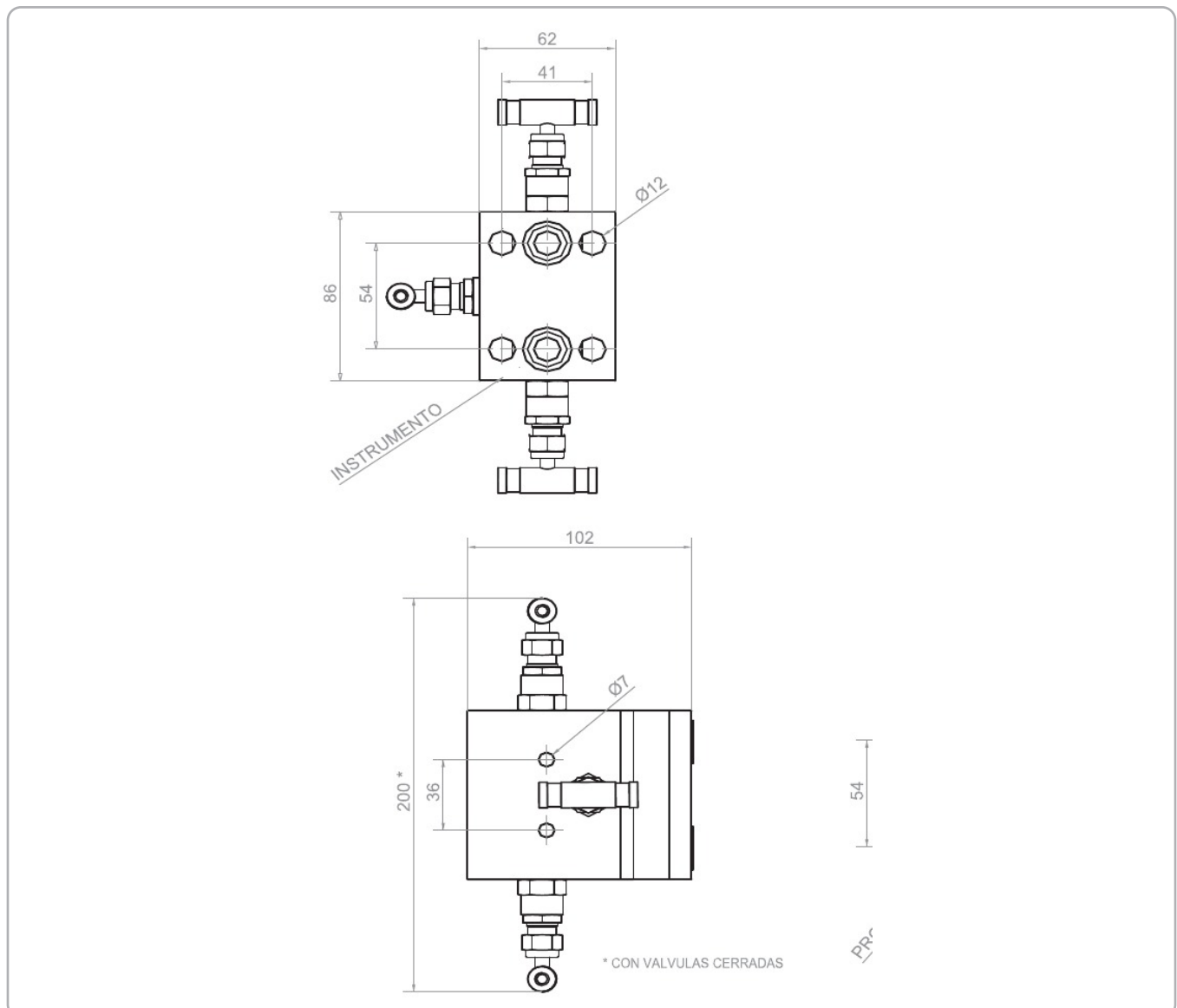


Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



PRESSURE

Pressure › Manifolds and Valves

MIP-5V CP

5-Way Conventional Integral Manifold

5-Way Coplanar



BUY ONLINE

DESCRIPTION

5-way manifold with 2 block valves, 1 equalizing valve and 2 bleed valves, with outlets that can be blocked by 1/4" NPT threaded plugs or connected to a bleed line via suitable tubing. Suitable for the mounting and process connection of differential pressure transmitters with direct Coplanar® coupling.

TECHNICAL SPECIFICATIONS

- Body: solid-block machined AISI 304/316 stainless steel
- Bleed connections: 1/4" NPT
- Working temperature: -50 to 250°C with PTFE packing (up to 650°C with optional Grafoil)
- Process connections: 1/2" NPT female
- Working pressure: up to 400 bar (700 bar optional)
- Instrument coupling: 4-bolt Coplanar® pattern, suitable for multivariable transmitters

TYPICAL APPLICATIONS

Oil & Gas

Petrochemical

Power Generation

General Industry

etc.



Additional options and full dimensions on the next page

MIP-5V CP



Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional working pressure 700 bar

Optional working temperature -50 to 650°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

Tantalum

Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS

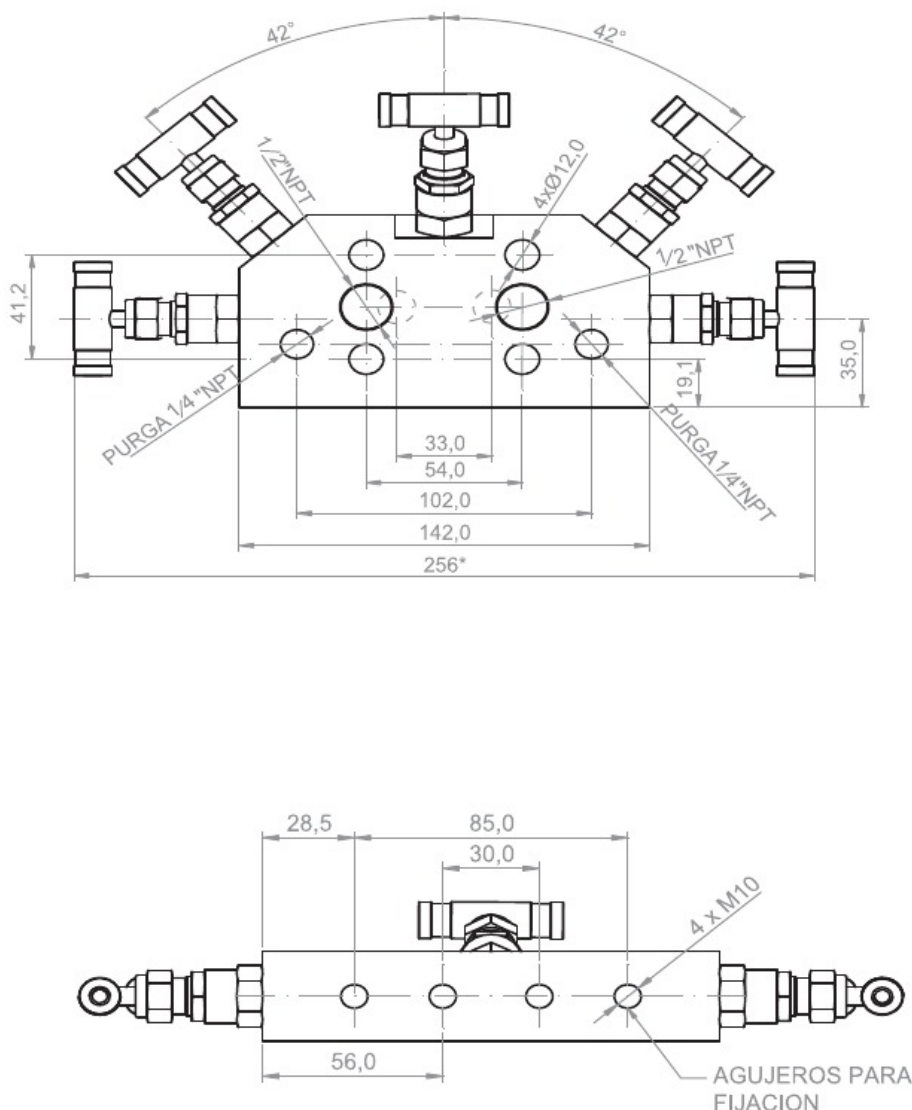


Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



PRESSURE

Pressure › Manifolds and Valves

MIP-5V MRP



BUY ONLINE

5-Way Integral Manifold for Multivariable

5-Way Remote

DESCRIPTION

5-way manifold with 2 block valves, 1 equalizing valve and 2 bleed valves, with outlets that can be blocked by 1/4" NPT threaded plugs or connected to a bleed line via suitable tubing. Suitable for the mounting and process connection of differential pressure transmitters with remote coupling via tubing, with an independent female 1/2" NPT instrument connection.

TECHNICAL SPECIFICATIONS

- Body: solid-block machined AISI 304/316 stainless steel
- Process connections: 1/2" NPT female
- Instrument connections: 1/2" NPT female
- Bleed connections: 1/4" NPT
- Working pressure: up to 400 bar (700 bar optional)
- Working temperature: -50 to 250°C with PTFE packing (up to 650°C with optional Grafoil)

TYPICAL APPLICATIONS

- 🔥 Oil & Gas
- 🔬 Petrochemical
- ⚡ Power Generation
- 🏭 General Industry
- ⌚ etc.



Additional options and full dimensions on the next page

MIP-5V MRP



Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional working pressure 700 bar

Optional working temperature -50 to 650°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

Tantalum

Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS

Dimensiones

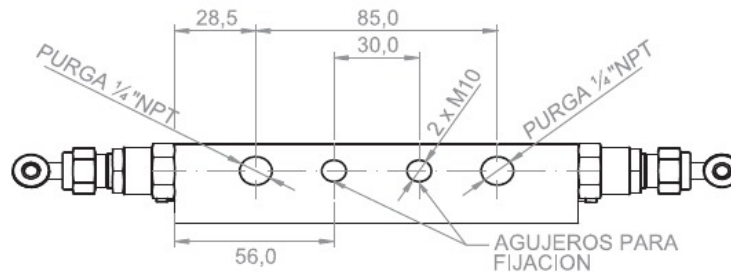
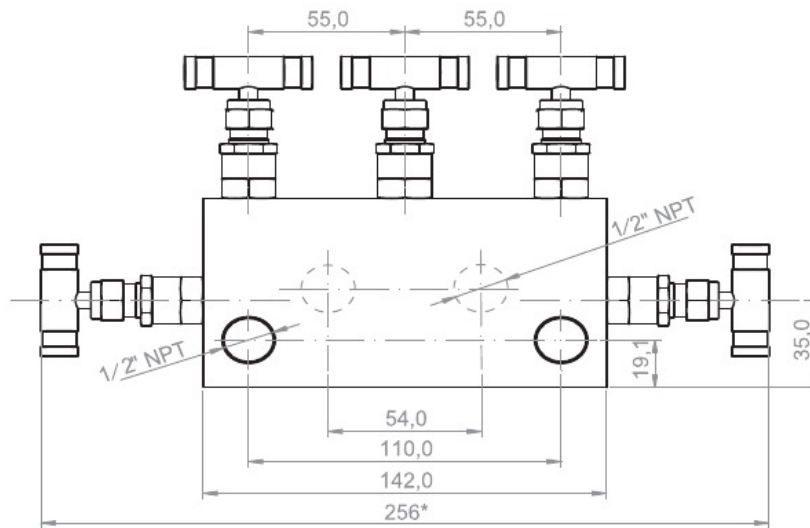


Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



PRESSURE

Pressure · Manifolds and Valves

VS

Simple Block Valve

V5 Series



BUY ONLINE

DESCRIPTION

Hexagonal-body needle valve for medium pressure (400 bar in the standard version), suitable for flow blocking and regulation. Its stainless steel construction, machined from a robust hexagonal bar with careful machining, allows in-line or panel mounting. It provides a secure metal-to-metal seal: it is of the dry-thread type (unaffected by the process fluid), with a non-rotating obturator that cannot be ejected in the event of improper gland disassembly. In the fully open position, the obturator blocks the passage of fluid toward the packing, isolating it from process conditions and increasing the operating safety factor. The bonnet-to-body assembly is threaded, with anti-tamper locking pins. Available with female-female (SS-V5-F8-5) or male-female (SS-V5-M8-F8-5) connections, both 1/2" NPT.

TECHNICAL SPECIFICATIONS

- Body: AISI 304/316 stainless steel, machined hexagonal bar
- Working temperature: -50 to 400°C with PTFE packing (up to 650°C with optional Grafoil)
- Suitable for in-line or panel mounting
- Working pressure: up to 400 bar (700 bar optional)
- Connections: 1/2" NPT female-female or male-female

TYPICAL APPLICATIONS

Oil & Gas

Petrochemical

Power Generation

General Industry

etc.



Additional options and full dimensions on the next page

VS



Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional working pressure 700 bar

Optional working temperature -50 to 650°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

Tantalum

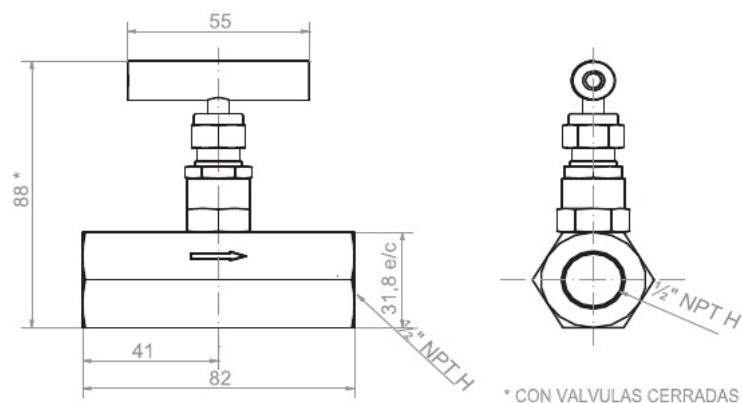
Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS

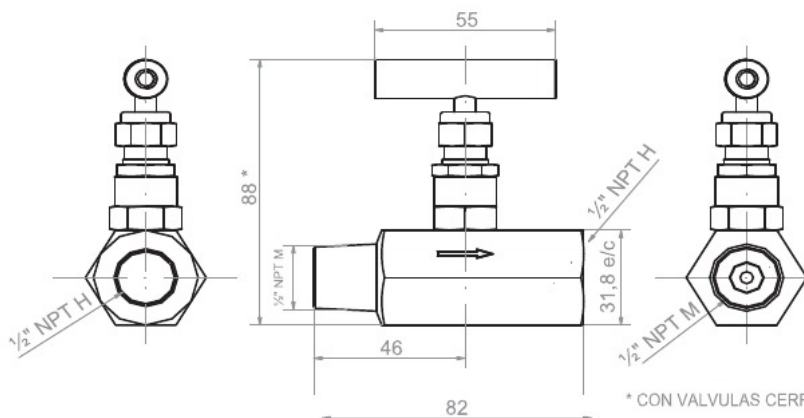
SS-V5-F8-5



* CON VALVULAS CERRADAS

Las conexiones de entrada y salida son roscadas 1/2" NPT hembra.

SS-V5-M8-F8-5



* CON VALVULAS CERR

La conexión de entrada es roscada 1/2" NPT macho y la de salida 1/2" NPT hembra .

Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



PRESSURE

Pressure · Manifolds and Valves

SERIE V

High-Pressure Valve

Up to 4137 bar



BUY ONLINE

DESCRIPTION

Needle valve for high pressure, available in 4 versions depending on the working range: V15 (1034 bar / 15,000 PSI), V20 (1379 bar / 20,000 PSI), V30 (2068 bar / 30,000 PSI) and V60 (4137 bar / 60,000 PSI). It is built in AISI 316 stainless steel, with a robust rectangular prism body and careful machining. It provides a secure metal-to-metal seal, is of the dry-thread type (unaffected by the process fluid), with a non-rotating obturator. The bonnet-to-body assembly is threaded, with an anti-tamper locking plate and screw set. Inlet and outlet connections are made via compression tubing connectors, with stainless steel ferrules.

TECHNICAL SPECIFICATIONS

- Body: AISI 316 stainless steel, machined rectangular prism
- Working temperature: -50 to 250°C with PTFE packing (up to 450°C with optional Grafoil)
- Anti-tamper locking via locking plate and screw
- Working pressure: 1034 to 4137 bar depending on version (V15 / V20 / V30 / V60)
- Connections: for Ø 1/4" OD compression tubing (3/8" or 1/2" OD optional)

TYPICAL APPLICATIONS

Oil & Gas

Petrochemical

Power Generation

General Industry

etc.



Additional options and full dimensions on the next page

SERIE V



Additional Options and Dimensions

ADDITIONAL OPTIONS

Optional tube diameter	3/8" OD or 1/2" OD
Optional working temperature	-50 to 450°C with Grafoil packing

ALTERNATIVE MATERIALS AVAILABLE ON REQUEST

Hastelloy C276

Monel 400

Titanium

Tantalum

Super Duplex Steel

Duplex Steel

Special materials subject to availability and manufacturing lead time inquiry.

DIMENSIONS

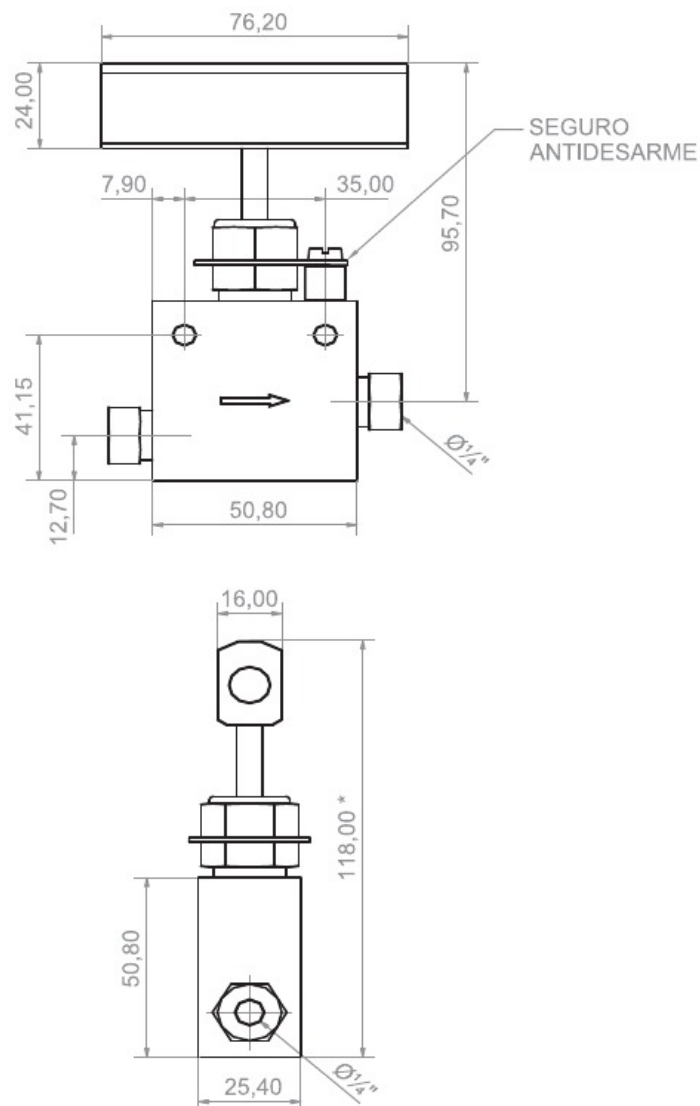


Diagram reproduced from the original factory technical drawing (labels in Spanish). Glossary: INSTRUMENTO = instrument · PURGA = bleed/vent · PROCESO = process · ENTRADA = inlet · SALIDA = outlet · ROSCADA(S) = threaded · HEMBRA = female · MACHO = male · CON VÁLVULA(S) CERRADA(S) = with valve(s) closed · SEGURO ANTIDESARME = anti-tamper lock · AGUJEROS PARA FIJACIÓN = mounting holes. Dimension values use a comma as the decimal separator (e.g. "41,2" = 41.2 mm).

Source: tienda.jmh.com.ar/valvulas-y-manifolds — JMH SRL Product Catalog



Accessories

5 technical data sheets in this group

WHAT IS IT?

Complementary elements that protect, support or ease the maintenance of pressure and temperature instrumentation.

HOW DOES IT WORK?

Each accessory serves a specific function: the test pump generates a reference pressure, heat dissipators keep heat away from the electronics, siphons condense steam, flushing rings allow seals to be cleaned in place, and capillary extensions enable remote instrument mounting.

WHEN IS IT USED?

As an installation complement, for field verification, or for preventive maintenance of instruments already mounted on the plant.





PRESSURE

Pressure > Accessories

BOMBA DE PRUEBA



BUY ONLINE

Manual Pressure Generator Test Pump

Field Verification



IN-HOUSE MANUFACTURING

DESCRIPTION

Hydraulic laboratory equipment for the calibration verification of pressure measuring instruments. It features a manual screw-type pump that generates pressure, with two ports for connecting the instruments under test and an additional port for the reference (master) instrument, each with its own shutoff valve for individual use. All parts in contact with the fluid, including the base cabinet, are built in stainless steel.

APPLICATIONS



Calibration laboratory



Reference instrument verification



Bench testing



Quality control



etc.



Full technical characteristics, accessories and dimensions on the next page

BOMBA DE PRUEBA



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle	Manual screw-type hydraulic pump that generates reference pressure for the bench verification and calibration of pressure measuring instruments in the laboratory	Working pressure	Up to 600 bar / 8700 psi
----------------------------	---	-------------------------	--------------------------

MATERIALS

Body and cabinet	Stainless steel AISI 304 / AISI 316
Fluid reservoir	Acrylic with stainless steel AISI 316 end fittings · 450 cm ³ capacity
Working fluid	Distilled water (recommended), hydraulic oil, glycerin, or another fluid compatible with the internals of the instrument under test
Connections	2 ports for instruments under test + 1 port for the master instrument, with union-nut connectors and an individual shutoff valve on each port

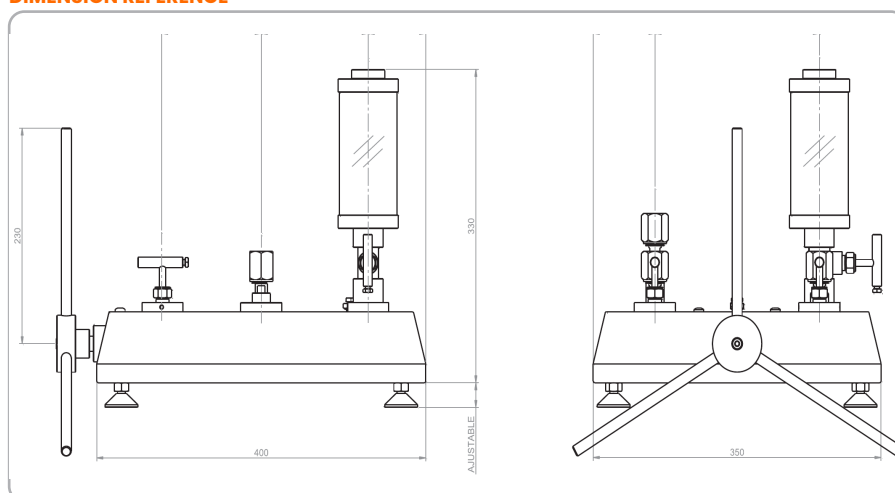
OPTIONS

- 🔥 Different working fluids: distilled water, hydraulic oil, glycerin
- ⦿ Stepped pumping for instruments with high displaced volume
- ⦿ Master instruments available on request, not included in the standard supply
- ⦿ Other customizations on request

DIMENSIONS (mm)

	CHP-701
BASE LENGTH	400
BASE DEPTH	350
TOTAL HEIGHT	330
HANDWHEEL HEIGHT	230

DIMENSION REFERENCE



Adjustable, non-slip support legs, height-adjustable. The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/accesorios



PRESSURE

Pressure > Accessories

DISIPADOR DC-100



BUY ONLINE

DC-100 Heat Dissipator

Thermal Protection



IN-HOUSE MANUFACTURING

DESCRIPTION

Passive thermal insulation element installed in line between the process point and the measuring instrument. Its cylindrical finned body increases the dissipating surface, releasing by radiation and convection a high percentage of the heat received and creating a thermal gradient between its ends that protects both the integrity of the instrument and the accuracy of the measurement.

APPLICATIONS

⌚ High-temperature processes

⌚ Protection of transmitter electronics

⌚ Steam and thermal fluids

⌚ Petrochemical

⌚ etc.



Full technical characteristics, accessories and dimensions on the next page

DISIPADOR DC-100



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Passive finned thermal insulation element that increases the dissipating surface by radiation and convection, creating a thermal gradient between the process and the measuring instrument

Working temperature Guideline by model: DC-150 up to 150°C, DC-200 up to 200°C, DC-300 up to 300°C maximum process temperature, to be validated per the ambient and mounting conditions of each installation

MATERIALS

Finned body Stainless steel AISI 316 (other alloys to be defined per process fluid)

Process / instrument connection 1/2" NPT threaded at both ends · 40 mm outer diameter · 36 mm across-flats hex for wrenching

OPTIONS

⊙ Direct mounting to the process or with a fluid diaphragm seal

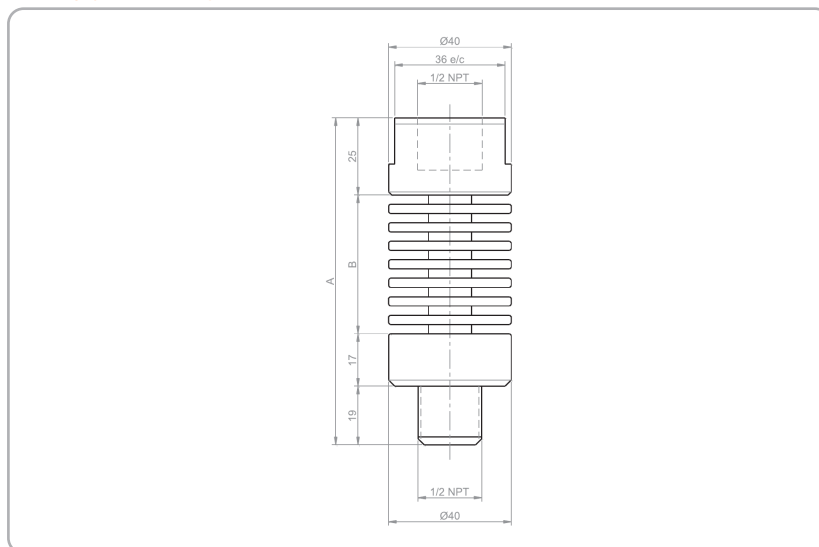
⊙ Three models by dissipation capacity: DC-150, DC-200, DC-300

⊙ Other customizations on request

DIMENSIONS (mm)

	DC-150	DC-200	DC-300
Ø OUTER	40	40	40
HEX (a/f)	36	36	36
A · TOTAL LENGTH	88	106	130
B · FINNED SECTION	27	45	69
CONNECTION	1/2" NPT at both ends		

DIMENSION REFERENCE



Indicative maximum process temperature; must be validated per the ambient and mounting conditions of each installation. The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/accesorios





PRESSURE

Pressure > Accessories

FLUSHING RING



Flushing Ring for Seals

In-Line Maintenance



IN-HOUSE MANUFACTURING

DESCRIPTION

Flushing ring mounted between flanges, with intermediate gaskets, as a complement to diaphragm seals in installations where the process fluid may carry sediment or solidify as temperature drops. Its 2 radial threaded ports, arranged in opposition, allow flushing and drain lines to be connected to clean and drain the diaphragm without removing it from the process.

APPLICATIONS

⦿ Diaphragm seals

⦿ Fluids with suspended solids

⦿ Solidifiable fluids

⦿ In-line maintenance

⦿ etc.



Full technical characteristics, accessories and dimensions on the next page

FLUSHING RING



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle	Ring mounted between flanges that allows the diaphragm of a diaphragm seal to be flushed and drained without removing it from the process, via 2 radial threaded ports arranged in opposition	Working pressure	Per the rating of the selected flange, up to ASME class 2500
----------------------------	---	-------------------------	--

MATERIALS

Body	Stainless steel AISI 316 (other materials to be defined per process fluid)
Flushing fluid	Per customer specifications, injected through the 2 radial threaded ports arranged in opposition for the flushing and drain lines
Process connection	Flanged per ASME B16.5, classes 150 to 2500, for nominal diameters of 1" to 4"

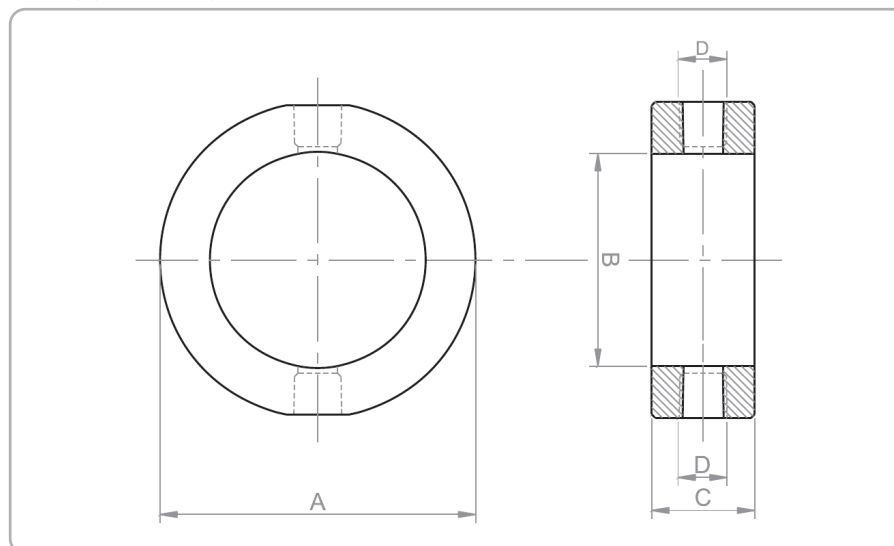
OPTIONS

- ☐ RJ flange available on request
- ☐ DIN flange available on request
- ☐ Flushing connection threads: 1/4" or 1/2" NPT
- ☐ Other customizations on request

DIMENSIONS (mm)

		1/4" NPT	1/2" NPT
1"	A	51	51
	B	35	35
	C	30	35
1 1/2"	A	73	73
	B	50	50
	C	30	35
2"	A	92	92
	B	62	62
	C	40	45
2 1/2"	A	105	105
	B	75	75
	C	50	55
3"	A	127	127
	B	91	91
	C	60	65
3 1/2"	A	140	140
	B	103	103
	C	70	75
4"	A	157	157
	B	116	116
	C	80	85

DIMENSION REFERENCE



Dimensions correspond to the flange faces per ASME B16.5, for nominal diameters of 1" to 4" and working pressures of classes 150 to 2500. The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/accesorios



PRESSURE

Pressure > Accessories

SIFÓN CS-10



BUY ONLINE

CS-10 Steam Protector Siphon

Steam Protection



IN-HOUSE MANUFACTURING

DESCRIPTION

Siphon-type condenser designed to provide adequate isolation for pressure measuring instruments against adverse process conditions, such as the ingress of high-temperature steam or pulsating fluids. The labyrinth created by the siphon loop allows process vapors to condense, accumulating a volume of liquid in the low points that blocks the passage of steam and dampens pulsations.

APPLICATIONS

High-temperature steam

Pulsation damping

Instrument protection

Petrochemical

etc.



Full technical characteristics, accessories and dimensions on the next page

SIFÓN CS-10



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle	Labyrinth siphon-type condenser, installed between the process and the measuring instrument, that condenses high-temperature steam and dampens pulsations through the volume of liquid accumulated in its loop	Working pressure	0 to 600 bar
----------------------------	--	-------------------------	--------------

MATERIALS

Tube	Stainless steel AISI 316
Connectors	Stainless steel AISI 316
Connection	Threaded, per model (see dimensions table) · weld-end process connection available on request

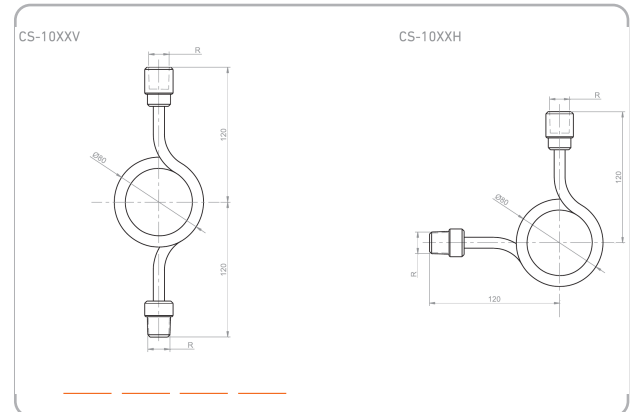
OPTIONS

- Connection threads on request
- Weld-end process connection on request
- Other customizations on request

DIMENSIONS (mm)

	CS-1025V	CS-1050V	CS-1025H	CS-1050H
R · THREAD	1/4" NPT	1/2" NPT	1/4" NPT	1/2" NPT
Ø LOOP	80			
REFERENCE DIMENSION	120			

DIMENSION REFERENCE



V (vertical) and H (horizontal) models per mounting orientation. Connection threads on request; weld-end process connection on request. The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/accesorios





PRESSURE

Pressure > Accessories

LINEA CAPILAR

Capillary Extension Line

Accessory for Seals and Instruments



IN-HOUSE MANUFACTURING



DESCRIPTION

The JMH capillary extension line physically separates the measuring instrument from the process point, enabling its remote mounting in a more accessible location for reading, calibration or maintenance. By moving the instrument away from the tap point, the capillary also acts as a heat-dissipating element along its length, reducing the temperature that ultimately reaches the instrument, and provides additional protection against mechanical vibration inherent to the process. It is used together with a diaphragm seal or directly on the process connection, depending on the requirements of the installation.

APPLICATIONS

○ Petrochemical

🔥 Oil & Gas

○ Steam and high temperature

○ Remote mounting

○ etc.



Full technical characteristics, accessories and dimensions on the next page

LINEA CAPILAR



Technical Characteristics and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Flexible hydraulic transmission line in capillary tubing, installed between a diaphragm seal (or directly the instrument) and the measuring point, that enables remote mounting of the instrument and acts as a cooling element for the fill fluid along its length, dissipating approximately 60 to 80°C per meter of length, depending on installation conditions

Working pressure Up to 700 bar, depending on length and operating temperature

Working temperature -20°C to +400°C at the process end, depending on capillary length

MATERIALS

Capillary tube Stainless steel AISI 316L

External protection Spring-type metal mesh in stainless steel AISI 304, with optional additional PVC sleeve

Transmission fluid Per customer specifications (glycerin, silicone, or food-grade oil, to be defined together with the associated seal or instrument)

Process connection Fixed end (to seal or instrument): 1/4" or 1/2" NPT male

Instrument connection Free end: 1/4" or 1/2" NPT, male or female

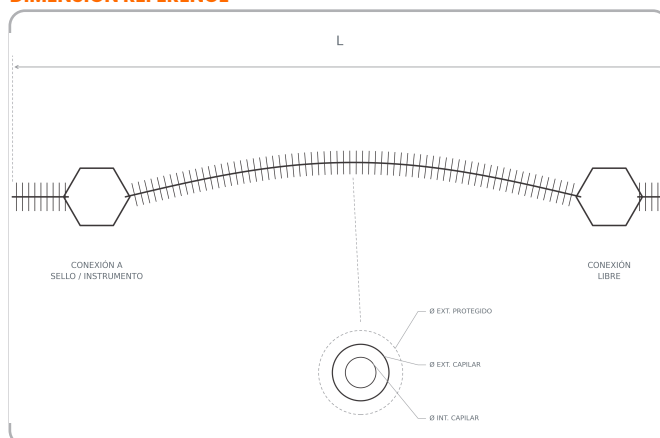
OPTIONS

- Additional PVC protection
- Crimped AISI 316 protection
- Glycerin or silicone fill per service temperature
- Special lengths on request
- Other customizations on request

DIMENSIONS (mm)

	0.5 m	1 m	1.5 m	2 m	3 m	5 m
Ø EXT. CAPILLARY	3.2	3.2	3.2	3.2	3.2	3.2
Ø INT. CAPILLARY	1.5	1.5	1.5	1.5	1.5	1.5
Ø EXT. PROTECTED	5.3	5.3	5.3	5.3	5.3	5.3
FIXED CONNECTION	1/4" or 1/2" NPT male					
FREE CONNECTION	1/4" or 1/2" NPT, male or female					

DIMENSION REFERENCE



Preferably installed in a horizontal position, to minimize reading errors from the liquid column. Special lengths on request, in increments per customer specification. The company reserves the right to modify the data listed in this catalog without prior notice.



Industrial Transmitters

15 technical data sheets in this group

WHAT IS IT?

Electronic instruments that convert process pressure into a standard signal suitable for automation systems.

HOW DOES IT WORK?

A high-stability monocrystalline silicon sensor generates a signal proportional to pressure, which is conditioned and transmitted as 4-20 mA with HART protocol superimposed.

WHEN IS IT USED?

In industrial processes that require continuous monitoring and automatic control: petrochemical, power generation, water treatment and manufacturing.



Selection Table (1/2)

Industrial LEEG / Microsensor transmitters — Pg. = data sheet

MODEL	BRAND	MEASUREMENT TYPE	OUTPUT	RANGE / NOTE	PG.
INDUSTRIAL TRANSMITTERS					
DMP305X-DST	LEEG	Differential Pressure	4-20 mA, HART optional	See order code	106
2035	LEEG	Multivariable	4-20 mA/HART or RS-485 Modbus	200 Pa to 10 MPa	112
SMP858-TST-S	LEEG	Gauge Pressure	4-20 mA, HART optional	See order code	113
DMP305X-TST-S	LEEG	Absolute Pressure	4-20 mA, HART optional	See order code	125
DMP305X-TST-S	LEEG	Gauge Pressure	4-20mA/HART, 1-5VDC or Modbus-RTU	2 kPa to 40 MPa	125
DMP305X-TLT	LEEG	Gauge Pressure (high performance)	4-20mA or 4-20mA+HART	5 kPa to 100 MPa	132
SMP858-NST	LEEG	Differential Pressure	4-20 mA, HART optional	See order code	139
SMP858-DST	LEEG	Differential Pressure	4-20 mA, HART optional	See order code	144
DMP305X-TLF	LEEG	Gauge Pressure (compact lightweight)	4-20mA or 4-20mA+HART	5 kPa to 100 MPa	151
MDM7000DP	Microsensor	Smart Differential Pressure	4-20mA HART, 1-5VDC or Modbus RS-485	20 mbar to 100 bar	158
MDM7000-DGP/DAP	Microsensor	Gauge/Absolute Direct Mount	4-20mA HART (2-wire)	DGP 60 mbar-400 bar · DAP 0.4-100 bar	167
MDM7000-GP/AP	Microsensor	Smart Gauge/Absolute	4-20mA HART	GP 0.4-1000 bar · AP 0.1-100 bar	176
MDM7000-GP-T	Microsensor	Flanged Gauge/Absolute	4-20mA HART, 1-5VDC or Modbus RS-485	GP-T 0.4-100 bar · AP-T 0.4-30 bar	185
MDM7000-LP	Microsensor	Differential with Remote Seal	4-20mA HART, Modbus RS-485 or 1-5VDC	0.4 to 10 bar (min. span 100 mbar)	194
MDM7000LT	Microsensor	Level via Hydrostatic Pressure	4-20mA HART	0.4 to 2.5 bar (up to 10 bar)	202

The company reserves the right to modify the data listed in this catalog without prior notice.

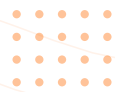


Selection Table (2/2)

LEEG sanitary and compact transmitters — Pg. = data sheet

MODEL	BRAND	MEASUREMENT TYPE	OUTPUT	RANGE / NOTE	PG.
SANITARY TRANSMITTERS					
SMP858-NSF	LEEG	Sanitary Differential Pressure	4-20 mA (2-wire)	Clamp/DIN/SMS connection per order	212
SMP858-TSF-S	LEEG	Sanitary Gauge Pressure	4-20 mA (2-wire)	Clamp/DIN/SMS connection per order	219
SMP858-TLF	LEEG	Gauge Pressure (welded diaphragm)	4-20mA or 4-20mA+HART	20 kPa to 3.5 MPa	224
SMP858-TSF-D	LEEG	Dual-Diaphragm Gauge Pressure	4-20 mA (2-wire)	Clamp/DIN/SMS connection per order	230
SMP858-TSH-S	LEEG	Hygienic Gauge Pressure	4-20 mA (2-wire)	Clamp/DIN/SMS connection per order	236
SMP858-TSD-S	LEEG	Sanitary Gauge Pressure	4-20 mA (2-wire)	Clamp/DIN/SMS connection per order	242
COMPACT TRANSMITTERS					
SMP131-TSD-S	LEEG	Compact Gauge Pressure	4-20 mA (2-wire)	Ultra-compact form factor, OEM use	264
SMP131-TLD(H)	LEEG	Compact Gauge	4-20 mA (2-wire)	Ultra-compact form factor, OEM use	271
SMP131-TLD(H)	LEEG	Compact Absolute Pressure	4-20 mA (2-wire)	Ultra-compact form factor, OEM use	271
SMP131-TLN	LEEG	Compact Gauge	4-20 mA (2-wire)	Ultra-compact form factor, OEM use	272
SMP131-TC(D)(H)	LEEG	Compact Gauge	4-20 mA (2-wire)	Ultra-compact form factor, OEM use	277
SMP131-DLD	LEEG	Compact Differential Pressure	4-20 mA (2-wire)	Ultra-compact form factor, OEM use	283
LCD11	LEEG	Field Indicator with Local Display	4-20 mA (2-wire)	Ultra-compact form factor, OEM use	289

The company reserves the right to modify the data listed in this catalog without prior notice.





PRESSURE

NEW 2026

Pressure › Industrial Transmitters

DMP305X-DST

Differential Pressure Transmitter

LEEG · Industrial

LEEG



BUY ONLINE

DESCRIPTION

Differential pressure transmitter from the LEEG line, with a monocrystalline silicon piezoresistive sensor for demanding industrial applications.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire), HART optional
- Power supply: 16.5 - 55 VDC
- Body: 316L stainless steel
- Exdb / IECEx certification available

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

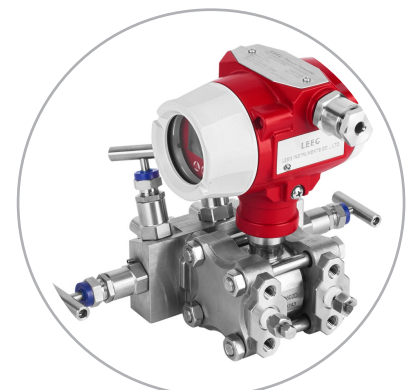
—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



DMP305X-DST

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. SPAN	LRL	URL	STATIC P. LIMIT	HIGH OVERP...	LOW OVERPR...
S602D	6 kPa	200 Pa	-6 kPa	6 kPa	25 MPa	25 MPa	16 MPa
S403D	40 kPa	400 Pa	-40 kPa	40 kPa	40 MPa	25 MPa	16 MPa
S254D	250 kPa	2.5 kPa	-250 kPa	250 kPa	40 MPa	25 MPa	16 MPa
S105D	1 MPa	10 kPa	-500 kPa	1 MPa	40 MPa	25 MPa	16 MPa
S305D	3 MPa	30 kPa	-500 kPa	3 MPa	40 MPa	25 MPa	16 MPa
S106D	10 MPa	100 kPa	-500 kPa	10 MPa	40 MPa	25 MPa	16 MPa

REFERENCE ACCURACY

TD ≤ 10 ±0.075% reference SPAN (optional ±0.05% SPAN)

10 < TD ≤ 100 ±0.0075 × TD % SPAN

Square-root output 1.5 times the linear-output accuracy

TD = Turndown = URL / |URV-LRV| · SPAN = |URV-LRV| · Stability: ±0.2% URL every 5 years

EFFECTS ON MEASUREMENT

Ambient temperature ±(0.1 + 0.015 × TD)% SPAN per 10 °C, within -20 to 80 °C

Static pressure (zero) ±0.15 × TD % URL per 10 MPa

Static pressure (span) ±0.2% URL per 10 MPa

Power supply ≤ ±0.005% URL per Volt, within 10.5/16.5-55 VDC

Mounting position Installation error < 400 Pa, correctable with PV = 0 function

Vibration < 0.1% URL, per IEC 61298-3

DMP305X-DST

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire, 4-20 mA output with superimposed digital communication. Programmable linear or square-root output. HART protocol superimposed on the 4-20 mA signal.
Damping	Total constant = amplifier damping + sensor capsule damping. Amplifier: 0-100 s adjustable · Sensor capsule: ≤0.2 s · Start-up after power loss: ≤6 s · Response time: ≤150 ms
Weight	≈ 4 kg (without mounting bracket or process connection adapter)

POWER SUPPLY AND LOAD

Standard / flameproof	10.5 – 55 VDC
With HART protocol	16.5 – 55 VDC · 250 ohm communication load resistance
Modbus-RTU / RS485	5 – 32 VDC
Load resistance	0-2119 ohm for operation · 250-600 ohm for HART protocol
Transmission distance	< 1000 meters
Consumption	≤500 mW @ 24 VDC, 20.8 mA

Maximum admissible load resistance: $R(\text{ohm}) = (U - 10.5) / 0.021$ · HART communication range: between 250 and 600 ohm (16.5-23.8 V) · up to 2119 ohm at 55 V.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85 °C (with integrated LCD display: -20 to 70 °C)
Storage temperature	-40 to 110 °C (with integrated LCD display: -40 to 85 °C)
Medium temperature (silicone fill)	-40 to 120 °C
Medium temperature (inert fill)	-40 to 85 °C
Working humidity	5-100% RH @ 40 °C
Protection class	IP66 / IP67

DMP305X-DST

LEEC

Complete Order Code Structure

BASE MODEL: DMP305X-DST

SENSOR

Pressure range	S602D	Nominal 6 kPa (min. span 200 Pa)
	S403D	Nominal 40 kPa (min. span 400 Pa)
	S254D	Nominal 250 kPa (min. span 2.5 kPa)
	S105D	Nominal 1 MPa (min. span 10 kPa)
	S305D	Nominal 3 MPa (min. span 30 kPa)
	S106D	Nominal 10 MPa (min. span 100 kPa)
Diaphragm material	S	SUS316L stainless steel
	H	Hastelloy C
Isolating fill fluid	S	Silicone oil, thermal resistance -45 to 205 °C
	D	Inert oil, thermal resistance -45 to 160 °C
Sensor seal	P	PTFE O-ring, thermal resistance -100 to 280 °C

ELECTRICAL CONNECTION

Electrical connection	T1	Aluminum alloy terminal, 2 M20×1.5(H) cable entries, red body, white cover
Cable entry protector	R1	Sealed M20×1.5 connector on one side, blind plug on the other, PVC, 6-8mm cable, IP67
	R2	Flameproof, 1/2 NPT(H) on one side, blind plug on the other, stainless steel, 6-8mm cable, IP67
	R3	Flameproof, M20×1.5(H) on one side, blind plug on the other, stainless steel, 6-8mm cable, IP67

OUTPUT

Output signal	F	Two-wire 4-20 mA, 10.5-55 VDC supply
	H	Two-wire 4-20 mA + HART, 16.5-55 VDC supply
	R	Modbus-RTU / RS485, 5-32 VDC supply
Display	A	Without display
	C	With integrated LCD display

PROCESS CONNECTION

H structure, dual flange	H1	1/4-18 NPT(H) connection, drain valve at the rear end of the flange, SS316
	H2	1/4-18 NPT(H) connection, drain valve at the top of the flange, SS316
	H3	1/4-18 NPT(H) connection, drain valve at the bottom of the flange, SS316

DMP305X-DST

LEEC

Order Options (continued)

PROCESS CONNECTION ACCESSORY

/A1	M20×1.5(M) adapter with Ø14×2×30 pressure guide tube, SS304, for H structure
/A2	1/2-14 NPT(H) adapter, SS304, for H structure

FIXED MOUNTING ACCESSORY

/B1	Curved bracket for 2" pipe mounting, carbon steel
/B2	Curved bracket for panel mounting, carbon steel
/B3	Flat bracket for 2" pipe mounting, carbon steel

CALIBRATION REPORT

/Q1	Calibration report provided by the manufacturer
/Q2	Calibration report by authorized third party (China)
/Q3	Static pressure report (differential pressure only)

APPROVALS

/E1	Flameproof certificate — NEPSI ExdIICT6 / IECEx-ATEX Ex db IIC T6 Gb, Ex tb IIIC T80°C Db
/I1	Intrinsic safety certificate — IECEx-ATEX Ex ia IIC T4 Ga / NEPSI ExiaIICT4
/E2	CSA flameproof certificate
/F3	CE certificate

WETTED PARTS TREATMENT

/G1	Ungrease treatment
/G2	Electropolishing treatment

DMP305X-DST

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Tag position (TAG)

No specific setting

Display mode (DISP)

PV (process variable)

Damping value (DAMP)

0 (no specific setting)

Process unit (U)

Per the order specification

Analog output type

Linear

Alarm signal (ALARM)

Disabled

4-20 mA range (LRV/URV)

Per the order specification

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2015 · Scope: Design and production of pressure transmitters · Registration: I10804039

CE Certificate — ISET

Mark: EU · EMC: 2014/30/EU · Standard: AC/0100708 · Registration: IT41353LG161207

FLAMEPROOF CERTIFICATE BY BODY

NEPSI

ExdIICT6
Working T.: -20 to 55 °C
Medium T.: +80 °C
Reg.: GYB16.1254X

ATEX

Ex db IIC T6 Gb, Ex tb IIIC T80°C
Db
Working T.: -20 to 60 °C
Medium T.: +80 °C
Reg.: CML 19ATEX1078X

IECEX

Ex db IIC T6 Gb, Ex tb IIIC T80°C
Db
Working T.: -20 to 60 °C
Medium T.: +80 °C
Reg.: IECEx NEP 18.0008X

CSA

Class I Div.1 (A-D) T6 · Class II
Div.1 (E-G) T80°C · Class III
Working T.: -40 to 60 °C
Medium T.: —
Reg.: 80020805

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExialICT4
Ambient T.: -40 to 60 °C
Medium T.: +120 °C
Reg.: GYB16.1962X

ATEX

Ex ia IIC T4 Ga
Ambient T.: -20 to 60 °C
Medium T.: +120 °C
Reg.: CML 19ATEX1078X

IECEX

Ex ia IIC T4 Ga
Ambient T.: -20 to 60 °C
Medium T.: +120 °C
Reg.: IECEx NEP 18.0008X

Source: LEEG DMP305X-DST data sheet, Rev. 2021.10.V1.0



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

2035

Multivariable Transmitter

LEEG · Industrial

LEEG



BUY ONLINE

DESCRIPTION

Second-generation multivariable transmitter from the LEEG line, with a more advanced technical solution: composite monosilicon sensor, Hastelloy C diaphragm as the standard configuration (broad media compatibility) and compliance with demanding flameproof standards. It simultaneously measures differential pressure, absolute pressure and temperature, with self-diagnostics and a red backlight fault warning on the display to identify problems on site. Test reports recognized by CNAS China and ILAC.

TECHNICAL SPECIFICATIONS

- Measurement range: 200 Pa to 10 MPa
- Reference accuracy: $\pm 0.075\%$ URL ($\pm 0.05\%$ URL optional)
- Medium temperature: -40 to 120°C
- Output: 4-20 mA, 4-20 mA/HART or RS-485 Modbus
- Diaphragm: Hastelloy C
- Process connection: M20×1.5(M), 1/2-14 NPT(H) or 1/4-18 NPT(H)

TYPICAL APPLICATIONS

- 🔦 Petrochemical and Natural Gas
- 🌿 Environmental Protection
- 💊 Pharmaceutical Industry
- 🍷 Food Industry
- 🚢 Hydraulic and Naval Works
- 🏭 Engineering Machinery

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—





PRESSURE

NEW 2026

Pressure · Industrial Transmitters

SMP858-TST-S

Gauge Pressure Transmitter

LEEG · Industrial

LEEG



BUY ONLINE

DESCRIPTION

Gauge pressure transmitter from the LEEG line, with a monocrystalline silicon piezoresistive sensor for demanding industrial applications.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire), HART optional
- Power supply: 16.5 - 55 VDC
- Body: 316L stainless steel
- Exdb / IECEx certification available

TYPICAL APPLICATIONS

- Differential-pressure level measurement in tanks
- Petrochemical process control and power generation
- HART-protocol instrumentation networks

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP67

ELECTRICAL CONNECTION

M20x1.5 or 1/2" NPT connector, standard cable gland

PROCESS TEMPERATURE

Process: up to 150 °C · Ambient: -30 to 80 °C

CERTIFICATION / QUALITY

Exdb / IECEx available depending on model (consult factory)



SMP858-TST-S

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. SPAN	LRL	URL	OVERLOAD LIMIT
S403G	40 kPa	10 kPa	-40 kPa	40 kPa	1 MPa
S254G	250 kPa	25 kPa	-100 kPa	250 kPa	4 MPa
S105G	1 MPa	100 kPa	-100 kPa	1 MPa	6 MPa
S305G	3 MPa	300 kPa	-100 kPa	3 MPa	15 MPa

REFERENCE ACCURACY

Typical accuracy (linearity, linear output) ±0.2% URL

Maximum accuracy (linear output) ±0.5% URL

Square-root output 1.5 times the linear-output reference accuracy

Stability ±0.2% URL/year

Reference accuracy (includes linearity, hysteresis and repeatability) valid for the nominal values 40 kPa, 250 kPa, 1 MPa and 3 MPa. Calibration temperature: 20°C ±5°C. The overall performance declared by the manufacturer includes, among other factors, reference accuracy, ambient temperature effects and static pressure effects, without a separate numeric value for static pressure being broken out in this data sheet. Test standard: GB/T28474 / IEC60770; zero-based span calibration, linear output, silicone oil fill, 316L stainless steel isolating diaphragm with welded seal. Range adjustment: LRV and URV can be set within the upper and lower range limits, provided that minimum calibratable span ≤ |URV-LRV| ≤ maximum measuring range.

EFFECTS ON MEASUREMENT

Ambient temperature (within -20 to 80°C, total impact) ±0.2% URL/10K

Power supply (within 10.5/16.5-55 VDC) Zero and span shift ≤ ±0.005% URL/V

Load (external resistance) Zero and span shift ≤ ±0.05% URL/k

Vibration Per IEC60068-2-6, 10g RMS (25-2000 Hz)

Shock Per IEC60068-2-27, 500g/1ms

SMP858-TST-S

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire output, 4–20 mA linear, or 4–20 mA + HART linear. Configurable analog output type: linear mA (mA LINER) or square-root mA. Configurable alarm signal: no alarm (ALARM NO), high alarm 20.8 mA (ALARM H) or low alarm 3.8 mA (ALARM L). Fixed output available (FIX/C): typical values 3.8000 / 4.0000 / 8.0000 / 12.000 / 16.000 / 20.000 / 20.800 mA. Insulation resistance ≥ 20 M Ω @ 100 VDC reference.
Damping	Total damping time constant = amplifier damping + sensor capsule damping. Amplifier damping: adjustable from 0 to 100 s. Sensor capsule damping (isolating diaphragm and silicone oil fill): ≤ 0.2 s. Start-up after power loss: ≤ 6 s. Normal service after data recovery: ≤ 31 s.
Weight	Net weight: approx. 0.6 kg (without mounting bracket or process connection adapter)

POWER SUPPLY AND LOAD

Standard	10.5–55 VDC
HART protocol	16.5–55 VDC, 250 communication load resistance

External load resistance: 0–2119 under standard operating conditions; 250–600 for HART protocol (digital communication range).
Maximum admissible resistance formula: $R = (U - 10.5) / 0.021$, where U is the supply voltage in volts. Transmission distance: <1000 meters.
Power consumption: ≤ 500 mW @24VDC, 20.8 mA.

AMBIENT AND PROCESS CONDITIONS

Working temperature	–40 to 85°C; with integrated LCD display: –20 to 70°C
Storage temperature	–40 to 110°C; with integrated LCD display: –40 to 85°C
Medium temperature (hygienic fill)	–10 to 125°C; with heat-exchange connector: –10 to 250°C*
Medium temperature (silicone oil fill)	–40 to 120°C; with heat-exchange connector: –40 to 300°C*
Working humidity	0–95% RH
Protection class	IP67

SMP858-TST-S

LEEC

Complete Order Code Structure

BASE MODEL: SMP858-TST

SENSOR

Pressure range	S403G	Nominal value: 40 kPa
	S254G	Nominal value: 250 kPa
	S105G	Nominal value: 1000 kPa
	S305G	Nominal value: 3000 kPa
Pressure type	G	Gauge pressure
Sensor seal	F	Welded stainless steel seal

ELECTRICAL CONNECTION

Electrical connection	T1	Aluminum alloy terminal, 2 M20×1.5(H) cable entries, red body, white cover
	T2	Aluminum alloy terminal, 2 M20×1.6(H) cable entries, blue body, white cover
Cable entry protector	R1	Sealed M20×1.5 connector on one side, blind plug on the other, PVC, 6-8mm cable, IP67
	R2	Flameproof, 1/2 NPT(H) on one side, blind plug on the other, stainless steel, 6-8mm cable, IP67
	R3	Flameproof, M20×1.5(H) on one side, blind plug on the other, stainless steel, 6-8mm cable, IP67

OUTPUT

Output signal	F	4-20 mA, two-wire, 10.5-55 VDC supply
	H	4-20 mA + HART, two-wire, 16.5-55 VDC supply
Display	C	With LCD display
	A	Without LCD display

PROCESS CONNECTION

Process connector material	4	SUS304 stainless steel
	6	SUS316 stainless steel
Connection type	NT	Standard connection, medium temperature -25 to 85°C
	HT	With cooling element, medium temperature -40 to 150°C
	UT	With capillary element, medium temperature -40 to 300°C
Isolating fill fluid	S	Silicone oil, process temperature -45 to 205°C
	H	High-temperature silicone oil, process temperature 0 to 315°C
Isolating diaphragm material	S	SUS316L stainless steel
	T	Tantalum
	P	SUS316 + PTFE coating
	H	Hastelloy C alloy
	8	Tantalum + PTFE coating
	9	Hastelloy C + PTFE coating
Process connection (flange)	H01	HG/T 20592-2009 DN50 PN10 flange
	H05	HG/T 20592-2009 DN80 PN10 flange

Note The dimensional drawing table in the data sheet also includes a DN100 PN10 flange specification (HG/T20592-2009, outer diameter 200 mm), but the order-code chapter only defines explicit codes for H01 (DN50 PN10) and H05 (DN80 PN10); no equivalent code appears for DN100 in the order table.

SMP858-TST-S

LEEC

Order Options (continued)

CAPILLARY LENGTH

LXX Capillary length from 0 to 10 m

DISPLAY MODE

/D1 Per customer specification

CALIBRATION REPORT

/Q1 Calibration report provided by the manufacturer

/Q2 Calibration report provided by an authorized Chinese third party

APPROVALS

/E1 Flameproof certificate, ExdbIICT6Gb, ExtbIIICT80 Cdb, IECEx or NEPSI

/I1 Intrinsic safety certificate, ExialICT4Ga, IECEx or NEPSI

/E2 CSA flameproof certificate: Class I Division 1 Group A,B,C,D T6; Class II Division 1 Group E,F,G T80C; Class III

/F3 CE certificate

WETTED PARTS TREATMENT

/G1 Degreasing treatment

/G2 Electropolishing treatment

SMP858-TST-S

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position

None, no specific setting

Display mode (DISP)

PV (process variable), no specific setting

Damping value (DAMP)

0, no specific setting

High range value 20mA (URV)

Per the purchase order

Analog output type (mA)

Linear, no specific setting

Alarm signal (ALARM)

None (No), no specific setting

Low range value 4mA (LRV)

Per the purchase order

Process unit (U)

Per the purchase order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2015 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT051353LG161207

FLAMEPROOF CERTIFICATE BY BODY

NEPSI

ExdIICT6
Working T.: -20 to 55°C
Medium T.: +80°C
Reg.: GYB16.1253X

IECEX

Ex db IIC T6 Gb, Ex tb IIIC T80°C
Db
Working T.: -20 to 60°C
Medium T.: +80°C
Reg.: IECEx NEP 19.0042X

CSA

Class I Division 1 Group A,B,C,D
T6; Class II Division 1 Group
E,F,G T80°C; Class III
Working T.: -40 to 60°C
Medium T.: +80°C
Reg.: 80020805

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExialICT4
Ambient T.: -40 to 60°C
Medium T.: +120°C
Reg.: GYB16.1965X

IECEX

Ex ia IIC T4 Ga
Ambient T.: -20 to 60°C
Medium T.: +120°C
Reg.: IECEx NEP 18.0008X

Source: LEEG SMP858-TST-S monosilicon diaphragm pressure transmitter data sheet (sanitary, flanged connection), Rev. 2021.09.V1.0



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

DMP305X-TST-S

LEEG



BUY ONLINE

Absolute Pressure Transmitter

LEEG · Industrial

DESCRIPTION

Absolute pressure transmitter from the LEEG line, with a monocrystalline silicon piezoresistive sensor for demanding industrial applications.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire), HART optional
- Power supply: 16.5 - 55 VDC
- Body: 316L stainless steel
- Exdb / IECEx certification available

TYPICAL APPLICATIONS

- Differential-pressure level measurement in tanks
- Petrochemical process control and power generation
- HART-protocol instrumentation networks

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP67

ELECTRICAL CONNECTION

M20x1.5 or 1/2" NPT connector, standard cable gland

PROCESS TEMPERATURE

Process: up to 150 °C · Ambient: -30 to 80 °C

CERTIFICATION / QUALITY

Exdb / IECEx available depending on model (consult factory)



DMP305X-TST-S

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL VALUE (URL)	MIN. SPAN	LRL	URL	OVERLOAD LIMIT
S403A	40 kPa	2 kPa	0 kPa	40 kPa	1 MPa
S254A	250 kPa	12.5 kPa	0 kPa	250 kPa	4 MPa
S105A	1 MPa	50 kPa	0 kPa	1 MPa	6 MPa
S106A	10 MPa	500 kPa	0 kPa	10 MPa	20 MPa

REFERENCE ACCURACY

TD ≤ 10 (Note 1)	±0.15% URL
10 < TD < 20	±0.015 × TD % URL

Standard and reference conditions, including linearity (BFS), hysteresis and repeatability; calibration temperature 20°C ±5°C. Valid for the nominal values: 40kPa, 250kPa, 1MPa, 10MPa. Note 1: TD is turndown, $TD = URL / |URV-LRV|$. Test standard: GB/T28474 / IEC60770; zero-based span calibration, silicone oil fill, 316L stainless steel isolating diaphragm, 4-20mA analog output. Overall performance (comprehensive, includes among other factors reference accuracy and ambient temperature effects): typical accuracy ±0.15% URL. Stability: ±0.2% URL every 5 years.

EFFECTS ON MEASUREMENT

Ambient temperature effect (typical)	Within -20 to 80°C, total impact ±(0.1 + 0.15×TD)% URL
Mounting position effect	Applicable in any position. Maximum value under 400 Pa, correctable via the zero-set function
Vibration effect	Per GB/T 1827.3 / IEC61298-3 testing: <0.1% URL
Power supply effect	Zero and span shift must not exceed ±0.005% URL/V when supply varies between 10.5/16.5 and 55 VDC
Insulation resistance	≥20 M @ 100VDC
Electromagnetic compatibility (EMC)	Complies with GB/T9254/CISPR22 (radiated and conducted interference) and IEC61000-4-2/3/4/5/6/8 (immunity to ESD, RF fields, fast transients/bursts, surge and power-frequency magnetic field)

DMP305X-TST-S

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4-20mA output. The user can select linear or square-root output. Digital process variables are superimposed on the 4-20mA signal and are compatible with any HART protocol host. Output code F: two-wire 4-20mA, 10.5-55VDC supply. Code H: two-wire 4-20mA+HART, 16.5-55VDC supply. Display: A = without display; C = with LCD display.
Damping	Total damping time constant: equal to the sum of the amplifier damping and the sensor capsule damping. Amplifier damping: adjustable from 0 to 100 s. Diaphragm damping (isolating sensor + silicone oil fill): ≤0.2 s. Start-up after power loss: ≤6 s. Normal service after data recovery: ≤31 s.
Weight	Net weight: approximately 1.87 kg (without mounting bracket or process connection adapter)

POWER SUPPLY AND LOAD

Standard / flameproof	10.5 – 55 VDC
With HART protocol	16.5 – 55 VDC (250 ohm communication load resistance)
Transmission distance	< 1000 m
Power consumption	≤500 mW @ 24VDC (20.8 mA)

External load resistance $R(\text{ohm})$: 0-2119ohm under standard working conditions, 250-600ohm for HART protocol. Formula: $R = (U - 10.5) / 0.021$, where U = supply voltage (V). Reference points on the graph: 10.5V/0ohm, 16.5V/250ohm (start of HART communication range), 23.8V/600ohm (end of HART range), 55V/2119ohm.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C (with integrated LCD display: -20 to 70°C)
Storage temperature	-40 to 110°C (with integrated LCD display: -40 to 85°C)
Medium temperature	Silicone oil fill: -40 to 120°C
Working humidity	5-100% RH @ 40°C
Protection class	IP67
Insulation resistance	≥20 M @ 100VDC
Hazardous area rating	ExiaIICT4 (GYB16.1962X) and ExdIICT6 (GYB16.1254X) — 4-20mA output only

DMP305X-TST-S

LEEC

Complete Order Code Structure

BASE MODEL: DMP305X-TST

SENSOR — PRESSURE RANGE

Pressure range (sensor code)	S403A	Nominal value (URL) 40 kPa
	S254A	Nominal value (URL) 250 kPa
	S105A	Nominal value (URL) 1 MPa
	S106A	Nominal value (URL) 10 MPa

SENSOR — DIAPHRAGM MATERIAL

Diaphragm material	S	SUS316L
	H	Hastelloy C

SENSOR — ISOLATING FILL FLUID

Isolating fill fluid	S	Silicone oil, process temperature -45 to 205°C
	D	Fluorocarbon oil, process temperature -10 to 160°C

SENSOR — SEAL

Sensor seal	F	Welded stainless steel seal
-------------	----------	-----------------------------

ELECTRICAL CONNECTION

Electrical connection	T1	Aluminum alloy terminal, 2 M20×1.5(F) cable entries, red body, white cover
Cable entry protector	R1	Sealed M20×1.5 connector on one side, blind plug on the other, PVC, 6-8mm cable only, IP67
	R2	Flameproof, 1/2 NPT(F) on one side, blind plug on the other, stainless steel, 6-8mm cable only, IP67
	R3	Flameproof, M20×1.5(F) on one side, blind plug on the other, stainless steel, 6-8mm cable only, IP67

OUTPUT / DISPLAY

Output signal	F	Two-wire 4-20mA, 10.5-55VDC supply
	H	Two-wire 4-20mA+HART, 16.5-55VDC supply
Display	C	With LCD display
	A	Without LCD display

PROCESS CONNECTION — MATERIAL

Material	6	SUS316 stainless steel
----------	----------	------------------------

PROCESS CONNECTION — SPECIFICATION

Specification	M01	M20×1.5(M), Ø3 pressure guide hole, GB/T193-2003, ISO261
	G01	G1/2(M), Ø3 pressure guide hole, GB/T7307, ISO228, DIN16288, BS2779
	G02	G1/4(M), Ø3 pressure guide hole, EN837
	G08	G1/4(M), Ø3 pressure guide hole, GB/T7307, ISO228, DIN16288, BS2779, DIN3852-E reference seal (backup seal)
	R01	1/2-14NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R02	1/4-18NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R03	1/2-14NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R04	1/4-18NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1

DMP305X-TST-S

LEEC

Order Options (continued)

FIXED MOUNTING ACCESSORY

/B4 U-bracket, for 2-inch pipe, applicable to T-structure

MOUNTING ACCESSORY — PROCESS CONNECTION

/N1 Heat-exchange connector, changes M20×1.5(F) to M20×1.5(M), SUS304 (condenser tube)

/N2 Heat-exchange connector, changes M20×1.5(F) to M20×1.5(M), SUS304 (cooling fin)

PROCESS CONNECTION ACCESSORY

/Z1 Weld adapter, M20×1.5(F), SUS304

/Z2 Weld adapter, G1/2(F), SUS304

DISPLAY MODE

/D1 Per customer requirements

CALIBRATION REPORT

/Q1 Calibration report provided by the company

APPROVALS (combinable)

/E1 Flameproof certificate, ExdbIICT6Gb, ExtbIIIC T80°C Db, IECEx

/I1 Intrinsic safety certificate, ExialICT4Ga, IECEx

/E2 Flameproof certificate, ExdIICT6, NEPSI

/I2 Intrinsic safety certificate, ExialICT4, NEPSI

/F3 CE certificate

WETTED PARTS TREATMENT

/G1 Degreasing treatment

/G2 Electropolishing treatment

DMP305X-TST-S

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position

None / no specific setting (0)

Display mode (DISP)

PV, no specific setting

Damping value (DAMP)

0 (no specific setting)

High range value 20mA (URV)

Per order

Analog output type (mA)

Linear, no specific setting

Alarm signal (ALARM)

No, no specific setting

Low range value 4mA (LRV)

Per order

Process unit (U)

Per order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: EU · EMC: 2014/30/EU · Standard: AC/0100708 · Registration: IT41353LG161207

FLAMEPROOF CERTIFICATE BY BODY

NEPSI

ExdIICT6
Working T.: -25 to 60°C
Medium T.: +80°C
Reg.: GYB16.1254X

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExialICT4
Ambient T.: -40 to 60°C
Medium T.: +120°C
Reg.: GYB16.1962X

Source: LEEG DMP305X-TST-S Monosilicon Absolute Pressure Transmitter data sheet, Rev. 2019.03.V1.0



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

DMP305X-TST-S

LEEG



BUY ONLINE

Gauge Pressure Transmitter

LEEG · Industrial

DESCRIPTION

Gauge pressure transmitter with a mono-silicon sensor from the LEEG line, typically used in process or environmental applications for continuous pressure measurement in liquids, vapors and gases. Reliable flameproof construction and electronics, suitable for classified (Ex) areas.

TECHNICAL SPECIFICATIONS

- Measurement range: 2 kPa to 40 MPa
- Reference accuracy: $\pm 0.1\%$ URL ($\pm 0.075\%$ URL optional)
- Net weight: ~1.56 kg
- Output: 4-20mA, 4-20mA+HART, low-consumption 1-5VDC or Modbus-RTU/RS485
- Measurement medium: liquid, gas or vapor
- Certifications: CE, NEPSI, ATEX, IECEx, CSA, RoHS

TYPICAL APPLICATIONS

- ⌚ Differential-pressure level measurement in tanks
- ⌚ Petrochemical process control and power generation
- ⌚ HART-protocol instrumentation networks

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP67

ELECTRICAL CONNECTION

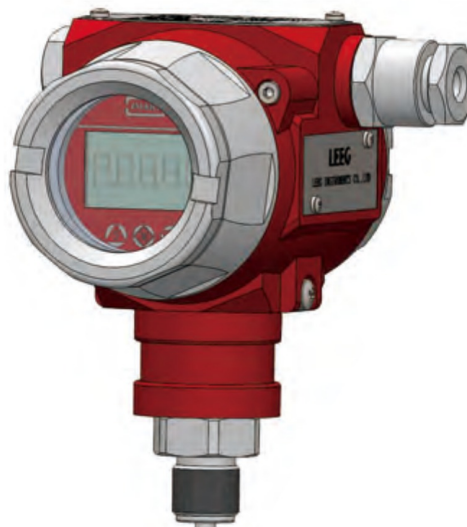
M20x1.5 or 1/2" NPT connector, standard cable gland

PROCESS TEMPERATURE

Process: up to 150 °C · Ambient: -30 to 80 °C

CERTIFICATION / QUALITY

Exdb / IECEx available depending on model (consult factory)



DMP305X-TST-S

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. SPAN	LRL	URL	OVERLOAD LIMIT
S403G	40 kPa	2 kPa	-40 kPa	40 kPa	1 MPa
S254G	250 kPa	12.5 kPa	-100 kPa	250 kPa	4 MPa
S105G	1 MPa	50 kPa	-100 kPa	1 MPa	6 MPa
S305G	3 MPa	150 kPa	-0.1 MPa	3 MPa	15 MPa
S106G	10 MPa	500 kPa	-0.1 MPa	10 MPa	20 MPa
S406S	40 MPa	5 MPa	-0.1 MPa	40 MPa	80 MPa

REFERENCE ACCURACY

- TD ≤ 5 (40 kPa and 250 kPa ranges)** ±0.1% reference SPAN
- TD ≤ 5 (1, 3, 10 and 40 MPa ranges)** ±0.075% reference SPAN
- TD > 5 (40 kPa and 250 kPa ranges)** ±(0.025 + 0.035 × TD)% SPAN
- TD > 5 (1, 3, 10 and 40 MPa ranges)** ±(0.0025 + 0.0145 × TD)% SPAN

Standard and reference conditions, including linearity (BFSL), hysteresis and repeatability; calibration temperature 20°C ±5°C. TD = Turn down = URL / |URV-LRV|; SPAN = |URV-LRV|. Reference accuracy stated in Main parameters: ±0.1%URL, optional ±0.075%URL. Typical accuracy (overall performance, including among other factors reference accuracy and ambient temperature effects): ±0.1%URL. Stability: ±0.2%URL / 5 years. Test standard: GB/T28474 / IEC60770; zero-based span calibration, silicone oil fill, 316L stainless steel isolating diaphragm, 4-20mA analog output.

EFFECTS ON MEASUREMENT

- Mounting position** Applicable in any position. Maximum value under 400 Pa, correctable via the zero-adjustment function
- Vibration** Per GB/T 1827.3 / IEC61298-3 testing: <0.1% URL
- Ambient temperature (typical)** ±(0.0375 × TD + 0.075)% of span per 10°C
- Power supply** Zero and span shift must not exceed ±0.005% URL/V when supply varies within 10.5/16.5-55VDC
- Insulation resistance** ≥20 M @ 100 VDC

DMP305X-TST-S

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4-20mA (codes F/H), or low-consumption four-wire 1-5VDC (codes 1D/1H). The customer can select linear or square-root output. Digital process variables are superimposed on the 4-20mA signal and are compatible with any HART protocol host. Also available in Modbus-RTU/RS485 (code R). Configurable alarm: none (ALARM NO), high (20.8mA) or low (3.8mA). Fixed output available between 3.8000 and 20.800 mA.
Damping	Total damping time constant: equal to the sum of the amplifier damping and the sensor capsule damping. Amplifier damping: adjustable from 0 to 100 s. Diaphragm capsule damping (isolating diaphragm with oil fill): ≤0.2 s. Start-up after power loss: ≤6 s. Normal service after data recovery: ≤31 s. Response time: ≤150 ms.
Weight	Net weight: approximately 1.56 kg (without mounting brackets or process connection accessories)

POWER SUPPLY AND LOAD

Standard (4-20mA)	10.5 – 55 VDC
With HART protocol	16.5 – 55 VDC, 250 ohm communication load resistance
Modbus-RTU/RS485	5 – 32 VDC
Low-consumption 1-5VDC (4-wire)	9 – 55 VDC (maximum current draw: 5 mA)
Load resistance	0-2119 ohm under working conditions, 250-600 ohm for HART protocol
Transmission distance	< 1000 m
Power consumption — 4-20mA / HART	≤500 mW @ 24VDC (20.8 mA)
Power consumption — Modbus-RTU/RS485	≤240 mW @ 24VDC (10 mA)
Power consumption — low-consumption 1-5VDC	≤100 mW @ 24VDC (5 mA)

External load resistance $R(\text{ohm}) = (U - 10.5) / 0.021$, where U = supply voltage (V). Reference points on the graph: 10.5V/0ohm, 16.5V/250ohm (start of HART digital communication range), 23.8V/600ohm (end of HART range), 55V/2119ohm.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-20 to 85°C (with integrated LCD display: -20 to 70°C)
Storage temperature	-40 to 85°C (with integrated LCD display: -20 to 70°C)
Medium temperature — silicone oil fill	-45 to 205°C
Medium temperature — inert oil fill	-45 to 160°C
Medium temperature — hygienic fill	-10 to 180°C
Working humidity	5-100% RH @ 40°C
Protection class	IP66/IP67

DMP305X-TST-S

LEEC

Complete Order Code Structure

BASE MODEL: DMP305X-TST

SENSOR — PRESSURE RANGE

Pressure range (sensor code)	S403G	Nominal (URL) 40 kPa
	S254G	Nominal (URL) 250 kPa
	S105G	Nominal (URL) 1 MPa
	S305G	Nominal (URL) 3 MPa
	S106G	Nominal (URL) 10 MPa
	S406S	Nominal (URL) 40 MPa

SENSOR — DIAPHRAGM MATERIAL

Diaphragm material	S	SUS316L
	H	Hastelloy C

SENSOR — ISOLATING FILL FLUID

Isolating fill fluid	S	Silicone oil, thermal resistance -45 to 205°C
	D	Inert oil, thermal resistance -45 to 160°C

SENSOR — SEAL

Sensor seal	S	FKM
	F	Welded stainless steel seal

ELECTRICAL CONNECTION

Electrical connection	T1	Aluminum alloy terminal, 2 M20×1.5(F) cable entries, red body, white cover
-----------------------	-----------	--

CABLE ENTRY PROTECTOR

Cable entry protector	R1	Sealed M20×1.5 connector on one side, blind plug on the other, PVC, Ø6-8mm cable only, IP66/IP67
	R2	Flameproof, 1/2 NPT(F) on one side, blind plug on the other, stainless steel, Ø6-8mm cable only, IP66/IP67
	R3	Flameproof, M20×1.5(F) on one side, blind plug on the other, stainless steel, Ø6-8mm cable only, IP66/IP67

OUTPUT / DISPLAY

Output signal	F	Two-wire 4-20mA, 10.5-55VDC supply
	H	Two-wire 4-20mA+HART, 16.5-55VDC supply
	1D	Low-consumption four-wire 1-5VDC, 9-55VDC supply
	1H	Low-consumption four-wire 1-5VDC+HART, 9-55VDC supply
	R	Modbus-RTU/RS485, 5-32VDC supply
Display	A	Without LCD display
	C	With LCD display

PROCESS CONNECTION — MATERIAL

Material	4	SUS304 stainless steel
	6	SUS316 stainless steel

DMP305X-TST-S

LEEC

Order Code (continued)

PROCESS CONNECTION — SPECIFICATION

Specification	M01	M20×1.5(M), Ø3 pressure guide hole, GB/T193-2003, ISO261
	G01	G1/2(M), Ø3 pressure guide hole, GB/T7307, ISO228, DIN16288, BS2779
	G02	G1/4(M), Ø3 pressure guide hole, EN837
	G08	G1/4(M), Ø3 pressure guide hole, GB/T7307, ISO228, DIN16288, BS2779, DIN3852-E reference seal (backup seal)
	R01	1/2-14NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R02	1/4-18NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R03	1/2-14NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R04	1/4-18NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1

DMP305X-TST-S

LEEC

Order Options (continued)

FIXED MOUNTING ACCESSORY

/B4	U-bracket, for 2" pipe, applicable to T-structure
-----	---

DISPLAY MODE

/D1	Per customer requirements
-----	---------------------------

CALIBRATION REPORT

/Q1	Calibration report provided by the company
-----	--

APPROVALS (combinable)

/E1	Flameproof certificate: NEPSI ExdbIICT6; IECEx or ATEX Ex db IIC T6 Gb, Ex tb IIIC T80°C Db (specify ATEX, IECEx or NEPSI when ordering)
/I1	Intrinsic safety certificate: IECEx or ATEX ExiaIICT4Ga; NEPSI ExiaIICT4 (specify ATEX, IECEx or NEPSI when ordering)
/E2	CSA flameproof certificate: Class I Div. 1 Group A,B,C,D T6; Class II Div. 1 Group E,F,G T80°C; Class III
/F3	CE certificate

WETTED PARTS TREATMENT

/G1	Degreasing treatment (ungrease)
/G2	Electropolishing treatment

DMP305X-TST-S

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position (TAG, None marking)

0 (no specific setting)

Display mode (DISP)

PV (no specific setting)

Damping value (DAMP)

0 (no specific setting)

High range value 20mA (URV)

Per order

Analog output type (mA)

Linear (no specific setting)

Alarm signal (ALARM)

No (no specific setting)

Low range value 4mA (LRV)

Per order

Process unit (U)

Per order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2015 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: EU · EMC: 2014/30/EU · Standard: AC/0100708 · Registration: IT41353LG161207

FLAMEPROOF CERTIFICATE BY BODY

NEPSI

ExdIICT6
Working T.: -20 to 55°C
Medium T.: +80°C
Reg.: GYB21.1692X

ATEX

Ex db IIC T6 Gb, Ex tb IIIC T80°C
Db
Working T.: -20 to 60°C
Medium T.: +80°C
Reg.: CML 19ATEX1078X

IECEX

Ex db IIC T6 Gb, Ex tb IIIC T80°C
Db
Working T.: -20 to 60°C
Medium T.: +80°C
Reg.: IECEx NEP 18.0008X

CSA

Class I, Division 1, Group A, B, C and D T6; Class II, Division 1, Group E, F and G T80°C; Class III
Working T.: -40 to 60°C
Medium T.: Not specified in the...
Reg.: 80020805

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiallCT4
Ambient T.: -40 to 60°C
Medium T.: +120°C
Reg.: GYB21.4030X

ATEX

Ex ia IIC T4 Ga
Ambient T.: -20 to 60°C
Medium T.: +120°C
Reg.: CML 19ATEX1078X

IECEX

Ex ia IIC T4 Ga
Ambient T.: -20 to 60°C
Medium T.: +120°C
Reg.: IECEx NEP 18.0008X

Source: LEEG DMP305X-TST-S monosilicon gauge pressure transmitter data sheet, Rev. 2022.11.V1.0



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

DMP305X-TLT

LEEG



BUY ONLINE

Gauge Pressure Transmitter

LEEG · Industrial

DESCRIPTION

High-performance LEEG gauge pressure transmitter, with a microprocessor transmission module and surface mounting that corrects measurement error via an integrated temperature sensor. Three external-button menu for safe local configuration in hazardous areas; remote configuration available via controller or HART software.

TECHNICAL SPECIFICATIONS

- Measurement range: 5 kPa to 100 MPa
- Reference accuracy: $\pm 0.2\%$ URL ($\pm 0.5\%$ URL max.)
- Net weight: ~1.44 kg
- Output: 4-20mA or 4-20mA+HART
- Measurement medium: liquid, gas or vapor
- Certifications: CE, NEPSI, ATEX, IECEx, CSA, RoHS

TYPICAL APPLICATIONS

- ⌚ Differential-pressure level measurement in tanks
- ⌚ Petrochemical process control and power generation
- ⌚ HART-protocol instrumentation networks

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP67

ELECTRICAL CONNECTION

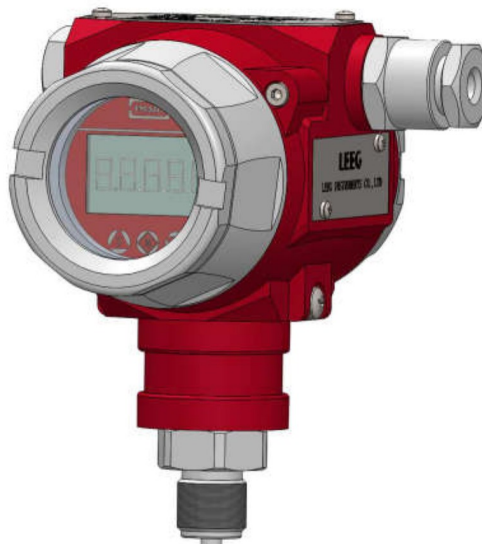
M20x1.5 or 1/2" NPT connector, standard cable gland

PROCESS TEMPERATURE

Process: up to 150 °C · Ambient: -30 to 80 °C

CERTIFICATION / QUALITY

Exdb / IECEx available depending on model (consult factory)



DMP305X-TLT

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. CALIBRATABLE SP...	LRL	URL	OVERLOAD LIMIT
L702G	7 kPa	5 kPa	-7 kPa	7 kPa	10.5 kPa
L203G	20 kPa	10 kPa	-20 kPa	20 kPa	30 kPa
L353G	35 kPa	20 kPa	-35 kPa	35 kPa	52.5 kPa
L104G	100 kPa	35 kPa	-100 kPa	100 kPa	150 kPa
L204G	200 kPa	100 kPa	-100 kPa	200 kPa	300 kPa
L704G	700 kPa	200 kPa	-100 kPa	700 kPa	1050 kPa
L105G	1 MPa	500 kPa	-0.1 MPa	1 MPa	1.5 MPa
L175G	1.7 MPa	1 MPa	-0.1 MPa	1.7 MPa	2.55 MPa
L355G	3.5 MPa	1.7 MPa	-0.1 MPa	3.5 MPa	5.25 MPa
L705S	7 MPa	3.5 MPa	-0.1 MPa	7 MPa	10.5 MPa
L176S	17 MPa	7 MPa	-0.1 MPa	17 MPa	25.5 MPa
L356S	35 MPa	17 MPa	-0.1 MPa	35 MPa	52.5 MPa
L406S	40 MPa	20 MPa	-0.1 MPa	40 MPa	60 MPa
L606S	60 MPa	30 MPa	-0.1 MPa	60 MPa	90 MPa
L706S	70 MPa	35 MPa	-0.1 MPa	70 MPa	105 MPa
L107S	100 MPa	50 MPa	-0.1 MPa	100 MPa	150 MPa

REFERENCE ACCURACY

Typical accuracy (linear output) ±0.2% URL

Maximum accuracy (linear output) ±0.5% URL

Standard and reference conditions, including linearity (BFSL), hysteresis and repeatability. Calibration temperature: 20°C ±5°C. Valid for the nominal values: 7kPa, 20kPa, 35kPa, 100kPa, 200kPa, 700kPa, 1MPa, 1.7MPa, 3.5MPa, 7MPa, 17MPa, 35MPa, 40MPa, 60MPa, 70MPa, 100MPa. The square-root output accuracy is 1.5 times the linear-output reference accuracy stated above. Test standard: GB/T28474 / IEC60770; zero-based span calibration, silicone oil fill, 316L stainless steel isolating diaphragm, 4-20mA analog output. Stability: ±0.1% URL / year.

EFFECTS ON MEASUREMENT

Ambient temperature (typical) Total effect within -20 to 80°C: ±(0.1 + 0.1×TD)% URL

Power supply Zero and span shift not exceeding ±0.005% URL/V when supply varies between 10.5/16.5 and 55VDC

Mounting position Applicable in any position; installation error under 400 Pa, correctable via the PV=0 adjustment

Vibration Per GB/T 1827.3 / IEC61298-3 testing: <0.1% URL

DMP305X-TLT

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4-20mA output (code F, 10.5-55VDC supply) or two-wire 4-20mA+HART output (code H, 16.5-55VDC supply). The user can select linear or square-root output. Digital process variables are superimposed on the 4-20mA signal and are compatible with any HART protocol host.
Damping	Total damping time constant: sum of the amplifier damping and the sensor capsule damping. Amplifier damping: 0-100s adjustable. Diaphragm capsule damping (isolating diaphragm and silicone oil fill): ≤0.2s. Start-up after power loss: ≤6s. Normal service after data recovery: ≤31s. Response time: ≤150ms.
Weight	Net weight: approximately 1.44 kg (without mounting bracket or process connection adapter)

POWER SUPPLY AND LOAD

Standard (4-20mA)	10.5 – 55 VDC
HART	16.5 – 55 VDC, 250 ohm communication load resistance
Power consumption	≤500 mW @ 24VDC, 20.8 mA

External load resistance: 0-2119 ohm under normal working conditions; 250-600 ohm for HART protocol. Maximum admissible resistance formula: $R = (U - 10.5) / 0.021$, where U is the supply voltage in V (graphed range 10.5-55V, with the HART communication band between 16.5 and 55V). Transmission distance: <1000 m.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C (with integrated LCD display: -20 to 70°C)
Storage temperature	-40 to 110°C (with integrated LCD display: -40 to 85°C)
Medium temperature (silicone oil fill)	-45 to 205°C
Working humidity	5-100% RH @ 40°C
Protection class	IP67
Insulation resistance	≥20 M @ 100VDC

DMP305X-TLT

LEEC

Complete Order Code Structure

BASE MODEL: DMP305X-TLT

SENSOR – PRESSURE RANGE

Pressure range	L702G	Nominal (URL) 7 kPa, min. span 5 kPa
	L203G	Nominal (URL) 20 kPa, min. span 10 kPa
	L353G	Nominal (URL) 35 kPa, min. span 20 kPa
	L104G	Nominal (URL) 100 kPa, min. span 35 kPa
	L204G	Nominal (URL) 200 kPa, min. span 100 kPa
	L704G	Nominal (URL) 700 kPa, min. span 200 kPa
	L105G	Nominal (URL) 1000 kPa (1 MPa), min. span 500 kPa
	L175G	Nominal (URL) 1700 kPa (1.7 MPa), min. span 1 MPa
	L355G	Nominal (URL) 3.5 MPa, min. span 1.7 MPa
	L705S	Nominal (URL) 7 MPa, min. span 3.5 MPa
	L176S	Nominal (URL) 17 MPa, min. span 7 MPa
	L356S	Nominal (URL) 35 MPa, min. span 17 MPa
	L406S	Nominal (URL) 40 MPa, min. span 20 MPa
	L606S	Nominal (URL) 60 MPa, min. span 30 MPa
	L706S	Nominal (URL) 70 MPa, min. span 35 MPa
	L107S	Nominal (URL) 100 MPa, min. span 50 MPa

SENSOR – MATERIALS AND SEALS

Isolating diaphragm material	S	SUS316L
Isolating fill fluid	S	Silicone oil, process temperature -45 to 205°C
Sensor seal	S	O-ring, FKM, process temperature -20 to 200°C

ELECTRICAL CONNECTION

Electrical connection	T1	Aluminum alloy terminal, 2 M20×1.5(F) cable entries, red body, white cover
Cable entry protector	R1	Sealed M20×1.5 connector on one side, blind plug on the other, PVC, 6–8mm cable, IP67
	R2	Flameproof, 1/2 NPT(F) on one side, blind plug on the other, stainless steel, 6–8mm cable, IP67
	R3	Flameproof, M20×1.5(F) on one side, blind plug on the other, stainless steel, 6–8mm cable, IP67

OUTPUT AND DISPLAY

Output signal	F	Two-wire 4–20mA, 10.5–55VDC supply
	H	Two-wire 4–20mA+HART, 16.5–55VDC supply
Display	A	Without display
	C	With LCD display

DMP305X-TLT

LEEC

Order Code (continued)

PROCESS CONNECTION

Material	4	SUS304 stainless steel
	6	SUS316 stainless steel
Specification	M01	M20×1.5(M), Ø3 pressure guide hole, GB/T193-2003, ISO261
	G01	G1/2(M), Ø3 pressure guide hole, GB/T7307, ISO228, DIN16288, BS2779
	G02	G1/4(M), Ø3 pressure guide hole, EN837
	G08	G1/4(M), Ø3 pressure guide hole, GB/T7307, ISO228, DIN16288, BS2779, DIN3852-E reference seal (backup seal), maximum measuring range 60 MPa
	R01	1/2-14NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R02	1/4-18NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R03	1/2-14NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R04	1/4-18NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1

DMP305X-TLT

LEEC

Order Options (continued)

FIXED MOUNTING ACCESSORY

/B4 U-bracket, for 2" pipe, applicable to T-structure

HEAT-EXCHANGE ACCESSORY

/N1 Heat-exchange connector, changes M20×1.5(F) to M20×1.5(M), SUS304

/N2 Heat-exchange connector, changes M20×1.5(F) to M20×1.5(M), SUS304 (see dimensional drawing for the construction difference vs. /N1)

PROCESS CONNECTION ACCESSORY

/Z1 Weld connector, M20×1.5(F), SUS304

/Z2 Weld adapter, G1/2(F), SUS304

DISPLAY MODE

/D1 Per customer requirements

CALIBRATION REPORT

/Q1 Calibration report provided by the company

APPROVALS (combinable)

/E1 IECEx flameproof certificate: Ex db IIC T6 Gb, Ex tb IIIC T80°C Db

/E2 NEPSI flameproof certificate: ExdIICT6

/I1 IECEx intrinsic safety certificate: Ex ia IIC T4 Ga

/I2 NEPSI intrinsic safety certificate: ExiaIICT4

/F3 CE certificate

DMP305X-TLT

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position

0 (no specific setting)

Display mode (DISP)

PV (process variable)

Damping value (DAMP)

0 (no specific setting)

High range value 20mA (URV)

Per order

Analog output type (mA)

Linear

Alarm signal (ALARM)

None

Low range value 4mA (LRV)

Per order

Process unit (U)

Per order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2008 · Scope: Design and production of pressure transmitters · Registration: I10804039

CE Certificate — ISET

Mark: EU · EMC: 2014/30/EU · Standard: AC/0100708 · Registration: IT41353LG161207

FLAMEPROOF CERTIFICATE BY BODY

NEPSI

ExdIICT6
Working T.: -25 to +60°C
Medium T.: +80°C
Reg.: GYB16.1254X

ATEX

Ex db IIC T6 Gb, Ex tb IIIC T80°C
Db
Working T.: -20 to +60°C
Medium T.: +80°C
Reg.: CML 19ATEX1078X

IECEX

Ex db IIC T6 Gb, Ex tb IIIC T80°C
Db
Working T.: -20 to +60°C
Medium T.: +80°C
Reg.: IECEx NEP 18.0008X

CSA

Class I Div.1 Grp A,B,C,D T6;
Class II Div.1 Grp E,F,G T80°C;
Class III
Working T.: -40 to 60°C
Medium T.: +80°C
Reg.: 80020805

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExialICT4
Ambient T.: -40 to +60°C
Medium T.: +120°C
Reg.: GYB16.1962X

ATEX / IECEx

Ex ia IIC T4 Ga
Ambient T.: -20 to +60°C
Medium T.: +120°C
Reg.: CML 19ATEX1078X / IECEx NEP 18...

Source: LEEG DMP305X-TLT Piezoresistive silicon gauge pressure transmitter data sheet, Rev. 2019.03.V1.0



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

SMP858-NST

Differential Pressure Transmitter

LEEG · Industrial

LEEG



BUY ONLINE

DESCRIPTION

Differential pressure transmitter from the LEEG line, with a monocrystalline silicon piezoresistive sensor for demanding industrial applications.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire), HART optional
- Power supply: 16.5 - 55 VDC
- Body: 316L stainless steel
- Exdb / IECEx certification available

TYPICAL APPLICATIONS

- Differential-pressure level measurement in tanks
- Petrochemical process control and power generation
- HART-protocol instrumentation networks

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP67

ELECTRICAL CONNECTION

M20x1.5 or 1/2" NPT connector, standard cable gland

PROCESS TEMPERATURE

Process: up to 150 °C · Ambient: -30 to 80 °C

CERTIFICATION / QUALITY

Exdb / IECEx available depending on model (consult factory)



SMP858-NST

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL (URL)	MIN. SPAN	LRL	URL	STATIC PRESSURE LIM...	HIGH-SIDE O...	LOW-SIDE OV...
S403D	40 kPa	10 kPa	-40 kPa	40 kPa	40 MPa	25 MPa	16 MPa
S254D	250 kPa	25 kPa	-250 kPa	250 kPa	40 MPa	25 MPa	500 kPa
S105D	1 MPa	100 kPa	-500 kPa	1 MPa	40 MPa	25 MPa	500 kPa

REFERENCE ACCURACY

Typical accuracy (general)	±0.2% URL
TD ≤ 10 (Note 1)	±0.2% URL
Maximum TD	±0.5%TD URL
Square-root output	1.5 times the linear-output accuracy
Stability	±0.2% URL / 5 years

Reference accuracy includes linearity (BFSL), hysteresis and repeatability. Calibration temperature: 20°C ±5°C. Valid for the nominal values 40 kPa, 250 kPa and 1 MPa. Note 1: TD is Turn Down (rangeability); when $|URV| \geq |LRL|$, $TD=URL/|URV|$; when $|URV| \leq |LRL|$, $TD=URL/|LRL|$. Test standard: GB/T28474 / IEC60770; zero-based span calibration, silicone oil fill, 316L stainless steel isolating diaphragm, 4-20mA analog output.

EFFECTS ON MEASUREMENT

Ambient temperature (within -20 to 80°C)	±(0.1 + 0.015 × TD)% URL
Static pressure — zero effect	±0.15×TD % URL / 4 MPa
Static pressure — span effect	±0.2% URL / 4 MPa
Power supply (within 10.5/16.5-55VDC)	Zero and span shift ≤ ±0.005% URL/V
Mounting position	Installation error under 400 Pa, correctable via PV=0 reset
Vibration (per GB/T1827.3/IEC61298-3)	<0.1% URL

SMP858-NST

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4-20 mA output with digital communications, programmable as linear or square-root output. HART protocol superimposed on the 4-20mA signal. Available output options: 4-20mA (code F, 10.5-55VDC supply), 4-20mA+HART (code H, 16.5-55VDC supply); the data sheet also mentions 4-wire Modbus-RTU/RS485 (12-32VDC supply) as a transmitter output, although this code does not appear in the formal order-code table for this model.
Damping	Total damping time constant = amplifier damping + sensor capsule damping. Amplifier damping: adjustable from 0 to 100 s. Sensor capsule damping (isolating diaphragm and silicone oil fill): ≤0.2 s. Start-up after power loss: ≤6 s. Normal service after data recovery: ≤31 s.
Weight	Not specified in the data sheet

POWER SUPPLY AND LOAD

Standard / flameproof	10.5-55 VDC
HART protocol	16.5-55 VDC, 250 ohm communication load resistance
Modbus-RTU/RS485	12-32 VDC
Transmission distance	<1000 meters
Power consumption	≤500 mW @24VDC, 20.8 mA

Load resistance: 0-2119 Ohm for standard operation, 250-600 Ohm for HART protocol. External load resistance formula: $R = (U-10.5)/0.021$, where U is the supply voltage in volts; the HART digital communication range corresponds to the 250-600 Ohm band, reachable between 16.5 V and 55 V.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C; unit with LCD display: -20 to 70°C
Storage temperature	-40 to 110°C; unit with LCD display: -40 to 85°C
Medium temperature	With silicone oil: -40 to 120°C; with Neobee M-20: -10 to 120°C
Working humidity	5-100% RH @40°C
Protection class	IP67
Hazardous area rating (certificates)	ExdIICT6 (GYB16.1253X); ExiaIICT4 (GYB16.1965X)

SMP858-NST

LEEC

Complete Order Code Structure

BASE MODEL: SMP858-NST

SENSOR (PRESSURE RANGE)

Pressure range	S403D	Nominal (URL): 40 kPa, min. span 10 kPa
	S254D	Nominal (URL): 250 kPa, min. span 25 kPa
	S105D	Nominal (URL): 1 MPa, min. span 100 kPa

ELECTRICAL CONNECTION

Electrical connection	T1	Aluminum alloy terminal, 2 M20x1.5(H) cable entries, red body, white cover
Cable entry protector	R1	Sealed M20x1.5 connector on one side, blind plug on the other, PVC, 6-8mm cable only, IP67
	R2	Flameproof, 1/2 NPT(H) on one side, blind plug on the other, stainless steel, 6-8mm cable only, IP67
	R3	Flameproof, M20x1.5(H) on one side, blind plug on the other, stainless steel, 6-8mm cable only, IP67

OUTPUT

Output signal	F	4-20mA two-wire, 10.5-55VDC supply
	H	4-20mA+HART two-wire, 16.5-55VDC supply
Display	A	Without LCD display
	C	With LCD display

PROCESS CONNECTION (HIGH-PRESSURE SIDE)

Connection position	HL	Connection on the high-pressure side
Connection type	G	Fixed mounting
Isolating fill fluid	S	Silicone oil, process temperature: -45 to 205°C
	H	Silicone oil, process temperature: 0 to 315°C
	F	Neobee M-20, process temperature: -10 to 180°C
Wetted parts material	4	SUS304
	6	SUS316
Diaphragm material	S	SUS316L
	H	Hastelloy C
Flange specification	H01	HG/T 20592-2009, raised-face flange DN50 PN10-PN40 (max. measuring range 4 MPa)
	H05	HG/T 20592-2009, raised-face flange DN80 PN10 (max. measuring range 1 MPa)
	H06	HG/T 20592-2009, raised-face flange DN100 PN10 (max. measuring range 1 MPa)
Insertion tube diameter	D00	None
	D01	Diameter: 66 mm, length: 50 mm
	D02	Diameter: 66 mm, length: 100 mm
	D03	Diameter: 66 mm, length: 150 mm

SMP858-NST

LEEG

Options, Factory Settings and Certifications

ADDITIONAL OPTIONS

/D1	Display mode per customer requirement
/Q1	Calibration report provided by the company
/Q2	Calibration report provided by an authorized Chinese third party
/Q3	Static pressure report (differential pressure only)
/E1	Flameproof certificate, ExdIICT6, NEPSI
/I1	Intrinsic safety certificate, ExialICT4, NEPSI
/F3	CE certificate
/G1	Grease-free treatment of wetted parts
/G2	Electropolishing treatment of wetted parts

DEFAULT FACTORY SETTINGS

TAG position

No specific setting (0)

Display mode (DISP)

PV, no specific setting

Damping value (DAMP)

0, no specific setting

High range value 20mA (URV)

Per the purchase order

Analog output type (mA)

Linear, no specific setting

Alarm signal (ALARM)

None, no specific setting

Low range value 4mA (LRV)

Per the purchase order

Process unit (U)

Per the purchase order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2015 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: EU · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT41353LG161207

FLAMEPROOF CERTIFICATE BY BODY

NEPSI

ExdIICT6Gb
Working T.: -25 to +55°C
Medium T.: -20 to +80°C
Reg.: GYB16.1253X

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExialICT4
Ambient T.: -40 to +60°C
Medium T.: +120°C
Reg.: GYB16.1965X

Source: LEEG SMP858-NST Monosilicon differential pressure transmitter data sheet, Rev. 2020.07.V1.0



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

SMP858-DST

Differential Pressure Transmitter

LEEG · Industrial

LEEG



BUY ONLINE

DESCRIPTION

Differential pressure transmitter from the LEEG line, with a monocrystalline silicon piezoresistive sensor for demanding industrial applications.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire), HART optional
- Power supply: 16.5 - 55 VDC
- Body: 316L stainless steel
- Exdb / IECEx certification available

TYPICAL APPLICATIONS

- Differential-pressure level measurement in tanks
- Petrochemical process control and power generation
- HART-protocol instrumentation networks

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP67

ELECTRICAL CONNECTION

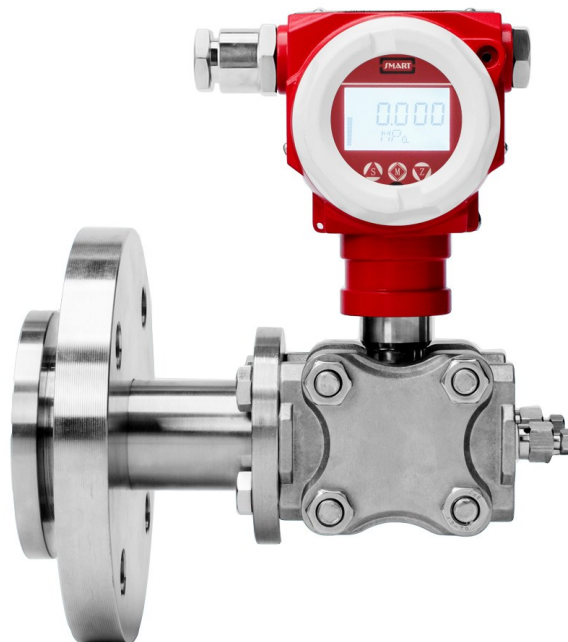
M20x1.5 or 1/2" NPT connector, standard cable gland

PROCESS TEMPERATURE

Process: up to 150 °C · Ambient: -30 to 80 °C

CERTIFICATION / QUALITY

Exdb / IECEx available depending on model (consult factory)



SMP858-DST

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL (URL)	MIN. SPAN	LRL	URL	STATIC PRESSURE LIM...	HIGH-PRESS...	LOW-PRESSU...
S403D	40 kPa	10 kPa	-40 kPa	40 kPa	10 MPa	10 MPa	10 MPa
S254D	250 kPa	12.5 kPa	-250 kPa	250 kPa	10 MPa	10 MPa	10 MPa
S105D	1 MPa	50 kPa	-500 kPa	1 MPa	10 MPa	10 MPa	10 MPa

REFERENCE ACCURACY

TD ≤ 10	±0.1% URL
10 < TD ≤ 20	±0.01 × TD % URL
Square-root output	1.5 times the linear-output accuracy

Includes linearity (BFSL), hysteresis and repeatability. Calibration temperature: 20°C ±5°C. TD = Turndown: when $|URV| \geq |LRV|$, $TD = URL / |URV|$; when $|URV| < |LRV|$, $TD = URL / |LRV|$. Typical accuracy: ±0.1% URL (per the main parameters sheet, optional ±0.075% URL). Stability: ±0.2% URL / 5 years. Test standard: GB/T28474 / IEC60770; reference conditions: zero-based calibration, silicone oil fill, 316L stainless steel isolating diaphragm, 4-20mA analog output.

EFFECTS ON MEASUREMENT

Ambient temperature (-20 to 80°C)	±(0.1 + 0.1 × TD)% URL, total impact within the range
Static pressure — zero effect	±0.15 × TD % URL / 4 MPa
Static pressure — span effect	±0.2% URL / 4 MPa
Power supply	±0.005% URL / V, within the 10.5/16.5-55 VDC range
Mounting position	Installation error under 400 Pa, correctable via PV=0 reset
Vibration	< 0.1% URL, per GB/T1827.3 / IEC61298-3

SMP858-DST

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4-20mA output with digital communications, programmable output type (linear or square-root). HART protocol superimposed on the 4-20mA signal. Signals available per the data sheet: 4-20mA, 4-20mA+HART, others.
Damping	Total damping time constant = amplifier damping + sensor capsule damping. Amplifier damping: 0-100 s adjustable. Sensor capsule damping (isolating diaphragm and silicone oil fill): ≤0.2 s. Start-up after power loss: ≤6 s. Return to normal service after data recovery: ≤31 s.
Weight	Net weight: approx. 6.35 kg (Tri-Clamp process connection, without mounting brackets).

POWER SUPPLY AND LOAD

Standard / flameproof	10.5 – 55 VDC
HART protocol	16.5 – 55 VDC, 250 ohm communication load resistance

Load resistance: 0-2119 ohm for normal operation, 250-600 ohm for HART protocol. Formula: $R(\text{ohm}) = (U - 10.5) / 0.021$, where U is the supply voltage in V. Transmission distance: < 1000 meters. Power consumption: ≤500 mW @ 24 VDC, 20.8 mA.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C (LCD display unit: -20 to 70°C)
Storage temperature	-40 to 110°C (LCD display unit: -40 to 85°C)
Medium temperature	With silicone oil: -40 to 315°C; with Neobee M-20: -10 to 200°C
Working humidity	5-100% RH @ 40°C
Protection class	IP67
Hazardous area rating	ExdIICT6 (GYB16.1253X); ExiaIICT4 (GYB16.1965X) — consult engineering for details

SMP858-DST

LEEC

Complete Order Code Structure

BASE MODEL: SMP858-DST

SENSOR — PRESSURE RANGE

Pressure range	S403D	Nominal (URL): 40 kPa
	S254D	Nominal (URL): 250 kPa
	S105D	Nominal (URL): 1 MPa

ELECTRICAL CONNECTION

Electrical connection	T1	Aluminum alloy terminal, 2 M20×1.5(H) cable entries, red body, white cover
Cable entry protector	R1	Sealed M20×1.5 connector on one side, blind plug on the other, PVC, 6-8mm cable only, IP67
	R2	Flameproof, 1/2 NPT(H) on one side, blind plug on the other, stainless steel, 6-8mm cable only, IP67
	R3	Flameproof, M20×1.5(H) on one side, blind plug on the other, stainless steel, 6-8mm cable only, IP67

OUTPUT

Output signal	F	4-20mA two-wire, 10.5-55 VDC supply
	H	4-20mA+HART two-wire, 16.5-55 VDC supply
Display	A	Without LCD display
	C	With LCD display

PROCESS CONNECTION (HIGH-PRESSURE SIDE)

Connection position	HL	High-pressure side with fixed connection; low-pressure side 1/4NPT(H) ANSI/ASME B1.20.1
	/H	Both sides (high and low pressure) with diaphragm connection
Connection type	G	Fixed mounting
Isolating fill fluid	S	Silicone oil, process temperature: -45 to 205°C
	H	High-temperature silicone oil, process temperature: 0 to 315°C
	F	Neobee M-20 hygienic fluid, process temperature: -10 to 180°C
Wetted parts material	4	SUS304
	6	SUS316
Diaphragm material	S	SUS316L
	H	Hastelloy C
Flange specification	H01	HG/T 20592-2009, raised-face flange DN50PN10-PN40 (max. measuring range 4MPa)
	H05	HG/T 20592-2009, raised-face flange DN80PN10 (max. measuring range 1MPa)
	H06	HG/T 20592-2009, raised-face flange DN100PN10 (max. measuring range 1MPa)
Insertion tube diameter	D00	None
	D01	Diameter 66mm, length 50mm
	D02	Diameter 66mm, length 100mm
	D03	Diameter 66mm, length 150mm

SMP858-DST

LEEC

Order Code (continued)

PROCESS CONNECTION (LOW-PRESSURE SIDE, when diaphragm-connected)

Connection position	/L	Low-pressure side connection
Connection type	C	Capillary transmission
Capillary type	M2	SUS304 armored, 3.5mm outer diameter
Capillary length	XX	Value range XX: 00-10 (e.g.: 02 = 2 meters; 10 = 10 meters)
Isolating fill fluid	S	Silicone oil, process temperature: -45 to 205°C
	H	High-temperature silicone oil, process temperature: 0 to 315°C
	F	Neobee M-20 hygienic fluid, process temperature: -10 to 180°C
Wetted parts material	4	SUS304
	6	SUS316
Diaphragm material	S	SUS316L
	H	Hastelloy C
Flange specification	H01	HG/T 20592-2009, raised-face flange DN50PN10-PN40 (max. measuring range 4MPa)
	H05	HG/T 20592-2009, raised-face flange DN80PN10 (max. measuring range 1MPa)
	H06	HG/T 20592-2009, raised-face flange DN100PN10 (max. measuring range 1MPa)
Insertion tube diameter	D00	None
	D01	Diameter 66mm, length 50mm
	D02	Diameter 66mm, length 100mm
	D03	Diameter 66mm, length 150mm

SMP858-DST

LEEC

Order Options (continued)

PROCESS CONNECTION ACCESSORY

- /A1** T-adapter, M20×1.5(M) with Ø14×2×30 pressure guide tube, SUS304 (low-pressure side)
- /A2** U-adapter, 1/2-14NPT(H), SUS304 (low-pressure side)

DISPLAY MODE

- /D1** Per customer requirement

CALIBRATION REPORT

- /Q1** Calibration report issued by the manufacturer
- /Q2** Calibration report issued by an authorized Chinese third party
- /Q3** Static pressure report (differential pressure only)

APPROVALS (multiple)

- /E1** Flameproof certificate, ExdIICT6, NEPSI
- /I1** Intrinsic safety certificate, ExiaIICT4, NEPSI
- /F3** CE certificate

WETTED PARTS TREATMENT

- /G1** Degreasing treatment
- /G2** Electropolishing treatment

SMP858-DST

LEEC

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position

No specific setting (0)

Display mode (DISP)

PV (no specific setting)

Damping value (DAMP)

0 (no specific setting)

High range value 20mA (URV)

Per the order

Analog output type (mA)

Linear (no specific setting)

Alarm signal (ALARM)

None (no specific setting)

Low range value 4mA (LRV)

Per the order

Process unit (U)

Per the order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001-2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT051353LG161207

FLAMEPROOF CERTIFICATE BY BODY

NEPSI

ExdIICT6
Working T.: -25 to 60°C
Medium T.: +80°C
Reg.: GYB16.1253X

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExialICT4
Ambient T.: -40 to 60°C
Medium T.: +120°C
Reg.: GYB16.1965X

Source: LEEG SMP858-DST Monosilicon differential pressure transmitter data sheet (direct mounting diaphragm), Rev. 2016.05.V1.0



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

DMP305X-TLF

LEEG



BUY ONLINE

Gauge Pressure Transmitter

LEEG · Industrial

DESCRIPTION

Compact-design LEEG gauge pressure transmitter, with a microprocessor transmission module and surface mounting that corrects measurement error via an integrated temperature sensor. Lightweight stainless steel body with an M12 aviation connector, available in vertical (F1) or horizontal (F2) mounting. Three external-button menu; remote configuration available via controller or HART software.

TECHNICAL SPECIFICATIONS

- Measurement range: 5 kPa to 100 MPa
- Reference accuracy: $\pm 0.2\%$ URL ($\pm 0.5\%$ URL max.)
- Net weight: ~0.52 kg
- Output: 4-20mA or 4-20mA+HART
- Measurement medium: liquid, gas or vapor
- Certifications: CE, NEPSI (intrinsic safety), RoHS

TYPICAL APPLICATIONS

- ⊙ Differential-pressure level measurement in tanks
- ⊙ Petrochemical process control and power generation
- ⊙ HART-protocol instrumentation networks

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP67

PROCESS TEMPERATURE

Process: up to 150 °C · Ambient: -30 to 80 °C

ELECTRICAL CONNECTION

M20x1.5 or 1/2" NPT connector, standard cable gland

CERTIFICATION / QUALITY

Exdb / IECEx available depending on model (consult factory)



DMP305X-TLF

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. SPAN	LR	UR	OVERLOAD LIMIT
L702G	7 kPa	5 kPa	-7 kPa	7 kPa	10.5 kPa
L203G	20 kPa	10 kPa	-20 kPa	20 kPa	30 kPa
L353G	35 kPa	20 kPa	-35 kPa	35 kPa	52.5 kPa
L104G	100 kPa	35 kPa	-100 kPa	100 kPa	150 kPa
L204G	200 kPa	100 kPa	-100 kPa	200 kPa	300 kPa
L704G	700 kPa	200 kPa	-100 kPa	700 kPa	1050 kPa
L105G	1 MPa	500 kPa	-0.1 MPa	1 MPa	1.5 MPa
L175G	1.7 MPa	1 MPa	-0.1 MPa	1.7 MPa	2.55 MPa
L355G	3.5 MPa	1.7 MPa	-0.1 MPa	3.5 MPa	5.25 MPa
L705S	7 MPa	3.5 MPa	-0.1 MPa	7 MPa	10.5 MPa
L176S	17 MPa	7 MPa	-0.1 MPa	17 MPa	25.5 MPa
L356S	35 MPa	17 MPa	-0.1 MPa	35 MPa	52.5 MPa
L406S	40 MPa	20 MPa	-0.1 MPa	40 MPa	60 MPa
L606S	60 MPa	30 MPa	-0.1 MPa	60 MPa	90 MPa
L706S	70 MPa	35 MPa	-0.1 MPa	70 MPa	105 MPa
L107S	100 MPa	50 MPa	-0.1 MPa	100 MPa	150 MPa

REFERENCE ACCURACY

Linear output accuracy — Typical $\pm 0.2\%$ URL

Linear output accuracy — Maximum $\pm 0.5\%$ URL

Standard and reference conditions, including linearity (BFSL), hysteresis and repeatability; calibration temperature 20°C $\pm 5^\circ\text{C}$. Valid for the nominal values: 7kPa, 20kPa, 35kPa, 100kPa, 200kPa, 700kPa, 1MPa, 1.7MPa, 3.5MPa, 7MPa, 17MPa, 35MPa, 40MPa, 60MPa, 70MPa, 100MPa. The square-root output accuracy is 1.5 times the linear reference accuracy stated above. Test standard: GB/T28474 / IEC60770; zero-based span calibration, silicone oil fill, 316L stainless steel isolating diaphragm, 4-20mA analog output.

EFFECTS ON MEASUREMENT

Power supply effect Zero and span shift must not exceed $\pm 0.005\%$ URL/V when supply varies between 10.5/16.5 and 55 VDC

Mounting position effect Applicable in any position. Installation error under 400 Pa, correctable via PV=0 reset

Vibration effect Per GB/T 1827.3 / IEC61298-3 testing: $< 0.1\%$ URL

Ambient temperature effect (typical) Total impact within -20 to 80°C: $\pm (0.1 + 0.1 \times \text{TD})\%$ URL

Stability $\pm 0.1\%$ URL / year

Overall performance (comprehensive) Includes, among other factors, reference accuracy and combined ambient temperature effects. Typical accuracy: $\pm 0.2\%$ URL

Electromagnetic compatibility (EMC) Complies with GB/T9254/CISPR22 (radiated and conducted emission) and IEC61000-4-2/3/4/5/6/8 (immunity to ESD, RF fields, fast transients/bursts, surge and power-frequency magnetic field)

DMP305X-TLF

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4-20mA output. The user can select linear or square-root output. Digital process variables are superimposed on the 4-20mA signal and are compatible with any HART protocol host (HART version). Transmission module types per order code: F = two-wire 4-20mA; H = two-wire 4-20mA+HART. Display: A = without display; C = with LCD display.
Damping	Total damping time constant: equal to the sum of the amplifier damping and the sensor capsule damping. Amplifier damping: adjustable from 0 to 100 s. Diaphragm damping (isolating sensor + silicone oil fill): ≤0.2 s. Start-up after power loss: ≤6 s. Normal service after data recovery: ≤31 s.
Weight	Net weight: approximately 0.52 kg (without mounting bracket or process connection adapter)

POWER SUPPLY AND LOAD

Standard / flameproof	10.5 – 55 VDC
With HART protocol	16.5 – 55 VDC (250 ohm communication load resistance)
Transmission distance	< 1000 m
Power consumption	≤500 mW @ 24VDC (20.8 mA)

External load resistance $R(\text{ohm})$: 0-2119ohm under standard working conditions, 250-600ohm for HART protocol. Formula: $R = (U - 10.5) / 0.021$, where U = supply voltage (V). Reference points on the graph: 10.5V/0ohm, 16.5V/250ohm (start of HART communication range), 23.8V/600ohm (end of HART range), 55V/2119ohm.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C (with integrated LCD display: -20 to 70°C)
Storage temperature	-40 to 110°C (with integrated LCD display: -40 to 85°C)
Medium temperature	Silicone oil fill: -45 to 205°C
Working humidity	5-95% RH
Protection class	IP67
Insulation resistance	≥ 20 M @ 100VDC

DMP305X-TLF

LEEC

Complete Order Code Structure

BASE MODEL: DMP305X-TLF

SENSOR — PRESSURE RANGE

Pressure range (sensor code)	L702G	Nominal (URL) 7 kPa
	L203G	Nominal (URL) 20 kPa
	L353G	Nominal (URL) 35 kPa
	L104G	Nominal (URL) 100 kPa
	L204G	Nominal (URL) 200 kPa
	L704G	Nominal (URL) 700 kPa
	L105G	Nominal (URL) 1000 kPa
	L175G	Nominal (URL) 1700 kPa
	L355G	Nominal (URL) 3.5 MPa
	L705S	Nominal (URL) 7 MPa
	L176S	Nominal (URL) 17 MPa
	L356S	Nominal (URL) 35 MPa
	L406S	Nominal (URL) 40 MPa
	L606S	Nominal (URL) 60 MPa
	L706S	Nominal (URL) 70 MPa
	L107S	Nominal (URL) 100 MPa

SENSOR — MATERIAL AND FLUID

Isolating diaphragm material	S	SUS316L
Isolating fill fluid	S	Silicone oil, process temperature -45 to 205°C

SENSOR — SEAL

Sensor seal	S	O-ring, FKM, process temperature -20 to 200°C
-------------	----------	---

ELECTRICAL CONNECTION

Electrical connection	F1	Stainless steel terminal, M12×1 aviation connector (4-pin) (H2), IP67, vertical mounting
	F2	Stainless steel terminal, M12×1 aviation connector (4-pin) (H2), IP67, horizontal mounting

OUTPUT / DISPLAY

Output signal	F	Two-wire 4-20mA, 10.5-55VDC supply
	H	Two-wire 4-20mA+HART, 16.5-55VDC supply
Display	A	Without LCD display
	C	With LCD display

PROCESS CONNECTION — MATERIAL

Material	4	SUS304 stainless steel
	6	SUS316 stainless steel

DMP305X-TLF

LEEC

Order Code (continued)

PROCESS CONNECTION — SPECIFICATION

Specification	M01	M20×1.5(M), Ø3 pressure guide hole, GB/T193-2003, ISO261
	G01	G1/2(M), Ø3 pressure guide hole, GB/T7307, ISO228, DIN16288, BS2779
	G02	G1/4(M), Ø3 pressure guide hole, EN837
	G08	G1/4(M), Ø3 pressure guide hole, GB/T7307, ISO228, DIN16288, BS2779, DIN3852-E reference seal (backup seal), maximum measuring range 60 MPa
	R01	1/2-14NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R02	1/4-18NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R03	1/2-14NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R04	1/4-18NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1

DMP305X-TLF

LEEC

Order Options (continued)

MOUNTING / PROCESS CONNECTION ACCESSORY

/N1	Heat-exchange connector, M20×1.5(F) changes to M20×1.5(M), SUS304 (condenser tube)
/N2	Heat-exchange connector, M20×1.5(F) changes to M20×1.5(M), SUS304 (cooling fin)
/Z1	Weld adapter, M20×1.5(F), SUS304
/Z2	Weld adapter, G1/2(F), SUS304

ELECTRICAL CONNECTION ACCESSORY

/J1	Female aviation plug, straight, with 2m cable, 4-pin, M12×1, IP67
/J2	Female aviation plug, angled, with 2m cable, 4-pin, M12×1, IP67
/J4	Female aviation plug, straight, without cable, 4-pin, M12×1, IP67
/J5	Female aviation plug, angled, without cable, 4-pin, M12×1, IP67

DISPLAY MODE

/D1	Per customer requirements
-----	---------------------------

CALIBRATION REPORT

/Q1	Calibration report provided by the company
-----	--

APPROVALS (combinable)

/I1	Intrinsic safety certificate, ExiaIICT4, NEPSI
/F3	CE certificate

WETTED PARTS TREATMENT

/G1	Degreasing treatment (ungrease)
/G2	Electropolishing treatment

DMP305X-TLF

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position

None / no specific setting (0)

Display mode (DISP)

PV

Damping value (DAMP)

0 (no specific setting)

High range value 20mA (URV)

Per order

Analog output type

Linear (mA)

Alarm signal (ALARM)

No

Low range value 4mA (LRV)

Per order

Process unit (U)

Per order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: EU · EMC: 2014/30/EU · Standard: AC/0100708 · Registration: IT041353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiallCT4
Ambient T.: -40 to +60°C
Medium T.: +120°C
Reg.: GYB16.1962X

Source: LEEG DMP305X-TLF Piezoresistive silicon gauge pressure transmitter data sheet, Rev. 2016.04.V1.0



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

MDM7000DP

MICROSENSOR



Intelligent Differential Pressure Transmitter

Microsensor · Industrial

DESCRIPTION

The MDM7000-DP is an intelligent differential pressure transmitter from MICROSENSOR, developed with piezoresistive monocrystalline silicon sensor technology and a sensor module with high mechanical strength and long-term stability. It achieves a reference accuracy of $\pm 0.05\%$ or $\pm 0.075\%$ URL, with a maximum turndown of 100:1 that allows the measured range to be adapted with great flexibility, covering from 20 mbar to 100 bar across seven factory ranges. Its two-wire, 4-20 mA DC output with superimposed HART protocol – or alternatively low-consumption 1-5 VDC and Modbus RS-485 – enables remote configuration, monitoring and diagnostics. It incorporates a high-performance EMC protection module, a 316L stainless steel or coated aluminum body, and flameproof and intrinsically safe certifications from multiple international bodies, and is also suitable for marine installations certified by DNV, ABS, KR, NK and RS.

TECHNICAL SPECIFICATIONS

- Accuracy $\pm 0.05\%$ / $\pm 0.075\%$ URL, maximum turndown 100:1
- Measuring range from 20 mbar to 100 bar (7 factory ranges)
- 4-20 mA + HART output; also 1-5 VDC or Modbus RS-485
- Piezoresistive monocrystalline silicon sensor, 316L SS or aluminum body, IP66/IP67

TYPICAL APPLICATIONS

Oil & Gas
 Food Industry
 Pulp and Paper
 Chemical Industry
 Marine/Naval
 etc.

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

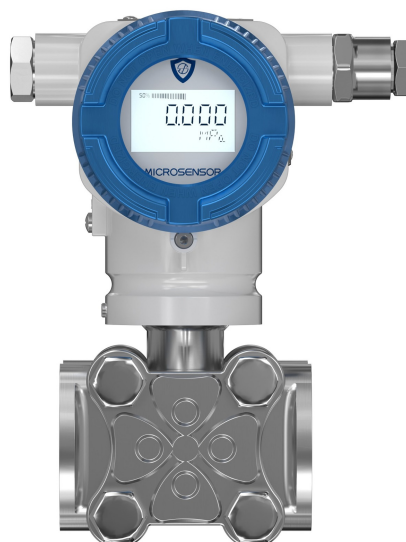
—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



MDM7000DP

MICROSENSOR

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. SPAN	LRL	URL	STATIC P. LIMIT	HIGH OVERP...	LOW OVERPR...
0	20 mbar	1 mbar	-20 mbar	20 mbar	420 bar	160 bar	160 bar
1	60 mbar	10 mbar	-60 mbar	60 mbar	420 bar	250 bar	250 bar
2	0.4 bar	20 mbar	-0.4 bar	0.4 bar	420 bar	250 bar	250 bar
3	2.5 bar	25 mbar	-2.5 bar	2.5 bar	420 bar	250 bar	250 bar
4	10 bar	0.1 bar	-10 bar	10 bar	420 bar	250 bar	250 bar
5	30 bar	0.3 bar	-30 bar	30 bar	420 bar	250 bar	250 bar
6	100 bar	1 bar	-30 bar	100 bar	420 bar	200 bar	200 bar

REFERENCE ACCURACY

TD ≤ 5 (20 mbar and 60 mbar ranges) ±0.075% reference SPAN (60 mbar only available with TD≤2)

TD ≤ 5 (0.4 to 100 bar ranges) ±0.075% reference SPAN (optional ±0.05% SPAN, consult MICROSENSOR)

TD > 5 (20 mbar and 60 mbar ranges) ±(0.001 + 0.0148 × TD) % SPAN

TD > 5 (0.4 to 100 bar ranges) ±(0.0275 + 0.0095 × TD) % SPAN

Square-root output 1.5 times the accuracy of the linear output

TD = Turndown = Maximum range (URL) / Actual range (SPAN = |URV-LRV|) · Reference accuracy includes BFSL (best fit straight line), hysteresis and repeatability, at a calibration temperature of 20°C ±5°C, zero-based · Long-term stability: ±0.1% SPAN every 10 years · Total performance = ±√(E1²+E2²+E3²), combining reference accuracy (E1), ambient temperature effect (E2) and static pressure effect (E3) · LRV/URV configuration: limit values must be set within the range limits; a low rangeability ratio is recommended for best performance

EFFECTS ON MEASUREMENT

Ambient temperature (60 mbar) ±(0.1 + 0.05 × TD) % SPAN per 10°C

Ambient temperature (other ranges) ±(0.075 + 0.0375 × TD) % SPAN per 10°C

Power supply Zero and span shifts ≤ ±0.005% URL per Volt, within 18.3-44 VDC

Mounting position Less than 4 mbar in any position, correctable with the PV (primary value) = 0 function

Vibration < 0.1% SPAN per GB/T18271.3 / IEC 61298-3

Static pressure (effect per 100 bar) — range ≤ 0.1 bar ±0.5% F.S.

Static pressure (effect per 100 bar) — 0.1 to 0.4 bar ±0.1% F.S.

Static pressure (effect per 100 bar) — 0.4 to 2.5 bar ±0.075% F.S.

Static pressure (effect per 100 bar) — 2.5 to 10 bar ±0.075% F.S.

Static pressure (effect per 100 bar) — 10 to 30 bar ±0.15% F.S.

Static pressure (effect per 100 bar) — 30 to 100 bar ±0.03% F.S.

MDM7000DP

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire, 4–20 mA DC output with HART protocol superimposed on the signal (code H). Alternatives: low-consumption 1–5 VDC output with 0.1%FS accuracy (code V) and Modbus RS-485 digital communication (code R). Programmable linear or square-root output (option /SQ, with LRL fixed at zero).
Damping	Total damping constant = sum of the electronic components damping + the sensor module damping. Electronic components: 0–100 s adjustable, default 0 s (option /ST) · Sensor module (silicone-oil-filled isolating diaphragm): ≤0.2 s · Start-up time after power loss: ≤6 s · Factory reset time: ≤31 s · Response time: ≤100 ms
Weight	Approx. 4 kg (without mounting bracket or process connection accessories)

POWER SUPPLY AND LOAD

Standard power supply (HART / RS-485)	18.3 – 44 VDC
Intrinsically safe power supply (HART)	18.3 – 30 VDC
Load resistance	0–1476 ohm in operation · 250–800 ohm for HART communication
Transmission distance	< 1000 meters
Consumption	≤500 mW @ 24 VDC, 20.8 mA

Maximum admissible load resistance: $R() = (44V - 13V) / 0.021 A \approx 1476$ · When HART communication is not used, the minimum supply voltage can be reduced to 13 VDC (consult MICROSENSOR).

AMBIENT AND PROCESS CONDITIONS

Ambient temperature	Without display: –50 to 85°C · With LCD display: –40 to 70°C
Storage temperature	Without display: –50 to 100°C · With LCD display: –40 to 85°C
Sensor operating temperature	–40 to 105°C
Medium temperature (standard silicone oil)	–40 to 105°C
Medium temperature (low-temperature silicone oil)	–55 to 85°C
Medium temperature (fluorinated oil)	–20 to 85°C
Ambient humidity	5–100% RH @ 40°C
Protection class	IP66 / IP67

MDM7000DP

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MDM7000-DP

HAZARDOUS AREA / Ex CERTIFICATION

Hazardous area application	1	China, flameproof, CE23.6650 · Ex db IIC T6 Gb (GB/T3836.1-2021, GB/T3836.2-2021)
	2	China, intrinsic safety, CE23.7688X · Ex ia IIC T4 Ga (GB/T3836.1-2021, GB/T3836.4-2021)
	3	China, dust ignition protection, GYB24.1215X · Ex tb IIIC T85°C Db (GB/T3836.1-2021, GB/T3836.31-2021)
	4	China, combined flameproof + intrinsic safety
	5	China, combined flameproof + dust protection + intrinsic safety
	A	CSA, flameproof + dust protection, CSA26CA80192884X (extended lead time)
	B	CSA, intrinsic safety, CSA24CA80156531X
	C	CSA, combined flameproof + intrinsic safety (extended lead time)
	E	ATEX, flameproof + dust protection, CSANe 25ATEXI107X
	F	ATEX, intrinsic safety, CSANe 24ATEXI178X
	G	ATEX, combined flameproof + intrinsic safety
	J	IECEX, flameproof + dust protection, IECEX CSA 25.0059X
	K	IECEX, intrinsic safety, IECEX CSA 24.0045X
	L	IECEX, combined flameproof + intrinsic safety
	M	EAC, flameproof, RU C-CN.58..05884/24
	0	Non-hazardous area

OUTPUT SIGNAL

Output signal	H	4-20 mA DC with HART protocol
	V	1-5 VDC low consumption (0.1%FS accuracy)
	R	Modbus RS-485

HOUSING

Housing material	S	316L stainless steel casting, 2 threaded entries M20×1.5 female
	U	316L stainless steel casting, 2 threaded entries 1/2 NPT female (without cable glands)
	P	Aluminum alloy (polyester resin coated), 2 entries M20×1.5 female
	N	Aluminum alloy (polyester resin coated), 2 entries 1/2 NPT female (without cable glands)

CABLE GLANDS AND ADAPTERS

Cable glands / adapters	0	No cable glands
	A	Flameproof plug for one end, M20×1.5, 316 stainless steel
	B	Flameproof plug for one end, 1/2 NPT, 316 stainless steel
	1	Sealed M20×1.5 cable gland with plug, PVC, 6-12mm cable, IP67
	2	Non-flameproof adapter M20×1.5(M) to M20×1.5(H) with plug, 316 SS, 6-8mm cable, IP67
	3	Flameproof adapter M20×1.5(M) to 1/2 NPT(H) with plug, 316 SS, 6-12mm cable, IP67
	4	Flameproof adapter M20×1.5(M) to M20×1.5(H) with plug, 316 SS, 6-12mm cable, IP67
	5	Flameproof adapter M20×1.5(M) to G1/2(H) with plug, 316 SS, 6-12mm cable, IP67

MDM7000DP

MICROSENSOR

Order Code (continued)

DISPLAY

Display	N	Without LCD display · flameproof -40 to 70°C, non-flameproof -50 to 85°C
	L	With LCD display · flameproof/non-flameproof -40 to 70°C

PRESSURE RANGE

Pressure range	0	Nominal 20 mbar (min. span 1 mbar)
	1	Nominal 60 mbar (min. span 10 mbar)
	2	Nominal 0.4 bar (min. span 20 mbar)
	3	Nominal 2.5 bar (min. span 25 mbar)
	4	Nominal 10 bar (min. span 0.1 bar)
	5	Nominal 30 bar (min. span 0.3 bar)
	6	Nominal 100 bar (min. span 1 bar)

WETTED PARTS MATERIAL

Diaphragm / flange / drain valve / s...	A	316L / 316L / 316L / FKM
	B	316L / 316L / 316L / PTFE with stainless steel insert
	E	316L / 316L / 316L / modified FKM
	C	Hastelloy C-276 / 316L / 316L / FKM
	D	Hastelloy C-276 / 316L / 316L / PTFE with stainless steel insert
	F	Hastelloy C-276 / 316L / 316L / modified FKM
	G	Tantalum / 316L / 316L / FKM (extended lead time ; not available below 0.4 bar)
	H	Tantalum / 316L / 316L / PTFE with stainless steel insert (extended lead time)
	I	Tantalum / 316L / 316L / modified FKM (extended lead time)

PROCESS CONNECTION

Process connection	1	1/4-18 NPT female, drain/vent valve on the back of the flange, fixed thread 7/16-20UNF(H), horizontal mounting
	2	1/4-18 NPT female, drain/vent valve on top of the flange, fixed thread 7/16-20UNF(H), horizontal mounting
	3	1/4-18 NPT female, drain/vent valve on the bottom of the flange, fixed thread 7/16-20UNF(H), horizontal mounting
	4	1/4-18 NPT female, side drain/vent valve (position not factory-defined), fixed thread 7/16-20UNF(H), vertical mounting

FILL FLUID

Fill fluid	S	Standard silicone oil (oil -40 to 200°C; medium -40 to 105°C)
	L	Low-temperature silicone oil (oil -55 to 120°C; medium -55 to 85°C)
	E	Fluorinated oil (oil -55 to 85°C; medium -20 to 85°C)

PROCESS FLANGE BOLTING

Flange bolting	1	Bolts, nuts and components in 35CrMo alloy steel
	6	Bolts, nuts and components in 316 stainless steel (static pressure < 250 bar)

PROCESS FLANGE MOUNTING

Flange mounting	H	Horizontal mounting
	E	Vertical mounting

MDM7000DP

MICROSENSOR

Order Code (continued)

FACTORY CALIBRATION RANGE

Calibration range	CAL	MICROSENSOR provides a standard verification report per the range, linear output by default. The contract must specify LRL-URL and display unit
-------------------	-----	---

MDM7000DP

MICROSENSOR

Order Options (continued)

MARINE AND METROLOGICAL APPROVALS

/CS1	CCS, China Classification Society, XA25PTB00010
/CS2	DNV, Det Norske Veritas, TAA00000Y1
/CS3	BV, Bureau Veritas, 77759/A0 BV
/CS4	ABS, American Bureau of Shipping, 24-2536413-PDA
/CS5	LR, Lloyd's Register, LR2520052TA
/CS6	KR, Korean Register, NAJ50160-AE001
/CS7	NK, Nippon Kaiji Kyokai, TA24376M
/CS8	RS, Russian Maritime Register of Shipping, 24.44.01.01398.266
/PAC	Type Approval Certificate (measuring instruments), Russia, 94159-24
/PBY	Type Approval Certificate (measuring instruments), Belarus, 18634

MOUNTING AND CONNECTION ACCESSORIES

/G10	Standard L-bracket, 316 stainless steel
/G11	Standard L-bracket, Q235 carbon steel
/G12	Standard L-bracket, 316L stainless steel
/D3	T-adapter (M) M20×1.5 with Ø14×2×30mm vent tube, 316 SS, ×2
/D4	Oval adapter, 1/2-14 NPT (H), 316 SS, ×2

CONFIGURATION AND OUTPUT

/SQ	Output signal and display in 'square root' format, with LRL fixed at zero
/ST	Damping time adjustment 0-100 s (default 0 s); the value must be specified in the contract
/WH	High current alarm value, 21 mA
/WL	Low current alarm value, 3.7 mA (default)
/B	Built-in Bluetooth communication

DOCUMENTATION AND TESTING

/Q1	Verification report per customer template (standard Micro Sensor format if not selected)
/PT	316L stainless steel hanging nameplate (up to 16 characters, to be specified in the contract)
/VT	Factory-assembled transmitter with MICROSENSOR valve manifold (full model to be specified in the contract)
/QD1	Standard leak test report, N2 or air, 200 bar, 1 min (100 bar nominal range)
/QD2	Standard leak test report, N2 or air, 250 bar, 1 min (60 mbar-30 bar nominal range)
/QD3	Standard leak test report, N2 or air, 160 bar, 1 min (20 mbar nominal range)

SPECIAL TREATMENTS AND MATERIALS

/J2	Gold-plated high and low pressure diaphragm (5)
/CL1	Degreasing and cleaning treatment for wetted parts (use fluorinated fluid code E under oxygen service)
/LD	Lithium battery with low copper and zinc content (Cu <0.1%, Zn <0.15%)
/P1	PUR coating

MATERIAL CERTIFICATES

/LE	Material traceability certificate per EN 10204 3.1
/NA	Wetted parts material certificate (diaphragm and process flange) per NACE MR0175/ISO 15156

MDM7000DP



Order Options (continued)

LANGUAGE AND DELIVERY

/LE	Nameplate, operation manual, certificate of conformity and factory verification report in English
/LR	Nameplate, operation manual, certificate of conformity and factory verification report in Russian
/XM	Additional documentation for project acceptance, to be detailed in the order

OPTIONAL ACCURACY

/AL3	±0.05%
/AL4	±0.075%
/AL5	±0.1%
/AL6	±0.2%

WARRANTY

/Y2	2-year warranty
/Y3	3-year warranty
/Y5	5-year warranty

MDM7000DP

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Calibrated range

Per requested range code (LRL-URL to be specified in the contract)

Damping

0 s (adjustable from 0 to 100 s via option /ST)

Output

4-20 mA linear (code H); square root available via option /SQ

Failure alarm

Low, 3.7 mA (default); high, 21 mA available via option /WH

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet (no ...

Mark: Not specified in the data sheet · EMC: Emission: GB/T 9254.1 / CISPR 32 · Immunity: GB/T 17626.2/-3/-4/-5/-6/-8 (equivalent to IEC 61000-4-2/-3/-4/-5/-6/-8) · Standard: Performance level A (normal operation) or B (temporary degradation allowed, with automatic recovery and no data loss), depending on the test — see the EMC Effects table in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

PCEC (China)

Ex db IIC T6 Gb
Working T.: Per the product's g...
Medium T.: ≤80°C recommend...
Reg.: CE23.6650

NEPSI (China, dust prot...

Ex tb IIIC T85°C Db
Working T.: Per the product's g...
Medium T.: ≤85°C (class T85°C)
Reg.: GYB24.1215X

CSA (North America)

Class I Div.1 Groups A,B,C,D T6 ·
Class II Div.1 Groups E,F,G
T80°C · Class III · Ex db IIC T6
Gb · Class I Zone 1, AEx db IIC
T6 Gb · Ex tb IIIC T80°C Db ·
Zone 21, AEx tb IIIC T80°C Db
Working T.: Per the product's g...
Medium T.: ≤80°C (class T6/T8...
Reg.: CSA26CA80192884X

ATEX

II 2G Ex db IIC T6 Gb · II 2D Ex tb
IIIC T80°C Db
Working T.: Per the product's g...
Medium T.: ≤80°C (class T6/T8...
Reg.: CSANe 25ATEX1107X

IECEx

Ex db IIC T6 Gb · Ex tb IIIC
T80°C Db
Working T.: Per the product's g...
Medium T.: ≤80°C (class T6/T8...
Reg.: IECEx CSA 25.0059X

EAC (Russia/CIS)

IEEx db IIC T6 Gb
Working T.: Per the product's g...
Medium T.: ≤80°C approx. (cla...
Reg.: RU C-CN.58..05884/24

INTRINSIC SAFETY CERTIFICATE BY BODY

PCEC (China)

Ex ia IIC T4 Ga
Ambient T.: Per the product's g...
Medium T.: ≤135°C approx. (cla...
Reg.: CE23.7688X

CSA (North America)

Class I Div.1 Groups A,B,C,D T4 ·
Ex ia IIC T4 Ga · Class I Zone 0,
AEx ia IIC T4 Ga
Ambient T.: Per the product's g...
Medium T.: ≤135°C approx. (cla...
Reg.: CSA24CA80156531X

ATEX

II 1G Ex ia IIC T4 Ga
Ambient T.: Per the product's g...
Medium T.: ≤135°C approx. (cla...
Reg.: CSANe 24ATEX1178X

IECEx

Ex ia IIC T4 Ga
Ambient T.: Per the product's g...
Medium T.: ≤135°C approx. (cla...
Reg.: IECEx CSA 24.0045X

EAC (Russia/CIS)

0Ex ia IIC T4 Ga
Ambient T.: Per the product's g...
Medium T.: ≤135°C approx. (cla...
Reg.: RU C-CN.58..05884/24

Source: MICROSENSOR MDM7000-DP data sheet, Rev. V4.3 04/2026



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

MDM7000-DGP/DAP

MICROSENSOR

Direct-Mount Gauge / Absolute Pressure Transmitter

Microsensor · Industrial



DESCRIPTION

The MDM7000-DGP/DAP is a direct-mount intelligent pressure transmitter, manufactured by MICROSENSOR with piezoresistive monocrystalline silicon technology. It is offered in two variants: DGP, for gauge pressure, with ranges from 60 mbar to 400 bar; and DAP, for absolute pressure, from 0.4 to 100 bar. Both share a cast 316L stainless steel or aluminum alloy body, two-wire 4-20 mA output with superimposed HART protocol, rangeability of up to 100:1, and reference accuracy of up to $\pm 0.075\%$ of span. Its electronics incorporate high-immunity EMC protection and long-term stability of $\pm 0.1\%$ of span every 10 years. Available in flameproof and intrinsically safe versions (ATEX, IECEx, CSA, NEPSI, EAC) and with DNV, ABS, KR, NK and RS marine approvals, it is suitable for industrial processes, oil & gas and marine applications.

TECHNICAL SPECIFICATIONS

- DGP accuracy $\pm 0.075/\pm 0.1/\pm 0.2\%$ URL · DAP accuracy $\pm 0.1/\pm 0.2\%$ URL
- Two-wire 4-20 mA DC HART output (optional low-consumption 1-5 VDC or Modbus RS-485)
- DGP range: 60 mbar to 400 bar · DAP range: 0.4 to 100 bar
- IP66/IP67 protection · Ex db IIC T6 Gb, Ex ia IIC T4 Ga, Ex tb IIIC T80°C Db certifications

TYPICAL APPLICATIONS

- Oil and Gas Industry
- Food Processing
- Chemical Industry
- Marine and Offshore Applications
- etc.

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

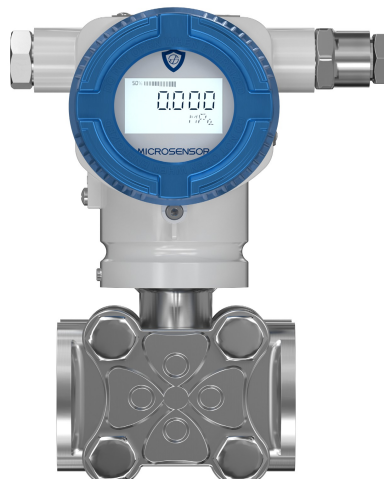
—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



MDM7000-DGP/DAP

MICROSENSOR

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. SPAN	LRL	URL	STATIC P. LIMIT	HIGH OVERP...	LOW OVERPR...
DGP	1	60 mbar	2 mbar	-60 mbar	60 mbar	160 bar	
DGP	2	0.4 bar	4 mbar	-0.4 bar	0.4 bar	160 bar	
DGP	3	2.5 bar	25 mbar	-1 bar	2.5 bar	160 bar	
DGP	4	10 bar	0.1 bar	-1 bar	10 bar	160 bar	
DGP	5	30 bar	0.3 bar	-1 bar	30 bar	160 bar	
DGP	6	100 bar	1 bar	-1 bar	100 bar	200 bar	
DGP	7	400 bar	4 bar	-1 bar	400 bar	600 bar	
DAP	2	0.4 bar	0.2 bar	0 bar	0.4 bar	160 bar	
DAP	3	2.5 bar	0.5 bar	0 bar	2.5 bar	160 bar	
DAP	4	10 bar	2 bar	0 bar	10 bar	160 bar	
DAP	5	30 bar	6 bar	0 bar	30 bar	160 bar	
DAP	6	100 bar	10 bar	0 bar	100 bar	200 bar	

REFERENCE ACCURACY

DGP · TD ≤ 5 (all ranges, incl. 60 mbar) ±0.075% reference SPAN

DGP · TD > 5 · 60 mbar range ±(0.001 + 0.0148 × TD)% SPAN

DGP · TD > 5 · 0.4/2.5/10/30/100/400 bar ranges ±(0.025 + 0.035 × TD)% SPAN

DAP · TD ≤ 5 · 0.4 bar range ±0.2% SPAN

DAP · TD ≤ 5 · 2.5/10/30/100 bar ranges ±0.1% SPAN

DAP · TD > 5 · 0.4 bar range ±(0.025 + 0.035 × TD)% SPAN

DAP · TD > 5 · 2.5/10/30/100 bar ranges ±(0.025 + 0.0195 × TD)% SPAN

TD (Turn Down) = Maximum range / Actual range, where Maximum range = URL (zero-based range, identical to the factory calibration range) and Actual range = SPAN (equivalent to |URV-LRV|). Reference accuracy includes BFSI, hysteresis and repeatability under standard test conditions; calibration temperature 20°C±5°C, zero-referenced. Total performance combines internal accuracy, ambient temperature effects and static pressure effects: Total performance = ±√(E1²+E2²+E3²). Note: the ±0.075% SPAN accuracy for the 60 mbar range is only available with TD≤2. Maximum rangeability (turndown): 100:1. Long-term stability: ±0.1% SPAN every 10 years.

EFFECTS ON MEASUREMENT

Ambient temperature (DGP) ±(0.075 + 0.0375 × TD)% SPAN per 10 °C

Ambient temperature (DAP) ±(0.085 + 0.0625 × TD)% SPAN per 10 °C

Power supply Zero and span shift ≤ ±0.005% URL per Volt, within 18.3–44 VDC

Mounting position < 4 mbar in any position; correctable by resetting PV (primary value) = 0

Vibration < 0.1% SPAN per GB/T18271.3 / IEC61298-3

Long-term stability ±0.1% SPAN every 10 years

MDM7000-DGP/DAP

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire, 4–20 mA DC output with HART protocol superimposed on the signal (output code H). Alternative options: low-consumption I–5 VDC with $\pm 0.1\%$ FS accuracy (code V) or Modbus RS-485 (code R). Programmable linear or square-root output (code /SQ, with LRL fixed at zero).
Damping	Total damping constant = sum of the electronic damping + the sensor module damping. Electronics: 0–100 s configurable, default 0 s (code /ST) · Sensor module (isolating diaphragm plus fill oil): ≤ 0.2 s · Start-up time: ≤ 6 s · Factory reset time: ≤ 31 s · Response time: ≤ 100 ms
Weight	Approx. 4 kg (without mounting bracket or process connection accessories)

POWER SUPPLY AND LOAD

Standard power supply (HART / RS-485)	18.3 – 44 VDC
Intrinsically safe power supply with HART	18.3 – 30 VDC
Minimum power supply without HART	13 VDC (consult MICROSENSOR)
Load resistance – operating mode	0 – 1476 ohm
Load resistance – HART communication	250 – 800 ohm
Transmission distance	< 1000 meters
Consumption	≤ 500 mW @ 24 VDC, 20.8 mA

Maximum admissible load resistance: $R(\text{ohm}) = (U - 13) / 0.021$, with U in volts (e.g.: $1476 \text{ ohm} = (44\text{V} - 13\text{V}) / 21\text{mA}$) · HART communication range: 250–800 ohm, between 18.3 and 30 V in the intrinsically safe version, or between 18.3 and 44 V in the standard version.

AMBIENT AND PROCESS CONDITIONS

Ambient temperature	Without LCD display: –50 to 85 °C · With LCD display: –40 to 70 °C (on short-neck flameproof models, the housing surface temperature must be ≤ 80 °C; when in doubt, the medium temperature must not exceed class T6 = 80 °C)
Storage temperature	Without LCD display: –50 to 100 °C · With LCD display: –40 to 85 °C
Sensor operating temperature	–40 to 105 °C (heat-dissipating accessories are available for higher-temperature media; consult MICROSENSOR)
Medium temperature per fill oil	Standard silicone: –40 to 105 °C · Low-temperature silicone: –55 to 85 °C · Fluorinated oil: –20 to 85 °C
Ambient humidity	5–100% RH @ 40 °C
Protection class	IP66 / IP67

MDM7000-DGP/DAP

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MDM7000-DGP/DAP

BASE MODEL

Gauge pressure	MDM7000-DGP	Intelligent gauge pressure transmitter
Absolute pressure	MDM7000-DAP	Intelligent absolute pressure transmitter

HAZARDOUS AREA

China – Flameproof	1	CE23.6650 · Ex db IIC T6 Gb, GB/T3836.1-2021, GB/T3836.2-2021
China – Intrinsic safety	2	CE23.7688X · Ex ia IIC T4 Ga, GB/T3836.1-2021, GB/T3836.4-2021
China – Dust protection	3	GYB24.1215X · Ex tb IIIC T85°C Db, GB/T3836.1-2021, GB/T3836.31-2021
China – Flameproof + Intrinsic safety	4	Combination of options 1 and 2, consult MICROSENSOR
China – Flameproof + Dust + Intrinsic...	5	Combination of options 1, 2 and 3, consult MICROSENSOR
CSA – Flameproof + Dust (extended I...	A	CSA26CA80192884X · Class I Div.1 Grp A,B,C,D T6 · Class II Div.1 Grp E,F,G T80°C · Class III · Ex db IIC T6 Gb · Class I Zone1 AEx db IIC T6 Gb · Ex tb IIIC T80°C Db · Zone21 AEx tb IIIC T80°C Db
CSA – Intrinsic safety	B	CSA24CA80156531X · Class I Div.1 Grp A,B,C,D T4 · Ex ia IIC T4 Ga · Class I Zone0 AEx ia IIC T4 Ga
CSA – Flameproof + Intrinsic safety (...)	C	Combination of options A and B, consult MICROSENSOR
ATEX – Flameproof + Dust	E	CSANe 25ATEX1107X · II 2G Ex db IIC T6 Gb, II 2D Ex tb IIIC T80°C Db
ATEX – Intrinsic safety	F	CSANe 24ATEX1178X · II 1G Ex ia IIC T4 Ga
ATEX – Flameproof + Intrinsic safety	G	Combination of options E and F, consult MICROSENSOR
IECEX – Flameproof + Dust	J	IECEX CSA 25.0059X · Ex db IIC T6 Gb, Ex tb IIIC T80°C Db
IECEX – Intrinsic safety	K	IECEX CSA 24.0045X · Ex ia IIC T4 Ga
IECEX – Flameproof + Intrinsic safety	L	Combination of options J and K, consult MICROSENSOR
EAC – Flameproof	M	RU C-CN.58..05884/24 · IEx db IIC T6 Gb, 0Ex ia IIC T4 Ga
No certification	O	Non-hazardous area

OUTPUT SIGNAL

HART	H	4-20 mA DC, HART
Low consumption	V	1-5 VDC, ±0.1% FS accuracy
Modbus	R	Modbus RS-485

HOUSING

316L SS casting, M20	S	316L SS cast housing, 2 female entries M20×1.5
316L SS casting, NPT	U	316L SS cast housing, 2 female entries 1/2 NPT (without cable glands)
Aluminum alloy, M20	P	Polyester-coated aluminum alloy, 2 female entries M20×1.5
Aluminum alloy, NPT	N	Polyester-coated aluminum alloy, 2 female entries 1/2 NPT (without cable glands)

MDM7000-DGP/DAP

MICROSENSOR

Order Code (continued)

CABLE GLANDS AND ADAPTERS

None	0	No cable glands
Flameproof plug M20	A	Flameproof plug for one end M20×1.5, 316 SS
Flameproof plug NPT	B	Flameproof plug for one end 1/2 NPT, 316 SS
Sealed cable gland M20	1	PVC, with plug, 6-12mm cable, IP67
Non-flameproof adapter	2	M20×1.5(M) to M20×1.5(H), with plug, 316 SS, 6-8mm cable, IP67
Flameproof adapter to NPT	3	M20×1.5(M) to 1/2 NPT(H), with plug, 316 SS, 6-12mm cable, IP67
Flameproof adapter M20-M20	4	M20×1.5(M) to M20×1.5(H), with plug, 316 SS, 6-12mm cable, IP67
Flameproof adapter to G1/2	5	M20×1.5(M) to G1/2(H), with plug, 316 SS, 6-12mm cable, IP67

DISPLAY

Without LCD	N	Flameproof -40 to 70 °C · Non-flameproof -50 to 85 °C
With LCD	L	Flameproof / non-flameproof -40 to 70 °C

SENSOR MODULE RANGE - DGP (gauge)

60 mbar	1	2 mbar min. · -60 to 60 mbar · 160 bar overpressure
0.4 bar	2	4 mbar min. · -0.4 to 0.4 bar · 160 bar overpressure
2.5 bar	3	25 mbar min. · -1 to 2.5 bar · 160 bar overpressure
10 bar	4	0.1 bar min. · -1 to 10 bar · 160 bar overpressure
30 bar	5	0.3 bar min. · -1 to 30 bar · 160 bar overpressure
100 bar	6	1 bar min. · -1 to 100 bar · 200 bar overpressure
400 bar (extended lead time)	7	4 bar min. · -1 to 400 bar · 600 bar overpressure

SENSOR MODULE RANGE - DAP (absolute)

0.4 bar	2	0.2 bar min. · 0 to 0.4 bar · 160 bar overpressure
2.5 bar	3	0.5 bar min. · 0 to 2.5 bar · 160 bar overpressure
10 bar	4	2 bar min. · 0 to 10 bar · 160 bar overpressure
30 bar	5	6 bar min. · 0 to 30 bar · 160 bar overpressure
100 bar	6	10 bar min. · 0 to 100 bar · 200 bar overpressure (note: no vent plug required on the 100/400 bar ranges)

WETTED PARTS - HIGH PRESSURE SIDE (diaphragm / flange block / drain valve / seal)

316L / FKM	A	316L diaphragm, 316L block and valve, FKM seal (-20 to 120 °C)
316L / PTFE	B	316L diaphragm, 316L block and valve, PTFE seal with stainless steel insert (-60 to 120 °C)
316L / modified FKM	E	316L diaphragm, 316L block and valve, modified FKM seal (-40 to 180 °C)
HC-276 / FKM	C	HC-276 diaphragm, 316L block and valve, FKM seal (-20 to 120 °C)
HC-276 / PTFE	D	HC-276 diaphragm, 316L block and valve, PTFE seal with stainless steel insert (-60 to 120 °C)
HC-276 / modified FKM	F	HC-276 diaphragm, 316L block and valve, modified FKM seal (-40 to 180 °C)
Tantalum / FKM (extended lead time)	G	Tantalum diaphragm, 316L block and valve, FKM seal (-20 to 120 °C); not available for ranges below 0.4 bar
Tantalum / PTFE (extended lead time)	H	Tantalum diaphragm, 316L block and valve, PTFE seal with stainless steel insert (-60 to 120 °C); not available for ranges below 0.4 bar
Tantalum / modified FKM (extended ...)	I	Tantalum diaphragm, 316L block and valve, modified FKM seal (-40 to 180 °C); not available for ranges below 0.4 bar

MDM7000-DGP/DAP

MICROSENSOR

Order Code (continued)

PROCESS CONNECTION - HIGH PRESSURE SIDE

Valve on flange back	1	NPT 1/4-18 female, drain valve on the back of the flange, fixed thread 7/16-20UNF(H), horizontal mounting
Valve on top	2	NPT 1/4-18 female, drain valve on top of the flange, fixed thread 7/16-20UNF(H), horizontal mounting
Valve on bottom	3	NPT 1/4-18 female, drain valve on the bottom of the flange, fixed thread 7/16-20UNF(H), horizontal mounting
Side valve	4	NPT 1/4-18 female, side drain valve (left/right not factory-specified), fixed thread 7/16-20UNF(H), vertical mounting

OIL FILL

Standard silicone	S	Oil -40 to 200 °C · Medium -40 to 105 °C
Low-temperature silicone (extended ...	L	Oil -55 to 120 °C · Medium -55 to 85 °C
Fluorinated (extended lead time)	E	Oil -55 to 85 °C · Medium -20 to 85 °C

PROCESS FLANGE BOLTS

Alloy steel	1	Bolts, nuts and other components in 35CrMo alloy steel
Stainless steel	6	Bolts, nuts and other components in 316 SS (static pressure < 250 bar)

PROCESS FLANGE MOUNTING

Horizontal	H	Horizontal mounting
Vertical (extended lead time)	E	Vertical mounting

FACTORY CALIBRATION RANGE

Calibration	CAL	Standard MICROSENSOR verification report per the range; linear output by default. The contract must specify LRL-URL and display unit
-------------	------------	--

MDM7000-DGP/DAP

MICROSENSOR

Order Options (continued)

APPROVALS (marine classification societies)

/CS1	CCS, China Classification Society, XA25PTB00010
/CS2	DNV, Det Norske Veritas, TAA00000Y1
/CS3	BV, Bureau Veritas, 77759/A0 BV
/CS4	ABS, American Bureau of Shipping, 24-2536413-PDA
/CS5	LR, Lloyd's Register, LR2520052TA
/CS6	KR, Korean Register, NAJ50160-AE001
/CS7	NK, Nippon Kaiji Kyokai, TA24376M
/CS8	RS, Russian Maritime Register of Shipping, 24.44.01.01398.266

METROLOGICAL CERTIFICATION (Russia and CIS)

/PAC	Type approval certificate, Russia, 94159-24
/PBY	Type approval certificate, Belarus, 18634

MOUNTING ACCESSORIES

/G10	Standard L-bracket, 316 SS
/G11	Standard L-bracket, Q235 carbon steel
/G12	Standard L-bracket, 316L SS

PROCESS CONNECTION ACCESSORIES

/D1	T-adapter (M) M20×1.5 and Ø14×2×30mm vent tube, 316 SS, ×1
/D2	Oval adapter, 1/2-14 NPT (H), 316 SS, ×1

OUTPUT MODE

/SQ	Output and display in square-root format, with LRL fixed at zero
-----	--

VERIFICATION REPORT (extended lead time)

/Q1	Data per customer template. The contract must specify LRL-URL, display unit and other requirements
-----	--

DAMPING TIME ADJUSTMENT

/ST	Adjustable range 0-100 s, default 0 s. The contract must specify the damping time
-----	---

FAILURE ALARM

/WH	High alarm current, 21 mA
/WL	Low alarm current, 3.7 mA (default value)

NAMEPLATE

/PT	316L SS hanging plate. The contract must specify the content (max. 16 characters)
-----	---

INTEGRATED MANIFOLD

/VT	Transmitter factory-assembled together with a MICROSENSOR valve manifold. The contract must specify the full manifold model
-----	---

LEAK TEST REPORT (extended lead time)

/QS4	N2 or air, 150 bar, 1 min hold. Standard MICROSENSOR report (60 mbar to 30 bar nominal ranges)
/QS5	N2 or air, 200 bar, 1 min hold. Standard MICROSENSOR report (100 bar nominal range)
/QS6	Water or hydraulic oil, 600 bar, 1 min hold. Standard MICROSENSOR report (400 bar nominal range)

MDM7000-DGP/DAP

MICROSENSOR

Order Options (continued)

BLUETOOTH

/B Built-in Bluetooth communication

GOLD-PLATED DIAPHRAGM (extended lead time)

/J1 Single gold-plated diaphragm (5 µ)

OIL-FREE TREATMENT (extended lead time)

/CL1 Degreasing and cleaning of wetted parts. For oxygen service, fluorinated oil (code E) must be selected

LITHIUM BATTERY (extended lead time)

/LD General low copper and zinc content requirements for the lithium battery industry (Cu <0.1%, Zn <0.15%)

PAINT (extended lead time)

/P1 PUR coating

WETTED PARTS MATERIAL CERTIFICATE

/EN Material traceability certificate per EN 10204 3.1

/NA Wetted parts material certificate (diaphragm and process flange) per NACE MR0175/ISO 15156

LANGUAGE

/LE Nameplate, operation manual, certificate of conformity and factory verification report in English

/LR Nameplate, operation manual, certificate of conformity and factory verification report in Russian

DELIVERY SERVICE

/XM In addition to standard documentation (certificate of conformity, operation manual and factory verification report), any additional documentation required for project acceptance must be detailed at the time of order

ACCURACY (override factory value)

/AL3 ±0.05% (extended lead time)

/AL4 ±0.075%

/AL5 ±0.1%

/AL6 ±0.2%

WARRANTY

/Y2 2 years

/Y3 3 years

/Y5 5 years

MDM7000-DGP/DAP

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Calibration range

Per order code (CAL); by default LRL-URL of the selected nominal range, linear output

Damping

0 s (adjustable 0-100 s via code /ST)

Display

Without LCD (code N); available with LCD via code L

Output

4-20 mA DC HART linear (output code H); square-root version available with /SQ

Failure alarm

Low current 3.7 mA (code /WL); high alarm 21 mA available with /WH

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet as a ...

Mark: CE · EMC: Not specified in the data sheet · Standard: EMC tests reported per GB/T 9254.1/CISPR 32 (radiated and conducted emissions) and the GB/T 17626/IEC 61000-4 series (immunity to electrostatic discharge, radiated fields, fast transients, surge and RF-conducted immunity) · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

PCEC / NEPSI (China)

Ex db IIC T6 Gb
Working T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: CE23.6650

PCEC / NEPSI (China) - ...

Ex tb IIIC T85°C Db
Working T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: GYB24.1215X

ATEX (notified body CS...

II 2G Ex db IIC T6 Gb / II 2D Ex
tb IIIC T80°C Db
Working T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: CSANe 25ATEX1107X

IECEx (CSA)

Ex db IIC T6 Gb / Ex tb IIIC
T80°C Db
Working T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: IECEx CSA 25.0059X

CSA (North America, e...

Class I Div.1 Grp A,B,C,D T6 / Ex
db IIC T6 Gb / AEx db IIC T6 Gb
/ Ex tb IIIC T80°C Db
Working T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: CSA26CA80192884X

EAC (Customs Union)

IEx db IIC T6 Gb
Working T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: RU C-CN.58..05884/24

INTRINSIC SAFETY CERTIFICATE BY BODY

PCEC / NEPSI (China)

Ex ia IIC T4 Ga
Ambient T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: CE23.7688X

ATEX (notified body CS...

II 1G Ex ia IIC T4 Ga
Ambient T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: CSANe 24ATEX1178X

IECEx (CSA)

Ex ia IIC T4 Ga
Ambient T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: IECEx CSA 24.0045X

CSA (North America)

Class I Div.1 Grp A,B,C,D T4 / Ex
ia IIC T4 Ga / Class I Zone0
AEx ia IIC T4 Ga
Ambient T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: CSA24CA80156531X

EAC (Customs Union)

0Ex ia IIC T4 Ga
Ambient T.: See Ambient Condi...
Medium T.: See sensor and fill...
Reg.: RU C-CN.58..05884/24 (cert...

Source: MICROSENSOR MDM7000-DGP/DAP Smart Pressure Transmitter - Double Clamp Seals data sheet, Rev. V4.3 04/2026



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

MDM7000-GP/AP

MICROSENSOR



BUY ONLINE

Intelligent Gauge / Absolute Pressure Transmitter

Microsensor · Industrial

DESCRIPTION

The MDM7000-GP/AP is an intelligent pressure transmitter in a traditional mounting configuration (threaded process connection) manufactured by MICROSENSOR, designed for demanding industrial process applications. The GP version measures gauge pressure in a range of 0.4 to 1000 bar, while the AP version measures absolute pressure from 0.1 to 100 bar, both built on the same high-stability monocrystalline piezoresistive sensor. It offers accuracy of up to $\pm 0.075\%$ URL, turndown of 100:1 and long-term stability of $\pm 0.1\%$ of span every 10 years. Its output is 4-20 mA with HART protocol, housing in aluminum or cast 316L stainless steel with dual cable entry, and it carries flameproof (Ex d) and intrinsically safe (Ex ia) certifications from multiple bodies, plus DNV, ABS, KR, NK, RS, CCS and BV marine approvals for shipboard installation.

TECHNICAL SPECIFICATIONS

- Accuracy up to $\pm 0.075\%$ URL (GP) / $\pm 0.1\%$ URL (AP), turndown 100:1
- 4-20 mA DC output with HART, aluminum or 316L stainless steel housing, IP66/IP67
- GP range 0.4-1000 bar (gauge) / AP range 0.1-100 bar (absolute)
- DNV, ABS, KR, NK, RS, CCS and BV marine-approved; Ex d and Ex ia certifications

TYPICAL APPLICATIONS

- Chemical Industry
- Oil and Gas
- Pulp and Paper
- Power Generation
- Metallurgy
- Energy
- Food and Beverage
- Medical and Healthcare Industry
- General Industrial Processes

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

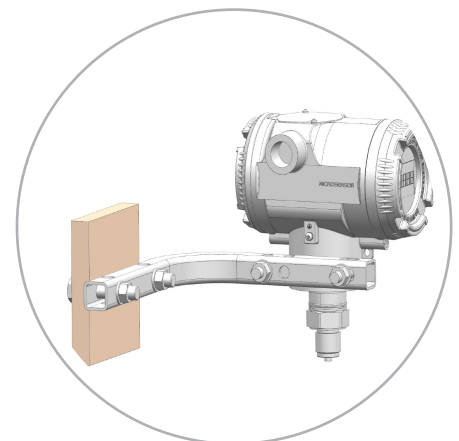
—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



MDM7000-GP/AP

MICROSENSOR

Measuring Ranges and Performance

MEASUREMENT RANGES AND LIMITS (GP: gauge pressure · AP: absolute pressure)

CODE	MODEL	NOMINAL RANGE	MIN. SPAN	LRL	URL	OVERPRESSURE
2	GP	0.4 bar	50 mbar	-0.4 bar	0.4 bar	10 bar
3	GP	2.5 bar	125 mbar	-1 bar	2.5 bar	40 bar
4	GP	10 bar	0.5 bar	-1 bar	10 bar	60 bar
5	GP	30 bar	1.5 bar	-1 bar	30 bar	150 bar
6	GP	100 bar	5 bar	-1 bar	100 bar	200 bar
7	GP	400 bar	50 bar	-1 bar	400 bar	600 bar
8	GP	700 bar	50 bar	-1 bar	700 bar	1050 bar
9	GP	1000 bar	50 bar	-1 bar	1000 bar	1100 bar
C	AP	0.1 bar	50 mbar	0 bar	0.1 bar	6 bar
D	AP	0.2 bar	100 mbar	0 bar	0.2 bar	10 bar
2	AP	0.4 bar	0.2 bar	0 bar	0.4 bar	10 bar
3	AP	2.5 bar	0.5 bar	0 bar	2.5 bar	40 bar
4	AP	10 bar	2 bar	0 bar	10 bar	60 bar
5	AP	30 bar	3 bar	0 bar	30 bar	150 bar
6	AP	100 bar	10 bar	0 bar	100 bar	200 bar

REFERENCE ACCURACY

GP · TD ≤ 5, 0.4 bar range ±0.1%

GP · TD ≤ 5, 2.5/10/30/100/400/700/1000 bar ranges ±0.075%

GP · TD > 5, 0.4 bar range ±(0.025 + 0.015 × TD) %

GP · TD > 5, 2.5/10/30/100/400/700/1000 bar ranges ±(0.0025 + 0.0145 × TD) % (as stated in the data sheet)

AP · TD ≤ 5, 0.1/0.2/0.4 bar ranges ±0.2%

AP · TD ≤ 5, 2.5/10/30/100 bar ranges ±0.1%

AP · TD > 5, 0.1/0.2/0.4 bar ranges ±(0.025 + 0.035 × TD) %

AP · TD > 5, 2.5/10/30/100 bar ranges ±(0.025 + 0.015 × TD) %

TD (Turn Down) = Maximum range / Actual range. Maximum range = URL (zero-based range, identical to the factory calibration range); Actual range = SPAN (equivalent to |URV-LRV|). Reference accuracy includes BFSI, hysteresis and repeatability under reference conditions: calibration temperature 20°C ± 5°C, zero-referenced. General specification: GP ±0.075%/±0.1%/±0.2% URL · AP ±0.1%/±0.2% URL · Maximum turndown 100:1 · Long-term stability ±0.1% Span/10 years.

EFFECTS ON MEASUREMENT

Ambient temperature — GP (all ranges) ±(0.075 + 0.0375 × TD) % SPAN per 10 °C

Ambient temperature — AP 0.1/0.2/0.4 bar ±(0.125 + 0.075 × TD) % SPAN per 10 °C

Ambient temperature — AP 2.5/10/30/100 bar ±(0.115 + 0.065 × TD) % SPAN per 10 °C

Power supply effect Zero and span shift ≤ ±0.005% URL/V, for variations of 18.3–44 VDC

Mounting position effect Less than 4 mbar in any position; correctable via PV (primary value) reset = 0

Vibration effect < 0.1% SPAN per GB/T18271.3 / IEC61298-3

MDM7000-GP/AP

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4–20 mA DC output, with superimposed HART digital communication protocol. Protection class IP67 / IP66.
Damping	Total damping constant = electronic damping + sensor module damping. Electronic damping: 0–100 s configurable · Sensor module damping (isolating diaphragm + silicone oil): ≤0.2 s · Start-up time: ≤6 s · Factory reset time: ≤31 s · Response time: ≤100 ms.
Weight	Aluminum alloy housing: approx. 1.56 kg · Stainless steel housing: approx. 3.84 kg (without mounting bracket or process connection accessories).

POWER SUPPLY AND LOAD

With HART communication 18.3 – 44 VDC

With intrinsically safe HART protocol 18.3 – 30 VDC

Load resistance: 0–1476 in standard operating mode [1476 = (44V–13V)/21mA]; 250–800 for HART communication. Maximum transmission distance: <1000 m. Consumption: ≤500 mW @ 24 VDC, 20.8 mA (4–20 mA loop). If HART communication is not used, the minimum supply voltage can be reduced to 13 V (consult factory).

AMBIENT AND PROCESS CONDITIONS

Working temp., without LCD display	–50 to 85 °C
Working temp., with LCD display	–40 to 70 °C
Storage temp., without LCD display	–50 to 100 °C
Storage temp., with LCD display	–40 to 85 °C
Sensor operating temp.	–40 to 105 °C
Medium temp. — standard silicone oil	–40 to 105 °C
Medium temp. — low-temperature silicone oil	–55 to 85 °C
Medium temp. — fluorinated oil	–20 to 85 °C
Working humidity	5% RH to 100% RH @ 40 °C

MDM7000-GP/AP

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MDM7000-GP/AP

HAZARDOUS AREA

1	China, flameproof, CE23.6650 — Ex db IIC T6 Gb, GB/T3836.1-2021, GB/T3836.2-2021
2	China, intrinsic safety, CE23.7688X — Ex ia IIC T4 Ga, GB/T3836.1-2021, GB/T3836.4-2021
3	China, dust ignition protection, GYB24.1215X — Ex tb IIIC T85°C Db, GB/T3836.1-2021, GB/T3836.31-2021
4	China, combined flameproof + intrinsic safety
5	China, combined flameproof + dust protection + intrinsic safety
A	CSA, flameproof + dust protection, CSA26CA80192884X — Class I Div1 Grp A-D T6 / Class II Div1 Grp E-G T80°C / Class III / Ex db IIC T6 Gb / Ex tb IIIC T80°C Db
B	CSA, intrinsic safety, CSA24CA80156531X — Class I Div1 Grp A-D T4 / Ex ia IIC T4 Ga / Class I Zone0 AEx ia IIC T4 Ga
C	CSA, combined flameproof + intrinsic safety
E	ATEX, flameproof + dust protection, CSANe 25ATEX1107X — II 2G Ex db IIC T6 Gb / II 2D Ex tb IIIC T80°C Db
F	ATEX, intrinsic safety, CSANe 24ATEX1178X — II 1G Ex ia IIC T4 Ga
G	ATEX, combined flameproof + intrinsic safety
J	IECEx, flameproof + dust protection, IECEx CSA 25.0059X — Ex db IIC T6 Gb / Ex tb IIIC T80°C Db
K	IECEx, intrinsic safety, IECEx CSA 24.0045X — Ex ia IIC T4 Ga
L	IECEx, combined flameproof + intrinsic safety
M	EAC, flameproof, RU C-CN.58.05884/24 — 1Ex db IIC T6 Gb, 0Ex ia IIC T4 Ga
0	Non-hazardous area

OUTPUT SIGNAL

H	4-20 mA DC, HART
V	1-5 VDC low consumption (0.1%FS accuracy)
R	Modbus RS-485

HOUSING

S	316L stainless steel casting, 2× female entries M20×1.5
U	316L stainless steel casting, 2× female entries 1/2 NPT (without cable glands)
P	Aluminum alloy (polyester-coated), 2× female entries M20×1.5
N	Aluminum alloy (polyester-coated), 2× female entries 1/2 NPT (without cable glands)

CABLE GLANDS AND ADAPTERS

0	None (no cable glands)
A	Flameproof plug for one end, M20×1.5, 316 stainless steel
B	Flameproof plug for one end, 1/2 NPT, 316 stainless steel
1	Sealed M20×1.5 cable gland with plug, PVC, 6-12 mm cable, IP67
2	Non-flameproof adapter M20×1.5(M) to M20×1.5(H) with plug, SS316, 6-8 mm cable, IP67
3	Flameproof adapter M20×1.5(M) to 1/2 NPT(H) with plug, SS316, 6-12 mm cable, IP67
4	Flameproof adapter M20×1.5(M) to M20×1.5(H) with plug, SS316, 6-12 mm cable, IP67
5	Flameproof adapter M20×1.5(M) to G1/2(H) with plug, SS316, 6-12 mm cable, IP67

MDM7000-GP/AP

MICROSENSOR

Order Code (continued)

DISPLAY

N	Without LCD display — flameproof version -40 to 70 °C, non-flameproof version -50 to 85 °C
L	With LCD display — flameproof/non-flameproof -40 to 70 °C

SENSOR RANGE — GP (gauge pressure)

2	Nominal 0.4 bar (min. span 50 mbar, LRL -0.4 bar, URL 0.4 bar, overpressure 10 bar)
3	Nominal 2.5 bar (min. span 125 mbar, LRL -1 bar, URL 2.5 bar, overpressure 40 bar)
4	Nominal 10 bar (min. span 0.5 bar, LRL -1 bar, URL 10 bar, overpressure 60 bar)
5	Nominal 30 bar (min. span 1.5 bar, LRL -1 bar, URL 30 bar, overpressure 150 bar)
6	Nominal 100 bar (min. span 5 bar, LRL -1 bar, URL 100 bar, overpressure 200 bar)
7	Nominal 400 bar (min. span 50 bar, LRL -1 bar, URL 400 bar, overpressure 600 bar) — extended lead time
8	Nominal 700 bar (min. span 50 bar, LRL -1 bar, URL 700 bar, overpressure 1050 bar) — extended lead time
9	Nominal 1000 bar (min. span 50 bar, LRL -1 bar, URL 1000 bar, overpressure 1100 bar) — extended lead time

SENSOR RANGE — AP (absolute pressure)

C	Nominal 0.1 bar (min. span 50 mbar, LRL 0 bar, URL 0.1 bar, overpressure 6 bar) — ceramic diaphragm
D	Nominal 0.2 bar (min. span 100 mbar, LRL 0 bar, URL 0.2 bar, overpressure 10 bar) — ceramic diaphragm
2	Nominal 0.4 bar (min. span 0.2 bar, LRL 0 bar, URL 0.4 bar, overpressure 10 bar)
3	Nominal 2.5 bar (min. span 0.5 bar, LRL 0 bar, URL 2.5 bar, overpressure 40 bar)
4	Nominal 10 bar (min. span 2 bar, LRL 0 bar, URL 10 bar, overpressure 60 bar)
5	Nominal 30 bar (min. span 3 bar, LRL 0 bar, URL 30 bar, overpressure 150 bar)
6	Nominal 100 bar (min. span 10 bar, LRL 0 bar, URL 100 bar, overpressure 200 bar)

SENSOR STRUCTURE

T	Single-flange diaphragm seal
----------	------------------------------

WETTED PARTS MATERIALS (diaphragm / process connection thread)

A	316L diaphragm / 316L thread
B	Hastelloy C-276 diaphragm / 316L thread
C	Tantalum diaphragm / 316L thread — extended lead time
E	Ceramic diaphragm / 316L thread (mandatory for AP ranges of 0.1 or 0.2 bar; 304 stainless steel body threaded connection)

PROCESS CONNECTION

M	M20×1.5 (M), Ø3 pressure port, GB/T193-2003, ISO 261
G	G1/2 (M), Ø3 pressure port, GB/T7307-2001, ISO228-1 — only option for ceramic diaphragm (Ø10 port)
A	1/2-14 NPT (M), Ø6 pressure port, GB/T12716-2011, ASME B1.20.2M
N	1/2-14 NPT (H), Ø14 pressure port, GB/T12716-2011, ASME B1.20.2M
H	Flange without diaphragm — see Options for detailed specification — extended lead time

MDM7000-GP/AP

MICROSENSOR

Order Code (continued)

OIL FILL

N	No oil fill (only optional for ceramic diaphragm)
S	Standard silicone oil (oil: -40 to 200 °C; medium: -40 to 105 °C)
L	Low-temperature silicone oil (oil: -55 to 120 °C; medium: -55 to 85 °C) — extended lead time
E	Fluorinated oil (oil: -55 to 85 °C; medium: -20 to 85 °C) — extended lead time

FACTORY CALIBRATION

CAL	Standard MICROSENSOR verification report per the range, linear output by default. The contract must specify LRL-URL and display unit.
------------	---

MDM7000-GP/AP

MICROSENSOR

Order Options (continued)

MARINE APPROVALS

/CS1	CCS, China Classification Society, XA25PTB00010
/CS2	DNV, Det Norske Veritas, TAA00000Y1
/CS3	BV, Bureau Veritas, 77759/A0 BV
/CS4	ABS, American Bureau of Shipping, 24-2536413-PDA
/CS5	LR, Lloyd's Register, LR2520052TA
/CS6	KR, Korean Register, NAJ50160-AE001
/CS7	NK, Nippon Kaiji Kyokai, TA24376M
/CS8	RS, Russian Maritime Register of Shipping, 24.44.01.01398.266

METROLOGICAL CERTIFICATION (RUSSIA AND CIS)

/PAC	Type approval certificate for measuring instruments, Russia, 94159-24
/PBV	Type approval certificate for measuring instruments, Belarus, 18634

MOUNTING ACCESSORIES

/G10	Standard L-bracket, 316 stainless steel
/G11	Standard L-bracket, Q235 carbon steel
/G12	Standard L-bracket, 316L stainless steel

FLANGE (WITHOUT DIAPHRAGM)

/H01	HG/T20592-2009 DN50 PN10-PN40, RF raised-face flange — extended lead time
/H02	HG/T20592-2009 DN25 PN10-PN40, RF raised-face flange — extended lead time
/H08	HG/T20592-2009 DN20 PN10-PN40, RF raised-face flange — extended lead time

VERIFICATION REPORT

/Q1	Data report per customer template. The contract must specify LRL-URL, display unit and other requirements — extended lead time
-----	--

DAMPING

/ST	Damping time adjustable 0-100 s, default 0 s. The contract must specify the damping time.
-----	---

FAILURE ALARM

/WH	High alarm current value, 21 mA
/WL	Low alarm current value, 3.7 mA (default)

NAMEPLATE

/PT	316L stainless steel hanging plate. The contract must specify the tag content (max. 16 characters).
-----	---

INTEGRATED VALVE MANIFOLD

/VT	Transmitter factory-assembled with a MICROSENSOR valve manifold. The contract must specify the full manifold model.
-----	---

MDM7000-GP/AP

MICROSENSOR

Order Options (continued)

LEAK TEST

/QS1	N2 or air, 10 bar, 1 min. Standard Micro Sensor report (0.4 bar nominal range) — extended lead time
/QS2	N2 or air, 40 bar, 1 min. (2.5 bar nominal range) — extended lead time
/QS3	N2 or air, 60 bar, 1 min. (10 bar nominal range) — extended lead time
/QS4	N2 or air, 150 bar, 1 min. (30 bar nominal range) — extended lead time
/QS5	N2 or air, 200 bar, 1 min. (100 bar nominal range) — extended lead time
/QS6	Water or hydraulic oil, 600 bar, 1 min. (400 bar nominal range) — extended lead time
/QS7	Water or hydraulic oil, 1050 bar, 1 min. (700 bar nominal range) — extended lead time
/QS8	Water or hydraulic oil, 1100 bar, 1 min. (1000 bar nominal range) — extended lead time

WIRELESS COMMUNICATION

/B	Built-in Bluetooth communication — extended lead time
----	---

SPECIAL TREATMENTS

/J1	Single gold-plated diaphragm (5 µ) — extended lead time
/CL1	Degreasing and cleaning treatment of wetted parts — extended lead time (for oxygen service, fluorinated oil, code E, must be used)

LITHIUM BATTERY

/LD	General low copper and zinc content requirement for the lithium battery industry (Cu<0.1%, Zn<0.15%)
-----	--

PAINT

/P1	PUR coating — extended lead time
-----	----------------------------------

MATERIAL CERTIFICATES

/EN	Material traceability certificate per EN 10204 3.1
/NA	Wetted parts material certificate (diaphragm and process flange) per NACE MR0175/ISO 15156

DOCUMENTATION LANGUAGE

/LE	Nameplate, operation manual, certificate of conformity and factory verification report in English
/LR	Nameplate, operation manual, certificate of conformity and factory verification report in Russian

DELIVERY SERVICE

/XM	Additional documentation required for project acceptance (beyond the standard certificate of conformity, manual and verification report), to be detailed in the order
-----	---

OPTIONAL ACCURACY

/AL3	±0.05% — extended lead time
/AL4	±0.075%
/AL5	±0.1%
/AL6	±0.2%

WARRANTY

/Y2	2-year warranty
/Y3	3-year warranty
/Y5	5-year warranty

MDM7000-GP/AP

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Output

Linear (4–20 mA); configurable with HART protocol

Failure alarm

Low current 3.7 mA (LO) by default; high alarm 21 mA available as option /WH

Damping time

0 s (adjustable 0–100 s via option /ST)

Factory calibration (CAL)

Range 0 – URL per order code; LRL–URL and display unit to be specified in the contract

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet (the ...

Mark: CE · EMC: EMC tests per GB/T 9254.1/CISPR 32 and GB/T 17626-2/-3/-4/-5/-6/-8 (IEC 61000-4-2/3/4/5/6/8) — see the EMC Effects table in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

PCEC (China)

Ex db IIC T6 Gb
Working T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: CE23.6650 (order code hazar...

NEPSI (China, dust)

Ex tb IIIC T85°C Db
Working T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: GYB24.1215X (order code haza...

ATEX (notified body CS...

II 2G Ex db IIC T6 Gb / II 2D Ex
tb IIIC T80°C Db
Working T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: CSANe 25ATEXII107X (order co...

IECEx (CSA)

Ex db IIC T6 Gb / Ex tb IIIC
T80°C Db
Working T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: IECEx CSA 25.0059X (order co...

CSA (North America)

Class I Div1 Grp A–D T6 / Ex db
IIC T6 Gb / Class I Zone1 AEx
db IIC T6 Gb
Working T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: CSA26CA80192884X (order co...

EAC (Russia / EAEU)

1Ex db IIC T6 Gb
Working T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: RU C–CN.58..05884/24 (ord...

INTRINSIC SAFETY CERTIFICATE BY BODY

PCEC (China)

Ex ia IIC T4 Ga
Ambient T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: CE23.7688X (order code hazar...

ATEX (notified body CS...

II 1G Ex ia IIC T4 Ga
Ambient T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: CSANe 24ATEXII178X (order co...

IECEx (CSA)

Ex ia IIC T4 Ga
Ambient T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: IECEx CSA 24.0045X (order co...

CSA (North America)

Class I Div1 Grp A–D T4 / Ex ia
IIC T4 Ga / Class I Zone0 AEx
ia IIC T4 Ga
Ambient T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: CSA24CA80156531X (order co...

EAC (Russia / EAEU)

0Ex ia IIC T4 Ga
Ambient T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: RU C–CN.58..05884/24 (ord...

Source: MICROSENSOR MDM7000-GP-AP-Smart-Gauge-Absolute-Pressure-Transmitter data sheet, Rev. V4.3 04/2026



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

MDM7000-GP-T

MICROSENSOR



BUY ONLINE

Flanged Gauge / Absolute Pressure Transmitter

Microsensor · Industrial

DESCRIPTION

The MDM7000-GP-T/AP-T is the direct-mount flanged version of MICROSENSOR's MDM7000 family, designed for processes that require isolating the monocrystalline silicon sensor from the fluid through a diaphragm seal welded directly to a process flange, without a remote capillary. Pressure is transmitted through the fill oil to the sensing element, avoiding direct contact with aggressive, viscous or solids-laden wetted parts. It is offered in two variants: GP-T for gauge pressure, with ranges from 0.4 to 100 bar, and AP-T for absolute pressure, from 0.4 to 30 bar. Flanges are manufactured per EN1092-1, HG/T-20592 or ANSI/ASME B16.5, in diameters from DN25 to DN100 (1" to 4"), with interchangeable diaphragms in 316L, Hastelloy C-276, tantalum, titanium or Monel depending on the required chemical compatibility.

TECHNICAL SPECIFICATIONS

- Accuracy $\pm 0.1\%$ / $\pm 0.2\%$ SPAN ($TD \leq 5$ / TD between 5 and 10) · 4-20 mA HART, 1-5 VDC or Modbus RS-485 output
- GP-T range: 0.4 to 100 bar · AP-T range: 0.4 to 30 bar · Maximum turndown 100:1 · stability $\pm 0.1\%$ SPAN/10 years
- Direct-mount flanged diaphragm seal, EN1092-1 / HG/T-20592 / ANSI B16.5 standards, DN25-DN100 (1"-4"), IP67/IP66
- Ex db IIC T6 Gb and Ex ia IIC T4 Ga certified (PCEC, ATEX, CSA, IECEx, EAC); DNV, ABS, KR, NK, RS, BV, CCS marine-approved

TYPICAL APPLICATIONS

- Oil and Gas
- Food and Beverage Processing
- Pulp and Paper
- Electric Power Generation and Transmission
- Chemical and Petrochemical Industry
- Naval and Marine Industry
- Water and Wastewater Treatment
- Pharmaceutical and Healthcare

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



MDM7000-GP-T

MICROSENSOR

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. SPAN	LRL	URL	STATIC P. LIMIT	HIGH OVERP...	LOW OVERPR...
GP-T	2	0.4 bar	20 mbar	-0.4 bar	0.4 bar	10 bar	
GP-T	3	2.5 bar	125 mbar	-1 bar	2.5 bar	40 bar	
GP-T	4	10 bar	0.5 bar	-1 bar	10 bar	60 bar	
GP-T	5	30 bar	1.5 bar	-1 bar	30 bar	150 bar	
GP-T	6	100 bar	5 bar	-1 bar	100 bar	200 bar	
AP-T	2	0.4 bar	0.2 bar	0 bar	0.4 bar	10 bar	
AP-T	3	2.5 bar	0.5 bar	0 bar	2.5 bar	40 bar	
AP-T	4	10 bar	2 bar	0 bar	10 bar	60 bar	
AP-T	5	30 bar	3 bar	0 bar	30 bar	150 bar	

REFERENCE ACCURACY

GP-T, $TD \leq 5$ $\pm 0.1\%$ SPAN (0.4, 2.5, 10, 30 and 100 bar ranges)

GP-T, $5 < TD < 10$ $\pm 0.2\%$ SPAN

AP-T, $TD \leq 5$ $\pm 0.1\%$ SPAN (0.4, 2.5, 10 and 30 bar ranges)

AP-T, $5 < TD < 10$ $\pm 0.2\%$ SPAN

TD (Turn Down) = Maximum range (URL) / Actual range (SPAN = |URV-LRV|). The declared reference accuracy includes BFSI linearity, hysteresis and repeatability; total performance includes ambient-temperature accuracy and thermal effects, based on a DN50 flange and a 316L diaphragm. Long-term stability: $\pm 0.1\%$ SPAN every 10 years. Optional accuracy selectable in the order: $\pm 0.1\%$ (/AL5), $\pm 0.2\%$ (/AL6) or $\pm 0.5\%$ (/AL7).

EFFECTS ON MEASUREMENT

Ambient temperature $\pm (0.5 + 0.15 \times TD)\%$ SPAN per 10 °C, within -20 to 80 °C

Power supply $\pm 0.005\%$ URL/V for variations of 18.3-44 VDC

Mounting position Zero error correctable via PV=0 reset, without affecting the range

Vibration $< 0.1\%$ SPAN per GB/T18271.3 / IEC61298-3

MDM7000-GP-T

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire, standard 4-20 mA DC output with superimposed HART protocol. Alternative outputs: low-consumption 1-5 VDC or Modbus RS-485. Protection class IP67/IP66.
Damping	Total damping constant = electronic damping + sensor module damping. Amplifier (electronics): 0-100 s adjustable · Sensor module (isolated diaphragm + fill oil): ≤ 0.2 s · Start-up time: ≤ 6 s · Factory reset time: ≤ 31 s · Response time: ≤ 100 ms
Weight	Approx. 1.61 kg (transmitter body/head only); final weight depends on the selected flange and diaphragm seal (diameter, material and pressure class), not quantified in the data sheet

POWER SUPPLY AND LOAD

Standard HART / RS-485	18.3 – 44 VDC
Intrinsically safe HART	18.3 – 30 VDC
Without HART communication (minimum)	13 VDC — consult MICROSENSOR

Load resistance: 0-1476 Ω in normal operating mode [$1476 \Omega = (44V-13V)/21mA$]; 250-800 Ω for HART communication. Maximum transmission distance: 1000 m. Consumption: ≤ 500 mW @ 24 VDC, 20.8 mA (4-20 mA output).

AMBIENT AND PROCESS CONDITIONS

Ambient temperature	-50 to 85 °C without LCD display · -40 to 70 °C with LCD display
Storage temperature	-50 to 100 °C without LCD display · -40 to 85 °C with LCD display
Ambient humidity	5% to 100% RH @ 40 °C
Process temperature (per fill oil)	Standard silicone: -40 to 200 °C · High-temperature silicone: 0 to 315 °C · Low-temperature silicone: -55 to 120 °C · Fluorinated oil: -55 to 85 °C
Flameproof short-neck note	The housing surface temperature must be ≤ 80 °C (class T6); if this cannot be verified, the process temperature must not exceed 80 °C

MDM7000-GP-T

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MDM7000-GP-T/AP-T (seal code ST — direct-mount flange)

HAZARDOUS AREA / Ex CERTIFICATION

Application area	1	China, flameproof, CE23.6650 — Ex db IIC T6 Gb
Application area	2	China, intrinsic safety, CE23.7688X — Ex ia IIC T4 Ga
Application area	3	China, dust protection, GYB24.1215X — Ex tb IIIC T85 °C Db
Application area	4	China, combined flameproof + intrinsic safety
Application area	5	China, combined flameproof + dust + intrinsic safety
Application area	A	CSA, flameproof + dust, CSA26CA80192884X
Application area	B	CSA, intrinsic safety, CSA24CA80156531X
Application area	C	CSA, combined flameproof + intrinsic safety
Application area	E	ATEX, flameproof + dust, CSANe 25ATEX1107X
Application area	F	ATEX, intrinsic safety, CSANe 24ATEX1178X
Application area	G	ATEX, combined flameproof + intrinsic safety
Application area	J	IECEX, flameproof + dust, IECEX CSA 25.0059X
Application area	K	IECEX, intrinsic safety, IECEX CSA 24.0045X
Application area	L	IECEX, combined flameproof + intrinsic safety
Application area	M	EAC, flameproof, RU C-CN.58.05884/24
Application area	0	Non-hazardous area

OUTPUT SIGNAL

Output signal	H	4-20 mA DC, HART
Output signal	V	1-5 VDC low consumption
Output signal	R	Modbus RS-485

HOUSING

Housing	S	316L stainless steel casting, 2 female M20×1.5 entries
Housing	U	316L stainless steel casting, 2 female 1/2 NPT entries (without cable glands)
Housing	P	Polyester-coated aluminum alloy, 2 female M20×1.5 entries
Housing	N	Polyester-coated aluminum alloy, 2 female 1/2 NPT entries (without cable glands)

CABLE GLANDS AND ADAPTERS

Cable gland	0	No cable gland
Cable gland	A	Flameproof plug for one end, M20×1.5, 316 SS
Cable gland	B	Flameproof plug for one end, 1/2 NPT, 316 SS
Cable gland	1	Sealed M20×1.5 cable gland with plug, PVC, 6-12 mm, IP67
Cable gland	2	Non-flameproof adapter M20×1.5(M)-M20×1.5(F), 316 SS, IP67
Cable gland	3	Flameproof adapter M20×1.5(M)-1/2 NPT(F), 316 SS, IP67
Cable gland	4	Flameproof adapter M20×1.5(M)-M20×1.5(F), 316 SS, IP67
Cable gland	5	Flameproof adapter M20×1.5(M)-G1/2(F), 316 SS, IP67

DISPLAY

Display	N	Without LCD display — flameproof -40/70 °C, non-flameproof -50/85 °C
Display	L	With LCD display — flameproof/non-flameproof -40/70 °C

MDM7000-GP-T

MICROSENSOR

Order Code (continued)

SENSOR RANGE — GP-T

GP-T range	2	0.4 bar (min. 20 mbar) · LRL -0.4 bar · URL 0.4 bar · overpressure 10 bar
GP-T range	3	2.5 bar (min. 125 mbar) · LRL -1 bar · URL 2.5 bar · overpressure 40 bar
GP-T range	4	10 bar (min. 0.5 bar) · LRL -1 bar · URL 10 bar · overpressure 60 bar
GP-T range	5	30 bar (min. 1.5 bar) · LRL -1 bar · URL 30 bar · overpressure 150 bar
GP-T range	6	100 bar (min. 5 bar) · LRL -1 bar · URL 100 bar · overpressure 200 bar

SENSOR RANGE — AP-T

AP-T range	2	0.4 bar (min. 0.2 bar) · LRL 0 bar · URL 0.4 bar · overpressure 10 bar
AP-T range	3	2.5 bar (min. 0.5 bar) · LRL 0 bar · URL 2.5 bar · overpressure 40 bar
AP-T range	4	10 bar (min. 2 bar) · LRL 0 bar · URL 10 bar · overpressure 60 bar
AP-T range	5	30 bar (min. 3 bar) · LRL 0 bar · URL 30 bar · overpressure 150 bar

SENSOR STRUCTURE AND SEAL

Sensor structure	T	Single-flange diaphragm seal
Diaphragm connection position	S	Pressure transmitter
Seal system code	T	Direct-mount flange (flanged version of this data sheet)

PROCESS FLANGE

Flange standard	2	HG/T-20592
Flange standard	1	EN1092-1
Flange standard	5	HG/T-20615
Flange standard	6	ANSI/ASME B16.5
Flange diameter	A	DN25 (316L or HC diaphragm recommended)
Flange diameter	J	DN40
Flange diameter	B	DN50
Flange diameter	C	DN80
Flange diameter	1	1 in (316L or HC diaphragm recommended)
Flange diameter	2	2 in
Flange diameter	3	3 in
Pressure class	1	PN10/PN16 — DN25, DN40, DN50, DN80
Pressure class	2	PN25/PN40 — DN25, DN40, DN50, DN80
Pressure class	3	PN63 — DN25, DN40, DN50, DN80
Pressure class	4	PN100 — DN25, DN40, DN50, DN80
Pressure class	A	Class 150 — 1, 2, 3 in
Pressure class	B	Class 300 — 1, 2, 3 in
Pressure class	C	Class 600 — 1, 2, 3 in
Flange material	6	316 stainless steel
Flange seal face	1	RF — raised face
Flange seal face	A	FM — female face
Flange seal face	B	M — male face
Flange seal face	C	RJ — ring joint face

MDM7000-GP-T

MICROSENSOR

Order Code (continued)

WETTED PARTS MATERIALS (blind flange / measuring diaphragm)

Wetted parts	6A	316 SS flange / 316L diaphragm
Wetted parts	6B	316 SS flange / Hastelloy C-276 diaphragm
Wetted parts	6C	316 SS flange / tantalum diaphragm
Wetted parts	6D	316 SS flange / titanium diaphragm
Wetted parts	6E	316 SS flange / Monel diaphragm

THERMAL EXCHANGE AND OIL FILL

Exchange type	0	Normal temperature
Exchange type	1	High-temperature thermal exchange parts, ≤150 °C
Exchange type	2	Ultra-high-temperature thermal exchange parts, ≤300 °C (only with high-temperature silicone oil, code H)
Oil fill	S	Standard silicone — process -40/200 °C, ambient -40/85 °C
Oil fill	H	High-temperature silicone — process 0/315 °C, ambient 0/85 °C
Oil fill	L	Low-temperature silicone — process -55/120 °C, ambient -40/85 °C
Oil fill	E	Fluorinated oil — process -55/85 °C, ambient -40/85 °C

FACTORY CALIBRATION RANGE

Factory calibration	CAL	Standard MICROSENSOR verification report per the chosen range; default linear output LRL-URL, display unit
---------------------	------------	--

MDM7000-GP-T

MICROSENSOR

Order Options (continued)

MARINE APPROVALS

/CS1	CCS — China Classification Society, XA25PTB00010
/CS2	DNV — Det Norske Veritas, TAA00000Y1
/CS3	BV — Bureau Veritas, 77759/A0 BV
/CS4	ABS — American Bureau of Shipping, 24-2536413-PDA
/CS5	LR — Lloyd's Register, LR2520052TA
/CS6	KR — Korean Register, NAJ50160-AE001
/CS7	NK — Nippon Kaiji Kyokai, TA24376M
/CS8	RS — Russian Maritime Register of Shipping, 24.44.01.01398.266

METROLOGICAL CERTIFICATION (RUSSIA AND CIS)

/PAC	Type approval certificate, Russia, 94159-24
/PBY	Type approval certificate, Belarus, 18634

DIAPHRAGM AND SPECIAL PROCESS

/V	High-vacuum / high-temperature process diaphragm (limits accuracy to 0.2%)
/J1	Single gold-plated diaphragm (8 µm)
/T1	PTFE coating on single-flange diaphragm (high-pressure side)
/T7	PFA coating on single-flange diaphragm (high-pressure side)
/PFA	Protective PFA film over the diaphragm (anti-corrosive conditions, no vacuum, pressure ≥0, flange ≥50 mm)
/CL1	Degreasing and cleaning of wetted parts (use fluorinated oil code E with oxygen)

DAMPING AND ALARM

/ST	Damping time adjustment 0-100 s (default 0 s)
/WH	Failure alarm, high current 21 mA
/WL	Failure alarm, low current 3.7 mA (default)

COMMUNICATION, NAMEPLATE AND REPORTS

/B	Built-in Bluetooth communication
/PT	316L SS hanging identification plate (max. 16 characters)
/Q1	Verification report in customer format/template
/QS1	N2/air leak test report, 10 bar, 1 min (0.4 bar nominal range)
/QS2	N2/air leak test report, 40 bar, 1 min (2.5 bar nominal range)
/QS3	N2/air leak test report, 60 bar, 1 min (10 bar nominal range)
/QS4	N2/air leak test report, 150 bar, 1 min (30 bar nominal range)
/QS5	N2/air leak test report, 200 bar, 1 min (100 bar nominal range)

BATTERY AND PAINT

/LD	Lithium battery with low copper and zinc content (Cu<0.1%, Zn<0.15%)
/P1	PUR paint coating

MDM7000-GP-T

MICROSENSOR

Order Options (continued)

LANGUAGE AND DELIVERY SERVICE

/LE	Documentation in English (nameplate, manual, certificate of conformity, factory report)
/LR	Documentation in Russian (nameplate, manual, certificate of conformity, factory report)
/XM	Additional documentation for project acceptance, per detailed contract list

OPTIONAL ACCURACY

/AL5	±0.1%
/AL6	±0.2%
/AL7	±0.5%

WARRANTY

/Y2	2 years
/Y3	3 years
/Y5	5 years

MDM7000-GP-T

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Calibrated range

LRL—URL of the selected range (code CAL), standard display unit

Failure alarm

3.7 mA (low) if the option is selected, unless /WH is specified

Oil fill

Standard silicone, code S (–40 to 200 °C process / –40 to 85 °C ambient)

Damping

0 s (adjustable 0–100 s via option /ST)

Nameplate

304 SS stainless steel

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet (EMC...

Mark: EMC compliance declared by test (see standards) · EMC: GB/T 9254.1 / CISPR 32 (radiated and conducted emissions) · Standard: GB/T17626.2/IEC61000-4-2 (ESD), GB/T17626.3/IEC61000-4-3 (radiated RF), GB/T17626.8/IEC61000-4-8 (magnetic field), GB/T17626.4/IEC61000-4-4 (EFT/burst), GB/T17626.5/IEC61000-4-5 (surge), GB/T17626.6/IEC61000-4-6 (conducted RF) — performance A or B depending on test · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

PCEC (China)

Ex db IIC T6 Gb
Working T.: –50/85 °C without ...
Medium T.: Per fill oil selected; ...
Reg.: CE23.6650

CSA (North America)

Ex db IIC T6 Gb · Class I Div.1
Groups A–D T6 · AEx db IIC T6
Gb Zone 1
Working T.: Same as ambient ...
Medium T.: Per fill oil selected; ...
Reg.: CSA26CA80192884X

ATEX (notified body CS...

II 2G Ex db IIC T6 Gb · II 2D Ex tb
IIIC T80 °C Db
Working T.: Same as ambient ...
Medium T.: Per fill oil selected; ...
Reg.: 25ATEX1107X

IECEx (CSA)

Ex db IIC T6 Gb · Ex tb IIIC T80
°C Db
Working T.: Same as ambient ...
Medium T.: Per fill oil selected; ...
Reg.: IECEx CSA 25.0059X

EAC (Customs Union)

IEx db IIC T6 Gb
Working T.: Same as ambient ...
Medium T.: Per fill oil selected; ...
Reg.: RU C–CN.58..05884/24

INTRINSIC SAFETY CERTIFICATE BY BODY

PCEC (China)

Ex ia IIC T4 Ga
Ambient T.: –50/85 °C without ...
Medium T.: –40 to 315 °C depe...
Reg.: CE23.7688X

CSA (North America)

Ex ia IIC T4 Ga · Class I Div.1
Groups A–D T4 · AEx ia IIC T4
Ga Zone 0
Ambient T.: –50/85 °C without ...
Medium T.: –40 to 315 °C depe...
Reg.: CSA24CA80156531X

ATEX (notified body CS...

II 1G Ex ia IIC T4 Ga
Ambient T.: –50/85 °C without ...
Medium T.: –40 to 315 °C depe...
Reg.: 24ATEX1178X

IECEx (CSA)

Ex ia IIC T4 Ga
Ambient T.: –50/85 °C without ...
Medium T.: –40 to 315 °C depe...
Reg.: IECEx CSA 24.0045X

EAC (Customs Union)

0Ex ia IIC T4 Ga
Ambient T.: –50/85 °C without ...
Medium T.: –40 to 315 °C depe...
Reg.: RU C–CN.58..05884/24

Source: MICROSENSOR MDM7000-GP-T/AP-T data sheet, Rev. V4.3 04/2026



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

MDM7000-LP

MICROSENSOR



BUY ONLINE

Differential Transmitter with Remote Seals

Microsensor · Industrial

DESCRIPTION

The MDM7000-LP is an intelligent differential pressure transmitter with a piezoresistive monocrystalline silicon sensor, connected to two remote diaphragm seals via flexible stainless steel capillaries instead of a direct process connection. This arrangement allows the transmitter to be installed away from viscous, corrosive, crystallizing or high-temperature fluids, while also avoiding clogging of the impulse taps. It is the typical solution for measuring level and interface in tanks and process vessels, as well as density and differential-pressure flow, in applications where direct mounting is impractical. It offers 4-20 mA output with HART, Modbus RS-485 or low-consumption 1-5 VDC, rangeability of up to 100:1 and interchangeable seals in fixed flange, fixed flange with insertion sleeve, or movable side-mount configurations, in various wetted materials and fill oils depending on process temperature.

TECHNICAL SPECIFICATIONS

- Differential pressure ranges from 0.4 to 10 bar (minimum span from 100 mbar), rangeability 100:1
- Remote seals in fixed flange, fixed flange with insertion sleeve, or movable side flange, capillaries 1 to 10 m
- Reference accuracy $\pm 0.2\%$ of span ($TD \leq 5$); 4-20 mA HART, Modbus RS-485 or 1-5 VDC output
- Ex ia / Ex db / Ex tb certifications (PCEC, ATEX, IECEx, CSA, EAC) and DNV, ABS, LR, KR, NK, RS, CCS marine approvals

TYPICAL APPLICATIONS

- Level and Interface Measurement in Tanks and Process Vessels
- Oil and Gas Industry
- Chemical and Petrochemical Industry
- Pulp and Paper
- Food and Beverage
- Medical and Pharmaceutical Industry
- Viscous, Corrosive or Crystallizing Fluids at the Tap Point
- High-Temperature Processes Requiring the Transmitter to Be Located Away from the Measurement Point

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

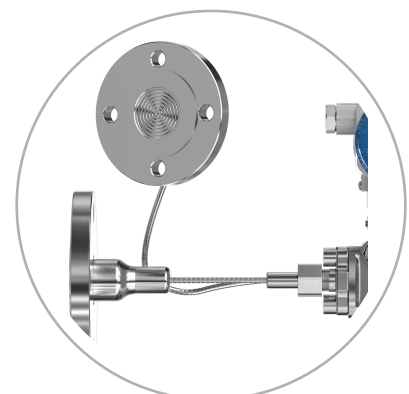
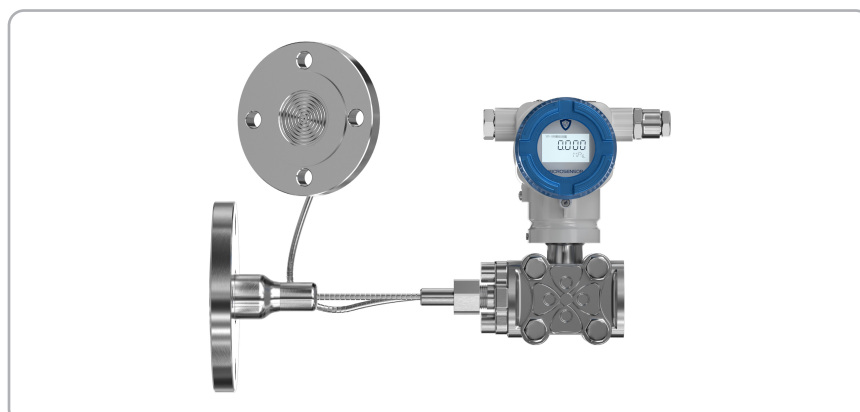
—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



MDM7000-LP

MICROSENSOR

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. SPAN	LRL	URL	STATIC P. LIMIT	HIGH OVERP...	LOW OVERPR...
2	0.4 bar	0.1 bar	-0.4 bar	0.4 bar			
3	2.5 bar	0.25 bar	-2.5 bar	2.5 bar			
4	10 bar	1 bar	-5 bar	10 bar			

REFERENCE ACCURACY

TD ≤ 5	±0.2% of reference span
TD > 5	±(0.025 + 0.045 × TD)% of reference span
Square-root output	1.5 times the accuracy of the corresponding linear output

TD (Turn Down) = Maximum range (URL) / Actual range (SPAN = |URV-LRV|). Reference calibration at 20±5°C, zero-referenced. Total performance combines reference accuracy, ambient temperature effect and static pressure effect: Total = $\pm\sqrt{(E1^2+E2^2+E3^2)}$. Long-term stability: ±0.1% SPAN every 10 years. Maximum admissible overpressure depends on the pressure class of the selected seal flange (up to PN100 / Class 600).

EFFECTS ON MEASUREMENT

Ambient temperature	(0.375 + 0.125×TD)% SPAN per 10°C, within -20 to 80°C
Power supply	±0.005% URL/V within 18.3-44 VDC
Mounting position	Correctable via reset to PV=0, without affecting the range
Vibration	< 0.1% SPAN per GB/T18271.3 / IEC 61298-3

MDM7000-LP

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire, 4–20 mA DC output with superimposed HART protocol (code H); Modbus RS-485 output (code R); or low-consumption 1–5 VDC output (code V). Protection class IP67/IP66. Built-in Bluetooth communication available as an option (/B).
Damping	Total constant = electronic amplifier damping + sensor module damping. Amplifier: 0–100 s adjustable · Sensor module (isolating diaphragm + fill oil): ≤0.2 s · Start-up after power loss: ≤6 s · Factory reset: ≤31 s · Response time: ≤150 ms
Weight	≈ 6.35 kg (transmitter body, without remote seals, capillaries or mounting bracket)

POWER SUPPLY AND LOAD

HART (not intrinsically safe)	18.5 – 44 VDC
Intrinsically safe HART	18.3 – 30 VDC

Load resistance: 0–1476 Ω in standard operating mode ($1476 \Omega = (44V-13V)/21mA$); 250–800 Ω for HART communication. Consumption ≤500 mW @24 VDC, 20.8 mA. Maximum transmission distance: <1000 m. With a non-intrinsically-safe supply, 13 VDC power can be selected (consult factory).

AMBIENT AND PROCESS CONDITIONS

Ambient temperature	Without display: –50 to 85°C · With LCD display: –40 to 70°C
Storage temperature	Without display: –50 to 100°C · With LCD display: –40 to 85°C
Ambient humidity	5% to 100% RH @ 40°C
Remote seal temperature (per fill oil)	Standard silicone (S): –40 to 200°C process / –40 to 85°C ambient · High-temperature silicone (H): 0 to 315°C process / 0 to 85°C ambient · Low-temperature silicone (L): –55 to 120°C process / –40 to 85°C ambient · Fluorinated oil (E): –55 to 85°C process / –40 to 85°C ambient

MDM7000-LP

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MDM7000-LP

TRANSMITTER BODY

Hazardous area	0	Non-hazardous area
Hazardous area	1	China PCEC flameproof, Ex db IIC T6 Gb — CE23.6650
Hazardous area	2	China PCEC intrinsic safety, Ex ia IIC T4 Ga — CE23.7688X
Hazardous area	3	China NEPSI dust, Ex tb IIIC T85°C Db — GYB24.1215X
Hazardous area	4 / 5	China: combined flameproof + intrinsic safety (5 adds dust protection)
Hazardous area	A	CSA (North America) flameproof + dust — CSA26CA80192884X
Hazardous area	B	CSA (North America) intrinsic safety — CSA24CA80156531X
Hazardous area	C	CSA: combined flameproof + intrinsic safety
Hazardous area	E	ATEX flameproof + dust, II 2G Ex db IIC T6 Gb / II 2D Ex tb IIIC T80°C Db — CSANe 25ATEX1107X
Hazardous area	F	ATEX intrinsic safety, II 1G Ex ia IIC T4 Ga — CSANe 24ATEX1178X
Hazardous area	G	ATEX: combined flameproof + intrinsic safety
Hazardous area	J	IECEx flameproof + dust — IECEx CSA 25.0059X
Hazardous area	K	IECEx intrinsic safety — IECEx CSA 24.0045X
Hazardous area	L	IECEx: combined flameproof + intrinsic safety
Hazardous area	M	EAC flameproof, IEx db IIC T6 Gb / 0Ex ia IIC T4 Ga — RU C-CN.58..05884/24
Output signal	H	4-20 mA DC with HART
Output signal	V	1-5 VDC low consumption
Output signal	R	Modbus RS-485
Housing	S	Cast 316L stainless steel, 2 female M20×1.5 entries
Housing	U	Cast 316L stainless steel, 2 female 1/2 NPT entries (without cable glands)
Housing	P	Polyester-resin painted aluminum alloy, 2 M20×1.5 entries
Housing	N	Polyester-resin painted aluminum alloy, 2 1/2 NPT entries (without cable glands)
Cable gland/adapter	0	No cable gland
Cable gland/adapter	A	Flameproof plug for one end, M20×1.5, 316 SS
Cable gland/adapter	B	Flameproof plug for one end, 1/2 NPT, 316 SS
Cable gland/adapter	1	Sealed M20×1.5 cable gland with plug, PVC, 6-12mm cable, IP67
Cable gland/adapter	2	Non-flameproof adapter M20×1.5(M)M20×1.5(F), 316SS, 6-8mm cable, IP67
Cable gland/adapter	3	Flameproof adapter M20×1.5(M)1/2NPT(F), 316SS, 6-12mm cable, IP67
Cable gland/adapter	4	Flameproof adapter M20×1.5(M)M20×1.5(F), 316SS, 6-12mm cable, IP67
Cable gland/adapter	5	Flameproof adapter M20×1.5(M)G1/2(F), 316SS, 6-12mm cable, IP67
Display	N	Without LCD display
Display	L	With LCD display
Sensor range	2	Nominal 0.4 bar (minimum 0.1 bar, -0.4 to 0.4 bar)
Sensor range	3	Nominal 2.5 bar (minimum 0.25 bar, -2.5 to 2.5 bar)
Sensor range	4	Nominal 10 bar (minimum 1 bar, -5 to 10 bar)
Process flange bolting	1	Bolts, nuts and other components in 35CrMo alloy steel

MDM7000-LP

MICROSENSOR

Order Code (continued)

REMOTE SEAL SYSTEM

Seal type (high / low pressure)	F	Remote fixed flange
Seal type (high / low pressure)	E	Remote fixed flange with insertion sleeve
Seal type (high / low pressure)	N	Movable side-mount flange
Seal type (high / low pressure)	M	Movable side-mount flange with insertion sleeve

MDM7000-LP

MICROSENSOR

Order Options (continued)

REMOTE SEAL — HIGH PRESSURE SIDE (code block "H_")

2 / 1 / 5 / 6	Flange standard: HG/T-20592 · EN1092-1 · HG/T-20615 · ANSI/ASME B16.5
A / J / B / C / D	Diameter DN25 · DN40 · DN50 · DN80 · DN100 (HG/T-20592, EN1092-1 standards)
1 / 2 / 3 / 4	Diameter 1" · 2" · 3" · 4" (HG/T-20615, ANSI/ASME B16.5 standards)
1 / 2 / 3 / 4	Pressure class PN10/16 · PN25/40 · PN63 · PN100 (DN25-DN100)
A / B / C	Pressure class Class 150 · Class 300 · Class 600 (1"-4")
6	Flange material: 316 stainless steel
1 / A / B / C	Seal face: RF raised · FM female · M male · RJ ring joint
6A / 6B / 6C / 6D / 6E	316SS flange + diaphragm: 316L · Hastelloy C-276 · Tantalum() · Titanium() · Monel()
K	Capillary connection: rear
U / L	3.5mm OD capillary (1/8"), armored 316L steel, grey PVC sheath (U) or stainless bellows sheath (L)
1 to A	Capillary length 1 to 10 m (for high/low temperature with 6-10m, a DN80 or larger flange is recommended)
S / H / L / E	Fill oil: standard silicone -40/200°C · high temp. 0/315°C · low temp. -55/120°C() · fluorinated -55/85°C()

REMOTE SEAL — LOW PRESSURE SIDE (code block "L_")

2 / 1 / 5 / 6	Flange standard: HG/T-20592 · EN1092-1 · HG/T-20615 · ANSI/ASME B16.5
A / J / B / C / D	Diameter DN25 · DN40 · DN50 · DN80 · DN100 (HG/T-20592, EN1092-1 standards)
1 / 2 / 3 / 4	Diameter 1" · 2" · 3" · 4" (HG/T-20615, ANSI/ASME B16.5 standards)
1 / 2 / 3 / 4	Pressure class PN10/16 · PN25/40 · PN63 · PN100 (DN25-DN100)
A / B / C	Pressure class Class 150 · Class 300 · Class 600 (1"-4")
6	Flange material: 316 stainless steel
1 / A / B / C	Blind seal face: RF raised · FM female · M male · RJ ring joint
6A / 6B / 6C / 6D / 6E	316SS flange + diaphragm: 316L · Hastelloy C-276 · Tantalum() · Titanium() · Monel()
K	Capillary connection: rear
U / L	3.5mm OD capillary (1/8"), armored 316L steel, grey PVC sheath (U) or stainless bellows sheath (L)
1 to A	Capillary length 1 to 10 m (for high/low temperature with 6-10m, a DN80 or larger flange is recommended)
S / H / L / E	Fill oil: standard silicone -40/200°C · high temp. 0/315°C · low temp. -55/120°C() · fluorinated -55/85°C()

FACTORY CALIBRATION

CAL	Standard MICROSENSOR verification report per the range; default linear output LRL-URL, display unit per contract
------------	--

OPTIONAL CERTIFICATIONS (MARINE CLASSIFICATION AND METROLOGY)

/CS1	CCS, China Classification Society — XA25PTB00010
/CS2	DNV — TAA00000YI
/CS3	BV, Bureau Veritas — 77759/A0 BV
/CS4	ABS, American Bureau of Shipping — 24-2536413-PDA
/CS5	LR, Lloyd's Register — LR2520052TA
/CS6	KR, Korean Register — NAJ50160-AE001
/CS7	NK, Nippon Kaiji Kyokai — TA24376M
/CS8	RS, Russian Maritime Register — 24.44.01.01398.266
/PAC	Type approval certificate, Russia — 94159-24
/PBY	Type approval certificate, Belarus — 18634

MDM7000-LP

MICROSENSOR

Order Options (continued)

SPECIFICATION OPTIONS

/V	High-vacuum / high-temperature process diaphragm (limits accuracy to $\pm 0.2\%$)
/G10 /G11 /G12	L-shaped (square) mounting bracket: 316 SS · Q235 carbon steel · 316L SS
/Q1	Verification report in customer format/template
/ST	Damping time adjustment 0-100 s, per contract (default 0 s)
/WH /WL	High current alarm 21mA / low current alarm 3.7mA (default)
/PT	316L SS hanging identification plate, content to be defined (max. 16 characters)
/QD4 /QD5 /QD6 /QD7	Leak test report (N2 or air, 1 min): PN10/16 · PN25/40 · PN63 · PN100
/B	Built-in Bluetooth communication
/J3 /J4	Gold-plated diaphragm (8 μ): single high-pressure side / double high and low
/T1 /T2	PTFE coating on fixed flange: single / double
/T3 /T5	PTFE coating on insertion sleeve: single / double
/T9 /T11	PFA coating on insertion sleeve: single / double
/PFA	Protective PFA film over the diaphragm (corrosive service, no vacuum, flange ≥ 50 mm)
/CL1	Cleaning and degreasing of wetted parts (use fluorinated oil /E for oxygen service)
/LD	Lithium battery with low copper and zinc content (Cu<0.1%, Zn<0.15%)
/P1	Polyurethane (PUR) paint
/LE /LR	Documentation (nameplate, manual, certificate, report) in English or Russian
/XM	Additional documentation service for project acceptance, to be detailed in the order
/AL6 /AL7	Accuracy $\pm 0.2\%$ or $\pm 0.5\%$
/Y2 /Y3 /Y5	2, 3 or 5-year warranty

MDM7000-LP

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Calibrated range

LRL – URL of the selected sensor range, linear output (per CAL code / contract)

Failure alarm

3.7 mA (low), unless /WH is specified for 21 mA (high)

Damping

0 s (adjustable 0–100 s via option /ST)

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet (CE ...

Mark: CE · EMC: Electromagnetic compatibility verified per GB/T9254.1/CISPR 32 (emissions) and GB/T17626/IEC61000-4-2/-3/-4/-5/-6/-8 (immunity) · Standard: Tests with level A or B performance depending on the item (see EMC Effects table in the data sheet) · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

PCEC (China)

Ex db IIC T6 Gb
Working T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: CE23.6650

NEPSI (China, dust)

Ex tb IIIC T85°C Db
Working T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: GYB24.1215X

ATEX

II 2G Ex db IIC T6 Gb / II 2D Ex
tb IIIC T80°C Db
Working T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: CSANe 25ATEX1107X

IECEx

Ex db IIC T6 Gb / Ex tb IIIC
T80°C Db
Working T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: IECEx CSA 25.0059X

CSA (North America)

Class I Div.1 Groups A,B,C,D T6
/ Ex db IIC T6 Gb / Class I Zone
1 AEx db IIC T6 Gb
Working T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: CSA26CA80192884X

EAC

1Ex db IIC T6 Gb
Working T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: RU C-CN.58..05884/24

INTRINSIC SAFETY CERTIFICATE BY BODY

PCEC (China)

Ex ia IIC T4 Ga
Ambient T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: CE23.7688X

ATEX

II 1G Ex ia IIC T4 Ga
Ambient T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: CSANe 24ATEX1178X

IECEx

Ex ia IIC T4 Ga
Ambient T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: IECEx CSA 24.0045X

CSA (North America)

Class I Div.1 Groups A,B,C,D T4
/ Ex ia IIC T4 Ga / Class I Zone
0 AEx ia IIC T4 Ga
Ambient T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: CSA24CA80156531X

EAC

0Ex ia IIC T4 Ga
Ambient T.: –50 to 85°C without...
Medium T.: Per remote seal fill ...
Reg.: RU C-CN.58..05884/24

Source: MICROSENSOR MDM7000-LP data sheet, Rev. V4.3 04/2026



PRESSURE

NEW 2026

Pressure · Industrial Transmitters

MDM7000LT

MICROSENSOR



BUY ONLINE

Intelligent Level Transmitter

Microsensor · Industrial

DESCRIPTION

The MDM7000-LT is a hydrostatic pressure level transmitter from the Chinese manufacturer Microsensor, designed to measure the level of viscous, corrosive or solids-laden liquids in tanks and process vessels. It mounts directly on a single flange with a diaphragm seal, either side-mounted or remote via capillary, which transmits the hydrostatic pressure of the liquid column to the monocrystalline silicon piezoresistive sensor through a selectable fill oil. The reference (low-pressure) side is connected via a clamp flange, open to atmosphere in open tanks or closed in pressurized tanks, and delivers a 4-20 mA output with superimposed HART protocol. It features IP66/IP67 protection, ATEX, IECEx, CSA, NEPSI and EAC flameproof certifications, and DNV, ABS, KR, NK and RS marine approvals.

TECHNICAL SPECIFICATIONS

- Range: 0.4 to 2.5 bar (up to 10 bar) · Accuracy: $\pm 0.075\%$ URL + diaphragm seal effect
- Diaphragm seal: side-mounted movable flange, remote fixed flange or with insertion sleeve · Flanges DN25-DN100 / 1-4" (HG/T-20592, EN1092-1, HG/T-20615, ANSI/ASME B16.5)
- Output: 4-20 mA HART (optional 1-5 VDC or Modbus RS-485) · Turndown 100:1
- Certifications: ATEX, IECEx, CSA, NEPSI, EAC · DNV, ABS, KR, NK and RS marine approval

TYPICAL APPLICATIONS

- Hydrostatic Pressure Level Measurement in Tanks
- Oil and Gas
- Power Generation and Mining
- Drinking Water and Effluent Networks
- etc.

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



MDM7000LT

MICROSENSOR

Measuring Ranges and Performance

SENSOR MODULE RANGES

CODE	NOMINAL RANGE	MINIMUM RANGE (MIN. SPAN)	LOWER LIMIT (LRL)	UPPER LIMIT (URL)
2	0.4 bar	0.1 bar	-0.4 bar	0.4 bar
3	2.5 bar	0.25 bar	-2.5 bar	2.5 bar
4	10 bar	1 bar	-5 bar	10 bar

REFERENCE ACCURACY

TD ≤ 5	±0.075% URL + diaphragm seal system effect
TD > 5	±(0.025 + 0.045 × TD)% URL + diaphragm seal system effect
Square-root output	1.5 times the accuracy of the linear output

TD (Turn Down) = Maximum range / Actual range; Maximum range = URL (zero-based range, identical to the factory calibration range); Actual range = SPAN (equivalent to URV-LRV). Reference accuracy includes BFSI, hysteresis and repeatability (calibration temperature 20 °C ±5 °C, zero-referenced). Total performance combines internal temperature accuracy (E1), ambient temperature effects (E2) and static pressure effects (E3): Total performance = $\pm\sqrt{E1^2+E2^2+E3^2}$. Maximum admissible overpressure/static pressure depends on the chosen flange pressure class (PN10 to PN100 / Class150 to 600).

EFFECTS ON MEASUREMENT

Ambient temperature	Total effect per 10 °C in the -20 to 80 °C range: (0.375 + 0.125 × TD)% of SPAN
Power supply	Zero and span variation ≤ ±0.005% URL/V for a supply between 18.3 and 44 VDC
Mounting position	Installation can generate a zero error, correctable via PV=0 reset, without affecting the range
Vibration	< 0.1% SPAN per GB/T18271.3 / IEC61298-3
Long-term stability	±0.1% SPAN every 10 years
Rangeability ratio (turndown)	100:1

MDM7000LT

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4–20 mA DC output with superimposed HART protocol (order code options: low-consumption 1–5 VDC or Modbus RS–485). Protection class IP67 / IP66.
Damping	Total damping constant = electronic component damping + sensor module damping. Electronic components: 0–100 s adjustable. Sensor module (isolating diaphragm with silicone oil): ≤0.2 s. Start-up after power-on: ≤6 s. Factory reset time: ≤31 s. Response time: ≤100 ms.
Weight	With DN50 flange: approx. 12.6 kg (without capillary tube) · With DN80 flange: approx. 15.5 kg (without capillary tube)

POWER SUPPLY AND LOAD

HART / Modbus RS–485	18.3 – 44 VDC
Intrinsically safe HART protocol	18.3 – 30 VDC

Load resistance: 0 to 1476 Ω in normal operating mode ($1476 \Omega = (44V-13V)/21mA$); 250 to 800 Ω for HART communication. Maximum transmission distance: <1000 m. Consumption: ≤500 mW @24 VDC, 20.8 mA (4–20 mA loop). Note: without HART use, the minimum supply voltage can be reduced to 13 V (consult factory).

AMBIENT AND PROCESS CONDITIONS

Ambient temperature (housing)	Without LCD display: –50 to 85 °C · With LCD display: –40 to 70 °C
Storage temperature	Without LCD display: –50 to 100 °C · With LCD display: –40 to 85 °C
Ambient humidity	5% to 100% RH @ 40 °C
Note — short-neck flameproof models	Verify the housing surface does not exceed 80 °C; if in doubt, the medium temperature must not exceed class T6 (80 °C)

MDM7000LT

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MDM7000-LT

HAZARDOUS AREA

Hazardous area	1	China, flameproof, CE23.6650 — Ex db IIC T6 Gb, GB/T3836.1-2021, GB/T3836.2-2021
	2	China, intrinsic safety, CE23.7688X — Ex ia IIC T4 Ga, GB/T3836.1-2021, GB/T3836.4-2021
	3	China, dust protection, GYB24.1215X — Ex tb IIIC T85°C Db, GB/T3836.1-2021, GB/T3836.31-2021
	4	China, combined flameproof + intrinsic safety
	5	China, combined flameproof + dust + intrinsic safety
	A	CSA, flameproof + dust, CSA26CA80192884X — Class I Div.1 Groups A-D T6, Class II Div.1 Groups E-G T80°C, Class III, Ex db IIC T6 Gb
	B	CSA, intrinsic safety, CSA24CA80156531X — Class I Div.1 Groups A-D T4, Ex ia IIC T4 Ga, Class I Zone 0 AEx ia IIC T4 Ga
	C	CSA, combined flameproof + intrinsic safety
	E	ATEX, flameproof + dust, CSANe 25ATEX1107X — II 2G Ex db IIC T6 Gb, II 2D Ex tb IIIC T80°C Db
	F	ATEX, intrinsic safety, CSANe 24ATEX1178X — II 1G Ex ia IIC T4 Ga
	G	ATEX, combined flameproof + intrinsic safety
	J	IECEx, flameproof + dust, IECEx CSA 25.0059X — Ex db IIC T6 Gb, Ex tb IIIC T80°C Db
	K	IECEx, intrinsic safety, IECEx CSA 24.0045X — Ex ia IIC T4 Ga
	L	IECEx, combined flameproof + intrinsic safety
	M	EAC, flameproof, RU C-CN.58..05884/24 — IEx db IIC T6 Gb, 0Ex ia IIC T4 Ga
	0	Non-hazardous area

OUTPUT SIGNAL

Output	H	4-20 mA DC, HART
	V	1-5 VDC low consumption
	R	Modbus RS-485

HOUSING

Housing	S	Cast 316L stainless steel, 2 female M20×1.5 entries
	U	Cast 316L stainless steel, 2 female 1/2 NPT entries (without cable glands)
	P	Painted aluminum (polyester resin), 2 female M20×1.5 entries
	N	Painted aluminum (polyester resin), 2 female 1/2 NPT entries (without cable glands)

CABLE GLANDS AND ADAPTERS

Cable gland	0	No cable gland
	A	Single flameproof plug, M20×1.5, 316 SS
	B	Single flameproof plug, 1/2 NPT, 316 SS
	1	Sealed M20×1.5 cable gland with plug, PVC, 6-12 mm cable, IP67
	2	Non-flameproof adapter M20×1.5(M) to M20×1.5(F) with plug, 316 SS, 6-8 mm cable, IP67
	3	Flameproof adapter M20×1.5(M) to 1/2 NPT(F) with plug, 316 SS, 6-12 mm cable, IP67
	4	Flameproof adapter M20×1.5(M) to M20×1.5(F) with plug, 316 SS, 6-12 mm cable, IP67
	5	Flameproof adapter M20×1.5(M) to G1/2(F) with plug, 316 SS, 6-12 mm cable, IP67

MDM7000LT

MICROSENSOR

Order Code (continued)

DISPLAY

Display	N	Without LCD display — flameproof -40 to 70 °C / non-flameproof -50 to 85 °C
	L	With LCD display — flameproof and non-flameproof -40 to 70 °C

SENSOR MODULE RANGE

Pressure range	2	Nominal 0.4 bar (min. 0.1 bar, LRL -0.4 bar, URL 0.4 bar)
	3	Nominal 2.5 bar (min. 0.25 bar, LRL -2.5 bar, URL 2.5 bar)
	4	Nominal 10 bar (min. 1 bar, LRL -5 bar, URL 10 bar)

WETTED PARTS — LOW PRESSURE SIDE (LP)

Diaphragm / flange block / valve-pl...	A	316L / 316L / 316L / FKM (-20 to 120 °C)
	B	316L / 316L / 316L / PTFE with stainless steel frame (-40 to 120 °C)
	E	316L / 316L / 316L / modified FKM (-50 to 120 °C)
	C	HC-276 / 316L / 316L / FKM (-20 to 120 °C)
	D	HC-276 / 316L / 316L / PTFE with stainless steel frame (-40 to 120 °C)
	F	HC-276 / 316L / 316L / modified FKM (-50 to 120 °C)
	G	Tantalum / 316L / 316L / FKM (-20 to 120 °C)
	H	Tantalum / 316L / 316L / PTFE with stainless steel frame (-40 to 120 °C)
	I	Tantalum / 316L / 316L / modified FKM (-50 to 120 °C)

PROCESS CONNECTION — LP SIDE CLAMP FLANGE

LP connection	2	Female 1/4-18 NPT, drain valve on top, thread 7/16-20UNF(F), horizontal mounting
	3	Female 1/4-18 NPT, drain valve on bottom, thread 7/16-20UNF(F), horizontal mounting

OIL FILL — LP SIDE

LP oil	S	Standard silicone (medium -40 to 200 °C, ambient -40 to 85 °C)
	H	High-temperature silicone (medium 0 to 315 °C, ambient 0 to 85 °C)
	L	Low-temperature silicone (medium -55 to 120 °C, ambient -40 to 85 °C)
	E	Fluorinated oil (medium -55 to 85 °C, ambient -40 to 85 °C)

PROCESS FLANGE BOLTS

Bolts	1	Bolts, nuts and other components, 35CrMo alloy steel
-------	----------	--

SEAL SYSTEM — HIGH PRESSURE SIDE (HP)

Connection position	H	High-pressure side of the differential pressure transmitter
Seal system code	N	Side Mounted Movable Flange
	M	Side Mounted Movable Flange with Insertion Sleeve
	F	Remote Fixed Flange, with capillary tube
	E	Remote Fixed Flange Insertion Sleeve, with capillary tube

PROCESS FLANGE — STANDARD AND DIAMETER (HP SIDE)

Flange standard	2 / 1 / 5 / 6	HG/T-20592 · EN1092-1 · HG/T-20615 · ANSI/ASME B16.5
Diameter (HG/T-20592 and EN1092-1 ...)	A / J / B / C / D	DN25 · DN40 · DN50 · DN80 · DN100 (N/F variants admit DN25-DN100; M/E variants with sleeve admit DN50-DN100)
Diameter (HG/T-20615 and ANSI B16....)	1 / 2 / 3 / 4	1" · 2" · 3" · 4" (N/F variants admit 1"-4"; M/E variants with sleeve admit 2"-4")

MDM7000LT

MICROSENSOR

Order Code (continued)

PRESSURE CLASS — HP FLANGE

Class (HG/T-20592, EN1092-1)	1 / 2 / 3 / 4	PN10/PN16 · PN25/PN40 · PN63 · PN100 — applicable to DN25, DN40, DN50, DN80, DN100
Class (HG/T-20615, ANSI B16.5)	A / B / C	Class 150 · Class 300 · Class 600 — applicable to 1", 2", 3", 4"

MATERIAL AND SEAL FACE — HP FLANGE

Flange material	6	316 SS
Seal face	1	RF — raised face (DN25-DN100 / 1"-4", PN10-PN160 or Class150-2500)
	A	FM — female face (Class300-2500)
	B	M — male face (Class300-2500)
	C	RJ — ring joint face (PN63-PN160 or Class150-2500)

WETTED MATERIALS AND MEASURING DIAPHRAGM — HP SIDE

Blind / measuring diaphragm	6A	316 SS / 316L
	6B	316 SS / Hastelloy C-276
	6C	316 SS / Tantalum
	6D	316 SS / Titanium
	6E	316 SS / Monel

INSERTION SLEEVE (M AND E VARIANTS)

Sleeve diameter	4 / 6 / 7	46 mm (DN50, 2") · 66 mm (DN80, 3") · 77 mm (DN100, 4")
Sleeve length	A / B / C / D	50 mm · 100 mm · 150 mm · 200 mm
Sleeve material	6	316 SS

CAPILLARY TUBE (F AND E VARIANTS — REMOTE FLANGE)

Connection location	K	Rear connection
Capillary type	U / L	3.5 mm OD (1/8"), armored in 316L SS, with grey PVC sheath (U) or stainless-steel banded metal sheath (L)
Capillary length	1 to A	1 to 10 m (sequential codes 1-9 and A=10m); for 6-10 m under extreme temperature conditions, a DN80 or larger flange is recommended

OIL FILL — HP SIDE

HP oil	S	Standard silicone (medium -40 to 200 °C, ambient -40 to 85 °C)
	H	High-temperature silicone (medium 0 to 315 °C, ambient 0 to 85 °C)
	L	Low-temperature silicone (medium -55 to 120 °C, ambient -40 to 85 °C)
	E	Fluorinated oil (medium -55 to 85 °C, ambient -40 to 85 °C)

FACTORY CALIBRATED RANGE

Calibration	CAL	Standard Microsensor verification report per the ordered range; default linear output. To be specified in the contract: LRL-URL, display unit
-------------	------------	---

MDM7000LT

MICROSENSOR

Order Options (continued)

MARINE APPROVALS / CLASSIFICATION SOCIETIES

/CS1	CCS, China Classification Society, XA25PTB00010
/CS2	DNV, Det Norske Veritas, TAA00000Y1
/CS3	BV, Bureau Veritas, 77759/A0 BV
/CS4	ABS, American Bureau of Shipping, 24-2536413-PDA
/CS5	LR, Lloyd's Register, LR2520052TA
/CS6	KR, Korean Register, NAJ50160-AE001
/CS7	NK, Nippon Kaiji Kyokai, TA24376M
/CS8	RS, Russian Maritime Register of Shipping, 24.44.01.01398.266

METROLOGICAL CERTIFICATION (RUSSIA AND CIS)

/PAC	Type approval certificate, Russia, 94159-24
/PBY	Type approval certificate, Belarus, 18634

PROCESS AND DIAPHRAGM OPTIONS

/V	High-vacuum and high-temperature process diaphragm (affects accuracy, up to ±0.2%)
/J3	Gold-plated diaphragm, single on HP side (8 μ)
/J4	Gold-plated diaphragm, double on HP and LP side (8 μ)
/T1/T3	PTFE coating on HP-side flange/sleeve diaphragm (depending on variant)
/T7/T9	PFA coating on HP-side flange/sleeve diaphragm (depending on variant)
/PFA	Diaphragm covered with protective PFA film (non-vacuum use, pressure ≥0, flange ≥50 mm)
/CL1	Cleaning and degreasing of wetted parts (use fluorinated oil /E for oxygen service)

ADJUSTMENTS AND MOUNTING ACCESSORIES

/ST	Damping adjustment 0-100 s, default 0 s
/WH	High current alarm, 21 mA
/WL	Low current alarm, 3.7 mA (default)
/PT	316L SS hanging identification plate (up to 16 characters)
/VT	Transmitter factory-assembled with a Microsensor valve manifold
/G10/G11/G12	L-shaped mounting bracket — 316 SS / Q235 carbon steel / 316L SS (remote flange variants)
/B	Built-in Bluetooth communication

REPORTS, LANGUAGE AND DOCUMENTATION

/Q1	Standard Microsensor verification report per range, template format on request
/QD4	Leak test PN10/PN16 (Class150), N2 or air, 1 min
/QD5	Leak test PN25/PN40 (Class300), N2 or air, 1 min
/QD6	Leak test PN63, N2 or air, 1 min
/QD7	Leak test PN100 (Class600), N2 or air, 1 min
/LE	Documentation in English (nameplate, manual, certificate of conformity, verification report)
/LR	Documentation in Russian (nameplate, manual, certificate of conformity, verification report)
/XM	Additional project acceptance documentation to be detailed in the order

MDM7000LT

 MICROSENSOR

Order Options (continued)

ACCURACY, WARRANTY AND OTHER

/AL6	Accuracy ±0.2%
/AL7	Accuracy ±0.5%
/Y2 /Y3 /Y5	2, 3 or 5-year extended warranty
/LD	Lithium battery with low Cu/Zn content (Cu <0.1%, Zn <0.15%)
/P1	PUR paint coating

MDM7000LT

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Calibrated range

Per order code (CAL): LRL – URL, display unit; linear output

Current alarm

Low: 3.7 mA by default · High: 21 mA with option /WH

Documentation language

English (nameplate, manual, certificate of conformity, verification report); Russian available with /LR

Damping

0 s (adjustable 0–100 s with option /ST)

Protection class

IP67 / IP66 from factory

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet

Mark: Not specified in the data sheet · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

PCEC (China)

Ex db IIC T6 Gb
Working T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen: ...
Reg.: CE23.6650 — GB/T3836.1–2021,...

NEPSI (China, dust)

Ex tb IIIC T85°C Db
Working T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: GYB24.1215X — GB/T3836.1–2021...

ATEX

II 2G Ex db IIC T6 Gb / II 2D Ex
tb IIIC T80°C Db
Working T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: CSANe 25ATEX1107X — EN IEC 6...

IECEX

Ex db IIC T6 Gb / Ex tb IIIC
T80°C Db
Working T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: IECEX CSA 25.0059X — IEC 600...

CSA (North America)

Class I Div.1 Groups A–D T6 / Ex
db IIC T6 Gb / Class I Zone 1
AEx db IIC T6 Gb / Class II Div.1
Groups E–G T80°C / Ex tb IIIC
T80°C Db
Working T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: CSA26CA80192884X — CSA C2...

EAC (Russia / CIS)

1Ex db IIC T6 Gb
Working T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: RU C–CN.58.05884/24 — G...

INTRINSIC SAFETY CERTIFICATE BY BODY

PCEC (China)

Ex ia IIC T4 Ga
Ambient T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: CE23.7688X — GB/T3836.1–2021,...

ATEX

II 1G Ex ia IIC T4 Ga
Ambient T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: CSANe 24ATEX1178X — EN IEC 6...

IECEX

Ex ia IIC T4 Ga
Ambient T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: IECEX CSA 24.0045X — IEC 600...

CSA (North America)

Class I Div.1 Groups A–D T4 / Ex
ia IIC T4 Ga / Class I Zone 0
AEx ia IIC T4 Ga
Ambient T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: CSA24CA80156531X — ANSI/UL...

EAC (Russia / CIS)

0Ex ia IIC T4 Ga
Ambient T.: Housing: –50 to 85 ...
Medium T.: Per fill oil chosen (s...
Reg.: RU C–CN.58.05884/24 — G...

Source: MICROSENSOR MDM7000–LT data sheet, Rev. V4.3 03–04/2026



Sanitary Transmitters

6 technical data sheets in this group

WHAT IS IT?

Hygienic variant of electronic transmitters, designed for direct contact with food or pharmaceutical products.

HOW DOES IT WORK?

Same principle as an industrial transmitter, but with an electropolished stainless steel diaphragm and body and a quick-disassembly connection suitable for CIP/SIP cleaning.

WHEN IS IT USED?

On food, beverage, dairy and pharmaceutical production lines, where hygiene and sanitary traceability are non-negotiable.





PRESSURE

NEW 2026

Pressure › Sanitary Transmitters

SMP858-NSF

Sanitary Differential Pressure Transmitter

LEEG · Sanitary

LEEG



BUY ONLINE

DESCRIPTION

Sanitary differential pressure transmitter, with a quick-disassembly hygienic connection suitable for CIP/SIP cleaning in the food and pharmaceutical industry.

TECHNICAL SPECIFICATIONS

- Connection: Clamp / DIN / SMS per order
- Body: electropolished 316L stainless steel
- Output: 4-20 mA (2-wire)
- CIP/SIP cleaning suitable

TYPICAL APPLICATIONS

- Dairy and beverage industry
- Pharmaceutical and biotechnological processes
- Lines with periodic CIP/SIP cleaning

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP69K

ELECTRICAL CONNECTION

Hygienic M12 connector

PROCESS TEMPERATURE

Process: up to 130 °C (sterilization) · Ambient: -20 to 60 °C

CERTIFICATION / QUALITY

Electropolished surfaces $R_a \leq 0.8 \mu m$


SMP858-NSF

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL (URL)	MIN. SPAN	LRL	URL	STATIC PRESSURE LIM...	HIGH-SIDE O...	LOW-SIDE OV...
S403D	40 kPa	4 kPa	-40 kPa	40 kPa	10 MPa	10 MPa	10 MPa
S254D	250 kPa	25 kPa	-250 kPa	250 kPa	10 MPa	10 MPa	500 kPa
S105D	1 MPa	100 kPa	-500 kPa	1 MPa	10 MPa	10 MPa	500 kPa

REFERENCE ACCURACY

Typical accuracy (general)	±0.2% URL
TD ≤ 10 (Note 1)	±0.2% URL
Maximum TD	±0.5% URL
Square-root output	1.5 times the linear-output accuracy
Stability	±0.2% URL / 5 years

Reference accuracy includes linearity (BFSL), hysteresis and repeatability. Calibration temperature: 20°C ±5°C. Valid for the nominal values 40 kPa, 250 kPa and 1 MPa. Note 1: TD is Turn Down (rangeability); when $|URV| \geq |LRL|$, $TD = URL/|URV|$; when $|URV| < |LRL|$, $TD = URL/|LRL|$. Test standard: GB/T28474 / IEC60770; zero-based span calibration, silicone oil fill, 316L stainless steel isolating diaphragm, 4-20mA analog output. Range adjustment: LRV and URV can be set within the upper and lower range limits, respecting the minimum calibratable span; the overpressure limit depends on the pressure rating of the lowest-rated component.

EFFECTS ON MEASUREMENT

Ambient temperature (within -20 to 80°C, total impact)	±(0.1 + 0.15×TD)% URL
Static pressure — zero effect	±0.15×TD % URL / 4 MPa
Static pressure — span effect	±0.2% URL / 4 MPa
Power supply (within 10.5/16.5-55VDC)	Zero and span shift ≤ ±0.005% URL/V
Mounting position	Installation error under 400 Pa, correctable via PV=0 reset
Vibration (per GB/T1827.3/IEC61298-3)	<0.1% URL

SMP858-NSF

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4-20 mA output with digital communications, programmable as linear or square-root output. HART protocol superimposed on the 4-20mA signal. Output options per order code: F = two-wire 4-20mA (10.5-55VDC supply); H = two-wire 4-20mA+HART (16.5-55VDC supply). The main parameters table on page 1 also mentions 'customer' (to be defined with the client) as a third output signal option, without a formal order code associated with it in the data sheet.
Damping	Total damping time constant = amplifier damping + sensor capsule damping. Amplifier damping: adjustable from 0 to 100 s. Sensor capsule damping (isolating diaphragm and silicone oil fill): ≤0.2 s. Start-up after power loss: ≤6 s. Normal service after data recovery: ≤31 s.
Weight	Net weight: approx. 2.4 kg (with Tri-Clamp process connection accessory, without mounting brackets)

POWER SUPPLY AND LOAD

Standard / flameproof	10.5-55 VDC
HART protocol	16.5-55 VDC, 250 Ohm communication load resistance
Load resistance	0-2119 Ohm under standard working conditions, 250-600 Ohm for HART protocol
Transmission distance	<1000 meters
Power consumption	≤500 mW @24VDC, 20.8 mA

External load resistance formula: $R = (U - 10.5) / 0.021$, where U is the supply voltage in volts; the HART digital communication range corresponds to the 250 Ohm to 600 Ohm band, reachable between 16.5 V and 55 V.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C; with integrated LCD display: -20 to 70°C
Storage temperature	-40 to 110°C; with integrated LCD display: -40 to 85°C
Medium temperature	With silicone oil: -40 to 120°C; with Neobee M-20: -10 to 180°C
Working humidity	5-100% RH @40°C
Protection class	IP67
Hazardous area rating (certificate)	ExiaIICT4 (GYB16.1965X)

SMP858-NSF

LEEC

Complete Order Code Structure

BASE MODEL: SMP858-NSF

SENSOR (PRESSURE RANGE)

Pressure range	S403D	Nominal (URL): 40 kPa
	S254D	Nominal (URL): 250 kPa
	S105D	Nominal (URL): 1 MPa
Sensor seal	F	Welded stainless steel seal

ELECTRICAL CONNECTION

Electrical connection	F1	Stainless steel terminal, M12x1 aviation connector (4-pin) (H2), IP67, vertical mounting
	F2	Stainless steel terminal, M12x1 aviation connector (4-pin) (H2), IP67, horizontal mounting
Cable entry protector	R0	None

OUTPUT

Output signal	F	4-20mA two-wire, 10.5-55VDC supply
	H	4-20mA+HART two-wire, 16.5-55VDC supply
Display	C	With LCD display
	A	Without LCD display

PROCESS CONNECTION (HIGH-PRESSURE SIDE)

Connection position	HL	Connection on high- and low-pressure sides (high-side value = low-side value)
	/H	Connection on high-pressure side (high-side value differs from low-side value)
Connection type	C	Capillary transmission
Capillary type	M2	SUS304 armored, 3.5mm outer diameter
Capillary length	XX	Value range 00-10; examples: 02=2 meters, 10=10 meters
Isolating fill fluid	S	Silicone oil, process temperature: -45 to 205°C
	H	High-temperature silicone oil, process temperature: 0 to 315°C
	F	Neobee M-20, process temperature: -10 to 180°C
Wetted parts material	4	SUS304
	6	SUS316
Diaphragm material	S	SUS316L
	H	Hastelloy C
Flange specification (Note 1)	H01	HG/T 20592-2009, raised-face flange DN50 PN10 (max. measuring range 1 MPa)
	H05	HG/T 20592-2009, raised-face flange DN80 PN10 (max. measuring range 1 MPa)
	H06	HG/T 20592-2009, raised-face flange DN100 PN10 (max. measuring range 1 MPa)
	K01	Tri-Clamp 1-1/2" (max. measuring range 2 MPa)
	K02	Tri-Clamp 2" (max. measuring range 2 MPa)
Insertion tube diameter	D00	None
	D01	Diameter: 66 mm, length: 50 mm

SMP858-NSF

LEEC

Order Code (continued)

PROCESS CONNECTION (LOW-PRESSURE SIDE)

Connection position	/L	Connection on low-pressure side (high-side value differs from low-side value)
Connection type	C	Capillary transmission
Capillary type	M2	SUS304 armored, 3.5mm outer diameter
Capillary length	XX	Value range 00-10; examples: 02=2 meters, 10=10 meters
Isolating fill fluid	S	Silicone oil, process temperature: -45 to 205°C
	H	High-temperature silicone oil, process temperature: 0 to 315°C
	F	Neobee M-20, process temperature: -10 to 180°C
Wetted parts material	4	SUS304
	6	SUS316
Diaphragm material	S	SUS316L
	H	Hastelloy C
Flange specification (Note 1)	H01	HG/T 20592-2009, raised-face flange DN50 PN10 (max. measuring range 1 MPa)
	H05	HG/T 20592-2009, raised-face flange DN80 PN10 (max. measuring range 1 MPa)
	H06	HG/T 20592-2009, raised-face flange DN100 PN10 (max. measuring range 1 MPa)
	K01	Tri-Clamp 1-1/2" (max. measuring range 2 MPa)
	K02	Tri-Clamp 2" (max. measuring range 2 MPa)
Insertion tube diameter	D00	None
	D01	Diameter: 66 mm, length: 50 mm

SMP858-NSF

LEEC

Order Options (continued)

FIXED MOUNTING ACCESSORY

/B5 U-bracket, applicable to dual remote products without process flanges

ELECTRICAL CONNECTION ACCESSORY

/J1 Female aviation connector (straight) with 2m cable, 4-pin, M12x1, IP67

/J2 Female aviation connector (angled) with 2m cable, 4-pin, M12x1, IP67

PROCESS CONNECTION ACCESSORY

/G1 1.5" Tri-Clamp

/G2 2" Tri-Clamp

/M1 1.5" sealing gasket

/M2 2" sealing gasket

/Z1 Weld adapter for 1-1/2" Tri-Clamp

/Z2 Weld adapter for 2" Tri-Clamp

DISPLAY MODE

/D1 Per customer requirement

CALIBRATION REPORT

/Q1 Calibration report provided by the company

/Q2 Calibration report provided by an authorized Chinese third party

/Q3 Static pressure report (differential pressure only)

APPROVALS (MULTIPLE)

/I1 Intrinsic safety certificate, ExiaIICT4, NEPSI

/F3 CE certificate

WETTED PARTS TREATMENT

/G1 Grease-free treatment

/G2 Electropolishing treatment

SMP858-NSF

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position

None, no specific setting (0)

Display mode (DISP)

PV, no specific setting

Damping value (DAMP)

0, no specific setting

High range value 20mA (URV)

Per the purchase order

Analog output type (mA)

Linear, no specific setting

Alarm signal (ALARM)

None, no specific setting

Low range value 4mA (LRV)

Per the purchase order

Process unit (U)

Per the purchase order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT051353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPEI

ExiallCT4
Ambient T.: -40 to +60°C
Medium T.: +120°C
Reg.: GYB16.1965X

Source: LEEG SMP858-NSF Monosilicon differential pressure transmitter data sheet (sanitary/hygienic), Rev. 2016.11.V1.0



PRESSURE

NEW 2026

Pressure · Sanitary Transmitters

SMP858-TSF-S

Sanitary Gauge Pressure Transmitter

LEEG · Sanitary

LEEG



BUY ONLINE

DESCRIPTION

Sanitary gauge pressure transmitter, with a quick-disassembly hygienic connection suitable for CIP/SIP cleaning in the food and pharmaceutical industry.

TECHNICAL SPECIFICATIONS

- Connection: Clamp / DIN / SMS per order
- Output: 4-20 mA (2-wire)
- Body: electropolished 316L stainless steel
- CIP/SIP cleaning suitable

TYPICAL APPLICATIONS

- Dairy and beverage industry
- Pharmaceutical and biotechnological processes
- Lines with periodic CIP/SIP cleaning

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP69K

ELECTRICAL CONNECTION

Hygienic M12 connector

PROCESS TEMPERATURE

Process: up to 130 °C (sterilization) · Ambient: -20 to 60 °C

CERTIFICATION / QUALITY

Electropolished surfaces $R_a \leq 0.8 \mu\text{m}$


SMP858-TSF-S

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL (URL)	MIN. SPAN	LRL	URL	OVERLOAD LIMIT
S403G	40 kPa	10 kPa	-40 kPa	40 kPa	1 MPa
S254G	250 kPa	25 kPa	-100 kPa	250 kPa	4 MPa
S105G	1 MPa	100 kPa	-100 kPa	1 MPa	6 MPa
S305G	3 MPa	300 kPa	-100 kPa	3 MPa	15 MPa

REFERENCE ACCURACY

Typical accuracy (linearity, hysteresis and repeatability) ±0.2% URL

Maximum accuracy (linear output) ±0.5% URL

Square-root output 1.5 times the linear-output reference accuracy

Stability ±0.2% URL/year

Reference accuracy valid for the nominal values 40 kPa, 250 kPa, 1 MPa and 3 MPa. Calibration temperature: 20°C ±5°C. The overall performance declared by the manufacturer includes, among other factors, reference accuracy, ambient temperature effects and static pressure effects, without a separate numeric value for static pressure being broken out in this data sheet. Test standard: GB/T28474 / IEC60770; zero-based span calibration, linear output, silicone oil or Neobee M-20 fill depending on the option selected, welded 316L stainless steel (roughness ≤0.4 μm) or Hastelloy C isolating diaphragm. Range adjustment: LRV and URV can be set within the upper and lower range limits, respecting the minimum calibratable span; the overpressure limit depends on the pressure rating of the lowest-rated component.

EFFECTS ON MEASUREMENT

Ambient temperature (within -20 to 80°C, total impact) ±0.2% URL/10K

Power supply (within 10.5/16.5-55VDC) Zero and span shift ≤ ±0.005% URL/V

Load (external resistance) Zero and span shift ≤ ±0.05% URL/k

Vibration Per IEC60068-2-6, 10g RMS (25-2000 Hz)

Shock Per IEC60068-2-27, 500g/1ms

SMP858-TSF-S

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire output, 4–20 mA linear, or 4–20 mA + HART linear. Configurable analog output type: linear mA (mA LINER) or square-root mA. Configurable alarm signal: no alarm (ALARM NO), high alarm 20.8 mA (ALARM H) or low alarm 3.8 mA (ALARM L). Fixed output available (FIX/C): typical values 3.8000 / 4.0000 / 8.0000 / 12.000 / 16.000 / 20.000 / 20.800 mA.
Damping	Total damping time constant = amplifier damping + sensor capsule damping. Amplifier damping: adjustable from 0 to 100 s. Sensor capsule damping (isolating diaphragm and silicone oil fill): ≤0.2 s. Start-up after power loss: ≤6 s. Normal service after data recovery: ≤31 s.
Weight	Net weight: approx. 0.6 kg (without mounting bracket or process connection adapter)

POWER SUPPLY AND LOAD

Standard	10.5–55 VDC
HART protocol	16.5–55 VDC, 250 Ohm communication load resistance

External load resistance: 0–2119 Ohm under standard operating conditions; 250–600 Ohm for HART protocol (digital communication range). Maximum admissible resistance formula: $R = (U - 10.5) / 0.021$, where U is the supply voltage in volts. Transmission distance: <1000 meters. Power consumption: ≤500 mW @24VDC, 20.8 mA.

AMBIENT AND PROCESS CONDITIONS

Working temperature	–40 to 85°C; with integrated LCD display: –20 to 70°C
Storage temperature	–40 to 110°C; with integrated LCD display: –40 to 85°C
Medium temperature (sanitary/Neobee M-20 fill)	–10 to 125°C; with heat-exchange connector: –10 to 250°C*
Medium temperature (silicone oil fill)	–40 to 120°C; with heat-exchange connector: –40 to 300°C*
Working humidity	0–95% RH
Protection class	IP67
Hazardous area rating (certificate)	ExiaIICT4 (GYB13.1139X)**

SMP858-TSF-S

LEEC

Complete Order Code Structure

BASE MODEL: SMP858-TSF

SENSOR (PRESSURE RANGE)

Pressure range	S403G	Nominal (URL): 40 kPa
	S254G	Nominal (URL): 250 kPa
	S105G	Nominal (URL): 1 MPa
	S305G	Nominal (URL): 3 MPa

ELECTRICAL CONNECTION

Electrical connection	F1	Stainless steel terminal, M12x1 aviation connector (4-pin) (H2), IP67, vertical mounting
	F2	Stainless steel terminal, M12x1 aviation connector (4-pin) (H2), IP67, horizontal mounting

OUTPUT

Output signal	H	4-20mA+HART, two-wire, 16.5-55VDC supply
	F	4-20mA, two-wire, 10.5-55VDC supply
Display	C	With LCD display
	A	Without LCD display

PROCESS CONNECTION

Process connector material	4	SUS304 stainless steel
	6	SUS316 stainless steel
Connection type	NT	Standard connection, suitable for medium temperature -25 to 85°C
	HT	With cooling element, suitable for medium temperature -40 to 150°C
Isolating fill fluid	F	Sanitary fluid, Neobee M-20, process temperature -10 to 180°C
	S	Silicone oil, process temperature -45 to 205°C
Isolating diaphragm material	S	SUS316L
	H	Hastelloy C
Process connection specification	K01	Tri-Clamp 1-1/2", max. measuring range 2 MPa
	K02	Tri-Clamp 2", max. measuring range 2 MPa
	K03	DIN32676 DN32, max. measuring range 1.6 MPa
	K04	DIN32676 DN40, max. measuring range 1.6 MPa
	K05	DIN32676 DN50, max. measuring range 1.6 MPa
	K06	ISO2852 DN38, max. measuring range 4 MPa
	K07	ISO2852 DN40, max. measuring range 4 MPa
	K08	ISO2852 DN51, max. measuring range 2.5 MPa
	K09	DIN11851 DN25, max. measuring range 2.5 MPa
	K10	DIN11851 DN40, max. measuring range 2.5 MPa
	K11	DIN11851 DN50, max. measuring range 2.5 MPa
	K12	SMS DNI-1/2", max. measuring range 2.5 MPa
	K13	SMS DN2", max. measuring range 2.5 MPa
	K14	IDF DNI-1/2", max. measuring range 2 MPa
	K15	IDF DN2", max. measuring range 2 MPa
	K18	DRD, max. measuring range 2.5 MPa
	K20	Plug-in flush sanitary-clamp type, max. measuring range 2 MPa

SMP858-TSF-S

LEEG

Options, Factory Settings and Certifications

ACCESSORIES

/J1	Aviation connector (straight) with 2m cable, 4-pin, M12x1, IP67
/J2	Aviation connector (angled) with 2m cable, 4-pin, M12x1, IP67
/G1	1.5" clamp
/G2	2" clamp
/M1	1.5" O-ring
/M2	2" O-ring
/Z1	Weld adapter, 1-1/2" Tri-Clamp
/Z2	Weld adapter, 2" Tri-Clamp

CALIBRATION REPORT

/Q1	Calibration report provided by the company
-----	--

APPROVALS (MULTIPLE)

/I1	Intrinsic safety certificate, ExiaIICT4, NEPSI
/F3	CE certificate

DEFAULT FACTORY SETTINGS

TAG position

None, no specific setting

Display mode (DISP)

PV (process variable), no specific setting

Damping value (DAMP)

0, no specific setting

High range value 20mA (URV)

Per the purchase order

Analog output type (mA)

Linear, no specific setting

Alarm signal (ALARM)

None (No), no specific setting

Low range value 4mA (LRV)

Per the purchase order

Process unit (U)

Per the purchase order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — Not specified in the data sheet

Mark: CE · EMC: EN61000-6-2:2005, EN61000-6-4:2007 · Standard: Not specified in the data sheet (see norma_emc) · Registration: AC/0100708

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiaIICT4
Ambient T.: Not specifically sta...
Medium T.: Not specifically sta...
Reg.: GYB13.1139X

Source: LEEG SMP858-TSF Monosilicon gauge pressure transmitter data sheet (sanitary, tri-clamp), Rev. 2016.11.V1.0



PRESSURE

NEW 2026

Pressure · Sanitary Transmitters

SMP858-TLF

Sanitary Gauge Pressure Transmitter

LEEG · Sanitary

LEEG



DESCRIPTION

Compact sanitary-design LEEG gauge pressure transmitter, with a welded process diaphragm (no O-ring) in 316L stainless steel, roughness $\leq 0.4\mu\text{m}$, suitable for CIP/SIP cleaning in the food and pharmaceutical industry. Available with standard process connection (NT, medium -25 to 85°C) or with a cooling element (HT, medium up to 150°C), and with a wide variety of sanitary connection specifications (Tri-Clamp, DIN32676, ISO2852, DIN11851, SMS, IDF, DRD). Body with an M12 aviation connector, available in vertical (F1) or horizontal (F2) mounting.

TECHNICAL SPECIFICATIONS

- Measurement range: 20 kPa to 3.5 MPa nominal (effective measurement up to 2 MPa in code L355G)
- Reference accuracy: $\pm 0.2\%$ URL ($\pm 0.5\%$ URL max.)
- Welded 316L or Hastelloy C diaphragm · silicone oil fill or Neobee M-20 hygienic fluid
- Certifications: CE, NEPSI (intrinsic safety); manufacturer additionally declares 3-A, EHEDG and RoHS
- Output: 4-20mA or 4-20mA+HART
- Process connection: Tri-Clamp, DIN32676, ISO2852, DIN11851, SMS, IDF, DRD (20 codes K01-K20)
- Net weight: ~ 0.6 kg

TYPICAL APPLICATIONS

- Dairy and beverage industry
- Pharmaceutical and biotechnological processes
- Lines with periodic CIP/SIP cleaning

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP69K

ELECTRICAL CONNECTION

Hygienic M12 connector

PROCESS TEMPERATURE

Process: up to 130°C (sterilization) · Ambient: -20 to 60°C

CERTIFICATION / QUALITY

Electropolished surfaces $R_a \leq 0.8 \mu\text{m}$ 

SMP858-TLF

LEEC

Measuring Ranges and Performance

MEASURING RANGE AND LIMITS

CODE	NOMINAL VALUE (URL)	MIN. CALIBRATABLE SP...	LOWER RANGE LIMIT (LR...	UPPER RANGE LIMIT (UR...	OVERPRESSURE LIMIT
L203G	20 kPa	10 kPa	-20 kPa	20 kPa	30 kPa
L353G	35 kPa	20 kPa	-35 kPa	35 kPa	52.5 kPa
L104G	100 kPa	35 kPa	-100 kPa	100 kPa	150 kPa
L204G	200 kPa	100 kPa	-100 kPa	200 kPa	300 kPa
L704G	700 kPa	200 kPa	-100 kPa	700 kPa	1050 kPa
L105G	1 MPa	500 kPa	-100 kPa	1 MPa	1.5 MPa
L175G	1.7 MPa	1 MPa	-100 kPa	1.7 MPa	2.55 MPa
L355G	3.5 MPa	1.7 MPa	-100 kPa	2 MPa*	5.25 MPa

REFERENCE ACCURACY

Pressure type Gauge

Reference accuracy (stated on cover) $\pm 0.2\%$ URL, $\pm 0.5\%$ URL, optional 'customer' (to be defined with client)

Typical linear-output accuracy $\pm 0.2\%$ URL

Maximum linear-output accuracy $\pm 0.5\%$ URL

Square-root output accuracy 1.5 times the linear-output reference accuracy

Stability $\pm 0.2\%$ URL / year

Reference accuracy includes linearity, hysteresis and repeatability; calibration temperature: 20°C $\pm 5^\circ\text{C}$. Overall performance includes, among other factors: reference accuracy, ambient temperature effects, static pressure effects and other combined errors. Tested per GB/T28474 / IEC60770, with zero-based span calibration, linear output, silicone oil fill and welded 316L stainless steel isolating diaphragm. Minimum calibratable span $\leq |\text{URV}-\text{LRV}| \leq$ maximum measuring range, within the adjustable LRV and URV scope. The overpressure limit depends on the lowest-pressure-rated component in the assembly. *Sensor code L355G has a nominal value (catalog URL) of 3.5 MPa, but the data sheet itself limits its actual, adjustable upper range limit (URL) to 2 MPa.

EFFECTS ON MEASUREMENT

Ambient temperature Within -20 to 80°C, total impact $\pm 0.2\%$ URL/10K

Power supply (source effect) Zero and span shift must not exceed $\pm 0.005\%$ URL/V when supply varies within 10.5/16.5-55VDC

Load (load effect) Zero and span shift must not exceed $\pm 0.05\%$ URL/k

Vibration Vibration resistance per IEC60068-2-6: 10g RMS (25-2000 Hz)

Shock Per IEC60068-2-27: 500g / 1 ms

SMP858-TLF

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Available output signals: 4-20mA (two-wire, linear); 4-20mA+HART (two-wire, linear); also supports square-root output selectable via menu (mA LINER / mA $\sqrt{\quad}$). Insulation resistance: $\geq 20M$ @ reference, 100VDC.
Damping	Total damping time constant = amplifier damping time + sensor capsule damping time. Amplifier damping time: 0-100 s adjustable. Sensor capsule damping time (isolating diaphragm and silicone oil fill): ≤ 0.2 s. Start-up after power loss: ≤ 6 s. Normal service after data recovery: ≤ 31 s.
Weight	Net weight: approx. 0.6 kg (without mounting bracket or process connection adapter).

POWER SUPPLY AND LOAD

Standard	10.5-55 VDC
HART protocol	16.5-55 VDC, 250ohm communication load resistance

External load resistance: 0-2119ohm for standard operation, 250-600ohm for HART protocol. Data sheet formula: $R(\text{ohm}) = (U-10.5)/0.021$, where U is the supply voltage in volts (graph range: 10.5 to 55 V, with the HART digital communication band between 16.5 and 23.8 V approx.). Transmission distance: <1000 meters. Power consumption: $\leq 500mW$ @ 24VDC (20.8mA).

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C (with integrated LCD display: -20 to 70°C)
Storage temperature	-40 to 110°C (with integrated LCD display: -40 to 85°C)
Medium temperature (hygienic fluid fill)	-10 to 125°C; with heat-exchange connector: -10 to 250°C
Medium temperature (silicone oil fill)	-40 to 120°C; with heat-exchange connector: -40 to 300°C
Working humidity	0-95% RH
Protection class	IP67
Hazardous area rating (intrinsically safe version)	ExiaIICT4 (GYB13.1139X)
Electromagnetic compatibility (EMC)	Tested per GB/T9254/CISPR22 (radiated interference 30-1000MHz, conducted 0.15-30MHz), GB/T17626.2/IEC61000-4-2 (ESD, 4kV contact / 8kV air), GB/T17626.3/IEC61000-4-3 (radiated EM fields, 10V/m, 80MHz-1GHz), GB/T17626.8/IEC61000-4-8 (50Hz magnetic field, 30A/m), GB/T17626.4/IEC61000-4-4 (fast transients/bursts, 2kV, 5/50ns, 100kHz), GB/T17626.5/IEC61000-4-5 (surge, 1kV line-line / 2kV line-ground, 1.2/50us), GB/T17626.6/IEC61000-4-6 (RF conducted disturbances, 3V, 150kHz-80MHz); performance levels reported as OK, A or B depending on the test

SMP858-TLF

LEEC

Complete Order Code Structure

BASE MODEL: SMP858-TLF

MODEL

Model	SMP858-TLF	Piezoresistive silicon gauge pressure transmitter, tri-clamp sanitary connection
-------	-------------------	--

SENSOR — PRESSURE RANGE CODE

Pressure range	L203G	Nominal value (URL): 20 kPa
	L353G	Nominal value (URL): 35 kPa
	L104G	Nominal value (URL): 100 kPa
	L204G	Nominal value (URL): 200 kPa
	L704G	Nominal value (URL): 700 kPa
	L105G	Nominal value (URL): 1 MPa
	L175G	Nominal value (URL): 1.7 MPa
	L355G	Nominal value (URL): 3.5 MPa

SENSOR — SEAL

Sensor seal	F	Welded stainless steel seal
-------------	----------	-----------------------------

ELECTRICAL CONNECTION

Electrical connection	F1	Stainless steel terminal, M12×1 aviation connector (4-pin) (H2), IP67, vertical mounting
	F2	Stainless steel terminal, M12×1 aviation connector (4-pin) (H2), IP67, horizontal mounting

OUTPUT

Output signal	H	4-20mA+HART two-wire, 16.5-55VDC supply
	F	4-20mA two-wire, 10.5-55VDC supply
Display	C	With LCD display
	A	Without LCD display

PROCESS CONNECTION — MATERIAL AND CONNECTION TYPE

Process connector material	4	SUS304 stainless steel
	6	SUS316 stainless steel
Connection type	NT	Standard connection, medium temperature: -25 to 85°C
	HT	Connector with cooling element, medium temperature: -40 to 150°C

PROCESS CONNECTION — ISOLATED FLUID AND DIAPHRAGM

Isolating fill fluid	F	Neobee M-20 hygienic fluid fill, process temperature: -10 to 180°C
	S	Silicone oil fill, process temperature: -45 to 205°C
Isolating diaphragm material	S	SUS316L stainless steel
	H	Hastelloy C

SMP858-TLF

LEEC

Order Code (continued)

PROCESS CONNECTION — SPECIFICATION (SANITARY)

Process connection specification	K01	Tri-Clamp 1-1/2", max. measuring range: 2 MPa
	K02	Tri-Clamp 2", max. measuring range: 2 MPa
	K03	DIN32676 DN32, max. measuring range: 1.6 MPa
	K04	DIN32676 DN40, max. measuring range: 1.6 MPa
	K05	DIN32676 DN50, max. measuring range: 1.6 MPa
	K06	ISO2852 DN38, max. measuring range: 4 MPa
	K07	ISO2852 DN40, max. measuring range: 4 MPa
	K08	ISO2852 DN51, max. measuring range: 2.5 MPa
	K09	DIN11851 DN25, max. measuring range: 2.5 MPa
	K10	DIN11851 DN40, max. measuring range: 2.5 MPa
	K11	DIN11851 DN50, max. measuring range: 2.5 MPa
	K12	SMS DN1-1/2", max. measuring range: 2.5 MPa
	K13	SMS DN2", max. measuring range: 2.5 MPa
	K14	IDF DN1-1/2", max. measuring range: 2 MPa
	K15	IDF DN2", max. measuring range: 2 MPa
	K18	DRD, max. measuring range: 2.5 MPa
	K20	Plug-in flush hygienic-clamp tube connection, max. measuring range: 2 MPa

SMP858-TLF

LEEG

Options, Factory Settings and Certifications

ELECTRICAL CONNECTION ACCESSORY

/J1	Female aviation connector (straight) with 2 m cable, 4-pin, M12×1, IP67
/J2	Female aviation connector (angled) with 2 m cable, 4-pin, M12×1, IP67

PROCESS CONNECTION ACCESSORY (SANITARY)

/G1	1.5" tri-clamp
/G2	2" tri-clamp
/M1	1.5" sealing gasket (O-ring)
/M2	2" sealing gasket (O-ring)
/Z1	Weld adapter for 1-1/2" tri-clamp
/Z2	Weld adapter for 2" tri-clamp

CALIBRATION REPORT

/Q1	Calibration report provided by the manufacturer
------------	---

APPROVALS (MULTIPLE)

/I1	Intrinsic safety certificate, ExiaIICT4, NEPSI
/F3	CE certificate

DEFAULT FACTORY SETTINGS

TAG position

No specific setting (0)

Display mode (DISP)

PV (process variable)

Damping value (DAMP)

No specific setting (0)

High range value 20mA (URV)

Per order

Analog output type (mA)

Linear

Alarm signal (ALARM)

No

Low range value 4mA (LRV)

Per order

Process unit (U)

Per order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitter · Registration: 110804039

CE Certificate — Not specified in this data sheet

Mark: CE · EMC: EN61000-6-2:2005 (immunity, industrial environments) · Standard: EN61000-6-4:2007 (emission, industrial environments) · Registration: AC/0100708

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiaIICT4
Ambient T.: Not specified in this...
Medium T.: Not specified in this...
Reg.: GYB13.1139X

Source: LEEG SMP858-TLF Piezoresistive silicon gauge pressure transmitter data sheet, Rev. 2016.03.V1.0



PRESSURE

NEW 2026

Pressure · Sanitary Transmitters

SMP858-TSF-D

Dual-Diaphragm Gauge Pressure Transmitter

LEEG · Sanitary

LEEG



BUY ONLINE

DESCRIPTION

Dual-diaphragm gauge pressure transmitter, with a quick-disassembly hygienic connection suitable for CIP/SIP cleaning in the food and pharmaceutical industry.

TECHNICAL SPECIFICATIONS

- Connection: Clamp / DIN / SMS per order
- Output: 4-20 mA (2-wire)
- Body: electropolished 316L stainless steel
- CIP/SIP cleaning suitable

TYPICAL APPLICATIONS

- Dairy and beverage industry
- Pharmaceutical and biotechnological processes
- Lines with periodic CIP/SIP cleaning

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP69K

ELECTRICAL CONNECTION

Hygienic M12 connector

PROCESS TEMPERATURE

Process: up to 130 °C (sterilization) · Ambient: -20 to 60 °C

CERTIFICATION / QUALITY

Electropolished surfaces $Ra \leq 0.8 \mu m$


SMP858-TSF-D

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL (URL)	MIN. SPAN	LRL	URL	OVERLOAD (LIMIT)
D403G	40 kPa	10 kPa	-40 kPa	40 kPa	1 MPa
D254G	250 kPa	25 kPa	-100 kPa	250 kPa	4 MPa
D105G	1 MPa	100 kPa	-100 kPa	1 MPa	6 MPa
D305G	3 MPa	300 kPa	-100 kPa	3 MPa	15 MPa

REFERENCE ACCURACY

Typical accuracy (general)	±0.2% URL
TD ≤ 10 (Note 1)	±0.2% URL
Maximum TD	±0.5% URL
Square-root output	1.5 times the linear-output accuracy
Stability	±0.2% URL / 1 year

Reference accuracy includes linearity, hysteresis and repeatability. Calibration temperature: 20°C ±5°C. Valid for the nominal values 40 kPa, 250 kPa, 1 MPa and 3 MPa. Note 1: TD is Turn Down (rangeability); $TD = URL / |URV - LRV|$. Test standard: GB/T28474 / IEC60770; zero-based span calibration, linear output, silicone oil fill, welded 316L stainless steel isolating diaphragm, 4-20mA analog output. Range adjustment: LRV and URV can be set within the upper and lower range limits, respecting the minimum calibratable span (minimum measuring range ≤ |URV-LRV| ≤ maximum measuring range); the overpressure limit depends on the pressure rating of the lowest-rated component. The model is identified in the data sheet as a 'Monosilicon gauge pressure transmitter (dual-diaphragm structure)'; the data sheet does not detail additional anti-condensation design mechanisms beyond this welded process diaphragm structure, in 316L stainless steel with roughness ≤0.4 μm, with a hygienic-grade fill fluid (Neobee M-20, FDA-approved) or silicone oil, suitable for CIP/SIP cleaning and sterilization.

EFFECTS ON MEASUREMENT

Ambient temperature (within -20 to 80°C, total impact)	±0.2% URL/10K
Power supply (within 10.5/16.5-55VDC)	Zero and span shift not exceeding ±0.005% URL/V
Load (loading)	Zero and span shift not exceeding ±0.05% URL/k
Mounting position	Effect not exceeding 1.67 kPa (measured after a 180-degree rotation in the diaphragm's vertical direction), correctable via the zero-adjustment function
Vibration resistance	Per IEC60068-2-6, 10g RMS (25-2000Hz)
Shock resistance	Per IEC60068-2-27, 500g/1ms

SMP858-TSF-D

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire output, programmable as linear or square-root. Output options per order code: F = 4-20mA two-wire (10.5-55VDC supply); H = 4-20mA+HART two-wire (16.5-55VDC supply). The main parameters table on page 1 also mentions 'customer' (to be defined with the client) as a third output signal option, without a formal order code associated with it in the data sheet.
Damping	Total damping time constant = amplifier damping + sensor capsule damping. Amplifier damping: adjustable from 0 to 100 s. Diaphragm capsule damping (isolating diaphragm and silicone oil fill): ≤0.2 s. Start-up after power loss: ≤6 s. Normal service after data recovery: ≤31 s.
Weight	Net weight: approx. 0.8 kg (without mounting brackets or process connection accessory)

POWER SUPPLY AND LOAD

Standard	10.5-55 VDC
HART protocol	16.5-55 VDC, 250 Ohm communication load resistance
Load resistance	0-2119 Ohm under working conditions, 250-600 Ohm for HART protocol
Transmission distance	<1000 meters
Power consumption	≤500 mW @24VDC, 20.8 mA

External load resistance formula: $R = (U - 10.5) / 0.021$, where U is the supply voltage in volts and R in Ohm; the HART digital communication range corresponds to the 250 Ohm to 600 Ohm band, reachable between 16.5 V and 55 V.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C; with integrated LCD display: -20 to 70°C
Storage temperature	-40 to 110°C; with integrated LCD display: -40 to 85°C
Medium temperature (hygienic fill)	-10 to 125°C
Medium temperature (silicone oil fill)	-40 to 120°C
Working humidity	0-95% RH
Protection class	IP67
Insulation resistance	≥20 M @ reference, 100VDC
Hazardous area rating (certificate)	ExiaIICT4 (GYB16.1965X) — consult engineering for details

SMP858-TSF-D

LEEC

Complete Order Code Structure

BASE MODEL: SMP858-TSF-D

SENSOR

Pressure range	D403G	Nominal (URL): 40 kPa
	D254G	Nominal (URL): 250 kPa
	D105G	Nominal (URL): 1 MPa
	D305G	Nominal (URL): 3 MPa
Sensor seal	F	Welded stainless steel seal

ELECTRICAL CONNECTION

Electrical connection	F1	Stainless steel terminal, M12x1 aviation connector (4-pin) (H2), IP67, vertical mounting
	F2	Stainless steel terminal, M12x1 aviation connector (4-pin) (H2), IP67, horizontal mounting
Cable entry protector	R0	None

OUTPUT

Output signal	H	4-20mA+HART two-wire, 16.5-55VDC supply
	F	4-20mA two-wire, 10.5-55VDC supply
Display	C	With LCD display
	A	Without LCD display

PROCESS CONNECTION

Process connection material	6	SUS316 stainless steel
Connection type	NT	Standard connection, process temperature -25 to 85°C
Isolating fill fluid	F	Hygienic fill, Neobee M-20, process temperature -10 to 180°C (FDA-approved)
	S	Silicone oil, process temperature -45 to 205°C
Isolating diaphragm material	S	SUS316L
	H	Hastelloy C
Process connection specification	K01	Tri-clamp 1-1/2", max. measuring range: 2 MPa
	K02	Tri-clamp 2", max. measuring range: 2 MPa
	K03	DIN32676 DN32, max. measuring range: 1.6 MPa
	K04	DIN32676 DN40, max. measuring range: 1.6 MPa
	K05	DIN32676 DN50, max. measuring range: 1.6 MPa
	K06	ISO2852 DN38, max. measuring range: 4 MPa
	K07	ISO2852 DN40, max. measuring range: 4 MPa
	K08	ISO2852 DN51, max. measuring range: 2.5 MPa
	K09	DIN11851 DN25, max. measuring range: 2.5 MPa
	K10	DIN11851 DN40, max. measuring range: 2.5 MPa
	K11	DIN11851 DN50, max. measuring range: 2.5 MPa
	K12	SMS DN1-1/2", max. measuring range: 2.5 MPa
	K13	SMS DN2", max. measuring range: 2.5 MPa
	K14	IDF DN1-1/2", max. measuring range: 2 MPa
	K15	IDF DN2", max. measuring range: 2 MPa
	K18	DRD, max. measuring range: 2.5 MPa
	K20	Plug-in flush hygienic clamp connection (plug in tube), max. measuring range: 2 MPa

SMP858-TSF-D

LEEC

Order Options (continued)

ELECTRICAL CONNECTION ACCESSORY

/J1	Female aviation connector (straight) with 2m cable, 4-pin, M12x1, IP67
/J2	Female aviation connector (angled) with 2m cable, 4-pin, M12x1, IP67
/J4	Female aviation connector (straight) without cable, 4-pin, M12x1, IP67
/J5	Female aviation connector (angled) without cable, 4-pin, M12x1, IP67

PROCESS CONNECTION ACCESSORY

/G1	1.5" tri-clamp
/G2	2" tri-clamp
/M1	1.5" sealing gasket, silicone material, process temperature range -60 to 200°C (FDA-approved)
/M2	2" sealing gasket, silicone material, process temperature range -60 to 200°C (FDA-approved)
/Z1	Weld adapter for 1-1/2" tri-clamp (compliant with 3A certificate regulation 74-06)
/Z2	Weld adapter for 2" tri-clamp (compliant with 3A certificate regulation 74-06)

CALIBRATION REPORT

/Q1	Calibration report provided by the company
-----	--

APPROVALS (MULTIPLE)

/I1	Intrinsic safety certificate, ExiaIICT4, NEPSI (consult engineering for details)
/F3	CE certificate (consult engineering for details)
/H1	3-A certificate (consult engineering for details)

WETTED PARTS TREATMENT

/G1	Grease-free treatment (ungrease)
/G2	Electropolishing treatment

SMP858-TSF-D

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position

None, no specific setting (0)

Display mode (DISP)

P, no specific setting

Damping value (DAMP)

0, no specific setting

High range value 20mA (URV)

Per the purchase order

Analog output type (mA)

Linear, no specific setting

Alarm signal (ALAM)

None, no specific setting

Low range value 4mA (LRV)

Per the purchase order

Process unit (U)

Per the purchase order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT051353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiallCT4
Ambient T.: -40 to +60°C
Medium T.: +120°C
Reg.: GYB16.1965X

Source: LEEG SMP858-TSF-D Monosilicon gauge pressure transmitter data sheet (anti-condensation)(GP), Rev. 2017.04.V1.0-1



PRESSURE

NEW 2026

Pressure › Sanitary Transmitters

SMP858-TSH-S

Hygienic Gauge Pressure Transmitter

LEEG · Sanitary

LEEG



BUY ONLINE

DESCRIPTION

Hygienic gauge pressure transmitter, with a quick-disassembly hygienic connection suitable for CIP/SIP cleaning in the food and pharmaceutical industry.

TECHNICAL SPECIFICATIONS

- Connection: Clamp / DIN / SMS per order
- Body: electropolished 316L stainless steel
- Output: 4-20 mA (2-wire)
- CIP/SIP cleaning suitable

TYPICAL APPLICATIONS

- Dairy and beverage industry
- Pharmaceutical and biotechnological processes
- Lines with periodic CIP/SIP cleaning

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP69K

ELECTRICAL CONNECTION

Hygienic M12 connector

PROCESS TEMPERATURE

Process: up to 130 °C (sterilization) · Ambient: -20 to 60 °C

CERTIFICATION / QUALITY

Electropolished surfaces $R_a \leq 0.8 \mu\text{m}$


SMP858-TSH-S

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL VALUE	MIN. CALIBRATABLE SP...	LOWER LIMIT (LRL)	UPPER LIMIT (URL)	OVERPRESSURE LIMIT
H403G	40 kPa	10 kPa	-40 kPa	40 kPa	25 MPa
H254G	250 kPa	25 kPa	-100 kPa	250 kPa	25 MPa
H105G	1 MPa	100 kPa	-100 kPa	1 MPa	25 MPa
H305G	3 MPa	300 kPa	-100 kPa	3 MPa	25 MPa
H106G	10 MPa	1 MPa	-100 kPa	10 MPa	25 MPa

REFERENCE ACCURACY

TD ≤ 10 ±0.2% URL

Maximum value (TD > 10) ±0.5% URL

Reference accuracy: includes linearity (BFSL), hysteresis and repeatability. Calibration temperature: 20°C±5°C. TD (Turndown) = URL / [URV - LRV]. Square-root output accuracy is 1.5 times the stated linear reference accuracy. Overall typical accuracy (including ambient temperature effects and other accumulated errors): ±0.2% URL. Stability: ±0.2% URL / 1 year. The overpressure limit depends on the pressure rating of the weakest component in the assembly.

EFFECTS ON MEASUREMENT

Ambient temperature	±0.2% URL every 10°C, within -20 to 80°C
Power supply	±0.005% URL/V for supply voltage changes within 10.5/16.5-55 VDC
Load	±0.05% URL/k
Mounting position	Installation error under 1.74 kPa, correctable via PV=0 reset
Vibration	Vibration resistance per IEC60068-2-6, 10g RMS (25-2000 Hz)
Shock	Shock resistance per IEC60068-2-27, 500g/1ms

SMP858-TSH-S

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4-20mA output, linear type. 4-20mA+HART two-wire option, linear type, with 250 communication load resistance. Output type configurable as linear (mA LINER) or square-root (mA $\sqrt{}$).
Damping	Total damping constant = amplifier damping + sensor capsule damping. Amplifier damping: adjustable from 0 to 100 s. Capsule damping (isolating diaphragm with silicone oil fill): ≤ 0.2 s. Start-up time after power loss: ≤ 6 s. Normal service after data recovery: ≤ 31 s.
Weight	Approximate net weight: 1.23 kg (without mounting brackets or process connection accessories)

POWER SUPPLY AND LOAD

Standard	10.5 – 55 VDC
HART protocol	16.5 – 55 VDC, 250 communication load resistance
Load resistance	0-2119 under working conditions; 250-600 for HART protocol
Transmission distance	< 1000 m
Power consumption	≤ 500 mW @ 24 VDC, 20.8 mA

Maximum external load resistance: $R() = (U - 10.5) / 0.021$, where U is the supply voltage in V. The HART digital communication range corresponds to a load resistance between 250 and 600, obtained with supply voltages between approximately 16.5 and 23.8 V.

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C (with integrated LCD display: -20 to 70°C)
Storage temperature	-40 to 110°C (with integrated LCD display: -40 to 85°C)
Medium temperature (environmental conditions table)	Hygienic fluid fill: -10 to 125°C / Silicone oil fill: -40 to 120°C
Fill fluid process temperature (per process connection code)	Hygienic fill, code F, Neobee M-20: -10 to 180°C / Silicone oil fill, code S: -45 to 205°C
Working humidity	0-95% RH
Protection class	IP67
Insulation resistance	≥ 20 M @ reference, 100 VDC
Hazardous area rating	ExiaIICT4 (GYB16.1965X) — consult engineering for details

SMP858-TSH-S

LEEC

Complete Order Code Structure

BASE MODEL: SMP858-TSF

SENSOR — PRESSURE RANGE

Pressure range	H403G	Nominal value (URL): 40 kPa
	H254G	Nominal value (URL): 250 kPa
	H105G	Nominal value (URL): 1 MPa
	H305G	Nominal value (URL): 3 MPa
	H106G	Nominal value (URL): 10 MPa

ELECTRICAL CONNECTION

Electrical connection	F1	Stainless steel terminal, M12×1 aviation connector (4-pin) (H2), IP67, vertical mounting
	F2	Stainless steel terminal, M12×1 aviation connector (4-pin) (H2), IP67, horizontal mounting

OUTPUT

Output signal	H	4-20mA+HART two-wire, 16.5-55 VDC supply
	F	4-20mA two-wire, 10.5-55 VDC supply
Display	C	With LCD display
	A	Without display

CONNECTION

Process connection material	4	SUS304 stainless steel
	6	SUS316 stainless steel
Connection type	NT	Standard connection, suitable for medium temperature -25 to 85°C
Isolating fill fluid	F	Hygienic fill Neobee M-20, process temperature -10 to 180°C
	S	Silicone oil fill, process temperature -45 to 205°C
Isolating diaphragm material	S	SUS316L stainless steel
	H	Hastelloy C
Process connection specification	M01	M20×1.5(M), GB/T193-2003, ISO261, suitable range: 250kPa-40MPa
	G01	G1/2(M), GB/T7307, ISO228, BS2779, suitable range: 250kPa-40MPa
	G07	G1-1/2(M), GB/T7307, ISO228, BS2779, suitable range: 10kPa-40MPa
	G12	G1(M), metal seal GB/T7307, ISO228, BS2779, suitable range: 10kPa-10MPa

SMP858-TSH-S

LEEC

Order Options (continued)

ELECTRICAL CONNECTION ACCESSORY

/J1	Female aviation connector (straight) with 2 m cable, 4-pin, M12×1, IP67
/J2	Female aviation connector (angled) with 2 m cable, 4-pin, M12×1, IP67
/J4	Female aviation connector (straight) without cable, 4-pin, M12×1, IP67
/J5	Female aviation connector (angled) without cable, 4-pin, M12×1, IP67

PROCESS CONNECTION ACCESSORY

/Z3	Weld adapter, M20×1.5 (H), SUS316
/Z4	Weld adapter, G1/2 (H), SUS316
/Z5	Weld adapter, G1 (H), SUS316

ADAPTER

/H1	Adapter plug for weld adapter, G1(M), copper material
-----	---

CALIBRATION REPORT

/Q1	Calibration report provided by the manufacturer
-----	---

APPROVALS (combinable)

/I1	Intrinsic safety certificate, ExiaIICT4, NEPSI
/F3	CE certificate

SMP858-TSH-S

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position (menu: None)

0 (no specific setting)

Display mode (menu: DISP)

P (no specific setting)

Damping value (menu: DAMP)

0 (no specific setting)

High range value 20mA (menu: URV)

Per order

Analog output type (menu: mA)

LINER — linear (no specific setting)

Alarm signal (menu: ALARM)

No (no specific setting)

Low range value 4mA (menu: LRV)

Per order

Process unit (menu: U)

Per order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT051353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiallCT4
Ambient T.: Not stated indepe...
Medium T.: Not specified in the...
Reg.: GYB16.1965X

Source: LEEG SMP858-TSF-H "Monosilicon gauge pressure transmitter" data sheet, Rev. 2016.08.V1.0. The model code printed on the data sheet is SMP85...



PRESSURE

NEW 2026

Pressure · Sanitary Transmitters

SMP858-TSD-S

Sanitary Gauge Pressure Transmitter

LEEG · Sanitary

LEEG



DESCRIPTION

Sanitary gauge pressure transmitter, with a quick-disassembly hygienic connection suitable for CIP/SIP cleaning in the food and pharmaceutical industry.

TECHNICAL SPECIFICATIONS

- Connection: Clamp / DIN / SMS per order
- Output: 4-20 mA (2-wire)
- Body: electropolished 316L stainless steel
- CIP/SIP cleaning suitable

TYPICAL APPLICATIONS

- Dairy and beverage industry
- Pharmaceutical and biotechnological processes
- Lines with periodic CIP/SIP cleaning

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP66 / IP69K

ELECTRICAL CONNECTION

Hygienic M12 connector

PROCESS TEMPERATURE

Process: up to 130 °C (sterilization) · Ambient: -20 to 60 °C

CERTIFICATION / QUALITY

Electropolished surfaces $Ra \leq 0.8 \mu m$



SMP858-TSD-S

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS

CODE	NOMINAL	MIN. SPAN	LRL	URL	OVERLOAD LIMIT
S403G	40 kPa	10 kPa	-40 kPa	40 kPa	1 MPa
S254G	250 kPa	25 kPa	-100 kPa	250 kPa	4 MPa
S105G	1 MPa	100 kPa	-100 kPa	1 MPa	6 MPa
S305G	3 MPa	300 kPa	-0.1 MPa	3 MPa	15 MPa
S106G	10 MPa	1 MPa	-0.1 MPa	10 MPa	20 MPa
S406G	40 MPa	5 MPa	-0.1 MPa	40 MPa	80 MPa

REFERENCE ACCURACY

Linear output — typical value ±0.2% URL

Linear output — maximum value / voltage output ±0.5% URL

Reference accuracy (includes linearity, hysteresis and repeatability; calibration temperature 20°C±5°C), applicable to the nominal values 40 kPa, 250 kPa, 1 MPa, 3 MPa, 10 MPa and 40 MPa. Overall typical accuracy: ±0.2% URL. Stability: ±0.2% URL / 1 year. Test standard: GB/T28474 / IEC60770; zero-based span calibration, linear output, silicone oil fill, 316L stainless steel isolating diaphragm, 4-20mA analog output. The measuring range unit can be converted to kg/cm², MPa and kPa; the lower (LRV) and upper (URV) range values can be adjusted within the lower and upper limits of the corresponding row, provided that minimum measuring range ≤ |URV - LRV| ≤ maximum measuring range. The overload limit depends on the lowest-pressure-rated component in the assembly.

EFFECTS ON MEASUREMENT

Ambient temperature (typical effect) ±0.2% URL / 10 K, within -20 to 80 °C

Power supply (effect) Zero and span shift ≤ ±0.005% URL/V

Load (effect) Zero and span shift ≤ ±0.05% URL/k

Vibration Per IEC60068-2-6, 10g RMS (25-2000 Hz)

Shock Per IEC60068-2-27, 500g/1ms

SMP858-TSD-S

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Five output signal types available: – 4–20mA (2-wire): linear, 12–30 VDC supply, current ≤20.8 mA, transmission distance <1000 m, consumption ≤500 mW (20.8 mA output @24VDC). – 4–20mA+HART (2-wire): linear, 10.5/16.5–55 VDC supply (16.5–55 VDC in HART communication mode), current ≤20.8 mA, distance <1000 m. – 0.5–4.5VDC (3-wire): linear, 6–15 VDC supply, current ≤3.5 mA, distance <5 m, consumption ≤42 mW (@12VDC). – Ratiometric 0.5–4.5VDC (3-wire): 5 VDC supply, current ≤3.5 mA, distance <5 m. – Modbus-RTU/RS485 (4-wire): linear, 5VDC/9–30VDC supply, current ≤7 mA, distance <1200 m, consumption ≤168 mW (RS485 output @24VDC). Insulation resistance: ≥20 M @ reference, 100 VDC. DIN43650 electrical connection (IP65) – terminal assignment per output type: terminal 1 = Power+ (all variants); terminal 2 = Power- (all variants); terminal 3 = Key-z (offset zero, 2-wire) / Signal+ (3- and 4-wire) / A+ (Modbus-RTU/RS485); ground = Signal- (4-wire) / B- (Modbus-RTU/RS485). Key-z corresponds to offset zero.
Damping	Total damping time constant: sum of the amplifier damping and the sensor capsule damping. Amplifier damping: 0–100 s adjustable. Capsule (isolating diaphragm with silicone oil fill): ≤0.2 s. Start-up after power loss: ≤3 s (with HART communication: ≤6 s). Return to normal service after data recovery: ≤4 s (with HART communication: ≤31 s).
Weight	Approximately 220 g

POWER SUPPLY AND LOAD

4–20mA (2-wire)	12–30 VDC
4–20mA+HART (2-wire)	10.5/16.5–55 VDC
0.5–4.5VDC (3-wire)	6–15 VDC
Ratiometric 0.5–4.5VDC (3-wire)	5 VDC
Modbus-RTU/RS485 (4-wire)	5VDC / 9–30VDC

Load resistance: 4–20mA $< (U-12)/0.0208$; 4–20mA+HART $< (U-10.5)/0.0208$ (for this output type, the load resistance in communication mode is 250 ; the 0–2119 value corresponds to nominal working conditions, 250–600 to HART communication); 0.5–4.5VDC and ratiometric ≥5 k (100 k recommended); RS485 not applicable ("/"). Transmission distance: <1000 m (4–20mA / HART), <5 m (0.5–4.5VDC), <1200 m (RS485).

AMBIENT AND PROCESS CONDITIONS

Working temperature	–40 to 85 °C
Storage temperature	–40 to 100 °C
Medium temperature (hygienic fill)	–10 to 125 °C
Medium temperature (silicone oil fill)	–40 to 120 °C
Working humidity	0–95% RH
Protection class	IP67
Hazardous area rating	ExiaIICT4 (GYBI6.1965X)

SMP858-TSD-S

LEEC

Complete Order Code Structure

BASE MODEL: SMP858-TSD-S

SENSOR

Pressure range code	S403G	Nominal value (URL): 40 kPa
	S254G	Nominal value (URL): 250 kPa
	S105G	Nominal value (URL): 1 MPa
	S305G	Nominal value (URL): 3 MPa
	S106G	Nominal value (URL): 10 MPa
	S406G	Nominal value (URL): 40 MPa
Sensor seal	F	Welded stainless steel seal

ELECTRICAL CONNECTION

Electrical connection	D1	DIN43650 connector, IP65
Cable entry protector	R0	None

OUTPUT

Output signal	F	4-20mA, 2-wire, supply: 12-30 VDC
	H	4-20mA+HART, 2-wire, supply: 16.5-55 VDC
	R	Modbus-RTU/RS485, supply: 5V/9-30VDC
	5	0.5-4.5VDC, 3-wire, supply: 6-15 VDC
	6	0.5-4.5VDC ratiometric, 3-wire, supply: 5 VDC
	A	4-20mA, 2-wire, intrinsic safety, supply: 12-30 VDC

TUBE TYPE

Tube body	65	Stainless steel tube, 65 mm length
	85	Stainless steel tube, 85 mm length

PROCESS CONNECTION

Process connection material	6	SUS316 stainless steel
Connection type	NT	Standard connection, medium temperature: -25 to 85 °C
Isolating fill fluid	F	Hygienic fluid, Neobee M-20, process temperature: -10 to 180 °C
	S	Silicone oil, process temperature: -45 to 205 °C
Isolating diaphragm material	S	SUS316L stainless steel
	H	Hastelloy C
Process connection specifications	M01	M20×1.5(M), GB/T193-2003, ISO261; range: 250 kPa-40 MPa
	G01	GI/2(M), GB/T7307, ISO228, BS2779; range: 250 kPa-40 MPa
	G07	GI-1/2(M), GB/T7307, ISO228, BS2779; range: 20 kPa-5 MPa
	G12	GI(M), metal seal, GB/T7307, ISO228, BS2779; range: 20 kPa-10 MPa

SMP858-TSD-S

LEEG

Options, Factory Settings and Certifications

WELD ADAPTER

/Z3 Weld adapter, M20×1.5(F), SUS316

/Z4 Weld adapter, G1/2(F), SUS316

/Z5 Weld adapter, G1(F), SUS316

WELDING ACCESSORY

/H1 Adapter plug for weld adapter, G1(M), material: copper

APPROVALS (MULTIPLE)

/I1 Intrinsic safety certificate, ExiaIICT4, NEPSI (consult engineering for more details)

/F3 CE certificate (consult engineering for more details)

WETTED PARTS REQUIREMENTS

/G1 Degreasing treatment

/G2 Electropolishing

DEFAULT FACTORY SETTINGS

Factory settings

Not specified in the data sheet — see the base data sheet

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT051353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiaIICT4
Ambient T.: -40 to +60 °C
Medium T.: +120 °C
Reg.: GYB16.1965X

Source: LEEG SMP858-TSD-S Monosilicon gauge pressure transmitter data sheet, Rev. 2017.06.V1.0



Pressure Switches

2 technical data sheets in this group

WHAT IS IT?

Device that activates an electrical contact when process pressure rises above or falls below a configured threshold.

HOW DOES IT WORK?

A sensing element (diaphragm or piston) trips a microswitch or relay upon reaching the set point, with a defined hysteresis to prevent repeated activations.

WHEN IS IT USED?

For alarms, safety interlocks and equipment protection (compressors, pumps) against abnormal pressure conditions.





PRESSURE

NEW 2026

Pressure › Pressure Switches

PS858-TSR-S

LEEG



BUY ONLINE

Standard Gauge Pressure Switch

Relay Output

DESCRIPTION

Standard gauge pressure switch with relay output for cutoff and alarm in control panels, with local setpoint adjustment.

TECHNICAL SPECIFICATIONS

- Output: SPDT relay contact
- Local setpoint and hysteresis adjustment
- Body: stainless steel
- M12 or cable gland electrical connection

TYPICAL APPLICATIONS

- Compressor and pump protection
- Low/high pressure alarm in control panels
- Process safety interlocks

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65

ELECTRICAL CONNECTION

M12 connector or PG13.5 cable gland

PROCESS TEMPERATURE

Process: up to 120 °C · Ambient: -20 to 70 °C

CERTIFICATION / QUALITY

Relay contact rated for inductive load



PS858-TSR-S

LEEC

Measuring Ranges and Performance

PRESSURE SENSOR MEASURING RANGE AND LIMITS (tri-clamp variant S403G/S254G/S105G/S305G)

SENSOR CODE	NOMINAL VALUE (URL)	MIN. CALIBRATABLE SP...	LOWER RANGE LIMIT (LR...	UPPER RANGE LIMIT (UR...	OVERLOAD LIMIT
S403G	40 kPa	10 kPa	-40 kPa	40 kPa	1 MPa
S254G	250 kPa	25 kPa	-100 kPa	250 kPa	4 MPa
S105G	1 MPa	100 kPa	-100 kPa	1 MPa	6 MPa
S305G	3 MPa	300 kPa	-100 kPa	3 MPa	15 MPa

REFERENCE ACCURACY

Reference accuracy (general brochure, p. 1) ±0.5% URL, optional ±0.2% URL

Typical accuracy (overall performance) ±0.2% URL

Stability ±0.2% URL / 5 years

Linear output accuracy — typical value ±0.2% URL

Linear output accuracy — maximum value / voltage output ±0.5% URL

Reference accuracy: includes linearity, hysteresis and repeatability; calibration temperature 20°C ±5°C. Tested per GB/T28474 / IEC60770, with zero-based span calibration, linear output, silicone oil fill and 316L stainless steel isolating diaphragm as the standard reference specification (this model's order code also allows Neobee M-20 hygienic fluid fill and Hastelloy C diaphragm — see order_groups). The accuracy/stability table applies to the nominal values 40 kPa, 250 kPa, 1 MPa and 3 MPa, which match sensor codes S403G/S254G/S105G/S305G of this tri-clamp variant.

EFFECTS ON MEASUREMENT

Mounting position effect Applicable in any position; installation error under 400 Pa, correctable via the zero-set function

Vibration effect Per GB/T1827.3 / IEC61298-3 testing: <0.1% URL

Power supply effect Zero and span variation not exceeding ±0.005% URL/V

Ambient temperature effect (typical) Within -20 to 80°C, total impact: ±0.2% URL / 10k (figure transcribed literally as it appears in the data sheet)

Insulation resistance ≥20 M @ 100 VDC

PS858-TSR-S

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output

The PS858-TSR-S is not an electromechanical relay with SPDT contacts, but rather an electronic pressure switch/transmitter ('PS series electronic pressure switch', per the data sheet's own CE certificate, p. 16) with a linear 4-20mA analog output (3-wire) and, in parallel, one or two solid-state NPN or PNP transistor-type contact output channels (non-linear), selectable via the signal order codes FN (4-20mA + NPN) or FP (4-20mA + PNP), both with 12-30VDC supply. The 'Output contact' order code allows 1 (one channel) or 2 (two channels) of contact/alarm. Each alarm channel is configured with a trip value set by the customer (C1/C2) or factory-set (A1/A2, figure fixed via order codes /A1-XXX and /A2-XXX in Pa) and a trip method: high-level output below the alarm value (L1/L2), high-level output above the alarm value (H1/H2), in-window alarm (W1) or out-of-window alarm (W2). The data sheet does not publish contact hysteresis figures or contact load capacity in A/VAC. Technical note: the general 'Technical Specifications' table (p. 3) includes a full column of specifications for RS485/Modbus output (12-30VDC supply, current $\leq 45\text{mA}$, transmission distance $< 1200\text{m}$, consumption $\leq 1.08\text{W}$), and the electrical connector diagrams (H3/H4, p. 6-7) show pin assignments for RS485A+/RS485B-. However, this specific model's order-code section ('Output signal', p. 13) only offers codes FN and FP (4-20mA + NPN/PNP); there is no order code for RS485/Modbus on the PS858-TSR-S. The information is transcribed as it appears in the data sheet, noting this apparent inconsistency between the general specifications table (likely inherited from the generic data sheet for the entire PS858 series) and the actual, specific order code for the tri-clamp TSR-S variant. Local display and control: OLED display with 3 buttons on the body (order code E = with OLED display, A = without display); no remote control option. The factory menu includes zero setting (PV=0), span readjustment (4mA/20mA with pressure applied) and factory configuration restore. The AOLC/AOHC parameters (labeled in the factory settings table on p. 16 as 'Alarm URV'/'Alarm LRV' respectively, with factory values 3.800mA/23.000mA) generate an out-of-range analog output notice when the current falls below AOLC or exceeds AOHC — this is a 4-20mA analog signal range alarm, distinct from the transistor contact channels in the order code. Note that the factory table label ('Alarm URV' for AOLC, 'Alarm LRV' for AOHC) is inconsistent with the functional description of AOLC/AOHC on p. 5 (AOLC = pressure-too-low notice, AOHC = pressure-too-high notice); transcribed literally as it appears in the source data sheet.

Damping

Start-up after power loss: $\leq 3\text{ s}$. Return to normal service after data recovery: $\leq 10\text{ s}$. Damping value (DAMP menu parameter), factory setting: 0 (no specific setting).

Weight

Net weight: approximately 1 kg (without mounting bracket or process connection accessory).

POWER SUPPLY AND LOAD

4-20mA (order code FN/FP, 3-wire)

Supply 12-30VDC; current $\leq 60\text{mA}$; load resistance $< (U-12)/0.06\text{ ohm}$; transmission distance $< 1000\text{m}$; consumption $\leq 1.44\text{W}$ (4-20mA + transistor + OLED display @24VDC)

RS485 (general specifications table — no dedicated order code on this model, see note)

Supply 12-30VDC; current $\leq 45\text{mA}$; load resistance: not applicable ("/" in the data sheet); transmission distance $< 1200\text{m}$; consumption $\leq 1.08\text{W}$ (RS485 + transistor + OLED display @24VDC)

U = supply voltage in VDC; the maximum load resistance for the 4-20mA output is $< (U-12)/0.06\text{ ohm}$. The RS485 row is transcribed from the general 'Technical Specifications' table (p. 3) for completeness, but — as detailed in output_detail — the PS858-TSR-S's specific order code does not include an RS485/Modbus output signal option (only FN/FP), so this specification may not apply to units ordered under this model code.

AMBIENT AND PROCESS CONDITIONS

Working temperature

-40 to 85°C; with integrated LCD/OLED display: -20 to 70°C

Storage temperature

-40 to 110°C; with integrated LCD/OLED display: -40 to 85°C

Medium temperature — hygienic fluid fill

-10 to 125°C; with heat-exchange connector (order code HT): -10 to 250°C *

Medium temperature — silicone oil fill

-40 to 120°C; with heat-exchange connector (order code HT): -40 to 300°C *

PS858-TSR-S

LEEC

Output, Power Supply and Ambient Conditions (continued)

Working humidity	0-95% RH @ 40°C
Protection class	IP67
* Note on heat-exchange connector	The heat-exchange connector can produce varying degrees of zero drift and thermal drift, depending on the mounting position and fill fluid
Electromagnetic compatibility (EMC, not applicable to RS485 output)	Tested per: GB/T9254/CISPR22 radiated interference 30-1000MHz and conducted 0.15-30MHz (result: OK); GB/T17626.2/IEC61000-4-2 electrostatic discharge 4kV contact / 8kV air (level B); GB/T17626.3/IEC61000-4-3 immunity to radiated EM fields 10V/m 80MHz-1GHz (level A); GB/T17626.8/IEC61000-4-8 immunity to power-frequency magnetic field 30A/m (level A); GB/T17626.4/IEC61000-4-4 fast electrical transients/bursts 2kV 5/50ns 100kHz (level B); GB/T17626.5/IEC61000-4-5 immunity to surge 1kV line-line / 2kV line-ground, 1.2/50µs (level B); GB/T17626.6/IEC61000-4-6 immunity to RF conducted disturbances 3V 150kHz-80MHz (level A). Level A = performance within normal limits; Level B = temporary reduction or loss of functionality, self-recoverable, without altering operating/storage conditions or data.

PS858-TSR-S

LEEC

Complete Order Code Structure

BASE MODEL: PS858-TSR-S

BASE MODEL

Model	PS858-TSR	Monosilicon electronic gauge pressure switch/transmitter ('Monosilicon gauge pressure switch'). The commercial suffix '-S' in the full name PS858-TSR-S corresponds to the sensor family whose range code starts with 'S' (S403G, S254G, S105G, S305G), as shown in this specific tri-clamp variant's order code.
-------	------------------	---

SENSOR — PRESSURE RANGE CODE

Pressure range	S403G	Nominal value (URL): 40 kPa
	S254G	Nominal value (URL): 250 kPa
	S105G	Nominal value (URL): 1 MPa
	S305G	Nominal value (URL): 3 MPa

SENSOR — SENSOR SEAL

Seal	F	Welded stainless steel seal
------	----------	-----------------------------

ELECTRICAL CONNECTION

Connector	H3	M12×1 aviation connector, 5-pin, IP67
	H4	M12×1 aviation connector, 4-pin, IP67 (quick delivery)

ELECTRICAL CONNECTION — CABLE ENTRY PROTECTOR

Protector	R0	None
-----------	-----------	------

OUTPUT — OUTPUT SIGNAL

Signal	FN	4-20mA + NPN output, 12-30VDC supply (quick delivery)
	FP	4-20mA + PNP output, 12-30VDC supply

OUTPUT — DISPLAY MODE

Display	E	With OLED display
	A	Without display

OUTPUT — OUTPUT CONTACT CHANNELS

Contact channels	1	One contact output channel
	2	Two contact output channels

OUTPUT — FIRST CONTACT ALARM VALUE

Alarm value	C1	Customer-set
	A1	Factory-set

OUTPUT — FIRST CONTACT ALARM METHOD

Method	L1	N, P: below the alarm value, high-level output
	H1	N, P: above the alarm value, high-level output
	W1	In-window alarm
	W2	Out-of-window alarm

PS858-TSR-S

LEEC

Order Code (continued)

OUTPUT — SECOND CONTACT ALARM VALUE

Alarm value	C2	Customer-set
	A2	Factory-set

OUTPUT — SECOND CONTACT ALARM METHOD

Method	L2	N, P: below the alarm value, high electrical level output
	H2	N, P: above the alarm value, high electrical level output
	W1	In-window alarm
	W2	Out-of-window alarm

TUBE TYPE

Tube body	57	Stainless steel tube body, 57mm length
-----------	-----------	--

PROCESS CONNECTION — MATERIAL

Material	6	SUS316 stainless steel
----------	----------	------------------------

PROCESS CONNECTION — CONNECTION TYPE

Connection type	NT	Standard connection, process temperature: -25 to 85°C (quick delivery)
	HT	Connection with heat-exchange connector, process temperature: -40 to 150°C

PROCESS CONNECTION — ISOLATED FILL FLUID

Fill fluid	F	Neobee M-20 hygienic fluid fill, process temperature: -10 to 180°C (quick delivery)
	S	Silicone oil fill, process temperature: -45 to 205°C (quick delivery)

PROCESS CONNECTION — ISOLATED DIAPHRAGM MATERIAL

Diaphragm material	S	SUS316L stainless steel (quick delivery)
	H	Hastelloy C alloy

PROCESS CONNECTION — SPECIFICATION (Note 1: compliant with 3-A hygienic certification regula...

Standard / size	K01	Tri-Clamp 1-1/2", max. measuring range 2 MPa (quick delivery)
	K02	Tri-Clamp 2", max. measuring range 2 MPa
	K03	DIN32676 DN32, max. measuring range 1.6 MPa
	K04	DIN32676 DN40, max. measuring range 1.6 MPa
	K05	DIN32676 DN50, max. measuring range 1.6 MPa
	K06	ISO2852 DN38, max. measuring range 4 MPa
	K07	ISO2852 DN40, max. measuring range 4 MPa
	K08	ISO2852 DN51, max. measuring range 2.5 MPa
	K09	DIN11851 DN25, max. measuring range 2.5 MPa
	K10	DIN11851 DN40, max. measuring range 2.5 MPa
	K11	DIN11851 DN50, max. measuring range 2.5 MPa
	K12	SMS DN1-1/2", max. measuring range 2.5 MPa
	K13	SMS DN2", max. measuring range 2.5 MPa
	K14	IDF DN1-1/2", max. measuring range 2 MPa
	K15	IDF DN2", max. measuring range 2 MPa
	K18	DRD, flanged connection, max. measuring range 2.5 MPa
	K20	Plug-in flush tube connection, hygienic clamp, max. measuring range 2 MPa

PS858-TSR-S

LEEC

Order Options (continued)

FACTORY ALARM VALUE PER CONTACT

*/A1-XXX	First contact alarm value: XXX = two significant digits + one power-of-ten digit. Unit: Pa
*/A2-XXX	Second contact alarm value: XXX = two significant digits + one power-of-ten digit. Unit: Pa

ELECTRICAL CONNECTION ACCESSORY

/J1	Female aviation connector, straight, with 2 m cable, M12×1, 4-pin, IP67
/J2	Female aviation connector, angled, with 2 m cable, M12×1, 4-pin, IP67
/J3	Female aviation connector, straight, with 2 m cable, M12×1, 5-pin, IP67
/J4	Female aviation connector, straight, without cable, M12×1, 4-pin, IP67
/J5	Female aviation connector, angled, without cable, M12×1, 4-pin, IP67
/J6	Female aviation connector, straight, without cable, M12×1, 5-pin, IP67
/J7	Female aviation connector, angled, with 2 m cable, M12×1, 5-pin, IP67
/J8	Female aviation connector, angled, without cable, M12×1, 5-pin, IP67 (quick delivery)

PROCESS CONNECTION ACCESSORY

/G1	Tri-clamp 1.5" (quick delivery)
/G2	Tri-clamp 2"
/M1	1.5" sealing gasket, silicone rubber, temperature range -60 to 200°C (FDA-approved) (quick delivery)
/M2	2" sealing gasket, silicone rubber, temperature range -60 to 200°C (FDA-approved)
/Z3	Weld adapter for 1-1/2" tri-clamp (compliant with 3-A certificate regulation 74-06) (quick delivery)
/Z4	Weld adapter for 2" tri-clamp (compliant with 3-A certificate regulation 74-06)

CALIBRATION REPORT

/Q1	Calibration report provided by the manufacturer (quick delivery)
------------	--

APPROVALS (multiple)

/F3	CE certificate (consult engineering for more details)
/H1	3-A certificate (consult engineering for more details) (quick delivery)

WETTED PARTS TREATMENT

/G1	Degreasing treatment
/G2	Electropolishing

PS858-TSR-S

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position

None (no specific setting)

Display mode (DisMod)

Pressure & Unit

AOHC parameter (labeled in the sheet as 'Alarm LRV' — see honesty note in output_detail)

23.000 mA

Low range limit 4mA (LRV)

As requested in the order

Process unit (U)

As requested in the order

Analog output type

None / 4-20mA (no specific setting)

AOLC parameter (labeled in the sheet as 'Alarm URV' — see honesty note in output_detail)

3.800 mA

Damping value (DAMP)

0 (no specific setting)

High range limit 20mA (URV)

As requested in the order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitters (literal wording from the data sheet) · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT011353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: LEEG PS858-TSR-S Monosilicon gauge pressure switch data sheet (tri-clamp sanitary connection), Rev. 2016.11.V1.0-1



PRESSURE

NEW 2026

Pressure › Pressure Switches

PS131-TSR

LEEG



BUY ONLINE

Compact Gauge Pressure Switch

Relay Output

DESCRIPTION

Compact gauge pressure switch with relay output for cutoff and alarm in control panels, with local setpoint adjustment.

TECHNICAL SPECIFICATIONS

- Output: SPDT relay contact
- Local setpoint and hysteresis adjustment
- Body: stainless steel
- M12 or cable gland electrical connection

TYPICAL APPLICATIONS

- Compressor and pump protection
- Low/high pressure alarm in control panels
- Process safety interlocks

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65

ELECTRICAL CONNECTION

M12 connector or PG13.5 cable gland

PROCESS TEMPERATURE

Process: up to 120 °C · Ambient: -20 to 70 °C

CERTIFICATION / QUALITY

Relay contact rated for inductive load



PSI31-TSR

LEEC

Measuring Ranges and Performance

PRESSURE SENSOR MEASURING RANGE AND LIMITS

SENSOR CODE	NOMINAL VALUE (URL)	MIN. CALIBRATABLE SP...	LOWER RANGE LIMIT (LR...	UPPER RANGE LIMIT (UR...	OVERLOAD LIMIT
H602G	6 kPa	1 kPa	-6 kPa	6 kPa	25 MPa
H403G	40 kPa	2 kPa	-40 kPa	40 kPa	25 MPa
H254G	250 kPa	12.5 kPa	-100 kPa	250 kPa	25 MPa
H105G	1 MPa	50 kPa	-100 kPa	1 MPa	25 MPa
H305G	3 MPa	150 kPa	-0.1 MPa	3 MPa	25 MPa
H106G	10 MPa	500 kPa	-0.1 MPa	10 MPa	25 MPa
S406S	40 MPa	5 MPa	-0.1 MPa	40 MPa	42 MPa

REFERENCE ACCURACY

Reference accuracy (overall performance) ±0.1% URL (includes reference accuracy, ambient temperature effects and other combined errors)

Stability ±0.2% URL / 5 years

Linear output accuracy, TD ≤ 10 (Note 1) ±0.1% URL

Linear output accuracy, 10 < TD ≤ 20 ±0.01% URL

Includes linearity, hysteresis and repeatability; calibration temperature 20°C ±5°C. Note 1: TD = Turndown = URL / |URV - LRV|. Applies to the nominal values 6 kPa, 40 kPa, 250 kPa, 1 MPa, 3 MPa, 10 MPa and 40 MPa. Tested per GB/T28474 / IEC60770, with zero-based span calibration, linear output, silicone oil fill and 316L stainless steel isolating diaphragm. The PSI31-TSR-H version has a nominal value ≤ 10 MPa (sensor code H106G).

EFFECTS ON MEASUREMENT

Mounting position effect Applicable in any position; installation error under 400 Pa, correctable via PV=0 reset

Vibration effect Per GB/T1827.3 / IEC61298-3 testing: <0.1% URL

Power supply effect Zero and span variation not exceeding ±0.005% URL/V

Ambient temperature effect (typical) Within -20 to 80°C, total impact: ±(0.1 + 0.15×TD)% URL

Insulation resistance ≥20 M @ 100 VDC

PSI31-TSR

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	The PSI31-TSR is not an electromechanical relay with SPDT contacts, but rather an electronic pressure switch/transmitter with a selectable analog output — linear 4-20mA (3-wire), linear 0.5-4.5VDC (3-wire) or linear Modbus-RTU/RS485 (4-wire) — and, in parallel, one solid-state PNP or NPN transistor-type contact output (non-linear, 3-wire), selectable as one channel (order code '1') or two channels ('2') of contact/alarm. Each alarm channel is configured with a trip value set by the customer (C1/C2) or factory-set (A1/A2, figure fixed via order codes /A1-XXX and /A2-XXX in Pa) and a trip method: high-level output below the alarm value (L1/L2), high-level output above the alarm value (H1/H2), in-window alarm (W1) or out-of-window alarm (W2). The data sheet does not publish contact hysteresis figures or contact load capacity in A/VAC.
Damping	Start-up after power loss: ≤3 s. Return to normal service after data recovery: ≤10 s. Damping value (DAMP menu parameter), factory setting: 0 (no specific setting).
Weight	Net weight: approximately 1 kg (without mounting bracket or process connection adapter).

POWER SUPPLY AND LOAD

4-20mA (3-wire)	Supply 10-30VDC; current ≤60mA; load resistance $< (U-12)/0.06$ ohm; transmission distance <1000m; consumption ≤1.44W (4-20mA + transistor + OLED display @24VDC)
0.5-4.5VDC (3-wire)	Supply 12-30VDC; current ≤41mA; load resistance ≥5kohm (100kohm recommended); transmission distance <5m; consumption ≤984mW (0.5-4.5VDC + transistor + OLED display @24VDC)
Modbus-RTU/RS485 (4-wire)	Supply 5V / 9-30VDC per order code (12-30VDC in consumption table); current ≤45mA; transmission distance <1200m; consumption ≤1.08W (RS485 + transistor + OLED display @24VDC)
PNP output (contact, 3-wire)	Supply 12-30VDC
NPN output (contact, 3-wire)	Supply 12-30VDC

**For the communication output type, the load resistance value is 250ohm. **The data sheet literally states that the 0-2119ohm load resistance value corresponds to nominal working conditions and 250-600ohm to HART communication; this HART reference is transcribed literally as it appears in the data sheet, although the PSI31-TSR does not list HART among its output signal codes (F/R/5/N/P) — a possible inconsistency in the source data sheet that was not corrected.*

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C
Storage temperature	-40 to 85°C
Medium temperature	Sensor with silicone oil fill: -40 to 120°C
Working humidity	0-95% RH @ 40°C
Protection class	IP67
Electromagnetic compatibility (EMC)	Tested per GB/T9254/CISPR22 (radiated and conducted interference), GB/T17626.2 to .6 / IEC61000-4-2 to -6 (electrostatic discharge, radiated EM fields, power-frequency magnetic field, fast transients/bursts, surge, RF conducted disturbances); performance levels reported: OK / A / B depending on the test (not applicable to RS485 output)

PS131-TSR

LEEC

Complete Order Code Structure

BASE MODEL: PS131-TSR

SENSOR — PRESSURE RANGE

Range code	H602G	Nominal value (URL): 6 kPa
	H403G	Nominal value (URL): 40 kPa
	H254G	Nominal value (URL): 250 kPa
	H105G	Nominal value (URL): 1 MPa
	H305G	Nominal value (URL): 3 MPa
	H106G	Nominal value (URL): 10 MPa
	S406S	Nominal value (URL): 40 MPa

SENSOR — ISOLATING DIAPHRAGM MATERIAL

Diaphragm material	S	SUS316
	H	Hastelloy C

SENSOR — ISOLATING FILL LIQUID

Fill	S	Silicone oil, process temperature: -45 to 250°C
	D	Fluorocarbon oil, process temperature: -45 to 160°C

SENSOR — SENSOR SEAL

Seal	F	Welded stainless steel seal
------	----------	-----------------------------

ELECTRICAL CONNECTION

Connection	H3	M12×1 aviation connector (5-pin), IP67
------------	-----------	--

OUTPUT — OUTPUT SIGNAL

Signal	F	4-20mA, 3-wire, 10-30VDC supply
	R	Modbus-RTU/RS485, supply 5V / 9-30VDC
	5	0.5-4.5VDC, 3-wire, 6-30VDC supply
	N	NPN output, 12-30VDC supply
	P	PNP output, 12-30VDC supply

OUTPUT — OUTPUT CONTACT

Contact channels	1	One contact output channel
	2	Two contact output channels

OUTPUT — FIRST CONTACT ALARM VALUE

Alarm value	C1	Customer-set
	A1	Factory-set

OUTPUT — FIRST CONTACT ALARM METHOD

Method	L1	N, P: below the alarm value, high-level output
	H1	N, P: above the alarm value, high-level output
	W1	In-window alarm
	W2	Out-of-window alarm

PS131-TSR

LEEC

Order Code (continued)

OUTPUT — SECOND CONTACT ALARM VALUE

Alarm value	C2	Customer-set
	A2	Factory-set

OUTPUT — SECOND CONTACT ALARM METHOD

Method	L2	N, P: below the alarm value, high electrical level output
	H2	N, P: above the alarm value, high electrical level output
	W1	In-window alarm
	W2	Out-of-window alarm

PROCESS CONNECTION — MATERIAL

Material	4	SUS304
	6	SUS316

PROCESS CONNECTION — SPECIFICATION

Thread / standard	M01	M20×1.5(M), Ø3 pressure port, GB/T193-2003, ISO261
	G01	G1/2(M), Ø3 port, EN837
	G02	G1/4(M), Ø3 port, EN837
	G08	G1/4(M), Ø3 port, GB/T7307, ISO228, DIN16288, BS2779, DIN3852-E seal (backup seal)
	R01	1/2-14NPT(M), Ø3 port, GB/T12716, ANSI/ASME B1.20.1
	R02	1/4-18NPT(M), Ø3 port, GB/T12716, ANSI/ASME B1.20.1
	R03	1/2-14NPT(H), Ø3 port, GB/T12716, ANSI/ASME B1.20.1
	R04	1/4-18NPT(H), Ø3 port, GB/T12716, ANSI/ASME B1.20.1

PS131-TSR

LEEC

Order Options (continued)

FACTORY ALARM VALUE PER CONTACT

/A1-XXX First contact alarm value: XXX = two significant digits + one power-of-ten digit. Unit: Pa

/A2-XXX Second contact alarm value: XXX = two significant digits + one power-of-ten digit. Unit: Pa

ELECTRICAL CONNECTION ACCESSORY

/J3 Female aviation connector, straight, with 2 m cable, 5-pin, M12×1, IP67

PROCESS CONNECTION MOUNTING ACCESSORY

/N1 Heat-exchange connector, from M20×1.5(H) to M20×1.5(M), SUS304 (text identical to /N2 in the source data sheet)

/N2 Heat-exchange connector, from M20×1.5(H) to M20×1.5(M), SUS304 (text identical to /N1 in the source data sheet)

PROCESS CONNECTION ACCESSORY

/Z1 Weld connector, M20×1.5(H), SUS304

/Z2 Weld adapter, G1/2(H), SUS304

DISPLAY MODE

/D1 Per customer requirement

CALIBRATION REPORT

/Q1 Calibration report provided by the manufacturer

APPROVALS (multiple)

/E1 Flameproof certificate, ExdIICT6, NEPSI

/I1 Intrinsic safety certificate, ExiaIICT4, NEPSI (consult engineering)

/L3 CE certificate

PS131-TSR

LEEG

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

TAG position

0 (no specific setting)

Display mode (DISP)

PV (no specific setting)

Damping value (DAMP)

0 (no specific setting)

High range limit 20mA (URV)

As requested in the order

Analog output type (mA)

Linear (no specific setting)

Alarm signal (ALARM)

No (no specific setting)

Low range limit 4mA (LRV)

As requested in the order

Process unit (U)

As requested in the order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitters (literal wording from the data sheet) · Registration: 110804039

CE Certificate — Not specified in the data sheet

Mark: CE · EMC: EN61000-6-2:2005; EN61000-6-4:2007 · Standard: AC/0100708 · Registration: Not specified in the data sheet (formal certificate available as order option /L3)

FLAMEPROOF CERTIFICATE BY BODY

NEPSI

ExdIICT6
Working T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: Not specified in the data sheet...

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiaIICT4
Ambient T.: Not specified in the...
Medium T.: Not specified in the...
Reg.: Not specified in the data sheet...

Source: LEEG PS131-TSR Monosilicon electronic pressure switch data sheet, Rev. 2016.10.V1.0



Compact Transmitters

8 technical data sheets in this group

WHAT IS IT?

Miniaturized version of electronic pressure transmitters, designed for direct integration into equipment and machinery.

HOW DOES IT WORK?

Same piezoresistive principle as a standard transmitter, in a reduced form factor optimized for series production and OEM integration.

WHEN IS IT USED?

For equipment manufacturers (OEM) and applications with limited panel space, where size and per-unit cost are decisive.





PRESSURE

NEW 2026

Pressure · Compact Transmitters

SMP131-TSD-S

Compact Gauge Pressure Transmitter

LEEG · Reduced Format

LEEG



BUY ONLINE

DESCRIPTION

Compact gauge pressure transmitter in an ultra-compact format, ideal for OEM applications and tight spaces in panels and machines.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Body: stainless steel
- Ultra-compact format for OEM
- Relatively low cost due to production scale

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—





PRESSURE

NEW 2026

Pressure · Compact Transmitters

SMP131-TLD(H)
LEEG


BUY ONLINE

Compact Gauge Transmitter

LEEG · Reduced Format

DESCRIPTION

Compact gauge transmitter in an ultra-compact format, ideal for OEM applications and tight spaces in panels and machines.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Body: stainless steel
- Ultra-compact format for OEM
- Relatively low cost due to production scale

TYPICAL APPLICATIONS

- OEM integration in machines and skids
- Tight panel spaces
- Series production of equipment

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65

ELECTRICAL CONNECTION

4-pin M12 connector

PROCESS TEMPERATURE

Process: up to 100 °C · Ambient: -20 to 80 °C

CERTIFICATION / QUALITY

Design optimized for OEM integration



SMP131-TLD(H)

LEEC

Measuring Ranges and Performance

MEASURING RANGE AND LIMITS

CODE	NOMINAL VALUE (URL)	MIN. CALIBRATABLE SP...	LRL	URL	OVERLOAD LIMIT
L702G	7 kPa	5 kPa	-7 kPa	7 kPa	10.5 kPa
L203G	20 kPa	10 kPa	-20 kPa	20 kPa	30 kPa
L353G	35 kPa	20 kPa	-35 kPa	35 kPa	52.5 kPa
L104G	100 kPa	35 kPa	-100 kPa	100 kPa	150 kPa
L204G	200 kPa	100 kPa	-100 kPa	200 kPa	300 kPa
L704G	700 kPa	200 kPa	-100 kPa	700 kPa	1050 kPa
L105G	1 MPa	500 kPa	-0.1 MPa	1 MPa	1.5 MPa
L175G	1.7 MPa	1 MPa	-0.1 MPa	1.7 MPa	2.55 MPa
L355G	3.5 MPa	1.7 MPa	-0.1 MPa	3.5 MPa	5.25 MPa
L705S	7 MPa	3.5 MPa	-0.1 MPa	7 MPa	10.5 MPa
L176S	17 MPa	7 MPa	-0.1 MPa	17 MPa	25.5 MPa
L356S	35 MPa	17 MPa	-0.1 MPa	35 MPa	52.5 MPa
L406S	40 MPa	20 MPa	-0.1 MPa	40 MPa	60 MPa
L606S	60 MPa	30 MPa	-0.1 MPa	60 MPa	90 MPa
L706S	70 MPa	35 MPa	-0.1 MPa	70 MPa	105 MPa
L107S	100 MPa	50 MPa	-0.1 MPa	100 MPa	150 MPa

REFERENCE ACCURACY

Pressure type Gauge

Reference accuracy (as stated on the cover) $\pm 0.2\%$ URL, $\pm 0.5\%$ URL, optional $\pm 0.1\%$ URL

Typical linear-output accuracy $\pm 0.2\%$ URL (HART output: $\pm 0.1\%$ URL)

Max. accuracy / voltage output $\pm 0.5\%$ URL

Stability $\pm 0.1\%$ URL / year

Reference accuracy includes linearity, hysteresis and repeatability; calibration temperature: $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$. Applies to the listed nominal values: 7kPa, 20kPa, 35kPa, 100kPa, 200kPa, 700kPa, 1MPa, 1.7MPa, 3.5MPa, 7MPa, 17MPa, 35MPa, 40MPa, 60MPa, 70MPa and 100MPa. Overall performance includes, among other factors: reference accuracy, ambient-temperature effects and other combined errors (typical accuracy: $\pm 0.2\%$ URL, HART: $\pm 0.1\%$ URL). Tested per GB/T28474 / IEC60770, with zero-based span calibration, linear output, silicone-oil fill and SUS316L stainless-steel isolating diaphragm. The minimum calibratable span $\leq$ [URV-LRV] $\leq$ upper range limit, within the upper and lower range-limit scope.

EFFECTS ON MEASUREMENT

Ambient temperature (typical) Within -20 to 80°C , total impact $\pm 0.2\%$ URL/10K

Power supply (source effect) Zero and span change must not exceed $\pm 0.005\%$ URL/V

Load (load effect) Zero and span change must not exceed $\pm 0.05\%$ URL/kohm

Vibration Vibration resistance per IEC60068-2-6: 10g RMS (25-2000 Hz)

Shock Per IEC60068-2-27: 500g / 1 ms

Insulation resistance ≥ 20 Mohm @ 100 VDC

Service life More than 10 million maximum-pressure cycles

SMP131-TLD(H)

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Available output signals: 4-20mA (two-wire, linear); 4-20mA+HART (two-wire, linear); 0.5-4.5VDC (three-wire, linear); 0.5-4.5VDC ratiometric (three-wire); Modbus-RTU/RS485 (four-wire, linear), plus 'other' per the cover sheet. Electrical current: ≤20.8mA (4-20mA and 4-20mA+HART); ≤3.5mA (0.5-4.5VDC and ratiometric); ≤7mA (RS485). Transmission distance: <1000 m (4-20mA / HART); <5 m (0.5-4.5VDC); <1200 m (RS485).
Damping	Total damping time constant = amplifier damping time + sensor-capsule damping time. Amplifier damping time: 0-100 s adjustable (with HART protocol). Start-up after power loss: ≤3 s (HART output: ≤6 s). Normal service after data recovery: ≤4 s (HART output: ≤31 s).
Weight	Approx. 210 g (version with DIN43650 connector, D1); approx. 180 g (version with M12×1 aviation connector, H1).

POWER SUPPLY AND LOAD

4-20mA (two-wire)	10-30 VDC
4-20mA+HART (two-wire)	10.5/16.5-55 VDC
0.5-4.5VDC (three-wire)	6-15 VDC
0.5-4.5VDC ratiometric (three-wire)	5 VDC
Modbus-RTU/RS485 (four-wire)	5 VDC / 9-30 VDC

Load resistance: for 4-20mA output, $R < (U-10)/0.0208$; for 4-20mA+HART output, $R < (U-10.5)/0.0208$. *For the HART-communication output type, the load-resistance value is 250 ohm. **The data sheet literally states that the load-resistance value 0-2119 ohm corresponds to nominal working condition and 250-600 ohm to HART communication (figure transcribed literally from the source sheet). For 0.5-4.5VDC, ≥5kohm is recommended, with a recommended value of 100kohm. For Modbus-RTU/RS485, not applicable ('/'). Power consumption: ≤500mW (20.8mA output @24VDC); ≤42mW (0.5-4.5VDC output @12VDC); ≤168mW (RS485 output @24VDC).

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C
Storage temperature	-40 to 100°C
Medium temperature	-30 to 80°C
Working ambient humidity	0-95% RH
Protection class	IP65, IP67
Hazardous condition (flameproof)	ExiaIICT4 (GYB16.1964X) — 4-20mA output only
Electromagnetic compatibility (EMC, does not apply to RS485 output)	Tested per GB/T9254/CISPR22 (radiated interference 30-1000MHz, conducted 0.15-30MHz), GB/T17626.2/IEC61000-4-2 (ESD, 4kV contact / 8kV air), GB/T17626.3/IEC61000-4-3 (radiated EM fields, 10V/m, 80MHz-1GHz), GB/T17626.8/IEC61000-4-8 (50Hz magnetic field, 30A/m), GB/T17626.4/IEC61000-4-4 (fast transient/burst, 2kV, 5/50ns, 100kHz), GB/T17626.5/IEC61000-4-5 (surge, 1kV line-line / 2kV line-ground, 1.2/50μs), GB/T17626.6/IEC61000-4-6 (conducted RF disturbances, 3V, 150kHz-80MHz); reported performance levels OK, A or B depending on the test

SMP131-TLD(H)

LEEC

Complete Order Code Structure

BASE MODEL: SMP131-TLD(H)

MODEL

Model	SMP131-TLD	Piezoresistive silicon gauge pressure transmitter (electrical-connection first letter = D)
	SMP131-TLH	Piezoresistive silicon gauge pressure transmitter (electrical-connection first letter = H)

SENSOR — PRESSURE-RANGE CODE

Pressure range	L702G	Nominal value (URL): 7 kPa
	L203G	Nominal value (URL): 20 kPa
	L353G	Nominal value (URL): 35 kPa
	L104G	Nominal value (URL): 100 kPa
	L204G	Nominal value (URL): 200 kPa
	L704G	Nominal value (URL): 700 kPa
	L105G	Nominal value (URL): 1000 kPa
	L175G	Nominal value (URL): 1700 kPa
	L355G	Nominal value (URL): 3.5 MPa
	L705S	Nominal value (URL): 7 MPa
	L176S	Nominal value (URL): 17 MPa
	L356S	Nominal value (URL): 35 MPa
	L406S	Nominal value (URL): 40 MPa
	L606S	Nominal value (URL): 60 MPa
	L706S	Nominal value (URL): 70 MPa
	L107S	Nominal value (URL): 100 MPa

SENSOR — DIAPHRAGM, FILL AND SEAL

Isolating diaphragm material	S	SUS316
Isolating fill fluid	S	Silicone-oil fill, process temperature: -45 to 205°C
Sensor seal	S	O-ring, FKM, process temperature: -20 to 200°C
	F	Stainless-steel weld seal

ELECTRICAL CONNECTION

Electrical connection	D1	DIN43650, IP65
	H1	Aviation connector, M12×1 (4 pins), IP67
Cable entry protector	R0	None

OUTPUT

Output signal	F	4-20mA two-wire, 10-30VDC supply
	H	4-20mA+HART two-wire, 16.5-55VDC supply
	R	Modbus-RTU/RS485 four-wire, 5VDC/9-30VDC supply
	5	0.5-4.5VDC three-wire, 6-15VDC supply
	6	0.5-4.5VDC ratiometric three-wire, 5VDC supply
	A	4-20mA two-wire, intrinsic safety, 10-30VDC supply

SMP131-TLD(H)

LEEC

Order Code (continued)

BODY TUBE

Tube length (stainless steel)	53	53 mm (HART and Modbus-RTU/RS485 not available)
	37	37 mm (HART and Modbus-RTU/RS485 not available)
	65	65 mm (with HART/Modbus-RTU/RS485, accuracy $\leq 0.1\%$)
	85	85 mm (with HART/Modbus-RTU/RS485, accuracy $\leq 0.1\%$)

PROCESS CONNECTION — MATERIAL

Material	4	SUS304
	6	SUS316

PROCESS CONNECTION — SPECIFICATION

Thread / standard	M01	M20×1.5(M), Ø3 pressure guide hole, GB/T193-2003, ISO261
	G01	G1/2(M), Ø3 pressure guide hole, EN837
	G02	G1/4(M), Ø3 pressure guide hole, EN837
	G08	G1/4(M), Ø3 pressure guide hole, GB/T7307, ISO228, DIN16288, BS2779, DIN3852-E reference seal (back-pressure seal), max. measurement range 60 MPa
	R01	1/2-14NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R02	1/4-18NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R03	1/2-14NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1
	R04	1/4-18NPT(F), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1

SMP131-TLD(H)

LEEC

Options, Factory Settings and Certifications

PROCESS-CONNECTION MOUNTING ACCESSORY

/N1	Heat-exchange connector, M20×1.5(H) to M20×1.5(M), SUS304 (condenser tube)
/N2	Heat-exchange connector, M20×1.5(H) to M20×1.5(M), SUS304 (cooling fin)

PROCESS-CONNECTION ACCESSORY

/Z1	Weld adapter, M20×1.5(H), SUS304
/Z2	Weld adapter, G1/2(H), SUS304

ELECTRICAL-CONNECTION ACCESSORY

/J1	Female aviation connector (straight) with 2 m cable, 4 pins, M12×1, IP67
/J2	Female aviation connector (elbow) with 2 m cable, 4 pins, M12×1, IP67
/J4	Female aviation connector (straight) without cable, 4 pins, M12×1, IP67
/J5	Female aviation connector (elbow) without cable, 4 pins, M12×1, IP67

APPROVALS (MULTIPLE)

/I1	Intrinsic-safety certificate, ExiallCT4, NEPSI
/F3	CE certificate

WETTED-PARTS TREATMENT

/G1	Ungrease treatment
/G2	Electropolishing treatment

DEFAULT FACTORY SETTINGS

Factory settings (TAG, etc.)

Not specified in the data sheet — the sheet does not include a TAG/DISP/DAMP-type factory-settings section

'Key-z' pin (electrical connection)

Pressure-zero modification function (per the electrical connection-diagram note); no published factory value

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitter · Registration: 110804039

CE Certificate — ISET

Mark: EU · EMC: 2014/30/EU · Standard: AC/0100708 · Registration: IT031353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiallCT4
Ambient T.: -40 to +60°C
Medium T.: +120°C
Reg.: GYB16.1964X

Source: LEEC SMP131-TLD(H) (GP) Piezoresistive silicon gauge pressure transmitter data sheet, Rev. 2016.03.V1.0 / V1.0-1



PRESSURE

NEW 2026

Pressure · Compact Transmitters

SMP131-TLD(H)

Compact Absolute Pressure Transmitter

LEEG · Reduced Format

LEEG



DESCRIPTION

Compact absolute pressure transmitter in an ultra-compact format, ideal for OEM applications and tight spaces in panels and machines.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Body: stainless steel
- Ultra-compact format for OEM
- Relatively low cost due to production scale

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—





PRESSURE

NEW 2026

Pressure › Compact Transmitters

SMP131-TLN

LEEG



Compact Gauge Transmitter

LEEG · Reduced Format

DESCRIPTION

Compact gauge transmitter in an ultra-compact format, ideal for OEM applications and tight spaces in panels and machines.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Body: stainless steel
- Ultra-compact format for OEM
- Relatively low cost due to production scale

TYPICAL APPLICATIONS

- OEM integration in machines and skids
- Tight spaces in panels
- Serial equipment production

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65

ELECTRICAL CONNECTION

4-pin M12 connector

PROCESS TEMPERATURE

Process: up to 100 °C · Ambient: -20 to 80 °C

CERTIFICATION / QUALITY

Design optimized for OEM integration



SMP131-TLN

LEEC

Measuring Ranges and Performance

MEASURING RANGE AND LIMITS

NOMINAL VALUE	LOWER RANGE LIMIT (LRL)	UPPER RANGE LIMIT (URL)	OVERLOAD LIMIT
100 kPa	0 kPa	100 kPa	150 kPa
200 kPa	0 kPa	200 kPa	300 kPa
700 kPa	0 kPa	700 kPa	1050 kPa
1 MPa	-0.1 MPa	1 MPa	1.5 MPa
1.7 MPa	-0.1 MPa	1.7 MPa	2.55 MPa
3.5 MPa	-0.1 MPa	3.5 MPa	5.25 MPa
7 MPa	-0.1 MPa	7 MPa	10.5 MPa

REFERENCE ACCURACY

Linear output accuracy (typical) ±0.5% URL — valid for the nominal values: 100kPa, 200kPa, 700kPa, 1MPa, 1.7MPa, 3.5MPa, 7MPa

Overall typical accuracy ±0.5 URL

Stability ±0.1% URL / year

Reference accuracy includes linearity (BFSL), hysteresis and repeatability; calibration temperature: 20°C ±5°C. Overall performance includes, among other factors, reference accuracy and ambient temperature effects. Tested per GB/T28474 / IEC60770; zero-based span calibration, linear output, silicone oil fill, 316L stainless steel isolating diaphragm. The measuring range can also be expressed in kg/cm², MPa or kPa as required; other measuring ranges can be requested. The lower (LRV) and upper (URV) range values can be adjusted within the lower and upper range limits, provided that minimum calibratable span $\leq |URV-LRV| \leq$ upper range limit.

EFFECTS ON MEASUREMENT

Ambient temperature (typical) Within -20 to 80°C, total impact ±0.5% URL/10K

Power supply Zero and span shift must not exceed ±0.005% URL/V

Load (load resistance) Zero and span shift must not exceed ±0.05% URL/kohm

Vibration Vibration resistance per IEC60068-2-6: 10g RMS (25-2000 Hz)

Shock Per IEC60068-2-27: 500g / 1 ms

SMP131-TLN

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	4-20mA output signal, linear type, two-wire (order code F); or 0.5-4.5VDC output signal, linear type, three-wire (code 5); or ratiometric 0.5-4.5VDC output signal, three-wire (code 6). On the SMP131-TLN model the electrical connection is by cable (code NG: PG7 connection with 5 m shielded PVC cable, 4-pin: red=Power+, black=Power-, blue=Signal+, yellow=Signal-). Electrical current: ≤20.8mA (4-20mA output) or ≤3.5mA (voltage output). Transmission distance: <1000 m (4-20mA) or <5 m (0.5-4.5VDC voltage output). Data sheet note: the gauge pressure transmitter's reference pressure is current atmospheric pressure; operate with care, avoid dislodging the filter at the cable end and keep it dry.
Damping	Total damping time constant = amplifier damping time + sensor capsule damping time. Response frequency: 300 Hz. Return to normal service after data recovery: ≤150 ms.
Weight	Approx. 210 g with DIN43650 connector (code D1). With PG7 cable output (code NG — this SMP131-TLN product's electrical connection): approx. 330 g, without cable.

POWER SUPPLY AND LOAD

4-20mA, two-wire (code F)	10-30 VDC
0.5-4.5VDC, three-wire (code 5)	6-15 VDC
0.5-4.5VDC ratiometric, three-wire (code 6)	5 VDC

Load resistance for 4-20mA output: $< (U-10)/0.0208 \text{ ohm}$ (U = supply voltage in volts). For voltage output (0.5-4.5VDC): load resistance ≥5 kohm, 100 kohm recommended. Power consumption: ≤500 mW (20.8mA output @24VDC); ≤42 mW (0.5-4.5VDC output @12VDC).

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C
Storage temperature	-40 to 100°C
Medium temperature	-30 to 80°C
Working ambient humidity	0-95% RH
Protection class	IP65
Insulation resistance	≥20 M @ 100VDC
Working life	>10 million maximum-pressure cycles

Electromagnetic compatibility (EMC, not applicable to RS485 output)	Tested per GB/T9254/CISPR22 (radiated interference 30-1000MHz, conducted 0.15-30MHz), GB/T17626.2/IEC61000-4-2 (ESD, 4kV contact / 8kV air), GB/T17626.3/IEC61000-4-3 (radiated EM fields, 10V/m, 80MHz-1GHz), GB/T17626.8/IEC61000-4-8 (50Hz magnetic field, 30A/m), GB/T17626.4/IEC61000-4-4 (fast transients/bursts, 2kV), GB/T17626.5/IEC61000-4-5 (surge, 0.5kV line-line / 1kV line-ground), GB/T17626.6/IEC61000-4-6 (RF conducted disturbances, 3V, 150kHz-80MHz); performance levels reported as OK, A or B depending on the test
--	--

SMP131-TLN

LEEC

Complete Order Code Structure

BASE MODEL: SMP131-TLN

MODEL

Model	SMP131-TLD	Piezoresistive silicon gauge pressure sensor (first electrical connection letter = D)
	SMP131-TLN	Piezoresistive silicon gauge pressure sensor (first electrical connection letter = N) – this product

SENSOR — PRESSURE RANGE CODE

Pressure range	L104	Nominal value (URL): 100 kPa
	L204	Nominal value (URL): 200 kPa
	L704	Nominal value (URL): 700 kPa
	L105	Nominal value (URL): 1000 kPa
	L175	Nominal value (URL): 1700 kPa
	L355	Nominal value (URL): 3.5 MPa
	L705	Nominal value (URL): 7 MPa

SENSOR — TYPE, DIAPHRAGM, FILL AND SEAL

Pressure type	G	Gauge, 100 kPa – 7 MPa
Isolating diaphragm material	S	SUS316
Isolating fill fluid	S	Silicone oil; process temperature: -45 to 205°C
Sensor seal	S	O-ring, FKM; process temperature: -20 to 200°C

ELECTRICAL CONNECTION

Electrical connection	D1	DIN43650, IP65
	NG	PG7 connection with 5 m shielded PVC cable (4-pin) – this product's code

OUTPUT

Output signal	F	4-20mA, two-wire, supply: 10-30VDC
	5	0.5-4.5VDC, three-wire, supply: 6-15VDC
	6	0.5-4.5VDC, three-wire, ratiometric output, supply: 5VDC

BODY / TUBE

Tube	53	Stainless steel tube length: 53 mm (HART, Modbus-RTU/RS485 not available)
------	-----------	---

PROCESS CONNECTION — MATERIAL

Material	4	SUS304
----------	----------	--------

PROCESS CONNECTION — SPECIFICATION

Thread / standard	M01	M20×1.5(M), Ø3 pressure guide hole, GB/T193-2003, ISO261
	G01	G1/2(M), Ø3 pressure guide hole, EN837
	G02	G1/4(M), Ø3 pressure guide hole, EN837

SMP131-TLN

LEEG

Options, Factory Settings and Certifications

ADDITIONAL OPTIONS — PRODUCT NATURE (selection required)

/J Economic pressure transmitter

DEFAULT FACTORY SETTINGS

Factory settings (TAG, LRV/URV, etc.)

Not specified in the data sheet — the data sheet does not include a TAG/DISP/DAMP-type factory settings section for this series

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitter (literal wording from the data sheet) · Registration: 110804039

CE Certificate — ISET

Mark: EU · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT031353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: LEEG SMP131-TLD(N) Piezoresistive silicon gauge pressure transmitter data sheet, Rev. 2016.03.V1.0



PRESSURE

NEW 2026

Pressure · Compact Transmitters

SMPI31-TCD(H)

LEEG



Compact Gauge Transmitter

LEEG · Reduced Format

DESCRIPTION

Compact gauge transmitter in an ultra-compact format, ideal for OEM applications and tight spaces in panels and machines.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Body: stainless steel
- Ultra-compact format for OEM
- Relatively low cost due to production scale

TYPICAL APPLICATIONS

- OEM integration in machines and skids
- Tight spaces in panels
- Serial equipment production

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65

ELECTRICAL CONNECTION

4-pin M12 connector

PROCESS TEMPERATURE

Process: up to 100 °C · Ambient: -20 to 80 °C

CERTIFICATION / QUALITY

Design optimized for OEM integration



SMP131-TCD(H)

LEEC

Measuring Ranges and Performance

MEASURING RANGE AND LIMITS

CODE	NOMINAL VALUE (URL)	MIN. CALIBRATABLE SP...	LOWER RANGE LIMIT (LR...	UPPER RANGE LIMIT (UR...	OVERLOAD LIMIT
C502G	5 kPa	2.5 kPa	0 kPa	5 kPa	400 kPa
C103G	10 kPa	5 kPa	0 kPa	10 kPa	400 kPa
C203G	20 kPa	10 kPa	0 kPa	20 kPa	600 kPa
C403G	40 kPa	20 kPa	0 kPa	40 kPa	600 kPa
C104G	100 kPa	40 kPa	0 kPa	100 kPa	1 MPa
C204G	200 kPa	100 kPa	0 kPa	200 kPa	1.6 MPa
C404G	400 kPa	200 kPa	0 kPa	400 kPa	2.5 MPa
C105G	1 MPa	400 kPa	0 kPa	1 MPa	4 MPa
C205G	2 MPa	1 MPa	0 kPa	2 MPa	4 MPa
C405G	4 MPa	2 MPa	0 kPa	4 MPa	6 MPa

REFERENCE ACCURACY

Pressure type Gauge

Reference accuracy (stated on cover) ±0.2% URL, ±0.5% URL, optional ±0.1% URL

Typical linear-output accuracy ±0.2% URL

HART output accuracy ±0.1% URL

Voltage output accuracy (Max./Voltage output) ±0.5% URL

Stability ±0.1% URL / year

Reference accuracy includes linearity, hysteresis and repeatability; calibration temperature: 20°C ±5°C. Overall performance includes, among other factors: reference accuracy, ambient temperature effects and other combined errors. Tested per GB/T28474 / IEC60770, with zero-based span calibration. Total measuring range of the ceramic sensor: 2.5 kPa to 4 MPa (see the range code table under 'ranges'); additional ranges can be requested in kg/cm², MPa or kPa as required. Minimum calibratable span ≤ |URV-LRV| ≤ upper range limit, within the adjustable LRV and URV scope.

EFFECTS ON MEASUREMENT

Ambient temperature (typical) Within -20 to 80°C, total impact ≤0.2% URL/10K

Power supply (source effect) Zero and span shift must not exceed ±0.005% URL/V

Load (load effect) Zero and span shift must not exceed ±0.05% URL/kohm

Vibration Vibration resistance per IEC60068-2-6: 10g RMS (25-2000 Hz)

Shock Per IEC60068-2-27: 500g / 1 ms

SMP131-TCD(H)

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Available output signals: 4-20mA (two-wire, linear, 12-30VDC supply); 4-20mA+HART (two-wire, linear, 16.5-55VDC supply); 0-5VDC (three-wire, linear, 8-30VDC supply); 1-5VDC (three-wire, 12-30VDC supply); Modbus-RTU/RS485 (four-wire, linear, 5VDC / 9-30VDC supply), plus 'others' per the cover page. Electrical current: ≤20.8mA (4-20mA and 4-20mA+HART); ≤6.5mA (0-5VDC); ≤7mA (RS485). Transmission distance: <1000 m (4-20mA / HART); <5 m (0-5VDC); <1200 m (RS485).
Damping	Total damping time constant = amplifier damping time + sensor capsule damping time. Amplifier damping time: 0-100 s adjustable (via HART protocol). Sensor reaction time: ≤1 ms. Start-up after power loss: ≤3 s (HART output: ≤6 s). Normal service after data recovery: ≤4 s (HART output: ≤31 s).
Weight	Approx. 370 g (version with DIN43650 connector, D1); approx. 340 g (version with aviation connector, H1).

POWER SUPPLY AND LOAD

4-20mA (two-wire)	12-30 VDC
4-20mA+HART (two-wire)	16.5-55 VDC
0-5VDC (three-wire)	8-30 VDC
1-5VDC (three-wire)	12-30 VDC
Modbus-RTU/RS485 (four-wire)	5 VDC / 9-30 VDC

Load resistance: for 4-20mA output, $R \leq (U-12)/0.0208$; for 4-20mA+HART output, $R \leq (U-10.5)/0.0208$. *For the HART communication output type, the load resistance value is 250ohm. **The data sheet literally states that the 0-2119ohm load resistance value corresponds to nominal working conditions and 250-600ohm to HART communication (figure transcribed literally from the source data sheet). For 0-5VDC, load resistance is not applicable ('/'). For Modbus-RTU/RS485, ≥5kohm is recommended, with 100kohm as the recommended value. Power consumption: ≤156mW (0-5VDC output @24VDC); ≤168mW (RS485 output @24VDC); ≤500mW (20.8mA output @24VDC).

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C
Storage temperature	-40 to 100°C
Medium temperature	-30 to 80°C
Working ambient humidity	0-95% RH
Protection class	IP65

Electromagnetic compatibility (EMC, not applicable to RS485 output)

Tested per GB/T9254/CISPR22 (radiated interference 30-1000MHz, conducted 0.15-30MHz), GB/T17626.2/IEC61000-4-2 (ESD, 4kV contact / 8kV air), GB/T17626.3/IEC61000-4-3 (radiated EM fields, 10V/m, 80MHz-1GHz), GB/T17626.8/IEC61000-4-8 (50Hz magnetic field, 30A/m), GB/T17626.4/IEC61000-4-4 (fast transients/bursts, 2kV), GB/T17626.5/IEC61000-4-5 (surge, 1kV line-line / 2kV line-ground), GB/T17626.6/IEC61000-4-6 (RF conducted disturbances, 3V, 150kHz-80MHz); performance levels reported as A or B depending on the test

SMP131-TCD(H)

LEEC

Complete Order Code Structure

BASE MODEL: SMP131-TCD(H)

MODEL

Model	SMP131-TCD	Capacitive ceramic gauge transmitter (first electrical connection letter = D)
	SMP131-TCH	Capacitive ceramic gauge transmitter (first electrical connection letter = H)

SENSOR — PRESSURE RANGE CODE

Pressure range	C502G	Nominal value (URL): 5 kPa
	C103G	Nominal value (URL): 10 kPa
	C203G	Nominal value (URL): 20 kPa
	C403G	Nominal value (URL): 40 kPa
	C104G	Nominal value (URL): 100 kPa
	C204G	Nominal value (URL): 200 kPa
	C404G	Nominal value (URL): 400 kPa
	C105G	Nominal value (URL): 1 MPa
	C205G	Nominal value (URL): 2 MPa
	C405G	Nominal value (URL): 4 MPa

SENSOR — DIAPHRAGM, FILL AND SEAL

Isolating diaphragm material	C	Ceramic (99.9% Al ₂ O ₃)
Fill fluid	N	None
Sensor seal	S	O-ring, FKM (process temperature: -20 to 200°C)

ELECTRICAL CONNECTION

Electrical connection	D1	DIN43650, IP65
	H1	Aviation connector, M12×1 (4-pin), IP67
Cable entry protector	R0	None

OUTPUT

Output signal	F	4-20mA two-wire, 12-30VDC supply
	H	4-20mA+HART two-wire, 16.5-55VDC supply
	R	Modbus-RTU/RS485 four-wire, 5VDC/9-30VDC supply
	1	1-5VDC three-wire, 12-30VDC supply
	2	0-5VDC three-wire, 8-30VDC supply

BODY

Body	L3	Specialized capacitive ceramic pressure sensor body
------	-----------	---

PROCESS CONNECTION — MATERIAL

Material	4	SUS304
	6	SUS316

SMP131-TCD(H)

LEEC

Order Code (continued)

PROCESS CONNECTION — SPECIFICATION

Thread / standard	M05	M20×1.5(M), Ø8 pressure guide hole, GB/T193-2003, ISO261
	M08	M42×1.5(M), flush diaphragm, EN837
	G01	G1/2(M), Ø8 pressure guide hole, EN837
	G21	G1-1/2(M), flush diaphragm, EN837
	R02	1/4-18NPT(M), Ø3 pressure guide hole, GB/T12716, ANSI/ASME B1.20.1

SMP131-TCD(H)

LEEC

Options, Factory Settings and Certifications

PROCESS CONNECTION MOUNTING ACCESSORY

/N1	Heat-exchange connector, from M20×1.5(H) to M20×1.5(M), SUS304 (condenser tube)
/N2	Heat-exchange connector, from M20×1.5(H) to M20×1.5(M), SUS304 (cooling fin)

PROCESS CONNECTION ACCESSORY

/Z1	Weld adapter, M20×1.5(H), SUS304
/Z2	Weld adapter, G1/2(H), SUS304

ELECTRICAL CONNECTION ACCESSORY

/J1	Female aviation connector (straight) with 2 m cable, 4-pin, M12×1, IP67
/J2	Female aviation connector (angled) with 2 m cable, 4-pin, M12×1, IP67
/J4	Female aviation connector (straight) without cable, 4-pin, M12×1, IP67
/J5	Female aviation connector (angled) without cable, 4-pin, M12×1, IP67

APPROVALS

/F3	CE certificate
-----	----------------

WETTED PARTS TREATMENT

/G1	Degreasing treatment
/G2	Electropolishing treatment

DEFAULT FACTORY SETTINGS

Factory settings (TAG, etc.)

Not specified in the data sheet — the data sheet does not include a TAG/DISP/DAMP-type factory settings section

'Key-z' pin (electrical connection)

Pressure zero-modification function (per the electrical connection diagram note); no published factory value

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitter (literal wording from the data sheet) · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1: 2013 · Registration: IT031353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: LEEG SMP131-TCD(H) Capacitive ceramic gauge pressure transmitter data sheet, Rev. 2017.04.V1.0 / V1.0-1



PRESSURE

NEW 2026

Pressure · Compact Transmitters

SMP131-DLD

LEEG



Compact Differential Pressure Transmitter

LEEG · Reduced Format

DESCRIPTION

Compact differential pressure transmitter in an ultra-compact format, ideal for OEM applications and tight spaces in panels and machines.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Body: stainless steel
- Ultra-compact format for OEM
- Relatively low cost due to production scale

TYPICAL APPLICATIONS

- OEM integration in machines and skids
- Tight spaces in panels
- Serial equipment production

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65

ELECTRICAL CONNECTION

4-pin M12 connector

PROCESS TEMPERATURE

Process: up to 100 °C · Ambient: -20 to 80 °C

CERTIFICATION / QUALITY

Design optimized for OEM integration



SMP131-DLD

LEEC

Measuring Ranges and Performance

MEASURING RANGE AND LIMITS

CODE	NOMINAL VALUE (U...	MIN. CALIBRATABLE...	LOWER RANGE LIMIT...	UPPER RANGE LIMIT ...	HIGH-PRESSURE SID...	LOW-PRESSURE SIDE ...
L353D	35 kPa	10 kPa	-35 kPa	35 kPa	70 kPa	35 kPa
L703D	70 kPa	35 kPa	-70 kPa	70 kPa	150 kPa	70 kPa
L104D	100 kPa	50 kPa	-100 kPa	100 kPa	200 kPa	100 kPa
L204D	200 kPa	100 kPa	-200 kPa	200 kPa	400 kPa	200 kPa
L354D	350 kPa	200 kPa	-350 kPa	350 kPa	700 kPa	350 kPa
L704D	700 kPa	350 kPa	-500 kPa	700 kPa	1400 kPa	700 kPa
L105D	1 MPa	500 kPa	-0.5 MPa	1 MPa	2 MPa	1 MPa
L205D	2 MPa	1 MPa	-0.5 MPa	2 MPa	4 MPa	1 MPa
L355D	3.5 MPa	1.7 MPa	-0.5 MPa	3.5 MPa	7 MPa	1 MPa

REFERENCE ACCURACY

Pressure type	Differential (differential pressure)
Reference accuracy (stated on cover)	±0.2% URL, ±0.5% URL, optional ±0.1% URL
Typical linear-output accuracy	±0.2% URL (HART output accuracy: ±0.1% URL)
Voltage output accuracy / Max.	±0.5% URL
Stability	±0.1% URL / year

Reference accuracy includes linearity, hysteresis and repeatability; calibration temperature: 20°C ±5°C. Tested per GB/T28474 / IEC60770, with zero-based span calibration, linear output, silicone oil fill and 316L stainless steel isolating diaphragm. Overall performance includes, among other factors, reference accuracy, ambient temperature effects and other combined errors, without being limited to them. The available nominal range values are: 35 kPa, 70 kPa, 100 kPa, 200 kPa, 350 kPa, 700 kPa, 1 MPa, 2 MPa and 3.5 MPa (see range table). The measuring range can also be expressed in kg/cm² or MPa units as required; LRV and URV adjustment can be performed within the upper and lower range limits, provided that minimum calibratable span $\leq |URV-LRV| \leq$ upper range limit. Declared working life: more than 10 million maximum pressure cycles. Insulation resistance: $\geq 20\text{ M } @ 100\text{VDC}$.

EFFECTS ON MEASUREMENT

Ambient temperature (typical)	Within -20 to 80°C, total impact $\leq 0.2\%$ URL/10K
Power supply (source effect)	Zero and span shift must not exceed $\pm 0.005\%$ URL/V
Load (load effect)	Zero and span shift must not exceed $\pm 0.05\%$ URL/k
Vibration	Vibration resistance per IEC60068-2-6: 10g RMS (25-2000 Hz)
Shock	Per IEC60068-2-27: 500g / 1 ms

SMP131-DLD

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Output signals available per the order-code chapter: 4-20mA (two-wire, 10-30VDC supply); 4-20mA+HART (two-wire, 16.5-55VDC supply); Modbus-RTU/RS485 (four-wire, 5VDC/9-30VDC supply); 0.5-4.5VDC (three-wire, 6-15VDC supply); ratiometric 0.5-4.5VDC (three-wire, 5VDC supply); intrinsically safe 4-20mA (two-wire, 10-30VDC supply). The technical specifications table on page 3 also lists the 4-20mA+HART output supply voltage as 10.5/16.5-55VDC (literal figure from the source data sheet, different from the one shown in the order-code chapter). Electrical current: ≤20.8mA (4-20mA and 4-20mA+HART); ≤3.5mA (0.5-4.5VDC); ≤7mA (RS485). Transmission distance: <1000 m (4-20mA/HART); <5 m (0.5-4.5VDC); <1200 m (RS485).
Damping	Total damping time constant = amplifier damping time + sensor capsule damping time. Amplifier damping time: 0-100 s adjustable (with HART protocol). Start-up after power loss: ≤3 s (HART output: ≤6 s). Normal service after data recovery: ≤4 s (HART output: ≤31 s).
Weight	Not specified in the data sheet — the SMP131-DLD data sheet does not include an approximate weight table.

POWER SUPPLY AND LOAD

4-20mA (two-wire)	10-30 VDC
4-20mA+HART (two-wire)	16.5-55 VDC (the technical specifications table on page 3 states 10.5/16.5-55VDC)
0.5-4.5VDC (three-wire)	6-15 VDC
0.5-4.5VDC ratiometric (three-wire)	5 VDC
Modbus-RTU/RS485 (four-wire)	5 VDC / 9-30 VDC
Intrinsically safe 4-20mA (two-wire)	10-30 VDC

Load resistance: for 4-20mA output, $R < (U-10)/0.0208$; for 4-20mA+HART output, $R < (U-10.5)/0.0208$. *For the HART communication output type, the communication load resistance value is 250. **The 0-2119 load resistance value corresponds to nominal working conditions and 250-600 to HART communication (figure transcribed literally from the source data sheet). For 0.5-4.5VDC, load resistance ≥5k is recommended (100k recommended value); for ratiometric 0.5-4.5VDC and RS485, no particular load value is specified beyond what is indicated ('/'). Power consumption: ≤500mW (20.8mA output @24VDC); ≤42mW (0.5-4.5VDC output @12VDC); ≤168mW (RS485 output @24VDC).

AMBIENT AND PROCESS CONDITIONS

Working temperature	-40 to 85°C
Storage temperature	-40 to 100°C
Medium temperature	-30 to 80°C
Working ambient humidity	0-95% RH
Protection class	IP65
Hazardous condition (intrinsic safety)	ExiaIICT4 (GYB16.1964X) — 4-20mA output only
Declared working life	>10 million maximum-pressure cycles
Insulation resistance	≥20 M @ 100VDC

SMP131-DLD

LEEC

Output, Power Supply and Ambient Conditions (continued)

Electromagnetic compatibility (EMC, not applicable to RS485 output)

Tested per GB/T9254/CISPR22 (radiated interference 30-1000MHz, conducted 0.15-30MHz), GB/T17626.2/IEC61000-4-2 (ESD, 4kV contact/8kV air), GB/T17626.3/IEC61000-4-3 (radiated EM fields, 10V/m, 80MHz-1GHz), GB/T17626.8/IEC61000-4-8 (power-frequency magnetic field, 30A/m), GB/T17626.4/IEC61000-4-4 (fast transients/bursts, 2kV), GB/T17626.5/IEC61000-4-5 (surge, 1kV line-line/2kV line-ground), GB/T17626.6/IEC61000-4-6 (RF conducted disturbances, 3V, 150kHz-80MHz); performance levels reported as OK, A or B depending on the test

SMP131-DLD

LEEC

Complete Order Code Structure

BASE MODEL: SMP131-DLD

MODEL

Model	SMP131-DLD	Piezoresistive silicon differential pressure transmitter
-------	-------------------	--

SENSOR — PRESSURE RANGE CODE

Pressure range	L353D	Nominal value (URL): 35 kPa
	L703D	Nominal value (URL): 70 kPa
	L104D	Nominal value (URL): 100 kPa
	L204D	Nominal value (URL): 200 kPa
	L354D	Nominal value (URL): 350 kPa
	L704D	Nominal value (URL): 700 kPa
	L105D	Nominal value (URL): 1 MPa
	L205D	Nominal value (URL): 2 MPa
	L355D	Nominal value (URL): 3.5 MPa

SENSOR — ISOLATING DIAPHRAGM, FILL AND SEAL

Isolating diaphragm material	S	SUS316L
Isolating fill fluid	S	Silicone oil, process temperature: -45 to 205°C
Sensor seal	S	O-ring, FKM, process temperature: -20 to 200°C

ELECTRICAL CONNECTION

Electrical connection	D1	DIN43650, IP65
Cable entry protector	R0	None

OUTPUT

Output signal	F	4-20mA two-wire, 10-30VDC supply
	H	4-20mA+HART two-wire, 16.5-55VDC supply
	R	Modbus-RTU/RS485 four-wire, 5VDC/9-30VDC supply
	5	0.5-4.5VDC three-wire, 6-15VDC supply
	6	0.5-4.5VDC three-wire, ratiometric output, 5VDC supply
	A	4-20mA two-wire, intrinsic safety, 10-30VDC supply

PROCESS CONNECTION — MATERIAL

Material	4	SUS304
	6	SUS316

PROCESS CONNECTION — SPECIFICATION

Thread / standard	M01	M20×1.5(M), Ø3 pressure guide hole, GB/T193-2003, ISO261
	G01	G1/2(M), Ø3 pressure guide hole, EN837
	G02	G1/4(M), Ø3 pressure guide hole, EN837
	G09	G1/4(F), EN837
	R02	1/4NPT(M), ANSI/ASME B1.20.1
	R04	1/4NPT(F), ANSI/ASME B1.20.1

SMP131-DLD

LEEG

Options, Factory Settings and Certifications

FIXED MOUNTING ACCESSORY

/G1 Fixed base mounting bracket, with adapted mounting accessory, SUS304

APPROVALS (MULTIPLE)

/I1 Intrinsic safety certificate, ExiaIICT4, NEPSI

/F3 CE certificate

WETTED PARTS TREATMENT

/G1 Degreasing treatment

/G2 Electropolishing treatment

DEFAULT FACTORY SETTINGS

Factory settings (TAG, etc.)

Not specified in the data sheet — the SMP131-DLD data sheet does not include a TAG/DISP/DAMP-type factory settings section

'Key-z' pin (electrical connection, two-wire output)

Pressure zero-modification function (per the DIN43650 electrical connection table note); no published factory value

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO9001-2008 · Scope: Design and production of pressure transmitter (literal wording from the data sheet) · Registration: 110804039

CE Certificate — ISET

Mark: EU · EMC: 2014/30/EU · Standard: AC/0100708 · Registration: IT031353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiaIICT4
Ambient T.: -40 to +60°C
Medium T.: +120°C
Reg.: GYB16.1964X

Source: LEEG SMP131-DLD Piezoresistive silicon differential pressure transmitter data sheet, Rev. 2016.12.V1.0



PRESSURE

NEW 2026

Pressure › Compact Transmitters

LCD11

Field Indicator with Local Display

LEEG · Reduced Format

LEEG



BUY ONLINE

DESCRIPTION

Field indicator with local display in an ultra-compact format, ideal for OEM applications and tight spaces in panels and machines.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Body: stainless steel
- Ultra-compact format for OEM
- Relatively low cost due to production scale

TYPICAL APPLICATIONS

- OEM integration in machines and skids
- Tight spaces in panels
- Serial equipment production

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65

ELECTRICAL CONNECTION

4-pin M12 connector

PROCESS TEMPERATURE

Process: up to 100 °C · Ambient: -20 to 80 °C

CERTIFICATION / QUALITY

Design optimized for OEM integration



LCD11

LEEC

Measuring Ranges and Performance

INDICATION RANGE AND UNITS — The LCD11 is a local-display indicator, it does not measure press...

PARAMETER	DESCRIPTION
Input signal	4–20mA two-wire (loop)
On-screen indication range	–19999 to 99999
Display type	Dual row, 5-digit/8-digit, 7-segment/16-segment, with LCD backlight
ADC sampling	24 bits
Indication applications	Process variable, 4–20mA current value or percentage on local display
Configurable units	kPa, MPa, Pa, bar, mbar, psi, mH ₂ O, mmH ₂ O, cmH ₂ O, mmHg, Torr, atm, kg, g, mg, N, kN, °C, °F, K, %RH, %VOL, PPM, %LEL, pH, m, cm, mm, inch, m/s, ohm, kohm, mV, V

REFERENCE ACCURACY

Indication accuracy (display) 0.1% F.S. ±1 digit

Switching accuracy (on-off output) 0.1% F.S.

Accuracy referred to the full scale (F.S.) of the incoming 4–20mA signal received from the external transmitter. The data sheet does not define a 'turndown' (TD) ratio or a span-based accuracy band, since the LCD11 does not measure pressure but indicates a current signal already generated by another instrument.

EFFECTS ON MEASUREMENT

Working ambient temperature –20 to 70 °C (range within which the data sheet specifications apply)

Lightning protection 4 kV

Insulation property 500V/100Mohm

Electrical protection Short-circuit and reverse-polarity protection

LCD11

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	The LCD11 does not generate its own process variable: it is powered by and operates within a two-wire 4–20mA current loop (loop powered), displaying the process variable, the 4–20mA current value or the corresponding percentage. As an option, it delivers a two-wire 4–20mA repeater-mode signal output ('4–20mA two wire signal loop output for option'). It also has on/off (on-off) alarm output(s), PNP type, independent of the 4–20mA loop: 1 PNP channel in the standard configuration, up to 2 PNP channels as an option. Available switching functions: high setpoint, low setpoint, window function and hysteresis; normally-open or normally-closed state (optional); status indication via red or green LED; maximum continuous load 120mA; delay adjustment 0–255ms (optional); maximum switching frequency 10 times/s; hysteresis adjustment 0–5% (optional). Standard failure warning: low alarm value 3.5mA, high alarm value 23mA.
Damping	Not specified in the data sheet — the sheet does not define a damping time constant for the indicated signal. Related data available: on-off alarm output delay time adjustable from 0 to 255 ms (optional), with a maximum switching frequency of 10 times/s.
Weight	Approximate weight: 100 g (packaging/shipping information from the data sheet).

POWER SUPPLY AND LOAD

Power supply (loop powered)	Two-wire 4–20mA current loop; maximum admissible voltage drop (burden) in the loop: 8 VDC
------------------------------------	---

The LCD11 does not require its own external power supply: it draws power from the same two-wire 4–20mA loop that carries the transmitter signal, with a maximum voltage drop of 8 VDC. The data sheet does not detail a load-resistance formula as a function of loop supply voltage (unlike pressure-transmitter data sheets).

AMBIENT AND PROCESS CONDITIONS

Working ambient temperature	–20 to 70 °C
Storage temperature	–20 to 70 °C
Humidity limit	5–85% RH, without additional external protection
Protection class	IP55 (per the installation drawing in the data sheet)
Vibration resistance	20g, 20–5000Hz
Shock resistance	100g, 11ms
Housing material	ABS+PC
Rotation angle	350°, to facilitate viewing
Housing color	Red; black as an option

LCD11

LEEC

Complete Order Code Structure

BASE MODEL: LCD11

TYPE

Type	11	Direct plug-in installation connection
------	-----------	--

SEPARATOR

Separator	-	Continues with detailed specifications
-----------	----------	--

ELECTRICAL CONNECTION WITH TRANSMITTER

Connection with transmitter	D	DIN (DIN43650, female base)
	H	M12x1 (4 pins) (M12x1, 5 pins, female base)
	Y1	To be defined with the customer

ELECTRICAL CONNECTION WITH SYSTEM

Connection with system	D	DIN (DIN43650, male base)
	H	M12x1 (4 pins) (M12x1, 5 pins, male base)
	Y2	To be defined with the customer

ON-OFF ALARM FUNCTION

On-off alarm	N	None
	A	1-channel on-off alarm output
	B	2-channel on-off alarm output
	Y3	To be defined with the customer (minimum order: 100 units)

HOUSING COLOR

Housing color	R	Red (optional)
	B	Black
	Y4	To be defined with the customer (minimum order: 500 units)

MEMBRANE COLOR

Membrane color	R	Red (optional)
	B	Black
	Y5	To be defined with the customer (minimum order: 500 units)

SPECIAL REQUIREMENT

Special requirement	Y6	Special explanation to be defined
---------------------	-----------	-----------------------------------

LCD11

LEEG

Options, Factory Settings and Certifications

FULL ORDER-CODE EXAMPLE

LCD11-DDN

Example given in the data sheet: Type 11 (direct connection), electrical connection with transmitter DIN43650 female (D), electrical connection with system DIN43650 male (D), no on-off alarm function (N)

DEFAULT FACTORY SETTINGS

Failure warning – standard

Low alarm value 3.5 mA; high alarm value 23 mA

Factory instruction

Not specified in the data sheet — the corresponding row in the selection table is blank

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet

Mark: Not specified in the data sheet · EMC: EN61326 · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: LEEG LCD11 data sheet — 'Intelligent display unit' (intelligent field indicator with local display), 2-page data sheet.



PRESSURE

NEW 2026

Pressure · Compact Transmitters

MPM4760

MICROSENSOR



Compact Pressure Transmitter with Display

Microsensor · Compact

DESCRIPTION

The MPM4760 is an intelligent digital pressure transmitter from MICROSENSOR, with an extended-range LCD display (-30°C to $+80^{\circ}\text{C}$) and high-precision digital temperature compensation. In an ultra-compact format (76mm maximum diameter), it offers standard two-wire 4-20mA output or RS485 digital communication (ASCII protocol or MODBUS RTU, up to 99 transmitters per bus), and can be battery-powered by a lithium battery (in that case, with digital-only output). It does not require power calibration, and supports range shrinking and factory value restoring via the MS Setonline software. The indicator can be rotated 90° clockwise or counterclockwise, and accommodates virtually any type of process connection.

TECHNICAL SPECIFICATIONS

- Configurable range from -1 to 1000 bar, per the formula [0-X] bar
- Extended-range LCD display (-30°C to $+80^{\circ}\text{C}$), 4½ digits
- Total accuracy $\pm 0.25\%$ FS · Stability $\pm 0.2\%$ FS/year
- 4-20mA 2-wire output, or RS485 (ASCII/MODBUS RTU) · Battery power available

TYPICAL APPLICATIONS

Industrial Process Pressure Measurement

OEM and Machinery

Hydraulics and Pneumatics

Water and Effluent Treatment

etc.

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65

ELECTRICAL CONNECTION

4-pin connector (+V, +OUT, RS485A, RS485B depending on configuration) — see connection detail in the data sheet

PROCESS TEMPERATURE

Working -30°C to $+80^{\circ}\text{C}$ · Compensated -10°C to $+70^{\circ}\text{C}$ · Storage -40°C to $+85^{\circ}\text{C}$

CERTIFICATION / QUALITY

Manufactured per the ISO9000 international quality system



MPM4760

MICROSENSOR

Measuring Ranges and Performance

MEASUREMENT RANGES — CONFIGURABLE TO ORDER ([0~X] bar, between -1 and 1000 bar)

EXAMPLE RANGE	MAXIMUM OVERPRESSURE
-1 to 0 bar (vacuum)	1.5 bar
0 to 1 bar	1.5 bar
0 to 10 bar	15 bar
0 to 100 bar	150 bar
0 to 250 bar	375 bar
0 to 600 bar	900 bar
0 to 1000 bar	1100 bar (absolute sensor limit)

REFERENCE ACCURACY

Total accuracy	±0.25% FS
Stability	±0.2% FS / year

The measurement range is configured to order within the -1 to 1000 bar interval, per the formula [0~X] bar (X = maximum pressure to be measured); the table shows examples of typical configurations, not a closed list of models. Admissible overpressure: 1.5 times full scale (FS) or 1100 bar, whichever is lower. Transmitters with a flush diaphragm (codes PC1/PC3) have a measurement range of 0 to 0.7...350 bar.

EFFECTS ON MEASUREMENT

Compensated temperature	-10°C to +70°C
Working temperature	-30°C to +80°C (extended-range LCD display)
Storage temperature	-40°C to +85°C

MPM4760



Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Standard two-wire 4–20mA DC output, or RS485 digital interface (ASCII protocol or MODBUS RTU, up to 99 transmitters per bus). With battery power, the output is exclusively digital RS485 (no 4–20mA output). Local 4½-digit LCD display (range –19999 to 19999), with optional indication of maximum/minimum value, percentage and output current.
Damping	No adjustable damping constant is specified in this model's data sheet. The transmitter does not require power calibration, and supports range shrinking and factory value restoring from the MS Setonline software.
Weight	Net weight: ~420 g

POWER SUPPLY AND LOAD

Standard power supply	8 to 28 VDC
Battery power	3.6V lithium module

Admissible load resistance (4–20mA output): $R = (U - 8V) / 0.02A$, where U is the supply voltage in VDC. Battery-powered products do not have a 4–20mA DC output.

AMBIENT AND PROCESS CONDITIONS

Protection class	IP65
Insulation	50V, 100 M
Vibration	20g, 20Hz to 5000Hz
Shock	20g, 11ms
Display range	–19999 to 19999, LCD

MPM4760

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MPM4760-[0~X]bar-Vd/Vb-E/R4/R8-22/24-C1/C3/C4/C5/PC1/PC3/G/S/A

MODEL CODE — ORDER GUIDE

Base model	MPM4760	Intelligent pressure transmitter with LCD display, MICROSENSOR
Range	[0~X] bar	Measurement range configurable between -1 and 1000 bar; X = maximum pressure to be measured
Power supply	Vd	8 to 28 VDC
	Vb	Battery power (no 4-20mA DC output)
Output	E	4-20mA DC (with Vd power only)
	R4	ASCII protocol (with Vd or Vb power)
	R8	MODBUS RTU (with Vd or Vb power)
Construction material	22	Diaphragm and pressure port: stainless steel · Membrane: SS316L
	24	Diaphragm, pressure port and membrane: SS316L stainless steel
Connection / type	C1	M20×1.5 male, front seal
	C3	G1/2 male
	C4	G1/4 female
	C5	M20×1.5 male, waterline seal
	PC1	Flush diaphragm, M20×1.5 male
	PC3	Flush diaphragm, G1/2 male
	G	Gauge
	S	Sealed gauge
	A	Absolute

MPM4760

MICROSENSOR

Options, Factory Settings and Certifications

ORDER NOTES

Battery power	Battery-powered products do not have a 4-20mA DC output
Flush diaphragm (PC1/PC3)	Measurement range 0 to 0.7...350 bar
Battery	3.6V lithium module
Special requirements	Contact the factory and specify in the order

DEFAULT FACTORY SETTINGS

Power calibration

No power calibration required

Factory value restoring

Available from the MS Setonline software (Back to Factory Setting)

Range shrinking

Available from the MS Setonline software

Bus address (RS485)

Software-configurable, up to 99 transmitters per bus

FACTORY AND CE CERTIFICATE

Factory Certificate — MICROSENSOR

System: ISO9000 · Scope: Design and production of MPM4760 series pressure transmitters, per the ISO9000 international quality system · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet

Mark: Not specified in the data sheet · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: MICROSENSOR MPM4760 Pressure Transmitter data sheet, Rev. V3.0 09/2020



OPERATING MAGNITUDE

TEMPERATURE

Bimetal Thermometers, Thermowells, Transmitters and PT-100 Sensors

12 technical data sheets in this section

INSTRUMENT GROUP · TEMPERATURE



Bimetal Thermometers

5 technical data sheets in this group

WHAT IS IT?

Local-indication temperature instrument, requiring no electrical power.

HOW DOES IT WORK?

Two metals with different expansion coefficients are bonded into a coil; as they heat up they curve differentially, and that movement drives the indicating needle.

WHEN IS IT USED?

For direct visual temperature reading on piping, tanks and process panels, as a complement to or backup for electronic instrumentation.





TEMPERATURE

Temperature > Bimetal Thermometers

SERIE TBI-63



BUY ONLINE

Compact Bimetal Thermometer

Ø 63 mm

DESCRIPTION

The TBI-63 series includes compact, highly rugged stainless steel bimetal thermometers, designed for use as a local temperature indicator on industrial equipment and installations. They feature a removable front with a bayonet mounting ring and an elastic gasket that ensures the assembly's tightness. Their careful design and construction, together with the use of selected materials, provide very high reliability and accuracy within their class. They are supplied with an external zero-adjustment screw, allowing in-situ calibration without disassembly or opening.

APPLICATIONS

Local Indication on Control Panels

Compact Piping and Equipment

Installations with Limited Space

Environments with Moderate Vibration



Full technical characteristics, options and dimensions on the following page

SERIE TBI-63



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bimetal

MATERIALS

Connection	AISI 316 stainless steel
Bulb	AISI 316 stainless steel
Case – Ring	AISI 304 stainless steel
Dial	Matte white painted aluminum
Pointer	Black painted aluminum
Window	Glass

Nominal diameter 63 mm

Connection type Radial · Back

Threads 1/4" NPT

Accuracy 1.50%

Protection rating IP65

Ranges -40..60 °C to 0..500 °C

Scales Black on white background

OPTIONS

Dial Custom

Pointer Color on request

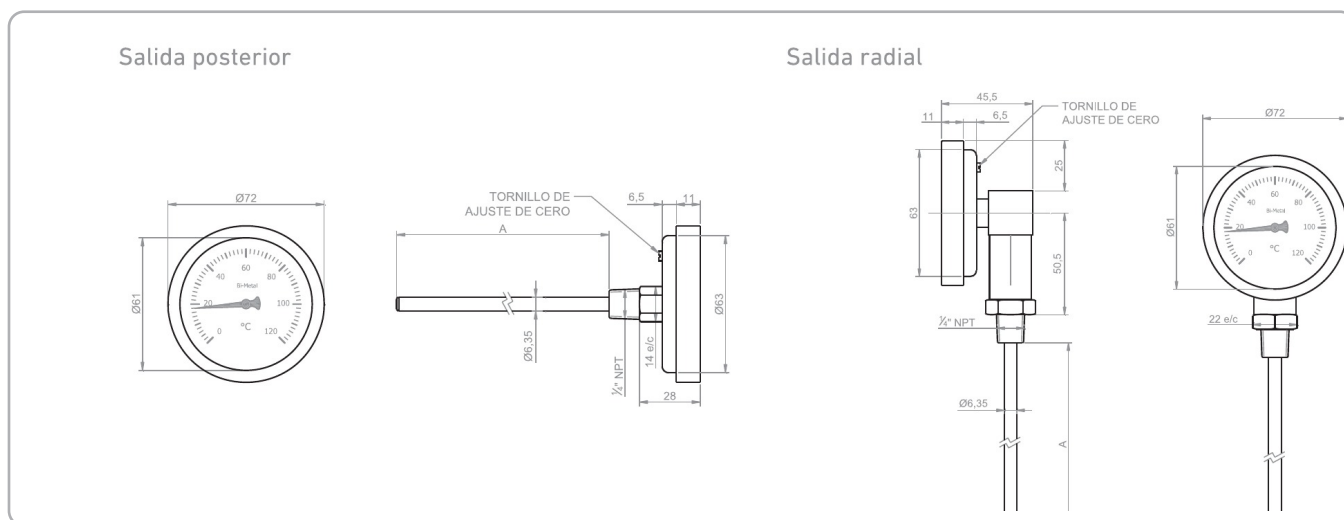
Window Tempered glass

Thermowell Available — see Thermowells section

Other customizations available on request.

DIMENSIONS (mm)

Bulb length "A" 100 · 150 · 200 · 250 · 300 · 350 · 400 · 450 mm



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/termometros-bimetalicos



TEMPERATURE

Temperature > Bimetal Thermometers

SERIE TBI-100

Standard Industrial Thermometer

Ø 100 mm



DESCRIPTION

The TBI-100 series includes highly rugged stainless steel bimetal thermometers, designed for use as a local temperature indicator on industrial equipment and installations. They feature a fixed front with a crimped ring and an elastic gasket that ensures the assembly's tightness. Their careful design and construction, together with the use of selected materials, provide very high reliability and accuracy within their class. They are supplied with an external zero-adjustment screw, allowing in-situ calibration without disassembly or opening.

APPLICATIONS

Industrial Process Plants

Large-Diameter Panels and Piping

Installations Requiring High Tightness

Frequent Reading in Control Rooms



Full technical characteristics, options and dimensions on the following page

SERIE TBI-100



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bimetal

MATERIALS

Connection	AISI 316 stainless steel
Bulb	AISI 316 stainless steel
Case – Ring	AISI 304 stainless steel
Dial	Matte white painted aluminum
Pointer	Black painted aluminum
Window	Glass

Threads 1/2" NPT

Accuracy 1.50%

Protection rating IP65

Ranges -40..60 °C to 0..500 °C

Scales Black on white background

Nominal diameter 100 mm

Connection type Radial · Back

OPTIONS

Dial Custom

Pointer Color on request

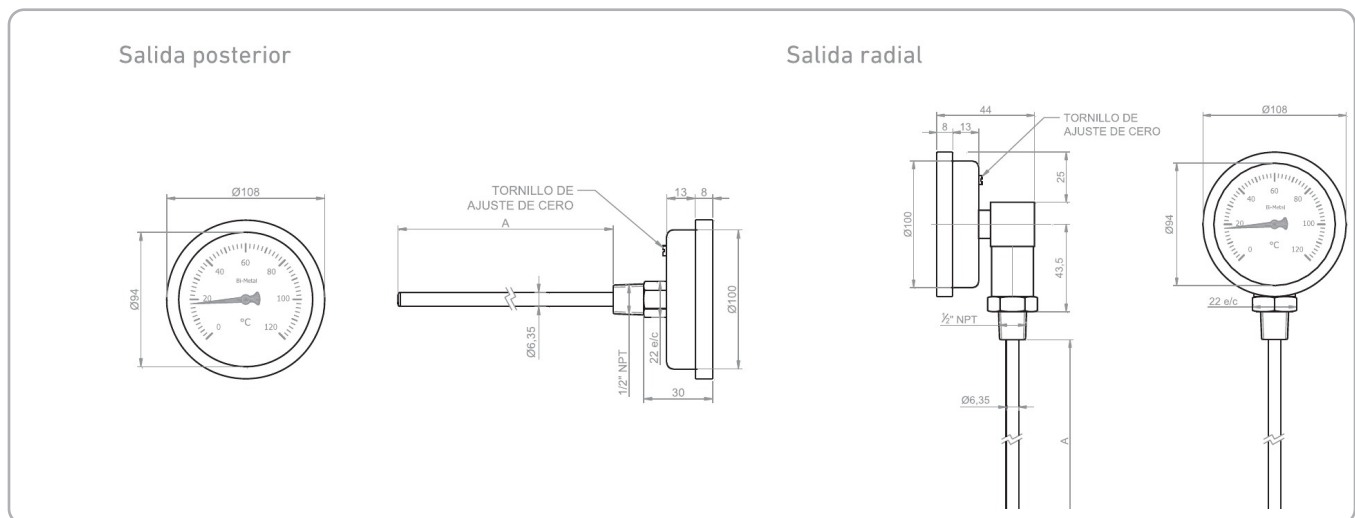
Window Tempered glass

Thermowell Available — see Thermowells section

Other customizations available on request.

DIMENSIONS (mm)

Bulb length "A" 100 · 150 · 200 · 250 · 300 · 350 · 400 · 450 mm



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/termometros-bimetalicos



TEMPERATURE

Temperature > Bimetal Thermometers

SERIE TBI-100AV

Adjustable-Angle Thermometer

Orientable Reading



DESCRIPTION

The TBI-100AV series includes highly rugged stainless steel adjustable-angle bimetal thermometers, designed for use as a local temperature indicator on industrial equipment and installations. They feature a fixed front with a crimped ring and an elastic gasket that ensures the assembly's tightness. Their adjustable-angle connection, via a compression-gland fitting, allows the dial to be oriented toward the operator without needing to rotate the instrument or the bulb installed in the process. They are supplied with an external zero-adjustment screw, allowing in-situ calibration without disassembly or opening.

APPLICATIONS

- Panels with Difficult Visual Access
- Piping Installed at Non-Standard Angles
- Installations Requiring Reading Reorientation Without Disassembly
- Processes with Limited Operator Space



Full technical characteristics, options and dimensions on the following page

SERIE TBI-100AV



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bimetal

MATERIALS

Connection	AISI 316 stainless steel
Bulb	AISI 316 stainless steel
Case – Ring	AISI 304 stainless steel
Dial	Matte white painted aluminum
Pointer	Black painted aluminum
Window	Glass

Nominal diameter 100 mm

Connection type Adjustable Angle with compression-gland fitting allowing installation without rotating the instrument

Threads 1/2" BSP

Accuracy 1.00%

Protection rating IP65

Ranges -40..60 °C to 0..500 °C

Scales Black on white background

OPTIONS

Dial Custom

Pointer Color on request

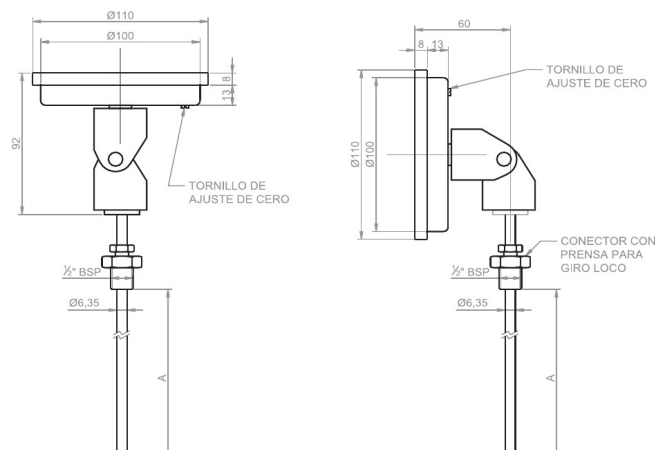
Window Tempered glass

Thermowell Available — see Thermowells section

Other customizations available on request.

DIMENSIONS (mm)

Bulb length "A" 100 · 150 · 200 · 250 · 300 · 350 · 400 · 450 mm



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/termometros-bimetalicos



TEMPERATURE

Temperature > Bimetal Thermometers

SERIE TBI-CLAMP



Sanitary Clamp Thermometer

Sanitary

DESCRIPTION

The TBI-CLAMP series includes compact, highly rugged stainless steel bimetal thermometers, designed for use as a local temperature indicator on sanitary-type equipment and installations, in the food and pharmaceutical industry sectors. They are hermetic, with a crimped ring. The process connection is made via a 1½" Clamp union that forms part of the measuring thermowell, forming a fully sealed welded assembly. Their careful design and construction, together with the use of selected materials, provide very high reliability and accuracy within their class. They are supplied with an external zero-adjustment screw, allowing in-situ calibration without disassembly or opening.

APPLICATIONS

Dairy and Food Industry

Pharmaceutical and Biotechnological Processes

Lines with CIP/SIP Cleaning

Sanitary Installations with Quick Disassembly



Full technical characteristics, options and dimensions on the following page

SERIE TBI-CLAMP



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Measuring principle Bimetal

MATERIALS

Connection	AISI 316 stainless steel
Bulb	AISI 316 stainless steel
Case – Ring	AISI 304 stainless steel
Dial	Matte white painted aluminum
Pointer	Black painted aluminum
Window	Glass

Nominal diameter TBI-63-CLAMP: 63 mm · TBI-100-CLAMP: 100 mm

Connection type Back

Process connection Clamp 1½" per ISO 2852

Accuracy 1.50%

Protection rating IP65

Ranges 0 to 120 °C

Scales Black on white background

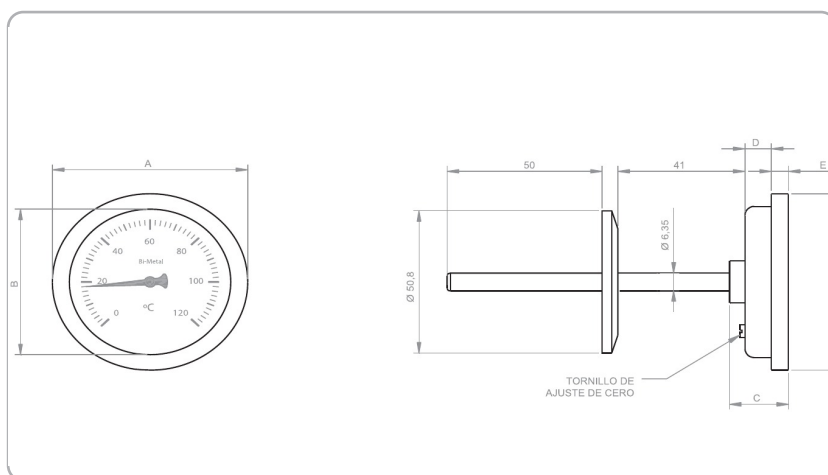
OPTIONS

Dial	Custom
Pointer	Color on request
Window	Tempered glass

Other customizations available on request.

DIMENSIONS (mm)

	63-CLAMP	100-CLAMP
A	63	110
B	52	98
C	19	26.5
D	8	19
E	5.5	7.5



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: tienda.jmh.com.ar/termometros-bimetalicos





TEMPERATURE

Temperature · Bimetal Thermometers

SENSOR PT-100

Pt100 RTD Probe

Platinum Element



BUY ONLINE

NEW 2026

DESCRIPTION

The RTD (Resistance Temperature Detector) probe measures temperature from the variation in electrical resistance of a platinum element in response to changes in the medium's temperature. Compared to thermocouples, it offers a wide measuring range (depending on the element type), higher accuracy, better long-term thermal stability and close calibration similarity between sensors, which simplifies replacement without needing to recalibrate the control loop. The Pt100 element is housed in a thermowell and connection in AISI 316 stainless steel, with an aluminum or plastic box or collar and a DIN A, DIN B, DIN C, APE or FDA standardized head depending on the required mounting, wired in 2, 3 or 4 wires depending on the accuracy and wiring distance required. Optionally offered with a head transmitter (TX Block Novus or THA33) to convert it into a 4-20 mA loop, its own protective thermowell and a calibration certificate.

TECHNICAL SPECIFICATIONS

- Element: Pt100 platinum, class A or B per IEC 60751
- Thermowell and process connection: AISI 316, 1/2" NPT or 1/2" BSP thread
- IP54 protection · epoxy-polyester finish
- Connection: 2, 3 or 4 wires
- Heads: DIN A, DIN B, DIN C, APE or FDA
- IEC 60751 tolerance: class A $\pm(0.15+0.002|t|)^{\circ}\text{C}$ · class B $\pm(0.30+0.005|t|)^{\circ}\text{C}$

TYPICAL APPLICATIONS

- ⊙ Sensor Replacement Without Stopping the Plant
- ⊙ Integration with TVR/TVB/TVS Thermowells
- ⊙ Digitalization with LG200 / THA33 Transmitters
- ⊙ 2, 3 or 4-Wire RTD Networks in Control Panels
- ⊙ Processes Requiring High Accuracy and Thermal Stability

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP54

ELECTRICAL CONNECTION

2, 3 or 4 wires · ceramic terminal block in head

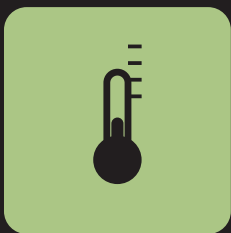
PROCESS TEMPERATURE

Per associated thermowell · up to 400 °C in direct installation

CERTIFICATION / QUALITY

Class A or B tolerance per IEC 60751





Thermowells

3 technical data sheets in this group

WHAT IS IT?

Protective sheath that houses the temperature sensor, physically separating it from the process fluid.

HOW DOES IT WORK?

The sensor is inserted inside the sheath, machined from solid bar stock, which is the part in direct contact with the process; this allows the sensor to be removed without opening the line.

WHEN IS IT USED?

In any installation where the temperature sensor needs to be calibrated, repaired or replaced without stopping the process or losing line pressure.



Selection Table

Comparative guide to JMH thermowell series — the Pg. column shows where to find its data sheet

SERIES	MODEL	CONNECTION TYPE	MATERIAL	AVAILABLE TYPOLOGIES	PG.
TVR	Threaded Thermowell	NPT, BSP or BSPT threaded — straight (TVR-1R) or tapered (TVR-1C)	AISI 316 (other materials on request: carbon steels, Monel, Inconel, Hastelloy, Titanium)	Straight, tapered, with head extension, or stepped	312
TVB	Flanged Thermowell	ASME B16.5 flanged, classes #150/#300/#600 — straight (TVB-1R) or tapered (TVB-1C)	AISI 316 (other materials on request: carbon steels, Monel, Inconel, Hastelloy, Titanium)	Straight, tapered, with head extension, or stepped	315
TVS	Sanitary Thermowell	Sanitary Clamp, DIN or Varivent — straight (TVS-1R) or tapered (TVS-1C)	AISI 316 (other materials on request: carbon steels, Monel, Inconel, Hastelloy, Titanium)	Straight or tapered	318

The company reserves the right to modify the data listed in this catalog without prior notice.





TEMPERATURE

Temperature > Thermowells

TERMOVAINA TVR



Threaded Thermowell

Solid AISI 316 Bar



IN-HOUSE MANUFACTURING

DESCRIPTION

The TVR-10 series thermowells are designed to provide physical and chemical protection to the thermal elements used to measure temperature in industrial processes. They act as a protective barrier between the sensor and the process, shielding it from high pressure, corrosive or abrasive flows, and severe thermal variations. Their use allows the thermal element to be removed without affecting process operation, avoiding leaks or venting of the fluid present in pipes and/or vessels and eliminating risks to personnel during maintenance work. Their high mechanical performance allows them to withstand turbulent or high-velocity flow media, and their AISI 316 stainless steel construction allows them to interact with aggressive liquids, with other materials available according to process needs. This series includes models with a threaded process connection in straight or tapered versions, machined from a single piece of bar stock.

APPLICATIONS

⊙ Chemistry and Petrochemicals

⊙ Power Generation

🔥 Oil and Gas

⊙ Water Treatment

⊙ Metallurgy and Foundry

✱ HVAC Systems



Technical characteristics, options, dimensions and configuration guide on the following pages

TERMOVAINA TVR



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Material	AISI 316 stainless steel (other materials on request: carbon steels, Monel, Inconel, Hastelloy, Titanium, among others)
Connection type	NPT, BSP or BSPT threaded — straight version (TVR-1R) or tapered version (TVR-1C), machined from a single piece of solid bar
Available typologies	Straight · Tapered · Straight with head extension · Tapered with head extension · Stepped
Maximum temperature	Depends on the material, shape, length and process characteristics. Please consult our technical department.

OPTIONS

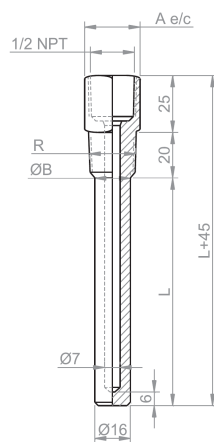
Connection threads	On request
Weld-end process connection	On request
Material	On request (carbon steels, Monel, Inconel, Hastelloy, Titanium, etc.)

Other customizations available on request.

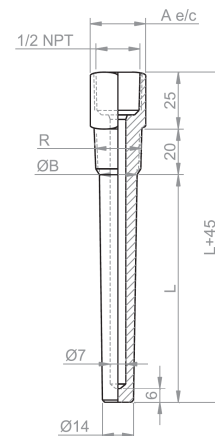
DIMENSIONS (mm)

	TVR-1R50	TVR-1R75	TVR-1C50	TVR-1C75
R	1/2" NPT	3/4" NPT	1/2" NPT	3/4" NPT
A	1/2" NPT	1/2" NPT	1/2" NPT	1/2" NPT
OB	16	18	16	18
L	On request	On request	On request	On request

TVR-1R XX



TVR-1C XX



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/termovainas-roscaadas

TERMOVAINA TVR



How to Configure your Threaded Thermowell

JMH identifies each thermowell through a modular coding system. Knowing this structure lets you configure and request the exact solution for your application, defining each segment of the code step by step.

JMH CODE STRUCTURE

JMH-[MODEL]-[SHEATH_MAT]-[INST_CONN]-[PROC_CONN]-[INT_DIAM]-[INS_LENGTH]

1. Thermowell type

Straight · Tapered · Straight with head extension · Tapered with head extension · Stepped

2. Sheath material

AISI 304 SS · AISI 304L SS · AISI 316 SS · AISI 316L SS · Other materials on request (Monel, Hastelloy, Titanium, etc.)

3. Instrument connection

1/4", 1/2" or 3/4" — NPT, BSP or BSPT thread (female)

4. Process connection

3/8", 1/2", 3/4" or 1" — NPT, BSP or BSPT thread (male); #3000 and #6000 series available for 3/4" and 1"

5. Internal bore diameter

7 mm (standard) · 8.5 · 9 · 10.5 · 11 · 13 · 13.5 mm

6. Insertion length "U"

From 35 to 600 mm — 36 standard lengths available, to be defined per process

7. Options

Calculation memo per ASME PTC 19.3

Source: jmh.srl.odoo.com/shop/termovaina-roskada-serie-jmh-16726



TEMPERATURE

Temperature > Thermowells

TERMOVAINA TVB



BUY ONLINE

Flanged Thermowell

ASME B16.5



IN-HOUSE MANUFACTURING

DESCRIPTION

The TVB-10 series thermowells are designed to provide physical and chemical protection to the thermal elements used to measure temperature in industrial processes, via a flanged process connection under ASME B16.5. This configuration is ideal for applications requiring a robust, secure, high-integrity connection, especially under high-pressure conditions or large pipe diameters. It allows the thermal element to be removed without affecting process operation or depressurizing the system, avoiding leaks or venting and eliminating risks to personnel during maintenance work. Their high mechanical performance allows them to withstand turbulent or high-velocity flow media, and their AISI 316 stainless steel construction allows them to interact with aggressive liquids, with other materials available according to process needs. This series includes models with a flanged process connection in straight or tapered versions, with a sheath machined from a single piece of bar stock.

APPLICATIONS

Chemistry and Petrochemicals

Oil and Gas

Power Generation

Water Treatment



Technical characteristics, options, dimensions and configuration guide on the following pages

TERMOVAINA TVB



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

Material	AISI 316 stainless steel (other materials on request: carbon steels, Monel, Inconel, Hastelloy, Titanium, among others)
Connection type	Flanged under ASME B16.5, classes #150/#300/#600 – straight version (TVB-1R) or tapered version (TVB-1C), sheath machined from a single piece of bar
Available typologies	Straight · Tapered · Straight with head extension · Tapered with head extension · Stepped
Maximum temperature	Depends on the material, shape, length and process characteristics. Please consult our technical department.

OPTIONS

European standard flange	On request
Instrument connection length	On request
Single-piece assembly for lap-joint flange	On request
Material	On request

Other customizations available on request.

DIMENSIONS (mm)

PRESSURE CLASS #150 (ASME B16.5)

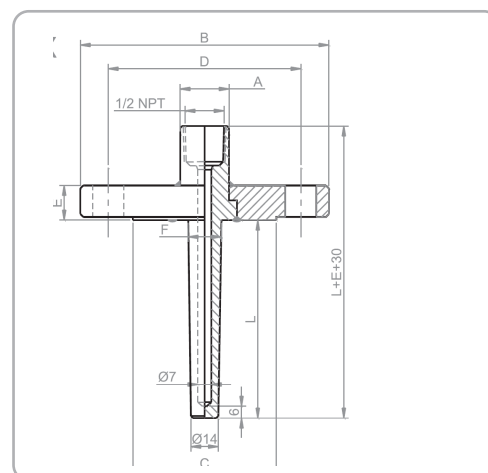
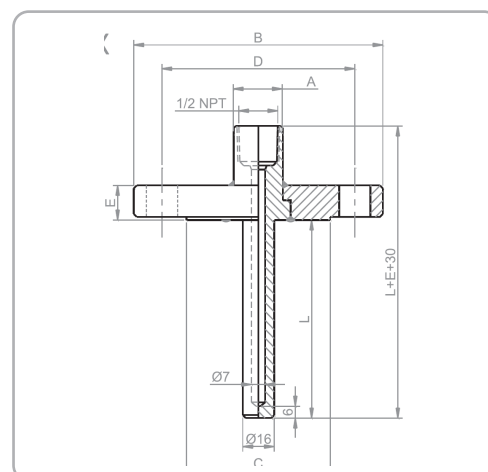
	1R25	1R38	1R50	1C25	1C38	1C50
	DN 1"	DN 1½"	DN 2"	DN 1"	DN 1½"	DN 2"
A	25	25	25	25	25	25
B	107.9	127	152.4	107.9	127	152.4
C	79.4	98.4	120.6	79.4	73	92.1
D	50.8	73	92.1	50.8	73	92.1
E	14.7	17.5	19.1	14.7	17.5	19.1
F	-	-	-	17	19	22
L	On request	On request	On request	On request	On request	On request

PRESSURE CLASS #300 (ASME B16.5)

	1R25	1R38	1R50	1C25	1C38	1C50
	DN 1"	DN 1½"	DN 2"	DN 1"	DN 1½"	DN 2"
A	28	28	28	28	28	28
B	123.8	155.6	165.1	123.8	155.6	165.1
C	88.9	114.3	127	88.9	114.3	127
D	50.8	73	92.1	50.8	73	92.1
E	17.5	20.6	22.2	17.5	20.6	22.2
F	-	-	-	17	19	22
L	On request	On request	On request	On request	On request	On request

PRESSURE CLASS #600 (ASME B16.5)

	1R25	1R38	1R50	1C25	1C38	1C50
	DN 1"	DN 1½"	DN 2"	DN 1"	DN 1½"	DN 2"
A	32	32	32	32	32	32
B	123.8	155.6	165.1	123.8	155.6	165.1
C	88.9	114.3	127	88.9	114.3	127
D	50.8	73	92.1	50.8	73	92.1
E	17.5	22.2	25.4	17.5	22.2	25.4
F	-	-	-	17	19	22
L	On request	On request	On request	On request	On request	On request



The company reserves the right to modify the data listed in this catalog without prior notice.

Source: jmhsrl.odoo.com/termovainas-bridadas

How to Configure your Flanged Thermowell

JMH identifies each thermowell through a modular coding system. Knowing this structure lets you configure and request the exact solution for your application, defining each segment of the code step by step.

JMH CODE STRUCTURE

JMH-[MODEL]-[MAT]-[INST_CONN]-[FLANGE]-[FACE]-[FLANGE_MAT]-[INT_DIAM]-[INS_LENGTH]

1. Thermowell type

Straight · Tapered · Straight with head extension · Tapered with head extension · Stepped

2. Sheath material

AISI 304 SS · AISI 304L SS · AISI 316 SS · AISI 316L SS · Other materials on request

3. Instrument connection

1/4", 1/2" or 3/4" NPT/BSP/BSPT (female); optional 75 mm extension neck

4. Process connection (flange)

From 1/2" to 2" — classes #150, #300 and #600 (1½" and 2" also available in #900)

4.1 Flange face type

Raised face (RF) · Flat face (FF) · Ring-type joint (RTJ)

4.2 Flange material

AISI 304 SS · AISI 316 SS

5. Internal bore diameter

7 mm (standard) · 8.5 · 9 · 10.5 · 11 · 13 · 13.5 mm

6. Insertion length "U"

From 35 to 600 mm — 28 standard lengths available, to be defined per process

7. Options

Weld certificate (dye penetrant) · Calculation memo per ASME PTC 19.3

Source: jmh.srl.odoo.com/shop/termovaina-bridada-serie-jmh-16899



TEMPERATURE

Temperature > Thermowells

TERMOVAINA TVS

Sanitary Thermowell

Quick Disassembly



IN-HOUSE MANUFACTURING



BUY ONLINE

DESCRIPTION

The TVS-10 series thermowells are designed to provide physical and chemical protection to the thermal elements used to measure temperature in industrial processes that require quick-disassembly sanitary connections. They are suited for industries with strict hygiene and cleanliness requirements, such as food, pharmaceutical and biotechnology: their Clamp connection system ensures a fast, easy-to-disassemble installation and eliminates dead legs where bacteria could proliferate, maintaining process asepsis. Their use allows the thermal element to be removed without affecting process operation, avoiding leaks or contamination of the fluid present in pipes and/or vessels and eliminating risks to personnel during maintenance work. Their high mechanical performance allows them to withstand turbulent or high-velocity flow media, and their AISI 316 stainless steel construction allows them to interact with aggressive liquids, with other materials available according to process needs. This series includes models with a sanitary process connection in straight or tapered versions, in a single piece machined from bar stock.

APPLICATIONS

Food and Beverage

Pharmaceutical and Biotechnology

CIP/SIP Cleaning Processes



Technical characteristics, options, dimensions and configuration guide on the following pages

TERMOVAINA TVS



Technical Characteristics, Options and Dimensions

TECHNICAL CHARACTERISTICS

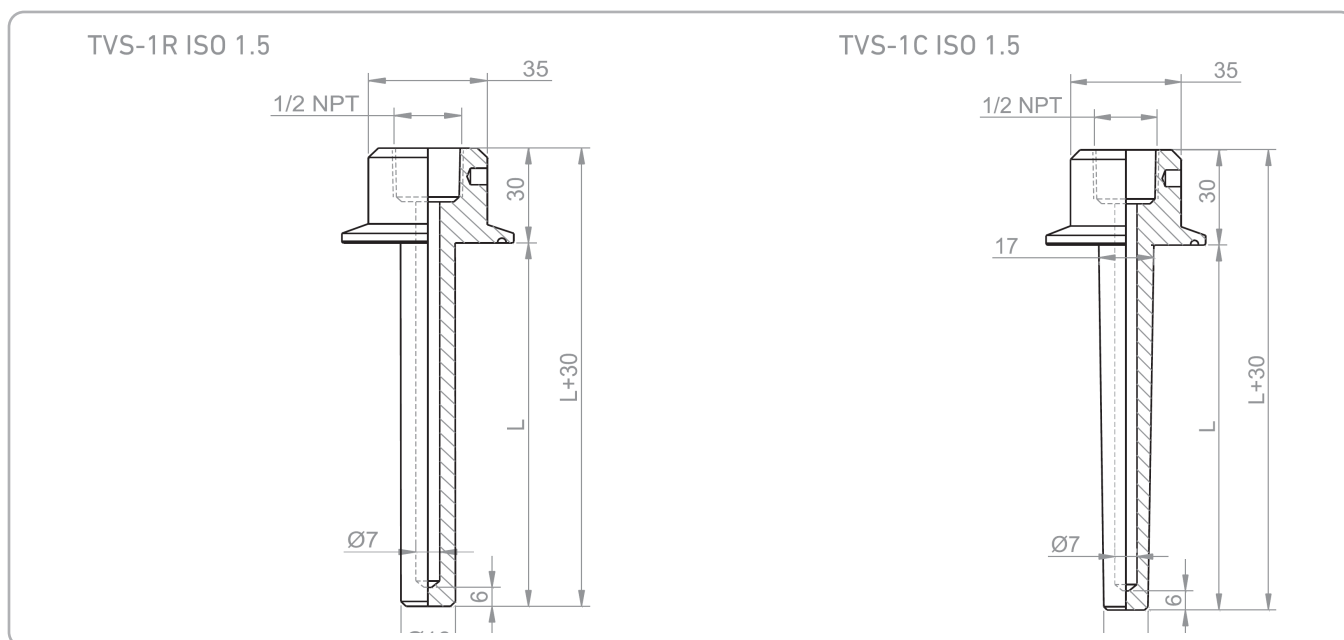
Material	AISI 316 stainless steel (other materials on request: carbon steels, Monel, Inconel, Hastelloy, Titanium, among others)
Connection type	Sanitary Clamp, DIN or Varivent — straight version (TVS-1R) or tapered version (TVS-1C), sheath machined from a single piece of bar
Available typologies	Straight · Tapered
Maximum temperature	Depends on the material, shape, length and process characteristics. Please consult our technical department.

OPTIONS

Instrument connection length	On request
Material	On request

Other customizations available on request.

DIMENSIONS (mm)



Dimensions and views correspond to an ISO 2852 1½" connection. This series is supplied to order, per any of the standard sanitary installation norms and in the nominal size requested. For more information, please contact our technical department.

Source: jmhsrl.odoo.com/termovainas-sanitarias



TERMOVAINA TVS



How to Configure your Sanitary Thermowell

JMH identifies each thermowell through a modular coding system. Knowing this structure lets you configure and request the exact solution for your application, defining each segment of the code step by step.

JMH CODE STRUCTURE

JMH-[MODEL]-[SHEATH_MAT]-[INST_CONN]-[SAN_CONN]-[INT_DIAM]-[INS_LENGTH]

1. Thermowell type

Straight · Tapered

2. Sheath material

AISI 304 SS · AISI 304L SS · AISI 316 SS · AISI 316L SS · Other materials on request

3. Instrument connection

1/4", 1/2" or 3/4" NPT/BSP/BSPT (female)

4. Process connection (sanitary)

Clamp 1" · Clamp 1½" (TCA) · Clamp 2" (TCS) · DIN DN40 · Danish 1½" · Varivent

5. Internal bore diameter

7 mm (standard) · 8.5 · 9 · 10.5 · 11 · 13 · 13.5 mm

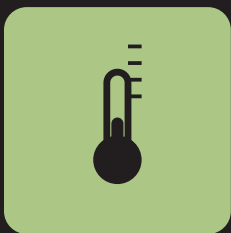
6. Insertion length "U"

From 35 to 600 mm — 27 standard lengths available, to be defined per process

7. Options

Calculation memo per ASME PTC 19.3

Source: jmhsrl.odoo.com/shop/termovaina-sanitaria-serie-jmh-16900



Temperature Transmitters

4 technical data sheets in this group

WHAT IS IT?

Electronic instrument that converts the signal from a temperature sensor into a standard signal for control systems.

HOW DOES IT WORK?

It receives the signal from an RTD (Pt100) or thermocouple and linearizes and amplifies it into a 4-20 mA output, either integrated into the sensor head or as a separate module.

WHEN IS IT USED?

To digitize temperature measurement points and integrate them into a control system, remote monitoring or historical logging.





TEMPERATURE

NEW 2026

Temperature · Temperature Transmitters

LG200-FRF

Standard Integrated Temperature Transmitter

Direct Mount

LEEG



BUY ONLINE

DESCRIPTION

Standard Integrated Temperature Transmitter, with 4-20 mA output, for direct mounting on a threaded, flanged or connection-head type thermowell.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Input: Pt100 RTD
- Direct mounting on thermowell
- DIN B type connection head

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



LG200-FRF

LEEC

Measuring Ranges and Performance

SENSOR TYPE AND TEMPERATURE MEASURING RANGE

SENSOR CODE	SENSOR TYPE	MEASURING RANGE AND LIMIT	MINIMUM CALIBRATABLE SPAN
R1	Pt100 RTD	-50 to 400 °C (unit convertible ...	100 °C

REFERENCE ACCURACY

Reference accuracy (typical) ±0.5% URL

Linear output accuracy (linearity, hysteresis and repeatability), full scale ±0.5% URL (calibrated at 20 °C ± 5 °C)

Stability Better than ±0.05% URL or 0.1 °C/year, whichever is greater, under reference conditions

Overall performance includes, among other factors, reference accuracy, ambient temperature effects and other combined errors. Test standard: GB/T30121 / IEC60751; zero-based span calibration, 4-20mA analog output.

EFFECTS ON MEASUREMENT

Ambient temperature effect (reference accuracy: 22 °C) ≤±0.005% URL/°C, reference temperature 22 °C

Power supply effect ≤±0.01% URL/V, 24V supply (referred to 20mA full-scale output)

Loading effect ≤±0.02% URL/100ohm, referred to 20mA full-scale output

Vibration effect Per IEC60068-2-6: 4g / 2...100Hz

Electromagnetic compatibility (EMC) Tested per GB/T9254/CISPR22 and IEC61000-4-2/3/4/5/6/8 (not applicable to RS485 output); performance OK / Level A / Level B depending on test

LG200-FRF

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	2-wire 4-20mA analog output, linear type. Standard power supply 10-30VDC; with HART protocol 16.5-55VDC (communication load resistance 250ohm). Load resistance: 0-2119ohm under normal working condition, 250-600ohm for HART protocol. Transmission distance: <1000 m. Insulation resistance: ≥20Mohm @ reference, 100VDC. The integrated transient voltage terminal meets grade-4 standard (differential-mode voltage 2000V, common-mode voltage 4000V), suitable for overvoltage-prone environments.
Damping	Total damping time constant: sum of amplifier damping and sensor capsule damping. Reference response time: ≤10 s @ 0.4 m/s water flow, 6mm O.D. thermowell (test standard IEC60751). The data sheet includes a detailed table of t50/t90 response times by thermowell outer diameter (10, 12 and 16mm, 1mm wall thickness) and thermowell type (5.3mm reducing, 6.6 or 9mm tapered, or straight): for example, 10mm thermowell with tapered tube: t50=11s / t90=37s; 10mm straight thermowell: t50=18s / t90=55s; 16mm straight thermowell: t50=38s / t90=125s (these times do NOT include the transmitter's own response time).
Weight	Approximate weight depending on process connection and thermowell configuration, with or without display (F1/F2, vertical/horizontal): with Tri-Clamp connection, approx. 510 g; with threaded connection (M20×1.5), approx. 540 g (see data sheet dimensional drawings for other configurations).

POWER SUPPLY AND LOAD

Standard	10-30 VDC
With HART protocol	16.5-55 VDC (communication load resistance 250 ohm)

Load resistance: 0-2119 ohm for working condition, 250-600 ohm for HART protocol. Transmission distance: <1000 m. Power consumption: ≤500 mW @24VDC, 20.8 mA.

AMBIENT AND PROCESS CONDITIONS

Operating temperature	-40 to 85 °C (with integrated LCD display: -20 to 70 °C)
Storage temperature	-40 to 100 °C (with integrated LCD display: -20 to 70 °C)
Working humidity	0-95% RH
Protection class	Stainless steel enclosure with aviation-type connector, IP67
Insulation resistance	≥20 Mohm @ reference, 100VDC
Humidity / general ambient conditions	See also EMC table under 'effects' — tested per GB/T9254/CISPR22 and IEC61000-4-2/3/4/5/6/8

LG200-FRF

LEEC

Complete Order Code Structure

BASE MODEL: LG200-FRF

SENSOR

Sensor type	R1	Pt100 RTD
-------------	-----------	-----------

ELECTRICAL CONNECTION

Electrical connection	F1	Stainless steel terminal, aviation-type connector M12×1 (4-pin) (H2), IP67, vertical mounting
	F2	Stainless steel terminal, aviation-type connector M12×1 (4-pin) (H2), IP67, horizontal mounting

OUTPUT

Output signal	F	2-wire 4–20mA, 10–30VDC supply
Display	C	With LCD display
	A	Without display

EXTENSION NECK (LENGTH)

Extension neck length	Q1	None (suitable temperature: -40 to 85 °C)
	Q2	SUS304 material, 50mm length, Ø12 outer diameter
	Q3	SUS304 material, 100mm length, Ø12 outer diameter
	Q4	SUS304 material, 150mm length, Ø12 outer diameter
	Q5	SUS304 material, 200mm length, Ø12 outer diameter

PROCESS CONNECTION

Mounting type	G	Fixed process connection mounting
	H	Movable process connection mounting
Material	4	SUS304
	6	SUS316
Specification	M01	M20×1.5(M), GB/T192-2003
	G01	G1/2(M), EN837
	R01	1/2-14NPT, ANSI/ASME B1.20.1
	K01	Tri-Clamp 1-1/2"
	K02	Tri-Clamp 2"

INSERTION PROBE

Outer diameter	D1	6mm, probe material same as process connection
	D2	In the 'Ordering information chapter' table (p. 10): 7mm. NOTE: in the 'Insertion probe select instruction' table (p. 6) the same code D2 is listed as 8mm. Discrepancy present in the source PDF itself; both values are transcribed as they appear, without choosing one as correct
	D3	P. 10: 8mm. P. 6: 10mm (same type of discrepancy as D2, see note above)
	D4	P. 10: 9mm. P. 6: 12mm (same type of discrepancy as D2, see note above)
	D5	P. 10: 10mm. P. 6: 16mm (same type of discrepancy as D2, see note above)
Insertion length	LXXXX	Custom insertion length: 0 < LXXXX < 3000mm; examples from the data sheet: 80mm=L0080, 150mm=L0150 (p. 11) — p. 7 additionally gives the example 200mm=L0200 with a note on a 50mm minimum gap for custom insertion length

LG200-FRF

LEEG

Options, Factory Settings and Certifications

ELECTRICAL CONNECTION ACCESSORY

/J1	Female aviation connector (straight) with 2m cable, 4-pin, M12×1, IP67
/J2	Female aviation connector (elbow) with 2m cable, 4-pin, M12×1, IP67

PROCESS CONNECTION ACCESSORY

/G1	Tri-Clamp 1.5"
/G2	Tri-Clamp 2"
/M1	1.5" seal ring, silicone rubber, operating temperature -60 to 200 °C
/M2	2" seal ring, silicone rubber, operating temperature -60 to 200 °C
/Z1	Welding adapter, Tri-Clamp 1-1/2"
/Z2	Welding adapter, Tri-Clamp 2"

CALIBRATION REPORT

/Q1	Calibration report provided by the company
------------	--

DEFAULT FACTORY SETTINGS

TAG position

None (no specific setting)

Display mode (DISP)

PV — process variable (no specific setting)

Damping value (DAMP)

0 (no specific setting)

Upper range value 20mA (URV)

As indicated in the order

Analog output type (mA)

Linear (no specific setting)

Alarm signal (ALARM)

No (no specific setting)

Lower range value 4mA (LRV)

As indicated in the order

Process unit (U)

As indicated in the order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2015 · Scope: Design and production of temperature transmitters (generic LEEG corporate certificate, not specific to this data sheet) · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1 · Registration: Not specified in data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: LEEG data sheet 'LG200-FRF Integrated temperature transmitter' (integrated thermal resistance temperature transmitter), Rev. 2016.08.V1.0 (Sha...



TEMPERATURE

NEW 2026

Temperature · Temperature Transmitters

LG200-DRD(H)

Dual-Sensor Integrated Temperature Transmitter

Direct Mount

LEEG



BUY ONLINE

DESCRIPTION

Dual-Sensor Integrated Temperature Transmitter, with 4-20 mA output, for direct mounting on a threaded, flanged or connection-head type thermowell.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Input: Pt100 RTD
- Direct mounting on thermowell
- DIN B type connection head

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



LG200-DRD(H)

LEEC

Measuring Ranges and Performance

SENSOR TYPE AND TEMPERATURE MEASURING RANGE

SENSOR CODE	SENSOR TYPE	MEASURING RANGE AND LIMIT	MINIMUM CALIBRATABLE SPAN
R1	Pt100 RTD	-50 to 400 °C (unit convertible ...	100 °C

REFERENCE ACCURACY

Reference accuracy (typical)	±0.5% URL
Linear output accuracy (linearity, hysteresis and repeatability), full scale	±0.5% URL (calibrated at 20 °C ± 5 °C)
Stability	Better than ±0.05% URL or 0.1 °C/year, whichever is greater, under reference conditions

Overall performance includes, among other factors, reference accuracy, ambient temperature effects and other combined errors. Test standard: GB/T30121 / IEC60751; zero-based span calibration, 4-20mA analog output. Measuring medium: any fluid compatible with the wetted parts. Application field stated in the data sheet: temperature measurement.

EFFECTS ON MEASUREMENT

Ambient temperature effect (reference accuracy: 22 °C)	≤±0.005% URL/°C, reference temperature 22 °C
Power supply effect	≤±0.01% URL/V, 24V supply (referred to 20mA full-scale output)
Loading effect	≤±0.02% URL/100ohm, referred to 20mA full-scale output
Vibration effect	Per IEC60068-2-6: 4g / 2...100Hz
Electromagnetic compatibility (EMC)	Tested per GB/T9254/CISPR22 (radiated interference 30MHz-1000MHz and conducted interference on DC power port 0.15MHz-30MHz, result OK) and IEC61000-4-2 to -4-2/-8 (electrostatic discharge 4kV contact/8kV air, immunity to RF EM fields 10V/m, immunity to power-frequency magnetic field 30A/m, fast transients/bursts 2kV, surge 1kV line-to-line/2kV line-to-ground, immunity to RF-induced conducted disturbances 3V); level A or B performance depending on test (level A: within normal specification; level B: temporary loss/degradation of functionality with automatic recovery, without altering conditions/data).

LG200-DRD(H)

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Available output signals: 4-20mA (linear type, 2-wire); 1-5VDC (linear type, 3-wire); direct sensor signal output (linear type, 2, 3 or 4-wire). Insulation resistance: $\geq 20\text{Mohm}$ @ reference, 100VDC.
Damping	Total damping time constant: sum of amplifier damping and sensor capsule damping. Reference response time: $\leq 10\text{ s}$ @ 0.4 m/s water flow, 6mm O.D. thermowell (test standard IEC60751). Table of t_{50}/t_{90} response times by thermowell outer diameter (1mm wall thickness) and thermowell type: 10mm – 5.3mm reducing tube: $t_{50}=7.5\text{s}$ / $t_{90}=21\text{s}$, 6.6 or 9mm tapered tube: $t_{50}=11\text{s}$ / $t_{90}=37\text{s}$, straight tube: $t_{50}=18\text{s}$ / $t_{90}=55\text{s}$; 12mm – 5.3mm reducing tube: $t_{50}=7.5\text{s}$ / $t_{90}=21\text{s}$, straight tube: $t_{50}=18\text{s}$ / $t_{90}=55\text{s}$ (no tapered-tube data); 16mm – 6.6 or 9mm tapered tube: $t_{50}=11\text{s}$ / $t_{90}=37\text{s}$, straight tube: $t_{50}=38\text{s}$ / $t_{90}=125\text{s}$ (no reducing-tube data). These times do NOT include the transmitter's own response time. Mounting requirements: no preferential mounting direction; mounting position on pipe, piping or other; the minimum insertion length must be 8 times the thermowell's outer diameter, and the probe tip must reach or extend past the pipe's axis/pivot (consider medium flow rate and process pressure when defining insertion length). The data sheet also includes graphs (no point-value table) of maximum admissible process pressure and maximum medium flow rate supported by the thermowell as a function of immersion length (L), for a 10mm/1mm-wall thermowell and a 12mm/2mm-wall thermowell, under condition A (water, 50 °C) and condition B (superheated steam, 400 °C).
Weight	Not specified in data sheet.

POWER SUPPLY AND LOAD

Standard	10-30 VDC
-----------------	-----------

Loading effect: $\leq \pm 0.02\%$ URL/100ohm (referred to 20mA full-scale output). Power consumption: $\leq 500\text{ mW}$ @24VDC, 20.8 mA.

AMBIENT AND PROCESS CONDITIONS

Operating temperature	-40 to 85 °C
Storage temperature	-40 to 100 °C
Working humidity	0-95% RH
Protection class	IP67
Insulation resistance	$\geq 20\text{ Mohm}$ @ reference, 100VDC
Measuring medium	Fluid compatible with wetted parts
Application field	Temperature measurement

LG200-DRD(H)
LEEC

Complete Order Code Structure

BASE MODEL: LG200-DRD(H)

MODEL

Model	LG200-DRD	Integrated thermal resistance temperature transmitter (first letter of the electrical connection is D)
	LG200-DRH	Integrated thermal resistance temperature transmitter (first letter of the electrical connection is D)

SENSOR

Sensor type	R1	Pt100 RTD
-------------	-----------	-----------

ELECTRICAL CONNECTION

Electrical connection	D1	DIN43650, IP65
	H1	Aviation-type connector, M12×1, 4-pin, IP67

TUBE (TERMINAL)

Stainless steel tube length	53	Tube length: 53mm
	30	Tube length: 30mm (only available for direct sensor signal output)

EXTENSION NECK (LENGTH)

Extension neck length	Q1	None (suitable temperature: -40 to 85 °C)
	Q2	SUS304 material, 50mm length, Ø12 outer diameter
	Q3	SUS304 material, 100mm length, Ø12 outer diameter
	Q4	SUS304 material, 150mm length, Ø12 outer diameter
	Q5	SUS304 material, 200mm length, Ø12 outer diameter

PROCESS CONNECTION

Mounting type	G	Fixed process connection mounting
	H	Movable process connection mounting
Material	4	SUS304
	6	SUS316
Specification	M01	M20×1.5(M), GB/T192-2003
	G01	G1/2(M), EN837
	R01	1/2-14NPT(M), ANSI/ASME B1.20.1
	K01	Tri-Clamp 1-1/2"
	K02	Tri-Clamp 2"
	H01	Flange HG/T20592-2009 DN50PN10-PN40
	H02	Per the 'Ordering information chapter' table (p. 11): flange HG/20592-2009 DN25PN10. NOTE: in the 'Process connection select instruction' table (p. 6) the same code H02 is listed as 'Flange HG/T20592-2009 DN50PN10-PN40' (identical to code H01, likely printing error). Discrepancy present in the source PDF itself; both values are transcribed as they appear, without choosing one as correct. The dimensional table on p. 9 confirms two available flange sizes: DN50PN10-PN40 (ØD=165mm) and DN25PN10-PN40 (ØD=115mm).

LG200-DRD(H)

LEEC

Order Code (continued)

INSERTION PROBE

Outer diameter	D1	6mm, probe material same as process connection
	D2	8mm, probe material same as process connection
	D3	10mm, probe material same as process connection
	D4	12mm, probe material same as process connection
	D5	16mm, probe material same as process connection
Insertion length	LXXX	Custom insertion length: 0 < LXXX < 3000mm; examples from the data sheet: 80mm=L0080, 150mm=L0150; 50mm minimum gap for custom insertion length; the default insertion length includes thread specifications

LG200-DRD(H)

LEEG

Options, Factory Settings and Certifications

ELECTRICAL CONNECTION ACCESSORY

/J1	Female aviation connector (straight) with 2m cable, 4-pin, M12×1, IP67
/J2	Female aviation connector (elbow) with 2m cable, 4-pin, M12×1, IP67

PROCESS CONNECTION ACCESSORY

/G1	Tri-Clamp 1.5"
/G2	Tri-Clamp 2"
/M1	1.5" seal ring, silicone rubber, operating temperature -60 to 200 °C
/M2	2" seal ring, silicone rubber, operating temperature -60 to 200 °C
/Z1	Welding adapter, Tri-Clamp 1-1/2"
/Z2	Welding adapter, Tri-Clamp 2"

CALIBRATION REPORT

/Q1	Calibration report provided by the company
-----	--

DEFAULT FACTORY SETTINGS

Factory defaults

Not specified in data sheet — this particular sheet does not include a factory defaults table (TAG, output type, DAMP, ALARM, LRV/URV, etc.).

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2015 · Scope: Design and production of temperature transmitters (generic LEEG corporate certificate, not specific to this data sheet) · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1 · Registration: Not specified in data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: LEEG data sheet 'LG200-DRD(H) Integrated thermal resistance temperature transmitter' (integrated thermal resistance temperature transmitter,...



TEMPERATURE

NEW 2026

Temperature · Temperature Transmitters

LG200-WRT

Industrial Integrated Temperature Transmitter

Direct Mount

LEEG



BUY ONLINE

DESCRIPTION

Industrial Integrated Temperature Transmitter, with 4-20 mA output, for direct mounting on a threaded, flanged or connection-head type thermowell.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Input: Pt100 RTD
- Direct mounting on thermowell
- DIN B type connection head

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

—

ELECTRICAL CONNECTION

—

PROCESS TEMPERATURE

—

CERTIFICATION / QUALITY

—



LG200-WRT

LEEC

Measuring Ranges and Performance

SENSOR TYPE AND TEMPERATURE MEASURING RANGE

SENSOR CODE	SENSOR TYPE	MEASURING RANGE AND LIMIT	MINIMUM CALIBRATABLE SPAN
R1	Pt100 RTD	-50 to 400 °C (unit convertible ...	100 °C

REFERENCE ACCURACY

Reference accuracy (typical) ±0.5% URL

Typical performance specifications accuracy ±0.5% URL

Linear output accuracy (linearity, hysteresis and repeatability), full scale ±0.5% URL (calibrated at 20 °C ± 5 °C)

Stability Better than ±0.05% URL or 0.1 °C/year, whichever is greater, under reference conditions

Overall performance includes, among other factors, reference accuracy, ambient temperature effects and other combined errors. Test standard: GB/T30121 / IEC60751; zero-based span calibration, 4-20mA analog output. Measuring medium: any fluid compatible with the wetted parts. Application field stated in the data sheet: temperature measurement.

EFFECTS ON MEASUREMENT

Ambient temperature effect (reference accuracy: 22 °C) ≤±0.005% URL/°C, reference temperature 22 °C

Power supply effect ≤±0.01% URL/V, 24V supply (referred to 20mA full-scale output)

Loading effect ≤±0.02% URL/100ohm, referred to 20mA full-scale output

Vibration effect Per IEC60068-2-6: 4g / 2...100Hz

Electromagnetic compatibility (EMC, not applicable to RS485 output) Radiated interference 30MHz-1000MHz and conducted interference on DC power port 0.15MHz-30MHz (GB/T9254/CISPR22): result OK. Electrostatic discharge (ESD) 4kV contact / 8kV air (GB/T17626.2/IEC61000-4-2): level B. Immunity to RF electromagnetic fields 10V/m, 80MHz-1GHz (GB/T17626.3/IEC61000-4-3): level A. Immunity to power-frequency magnetic field 30A/m (GB/T17626.8/IEC61000-4-8): level A. Fast transients/bursts 2kV, 5/50ns, 100kHz (GB/T17626.4/IEC61000-4-4): level B. Surge 1kV line-to-line / 2kV line-to-ground, 1.2us/50us (GB/T17626.5/IEC61000-4-5): level B. Immunity to RF-induced conducted disturbances 3V, 150kHz-80MHz (GB/T17626.6/IEC61000-4-6): level A. (Level A: performance within normal specification limits. Level B: temporary loss/degradation of functionality/performance with automatic recovery, without altering operating, storage or data conditions).

LG200-WRT

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Available output signals (table 'Output signal', all linear type): 4-20mA (2-wire); 4-20mA+HART (2-wire); 1-5VDC (3-wire); Modbus-RTU/RS485 (4-wire). Insulation resistance: $\geq 20\text{Mohm}$ @ reference, 100VDC.
Damping	Total damping time constant: sum of amplifier damping and sensor capsule damping. Reference response time: $\leq 10\text{ s}$ @ 0.4 m/s water flow, 6mm O.D. thermowell (test standard IEC60751). Table of t_{50}/t_{90} response times by thermowell outer diameter (1mm wall thickness) and tube type: 10mm – 5.3mm reducing tube: $t_{50}=7.5\text{ s}$ / $t_{90}=21\text{ s}$, 6.6 or 9mm tapered tube: $t_{50}=11\text{ s}$ / $t_{90}=37\text{ s}$, straight tube: $t_{50}=18\text{ s}$ / $t_{90}=55\text{ s}$; 12mm – 5.3mm reducing tube: $t_{50}=7.5\text{ s}$ / $t_{90}=21\text{ s}$, straight tube: $t_{50}=18\text{ s}$ / $t_{90}=55\text{ s}$ (no tapered-tube data); 16mm – 6.6 or 9mm tapered tube: $t_{50}=11\text{ s}$ / $t_{90}=37\text{ s}$, straight tube: $t_{50}=38\text{ s}$ / $t_{90}=125\text{ s}$ (no reducing-tube data). These times do NOT include the temperature transmitter's own response time. Mounting requirements: no preferential mounting direction; mounting position on pipe, piping or other; the minimum insertion length must be 8 times the thermowell's outer diameter, and the probe tip must reach or extend past the pipe's axis/pivot (consider medium flow rate and process pressure before confirming insertion length). The data sheet also includes graphs (no point-value table) of maximum admissible process pressure and maximum medium flow rate supported by the thermowell as a function of immersion length (L), for a 10mm/1mm-wall thermowell and a 12mm/2mm-wall thermowell, under condition A (water, $T=50\text{ }^{\circ}\text{C}$) and condition B (superheated steam, $T=400\text{ }^{\circ}\text{C}$); and a graph of terminal self-heating (T) as a function of extension neck length, for process temperatures of 200 $^{\circ}\text{C}$ and 400 $^{\circ}\text{C}$ (terminal temperature = ambient temperature + terminal self-heating).
Weight	Not specified in data sheet.

POWER SUPPLY AND LOAD

4-20mA (output code F)	10-30 VDC
4-20mA+HART (output code H)	10.5/16.5-30 VDC
1-5VDC (output code I)	12-30 VDC
Modbus-RTU/RS485 (output code R)	5/9-30 VDC

Power consumption: $\leq 500\text{ mW}$ @24VDC, 20.8 mA (table 'Power supply', item 'Standard': 10-30VDC). Loading effects: $\leq \pm 0.02\%$ URL/100ohm, referred to 20mA full-scale output. Power supply effects: $\leq \pm 0.01\%$ URL/V, 24V supply, referred to 20mA full-scale output.

AMBIENT AND PROCESS CONDITIONS

Operating temperature	-40 to 85 $^{\circ}\text{C}$ (with integrated LCD display: -20 to 70 $^{\circ}\text{C}$)
Storage temperature	-40 to 100 $^{\circ}\text{C}$ (with integrated LCD display: -20 to 70 $^{\circ}\text{C}$)
Working humidity	0-95% RH
Protection class	Aluminum alloy terminal, IP67
Hazardous condition — NEPSI	ExdIICT6 (GYB21.3089X)*
Hazardous condition — CSA	Class I, Division 1, Group A, B, C and D T6...T1; Class I, Division 2, Group A, B, C and D T4...T1; Class II, Division 1, Group E, F and G T80 $^{\circ}\text{C}$...T400 $^{\circ}\text{C}$; Class III (No.: 80081426)*

LG200-WRT

LEEC

Complete Order Code Structure

BASE MODEL: LG200-WRT

MODEL

Model	LG200-WRT	Integrated thermal resistance temperature transmitter
-------	-----------	---

SENSOR

Sensor type	R1	Pt100 RTD
-------------	----	-----------

ELECTRICAL CONNECTION

Electrical connection	T1	Aluminum alloy terminal, 2 cable entries, M20×1.5(H), red body, white cover
-----------------------	----	---

CABLE ENTRY PROTECTOR

Cable entry protector	R1	Waterproof connector M20×1.5 on one side, blind plug on the other side, PVC material, cable diameter 6-8mm only, IP67
	R2	Flameproof, 1/2 NPT(H) on one side, blind plug on the other side, stainless steel material, cable diameter 6-8mm only, IP67
	R3	Flameproof, M20×1.5(H) on one side, blind plug on the other side, stainless steel material, cable diameter 6-8mm only, IP67

OUTPUT

Output signal	F	2-wire 4-20mA, 10-30VDC supply
	H	2-wire 4-20mA+HART, 10.5/16.5-30VDC supply
	I	3-wire 1-5VDC, 12-30VDC supply
	R	4-wire Modbus-RTU/RS485, 5/9-30VDC supply
Display	C	With LCD display
	A	Without display

EXTENSION NECK (LENGTH)

Extension neck length	Q1	None
	Q2	SUS304 material, 50mm length, Ø12 outer diameter
	Q3	SUS304 material, 100mm length, Ø12 outer diameter
	Q4	SUS304 material, 150mm length, Ø12 outer diameter
	Q5	SUS304 material, 200mm length, Ø12 outer diameter

PROCESS CONNECTION

Mounting type	G	Fixed process connection mounting
	H	Movable process connection mounting
Material	4	SUS304
	6	SUS316
Specification	M01	M20×1.5(M), GB/T192-2003
	G01	G1/2(M), EN837
	R01	1/2-14NPT, ANSI/ASME B1.20.1
	H01	Flange HG/T20592-2009 DN50PN10-PN40 (per the p. 11 table, code listed as 'DN50PN10'; the p. 10 dimensional table confirms ØD=165mm, thickness 20mm)
	H02	Flange HG/T20592-2009 DN25PN10-PN40 (per the p. 11 table, code listed as 'DN25PN10'; the p. 10 dimensional table confirms ØD=115mm, thickness 16mm)

LG200-WRT

LEEC

Order Code (continued)

INSERTION PROBE		
Outer diameter	D1	6mm, probe material same as process connection
	D2	8mm, probe material same as process connection
	D3	10mm, probe material same as process connection
	D4	12mm, probe material same as process connection
	D5	16mm, probe material same as process connection
Insertion length	LXXX	Custom insertion length: 0 < LXXX < 3000mm; examples from the data sheet: 80mm=L0080, 150mm=L0150; 50mm minimum gap for custom insertion length; the default insertion length includes thread specifications

LG200-WRT

LEEG

Options, Factory Settings and Certifications

CALIBRATION REPORT

/Q1 Calibration report provided by the company

APPROVALS

/E1 Flameproof certificate, ExdIICT6, NEPSI

/E2 Flameproof certificate, CSA — Class I, Division 1, Group A, B, C and D T6...T1; Class I, Division 2, Group A, B, C and D T4...T1; Class II, Division 1, Group E, F and G T80°C...T400°C; Class III

/F3 CE certificate

WETTED PARTS TREATMENT

/G1 Ungrease treatment

/G2 Electropolishing treatment

DEFAULT FACTORY SETTINGS

TAG position

None — 0 (no specific setting)

Display mode (DISP)

PV — no specific setting

Damping value (DAMP)

0 — no specific setting

Upper range value 20mA (URV)

As indicated in the order

Analog output type (mA)

Linear — no specific setting

Alarm signal (ALARM)

No — no specific setting

Lower range value 4mA (LRV)

As indicated in the order

Process unit (U)

As indicated in the order

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001:2015 · Scope: Design and production of temperature transmitters (generic LEEG corporate certificate, not specific to this data sheet) · Registration: 110804039

CE Certificate — Not specified in data sheet

Mark: CE · EMC: Not specified in data sheet · Standard: Not specified in data sheet · Registration: Not specified in data sheet

FLAMEPROOF CERTIFICATE BY BODY

NEPSI

ExdIICT6
Working T.: -25 to 55 °C
Medium T.: Not specified in da...
Reg.: GYB21.3089X

CSA

Class I, Division 1, Group A, B, C and D T6...T1; Class I, Division 2, Group A, B, C and D T4...T1; Class II, Division 1, Group E, F and G T80°C...T400°C; Class III
Working T.: -40 to 60 °C
Medium T.: Not specified in da...
Reg.: 80081426

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: LEEG data sheet 'LG200-WRT Integrated thermal resistance temperature transmitter' (integrated thermal resistance temperature transmitter, th...



TEMPERATURE

NEW 2026

Temperature · Temperature Transmitters

THA33

Analog Head Transmitter

Pt100 · 2-Wire

LEEG


BUY ONLINE

DESCRIPTION

Head-type temperature transmitter, mounted directly on the Pt100 sensor socket inside the connection head, which converts the sensor's resistive signal into a 2-wire 4-20 mA analog output ready for integration into any standard control loop. Its compact 45 mm diameter disc format allows a Pt100 sensor without a transmitter to be converted into a 4-20 mA solution without changing the head or the existing field wiring — ideal for retrofit. The measuring range is factory-configured per order within a total range of -200 to 600 °C, with short-circuit and reverse-polarity protection, and a wide admissible ambient temperature range.

TECHNICAL SPECIFICATIONS

- Input: 1 × Pt100 (2 or 3 wires)
- Total range: -200 to 600 °C (factory-configured span)
- Power supply: 12-30 VDC / 24 VDC
- Short-circuit and reverse-polarity protection
- Output: 4-20 mA, 2-wire
- Accuracy: 0.2% or 0.5% F.S.
- Maximum output distance: 1000 m
- Stability: 0.1% F.S. / 12 months

TYPICAL APPLICATIONS

- Retrofit of Installations with Existing Pt100 Sensors
- Direct Integration in the Sensor Head
- Economical Replacement of Local Indication with 4-20 mA Signal
- OEM Integration in Machines and Skids

ADDITIONAL TECHNICAL DATA

IP PROTECTION

Not specified in the data sheet (short-circuit and reverse-polarity protection)

ELECTRICAL CONNECTION

6 screw terminals (silver-plated brass) · 2×M4 mounting with anti-vibration spring

PROCESS TEMPERATURE

Measurement: -200 to 600 °C (per configuration) · Ambient: -20 to 80 °C

CERTIFICATION / QUALITY

Insulation 500V/100M · EMC per EN61326





OPERATING MAGNITUDE

FLOW

Electromagnetic Flow Meters and Flow Switches

5 technical data sheets in this section



Electromagnetic Flow Meters

4 technical data sheets in this group

WHAT IS IT?

Instrument that measures the flow of conductive liquids with no moving parts and no obstruction to flow.

HOW DOES IT WORK?

It applies Faraday's law of induction: a magnetic field generated by coils induces a voltage in the moving liquid, proportional to its velocity.

WHEN IS IT USED?

On water, effluents, sludges and conductive liquids in general, especially when zero head loss and no mechanical maintenance are required.



Selection Table

Microsensor electromagnetic flow meters and flow switches — Pg. = data sheet

MODEL	TYPE	DIAMETER	ACCURACY	OUTPUT	PG.
ELECTROMAGNETIC FLOW METERS					
MFE600-E	Electromagnetic In-Line	DN3 to DN2400 depending on connection	Class 0.5 or Class 0.2	4–20mA, HART, pulse, RS485, RS232, Profibus DP/PA	343
MFE600Z	Electromagnetic Compact	DN10 to DN1600 (flanged)	Class 0.5	4–20mA, pulse, alarm, RS485 (Modbus)	351
MFE600H	Electromagnetic Heat Meter	DN25 to DN2400 (flanged)	Class 2 (heat meter)	4–20mA, bidirectional pulse, RS485 (Modbus)	357
MFE600C	Electromagnetic Insertion Type	DN150 to DN2400 (insertion probe)	Class 2.5 (Class 1.5 optional)	4–20mA, HART, pulse, RS485/RS232, Profibus DP/PA	363
FLOW SWITCHES					
MFM500A	Flow Switch	Depending on mounting interface	±10 cm/s (hysteresis ±2 to ±8 cm/s)	1 relay, 2 PNP, or 2 PNP + 4–20mA	370

The company reserves the right to modify the data listed in this catalog without prior notice.





FLOW

Flow › Electromagnetic Flow Meters

MFE600-E

MICROSENSOR



BUY ONLINE

In-Line Electromagnetic Flowmeter

Microsensor

NEW 2026

DESCRIPTION

Intelligent electromagnetic flowmeter from MICROSENSOR, with no moving parts or flow obstruction, based on Faraday's law of electromagnetic induction. Available in seven construction variants (carbon steel or stainless steel flanged, sanitary tri-clamp, threaded, wafer, and battery-powered in carbon steel or stainless steel), with diameters from DN3 to DN2400 depending on the connection type. Multi-electrode design that does not require a grounding ring in small diameters, EEPROM memory that retains the accumulated total during a power outage, and bidirectional measurement (positive and negative flow) with low-frequency excitation for better stability and low-flow performance. Optional integrated pressure port for simultaneous flow and pressure reading.

TECHNICAL SPECIFICATIONS

- Diameter: DN3 to DN2400 (flanged); DN3/DN6 to DN300/DN50 depending on sanitary, threaded or wafer connection type
- Output: 4-20mA, HART, frequency/pulse, RS485 (ModBus), RS232, Profibus-DP/PA; also battery-powered
- Electrode: 316L, titanium, Hastelloy B/C, tantalum, tungsten carbide or platinum-iridium
- Protection: IP65, IP67 (integral) or IP68 (sensor); Ex db ib mb IIC T6 Gb flameproof rating
- Accuracy: Class 0.5 or Class 0.2
- Construction: integral or remote (cable up to 99 m)
- Lining: chloroprene/natural/polyurethane rubber, PTFE, F46 or PFA depending on the fluid

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65 · IP67 (integral) · IP68 (sensor)

PROCESS TEMPERATURE

Process: up to 60-180 °C depending on lining ·
Ambient: -20 to 60 °C

ELECTRICAL CONNECTION

M20×1.5 (female) or NPT 1/2 (female)

CERTIFICATION / QUALITY

Ex db ib mb IIC T6 Gb flameproof rating; ATEX available as an option (/A)



MFE600-E

MICROSENSOR

Measuring Ranges and Performance

NOMINAL DIAMETER AND PRESSURE PER CONNECTION TYPE

CONNECTION TYPE	DIAMETER / NOMINAL PRESSURE	REMARKS
Flanged (F)	DN3–DN2400 · 4.0 to 0.6 MPa	Decreasing pressure per diameter (see note below).
Sanitary / tri-clamp (K)	DN3–DN300 · 1.6 MPa	Diameter differs between the general table and the order code (see note).
Threaded (L)	DN10–DN50 · 1.6 MPa	Diameter differs between the general table and the order code (see note).
Wafer (J)	DN3–DN300 · 1.6 MPa	Diameter differs between the general table and the order code (see note).

REFERENCE ACCURACY

Accuracy class	Class 0.5 or Class 0.2, per order code
Construction type	Integral (transmitter mounted on the sensor) or remote (separate signal and excitation cable, up to 99 m)
Flameproof rating	Ex db ib mb IIC T6 Gb

The data sheet does not publish an explicit error formula per accuracy class, nor factory test conditions (temperature, humidity) for accuracy calibration. The manufacturer states it uses a 37 m water tower as a pressure stabilizer for real flow calibration at the factory, in addition to a standard-table method for serial production. Note on the table above: the general specifications table in the data sheet indicates Flanged DN3–DN2400, Sanitary DN6–DN50, Threaded DN6–DN50 and Wafer DN10–DN300, while the order code notes (ordering page) extend the sanitary, threaded and wafer ranges to DN3–DN300, DN10–DN50 and DN3–DN300 respectively — the order code criterion is shown here as it is more specific, and both values are recorded as they appear in the original document. Nominal pressure for the flanged connection decreases with diameter: 4.0 MPa (DN3–DN80), 1.6 MPa (DN100–DN150), 1.0 MPa (DN200–DN1000), 0.6 MPa (DN1200–DN2400), per flange standard GB/T9124.1–2019 (DN3–DN500) or JB/T81–2015 (DN600–DN2400); ANSI (CLASS 150 to 1500), DIN (PN10 to PN100) and JIS (5K to 63K) flanges are also available.

EFFECTS ON MEASUREMENT

Minimum fluid conductivity	Must be greater than 5 µS/cm; an essential requirement for electromagnetic measurement
Recommended fluid velocity	Clean fluids: 1.5 to 3 m/s · Crystallizing solutions: 3 to 4 m/s (prevents deposition) · Abrasive fluids/slurries: 1 to 2 m/s (reduces wear); velocities above 7 m/s are uncommon, above 10 m/s are rare
Operating pressure	Must not exceed the sensor's nominal pressure; also verify there are no negative pressure conditions in the pipeline
Straight installation runs	Minimum 5D upstream and 2D downstream with fully open valves · 5D downstream of a T-section or a 90° elbow · 10D downstream of a reducer/expander or a partially open valve

MFE600-E

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Available output signals: 4-20mA DC (0-750 ohm load resistance, active output); HART output; frequency/pulse output (passive or active, jumper-selectable); high/low flow limit alarm output; RS485 output (ModBus protocol) or RS232; Profibus-DP or Profibus-PA. Battery version: LCD display, RS485 output, wireless output and frequency/pulse output (the latter for calibration only).
Damping	Not specified in the data sheet: no adjustable damping time constant is published for this model.
Weight	Not specified in the data sheet; weight varies significantly by nominal diameter (DN3 to DN2400) and construction type (flanged, sanitary, threaded or wafer).

POWER SUPPLY AND LOAD

220 VAC	Standard mains supply
12 VDC / 24 VDC	Low-voltage supply
Battery (3.6V, or 3.6V + 24VDC dual)	With LCD display; RS485, wireless and frequency/pulse output (the latter for calibration only)

Load resistance for the 4-20mA output: 0 to 750 ohm, active output. Electrical connection M20×1.5 (female) or NPT 1/2 (female). Wiring precautions per the data sheet: use shielded twisted-pair cable for RS485 communication; power and 4-20mA signal cables must be routed separately.

AMBIENT AND PROCESS CONDITIONS

Ambient temperature	-20 to 60°C (optional -40 to 60°C)
Storage temperature	-40 to 60°C
Relative humidity	5 to 90%
IP protection class	IP65 (protected against water jets) · IP67 (protected against temporary immersion, integral type only) · IP68 (continuous immersion — sensor IP68 / transmitter IP65, suitable for chambers or instrument pits)
Flameproof rating	Ex db ib mb IIC T6 Gb; ATEX certification available as an order option (/A)
Grounding	Requires a grounding electrode or ring to equalize the reference potential with that of the fluid, which must also be grounded; do not install near motors, transformers or other sources of electromagnetic interference

MFE600-E

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MFE600-E

MODEL AND SERIES

Model	MFE600	Electromagnetic flowmeter
Series	E	Series E

SENSOR — TYPE

Sensor type	C	Standard
	P	With pressure port (simultaneous flow and pressure measurement)
	X	Flameproof

SENSOR — NOMINAL DIAMETER

Nominal diameter (DN)	003–24H	3-character code per diameter: 003=DN3 ... 900=DN900, 10H=DN1000 ... 24H=DN2400 (36 diameters available in total, from DN3 to DN2400); see the available diameter range per connection type on the previous Measuring Ranges page.
-----------------------	----------------	--

SENSOR — NOMINAL PRESSURE

Nominal pressure (GB standard)	P0–P6	0.6 / 1.0 / 1.6 / 2.5 / 4.0 / 6.3 / 10 MPa, respectively (codes P0 to P6, in that order)
Nominal pressure (ANSI standard)	C0–C1	CLASS 150 (C0) or CLASS 300 (C1)
Nominal pressure (DIN/JIS standard)	J0–J1	10K (J0) or 16K (J1)

SENSOR — PROCESS CONNECTION

Connection type	F	Flanged
	L	Threaded (1.6 MPa, DN10–DN50)
	J	Wafer (1.6 MPa, DN3–DN300)
	K	Tri-clamp / sanitary (1.6 MPa, DN3–DN300)

SENSOR — BODY MATERIAL

Sensor material	1	Carbon steel
	2	SUS304 stainless steel
	3	SUS316L stainless steel

SENSOR — ELECTRODE TYPE

Electrode type	D	Standard fixed (DN20 and below: 2 electrodes; DN25 and above: 4 electrodes)
	T	Standard fixed (DN20 and below: 2 electrodes; DN25 and above: 3 electrodes)

SENSOR — ELECTRODE MATERIAL

Electrode material	1	316L stainless steel
	2	Hastelloy C (HC)
	3	Hastelloy B (HB)
	4	Titanium (Ti)
	5	Tantalum (Ta)
	6	Tungsten carbide (WC)
	7	Platinum-iridium (Pt)

MFE600-E

MICROSENSOR

Order Code (continued)

SENSOR — LINING MATERIAL

Lining material	C	Chloroprene rubber (CR)
	N	Natural rubber (NR)
	U	Polyurethane rubber (PU)
	T	Polytetrafluoroethylene (PTFE)
	F	Fluorinated ethylene propylene (F46)
	A	Perfluoroalkoxy (PFA)

SENSOR — MEDIUM TEMPERATURE

Medium temperature range	1	≤60°C
	2	≤120°C
	3	≤180°C (PFA lining, remote type)
	4	≤150°C
	5	≤100°C

SENSOR — GROUNDING

Grounding	1	With grounding electrode, no ring (no ring for DN20 and below)
	2	304 stainless steel grounding ring
	3	316L stainless steel grounding ring
	4	Hastelloy C grounding ring
	5	Titanium (Ti) grounding ring
	6	Tantalum (Ta) grounding ring

SENSOR — IP PROTECTION CLASS

IP protection class	1	IP65
	2	IP67 (integral type only)
	3	IP68 (sensor IP68 / transmitter IP65)

CONSTRUCTION TYPE

Construction type	1	Integral
	2	Remote

TRANSMITTER — ACCURACY AND HOUSING

Accuracy	A	Class 0.2
	B	Class 0.5
Transmitter housing	1	Cast aluminum
	2	SUS304 stainless steel

TRANSMITTER — ELECTRICAL CONNECTION

Electrical connection	M	M20×1.5 (female)
	T	NPT 1/2 (female)

MFE600-E

MICROSENSOR

Order Code (continued)

TRANSMITTER — OUTPUT SIGNAL

Output signal	N	No output — battery version
	1	4-20mA / frequency-pulse
	2	4-20mA / frequency-pulse + relay output
	3	4-20mA / frequency-pulse + HART
	4	4-20mA / frequency-pulse + RS485 (ModBus protocol)
	5	4-20mA / frequency-pulse + Profibus-DP
	6	4-20mA / frequency-pulse + Profibus-PA
	G	4G wireless output

TRANSMITTER — POWER SUPPLY

Power supply	1	220 VAC
	2	12 VDC
	3	24 VDC
	4	3.6 VDC — battery version
	5	3.6V lithium battery + 24VDC (dual supply)

MFE600-E

MICROSENSOR

Order Options (continued)

DOCUMENTATION AND TEST CERTIFICATES

/C	CNAS calibration report
/S	Third-party inspection report
/TS	TS certificate
/E	Labels, operation manual and certificate of conformity

ELECTRICAL CONNECTION ACCESSORIES

/J1	Nickel-plated copper electrical connection
/J2	304 stainless steel electrical connection

MATING COUNTERFLANGE

/F1	Carbon steel counterflange
/F2	304 stainless steel counterflange
/F3	316L stainless steel counterflange

CERTIFICATIONS AND SPECIAL VARIANTS

/Y	With integrated pressure transmitter
/CS	CCS certification (marine)
/JY	Slurry type
/KR	Interference-resistant (transmitter for low-conductivity fluids)
/A	ATEX flameproof certification

REMOTE CABLE

/L10	Default 10 m remote cable (excitation and signal, 10 m each); available in 5 m increments up to 99 m maximum (codes L10, L15, L20...L99)
------	--

MFE600-E

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Factory configuration

Not specified in the data sheet: LRV/URV values, engineering unit, damping and display mode are configured per the customer's order.

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified

Mark: CE · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Not specified

Ex db ib mb IIC T6 Gb
Working T.: -20 to 60°C (optio...
Medium T.: Per lining: up to 60/...
Reg.: Not specified in the data sheet...

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: MICROSENSOR MFE600-E Electromagnetic Flowmeter data sheet, Rev. V3.0 II/2025



FLOW

Flow › Electromagnetic Flow Meters

MFE600Z

MICROSENSOR



Compact Electromagnetic Flowmeter

Microsensor

NEW 2026

DESCRIPTION

Compact electromagnetic flowmeter from MICROSENSOR, of integral or remote flanged construction, aimed at sanitation, heating and building automation. Based on Faraday's law of electromagnetic induction, with no moving parts or flow obstruction. Class 0.5 accuracy multi-electrode design that does not require a grounding ring for most diameters, reducing installation costs. EEPROM memory retains the configuration and accumulated total during a power outage, with bidirectional measurement (positive and negative flow) and low-frequency excitation for better stability and low-flow performance. Manufactured and calibrated at the same 37 m water tower MICROSENSOR uses for its MFE600 line, with a dedicated production line for this model.

TECHNICAL SPECIFICATIONS

- Diameter: DN10 to DN1600 (flanged)
- Output: 4-20mA, frequency/pulse, high/low limit alarm, RS485 (ModBus)
- Electrode: 316L stainless steel, Hastelloy B/C, titanium, tantalum, tungsten carbide or platinum-iridium per order code
- Protection: IP65 or IP68 (sensor); no flameproof rating in the data sheet
- Accuracy: Class 0.5
- Construction: integral or remote (cable up to 50 m)
- Lining: chloroprene/natural/polyurethane rubber, PTFE, F46 or PFA depending on the fluid and order code

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65 · IP68 (sensor, remote transmitter IP66)

ELECTRICAL CONNECTION

M20×1.5 (female)

PROCESS TEMPERATURE

Process: up to 60–180 °C depending on lining ·
Ambient: -20 to 60 °C

CERTIFICATION / QUALITY

Requires minimum fluid conductivity $\geq 5 \mu\text{S}/\text{cm}$; no
flameproof rating in the data sheet



MFE600Z

MICROSENSOR

Measuring Ranges and Performance

NOMINAL DIAMETER AND PRESSURE PER CONNECTION TYPE

CONNECTION TYPE	DIAMETER / NOMINAL PRESSURE	REMARKS
Flanged (F)	DN10–DN1600 · 1.6 to 0.6 MPa	Decreasing pressure per diameter, JB/T 81–2015 standard; the order code also allows 0.6 to 4.0 MPa (see note below).

REFERENCE ACCURACY

Accuracy class	Class 0.5
Construction type	Integral or remote (signal and excitation cable, up to 50 m)

The data sheet does not publish an explicit error formula per accuracy class, nor factory test conditions (temperature, humidity) for accuracy calibration. The manufacturer states it uses the same 37 m water tower as a pressure stabilizer for real flow calibration at the factory, in addition to a dedicated production line for this model. Note on nominal pressure: the general specifications table indicates "GB: PN6, PN10, PN16" (a figure inconsistent with the rest of the document), while the precautions table specifies 1.6 MPa for DN10–DN200, 1.0 MPa for DN250–DN1000 and 0.6 MPa for DN1200–DN1600 per JB/T81–2015 — this second criterion is shown here as it is consistent with the rest of the data sheet and with the order code, which also allows selecting a nominal pressure of 0.6 to 4.0 MPa (codes P0 to P4) independently of the diameter. Note on materials: the general specifications table mentions only 316L stainless steel and titanium electrodes, and chloroprene rubber or PTFE lining, but the order code offers 7 electrode materials and 6 lining materials — all order code options are listed on the following page as it is the more complete and specific source.

EFFECTS ON MEASUREMENT

Minimum fluid conductivity	Must be greater than 5 µS/cm; an essential requirement for electromagnetic measurement
Recommended fluid velocity	Clean fluids: 1.5 to 3 m/s · Crystallizing solutions: 3 to 4 m/s (prevents deposition) · Abrasive fluids/slurries: 1 to 2 m/s (reduces wear); velocities above 7 m/s are uncommon, above 10 m/s are rare
Operating pressure	Must not exceed the sensor's nominal pressure; also verify there are no negative pressure conditions in the pipeline
Straight installation runs	Minimum 5D upstream and 2D downstream with fully open valves · 5D downstream of a T-section or a 90° elbow · 10D downstream of a reducer/expander or a partially open valve

MFE600Z

 MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Available output signals: 4–20mA DC (0–750 ohm load resistance, active output); frequency/pulse output (optional passive or active, jumper-selectable); high/low flow limit alarm output; RS485 output (ModBus protocol).
Damping	Not specified in the data sheet: no adjustable damping time constant is published for this model.
Weight	Not specified in the data sheet; weight varies significantly by nominal diameter (from DN10 to DN1600).

POWER SUPPLY AND LOAD

220 VAC	Standard mains supply
12 VDC / 24 VDC	Low-voltage supply

Load resistance for the 4–20mA output: 0 to 750 ohm, active output. Electrical connection M20×1.5 (female). Wiring precautions per the data sheet: use shielded twisted-pair cable for RS485 communication; power and 4–20mA signal cables must be routed separately.

AMBIENT AND PROCESS CONDITIONS

Ambient temperature	–20 to 60°C
Storage temperature	–40 to 60°C
Relative humidity	5 to 90%
IP protection class	IP65 (protected against dust and water jets) · IP68 (continuous immersion, sensor only / remote transmitter IP66; suitable for installation in chambers or instrument pits)
Grounding	Requires a grounding electrode or ring to equalize the reference potential with that of the fluid, which must also be grounded; do not install near motors, transformers or other sources of electromagnetic interference

MFE600Z

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MFE600-Z

MODEL AND SERIES

Model	MFE600	Electromagnetic flowmeter
Series	Z	Series Z

SENSOR — TYPE

Sensor type	C	Standard
-------------	----------	----------

SENSOR — NOMINAL DIAMETER

Nominal diameter (DN)	010-16H	3-character code per diameter: 010=DN10 ... 900=DN900, 10H=DN1000 ... 16H=DN1600 (27 diameters available in total, from DN10 to DN1600); see the diameter range on the previous Measuring Ranges page.
-----------------------	----------------	--

SENSOR — NOMINAL PRESSURE

Nominal pressure	P0-P4	0.6 / 1.0 / 1.6 / 2.5 / 4.0 MPa, respectively (codes P0 to P4, in that order)
------------------	--------------	---

SENSOR — PROCESS CONNECTION

Connection type	F	Flanged
-----------------	----------	---------

SENSOR — BODY MATERIAL

Sensor material	1	Carbon steel
	2	304 SS stainless steel
	3	316L SS stainless steel

SENSOR — ELECTRODE TYPE

Electrode type	D	Standard fixed (DN20 and below: 2 electrodes; DN25 and above: 4 electrodes)
	T	Standard fixed (DN20 and below: 2 electrodes; DN25 and above: 3 electrodes)

SENSOR — ELECTRODE MATERIAL

Electrode material	1	316L stainless steel
	2	Hastelloy C
	3	Hastelloy B
	4	Titanium (Ti)
	5	Tantalum (Ta)
	6	Tungsten carbide (WC)
	7	Platinum-iridium (Pt)

SENSOR — LINING MATERIAL

Lining material	C	Chloroprene rubber (CR)
	N	Natural rubber (NR)
	U	Polyurethane rubber (PU)
	T	Polytetrafluoroethylene (PTFE)
	F	Fluorinated ethylene propylene (F46/PFA)
	A	Perfluoroalkoxy (PFA) or melt-processable PTFE

MFE600Z

MICROSENSOR

Order Code (continued)

SENSOR — MEDIUM TEMPERATURE

Medium temperature range	1	≤60°C
	2	≤120°C
	3	≤180°C (suitable for PFA lining, remote type)
	4	≤150°C
	5	≤100°C

SENSOR — GROUNDING

Grounding	1	With grounding electrode, no ring (no ring for DN20 and below)
	2	304 stainless steel grounding ring
	3	316L stainless steel grounding ring
	4	Hastelloy C grounding ring
	5	Titanium (Ti) grounding ring
	6	Tantalum (Ta) grounding ring

SENSOR — IP PROTECTION CLASS

IP protection class	1	IP65
	3	IP68 (sensor IP68 / remote transmitter IP66)

CONSTRUCTION TYPE

Construction type	1	Integral
	2	Remote

TRANSMITTER — ACCURACY AND HOUSING

Accuracy	B	Class 0.5
Transmitter housing	1	Cast aluminum

TRANSMITTER — ELECTRICAL CONNECTION

Electrical connection	M	M20×1.5 (female)
-----------------------	---	------------------

TRANSMITTER — OUTPUT SIGNAL

Output signal	4	4–20mA / frequency-pulse + RS485 (ModBus protocol)
	9	Frequency-pulse + RS485 (ModBus protocol)

TRANSMITTER — POWER SUPPLY

Power supply	1	220 VAC
	2	12 VDC
	3	24 VDC

MFE600Z

MICROSENSOR

Options, Factory Settings and Certifications

DOCUMENTATION AND TEST CERTIFICATES

/N	No additional options
/S	Third-party inspection report
/C	CNAS calibration report
/E	Labels, operation manual and certificate of conformity

ELECTRICAL CONNECTION ACCESSORIES

/J1	Nickel-plated copper electrical connection
/J2	304 stainless steel electrical connection

MATING COUNTERFLANGE

/F1	Carbon steel counterflange
/F2	304 stainless steel counterflange
/F3	304L stainless steel counterflange

SPECIAL VARIANTS

/Y	With integrated pressure transmitter
----	--------------------------------------

REMOTE CABLE

/L10	Default 10 m remote cable (excitation and signal, 10 m each); available in 5 m increments up to 50 m maximum (codes L10, L15, L20...L50); consult MICROSENSOR if a longer length is required
------	--

DEFAULT FACTORY SETTINGS

Factory configuration

Not specified in the data sheet: LRV/URV values, engineering unit and display mode are configured per the customer's order.

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified

Mark: Not specified in the data sheet · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: MICROSENSOR MFE600-Z Electromagnetic Flowmeter data sheet, V2.0 1/2025



FLOW

Flow › Electromagnetic Flow Meters

MFE600H

MICROSENSOR



BUY ONLINE

Electromagnetic Heat Meter

Microsensor

NEW 2026

DESCRIPTION

Electromagnetic thermal energy meter from MICROSENSOR, integrating flow measurement, supply and return temperature (2 Pt1000 sensors) and thermal energy calculation (heat or cold) into a single instrument, with no additional totalizer required. Based on Faraday's law of electromagnetic induction, with no moving parts or flow obstruction. Multi-electrode design with an integrated grounding electrode that avoids the need for a grounding ring for most diameters. EEPROM memory retains parameters and accumulated totals during a power outage. Wide temperature-range LCD display with a full menu, password protection (read-only menu) and daily, monthly and annual reports. Aimed at thermal energy measurement in district heating, and heating and air conditioning of residential, commercial and institutional buildings.

TECHNICAL SPECIFICATIONS

- Diameter: DN25 to DN2400 (flanged)
- Temperature sensor: 2× Pt1000 (supply/return), -50 to 200 °C
- Construction: integral or remote (cable up to 99 m)
- Protection: IP65, IP67 (integral) or IP68 (remote only); consumption ≤5W
- Accuracy: Class 2 (heat meter)
- Output: 4-20mA, bidirectional frequency/pulse, RS485 (ModBus); HART and relay per order code
- Lining: chloroprene/natural/polyurethane rubber, PTFE, FEP or PFA depending on the fluid

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65 · IP67 (integral) · IP68 (remote only)

PROCESS TEMPERATURE

Process: -50 to 200 °C (Pt1000 sensors) · Ambient: -20 to 60 °C

ELECTRICAL CONNECTION

M20×1.5 (female)

CERTIFICATION / QUALITY

No flameproof rating or detailed CE certification in the data sheet



MFE600H

MICROSENSOR

Measuring Ranges and Performance

NOMINAL DIAMETER AND PRESSURE PER CONNECTION TYPE

CONNECTION TYPE	DIAMETER / NOMINAL PRESSURE	REMARKS
Flanged (F)	DN25–DN2400 · 4.0 to 0.6 MPa	Decreasing pressure per diameter (see note below).

REFERENCE ACCURACY

Accuracy class (heat meter)	Class 2
Temperature sensor	2× Pt1000 (supply/return), thermowell installation, -50 to 200 °C range
Construction type	Integral or remote

The data sheet does not publish an explicit error formula for the heat meter's accuracy class, nor the flow-measurement accuracy of the sensor separately. The manufacturer states it uses the same 37 m water tower as a pressure stabilizer for real flow calibration at the factory, with a dedicated production line for this model. Note on diameter: the flow sensor specifications indicate a nominal range of DN25 to DN2000, while the dimensions table and the order code go up to DN2400 (code 24H) — this second criterion is shown here as it is the most specific and complete. Note on nominal pressure: 4.0 MPa for DN25–DN80, 1.6 MPa for DN100–DN150, 1.0 MPa for DN200–DN1000 and 0.6 MPa for DN1200–DN2400, per standards GB/T9124.1-2019 (DN25–DN500) and JB/T81-2015 (DN600–DN2400); the order code also offers intermediate pressures (P3: 2.5 MPa) and notes that several bands are "available up to DN2400" on special order. The order code also includes option P4 (4.0 MPa) with the note "DN10–DN80", even though the sensor's minimum diameter elsewhere in the data sheet is DN25 — this is transcribed as it appears in the original document.

EFFECTS ON MEASUREMENT

Minimum fluid conductivity	Must not be less than 5 µS/cm
Recommended fluid velocity	Clean fluids: 1.5 to 3 m/s · Crystallizing solutions: 3 to 4 m/s (self-cleaning, prevents deposition); in practice it rarely exceeds 7 m/s, and velocities above 10 m/s are very rare
Installation below floor level or at pump outlet	Remote type must be used in both cases
Maximum remote installation distance	Depends on the medium's conductivity and cable cross-section; the shorter the distance, the better (excessive distance can cause interference from distributed capacitance). Data sheet example: mains water (~100 µS/cm) allows up to ~100 m; acidic, alkaline or saline solutions with higher conductivity can exceed 100 m

MFE600H

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Available output signals: 4–20mA DC; bidirectional frequency/pulse output; RS485 output (ModBus protocol); HART and relay output available depending on the selected output code. Wide temperature-range LCD display with full menu; configurable language (Chinese/English); displayed parameters: instantaneous heat, instantaneous flow, totalized heat, totalized flow and flow velocity; password protection with read-only menu; daily, monthly and annual reports available. Maximum display capacity: 99,999,999,999 (11 digits) for both flow and thermal energy; configurable energy units among MJ/h, GJ/h, kWh/h and MWh/h.
Damping	Not specified in the data sheet: no adjustable damping time constant is published for this model.
Weight	Not specified in the data sheet; weight varies significantly by nominal diameter (from DN25 to DN2400).

POWER SUPPLY AND LOAD

220 VAC	Standard mains supply
12 VDC / 24 VDC	Low-voltage supply

Power consumption: ≤5W. Electrical connection M20×1.5 (female). Wiring precautions per the data sheet: do not connect cables outdoors on rainy days (affects insulation); use eyelet-type terminals at both ends of power and signal cables; use rigid or flexible metal protective conduit for all power and signal cables except the 4-wire 24VDC one; properly tighten cable glands if waterproof; ensure adequate protective grounding (≤10 ohm).

AMBIENT AND PROCESS CONDITIONS

Ambient temperature	–20 to 60°C
Storage temperature	–40 to 60°C
Relative humidity	5 to 90%
IP protection class	IP65 · IP67 (integral) · IP68 (remote type only)
Grounding	Protective grounding ≤10 ohm; with its own grounding electrode, no ring, per order code

MFE600H

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MFE600H-A

MODEL AND SERIES

Model	MFE600H	Electromagnetic energy meter
Series	A	Series A

SENSOR — TYPE

Sensor type	C	Standard
	P	With pressure port

SENSOR — NOMINAL DIAMETER

Nominal diameter (DN)	025-24H	3-character code per diameter: 025=DN25 ... 900=DN900, 10H=DN1000 ... 24H=DN2400 (28 diameters available in total, from DN25 to DN2400); see the diameter range on the previous Measuring Ranges page.
-----------------------	----------------	--

SENSOR — NOMINAL PRESSURE

Nominal pressure	P0	0.6 MPa (DN1200-DN2400)
	P1	1.0 MPa, DN200-DN1000 (available up to DN2400)
	P2	1.6 MPa, DN100-DN150 (available up to DN2400)
	P3	2.5 MPa
	P4	4.0 MPa, DN10-DN80 (available up to DN500; see minimum diameter note below)

SENSOR — PROCESS CONNECTION

Connection type	F	Flanged
-----------------	----------	---------

SENSOR — BODY MATERIAL

Sensor material	1	Carbon steel
	2	304 SS stainless steel
	3	316L SS stainless steel

SENSOR — ELECTRODE TYPE

Electrode type	D	Standard fixed
----------------	----------	----------------

SENSOR — ELECTRODE MATERIAL

Electrode material	1	316L stainless steel
	4	Titanium (Ti)

SENSOR — LINING MATERIAL

Lining material	C	Chloroprene rubber (CR)
	N	Natural rubber (NR)
	U	Polyurethane rubber (PU)
	T	Polytetrafluoroethylene (PTFE)
	F	Fluorinated ethylene propylene (FEP)
	A	Perfluoroalkoxy (PFA)

MFE600H

MICROSENSOR

Order Code (continued)

SENSOR — MEDIUM TEMPERATURE

Medium temperature range	1	≤60°C
	2	≤120°C
	3	≤180°C (suitable for PFA lining, remote type)
	4	≤150°C
	5	≤100°C

SENSOR — GROUNDING

Grounding	1	With grounding electrode, no ring (no ring for DN20 and below)
	2	304 stainless steel grounding ring
	3	316L stainless steel grounding ring

SENSOR — IP PROTECTION CLASS

IP protection class	1	IP65
	2	IP67 (integral)
	3	IP68 (sensor IP68 / transmitter IP65)

SENSOR — TEMPERATURE SENSOR

Temperature sensor	A	PT1000
--------------------	---	--------

CONSTRUCTION TYPE

Construction type	1	Integral
	2	Remote

TRANSMITTER — ACCURACY AND HOUSING

Accuracy	F	Class 2
Transmitter housing	1	Cast aluminum
	2	304 SS stainless steel

TRANSMITTER — ELECTRICAL CONNECTION

Electrical connection	M	M20×1.5 (female)
-----------------------	---	------------------

TRANSMITTER — OUTPUT SIGNAL

Output signal	1	4-20mA / frequency-pulse
	2	4-20mA / frequency-pulse + relay output
	3	4-20mA / frequency-pulse + HART
	4	4-20mA / frequency-pulse + RS485 (ModBus protocol)

TRANSMITTER — POWER SUPPLY

Power supply	1	220 VAC
	2	12 VDC
	3	24 VDC

MFE600H

MICROSENSOR

Options, Factory Settings and Certifications

DOCUMENTATION AND TEST CERTIFICATES

/N	No additional options
/S	Third-party inspection report
/E	Labels, operation manual and certificate of conformity

MATING COUNTERFLANGE

/F1	Carbon steel counterflange
/F2	304 stainless steel counterflange
/F3	316L stainless steel counterflange

REMOTE CABLE

/L10	Default 10 m remote cable (excitation and signal, 10 m each); available in 5 m increments up to 99 m maximum (codes L10, L15, L20...L99); consult MICROSENSOR if a longer length is required
------	--

DEFAULT FACTORY SETTINGS

Factory configuration

Not specified in the data sheet: energy unit, display language and other configuration parameters are set per the customer's order.

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified

Mark: Not specified in the data sheet · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: MICROSENSOR MFE600H Electromagnetic Heat Meter data sheet, V3.0 1/2025



FLOW

Flow › Electromagnetic Flow Meters

MFE600C

MICROSENSOR



BUY ONLINE

Insertion Electromagnetic Flowmeter

Microsensor

NEW 2026

DESCRIPTION

Insertion electromagnetic flowmeter from MICROSENSOR: a probe with an electrode is introduced directly into the pipe through an access ball valve, avoiding the need to cut the process and the high cost of a full-line flanged flowmeter in large diameters. It allows probe installation and removal under pressure, without interrupting flow, ideal for measurements in existing pipelines and maintenance tasks. Based on Faraday's law of electromagnetic induction, with low-frequency square-wave excitation for zero stability, good interference immunity and stable low-flow performance. EEPROM memory retains the configuration and accumulated total during a power outage. Integral or remote construction, in standard type, with an integrated pressure port, or flameproof (integral type).

TECHNICAL SPECIFICATIONS

- Diameter: DN150 to DN2400 (per data sheet; the manufacturer's website indicates DN200–DN1600, see note)
- Nominal pressure: 1.6 MPa (fixed, no selection option)
- Probe: 304 SS rod, 316L electrode, ABS lining (fixed materials, no selection option)
- Construction: integral or remote (cable up to 99 m); requires fluid conductivity $>20 \mu\text{S}/\text{cm}$
- Accuracy: Class 2.5 (Class 1.5 optional)
- Process connection: hot-tap under pressure with ball valve, or fixed flange mounting
- Output: 4–20mA, HART, frequency/pulse, high/low limit alarm, RS485 (ModBus)/RS232, Profibus-DP/PA

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65 · IP67 (integral) · IP68 (sensor, remote transmitter IP65)

PROCESS TEMPERATURE

Process: $\leq 60^\circ\text{C}$ or $\leq 80^\circ\text{C}$ depending on code · Ambient: -20 to 60°C

ELECTRICAL CONNECTION

M20×1.5 (female) or NPT 1/2 (female)

CERTIFICATION / QUALITY

Ex db ib mb IIC T6 Gb flameproof rating, integral type only (type code X)



MFE600C

MICROSENSOR

Measuring Ranges and Performance

INSTALLATION TYPE AND NOMINAL PRESSURE

CONNECTION TYPE	DIAMETER / NOMINAL PRESSURE	REMARKS
Hot-tap (A)	DN150–DN2400 · 1.6 MPa fixed	With ball valve; without interrupting flow (see note below).
Fixed flange (B)	DN150–DN2400 · 1.6 MPa fixed	Requires stopping the process to install or remove the probe.

REFERENCE ACCURACY

Accuracy class	Class 2.5 (Class 1.5 optional)
Construction type	Integral or remote (signal and excitation cable, up to 99 m)
Flameproof rating	Ex db ib mb IIC T6 Gb, integral type only (order code type X)

The data sheet does not publish an explicit error formula per accuracy class, nor factory test conditions for accuracy calibration. Unlike the rest of the MFE600 line, this insertion model has a single fixed nominal pressure value (1.6 MPa, code P2) and fixed materials for the rod (304 SS), electrode (316L) and probe lining (ABS) — there is no selection code for these items, per the specifications table and the order code. Note on diameter: the product's web page indicates "Diameter: DN200 ~ DN1600", while both the specifications table and the order code in the data sheet itself (V3.0 11/2025) go from DN150 to DN2400 — the data sheet criterion is shown here as it is the more specific and up-to-date source, with the web value noted for the record. Note on the diameter code: in the order code table, the values 20H and 22H both appear as DN2000, repeating the value and breaking the 200 mm increment pattern used elsewhere in the table — this is transcribed as it appears in the original document; the correct value for 22H is likely DN2200.

EFFECTS ON MEASUREMENT

Minimum fluid conductivity	Must be greater than 20 µS/cm (a more demanding threshold than the rest of the MFE600 line, which requires ≥5 µS/cm)
Installation orientation	Horizontal or at a 30° to 45° angle from vertical, to avoid gas accumulation at the top of the pipe; do not install at the highest point of the pipeline
Operating pressure	Must not exceed the probe's fixed nominal pressure of 1.6 MPa
Straight installation runs	Minimum 10D upstream and 5D downstream with fully open valves · 20D upstream and 10D downstream of a T-section · 10D upstream and 5D downstream of a 90° elbow · 20D downstream of a partially open valve

MFE600C

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Available output signals: 4–20mA DC (0–750 ohm load resistance, active output); HART output; frequency/pulse output (active); high/low flow limit alarm output; RS485 output (ModBus protocol) or RS232; Profibus–DP or Profibus–PA. Battery version (3.6 VDC): no active output (output code N).
Damping	Not specified in the data sheet: no adjustable damping time constant is published for this model.
Weight	Not specified in the data sheet; weight varies by nominal diameter (from DN150 to DN2400) and insertion probe length.

POWER SUPPLY AND LOAD

220 VAC	Standard mains supply
12 VDC / 24 VDC	Low-voltage supply
3.6 VDC (battery)	Battery-powered version, no active output (output code N)

Load resistance for the 4–20mA output: 0 to 750 ohm, active output. Electrical connection M20×1.5 (female) or NPT 1/2 (female), or no connection in the battery version. Wiring precautions per the data sheet: use shielded twisted-pair cable for RS485 communication; power and 4–20mA signal cables must be routed separately.

AMBIENT AND PROCESS CONDITIONS

Ambient temperature	–20 to 60°C
Storage temperature	–40 to 60°C
Relative humidity	5 to 90%
Medium temperature	≤60°C (code 1) or ≤80°C (code 2), per order code
IP protection class	IP65 · IP67 (integral type only) · IP68 (sensor IP68 / transmitter IP65 on remote type)
Flameproof rating	Ex db ib mb IIC T6 Gb, integral type only (type code X)
Grounding	Not specified in the data sheet whether an additional grounding ring is required; the probe body, flange and ball valve are 304 stainless steel, in direct contact with the metal pipe

MFE600C

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MFE600-C

MODEL AND SERIES

Model	MFE600	Electromagnetic flowmeter
Series	C	Insertion

SENSOR — TYPE

Sensor type	C	Standard
	P	With pressure port
	X	Flameproof (integral)

SENSOR — NOMINAL DIAMETER

Nominal diameter (DN)	150–24H	Code per diameter: 150=DN150, 200=DN200, 250=DN250, 300=DN300, 350=DN350, 400=DN400, 450=DN450, 500=DN500, 600=DN600, 700=DN700, 800=DN800, 900=DN900, 10H=DN1000, 12H=DN1200, 14H=DN1400, 16H=DN1600, 18H=DN1800, 20H=DN2000, 22H=DN2000, 24H=DN2400 (20 diameters available in total, from DN150 to DN2400; code 22H repeats the DN2000 value as it appears in the data sheet — see accuracy note).
-----------------------	---------	---

SENSOR — NOMINAL PRESSURE

Nominal pressure	P2	1.6 MPa (only value available; unlike the rest of the MFE600 line, this model does not offer a pressure selection code)
------------------	----	---

SENSOR — PROBE ROD

Rod material	2	304 SS stainless steel (only value available)
--------------	---	---

SENSOR — ELECTRODE

Electrode material	1	316L stainless steel (only value available)
--------------------	---	---

SENSOR — PROBE LINING

Lining material	1	ABS (only value available)
-----------------	---	----------------------------

SENSOR — PROCESS CONNECTION

Connection type	A	In-line hot-tap, installation/removal under pressure (with ball valve)
	B	Fixed flange mounting

SENSOR — MEDIUM TEMPERATURE

Medium temperature range	1	≤60°C
	2	≤80°C

SENSOR — IP PROTECTION CLASS

IP protection class	1	IP65
	2	IP67 (integral type only)
	3	IP68 (sensor IP68 / transmitter IP65 on remote type)

CONSTRUCTION TYPE

Construction type	1	Integral
	2	Remote

MFE600C

MICROSENSOR

Order Code (continued)

TRANSMITTER — ACCURACY AND HOUSING

Accuracy	E	Class 2.5
	D	Class 1.5
Transmitter housing	1	Cast aluminum
	2	304 SS stainless steel

TRANSMITTER — ELECTRICAL CONNECTION

Electrical connection	M	M20×1.5 (female)
	T	NPT 1/2 (female)
	N	No connection — battery version

TRANSMITTER — OUTPUT SIGNAL

Output signal	N	No output — battery version
	1	4-20mA / frequency-pulse
	2	4-20mA / frequency-pulse + relay output
	3	4-20mA / frequency-pulse + HART
	4	4-20mA / frequency-pulse + RS485 (ModBus protocol)
	5	4-20mA / frequency-pulse + Profibus-DP
	6	4-20mA / frequency-pulse + Profibus-PA

TRANSMITTER — POWER SUPPLY

Power supply	1	220 VAC
	2	12 VDC
	3	24 VDC
	4	3.6 VDC — battery version

MFE600C

MICROSENSOR

Options, Factory Settings and Certifications

DOCUMENTATION AND TEST CERTIFICATES

/N	No additional options
/S	Third-party inspection report
/E	Labels, operation manual and certificate of conformity

ELECTRICAL CONNECTION ACCESSORY

/J2	304 stainless steel electrical connection
-----	---

SPECIAL VARIANTS

/Y	With integrated pressure transmitter (M20×1.5 female 304 stainless steel ball valve, by default)
----	--

REMOTE CABLE

/L10	Default 10 m remote cable (excitation and signal, 10 m each); available in 5 m increments up to 99 m maximum (codes L10, L15, L20...L99); consult MICROSENSOR if a longer length is required
------	--

DEFAULT FACTORY SETTINGS

Factory configuration

Not specified in the data sheet: LRV/URV values, engineering unit and display mode are configured per the customer's order.

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified

Mark: CE (mentioned on the product's web page; the data sheet does not detail the standard or registration number) · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Not specified

Ex db ib mb IIC T6 Gb (integral type only, type code X)
Working T.: -20 to 60°C
Medium T.: ≤60 or ≤80°C
Reg.: Not specified

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: MICROSENSOR MFE600-C Insertion Electromagnetic Flowmeter data sheet, V3.0 11/2025



Flow Switches

1 technical data sheet in this group

WHAT IS IT?

Device that detects the presence or absence of minimum flow in a process line.

HOW DOES IT WORK?

By thermal dispersion: a heated sensor loses temperature due to the moving fluid; the resulting heat dissipation, proportional to flow velocity, is compared against an adjusted switch point to trigger the alarm or cutoff output, with no moving parts.

WHEN IS IT USED?

To protect pumps against dry running and for safety interlocks that require confirming the presence of flow before enabling a piece of equipment.





FLOW

Flow › Flow Switches

MFM500A

MICROSENSOR



BUY ONLINE

Flow Switch (Thermal Dispersion)

Thermal Dispersion

NEW 2026

DESCRIPTION

MICROSENSOR flow switch based on the thermal dispersion principle, with an ARM processing core and high-quality sensors with temperature compensation and calibration, ensuring switching accuracy even with changes in fluid temperature. No moving parts, maintenance-free. Fully sealed stainless steel design, with protection against overvoltage, overcurrent and reverse polarity. Self-luminous OLED display with indication switchable between a progress bar and a digital numeric value, and an image-inversion function that allows installation in any orientation without losing readability. Various mounting interfaces available depending on pipe diameter. Used for real-time monitoring of water flow in pipelines and protection of critical equipment (pumps, cooling or lubrication systems) against flow failure.

TECHNICAL SPECIFICATIONS

- Measuring principle: thermal dispersion, no moving parts
- Output: 1 relay, 2 PNP, or 2 PNP + 4-20mA DC
- Range: 1 to 150 cm/s (water)
- Protection: IP67, fully stainless steel body

TYPICAL APPLICATIONS

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP67

ELECTRICAL CONNECTION

M12×1 male connector, 5 pins

PROCESS TEMPERATURE

Medium: -20 to 80°C (water) · Ambient: -20 to 70°C · Storage: -30 to 85°C

CERTIFICATION / QUALITY

No flameproof or detailed CE certification in the data sheet; tested per Chinese GB/T EMC/vibration/shock standards



MFM500A

MICROSENSOR

Measuring Ranges and Performance

MEASURING RANGE AND PERFORMANCE

PARAMETER	VALUE	TEST CONDITIONS
Measuring range	1 to 150 cm/s (water)	Test medium: water, unless otherwise noted.
Optimal working range	3 to 100 cm/s (water)	Range recommended by the manufacturer for best accuracy.

REFERENCE ACCURACY

Switch accuracy	±10 cm/s
Hysteresis	±2 to ±8 cm/s
Initial time	2 to 15 s (typ. 8 s)
Switch-off time	1 to 15 s (typ. 2 s)
Switch-on time	1 to 13 s (typ. 2 s)

The values in the specifications table were tested with water as the test medium, in the 5–100 cm/s range and at 20°C (default factory conditions), as stated in the data sheet itself. The product's web page also mentions a range of 3 to 300 cm/s for oil as the medium, a figure not detailed in the PDF's specifications table (which only publishes values for water) — both are recorded here, showing the PDF's criterion as it is the more detailed and specific source.

EFFECTS ON MEASUREMENT

Measuring principle	Thermal dispersion; no moving parts, maintenance-free
Temperature compensation	5 to 50°C (water); within this range the device guarantees measurement accuracy despite changes in fluid temperature
Installation orientation	Any position; image-inversion function allows installation in any orientation without losing display readability
Working pressure	Withstands up to 10 MPa (endurance pressure, body resistance test pressure)

MFM500A

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Output signal configurable by order code: 1 relay output (code J); 2 PNP transistor outputs (code P); or 2 PNP outputs + 1 analog 4-20mA DC output (code PE). Selectable output function NO (normally open) or NC (normally closed, optional). Relay characteristics: switching voltage $\leq 250\text{VAC}$ / 30VDC , switching current $\leq 3\text{A}$. Transistor characteristics: switching voltage drop $\leq 1.5\text{V}$, switching current $\leq 400\text{mA}$. Self-luminous OLED display, 128×32 pixel resolution, with indication switchable between a progress bar and a digital numeric value.
Damping	No independent adjustable damping parameter applies: see start-up, on and off times in Reference Accuracy.
Weight	265 g (gross weight, per the data sheet).

POWER SUPPLY AND LOAD

24 VDC ($\pm 4.8\text{V}$)	Only power supply code available in the order code (code DC); the manufacturer's web page also mentions 220VAC in its specification bullets, not detailed in the PDF's specifications table or the order code — see note
--	--

Working current: $\leq 60\text{ mA}$. Electrical protection: against reverse polarity, short-circuit and overvoltage. Electrical connection: M12×1 male connector, 5 pins (pin assignment detailed in the data sheet per the selected output type: relay, PNP or PNP+4-20mA).

AMBIENT AND PROCESS CONDITIONS

Medium temperature (water)	-20 to 80°C
Storage temperature	-30 to 85°C
Working temperature (ambient)	-20 to 70°C
Protection class	IP67
Electromagnetic compatibility	GB/T17626.2/4-2018, GB/T17626.3-2016
Vibration resistance	$\leq 3\text{g}$, per GB/T2423.10-2019
Shock resistance	$\leq 50\text{g}/11\text{ms}$, per GB/T2423.5-2019

MFM500A

 MICROSENSOR

Complete Order Code Structure

BASE MODEL: MFM500A

MODEL

Model	MFM500A	Thermal dispersion flow switch
-------	----------------	--------------------------------

POWER SUPPLY

Power supply	DC	24VDC (only value available; see accuracy note on the 220VAC mention on the website)
--------------	-----------	--

PROCESS CONNECTION

Process connection	C1	M20×1.5 male adapter (MS601 accessory)
	C3	G1/2 male adapter (MS602 accessory)

OUTPUT

Output signal	J	1× relay output
	P	2× PNP transistor output
	PE	2× PNP output + 1× 4-20mA DC analog output

PROBE LENGTH

Probe length	L1	15 mm
	L3	21 mm
	T(x)	Custom, X mm (subject to special factory review)

MFM500A

MICROSENSOR

Options, Factory Settings and Certifications

OPTIONAL ACCESSORIES

MS601	M20×1.5 male adapter (included per connection code C1)
MS602	G1/2 male adapter (included per connection code C3)

ORDER NOTES

Note 1	The pressure port thread can be customized; must be expressly indicated in the purchase order
Note 2	For special specification or function requirements, it is recommended to consult directly with MICROSENSOR

DEFAULT FACTORY SETTINGS

Factory configuration (test conditions)

Medium: water · Test range: 5 to 100 cm/s · Temperature: 20°C
(default factory values per the data sheet).

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified

Mark: Not specified in the data sheet · EMC: GB/T17626.2/4-2018, GB/T17626.3-2016 (electromagnetic compatibility; no CE mark detailed) · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

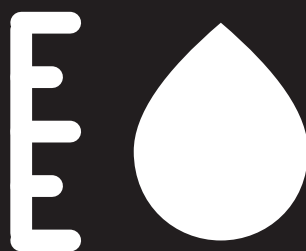
FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: MICROSENSOR MFM500A Flow Switch data sheet, V1.0 06/2024



OPERATING MAGNITUDE

LEVEL

Hydrostatic, Radar and Ultrasonic Transmitters, and Level Controller

7 technical data sheets in this section



Hydrostatic Level Transmitters

4 technical data sheets in this group

WHAT IS IT?

Instrument that measures the level of a liquid from the hydrostatic pressure exerted by its column.

HOW DOES IT WORK?

A probe submerged in the liquid measures the pressure exerted by the column on its sensor; since that pressure is proportional to the liquid height, the level is calculated directly.

WHEN IS IT USED?

In wells, cisterns, open tanks and pumping stations, especially in installations with a tall liquid column.



Selection Table

Hydrostatic, radar and ultrasonic transmitters, and level controller — Pg. = data sheet

MODEL	TYPE	TECHNOLOGY / RANGE	OUTPUT	PROTECTION	PG.
LMP633-NCN	Standard Submersible Probe	Hydrostatic, submersible probe	4-20 mA (2-wire)	IP68	378
LMP633-NBN	Compact Submersible Probe	Hydrostatic, submersible probe	4-20 mA (2-wire)	IP68	383
LMP633-NSN-S	Sanitary Submersible Probe	Hydrostatic, submersible probe	4-20 mA (2-wire)	IP68	388
MPM4700	Smart Level Transmitter	Hydrostatic, submersible probe, 28 factory ranges (0-1 to 0-200 mH ₂ O)	4-20mA, RS485 (ASCII/Modbus) or HART	IP68, stainless steel	393
LKZLD	Radar Level Meter (26 GHz)	Non-contact radar, up to 30 m (±3mm) or 70 m (±10mm)	4-20mA/HART or RS-485 Modbus	IP67, AISI 304/316 antenna	400
LR725L	Ultrasonic Level Meter	Non-contact ultrasonic, 5 to 50 m from factory	4-20mA + up to 4 relays, RS-485/RS-232 optional	Integrated or separate (probe up to 100 m)	405
MPM460W	Multichannel Transmitter Controller	Piezoresistive submersible probe, 12 factory ranges (0-1 to 0-20 mH ₂ O)	4-20mA/0-10VDC or RS-485 Modbus, up to 8 relays	IP65, cast aluminum	412

The company reserves the right to modify the data listed in this catalog without prior notice.





Level › Hydrostatic Level Transmitters

LMP633-NCN



Standard Submersible Level Transmitter

LEEG

NEW 2026

DESCRIPTION

Standard submersible level transmitter, submersible probe from the LEEG line for continuous hydrostatic level measurement.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Cable: PUR with atmospheric venting
- Body: 316L stainless steel
- Protection: IP68

TYPICAL APPLICATIONS

- Wells, cisterns and tall tanks
- Pumping control in water and effluent networks
- Remote level monitoring in treatment plants

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP68

ELECTRICAL CONNECTION

Self-supporting vented PUR cable, length to order

PROCESS TEMPERATURE

Process: up to 60 °C

CERTIFICATION / QUALITY

Ceramic membrane or 316L stainless steel



LMP633-NCN

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS (hydrostatic level / gauge pressure — convertible to mH₂O, mm...)

SENSOR CODE	NOMINAL VALUE (URL)	MIN. CALIBRABLE SPAN	LRL	URL	OVERLOAD LIMIT
C203G	20 kPa	10 kPa	0 kPa	20 kPa	600 kPa
C403G	40 kPa	20 kPa	0 kPa	40 kPa	600 kPa
C104G	100 kPa	40 kPa	0 kPa	100 kPa	1 MPa
C204G	200 kPa	100 kPa	0 kPa	200 kPa	1.8 MPa
C404G	400 kPa	200 kPa	0 kPa	400 kPa	2.5 MPa
C105G	1 MPa	400 kPa	0 kPa	1 MPa	4 MPa
C205G	2 MPa	1 MPa	0 kPa	2 MPa	4 MPa

REFERENCE ACCURACY

Reference accuracy — Typical (linear) ±0.2% URL (with HART protocol: ±0.1% URL)

Reference accuracy — Maximum / voltage output ±0.5% URL

Typical overall accuracy (comprehensive performance) ±0.2% URL

Stability ±0.2% URL / year

Reference accuracy: includes linearity (BFSL), hysteresis and repeatability; calibration temperature 20°C ± 5°C. Valid for the nominal values 20kPa, 40kPa, 100kPa, 200kPa, 400kPa, 1MPa and 2MPa. Test standard: GB/T28474 / IEC60770, zero-based calibration span. Overall performance comprises, among other factors, reference accuracy and the effect of ambient temperature.

EFFECTS ON MEASUREMENT

Ambient temperature effect Within the -20 to 80°C range, total impact ±0.2% URL/10K

Power supply effect Zero and span change must not exceed ±0.005% URL/V

Loading effect Zero and span change must not exceed ±0.05% URL/kohm

Vibration effect Per IEC61298-3 / GB/T18271.3: 20g (5-2000Hz, max. vibration value < 3mm)

LMP633-NCN

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Submersible-probe hydrostatic level transmitter, gauge pressure. Measuring medium: water, wastewater, oil. Application: level measurement in containers/tanks, among others. Output signals available per order code: F = 4-20mA two-wire (linear); H = 4-20mA+HART two-wire (linear); R = Modbus-RTU/RS485 four-wire (linear); G = Modbus-RTU/RS485 four-wire with pressure and temperature signal. A 0.5-4.5VDC three-wire variant (linear or ratiometric) also exists, although it does not appear as its own output code in this data sheet's order table. Insulation resistance: ≥ 20 Mohm @100VDC.
Damping	Total damping time constant: equal to the sum of the amplifier damping and the sensing capsule damping. Amplifier damping: 0-100 s adjustable. Start-up after power interruption: ≤ 3 s (HART output time: ≤ 6 s). Normal service after data recovery: ≤ 31 s.
Weight	Standard body: approx. 650 g (excluding cable). Anti-corrosive body: approx. 270 g (excluding cable). Cable weight per 5 m: PUR 0.32 kg; PTFE 0.41 kg. Accessories: cable clamp P2 approx. 340 g; counterweight P5 (anti-corrosive) approx. 500 g; threaded mounting accessory P3 approx. 520 g; counterweight P6 (standard) approx. 500 g.

POWER SUPPLY AND LOAD

4-20mA (2-wire)	10-30 VDC
4-20mA+HART (2-wire)	10.5/16.5-55 VDC
0.5-4.5VDC (3-wire)	6-15 VDC
0.5-4.5VDC ratiometric (3-wire)	5 VDC
Modbus-RTU/RS485 (4-wire)	5VDC / 9-30VDC

Permitted current: ≤ 20.8 mA (4-20mA and 4-20mA+HART); ≤ 3.5 mA (0.5-4.5VDC and ratiometric); ≤ 7 mA (RS485). Load resistance: $< (U-10)/0.0208$ ohm for 4-20mA; $< (U-10.5)/0.0208$ ohm for 4-20mA+HART** (*for this output type the communication load resistance is 250 ohm; **the 0-2119 ohm value applies under nominal working conditions, 250-600 ohm applies to HART communication); ≥ 5 kohm (100 kohm recommended) for voltage output; not applicable to RS485. Transmission distance: < 1000 m (4-20mA and HART); < 5 m (voltage output); < 1200 m (RS485). Power consumption: ≤ 500 mW (20.8mA@24VDC); ≤ 17.5 mW (0.5-4.5VDC@5VDC); ≤ 168 mW (RS485@24VDC).

AMBIENT AND PROCESS CONDITIONS

Working temperature	-10 to 70 °C
Storage temperature	-30 to 80 °C
Medium temperature	-10 to 70 °C
Protection class	IP68

LMP633-NCN

LEEC

Complete Order Code Structure

BASE MODEL: LMP633-NCN

SENSOR — PRESSURE RANGE (CODE)

Pressure range	C203G	Nominal value (URL): 20 kPa
	C403G	Nominal value (URL): 40 kPa
	C104G	Nominal value (URL): 100 kPa (quick delivery available)
	C204G	Nominal value (URL): 200 kPa (quick delivery available)
	C404G	Nominal value (URL): 400 kPa (quick delivery available)
	C105G	Nominal value (URL): 1 MPa (quick delivery available)
	C205G	Nominal value (URL): 2 MPa (quick delivery available)

SENSOR — DIAPHRAGM, FILL FLUID AND SEAL

Diaphragm material	C	Ceramic (Al ₂ O ₃ , 99.9% content) (quick delivery available)
Insulating fill fluid	N	None (quick delivery available)
Sensor seal	S	O-ring, FKM (temperature range: -20 to 200°C) (quick delivery available)

ELECTRICAL CONNECTION

Electrical connection	N1	PUR cable, outer diameter (7.5±0.2) mm (quick delivery available)
	N2	PTFE cable, outer diameter (7.5±0.2) mm
Cable entry protector	R0	None (quick delivery available)

OUTPUT

Output signal	F	4-20mA, 2-wire, 10-30VDC power supply (quick delivery available)
	H	4-20mA+HART, 2-wire, 16.5-55VDC power supply
	R	Modbus-RTU/RS485, 4-wire, 5VDC/9-30VDC power supply
	G	Modbus-RTU/RS485, 4-wire (with pressure and temperature signal), 5VDC/9-30VDC power supply

PROBE

Probe material	2	PP (max. measuring range 2 MPa)
	5	PVDF (max. measuring range 2 MPa) (quick delivery available)
	6	SUS316 (quick delivery available)
Diameter specification	H46	Submersible probe outer diameter 46 mm (PP, PVDF only) (quick delivery available)
	H39	Submersible probe outer diameter 39 mm (SUS316 only) (quick delivery available)

CABLE

Cable length	Ln	0 < n ≤ 200 m; e.g. 5m=L5, 10m=L10, 100m=L100. Permitted error range: 0-0.2 m (quick delivery available)
--------------	-----------	--

LMP633-NCN

LEEC

Options, Factory Settings and Certifications

FIXED MOUNTING ACCESSORY

P2	Cable clamp (to secure and support the assembly)
P3	Threaded mounting accessory (to secure the top part and support the assembly)
P5	Counterweight, to secure the product in areas of fast flow or high-density medium — applied to the anti-corrosive version
P6	Counterweight, same as above — applied to the standard version

CALIBRATION REPORT

/Q1	Calibration report provided by the manufacturer (quick delivery available)
------------	--

APPROVALS (MULTIPLE)

/F3	CE certificate
------------	----------------

WETTED PARTS TREATMENT

/G1	Degreasing treatment
/G2	Electropolishing treatment

DEFAULT FACTORY SETTINGS

Factory settings

Not specified in the data sheet — this LMP633-NCN data sheet does not include a factory settings table (e.g., TAG position)

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001-2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT021353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: LEEG LMP633-NCN Capacitive ceramic submersible level transmitter data sheet, Rev. 2016.02.V1.0



Level › Hydrostatic Level Transmitters

LMP633-NBN



Compact Submersible Level Transmitter

LEEG

NEW 2026

DESCRIPTION

Compact submersible level transmitter, submersible probe from the LEEG line for continuous hydrostatic level measurement.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Cable: PUR with atmospheric venting
- Body: 316L stainless steel
- Protection: IP68

TYPICAL APPLICATIONS

- Wells, cisterns and tall tanks
- Pumping control in water and effluent networks
- Remote level monitoring in treatment plants

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP68

ELECTRICAL CONNECTION

Self-supporting vented PUR cable, length to order

PROCESS TEMPERATURE

Process: up to 60 °C

CERTIFICATION / QUALITY

Ceramic membrane or 316L stainless steel



LMP633-NBN

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS (hydrostatic level / gauge pressure — convertible to mH₂O, mm...

SENSOR CODE	NOMINAL VALUE (URL)	MIN. CALIBRABLE SPAN	LRL	URL	OVERLOAD LIMIT
L203G	20 kPa	10 kPa	0 kPa	20 kPa	30 kPa
L353G	35 kPa	20 kPa	0 kPa	35 kPa	52.5 kPa
L104G	100 kPa	35 kPa	0 kPa	100 kPa	150 kPa
L204G	200 kPa	100 kPa	0 kPa	200 kPa	300 kPa
L704G	700 kPa	350 kPa	0 kPa	700 kPa	1050 kPa
L105G	1 MPa	500 kPa	0 kPa	1 MPa	1.5 MPa
L175G	1.7 MPa	1 MPa	0 kPa	1.7 MPa	2.55 MPa
L355G	3.5 MPa (*)	1.7 MPa	0 kPa	2 MPa (*)	5.25 MPa

REFERENCE ACCURACY

Reference accuracy — Typical (linear output) ±0.2% URL (with HART protocol: ±0.1% URL)

Reference accuracy — Maximum / voltage output ±0.5% URL

Stability ±0.2% URL / year

Reference accuracy: includes linearity, hysteresis and repeatability; calibration temperature 20°C ± 5°C. Test standard: GB/T28474 / IEC60770, zero-based calibration span, linear output, silicone oil fill, 316L stainless steel isolating diaphragm. () Due to the limit of the product's seal structure, on the 3.5 MPa nominal-range sensor the actual upper range limit (URL) is 2 MPa, not 3.5 MPa (see ranges table).*

EFFECTS ON MEASUREMENT

Ambient temperature effect Within the -20 to 80°C range, total impact ±0.2% URL/10K

Power supply effect Zero and span change must not exceed ±0.005% URL/V

Loading effect Zero and span change must not exceed ±0.05% URL/kohm

Vibration effect Per IEC61298-3 / GB/T18271.3: 20g (5-2000Hz, max. vibration value < 3mm)

Durability Across the full measuring range, service life > 10 million pressure cycles @25°C

Electromagnetic compatibility (EMC) Tested per GB/T9254/CISPR22 and IEC61000-4-2/3/4/5/6/8 (not applicable to RS485 output); performance OK / level A / level B depending on test

LMP633-NBN

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Submersible-probe hydrostatic level transmitter, gauge pressure. Pressure type: gauge. Measuring medium: water, wastewater, oil. Application: level measurement in containers, among others. Output signals available per order code: F = 4-20mA two-wire (linear); H = 4-20mA+HART two-wire (linear); 5 = 0.5-4.5VDC three-wire (linear); 6 = 0.5-4.5VDC ratiometric three-wire (linear); R = Modbus-RTU/RS485 four-wire (linear); G = Modbus-RTU/RS485 four-wire with pressure and temperature signal. Insulation resistance: ≥ 20 Mohm @100VDC.
Damping	Total damping time constant: equal to the sum of the amplifier damping and the sensing capsule damping. Amplifier damping: 0-100 s adjustable. Start-up after power interruption: ≤ 3 s (HART output time: ≤ 6 s). Normal service after data recovery: ≤ 4 s (HART output time: ≤ 31 s).
Weight	Transmitter (excluding cable): approx. 340 g. Cable weight per 5 m: PUR (polyurethane) 0.32 kg; PTFE (polytetrafluoroethylene) 0.41 kg. Mounting accessories: counterweight (P1) approx. 500 g; cable clamp (P2) approx. 340 g; top threaded connection (P3) approx. 520 g; bottom threaded connection (P4) approx. 120 g.

POWER SUPPLY AND LOAD

4-20mA (2-wire)	10-30 VDC
4-20mA+HART (2-wire)	10.5/16.5-55 VDC
0.5-4.5VDC (3-wire)	6-15 VDC
0.5-4.5VDC ratiometric (3-wire)	5 VDC
Modbus-RTU/RS485 (4-wire)	5VDC / 9-30VDC

Permitted current: ≤ 20.8 mA (4-20mA and 4-20mA+HART); ≤ 3.5 mA (0.5-4.5VDC and ratiometric); ≤ 7 mA (RS485). Load resistance: $< (U-10)/0.0208$ ohm for 4-20mA; $< (U-10.5)/0.0208$ ohm for 4-20mA+HART (*for this output type the communication load resistance is 250 ohm; **the 0-2119 ohm range applies under nominal working conditions, 250-600 ohm applies to HART communication); ≥ 5 kohm (100 kohm recommended) for voltage output; not applicable (/) to RS485. Transmission distance: < 1000 m (4-20mA and HART); < 5 m (voltage output); < 1200 m (RS485). Power consumption: ≤ 500 mW (20.8mA@24VDC); ≤ 17.5 mW (0.5-4.5VDC@5VDC); ≤ 168 mW (RS485@24VDC).

AMBIENT AND PROCESS CONDITIONS

Working temperature	-10 to 70 °C
Storage temperature	-30 to 80 °C
Medium temperature	-10 to 70 °C
Protection class	IP68
Hazardous area rating	ExiaIICT4 (GYBI6.1963X) — applies only to 4-20mA output
Insulation resistance	≥ 20 Mohm @ 100VDC

LMP633-NBN

LEEC

Complete Order Code Structure

BASE MODEL: LMP633-NLN (code printed on the source data sheet; corresponds to JMH catalog code LMP633-NBN)

SENSOR — PRESSURE RANGE (CODE)

Pressure range	L203G	Nominal value (URL): 20 kPa
	L353G	Nominal value (URL): 35 kPa
	L104G	Nominal value (URL): 100 kPa (quick delivery available)
	L204G	Nominal value (URL): 200 kPa (quick delivery available)
	L704G	Nominal value (URL): 700 kPa (quick delivery available)
	L105G	Nominal value (URL): 1000 kPa / 1 MPa (quick delivery available)
	L175G	Nominal value (URL): 1700 kPa / 1.7 MPa (quick delivery available)
	L355G	Nominal value: 3.5 MPa (actual URL 2 MPa due to seal limit)

SENSOR — DIAPHRAGM, FILL FLUID AND SEAL

Isolating diaphragm material	S	SUS316 stainless steel (quick delivery available)
Insulating fill fluid	S	Silicone oil, process temperature -45 to 205°C (quick delivery available)
Sensor seal	S	O-ring, FKM, process temperature -20 to 200°C (quick delivery available)
	F	Welded stainless steel seal

ELECTRICAL CONNECTION

Electrical connection	N1	PUR cable, outer diameter (7.5±0.2) mm (quick delivery available)
	N2	PTFE cable, outer diameter (7.5±0.2) mm
Cable entry protector	R0	None (quick delivery available)

OUTPUT

Output signal	F	4-20mA, 2-wire, 10-30VDC power supply (quick delivery available)
	H	4-20mA+HART, 2-wire, 16.5-55VDC power supply (quick delivery available)
	5	0.5-4.5VDC, 3-wire, 6-15VDC power supply
	6	0.5-4.5VDC ratiometric, 3-wire, 5VDC power supply (quick delivery available)
	R	Modbus-RTU/RS485, 4-wire, 5VDC/9-30VDC power supply
	G	Modbus-RTU/RS485 (with pressure and temperature signal), 4-wire, 5VDC/9-30VDC power supply

PROBE

Material	4	SUS304 stainless steel (quick delivery available)
	6	SUS316 stainless steel (quick delivery available)
Specification	H28	Submersible probe outer diameter 28 mm (quick delivery available)

CABLE

Cable length	Ln	0 < n ≤ 200 m; e.g. 5m=L5, 10m=L10, 100m=L100. Permitted error range: 0-0.2 m (quick delivery available)
--------------	-----------	--

LMP633-NBN

LEEG

Options, Factory Settings and Certifications

FIXED MOUNTING ACCESSORY

/P1	Counterweight (to secure the product in areas of fast flow or high-density medium), M22×1(M), SUS304 — quick delivery available
/P2	Cable clamp (to secure and support the assembly), PVC
/P3	Threaded connection (to secure and support the top part), G1-1/2(M), SUS304 — quick delivery available
/P4	Threaded connection (to secure and support the bottom part), M22×1(M) changes to M22×1.5(M), SUS304 — quick delivery available

CALIBRATION REPORT

/Q1	Per user requirement — quick delivery available
-----	---

APPROVALS (MULTIPLE)

/I1	Intrinsic safety certificate, ExialICT4, NEPSI
/F3	CE certificate

WETTED PARTS TREATMENT

/G1	Degreasing treatment
/G2	Electropolishing treatment

DEFAULT FACTORY SETTINGS

Factory settings

Not specified in the data sheet — this LMP633-NLN data sheet does not include a factory settings table (e.g., TAG position)

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001-2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT021353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExialICT4
Ambient T.: -40 to +60 °C
Medium T.: +120 °C max.
Reg.: GYB16.1963X (parameters: max....

Source: LEEG 'LMP633-NLN Piezoresistive silicon submersible level transmitter' data sheet, Rev. 2015.12.V1.0-1 (Shanghai LEEG Instruments Co., Ltd). NOTE: t...



Level › Hydrostatic Level Transmitters

LMP633-NSN-S

LEEG


Sanitary Submersible Level Transmitter

LEEG

NEW 2026

DESCRIPTION

Sanitary submersible level transmitter, submersible probe from the LEEG line for continuous hydrostatic level measurement.

TECHNICAL SPECIFICATIONS

- Output: 4-20 mA (2-wire)
- Cable: PUR with atmospheric venting
- Body: 316L stainless steel
- Protection: IP68

TYPICAL APPLICATIONS

- Wells, cisterns and tall tanks
- Pumping control in water and effluent networks
- Remote level monitoring in treatment plants

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP68

ELECTRICAL CONNECTION

Self-supporting vented PUR cable, length to order

PROCESS TEMPERATURE

Process: up to 60 °C

CERTIFICATION / QUALITY

Ceramic membrane or 316L stainless steel



LMP633-NSN-S

LEEC

Measuring Ranges and Performance

MEASURING RANGES AND LIMITS (hydrostatic level / gauge pressure — convertible to mH₂O@4°C,...)

SENSOR CODE (p.8)	NOMINAL VALUE (URL)	MIN. CALIBRABLE SPAN	LRL	URL	OVERLOAD LIMIT
S403G	40 kPa	5 kPa	0 kPa	40 kPa	1 MPa
S254G	250 kPa	40 kPa	0 kPa	250 kPa	4 MPa
S105G	1 MPa	250 kPa	0 kPa	1 MPa	6 MPa
S305G	*3 MPa	1 MPa	0 kPa	2 MPa	15 MPa

REFERENCE ACCURACY

Reference accuracy — Typical (linear output) ±0.1% URL

Reference accuracy — Maximum / voltage output ±0.5% URL

Typical overall accuracy (comprehensive performance) ±0.1% URL

Stability ±0.2% URL / year

**Due to the limit of the seal structure, the URL of the S305G range is lower than its nominal value (nominal 3MPa, actual range 0-2MPa; 1MPa = 102 mH₂O@4°C). The stated overload limit is that of the sensor, not that of the complete submersible probe. Reference accuracy includes linearity, hysteresis and repeatability; calibration temperature 20°C ± 5°C; valid for the nominal values 40kPa, 250kPa, 1MPa and 3MPa. Test standard: GB/T28474 / IEC60770, zero-based calibration span, linear output, silicone oil fill, 316L stainless steel isolated diaphragm. Overall performance comprises, among other factors, reference accuracy and the effect of ambient temperature.*

EFFECTS ON MEASUREMENT

Ambient temperature effect Within the -20 to 80°C range, total impact ±0.2% URL/10K

Power supply effect Zero and span change must not exceed ±0.005% URL/V

Loading effect Zero and span change must not exceed ±0.05% URL/kohm

Vibration effect Per IEC61298-3/GB/T1827.3: 20g (5-2000Hz, max. vibration value < 3mm)

Durability Across the full measuring range, service life > 10 million pressure cycles @25°C

LMP633-NSN-S

LEEC

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Submersible-probe hydrostatic level transmitter, gauge pressure, monosilicon sensor with metallic isolated diaphragm. Measuring medium: fluids compatible with the wetted parts. Application: level measurement in containers/tanks, among others. Output signals and wiring type: 4-20mA (linear, 2-wire); 4-20mA+HART (linear, 2-wire); 0.5-4.5VDC (linear, 3-wire); Modbus-RTU/RS485 (linear, 4-wire). Insulation resistance: ≥ 20 Mohm @100VDC. EMC tests (current output only), per GB/T9254/CISPR22, IEC61000-4-2 to -4-6: radiated and conducted interference (OK), electrostatic discharge 4kV contact/8kV air (level B), immunity to RF electromagnetic fields 10V/m (level A), power-frequency magnetic field 30A/m (level A), electrical fast transients/burst 2kV (level B), surge 1kV line-to-line / 2kV line-to-ground (level B), immunity to RF conducted disturbances 3V (level A).
Damping	Total damping time constant: equal to the sum of the amplifier damping and the sensing capsule damping. Amplifier damping: 0-100 s adjustable. Start-up after power interruption: ≤ 3 s (HART output time: ≤ 6 s). Normal service after data recovery: ≤ 4 s (HART output time: 31 s).
Weight	Transmitter body: approx. 340 g (excluding cable; submersible probe diameter 28 mm, length approx. 147/156 mm). Cable weight per 5 m: PUR 0.32 kg; PTFE 0.41 kg. Fixed mounting accessories: counterweight P1 approx. 500 g (M22×1, SUS304); cable clamp P2 approx. 340 g (PVC); top threaded mounting accessory P3 approx. 520 g (G1-1/2, SUS304); bottom threaded mounting accessory P4 approx. 120 g (M22×1 to M20×1.5, SUS304).

POWER SUPPLY AND LOAD

4-20mA (2-wire)	10-30 VDC
4-20mA+HART (2-wire)	10.5/16.5-55 VDC
0.5-4.5VDC (3-wire)	6-15 VDC
0.5-4.5VDC ratiometric (3-wire)	5 VDC
Modbus-RTU/RS485 (4-wire)	5VDC / 9-30VDC

Permitted current: ≤ 20.8 mA (4-20mA and 4-20mA+HART); ≤ 3.5 mA (0.5-4.5VDC and ratiometric); ≤ 7 mA (RS485). Load resistance: $< (U-10)/0.0208$ ohm for 4-20mA; $< (U-10.5)/0.0208$ ohm for 4-20mA+HART* (*for this output type the communication load resistance is 250 ohm; the 0-2119 ohm value applies under nominal working conditions, 250-600 ohm applies to HART communication); ≥ 5 kohm (100 kohm recommended) for voltage output; not applicable (/) to RS485. Transmission distance: < 1000 m (4-20mA and HART); < 5 m (voltage output); < 1200 m (RS485). Power consumption: ≤ 500 mW (20.8mA@24VDC); ≤ 17.5 mW (0.5-4.5VDC@5VDC); ≤ 168 mW (RS485@24VDC).

AMBIENT AND PROCESS CONDITIONS

Working temperature	-10 to 70 °C
Storage temperature	-30 to 80 °C
Medium temperature	-10 to 70 °C
Protection class	IP68
Hazardous area rating (4-20mA output only)	ExiaIICT4 (GYB16.1963X)

LMP633-NSN-S

LEEC

Complete Order Code Structure

BASE MODEL: LMP633-NSN

SENSOR — PRESSURE RANGE (CODE)

Pressure range	S403G	Nominal value (URL): 40 kPa (quick delivery available)
	S254G	Nominal value (URL): 250 kPa (quick delivery available)
	S105G	Nominal value (URL): 1 MPa (quick delivery available)
	S305G	Nominal value (URL): 3 MPa (quick delivery available)

SENSOR — DIAPHRAGM, FILL FLUID AND SEAL

Diaphragm material	S	SUS316L (quick delivery available)
	H	Hastelloy C
Insulating fill fluid	S	Silicone oil, process temperature: -45 to 205°C (quick delivery available)
	D	Fluorocarbon oil, process temperature: -45 to 160°C
Sensor seal	F	Stainless steel welded seal (quick delivery available)

ELECTRICAL CONNECTION

Electrical connection	N1	PUR cable, outer diameter (7.5±0.2) mm (quick delivery available)
	N2	PTFE cable, outer diameter (7.5±0.2) mm
Cable entry protector	R0	None (quick delivery available)

OUTPUT

Output signal	F	4-20mA, 2-wire, 10-30VDC power supply (quick delivery available)
	H	4-20mA+HART, 2-wire, 16.5-55VDC power supply
	5	0.5-4.5VDC, 3-wire, 6-15VDC power supply
	6	0.5-4.5VDC ratiometric output, 3-wire, 5VDC power supply
	R	Modbus-RTU/RS485, 4-wire, 5VDC/9-30VDC power supply
	G	Modbus-RTU/RS485, 4-wire (with pressure and temperature signal), 5VDC/9-30VDC power supply

PROBE

Probe material	4	SUS304 (quick delivery available)
	6	SUS316 (quick delivery available)
Specification	H28	Submersible probe diameter: 28 mm (quick delivery available)

CABLE

Cable length	Ln	0 ≤ n ≤ 200 m; e.g. 5m=L5, 10m=L10, 100m=L100. Permitted error range: 0-0.2 m (quick delivery available)
--------------	-----------	--

LMP633-NSN-S

LEEG

Options, Factory Settings and Certifications

FIXED MOUNTING ACCESSORY

/P1	Counterweight, to secure the product in areas of fast flow or high-density medium — M22×1(M), SUS304
/P2	Cable clamp, to secure and support the product — PVC
/P3	Threaded mounting accessory, to secure the top part and support the product — G1-1/2(M), SUS304
/P4	Threaded mounting accessory, to secure the bottom part and support the product — M22×1(M) changes to M20×1.5(M), SUS304

CALIBRATION REPORT

/Q1	Calibration report provided by the manufacturer (quick delivery available)
-----	--

APPROVALS (MULTIPLE)

/I1	Intrinsic safety certificate, ExiaIICT4, NEPSI
/F3	CE certificate

WETTED PARTS TREATMENT

/G1	Degreasing treatment
/G2	Electropolishing treatment

DEFAULT FACTORY SETTINGS

Factory settings

Not specified in the data sheet — this LMP633-NSN-S data sheet does not include a factory settings table (e.g., TAG position)

FACTORY AND CE CERTIFICATE

Factory Certificate — Intertek

System: ISO 9001-2008 · Scope: Design and production of pressure transmitters · Registration: 110804039

CE Certificate — ISET

Mark: CE · EMC: 2014/30/EU · Standard: EN61326-1:2013 · Registration: IT021353LG161207

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

NEPSI

ExiaIICT4
Ambient T.: -40 to +60 °C
Medium T.: +120 °C
Reg.: GYB16.1963X (intrinsic safety p...

Source: LEEG LMP633-NSN-S Monosilicon submersible gauge pressure transmitter data sheet, Rev. 2016.04.V1.0



Level › Hydrostatic Level Transmitters

MPM4700

MICROSENSOR



Smart Level Transmitter — Intelligent Level Transmitter

Microsensor · Submersible Hydrostatic

NEW 2026

DESCRIPTION

The MPM4700 is a submersible level transmitter from MICROSENSOR, fully sealed in stainless steel, designed for precise hydrostatic pressure level measurement. It incorporates a high-stability OEM piezoresistive pressure sensor and a high-precision signal processing circuit, with digital temperature compensation and nonlinear correction to improve measurement accuracy. The waterproof cable is sealed to the equipment body and includes an integrated vent tube, allowing prolonged immersion in the measured liquid. Its compact, integral design, together with standardized output signals, simplifies field installation and integration into automated control systems.

TECHNICAL SPECIFICATIONS

- 28 factory ranges: 0-1 to 0-200 mH₂O
- Digital temperature compensation and nonlinear correction
- Submersible stainless steel body, IP68
- Long-term stability $\leq \pm 0.2\%$ FS/year
- Accuracy: $\pm 0.1\%$ FS (typ.) · $\pm 0.25\%$ or $\pm 0.5\%$ FS depending on range
- 4-20 mA, RS485 (ASCII/Modbus RTU) or HART output
- Intrinsically safe Ex ia IIC T4 Ga (optional)
- CE, RoHS, EAC, PCEC certifications

TYPICAL APPLICATIONS

- ⊙ Pharmaceutical and Metallurgical Industry
- ⊙ Power Generation Plants and Mining
- ⊙ Drinking Water and Urban Drainage
- ⊙ Hydrological Exploration

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP68

ELECTRICAL CONNECTION

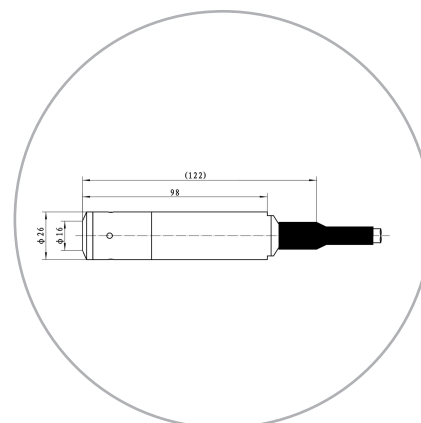
2-wire 4-20mA / 4-wire RS485 / HART · cable with waterproof seal and integrated vent tube

PROCESS TEMPERATURE

Compensated: -10 to 70°C · Working: -20 to 70°C (PE/PVC cable) or -20 to 80°C (PUR cable) · Storage: -20 to 85°C

CERTIFICATION / QUALITY

CE, RoHS, EAC, PCEC · Ex ia IIC T4 Ga intrinsically safe (optional, code i)



MPM4700

MICROSENSOR

Measuring Ranges and Performance

MEASURING RANGES AND ACCURACY — gauge pressure (7 of 28 factory ranges)

RANGE	ACCURACY	OVERPRESSURE	CODE
0 to 1 mH ₂ O	±0.5% FS	4 mH ₂ O	H001
0 to 5 mH ₂ O	±0.25% FS	20 mH ₂ O	H005
0 to 10 mH ₂ O	±0.1% FS	20 mH ₂ O	H010
0 to 20 mH ₂ O	±0.1% FS	40 mH ₂ O	H020
0 to 50 mH ₂ O	±0.1% FS	140 mH ₂ O	H050
0 to 100 mH ₂ O	±0.1% FS	200 mH ₂ O	H100
0 to 200 mH ₂ O	±0.1% FS	400 mH ₂ O	H200

REFERENCE ACCURACY

Accuracy ±0.5% FS	Range 0-1 mH ₂ O
Accuracy ±0.25% FS	Ranges 0-2 to 0-7 mH ₂ O
Accuracy ±0.1% FS	Ranges 0-8 to 0-200 mH ₂ O
Long-term stability	≤ ±0.2% FS / year

The table shows 7 of the 28 available factory ranges (0-1 to 0-200 mH₂O), for reference; the range is set at order time with the corresponding HXXX code. The specified accuracy applies within the compensated temperature range (-10 to 70°C). Units with HART output do not support the ±0.1% FS accuracy class — the maximum accuracy available with HART is ±0.25% FS.

EFFECTS ON MEASUREMENT

Compensated temperature	-10 to 70°C
Working temperature	-20 to 70°C (PE/PVC cable) · -20 to 80°C (PUR cable)
Storage temperature	-20 to 85°C
Vibration	20 g, 20 to 5000 Hz
Shock	20 g, 11 ms

MPM4700

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Two-wire 4–20 mA DC (code E) · 4-wire RS485 ASCII protocol (code R4, up to 99 units per bus) · 4-wire RS485 Modbus RTU (code R8, up to 99 units per bus) · HART (code H, non-flameproof). Maximum admissible load resistance: $\leq (U-10)/0.02$ in the intrinsically safe 4–20mA/RS485 version (10–28 VDC), or $\leq (U-12)/0.02$ in the HART version (12–30 VDC).
Damping	Not specified in the data sheet
Weight	≤ 250 g (excluding cable weight)

POWER SUPPLY AND LOAD

4–20 mA DC / RS485 (intrinsically safe) 10 to 28 VDC

HART (non-flameproof) 12 to 30 VDC

In the intrinsically safe version, power is delivered through a safety barrier. The cable has a waterproof seal to the equipment body and an integrated vent tube, allowing prolonged immersion in the measured liquid without loss of atmospheric reference.

AMBIENT AND PROCESS CONDITIONS

Protection	IP68
Pressure type	Gauge
Isolating diaphragm	AISI 316L / Ta1 titanium
Housing	AISI 304 / AISI 316L / TC4 titanium
Cable	PE / PUR / PVC
Sensor seal	O-ring (FKM/EPDM) or laser welding

MPM4700

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MPM4700

RANGE

Range	HXXX	4-digit factory range code; see the measuring ranges table on the previous page (0-1 to 0-200 mH2O, 28 ranges available).
-------	-------------	---

OUTPUT SIGNAL

Output	E	4-20 mA DC
	R4	RS485, ASCII protocol
	R8	RS485, Modbus RTU protocol
	H	HART (non-flameproof)
	ER4	4-20 mA DC + RS485 ASCII
	ER8	4-20 mA DC + RS485 Modbus RTU

POWER SUPPLY

Power supply	V10	12 to 30 VDC
	V22	10 to 28 VDC (intrinsically safe)

ACCURACY

Accuracy	A0	±0.1% FS
	A1	±0.25% FS
	A2	±0.5% FS

CONSTRUCTION MATERIAL (diaphragm / housing)

Material	22	AISI 316L diaphragm · AISI 304 housing
	24	AISI 316L diaphragm · AISI 316L housing
	40	Ta1 titanium diaphragm · TC4 titanium housing

SENSOR SEAL

Seal	00	FKM (standard)
	01	EPDM (optional, depending on medium compatibility)
	02	Welded (optional, depending on medium compatibility)

CABLE MATERIAL

Cable	P1	PE (standard)
	P2	PUR (optional, depending on medium compatibility)
	P3	PVC (optional, depending on medium compatibility)

CABLE LENGTH

Length	L001...L200	From 1 to 200 m, per 3-digit code (see the full data sheet for the complete list of available lengths).
--------	--------------------	---

CERTIFICATION

Certification	N	None
	i	Intrinsically safe Ex ia IIC T4 Ga
	T	Ship-use

MPM4700

MICROSENSOR

Order Code (continued)

ACCESSORY

Accessory	N	No accessories
	Yb5	Yb junction box, 5-way terminals
	Yc5	MS200, 5-way terminals
	Yd	PD140
	Ye	Ye, without indicator
	YeM6	Ye with M6 local indicator
	YeM7	Ye with M7 local indicator
	MS01	Polymer plug
	LJ8	Locking adapter (optional flange)

MPM4700

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Range

Per the HXXX code requested in the order

Output signal

Per the code requested in the order

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — MICROSENSOR

Mark: CE, RoHS, EAC, PCEC · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Ex ia IIC T4 Ga

Order code "I"
Ambient T.: Not detailed per va...
Medium T.: Per process medi...
Reg.: Not specified in the data sheet

Source: MICROSENSOR MPM4700 Smart Level Transmitter data sheet, Rev. V6.0 04/2025



Ultrasonic and Radar Sensors

2 technical data sheets in this group

WHAT IS IT?

Instruments that measure the level of a product with no physical contact with it.

HOW DOES IT WORK?

They emit a wave (ultrasonic, or electromagnetic in the case of radar) toward the product surface and measure the time it takes to return as an echo, calculating the distance and therefore the level.

WHEN IS IT USED?

With corrosive, abrasive or food products, or wherever any contact between the instrument and the product needs to be avoided; radar additionally tolerates steam, foam and dust.





Level › Ultrasonic and Radar Sensors

LKZLD

MICROSENSOR

Radar Level Meter — Radar Level Transmitter

Microsensor · 26 GHz



BUY ONLINE

DESCRIPTION

The LKZLD is a high-frequency (26 GHz) radar level meter from MICROSENSOR, non-contact with the medium, designed for continuous level measurement of liquids and solids under demanding process conditions: dense steam, agitation, condensation, foam or surface dust. Available in two horn antenna variants, with a range of up to 30 m (± 3 mm accuracy) or up to 70 m (± 10 mm accuracy), 2- or 4-wire electronics with 4-20 mA, HART or RS-485 Modbus output, an IP67 aluminum housing and an AISI 304/316 antenna. Suitable for storage tanks, silos and processes with difficult ambient conditions.

TECHNICAL SPECIFICATIONS

- Range: up to 30 m (± 3 mm) or 70 m (± 10 mm)
- Frequency: 26 GHz radar, non-contact
- Output: 4-20 mA / HART or RS-485 Modbus
- IP67 aluminum housing · AISI 304/316 antenna
- Insensitive to steam, foam, dust and condensation

TYPICAL APPLICATIONS

- Storage Tanks
- Silos and Bulk Solids
- Chemical and Petrochemical
- Water and Effluents

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP67 (aluminum housing)

ELECTRICAL CONNECTION

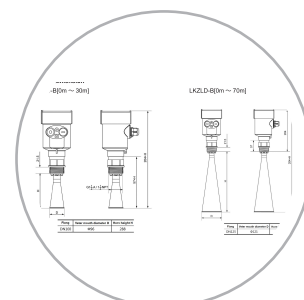
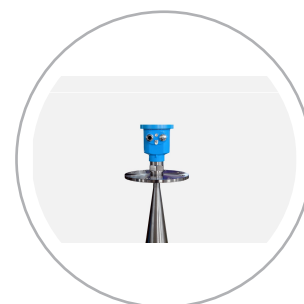
2 or 4-wire · M20×1.5 or ½" NPT · 4-20 mA / HART / RS-485 Modbus

PROCESS TEMPERATURE

Process: -40 to 100°C (up to 130°C) · Ambient: -40 to 70°C

CERTIFICATION / QUALITY

Not specified in the data sheet



LKZLD

MICROSENSOR

Measuring Ranges and Performance

RANGE, ANTENNA AND ACCURACY VARIANTS

MODEL	MAX. RANGE	ANTENNA	ACCURACY	BEAM ANGLE	BLIND ZONE
LKZLD-B [0~30m]	30 m	Ø96 mm horn, AISI ...	±3 mm	8°	0.5 m
LKZLD-B [0~70m]	70 m	Ø121 mm horn, AISI 3...	±10 mm	6°	1 m

REFERENCE ACCURACY

Accuracy (0–30 m variant) ±3 mm

Accuracy (0–70 m variant) ±10 mm

Display resolution 1 mm

Microwave frequency 26 GHz

Accuracy depends on the selected antenna variant; the unit applies digital pulse processing to discriminate false echoes from surface agitation, foam or dust.

EFFECTS ON MEASUREMENT

Measurement / update interval ≈1 s

Damping 0 to 36 s, configurable

Blind spot 0.5 m (30 m variant) · 1 m (70 m variant)

Seismic resistance Mechanical vibration 10 m/s², 10–150 Hz

Behavior with steam, foam, dust or condensation Designed to operate without direct contact with the medium; see blind zone and beam angle per variant

LKZLD

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Output configurable per electronics: 2-wire 4-20 mA DC / 24 VDC, 2-wire 4-20 mA DC / HART, 4-wire 4-20 mA DC / 220 VAC, or 4-wire 4-20 mA DC / RS-485 Modbus (high-frequency radars). Output resolution: 1.6 µA. Configurable fault current at 20.5 mA, 22 mA or 3.9 mA.
Damping	0 to 36 s, configurable
Weight	Not specified in the data sheet

POWER SUPPLY AND LOAD

24 VDC (2-wire electronics)	0.75 W
12-24 VDC / 220 VAC (4-wire electronics, RS-485/Modbus)	90 mW

Cable entry M20×1.5 (½" NPT thread option). Connection terminals with admissible cross-section of 1.0 mm². Digital communication protocol Modbus or HART depending on the selected electronics.

AMBIENT AND PROCESS CONDITIONS

Working / storage temperature	-40 to 70°C
Process medium temperature	-40 to 100°C (up to 130°C with general process seal, code H)
Relative humidity	< 95% RH
Protection	IP67
Working pressure	Normal process pressure (non-pressurized)
Antenna and housing material	AISI 304/316 antenna · aluminum housing

LKZLD

MICROSENSOR

Complete Order Code Structure

BASE MODEL: LKZLD

TYPE AND RANGE

Type and range	B	26 GHz high-frequency radar — range variant (0-30 m or 0-70 m) defined by the antenna type chosen in the next group.
----------------	----------	--

PROCESS CONNECTION / MOUNTING ACCESSORY

Connection / accessory	G	G1-1/2" A thread, AISI 304
	N	Standard mounting bracket
	M	Mounting bracket with rain shield
	H	G1-1/2" mounting base
	C	DN100 PN16 C flange, AISI 304
	E	DN125 PN16 C flange, AISI 304

ANTENNA TYPE AND MATERIAL

Antenna	C	Ø96 mm horn, AISI 304 (0-30 m range)
	D	Ø121 mm horn, AISI 304 (0-70 m range)
	Y	Custom, consult factory

SEAL / PROCESS TEMPERATURE

Seal	H	General type, -40 to 130°C
------	----------	----------------------------

ELECTRONICS UNIT

Electronics	1	4-20 mA DC, 24 VDC, 2-wire
	2	4-20 mA DC / HART, 24 VDC, 2-wire
	3	4-20 mA DC, 220 VAC, 4-wire
	4	RS-485, Modbus protocol, 4-wire (high-frequency radars only)

HOUSING / PROTECTION

Housing	L	Aluminum, IP67
---------	----------	----------------

ELECTRICAL CONNECTION

Electrical connection	M	M20×1.5 (female)
	N	½" NPT (female)

LOCAL DISPLAY

Display	X	Without display
	Y	With programmable display

LKZLD

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Range variant

Per the antenna requested in the order (30 m or 70 m)

Output electronics

Per the code requested in the order

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet

Mark: Not specified in the data sheet · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: MICROSENSOR Radar Level Meter LKZLD data sheet



Level › Ultrasonic and Radar Sensors

LR725L
MICROSENSOR


BUY ONLINE

Ultrasonic Level Meter – Ultrasonic Level Transmitter

Microsensor · Up to 50 m

DESCRIPTION

The LR725L is an ultrasonic level transmitter from MICROSENSOR, non-contact with the medium, available in integrated type (electronics and probe in a single body) or separate type (remote probe linked by cable up to 100 m). It measures liquid level, solids level or differential level by ultrasonic echo time-of-flight, with factory ranges from 5 to 50 m, accuracy of $\pm 0.5\%$ to $\pm 1.0\%$ FS, local LCD display, 4-20 mA output, up to 4 programmable relays and optional RS-485/RS-232 digital communication.

TECHNICAL SPECIFICATIONS

- Range: 5 to 50 m from factory
- Accuracy: $\pm 0.5\%$ to $\pm 1.0\%$ FS
- Integrated or separate type (probe up to 100 m)
- 4-20 mA output + up to 4 programmable relays
- Optional RS-485/RS-232 communication

TYPICAL APPLICATIONS

Storage Tanks

Water and Effluents

Chemical and Petrochemical

Food and Beverage

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65 (integrated) · IP65/IP68 (separate, converter/probe)

ELECTRICAL CONNECTION

4-20 mA + up to 4 relays · RS-485/RS-232 optional

PROCESS TEMPERATURE

Probe: -20 to 80°C · Ambient/indicator: -20 to 60°C

CERTIFICATION / QUALITY

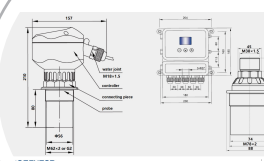
Not specified in the data sheet



Integrated type



Separated type



LR725L

MICROSENSOR

Measuring Ranges and Performance

AVAILABLE MEASURING RANGES

CODE	RANGE
05	5 m
10	10 m
15	15 m
20	20 m
30	30 m
40	40 m
50	50 m

REFERENCE ACCURACY

Accuracy ±0.5% FS to ±1.0% FS, depending on range

Resolution 3 mm or ±0.1% FS (the larger of the two values applies)

Measurement principle by ultrasonic echo time-of-flight ($D = V \times T / 2$) and level calculation by difference with the installation height ($L = H - D$); available in integrated type (electronics and probe in a single body) or separate type (remote probe via cable, up to 100 m).

EFFECTS ON MEASUREMENT

Local display LCD in English, level/distance indication

Assembly protection (integrated type) Indicator IP65

Assembly protection (separate type) Converter IP65 · probe IP68

Probe cable length 10 m standard, up to 100 m (separate type only)

LR725L

 MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Analog output 4–20 mA DC (maximum load 510 ohm). Relay output: single channel 2 groups, or dual channel 4 groups, AC 250V/8A or DC 30V/5A contacts, programmable by level and state. Optional RS-485 / RS-232 digital communication (manufacturer's protocol).
Damping	Not specified in the data sheet
Weight	Not specified in the data sheet

POWER SUPPLY AND LOAD

220 VAC ±15% (standard)	—
24 VDC (optional, 4-wire)	120 mA
12 VDC / 9 VDC / battery (custom)	Per configuration

Maximum admissible load on the analog output: 510 ohm. Standard 10 m probe cable (separate type), extendable up to 100 m per order.

AMBIENT AND PROCESS CONDITIONS

Ambient temperature — indicator / electronics	–20 to 60°C
Ambient temperature — probe	–20 to 80°C
Protection — integrated type	IP65
Protection — separate type	Converter IP65 · probe IP68
Digital communication	RS-485 / RS-232, optional

LR725L

MICROSENSOR

Complete Order Code Structure

BASE MODEL: LR725L

MOUNTING TYPE

Mounting	W	Integrated (electronics and probe in a single body)
	F	Separate (remote probe, independent converter)

APPLICATION

Application	YW	Liquid level
	WW	Solid / bulk material level
	CJ	Differential level

MEASURING RANGE

Range	05-50	2-digit code per range: 05 (5 m) to 50 (50 m); see the full ranges table on the previous page.
-------	--------------	--

PROBE MATERIAL

Probe material	A	ABS
	F	PTFE
	T	Other, consult factory

PROBE MOUNTING DIMENSION

Mounting dimension	F	G1-1/2", Ø47.8 mm
	G	G2", Ø59.6 mm
	T	Other, consult factory

MOUNTING METHOD

Mounting	N	No flange
	C	DN50 flange
	E	DN80 flange
	F	DN100 flange

EXTENDED PROBE THREAD LENGTH

Extended thread length	000	Standard (no extension) or length in mm, 3-digit code
------------------------	------------	---

POWER SUPPLY

Power supply	DCSP	12 VDC / 9 VDC / battery, custom
	DC	24 VDC (4-wire)
	AC	220 VAC (4-wire)
	TC	24 VDC (2-wire)

NUMBER OF RELAYS

Relays	R0	No relay
	R2	2 relays (single channel)
	R4	4 relays (dual channel)

LR725L

MICROSENSOR

Order Code (continued)

OUTPUT SIGNAL

Output	MA	4-20 mA
	C2	RS-232
	C4	RS-485
	C2MA	RS-232 + 4-20 mA
	C4MA	RS-485 + 4-20 mA
	HTMA	4-20 mA + HART
	TS	Other, consult factory

NUMBER OF PROBES

Probes	S1	1 probe
	S2	2 probes

ELECTRONICS HOUSING MATERIAL

Housing material	PL	ABS
	AI	Cast aluminum

PROBE CABLE LENGTH

Cable length	00	No cable (integrated type)
	nnn	Length in meters, 3-digit code (separate type, up to 200 m max.)

LR725L

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Calibrated range

Per the range code requested in the order (05 to 50)

Number of relays and output signal

Per the code requested in the order

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet

Mark: Not specified in the data sheet · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: MICROSENSOR Ultrasonic Level Meter LR725L data sheet



Level Controller

1 technical data sheet in this group

WHAT IS IT?

Electronic unit that centralizes the management of one or more level signals.

HOW DOES IT WORK?

It receives signals from level transmitters and executes control logic: pump start/stop, threshold alarms and historical logging of the variable.

WHEN IS IT USED?

In pumping stations and plants with multiple measurement points that require centralized automation and supervision.





LEVEL

Level · Level Controller

MPM460W

MICROSENSOR



BUY ONLINE

Multichannel Level Transmitter Controller

Microsensor · Multichannel

NEW 2026

DESCRIPTION

The MPM460W is an intelligent level controller from MICROSENSOR, designed for demanding outdoor and field environments. It integrates a submersible diffused piezoresistive silicon probe with digital nonlinear compensation and a controller unit with a dual high-brightness LED display (4-digit main and secondary reading). It offers standard 4–20 mA DC or 0–10 VDC analog output, plus RS-485 digital communication with Modbus RTU protocol for data networks, and up to 8 freely configurable relay outputs by value and state, with adjustable hysteresis to prevent contact bounce. It is used for level measurement, transmission, local indication and control in industries such as chemical, metallurgy, water supply and effluent treatment, energy, marine and environmental protection.

TECHNICAL SPECIFICATIONS

- Range: 0–1 to 0–20 mH₂O (12 factory ranges)
- Up to 8 relay outputs, configurable by value and state
- Cast aluminum housing, IP65
- Output 4–20 mA / 0–10 VDC or RS-485 Modbus RTU
- 4-digit main and secondary LED display
- 24 VDC or 220 VAC power supply

TYPICAL APPLICATIONS

- Chemical and Petrochemical
- Metallurgy
- Water Treatment
- Power Generation
- Environmental Protection

ADDITIONAL TECHNICAL DATA

IP PROTECTION

IP65 (controller housing)

PROCESS TEMPERATURE

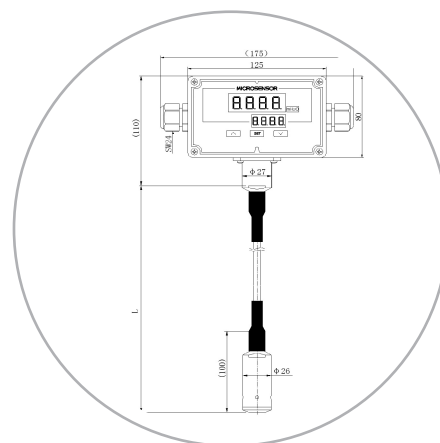
Process: –10 to 80°C · Ambient: –10 to 60°C

ELECTRICAL CONNECTION

Screw terminals, 0.2–1.5 mm² cross-section · up to 8 relay outputs

CERTIFICATION / QUALITY

Not specified in the data sheet



MPM460W

MICROSENSOR

Measuring Ranges and Performance

MEASURING RANGES, OVERPRESSURE AND ACCURACY

CODE	RANGE	OVERPRESSURE	ACCURACY
H001	0 – 1 mH ₂ O	4 mH ₂ O	±0.5% FS
H002	0 – 2 mH ₂ O	4 mH ₂ O	±0.5% FS
H003	0 – 3 mH ₂ O	7 mH ₂ O	±0.5% FS
H004	0 – 4 mH ₂ O	14 mH ₂ O	±0.5% FS
H005	0 – 5 mH ₂ O	20 mH ₂ O	±0.5% FS
H006	0 – 6 mH ₂ O	20 mH ₂ O	±0.5% FS
H007	0 – 7 mH ₂ O	20 mH ₂ O	±0.5% FS
H008	0 – 8 mH ₂ O	20 mH ₂ O	±0.5% FS
H009	0 – 9 mH ₂ O	20 mH ₂ O	±0.5% FS
H010	0 – 10 mH ₂ O	20 mH ₂ O	±0.5% FS
H015	0 – 15 mH ₂ O	40 mH ₂ O	±0.5% FS
H020	0 – 20 mH ₂ O	40 mH ₂ O	±0.5% FS

REFERENCE ACCURACY

Reference accuracy ±0.5% FS, per standard GB/T 17614.1-2015 / IEC 60770-1:2010

Thermal error (≤1 bar) ±0.03% FS/°C

Thermal error (>1 bar) ±0.02% FS/°C

Test conditions declared by the manufacturer: ambient temperature 20°C ±5°C, relative humidity 45-75%.

EFFECTS ON MEASUREMENT

Long-term stability ≤±0.5% FS/year

General admissible overpressure ≤1.5 times full scale (see specific limit per range in the table above)

Vibration 3 g, 0-300 Hz

Shock ≤10 g

MPM460W

MICROSENSOR

Output, Power Supply and Ambient Conditions

OUTPUT SIGNAL AND DAMPING

Output	Standard analog output 4–20 mA DC or 0–10 VDC (depending on output code); 1–5 VDC and 0–5 VDC also available. Version with RS-485 digital communication, Modbus RTU protocol (code R8), or combined with analog output (code ER8). Up to 8 relay outputs, freely configurable by value and state, with adjustable hysteresis to prevent contact bounce.
Damping	Not specified by the manufacturer in the data sheet.
Weight	Not specified by the manufacturer in the data sheet.

POWER SUPPLY AND LOAD

Power supply	24 VDC (code V1) or 220 VAC (code V220)
Maximum consumption	≤3.5 W (1 to 5 relay outputs) · ≤5 W (6 to 8 relay outputs)
Relay load capacity	240 VAC / 3 A or 30 VDC / 3 A
Contact service life	> 100,000 operations

Terminals with admissible cable cross-section of 0.2 to 1.5 mm². Relays are freely configured by level value and state, with adjustable hysteresis to prevent contact bounce under fluctuating levels.

AMBIENT AND PROCESS CONDITIONS

Ambient temperature (operation)	–10 to 60°C
Process medium temperature	–10 to 80°C
Storage temperature	–40 to 80°C
Vibration	3 g, 0–300 Hz
Shock	≤10 g
Protection	IP65 (controller housing)

MPM460W

MICROSENSOR

Complete Order Code Structure

BASE MODEL: MPM460W

MEASURING RANGE

Measuring range	HXXX	4-character code per range (H001 to H020); see the full ranges, overpressure and accuracy table on the previous page.
-----------------	-------------	---

OUTPUT SIGNAL

Output signal	E	4-20 mA DC
	F	1-5 VDC
	J	0-5 VDC
	V	0-10 VDC
	R8	RS-485, Modbus RTU
	ER8	4-20 mA DC + RS-485, Modbus RTU

POWER SUPPLY

Power supply	V1	24 VDC
	V220	220 VAC

ACCURACY

Accuracy	A2	±0.5% FS
----------	-----------	----------

CONSTRUCTION MATERIAL

Diaphragm / probe housing	22	SS316L / SS304
	24	SS316L / SS316L

SENSOR SEAL

Sensor seal	00	FKM (standard)
	01	EPDM (optional, for special media depending on compatibility)

CABLE MATERIAL

Cable material	P1	PE (standard)
	P2	PUR (optional, for special media depending on compatibility)
	P3	PVC (optional, for special media depending on compatibility)

CABLE LENGTH

Cable length	Lnnn	4-character code per length in meters, from L001 (1 m) to L050 (50 m) in standard 1 m steps (with L1D5 = 1.5 m); see the manufacturer's data sheet for the full list of options.
--------------	-------------	--

NO. OF RELAY OUTPUTS (independent suffix)

Number of relay outputs	J1-J8	From 1 to 8 relay outputs, freely configurable by value and state (J1 = 1 output ... J8 = 8 outputs); specified as an additional code, independent of the rest of the specification.
-------------------------	--------------	--

MPM460W

MICROSENSOR

Options, Factory Settings and Certifications

DEFAULT FACTORY SETTINGS

Calibrated range

Per the range code requested in the order (H001 to H020)

Relay assignment

No factory-preassigned value/state; configured on site or via the controller's software (RS-485 port)

Output signal

Per the output code requested in the order

FACTORY AND CE CERTIFICATE

Factory Certificate — Not specified in the data sheet

System: Not specified in the data sheet · Scope: Not specified in the data sheet · Registration: Not specified in the data sheet

CE Certificate — Not specified in the data sheet

Mark: Not specified in the data sheet (the data sheet mentions "improved EMC design" without detailing the standard or CE marking number) · EMC: Not specified in the data sheet · Standard: Not specified in the data sheet · Registration: Not specified in the data sheet

FLAMEPROOF CERTIFICATE BY BODY

Flameproof certification does not apply to this model.

INTRINSIC SAFETY CERTIFICATE BY BODY

Intrinsic safety certification does not apply to this model.

Source: MICROSENSOR MPM460W Multichannel Smart Level Controller data sheet, Rev. V4.0 05/2025

Technical Services

Repair, certification and on-site plant survey: JMH support beyond the instrument

01

Instrument Repair

We repair pressure and temperature measurement instruments of any brand, not just those manufactured by JMH.

- Free diagnosis and quote
- In-house and third-party spare parts
- In-house workshop and CNC machining
- Return with test protocol

02

Certification with Traceability

We calibrate and certify instruments with primary and secondary standards traceable to INTI.

- INTI-traceable standards
- Auditable test protocols
- Under ISO 9001:2015 Management System
- Pressure range: -1 to 700 bar

03

On-Site Plant Survey

On-site survey of your plant's instrument fleet, with condition diagnosis and an action plan.

- Proactive on-site diagnosis
- Report with risk traffic-light per instrument
- Report delivered in 48/72 hs
- Calibration or replacement recommendation

ON-SITE TECHNICAL SERVICE

Is your plant operating at 100% of its capacity?

We go to your plant and proactively diagnose the installed base of your pressure and temperature lines. We deliver a condition report with a risk traffic-light per instrument in 48/72 hs, and a concrete action plan: what to calibrate, what to repair and what to replace.

48/72 hs

Report delivery
100%

On-site survey
+1,000

Plants that trust JMH

Industries we work with

Oil & Gas

Mining

Food and Beverage

Water Treatment

Energy

Chemical and Petrochemical

Pharmaceutical

Hydraulics

Paper

Machinery

We also offer

Vacuum Seal Assembly

Assembly under vacuum chamber with glycerin, silicone or food-grade oil.

Special R&D Developments

Exotic alloys (Hastelloy C-276, tantalum) and custom-machined thermowells.

Heat Dissipators and Siphons

Thermal insulation accessories for processes above 150 °C.

More From Our Technical Service

LABORATORY SERVICES

System Fill: Transmitter + Seal

In addition to the mechanical assembly of the transmitter + diaphragm seal set, we offer filling under vacuum chamber with the fluid best suited to your process — from standard use to high temperature, differential pressure or food service.

- Silicone DC200 — standard use
- Glycerin
- Edible oil — food grade
- Silicone DC704 — high temperature
- Distilled water
- Fluorolube® — oxygen service



ORDER ONLINE

How do you request your technical service?

1

Tell us your case

By phone, email or WhatsApp: tell us what instrument you have and what you need.

2

Free diagnosis

We evaluate the instrument and send you a repair or calibration quote at no cost.

3

Work under protocol

We repair or calibrate using INTI-traceable standards, under an ISO 9001:2015 Management System.

4

Certified delivery

You receive the instrument with a test protocol or calibration certificate.

SUCCESS STORIES

Our instruments in action

At tienda.jmh.com.ar we share real case studies on how our pressure and temperature measurement solutions solve concrete operational challenges across different industries.

Oil & Gas

Mining

Brewing Industry

Dairy Industry

Water Treatment

Sugar Mills

Paper Mills



VIEW SUCCESS STORIES

Need assistance with your instrument now?

Tel: +54 11 5263 0404 · ventas@jmh.com.ar · www.jmh.com.ar

Unit Conversion Table

Pressure and temperature — commonly used technical conversion factors

Unit	Bar	Pa*	KPa	Psi	Kg/cm²	m H2O	Mm Hg	In H2O	In Hg
Bar	1	10 ⁵	100	14.504	1.02	10.197	750.064	401.463	29.530
Pa*	10 ⁻⁵	1	0.001	1.45x10 ⁻⁴	1.02x10 ⁻⁵	1.02x10 ⁻⁴	7.5x10 ⁻³	4.015x10 ⁻³	2.953x10 ⁻⁴
KPa	0.01	1000	1	0.145	1.02x10 ⁻²	0.102	7.50	4.014	0.295
Psi	6.895x10 ⁻²	6895	6.895	1	7.031x10 ⁻²	0.703	51.715	27.68	2.036
Kg/cm²	0.981	9.806x10 ⁴	98.06	14.223	1	10	735.562	393.701	28.959
m H2O	9.81x10 ⁻²	9.806x10 ³	980.665	142.234	10	1	7355.62	3937.01	289.59
Mm Hg	1.333x10 ⁻³	133.322	0.133	1.934x10 ⁻²	1.36x10 ⁻³	1.36x10 ⁻²	1	0.535	3.937x10 ⁻²
In H2O	2.491x10 ⁻³	249.089	0.249	3.613x10 ⁻²	2.54x10 ⁻³	2.54x10 ⁻²	1.868	1	7.356x10 ⁻²
In Hg	3.386x10 ⁻²	3386.39	3.386	0.491	3.453x10 ⁻²	0.345	25.4	13.595	1

* 1 Pa = 1 N/m². Table reading: 1 unit of the row equals N units of the column (e.g.: 1 Bar = 14.504 Psi).

Temperature Conversion

°C °F

°F = (°C × 9/5) + 32

°F °C

°C = (°F - 32) × 5/9

°C K

K = °C + 273.15

K °C

°C = K - 273.15

Reference Points

REFERENCE	CELSIUS	FAHRENHEIT	KELVIN
Absolute zero	-273.15 °C	-459.67 °F	0 K
Freezing point of water	0 °C	32 °F	273.15 K
Boiling point of water (1 atm)	100 °C	212 °F	373.15 K

Technical Glossary

Terms and acronyms commonly used in pressure, temperature, flow and level instrumentation

BSP

British Standard Pipe. Cylindrical (straight) thread profile that seals by bottoming out against a gasket at the base of the threaded port.

NPT

National Pipe Thread. Tapered thread profile that seals by interference between the thread flanks, with no need for a bottoming gasket.

BOURDON TUBE

Curved tubular sensing element that deforms proportionally to the applied pressure; it is the measuring mechanism used in most mechanical pressure gauges.

DIAPHRAGM

Flexible metal membrane that separates two media without allowing direct contact between them, transmitting pressure from one to the other; it is the active element of a diaphragm seal.

DIAPHRAGM SEAL

Accessory that isolates a measuring instrument from the process fluid by means of a diaphragm and a fill liquid, protecting it from aggressive, viscous or high-temperature fluids.

CAPILLARY

Very small-diameter flexible tube, filled with liquid, that connects a remote seal to its instrument at a distance.

FILL FLUID

Liquid (glycerin, silicone or food-grade oil, among others) that fills the inside of a diaphragm seal or capillary and transmits the pressure from the diaphragm to the sensing element.

HART

Highway Addressable Remote Transducer. Digital communication protocol superimposed on the 4-20 mA analog signal, enabling remote configuration and diagnostics of the instrument.

RS-485 / MODBUS RTU

Multipoint serial communication standard (RS-485) over which the Modbus RTU protocol runs, commonly used to integrate transmitters into a control system or SCADA.

PROFIBUS DP/PA

Industrial digital fieldbus; PA is designed for process instrumentation (including power over the same cable) and DP for plant automation.

4-20 MA

Standard analog signal used in the process industry: 4 mA represents 0% of the measured range and 20 mA represents 100%, and it also allows detecting a broken loop (0 mA).

ACCURACY / CLASS

Maximum permissible error of an instrument, expressed as a percentage of the span or of the URL (upper range limit); the lower the number, the higher the accuracy.

URL / SPAN

URL (Upper Range Limit) is the maximum value the sensor can measure; span is the width of the range actually configured (upper value minus lower value).

TURNDOWN / RANGEABILITY

Ratio between the sensor's URL and the configured span ($TD = URL / span$); a high turndown ratio allows the same transmitter to be reconfigured to smaller ranges without losing accuracy.

GAUGE PRESSURE

Pressure measured with local atmospheric pressure as the reference (0 = atmospheric pressure).

ABSOLUTE PRESSURE

Pressure measured with total vacuum as the reference (0 = absolute vacuum).

DIFFERENTIAL PRESSURE

Difference in pressure between two points in a process, measured by a single instrument with two impulse connections.

IP66 / IP67 / IP68

Degree of protection against dust and water per IEC 60529: IP66 withstands powerful water jets, IP67 temporary immersion (up to 1 m), and IP68 continuous immersion at the depth specified by the manufacturer.

ATEX / IECEx / NEPSI

Certifications of suitability for installation in potentially explosive atmospheres: ATEX (European Union), IECEx (international standard) and NEPSI (China).

EX D / EX IA

Explosion-protection methods: Ex d (flameproof enclosure, contains an internal explosion) and Ex ia (intrinsic safety, limits the electrical energy of the circuit so it cannot generate a spark capable of igniting the atmosphere).

CIP / SIP

Clean in Place / Sterilize in Place: cleaning and sterilizing a piece of equipment or line without disassembling it, common in the food and pharmaceutical industries.

TRI-CLAMP

Quick-disassembly sanitary connection, made up of two matching flanges, a gasket and an external clamp; it requires no tools for assembly/disassembly.

DIN 11851

Widely used European threaded sanitary connection standard, with a round thread and flat gasket.

DN (NOMINAL DIAMETER)

Numerical designation of the diameter of a pipe or connection, independent of its exact size in millimeters or inches (e.g.: DN50 $\approx$ 2").

ANSI / DIN FLANGE

Process connection standardized by bolts: ANSI/ASME B16.5 (United States, in inches and pressure classes #150/#300/etc.) or DIN/EN1092-1 (Europe, in millimeters and PN classes).

CV (FLOW COEFFICIENT)

Coefficient expressing a valve's capacity to pass flow at a given pressure drop; the higher the Cv, the greater the flow capacity.

RTD / PT100

Resistance Temperature Detector: temperature sensor based on the change in electrical resistance of a metal with temperature; the Pt100 is the most common type, with 100 nominal resistance at 0°C.

THERMOCOUPLE

Temperature sensor formed by two dissimilar metals joined at one point, which generates a small voltage (Seebeck effect) proportional to the temperature difference between the measuring junction and the reference junction.

THERMOWELL

Metal sheath that protects a temperature sensor (bulb, RTD or thermocouple) from direct contact with the process fluid, allowing it to be removed without depressurizing the line.

MANIFOLD

Integrated valve block that allows a differential pressure transmitter (or other instrument) to be blocked, equalized and vented without interrupting the process, easing its installation and maintenance.

Frequently Asked Questions

The most common questions from our customers about pressure, temperature, flow and level instrumentation

PRESSURE GAUGES

1 What's the difference between BSP and NPT thread? How do I know which one I need?

The difference is that BSP is cylindrical (straight-sided) while NPT is tapered. BSP seals by bottoming out against a seat at the base of the port, while NPT seals along the thread itself, with no need to bottom out.

2 What information do I need to provide to request a pressure gauge?

You need to specify the process it will be subjected to, the pressure range you need to measure, the process connection, and the case diameter.

3 Do I need to remove the plug when I install the gauge?

Yes. For optimal operation, the tip of the plug must be cut off, as indicated on the plug itself, in order to equalize the gauge's internal pressure with atmospheric pressure.

4 What is the maximum process temperature a pressure gauge can withstand?

The temperature that pressure gauges and measuring elements in general (thermometers excepted) can normally withstand is 65°C. Above that, some type of accessory (siphon, heat dissipator or diaphragm seal) needs to be considered so that temperature doesn't affect the instrument's reading.

5 I need a pressure gauge for an oxygen application — will any type work?

No. You need to use pressure gauges specifically manufactured for oxygen service, making sure they contain no oil of any kind inside the Bourdon tube.

6 What is the fill fluid in a pressure gauge used for?

It's used to protect the inside of the instrument against vibration from the machine or process where it's installed.

DIAPHRAGM SEALS

7 When is it worth using a diaphragm seal instead of installing the gauge directly?

When the process fluid is corrosive, viscous, prone to crystallizing, contains solids in suspension, or when the process temperature is too high for the instrument. The seal isolates the measuring element from direct contact with the fluid.

8 What fill fluid should I choose for a diaphragm seal, depending on my process?

It depends on the working temperature and whether the process is food-related or not: glycerin is the standard option for general use, silicone is used across wider temperature ranges (including low temperatures), and food-grade oil is required in the food and pharmaceutical industries because of its sanitary certifications.

9 Does the transmitter + diaphragm seal assembly come calibrated as a single unit?

Yes. It comes filled and calibrated as an assembly at the factory, since the capillary and seal filling is part of the measuring system; separating and reassembling the parts requires a new fill and calibration.

Frequently Asked Questions (continued)

The most common questions from our customers about pressure, temperature, flow and level instrumentation

THERMOWELLS AND THERMOMETERS

10 What's the point of a thermowell if I already have the temperature sensor?

It protects the sensor (bulb, RTD or thermocouple) from direct contact with the process fluid, and allows it to be removed for maintenance or calibration without depressurizing or draining the line.

11 How do I choose the immersion length ("U") of a thermowell?

It has to reach the center of the flow in the pipe or vessel for the measurement to be representative, avoiding staying close to the wall (where temperature is less uniform); on small pipes, an angled-extension thermowell or one installed at an elbow is often used to achieve sufficient immersion.

12 Can I remove the temperature sensor without stopping the process?

Yes — that's precisely the advantage of a thermowell: since it's threaded or flanged onto the line independently of the sensor, the sensor can be pulled out and replaced without depressurizing or stopping the process.

PRESSURE TRANSMITTERS

13 What's the difference between a 4–20 mA transmitter and one with a HART output?

Both deliver the same 4–20 mA analog signal; the difference is that HART superimposes a digital signal on top of that analog signal, allowing the instrument to be configured, diagnosed and read remotely without disconnecting it from the loop.

14 How do I know if I need a gauge, absolute or differential pressure transmitter?

Gauge pressure if your reference is atmospheric pressure (the most common case), absolute if you need zero to represent total vacuum (vacuum or barometric applications), and differential if you need to measure the pressure difference between two points in the process (typical in differential-pressure flow measurement or hydrostatic level measurement).

15 What is turndown, and why is a transmitter with a high turndown ratio an advantage?

It's the ratio between the maximum range the sensor can measure (URL) and the span you actually configure. A high turndown ratio lets you use the same transmitter across different applications or recalibrate it to a smaller range without losing accuracy, reducing the spare-parts stock you need to keep.

Frequently Asked Questions (continued)

The most common questions from our customers about pressure, temperature, flow and level instrumentation

FLOW METERS

16 What's the difference between an electromagnetic flow meter and a flow switch?

The electromagnetic flow meter measures instantaneous flow and delivers it as a continuous signal (4-20 mA, pulses, Modbus); the flow switch is a simpler instrument that only detects whether flow is above or below a fixed threshold, delivering an on/off output.

17 Do I need straight pipe runs before and after the flow meter?

Yes, in general some straight pipe diameters are recommended both upstream and downstream of the flow meter (the exact amount depends on the model and whether there are nearby elbows, valves or reducers) so that the flow profile is fully developed and the measurement is accurate.

18 Does the fluid need to be conductive to use an electromagnetic flow meter?

Yes, that's a limitation inherent to the technology: the electromagnetic flow meter measures by induction and requires the fluid to have a minimum electrical conductivity (water and most aqueous and industrial liquids meet this without issue); it doesn't work for pure hydrocarbons or gases.

MANIFOLDS AND VALVES

19 What's the point of a manifold if I already have the transmitter?

It allows the transmitter to be blocked, equalized and vented without disconnecting it from the process line, which makes it possible to calibrate it, service it or replace it without stopping the process or depressurizing the entire line.

20 What's the difference between a 2-valve, 3-valve and 5-valve manifold?

The 2-valve type only blocks the two impulse lines; the 3-valve type (the most common on differential transmitters) adds an equalizing valve between the two lines, needed to protect the sensor when starting up or taking the instrument out of service; the 5-valve type additionally adds two vent/bleed valves so each impulse line can be purged separately.

GENERAL AND CERTIFICATIONS

21 Do the instruments come with a calibration certificate?

A calibration certificate with INTI-traceable standards can be requested as part of the order; we also offer calibration and certification service for instruments already installed in the plant.

22 What does it mean for an instrument to be rated for ATEX zones?

It means it was designed and certified for installation in potentially explosive atmospheres (presence of flammable gases, vapors or dusts), under a protection method such as Ex d (flameproof enclosure) or Ex ia (intrinsic safety), in accordance with the European Union's ATEX directive.

23 How often does a pressure instrument need to be recalibrated?

There's no universal frequency: it depends on how critical the application is, the regulatory requirements of the sector (food, pharmaceutical, oil & gas) and the instrument's historical stability; as a general industry reference, a 12-month interval is used, adjusted according to each unit's drift history.

Frequently Asked Questions (continued)

The most common questions from our customers about pressure, temperature, flow and level instrumentation

HAVE ANOTHER QUESTION?

Find more frequently asked questions at tienda.jmh.com.ar/preguntas-frecuentes, or write to us directly at ventas@jmh.com.ar — we'll be happy to help you choose the right instrument for your process.



FOLLOW US AND SHOP ONLINE

Madariaga 830 (B1872CMP), Sarandí, Buenos Aires, Argentina

Tel: +54 11 5263 0404 · ventas@jmh.com.ar



www.jmh.com.ar