

DMP 335

Industrial Pressure Transmitter

Welded, Dry
Stainless Steel Sensor

accuracy according to IEC 60770:
0.5 % FSO

Nominal pressure

from 0 ... 10 bar up to 0 ... 600 bar

Output signals

2-wire: 4 ... 20 mA
3-wire: 0 ... 10 V
others on request

Special characteristics

- ▶ suitable for oxygen applications
- ▶ insensitive to pressure peaks
- ▶ high overpressure capability






Optional versions

- ▶ IS-version
Ex ia = intrinsically safe
for gases and dusts
- ▶ customer specific versions

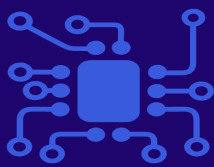
The industrial pressure transmitter DMP 335 is based on a welded stainless steel pressure sensor without fluid.

This characteristic has a special advantage with applications where silicone oil or elastomeric seals cannot be used.

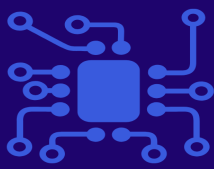
Preferred areas of use are

-  Medical technology
-  Plant and machine engineering
-  Commercial vehicles and mobile hydraulics
-  Refrigeration
-  Oxygen application





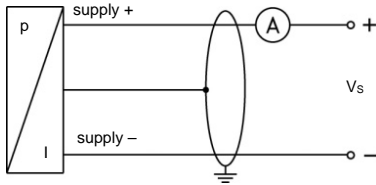
Input pressure range											
Nominal pressure gauge	[bar]	10	16	25	40	60	100	160	250	400	600
Overpressure	[bar]	20	32	50	80	120	200	320	500	800	1200
Burst pressure ≥	[bar]	50	80	125	200	300	500	800	1400	2000	3000
Vacuum resistance		unlimited									
Output signal / Supply											
Standard		2-wire: 4 ... 20 mA / V _S = 8 ... 32 V _{DC}									
Option IS-version		2-wire: 4 ... 20 mA / V _S = 10 ... 28 V _{DC}									
Option 3-wire		3-wire: 0 ... 10 V / V _S = 14 ... 30 V _{DC}									
Performance											
Accuracy ¹		≤ ± 0.5 % FSO									
Permissible load		current 2-wire:		R _{max} = [(V _S - V _{S min}) / 0.02 A] Ω							
		voltage 3-wire:		R _{min} = 10 kΩ							
Influence effects		supply:		0.05 % FSO / 10 V							
		load:		0.05 % FSO / kΩ							
Long term stability		≤ ± 0.2 % FSO / year at reference conditions									
Response time		2-wire: ≤ 10 msec									
		3-wire: ≤ 3 msec									
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)											
Thermal effects (offset and span)											
Thermal error		± 0.3 % FSO / 10 K									
In compensated range		0 ... 70 °C									
Permissible temperatures											
Medium		-40 ... 125 °C									
Electronics / environment		-40 ... 85 °C									
Storage		-40 ... 100 °C									
Electrical protection											
Short-circuit protection		permanent									
Reverse polarity protection		no damage, but also no function									
Electromagnetic compatibility		emission and immunity according to EN 61326									
Mechanical stability											
Vibration		20 g RMS (25 ... 2000 Hz)					according to DIN EN 60068-2-6				
Shock		500 g / 1 msec					according to DIN EN 60068-2-27				
Materials											
Pressure port		stainless steel 1.4571 (316 Ti)									
Housing		stainless steel 1.4404 (316 L)									
Option compact field housing		stainless steel 1.4301 (304)									
		cable gland M12x1.5, brass, nickel plated (clamping range 2 ... 8 mm)									
Seals		none (welded)									
Diaphragm		stainless steel 1.4542 (17-4PH)									
Media wetted parts		pressure port, diaphragm									
Explosion protection (only for 4 ... 20 mA / 2-wire)											
Approvals		IBExU 10 ATEX 1068 X / IECEx IBE 12.0027X									
DX19-DMP 335		zone 0: II 1G Ex ia IIC T4 Ga									
		zone 20: II 1D Ex ia IIIC T135 °C Da									
Safety technical maximum values		U _i = 28 V _{DC} , I _i = 93 mA, P _i = 660 mW, C _i ≈ 0 nF, L _i ≈ 0 μH, the supply connections have an inner capacity of max. 27 nF to the housing									
Permissible temperatures for environment		in zone 0:		-20 ... 60 °C with p _{atm} 0.8 bar up to 1.1 bar							
		in zone 1 or higher:		-40/-20 ... 70 °C							
Connecting cables (by factory)		cable capacitance:		signal line/shield also signal line/signal line: 160 pF/m							
		cable inductance:		signal line/shield also signal line/signal line: 1 μH/m							
Miscellaneous											
Current consumption		signal output current:		max. 25 mA							
		signal output voltage:		max. 7 mA							
Weight		approx. 140 g									
Installation position		any									
Operational life		100 million load cycles									
CE-conformity		EMC Directive: 2014/30/EU									
		Pressure Equipment Directive: 2014/68/EU (module A) ²									
ATEX Directive		2014/34/EU									
² This directive is only valid for devices with maximum permissible overpressure > 200 bar.											



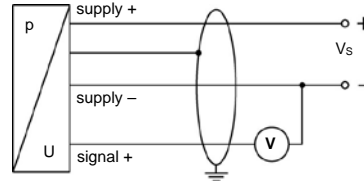
SensaCo Ltd.

Wiring diagrams

2-wire-system (current)



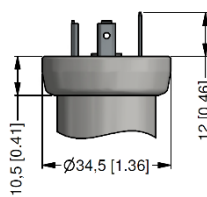
3-wire-system (voltage)



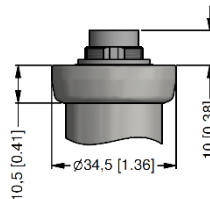
Pin configuration

Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1 / metal (4-pin)	compact field housing	cable colours (IEC 60757)
Supply +	1	3	1	V _s +	WH (white)
Supply -	2	4	2	V _s -	BN (brown)
Signal + (only for 3-wire)	3	1	3	S+	GN (green)
Shield	ground pin	5	4	GND	GNYE (green-yellow)

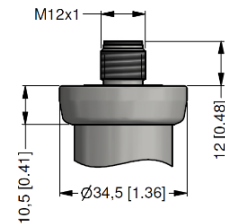
Electrical connections (dimensions mm / in)



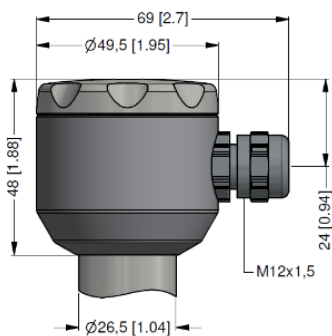
ISO 4400
(IP 65)



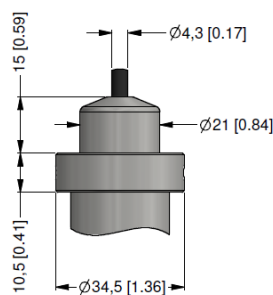
Binder series 723, 5-pin
(IP 67)



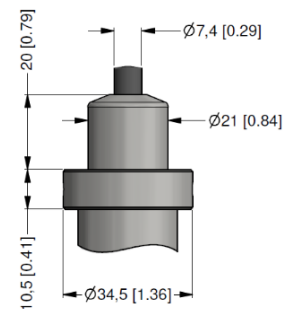
M12x1, 4-pin
(IP 67)



compact field housing
(IP 67)



cable outlet
with PVC-cable (IP 67) ³

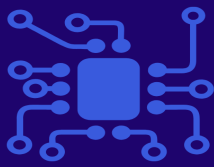


cable outlet, cable with
ventilation tube (IP 68) ⁴

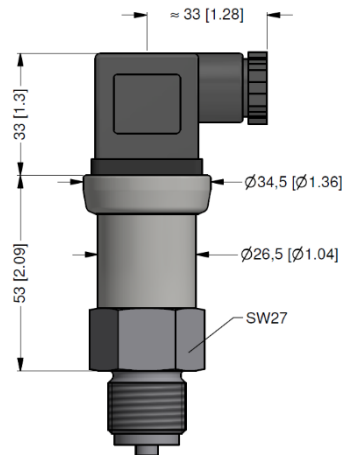
⇒ universal field housing stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request

³ standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)

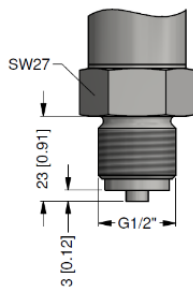
⁴ different cable types and lengths available, permissible temperature depends on kind of cable



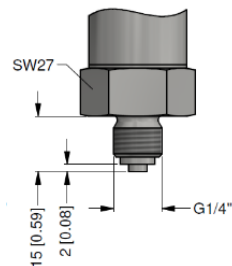
Dimensions (mm / in)



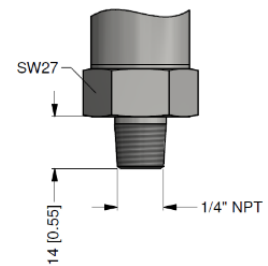
Mechanical connections (dimensions mm / in)



G1/2" EN 837



G1/4" EN 837



1/4" NPT

⇒ metric threads and other versions on request

Accessories

Plug-on Display PA 430



Functional range

- ▶ free scalable display
- ▶ switch mode, hysteresis, parameterizable deceleration of the contacts
- ▶ display 330 ° rotatable
- ▶ connector 300 ° rotatable
- ▶ no external power supply necessary

Product characteristics

- ▶ plug-on display for pressure transmitter with output signal: 4 ... 20 mA / 2-wire or 0 ... 10 V / 3-wire
- ▶ 4-digit LED display

Optional versions

- ▶ IS-version
- ▶ 1 or 2 programmable contacts

Ordering code DMP 335

DMP 335

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[illegible]

¹ standard: 2 m PVC cable without ventilation tube (permissible temperatur: -5 ... 70 °C)

² code TR0 = PVC cable, cable with ventilation tube available in different types and lengths