

DMP 335



Industrial Pressure Transmitter

Welded, Dry Stainless Steel Sensor

accuracy according to IEC 60770:
0.5 % FSO

Industrial
Pressure Transmitter

DMP 335

Nominal pressure

from 0 ... 6 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 stainless steel welded pressure sensor without fluid.

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

Preferred areas of use are



Medical Technology



Plant and Machine Engineering



Mobile Hydraulics

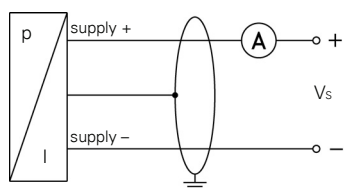
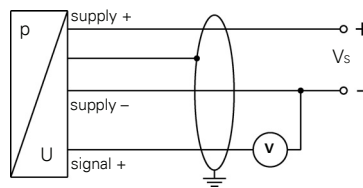


Refrigeration

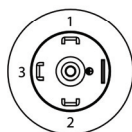
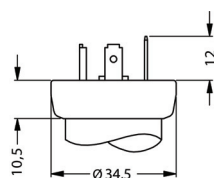
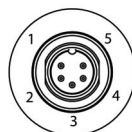
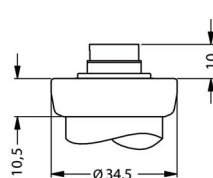
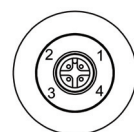
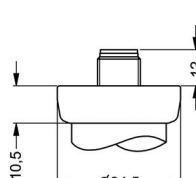
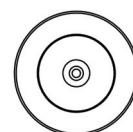
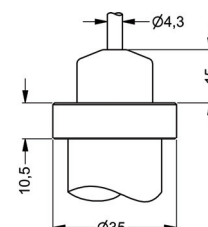
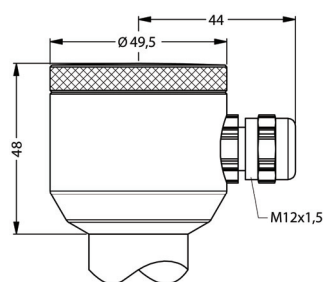
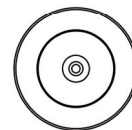
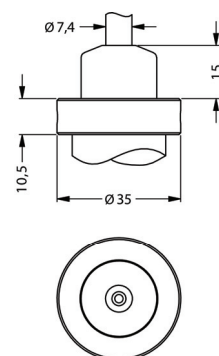


Oxygen application

Input pressure range												
Nominal pressure gauge	[bar]	6	10	16	25	40	60	100	160	250	400	600
Overpressure	[bar]	14	35	35	70	140	140	350	350	700	1200	1200
Burst pressure ≥	[bar]	35	85	85	175	350	350	850	850	1750	2800	2800
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] 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												
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 1.4305 (303), cable gland brass, nickel plated								others on request		
Seals (media wetted)		none (welded)										
Diaphragm		stainless steel 1.4542 (17-4PH)										
Media wetted parts		pressure port, diaphragm										
Explosion protection (only for 4 ... 20 mA / 2-wire)												
Approval DX19-DMP 335		IBExU 10 ATEX 1068 X zone 0: II 1G Ex ia IIC T4 Ga zone 20: II 1D Ex iaD 20 85°C										
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										
Permissible temperatures for environment		in zone 0: -20 ... 60 °C bei p _{atm} 0.8 bar up to 1.1 bar in zone 1: -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: typ. 5 mA										
Weight		approx. 140 g										
Installation position		any										
Operational life		> 100 x 10 ⁶ pressure cycles										
CE-conformity		EMC Directive: 2004/108/EC Pressure Equipment Directive: 97/23/EC (module A) ²										
² This directive is only valid for devices with maximum permissible overpressure > 200 bar												

Wiring diagrams**2-wire-system (current)****3-wire-system (voltage)****Pin configuration**

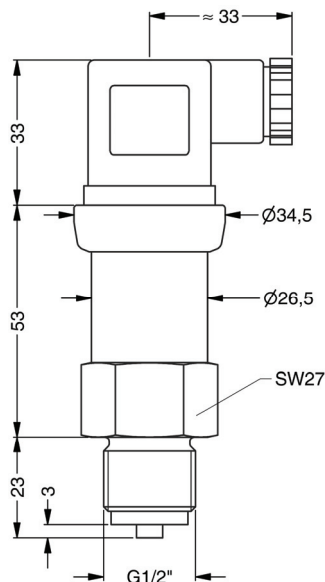
Electrical connections	ISO 4400	Binder 723 (5-pin)	M12x1 (4-pin)	field housing	cable colours (DIN 47100)
Supply +	1	3	1	IN +	wh (white)
Supply -	2	4	2	IN -	bn (brown)
Signal + (only for 3-wire)	3	1	3	OUT +	gn (green)
Shield	ground pin	5	4	⊥	gn/ye (green / yellow)

Electrical connections (dimensions in mm)**standard**ISO 4400
(IP 65)**option**Binder series 723 5-pin
(IP 67)M12x1 4-pin
(IP 67)cable outlet with PVC cable
(IP67) ³compact field housing
(IP 67)cable outlet,
cable with ventilation tube
(IP 68) ⁴

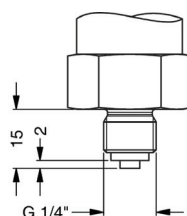
⇒ universal field housing stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request

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

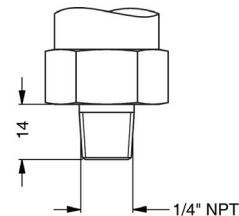
⁴ different cable types and lengths available, permissible temperature depends on kind of cable

Mechanical connections (dimensions in mm)**standard**

G1/2" EN 837

option

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 cable with ventilation tube (code TR0 = PVC cable), different cable types and lengths available, permissible temperature depends on kind of cable; price without cable