

DMP 335

Industrial Pressure Transmitter

Welded, Dry
Stainless Steel Sensor

accuracy according to IEC 61298-2:
0.5 % FSO



Nominal pressure

from 0 ... 16 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



DMP 335

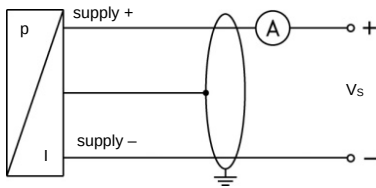
Industrial Pressure Transmitter

Technical Data

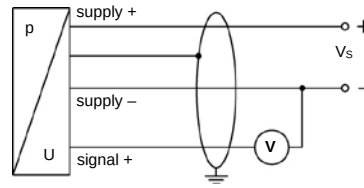
Input pressure range										
Nominal pressure gauge	[bar]	16	25	40	60	100	160	250	400	600
Overpressure	[bar]	32	50	80	120	200	320	500	800	1200
Burst pressure ≥	[bar]	80	125	200	300	500	800	1400	2000	3000
Vacuum resistance	unlimited									
Output signal / Supply										
Standard	2-wire: 4 ... 20 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 61298-2 – 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 / 10 ... 2000 Hz					according to DIN EN 60068-2-6				
Shock	500 g / 1 msec half sine					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 DX19-DMP 335	IBExU 10 ATEX 1068 X / IECEx IBE 12.0027X 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.										

Wiring diagrams

2-wire-system (current)



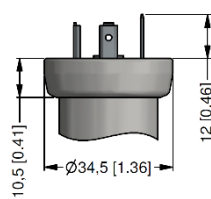
3-wire-system (voltage)



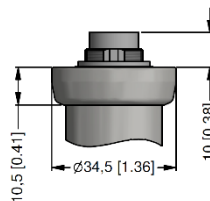
Pin configuration

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

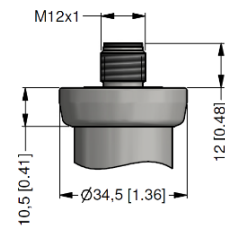
Electrical connections (dimensions mm / in)



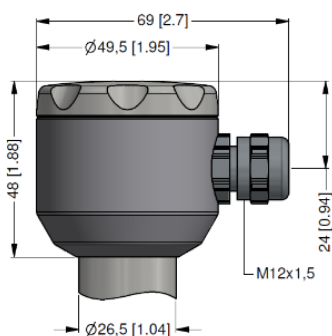
ISO 4400
(IP 65)



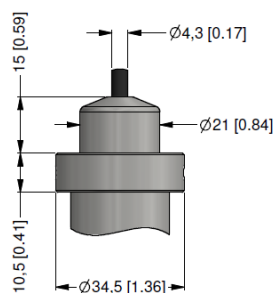
Binder series 723, 5-pin
(IP 67)



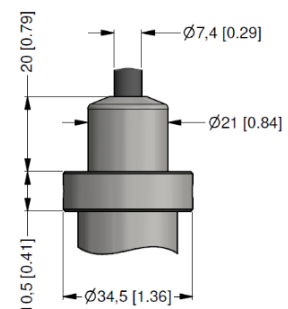
M12x1, 4-pin
(IP 67)



compact field housing
(IP 67)



cable outlet
with PVC-cable (IP 67) ³



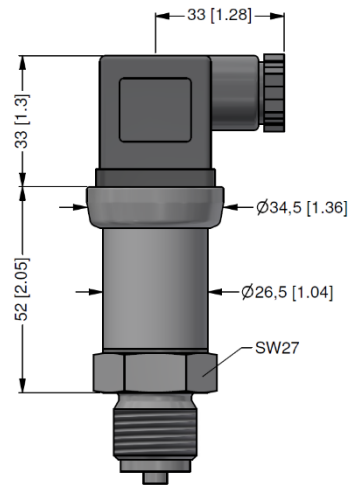
cable outlet, cable with
ventilation tube (IP 68) ⁴

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

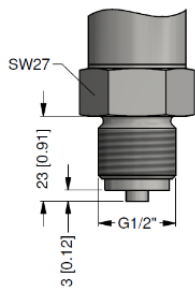
³ standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)

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

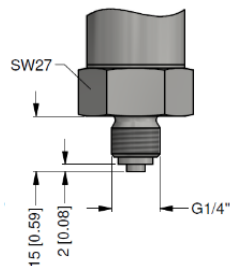
Dimensions (mm / in)



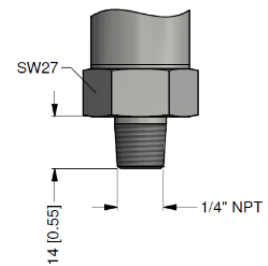
Mechanical connections (dimensions mm / in)



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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Pressure						
	gauge	2	1	0		
Input	[bar]					
	16		1	6	0	2
	25		2	5	0	2
	40		4	0	0	2
	60		6	0	0	2
	100		1	0	0	3
	160		1	6	0	3
	250		2	5	0	3
	400		4	0	0	3
	600		6	0	0	3
	customer		9	9	9	
Output						
	4 ... 20 mA / 2-wire			1		
	0 ... 10 V / 3-wire			3		
	intrinsic safety 4 ... 20 mA / 2-wire			E		
	customer			9		
Accuracy						
	0.5 % FSO			5		
	customer			9		
Electrical connection						
	male and female plug ISO 4400			1	0	0
	male plug Binder series 723 (5-pin)			2	0	0
	cable outlet with PVC cable (IP67) ¹			T	A	0
	cable outlet,					
	cable with ventilation tube (IP68) ²			T	R	0
	male plug M12x1 (4-pin) / metal			M	1	0
	compact field housing			8	5	0
	stainless steel 1.4301 (304)					
	customer			9	9	9
Mechanical connection						
	G1/2" EN 837			2	0	0
	G1/4" EN 837			4	0	0
	1/4" NPT			N	4	0
	customer			9	9	9
Seal						
	without (welded version)				2	
	customer				9	
Special version						
	standard				0	0
	customer				9	9

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