



DMP 335

Industrial
Pressure Transmitter

Welded, Dry
Stainless Steel Sensor

Accuracy according to IEC 60770:
0.5% FSO

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:

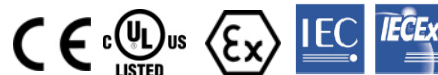
- ▶ IS-version
Ex ia = intrinsically safe for gases and dusts
- ▶ customer specific versions

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 elastomeric seals cannot be used.

Typical applications:

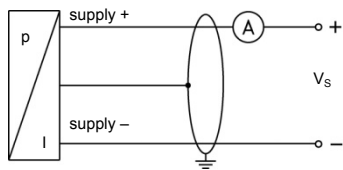
-  Medical Technology
-  Plant and Machine Engineering
-  Mobile Hydraulics
-  Refrigeration
-  Oxygen application



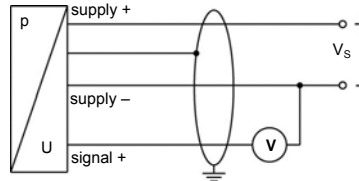
Input pressure range												
Nominal pressure gauge	[bar]	6	10	16	25	40	60	100	160	250	400	600
Overpressure	[bar]	14	35	35	70	140	140	350	350	700	1200	1200
Burst pressure \geq	[bar]	35	85	85	175	350	350	850	850	1750	2100	2100
Vacuum resistance		unlimited										
Output signal / Supply												
Standard		2-wire: 4 ... 20 mA / $V_S = 8 \dots 32 V_{DC}$										
Option IS-version		2-wire: 4 ... 20 mA / $V_S = 10 \dots 28 V_{DC}$										
Option 3-wire		3-wire: 0 ... 10 V / $V_S = 14 \dots 30 V_{DC}$										
Performance												
Accuracy ¹		$\leq \pm 0.5 \% \text{ FSO}$										
Permissible load		current 2-wire: $R_{\max} = [(V_S - V_{S\min}) / 0.02 \text{ A}] \Omega$ voltage 3-wire: $R_{\min} = 10 \text{ k}\Omega$										
Influence effects		supply: 0.05 % FSO / 10 V load: 0.05 % FSO / $\text{k}\Omega$										
Long term stability		$\leq \pm 0.2 \% \text{ FSO} / \text{year}$ at reference conditions										
Response time		2-wire: $\leq 10 \text{ msec}$ 3-wire: $\leq 3 \text{ msec}$										
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)												
Thermal effects (Offset and Span)												
Thermal error		$\pm 0.3 \% \text{ FSO} / 10 \text{ K}$										
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)												
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 T 85°C Da										
Safety technical maximum values		$U_i = 28 V_{DC}$, $I_i = 93 \text{ mA}$, $P_i = 660 \text{ mW}$, $C_i \approx 0 \text{ nF}$, $L_i \approx 0 \mu\text{H}$, the supply connections have an inner capacity of max. 27 nF to the housing										
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 $\mu\text{H}/\text{m}$										
Miscellaneous												
Current consumption		signal output current: max. 25 mA signal output voltage: max. 7 mA										
Weight		approx. 140 g										
Installation position		any										
Operational life		$> 100 \times 10^6$ pressure cycles										
CE-conformity		EMC Directive: 2004/108/EC Pressure Equipment Directive: 97/23/EC (module A) ²										
ATEX Directive		94/9/EG										
² This directive is only valid for devices with maximum permissible overpressure > 200 bar												

Wiring diagrams

2-wire-system (current)



3-wire-system (voltage)

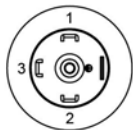
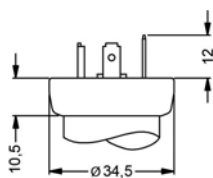


Pin configuration

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	⊥	ye/gn (yellow / green)

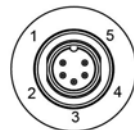
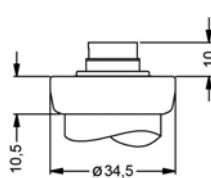
Electrical connections (dimensions in mm)

standard

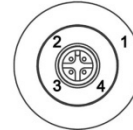
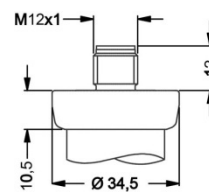


ISO 4400 (IP 65)

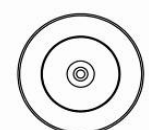
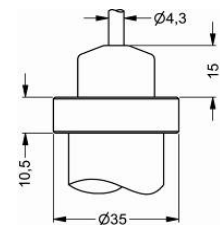
option



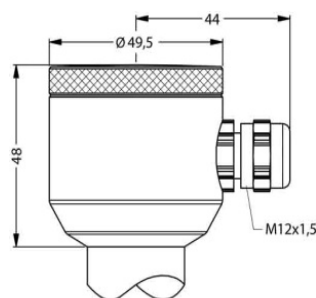
Binder series 723 5-pin (IP 67)



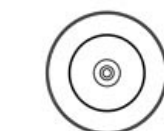
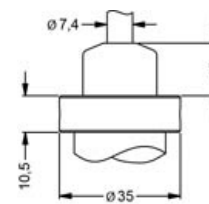
M12x1 4-pin (IP 67)



cable outlet with PVC cable (IP67)³



compact field housing (IP 67)



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

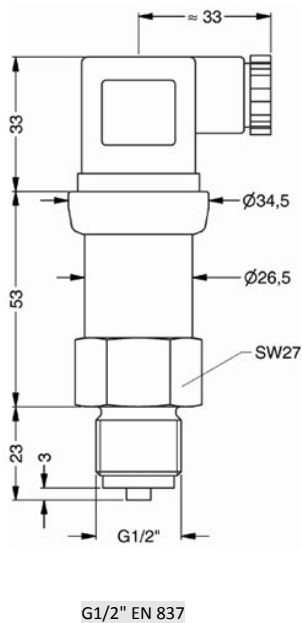
⇒ universal field housing stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request

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

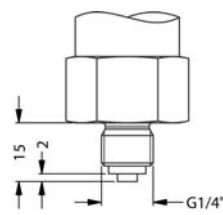
Mechanical connections (dimensions in mm)

standard

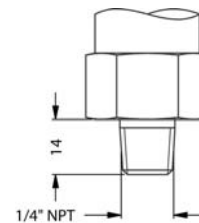


G1/2" EN 837

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

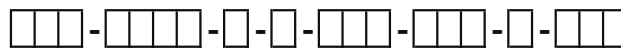
Optional versions

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



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Messgröße									
relativ	2 1 0								
Eingang									
	[bar]								
	6	6	0	0	1				
	10	1	0	0	2				
	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				
	Sondermessbereiche	9	9	9	9				auf Anfrage
Ausgang									
	4 ... 20 mA / 2-Leiter	1							
	0 ... 10 V / 3-Leiter	3							
	Ex-Schutz 4 ... 20 mA / 2-Leiter	E							
	andere	9							auf Anfrage
Genauigkeit									
	0,5 %	5							
	andere	9							auf Anfrage
Elektrischer Anschluss									
	Stecker und Kabeldose ISO 4400	1	0	0					
	Stecker Binder Serie 723 (5-polig)	2	0	0					
	Kabelausgang mit PVC-Kabel ¹	T	A	0					
	Kabelausgang mit Kabel ²	T	R	0					
	Stecker M12x1 (4-polig) / Metall	M	1	0					
	Kompakt-Feldgehäuse	8	5	0					
	Edelstahl 1.4305								
	andere	9	9	9					auf Anfrage
Mechanischer Anschluss									
	G1/2" EN 837	2	0	0					
	G1/4" EN 837	4	0	0					
	1/4" NPT	N	4	0					
	andere	9	9	9					auf Anfrage
Dichtung									
	ohne (Schweißversion)	2							
	andere	9							auf Anfrage
Sonderausführungen									
	Standard		0	0	0				
	andere		9	9	9				auf Anfrage

¹ Standard: 2 m PVC-Kabel ohne Belüftungsschlauch (Temperatureinsatzbereich: -5 ... 70 °C)

² Kabel mit Luftschlauch (Code TR0 = PVC-Kabel), Kabel in verschiedenen Ausführungen und Längen lieferbar, Temperatureinsatzbereich abhängig vom Kabel; Kabel nicht im Preis enthalten

Die Angaben dieser Preisliste enthalten die Spezifikation der Produkte, nicht die Zusicherung von Eigenschaften. Ausführliche Informationen zu den Bestelloptionen können dem Datenblatt entnommen werden. Technische Änderungen vorbehalten.