DMP 339

Industrial Pressure Transmitter

with G ¼" flush diaphragm

accuracy according to IEC 60770: 0.35 % FSO

Industrial Pressure Transmitter

DMP 339

Nominal pressure

from 0 ... 60 bar
up to 0 ... 600 bar

Output signals

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

Special characteristics

- mechanical connection: G1/4" flush
- suitable for viscous and pasty media

Optional versions

- several electrical connection
- customer specific versions
- IS-version
  Ex ia = intrinsically safe for gases and dusts

CE Ex

The industrial pressure transmitter type DMP 339 with flush diaphragm has been especially designed for use in dosing systems. The transmitter is suited for pressure measuring of adhesive, highly viscous oils, colors and pastes, which stringently need the G1/4" flush pressure port.

BD SENSORS typically, a multitude of electrical connections, which the integration into the plants alleviate, stand by for users. The DMP 339 stands for highest economics and reliability, because material accumulation on impedance discontinuity, the drip on the blast pipe or the cob webbing of adhesive can be avoided.

Preferred areas of use are

Plant and Machine Engineering
- especially conveyor plants and dosing systems

Hydraulics

Preferred using in

Fuels / Oils

Pasty media

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Input pressure range [1]							
Nominal pressure gauge / abs.	[bar]	60	100	160	250	400	600
Overpressure	[bar]	210	210	600	600	1050	1050
Burst pressure ≥	[bar]	300	300	1100	1100	1500	1500

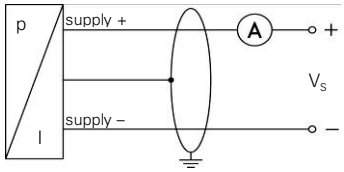
[1] Nominal pressure P_N < 60 bar on request

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / V_S = 8 ... 32 V_{DC}
Option IS-protection	2-wire: 4 ... 20 mA / V_S = 10 ... 28 V_{DC}
Options 3-wire	3-wire: 0 ... 20 mA / V_S = 14 ... 30 V_{DC} 0 ... 10 V / V_S = 14 ... 30 V_{DC}
Performance	
Accuracy [2]	≤ ± 0.35 % FSO
Permissible load	current 2-wire: $R_{max} = [(V_S - V_S \text{ min}) / 0.02 \text{ A}]\ \Omega$ current 3-wire: R_{max} = 500 Ω voltage 3-wire: R_{min} = 10 kΩ
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ
Long term stability	≤ ± 0.1 % FSO / year at reference conditions
Response time	2-wire: ≤ 10 msec 3-wire: ≤ 3 msec
[2] accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (Offset and Span)	
Tolerance band	≤ ± 1 % FSO
in compensated range	-20 ... 85 °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	10 g RMS (25 ... 2000 Hz) according to DIN EN 60068-2-6
Shock	100 g / 11 msec according to DIN EN 60068-2-27
Materials	
Pressure port	stainless steel 1.4548 (17-4 PH ERS) for G1/4" flush (DIN 3852)
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	FKM on pressure port G1/4" flush others on request
Diaphragm	stainless steel 1.4435 (316 L)
Media wetted parts	pressure port, diaphragm
Explosion protection (only for 4 ... 20 mA / 2-wire)	
Approval DX19-DMP 339	IBExU 10 ATEX 1068 X zone 0: II 1G Ex ia IIC T4 Ga zone 20: II 1D Ex iaD 20 T85 °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, C_{iGND} ≈ 27 nF
Permissible temperatures for environment	-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. 120 g
Installation position	any [3]
Operational life	> 100 x 10^6 pressure cycles
CE-conformity	EMC Directive: 2004/108/EC Pressure Equipment Directive: 97/23/EC (module A) [4]

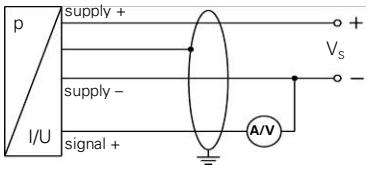
[3] Pressure transmitters are calibrated in a vertical position with the pressure connection down.
[4] This directive is only valid for devices with maximum permissible overpressure > 200 bar

Wiring diagrams

2-wire-system (current)



3-wire-system (current / voltage)

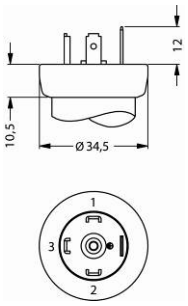


Pin configuration

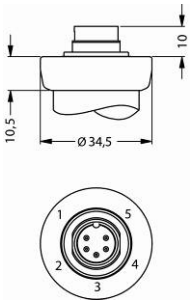
Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1 / Metall (4-pin)	field housing	cable colours (DIN 47100)
Supply +	1	3	1	IN +	wh (white)
Supply –	2	4	2	IN –	bn (brown)
Signal + (for 3-wire)	3	1	3	OUT +	gn (green)
Shield	ground pin	5	4	⏚	gn/ye (green / yellow)

Electrical connections (dimensions in mm)

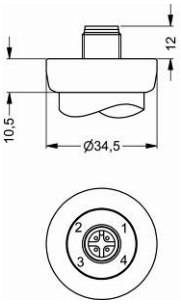
standard **option**



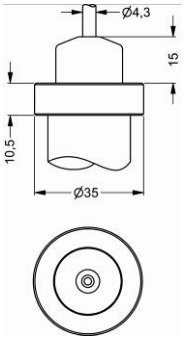
ISO 4400
(IP 65)



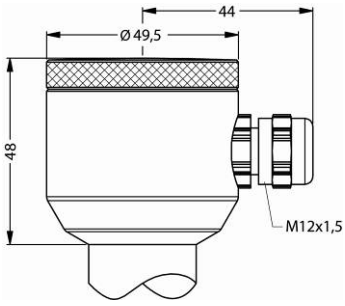
Binder Series 723 5-pin
(IP 67)



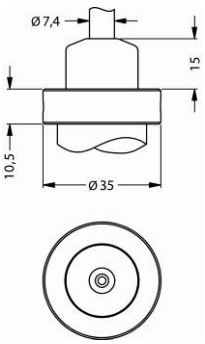
M12x1 4-pin
(IP 67)



cable outlet with PVC cable
(IP 67) [5]



compact field housing
(IP 67)



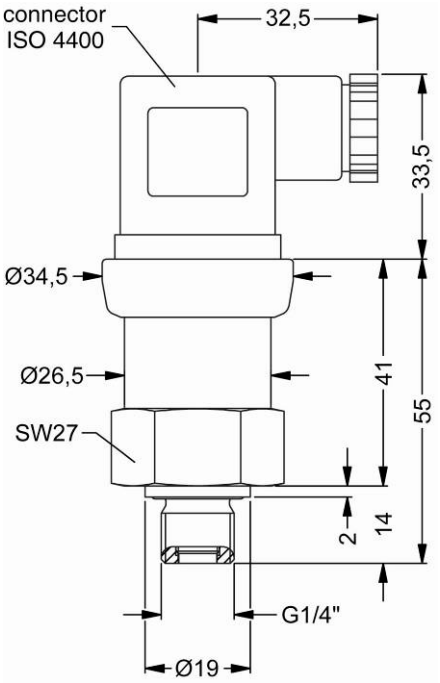
cable outlet,
cable with ventilation tube
(IP 68) [6]

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

[5] *standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)*
[6] *different cable types and lengths available, permissible temperature depends on kind of cable*

Mechanical connections (dimensions in mm)

with FKM seal on pressure port



G1/4" flush DIN 3852

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BD SENSORS® pressure measurement

Ordering code DMP 339

DMP 339 □□□-□□□□-□-□-□□□-□□□-□-□□□

Pressure																					
gauge	1	3	5																		
absolute	1	3	6																		
Input	**[bar]** [1]																				
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	9														consult
Output																					
4 ... 20 mA / 2-wire								1													
0 ... 20 mA / 3-wire								2													
0 ... 10 V / 3-wire								3													
Intrinsic safety 4 ... 20 mA / 2-wire								E													
customer								9													consult
Accuracy																					
0.35 %									3												
customer									9												consult
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 [2]										T	A	0									
Cable outlet [3]										T	R	0									
Male plug M12x1 (4-pin) / metal										M	1	0									
Compact field housing stainless steel 1.4305 (303)										8	5	0									
customer										9	9	9									consult
Mechanical connection																					
G1/4" DIN 3852 with flush sensor													F	0	2						
customer													9	9	9						consult
Seals																					
FKM on pressure port																P					
customer																9					consult
Special version																					
standard																	0	0	0		
customer																	9	9	9		consult

[1] nominal pressure gauge $P_N < 60$ bar on request

[2] standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 … 70°C), others on request

[3] cable with ventilation tube (code TR0 = PVC cable), different cable types and lengths available, price without cable

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