

DMP 339

Industrial Pressure Transmitter

Stainless Steel Sensor

accuracy according to IEC 60770:
0.35 % FSO



Nominal pressure

from 0 ... 60 bar 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:
G 1/4" flush
- ▶ suitable for viscous
and pasty media

Optional versions

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

The DMP 339 industrial pressure transmitter features a G 1/4" flush pressure port and was designed for the use in a range of machinery including metering systems. It is ideal for measuring the pressure of viscous and pasty media, as only a small dead space is created.

Material accumulation, dripping and stringing in machinery is eliminated. This increases the efficiency and reliability of your machines.

The DMP 339 is available with various electrical connections, ensuring an excellent adaption to the application conditions.

Preferred areas of use are:



Plant and machine engineering
- especially conveyor plants and
dosing systems



Hydraulics



Input pressure range ¹						
Nominal pressure gauge / abs. [bar]	60	100	160	250	400	600 ²
Overpressure [bar]	210	210	600	600	1050	1050
Burst pressure ≥ [bar]	300	300	750	750	1200	1400

¹ nominal pressure $p_N < 60$ bar on request
² nominal pressure 600 bar without UL certification

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / $V_S = 8 \dots 32 V_{DC}$
Option IS-version	2-wire: 4 ... 20 mA / $V_S = 10 \dots 28 V_{DC}$
Options 3-wire	3-wire: 0 ... 20 mA / $V_S = 14 \dots 30 V_{DC}$ 0 ... 10 V / $V_S = 14 \dots 30 V_{DC}$

Performance	
Accuracy ³	$\leq \pm 0.35$ % FSO
Permissible load	current 2-wire: $R_{max} = [(V_S - V_{S min}) / 0.02 A] \Omega$ current 3-wire: $R_{max} = 500 \Omega$ voltage 3-wire: $R_{min} = 10 k\Omega$
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / k Ω
Long term stability	$\leq \pm 0.1$ % FSO / year at reference conditions
Response time	2-wire: ≤ 10 msec 3-wire: ≤ 3 msec

³ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

Thermal effects (Offset and Span)	
Tolerance band	$\leq \pm 1$ % 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

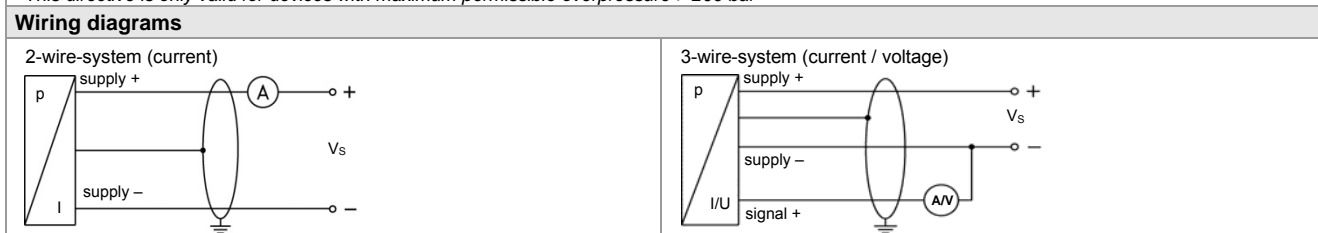
Materials	
Pressure port	stainless steel 1.4548 (17-4 PH ERS) for G1/4" flush (DIN 3852)
Housing	stainless steel 1.4404 (316 L)
Option compact field housing	stainless steel 1.4301 (304); cable gland M12x1.5, brass, nickel plated (clamping range 2 ... 8 mm)
Seals	FKM; others on request
Diaphragm	stainless steel 1.4435 (316 L)
Media wetted parts	pressure port, diaphragm

Explosion protection (only for 4 ... 20 mA / 2-wire)	
Approvals DX19-DMP 339	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, $C_i \approx 0$ nF, $L_i \approx 0$ μ H, $C_{iGND} \approx 27$ nF
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 μ H/m

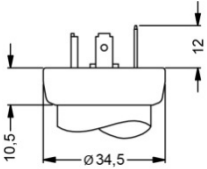
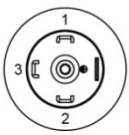
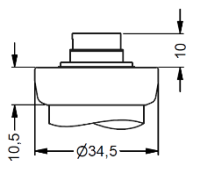
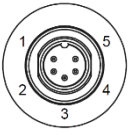
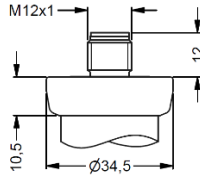
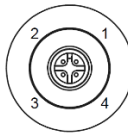
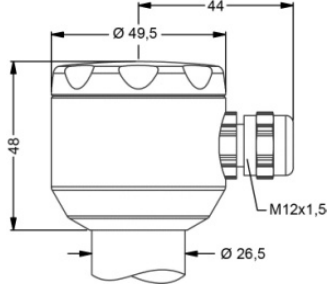
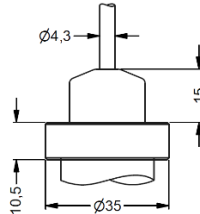
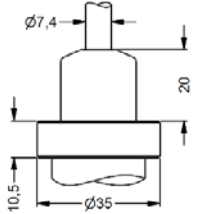
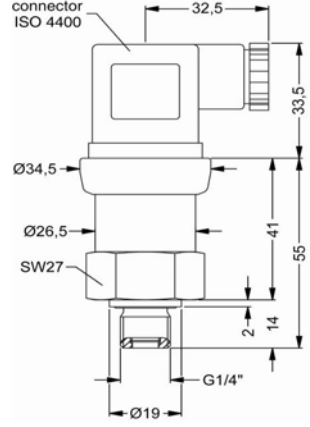
Miscellaneous	
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA
Weight	approx. 120 g
Installation position	any ⁴
Operational life	100 million load cycles
CE-conformity	EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A) ⁵
ATEX Directive	2014/34/EU

⁴ Pressure transmitters are calibrated in a vertical position with the pressure connection down.

⁵ This directive is only valid for devices with maximum permissible overpressure > 200 bar



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	IN +	WH (white)
Supply -	2	4	2	IN -	BN (brown)
Signal + (for 3-wire)	3	1	3	OUT +	GN (green)
Shield	ground pin \oplus	5	4	\oplus	GNYE (green-yellow)

Electrical connections (dimensions in mm)					
standard   ISO 4400 (IP 65)		options   Binder series 723, 5-pin (IP 67)		  M12x1, 4-pin (IP 67)	
 compact field housing (IP 67)					
 cable outlet with PVC cable (IP 67) ⁶		 cable outlet, cable with ventilation tube (IP 68) ⁷			
⇒ universal field housing in stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request					
⁶ standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C) ⁷ different cable types and lengths available, permissible temperature depends on kind of cable					
Mechanical connections (dimensions in mm)					
 G1/4" flush DIN 3852					

© 2020 BD|SENSORS GmbH – The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and materials.

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 ²			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 % FSO									3	
customer									9	consult
Electrical connection										
male and female plug ISO 4400									1	0
male plug Binder series 723 (5-pin)									2	0
cable outlet with PVC cable (IP67) ³									T	A
cable outlet,									T	R
cable with ventilation tube (IP68) ⁴									0	
male plug M12x1 (4-pin) / metal									M	1
compact field housing									8	5
stainless steel 1.4301 (304)									9	9
customer									9	9
Mechanical connection										
G1/4" DIN 3852									F	0
with flush sensor									9	9
customer									9	9
Seals										
FKM									1	
customer									9	
Special version										
standard									0	0
customer									9	9

¹ nominal pressure gauge $p_N < 60$ bar on request

² nominal pressure 600 bar without UL certification

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

⁴ code TR0 = PVC cable, cable with ventilation tube available in different types and lengths