



DMP 343

Industrial Pressure Transmitter

Without Media Isolation

accuracy according to IEC 60770:
0.35 % FSO

Nominal pressure:

from 0 ... 10 mbar
up to 0 ... 1000 mbar

Product characteristics

- ▶ excellent linearity
- ▶ small thermal effect
- ▶ excellent long term stability

Optional versions

- ▶ IS-version:
Ex ia = intrinsically safe for gases and dusts
- ▶ SIL 2 application according to IEC 61508 / IEC 61511
- ▶ different electrical and mechanical connections
- ▶ customer specific versions

The pressure transmitter DMP 343 has been especially designed for the measurement of very low gauge pressure and for vacuum applications. Permissible media are gases, pressurized air and non-aggressive low viscos oils.

The DMP 343 features excellent thermal behaviour and outstanding long term stability. A variety of standard output signals as well as mechanical and electrical connections make the DMP 343 covering a wide field of applications.

Preferred areas of use are



Plant and Machine Engineering



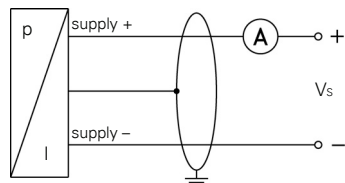
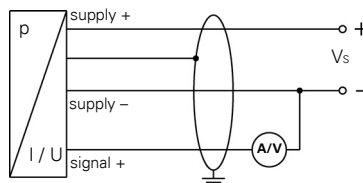
Heating and Air Conditioning

Industrial Pressure Transmitter

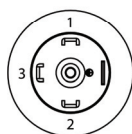
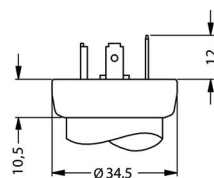
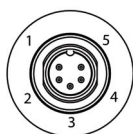
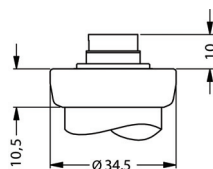
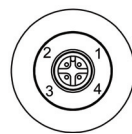
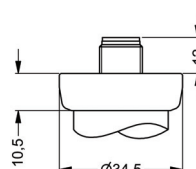
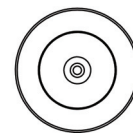
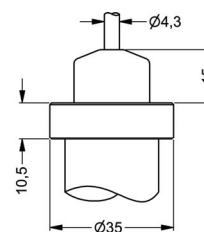
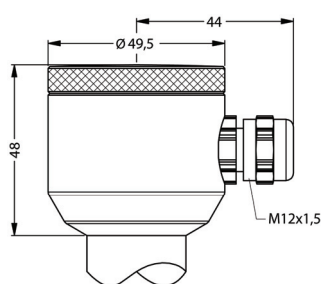
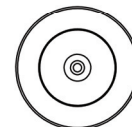
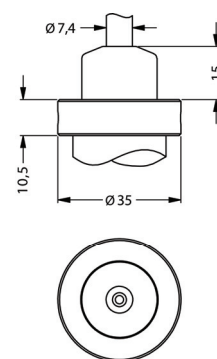
DMP 343



Input pressure range												
Nominal pressure gauge [mbar]	-1000 ... 0	10	16	25	40	60	100	160	250	400	600	1000
Overpressure [bar]	3	0.2	0.2	0.2	0.5	0.5	1	2	3	3	3	3
Burst pressure [bar]	5	0.3	0.3	0.3	0.75	0.75	1.5	3	5	5	5	5
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 ¹	standard: ≤ ± 0.35 % FSO nominal pressure ≤ 100 mbar: ≤ ± 0.50 % FSO											
Permissible load	current 2-wire: R _{max} = [(V _s – V _{s min}) / 0.02] Ω 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											
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)												
Nominal pressure P _N [mbar]	-1000 ... 0		≤ 100			≤ 400			> 400			
Tolerance band [% FSO]	≤ ± 0.75		≤ ± 1.5			≤ ± 1			≤ ± 0.75			
in compensated range [°C]	-20 ... 85		0 ... 50			0 ... 70			-20 ... 85			
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	500 g / 1 msec			according to DIN EN 60068-2-27								
Materials												
Pressure port	stainless steel 1.4404 (316L)											
Housing	stainless steel 1.4404 (316L)											
Seals (media wetted)	FKM											
Sensor	stainless steel 1.4404 (316L), silicon, epoxy or RTV, mineral glass											
Media wetted parts	pressure port, seals, sensor											
Explosion protection (only for 4 ... 20 mA / 2-wire)												
Approval DX19-DMP 343	IBExU10ATEX1068X Zone 0: II 1 G Ex ia IIC T4 Ga Zone 20: II 1 D Ex iaD 20 T85 °C											
Safety technical maximum values	U _i = 28 V, I _i = 93 mA, P _i = 660 mW, C _i ≈ 0nF, L _i ≈ 0 μH											
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: -25 ... 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												
Option SIL 2 application	according to IEC 61508 / IEC 61511											
Current consumption	signal output current: max. 25 mA signal output voltage: max. 5 mA											
Weight	approx. 140 g											
Installation position	any											
CE-conformity	EMC Directive: 2004/108/EC											

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

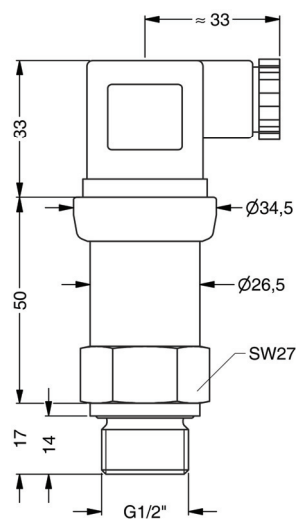
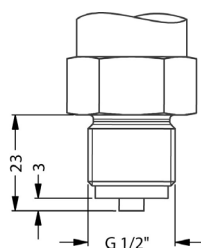
Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1 / metal (4-pin)	field housing	cable colours (DIN 47100)
Supply +	1	3	1	IN +	wh (white)
Supply -	2	4	2	IN -	bn (brown)
Signal + (only for 3-wire)	3	1	3	OUT+	gn (green)
Shield	ground pin	5	4	$\perp$	gn/ye (green / yellow)

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)²compact field housing
(IP 67)cable outlet, cable with ventilation tube
(IP 68)³

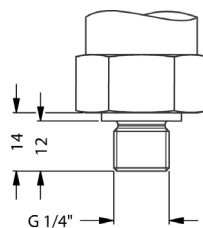
⇒ universal field housing stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request

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

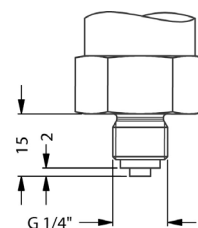
³ different cable types and lengths available, permissible temperature depends on kind of cable

Mechanical connection (dimensions in mm)**standard**G1/2" DIN 3852
with ISO 4400**option**

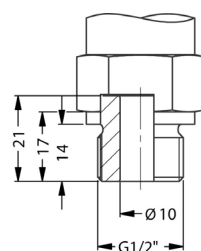
G1/2" EN 837



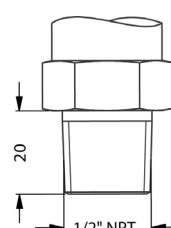
G1/4" DIN 3852



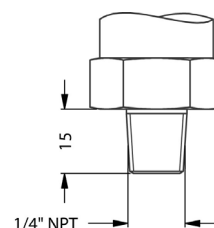
G1/4" EN 837



G1/2" open port



1/2" NPT



1/4" NPT

⇒ metric threads and others on request

