DMP 334

Industrial Pressure Transmitter for High Pressure

Thinfilm Sensor

accuracy according to IEC 60770:
0.35 % FSO

Nominal pressure

from 0 ... 600 bar up tp 0 ... 2200 bar

Analogue output

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

Special characteristics

- extremly robust and excellent long-term stability
- pressure sensor welded

Optional versions

- IS-version
  Ex ia = intrinsically safe for gases and dusts
- pressure port: M20 x 1.5 or 9/16 UNF
- adjustability of span and offset
- different kinds of electrical connections

The industrial pressure transmitter DMP 334 has been especially designed for use in hydraulic systems up to 2200 bar.The base element of DMP 334 is a thinfilm sensor, that is welded with the pressure port and meets high demands of and reliability.

All of characteristics and the excellent mesurement data of DMP 334 as well as distinguished offset stability offer a pressure transmitter with easy handling, reliability and robustness for hydraulic user. The DMP 334 is deliverable with standard HP connections.

Preferred areas of use are

- Plant and Machine Engineering
- Commercial Vehicles and Mobile Hydraulics

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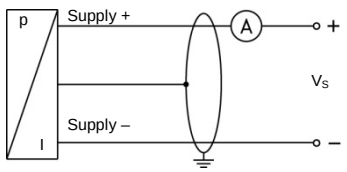
Input pressure range						
Nominal pressure gauge	[bar]	600 [1]	1000	1600	2000	2200
Overpressure	[bar]	800	1400	2200	2800	2800
Burst pressure ≥	[bar]	3000	4000	6000	6000	6000
[1] only available with pressure port G1/2" EN 837						

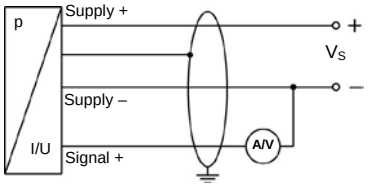
Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / V_S = 12 ... 36 V_{DC}
Option IS-protection	2-wire: 4 ... 20 mA / V_S = 14 ... 28 V_{DC}
Option 3-wire	3-wire: 0 ...10 V / V_S = 14 ... 30 V_{DC}
Performance	
Accuracy	≤ ± 0.35 % FSO IEC 60770 [2]
Permissible load	current 2-wire: R_{max} = [(V_S – 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	< 5 msec
Adjustability	Adjustment of offset is possible within the range of ± 5 % of the nominal pressure range, without an influence of characteristic curve and accuracy.
[2] accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (Offset and Span) / Permissible temperatures	
Thermal error	≤ ± 0.25 % FSO / 10 K in compensated range -20 ... 85 °C
Permissible temperatures	medium: -40 ... 140 °C electronics / environment: -25 ... 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 (20 ... 2000 Hz)
Shock	100 g / 11 msec.
Materials	
Pressure port	stainless steel 1.4542 (17-4 PH)
Housing	standard: stainless steel 1.4404 (316L) field housing: stainless steel 1.4404 (316L), cable gland: brass, nickel plated
Seals (media wetted)	none (welded version)
Diaphragm	stainless steel 1.4542 (17-4 PH)
Media wetted parts	pressure port / diaphragm
Explosion protection (only for 4 … 20 mA / 2-wire)	
Approvals DX19-DMP 334	**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 T 85°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: -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: 1µH/m
Miscellaneous	
Current consumption	signal output current: max. 25 mA signal output voltage: max. 8,5 mA
Weight	approx. 240 g
Installation position	any
CE-conformity	EMC Directive: 2004/108/EC Pressure Equipment Directive: 97/23/EC (module A)

Wiring diagrams

2-wire-system (current)



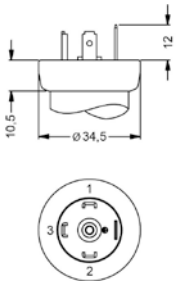
3-wire-system (current / voltage)



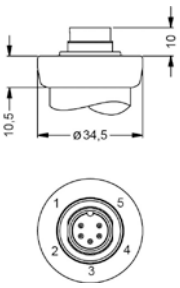
Pin configuration					
Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1 (4-pin)	Field housing	Cable colours (DIN 47100)
Supply + Supply – Signal + (only for 3-wire)	1 2 3	3 4 1	1 2 3	IN + IN - OUT+	wh (white bn (brown) gn (green)
Shield	ground pin	5	4	⏚	ye/gn (yellow / green)

Electrical connections (dimensions in mm)

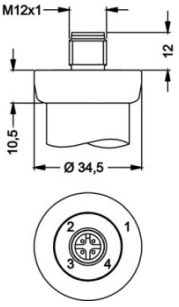
standard **option**



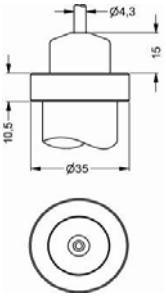
ISO 4400 (IP 65)



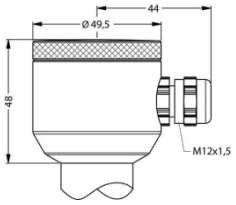
Binder series 723 (IP 67)



M12x1 4-pin (IP 67)



cable outlet (IP 67) [3]
with PVC cable

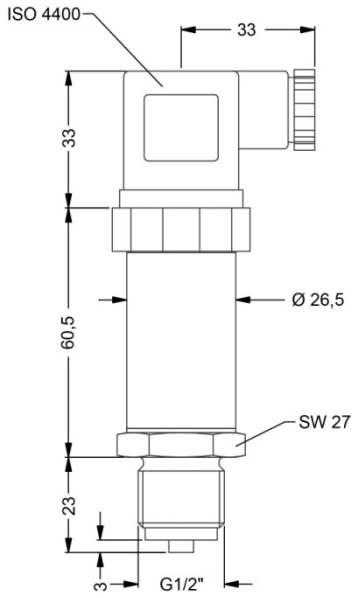


compact
field housing(IP 67)

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

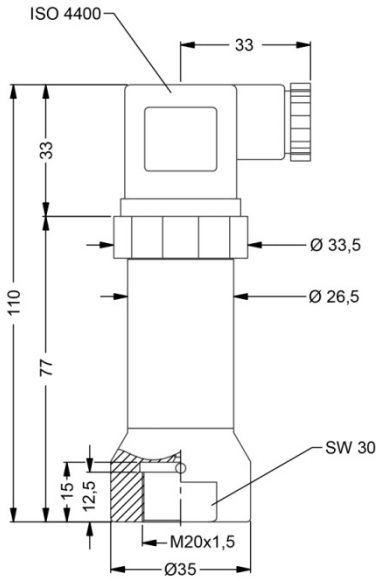
Mechanical connection (dimensions in mm)

standard [4]

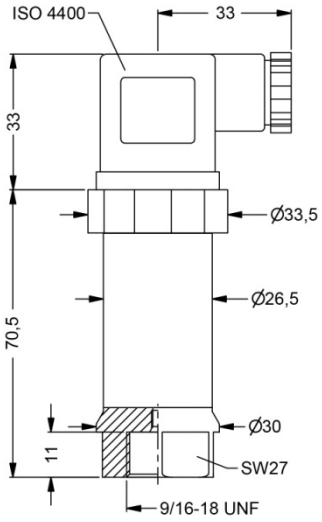


G1/2" EN 837 [5]

option [4]



M20x1.5 internal thread



9/16-18 UNF internal thread

[4] *adjustable version is not possible in combination with IS-version, compact field housing and cable outlet*
[5] *According to EN 837, the pressure port and the complement at pressure over 1000 bar must be preferably made of stainless steel with a tensile strength of R_P > 260 N/mm² in accordance with DIN 17440. The maximum allowed pressure is 1600 bar!*

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BD|SENSORS pressure measurement

Ordering code DMP 334

DMP 334 □□□-□□□□-□-□-□□□-□□□-□-□□□

Pressure																			
gauge	1	4	0																
Input	**[bar]**																		
600 [1]				6	0	0	3												
1000				1	0	0	4												
1600				1	6	0	4												
2000				2	0	0	4												
2200				2	2	0	4												
customer				9	9	9	9												consult
Output																			
4 … 20 mA / 2-wire								1											
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, 3]										T	A	0							
Male plug M12x1 (4-pin) / metal										M	1	0							
Comapct field housing stainless steel 1.4404 (316L)										8	5	0							
customer										9	9	9							consult
Mechanical connection																			
G1/2" EN 837 [4]													2	0	0				
M20x1.5 internal thread													D	2	8				
9/16 UNF internal thread													V	0	0				
customer													9	9	9				consult
Seals																			
without (welded version)																2			
customer																9			consult
Special version																			
standard (adjustable) [5]																	0	4	1
IS version, cable outlet, field housing																	0	0	0
customer																	9	9	9	consult

[1] only available with pressure port G1/2" EN 837

[2] different cable types and lengths deliverable

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

[4] According to EN 837, the pressure port and the complement, at pressure over 1000 bar must be preferably made of stainless steel with a tensile strength of R_P > 260 N/mm² in accordance with DIN 17440. The maximum allowed pressure is 1600 bar!

[5] not possible in combination with IS-version, compact field housing and cable outlet with PVC cable

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