

DMP 334



Industrial Pressure Transmitter for very high Pressure

- ▶ thinfilm sensor
- ▶ extremely robust and long term stable
- ▶ accuracy:
0.175% / 0.125% FSO BFSL
(0.35% / 0.25% FSO IEC 60770)
- ▶ nominal pressure ranges
from 0 ... 600 bar
up to 0 ... 2200 bar

The DMP 334 pressure transmitter is specially designed for use in hydraulic application up to 2200 bar. Permissible media are all with stainless steel 1.4542 compatible media.

Basic element of the DMP 334 is a thinfilm sensor which is welded onto a pressure port and features optimally the demand of safety operation and reliability.

These features of the DMP 334, combined with excellent measuring parameters and good offset stability, offers the user an easy-to-use, reliable and rugged pressure transmitter. The DMP 334 is available with all pressure ports commonly used for very high pressure systems. In addition, the customer can choose between different electrical connections.

Use for hydraulic systems in:

- ▶ hydraulic presses
- ▶ injection moulding machines
- ▶ handling equipment and mobile hydraulics
- ▶ elevated platforms
- ▶ test stands

- ▶ small thermal effect
- ▶ excellent linearity
- ▶ good long term stability
- ▶ option:
field housing
- ▶ customer specific versions:
 - variety of electrical and mechanical connections
 - other versions on request

Characteristics



DMP 334
Industrial Pressure Transmitter

Input pressure range

Nominal pressure gauge [bar]	600 ¹	1000	1600	2000	2200
Permissible overpressure [bar]	800	1400	2200	2800	2800

Output signal / Supply

Standard	2-wire: 4 ... 20 mA / $V_s = 12 \dots 36 V_{DC}$
Optional	3-wire: 0 ... 10 V / $V_s = 14 \dots 36 V_{DC}$

Performance

Accuracy	IEC 60770 ²	BFSL
	standard: $\leq \pm 0.35\%$ FSO option: $\leq \pm 0.25\%$ FSO (on request)	standard: $\leq \pm 0.175\%$ FSO option: $\leq \pm 0.125\%$ FSO (on request)
Permissible load	current 2-wire: $R_{max} = [(V_s - V_{smin}) / 0.02] \Omega$ 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	$\leq \pm 0.2\%$ FSO / year	
Response time	< 5 msec	
Adjustability	Adjustment of offset is possible within the range of $\pm 5\%$ of the nominal pressure range, without an influence of characteristic curve and accuracy.	

Thermal effects

Thermal error for offset and span in compensated range	$\leq \pm 0.25\%$ FSO / 10 K -20 ... 85 °C
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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

Permissible temperatures

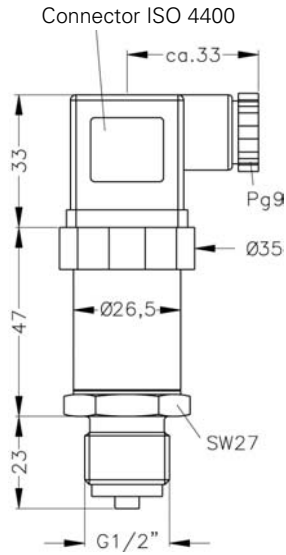
Medium	-40 ... 140 °C
Electronics / environment	-25 ... 85 °C
Storage	-40 ... 100 °C

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

² accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

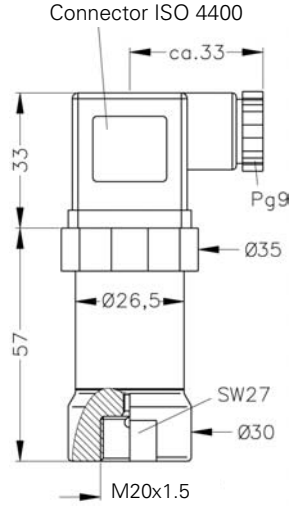
Mechanical connection (dimensions in mm)

Standard

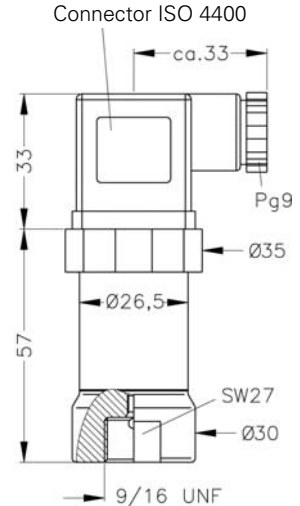


G1/2" EN 837³

Optional



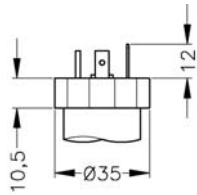
M20x1.5 internal thread



9/16" UNF internal thread

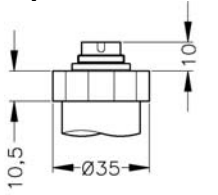
Electrical connection (dimensions in mm)

Standard

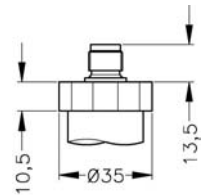


ISO 4400 (IP 65)

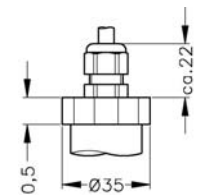
Optional



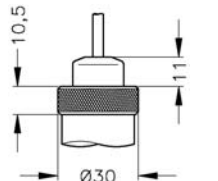
Binder Series 723 (IP 67)



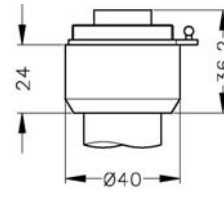
M12x1 4-pin (IP 67)



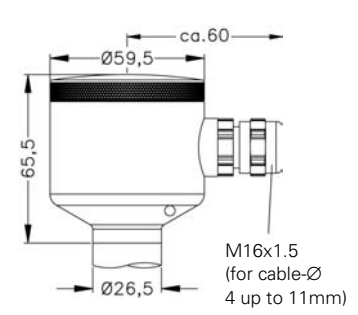
Cable gland (IP 67)^{4,5}



Cable outlet (IP 68)⁵



Buccaneer (IP 68)



Field housing (IP 67)

³ 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 $R_p > 260 \text{ N/mm}^2$ in accordance with DIN 17440. The maximum allowed pressure is 1600 bar!

⁴ different cable types and lengths available

⁵ standard: 2m PVC cable without ventilation tube

Materials

Pressure port	stainless steel 1.4542 (17-4PH)
Housing	standard: stainless steel 1.4301 (304) field housing: stainless steel 1.4305 (303), cable gland of brass, nickel plated
Seals (media wetted)	none (welded version)
Diaphragm	stainless steel 1.4542 (17-4PH)
Media wetted parts	pressure port, diaphragm

Miscellaneous

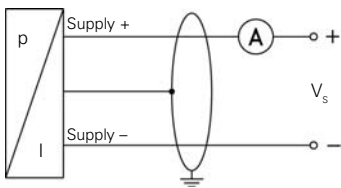
Connecting cables (by factory)	cable capacitance: signal line/shield also signal line/signal line: 160 pF/m cable inductance: signal line/shield also signal line/signal line: 1 µH/m
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA
Weight	approx. 200 g
Installation position	any

Pin configuration

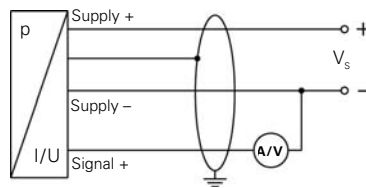
Electrical connection		ISO 4400	Binder 723 (5-pin)	M12x1 (4-pin)	Buccaneer (4-pin)	cable colours (DIN 47100)
2-wire-system	Supply +	1	3	1	1	white
	Supply -	2	4	2	2	brown
	Ground	ground pin	5	4	4	yellow / green (shield)
3-wire-system	Supply +	1	3	1	1	white
	Supply -	2	4	2	2	brown
	Signal +	3	1	3	3	green
	Ground	ground pin	5	4	4	yellow / green (shield)

Wiring diagrams

2-wire-system (current)



3-wire-system (current / voltage)



Ordering code DMP 334

DMP 334



Pressure		1	4	0																
Input	gauge [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															on request
Output																				
	4 ... 20 mA / 2-wire					1														
	0 ... 10 V / 3-wire					3														
	customer					9														on request
Accuracy																				
	standard	0,35 %				3														
	option	0,25 %				2														on request
	customer					9														on request
Electrical connection																				
	Male and female plug ISO 4400					1	0	0												
	Binder series 723 (5-pin)					2	0	0												
	Cable gland incl. cable ^{2,3}					4	0	0												
	Cable outlet ²					T	R	0												
	Male plug Buccaneer IP68					5	0	0												
	M12x1 (4-pin)					M	0	0												
	Field housing stainless steel					8	0	0												
	customer					9	9	9												on request
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												on request
Seals																				
	without (welded version)									2										
	customer									9										on request
Special version																				
	standard											0	4	1						
	customer											9	9	9						on request

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, 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!