



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. In addition it is possible to use the DMP 334 in explosive area (zone 0).

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 Ex-version
(only for 4 ... 20 mA / 2-wire)
TÜV 03 ATEX 2006 X
- ▶ option: field housing
- ▶ customer specific versions:
 - variety of electrical and mechanical connections
 - other versions on request

Characteristics



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Visit the website: www.impress-sensors.co.uk

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 / $V_s = 12 \dots 36 V_{DC}$	Ex-protection: $V_s = 14 \dots 28 V_{DC}$
Optional	3-wire: 0 ... 20 mA / $V_s = 14 \dots 36 V_{DC}$ 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: $R_{max} = [(V_s - V_{smin}) / 0.02] \Omega$ 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	$\leq \pm 0.2\%$ FSO / year	
Response time	< 5 msec	

Thermal effects	
Thermal error for offset and span	$\leq \pm 0.25\%$ FSO / 10 K
in compensated range	-20 ... 85 °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
Option Ex-protection only with 4 ... 20 mA / 2-wire DX13-DMP 334	zone 0 ³ : II 1 G EEx ia IIC T4 zone 20: II 1 D T 85°C safety technical maximum values: $V_i = 28 V$, $I_i = 93 mA$, $P_i = 660 mW$, $C_i \leq 1 nF$, $L_i \leq 10 \mu H$

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	Ex-protection: application in zone 0: -20 ... 60 °C application in zone 1 or higher: -25 ... 70 °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)

³ approved for atmospheric pressure from 0.8 bar up to 1.1 bar

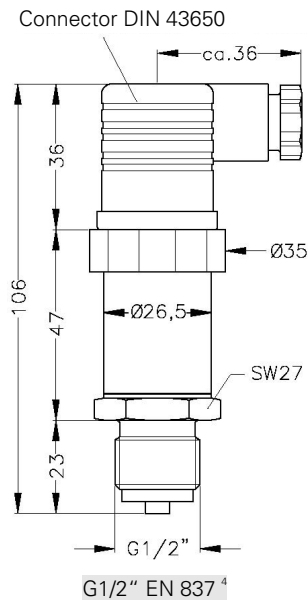
DMP 334

Industrial Pressure Transmitter

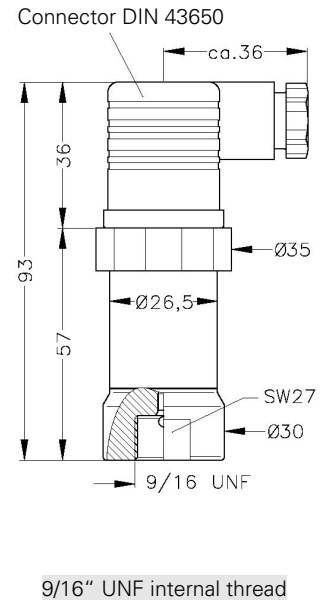
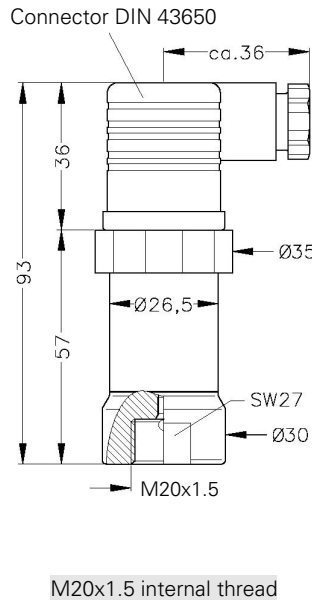
Technical Data

Mechanical connection

Standard



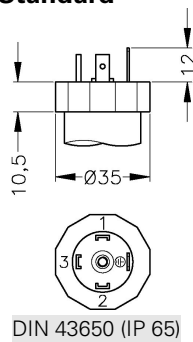
Optional



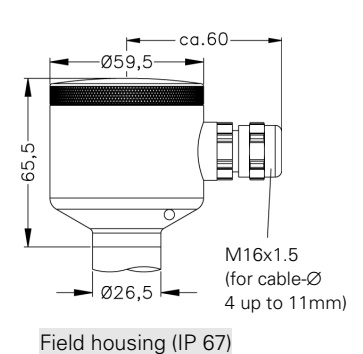
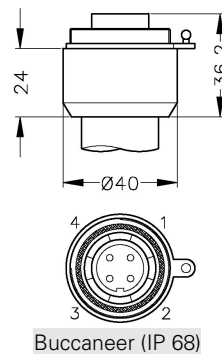
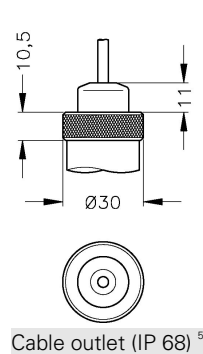
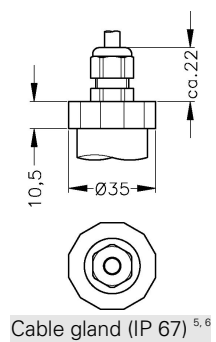
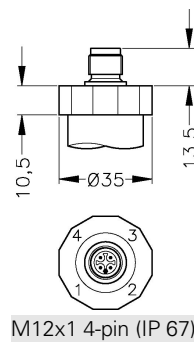
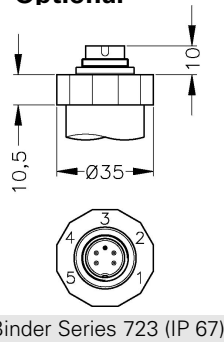
⇒ Total length of devices with Ex-protection increases by 17 mm!

Electrical connection

Standard



Optional



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

⁵ different cable types and lengths available

⁶ standard: 2m PVC cable without ventilation tube

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Technical Data

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

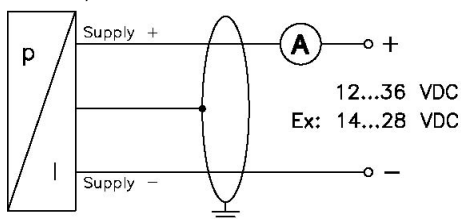
Cable capacitance ⁷	signal line/shield: 160 pF/m	signal line/signal line: 120 pF/m
Cable inductance ⁷	signal line/shield: 0.65 µH/m	signal line/signal line: 0.65 µH/m
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA	
Weight	approx. 200 g	
Installation position	any	

Pin configuration

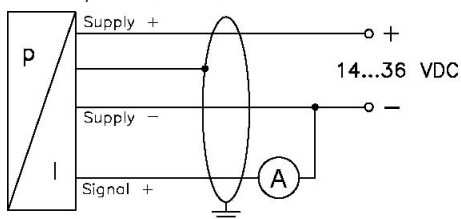
Electrical connection		DIN 43650	Binder 723 (5-pin)	M12x1 (4-pin)	Buccaneer (4-pin)	cable colours ⁷ (DIN 47100)
2-wire-system	Supply +	1	3	1	1	white
	Supply -	2	4	2	2	brown
	Ground	ground pin	5	4	4	yellow / green (shield)
3-wire-system	Supply +	1	3	1	1	white
	Supply -	2	4	2	2	brown
	Signal +	3	1	3	3	green
	Ground	ground pin	5	4	4	yellow / green (shield)

Wiring diagrams

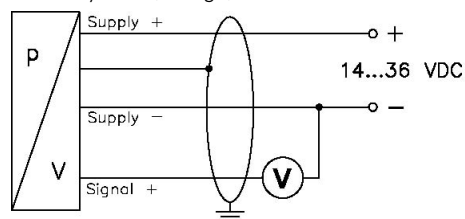
2-wire-system (current)



3-wire-system (current)



3-wire-system (voltage)



⁷ if the electrical connection is a mounted cable by factory