



# DMP 334

Industrial Pressure  
Transmitter  
for very high Pressure

Thinfilm Sensor

accuracy  
according to IEC 60770:  
0.35 % FSO

Industrial -  
Pressure Transmitter

**DMP 334**

**Nominal pressure ranges:**

from 0 ... 600 bar  
up to 0 ... 2200 bar

**Analogue output:**

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

**Special characteristics:**

- ▶ extremely 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 elecrrical 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 foolproofness and reliability.

All of characteristics and the excellent mesurement data of **DMP 334** as well as distinguished offset stability offer a pressure transmter with easy handling, reliability and robustness for hydraulic user. The **DMP 334** is deliverable with pressure ports of extrem pressure technics.

**Preferred areas of use are:**



Plant and Machine Engineering

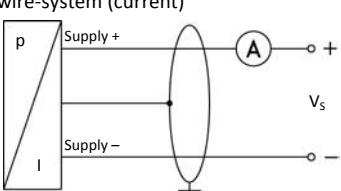
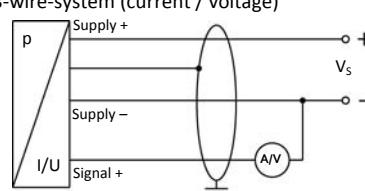


Commercial Vehicles and  
Mobile Hydraulics

# DMP 334

## Industrial Pressure Transmitter

## Technical Data

Input pressure range												
Nominal pressure gauge	[bar]	600 <sup>1</sup>	1000	1600	2000	2200						
Overpressure	[bar]	800	1400	2200	2800	2800						
<sup>1</sup> only available with pressure port G1/2" EN 837												
Output signal / Supply												
Standard	2-wire:	4 ... 20 mA	/ V <sub>S</sub> = 12 ... 36 V <sub>DC</sub>									
Option IS-protection	2-wire:	4 ... 20 mA	/ V <sub>S</sub> = 14 ... 28 V <sub>DC</sub>									
Option 3-wire	3-wire:	0 ... 10 V	/ V <sub>S</sub> = 14 ... 36 V <sub>DC</sub>									
Performance												
Accuracy	$\leq \pm 0.35\% \text{ FSO IEC 60770}^2$											
Permissible load	current 2-wire: R <sub>max</sub> = [(V <sub>S</sub> - V <sub>S</sub> min) / 0.02 A] Ω voltage 3-wire: R <sub>min</sub> = 10 kΩ											
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ											
Long term stability	$\leq \pm 0.2\% \text{ FSO / year}$											
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.											
<sup>2</sup> accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)												
Thermal effects (Offset and Span) / Permissible temperatures												
Thermal error	$\leq \pm 0.25\% \text{ FSO / 10 K}$ 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 (with option IS-protection)												
Approval DX13-DMP 334	zone 0: II 1 G Ex ia IIC T4 zone 20: II 1 D Ex tD A20 IP65 T 85°C											
Safety technical maximum values	U <sub>i</sub> = 28 V, I <sub>i</sub> = 93 mA, P <sub>i</sub> = 660 mW, C <sub>i</sub> ≤ 1nF, L <sub>i</sub> ≤ 10 μH											
Permissible temperatures for environment	in zone 0: -20 ... 60 °C with p <sub>atm</sub> 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												
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA											
Weight	approx. 200 g											
Installation position	any											
CE-conformity	EMC Directive: 2004/108/EC Pressure Equipment Directive: 97/23/EC (module A)											
Wiring diagrams												
<b>2-wire-system (current)</b> 												
<b>3-wire-system (current / voltage)</b> 												

# DMP 334

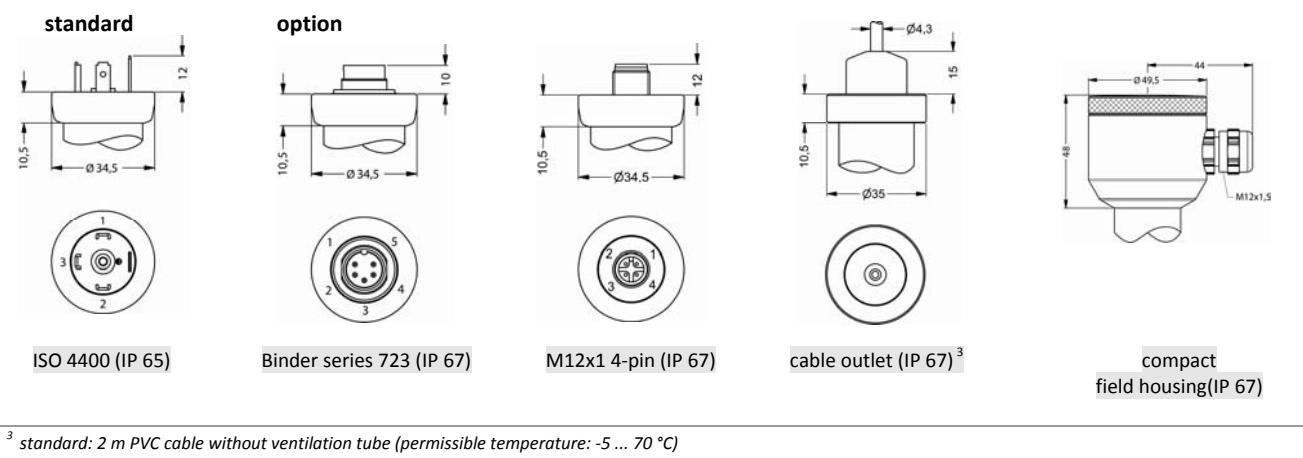
Industrial Pressure Transmitter

Technical Data

## Pin configuration

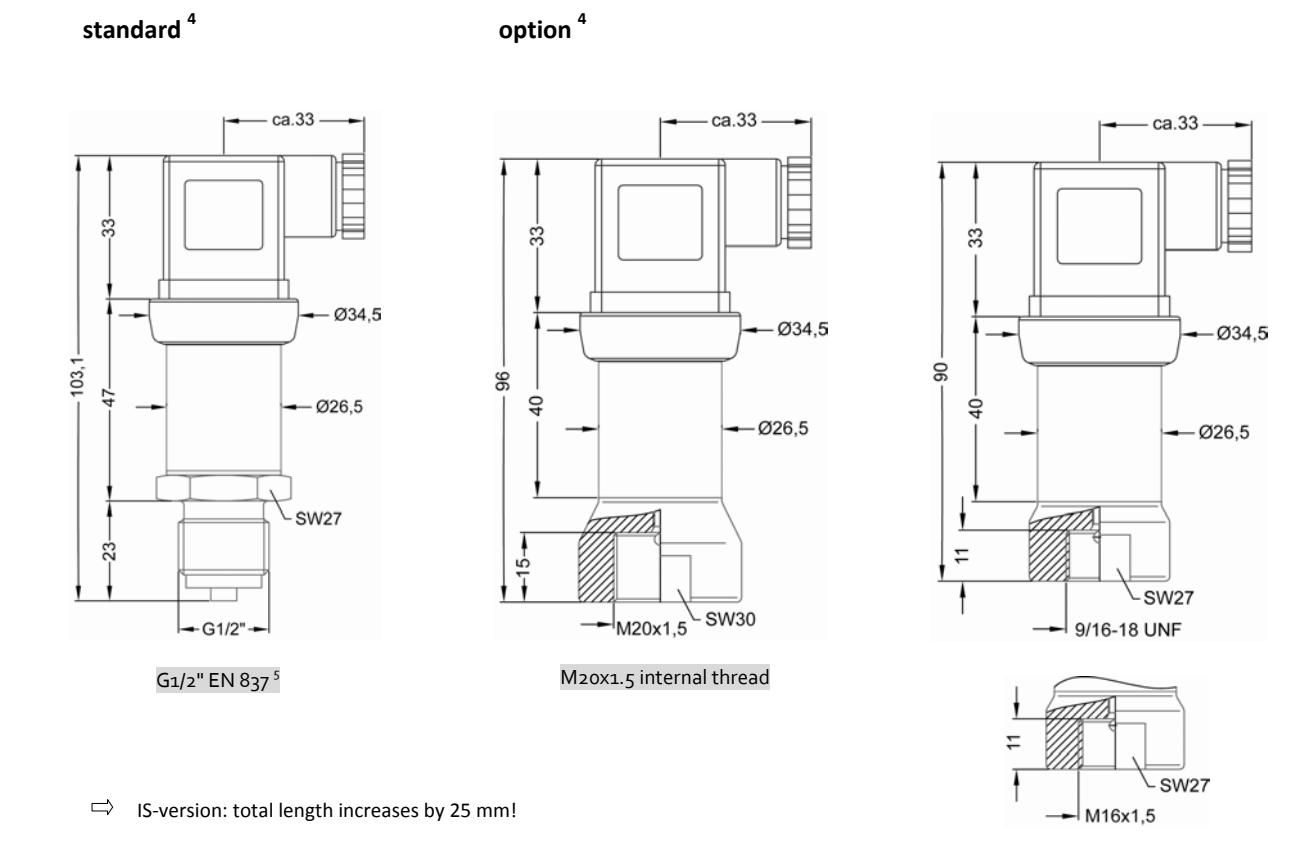
Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1 (4-pin)	Field housing	Cable colours (DIN 47100)
Supply +	1	3	1	IN +	white
Supply -	2	4	2	IN -	brown
Signal + (for 3-wire)	3	1	3	OUT+	green
Shield	ground pin	5	4	—	yellow / green

## Electrical connections (dimensions in mm)



<sup>3</sup> standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)

## Mechanical connection (dimensions in mm)



<sup>4</sup> adjustable version is not possible in combination with IS-version, compact field housing and cable outlet

<sup>5</sup> 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!

This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.



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[ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Messgröße				
	relativ	1	4	0
<b>Eingang</b>	<b>[bar]</b>			
600	<sup>1</sup>	6	0	0
1000		1	0	0
1600		1	6	0
2000		2	0	0
2200		2	2	0
Sondermessbereiche		9	9	9
				auf Anfrage
<b>Ausgang</b>				
4 ... 20 mA / 2-Leiter			1	
0 ... 10 V / 3-Leiter			3	
Ex-Schutz 4 ... 20 mA / 2-Leiter			E	
andere			9	auf Anfrage
<b>Genauigkeit</b>				
0,35 %			3	
andere			9	auf Anfrage
<b>Elektrischer Anschluss</b>				
Stecker und Kabeldose ISO 4400		1	0	0
Stecker Binder Serie 723 (5-polig)		2	0	0
Kabelausgang mit PVC-Kabel <sup>2,3</sup>		T	A	0
Stecker M12x1 (4-polig) / Metall		M	1	0
Kompakt-Feldgehäuse		8	5	0
Edelstahl 1.4404		9	9	9
andere				auf Anfrage
<b>Mechanischer Anschluss</b>				
G1/2" EN 837 <sup>4</sup>		2	0	0
M20x1,5 Innengewinde		D	2	8
9/16 UNF Innengewinde		V	0	0
andere		9	9	9
				auf Anfrage
<b>Dichtung</b>				
ohne (Schweißversion)			2	
andere			9	auf Anfrage
<b>Sonderausführungen</b>				
Standard		0	0	0
verstellbar <sup>5</sup>		0	4	1
andere		9	9	9
				auf Anfrage

<sup>1</sup> nur möglich mit Druckanschluss G1/2" EN 837

<sup>2</sup> Kabel in verschiedenen Ausführungen und Längen lieferbar

<sup>3</sup> Standard: 2 m PVC-Kabel ohne Belüftungsschlauch (Temperaturbereich: -5 ... 70 °C), optional Kabel mit Belüftungsschlauch

<sup>4</sup> Laut EN 837 müssen bei Drücken ab 1000 bar Druckanschluss und Gegenstück vorzugsweise aus einem nichtrostenden Stahl nach DIN 17440 mit einer Festigkeit von R<sub>p</sub> > 260 N/mm<sup>2</sup> hergestellt sein. Der maximal zulässige Druck ist 1600 bar!

<sup>5</sup> nicht möglich in Verbindung mit Ex-Ausführung, Kompakt-Feldgehäuse und Kabelausgang mit PVC-Kabel