



# 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 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 foolproofness and reliability.

All of characteristics and the excellent measurement 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 pressure ports of extrem pressure technics.

#### Preferred areas of use are:



Plant and Machine Engineering



Commercial Vehicles and  
Mobile Hydraulics

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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	≤ ± 0.35 % FSO IEC 60770 <sup>2</sup>					
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	≤ ± 0.2 % FSO / year					
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.					
<sup>2</sup> 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 (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						
2-wire-system (current)			3-wire-system (current / voltage)			

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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)**

ISO 4400 (IP 65)

Binder series 723 (IP 67)

M12x1 4-pin (IP 67)

cable outlet (IP 67)<sup>3</sup>

compact field housing (IP 67)

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

**Mechanical connection (dimensions in mm)**

**standard<sup>4</sup>**

G1/2" EN 837<sup>5</sup>

**option<sup>4</sup>**

M20x1,5 internal thread

9/16-18 UNF internal thread

⇨ IS-version: total length increases by 25 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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<b>Messgröße</b>			relativ	1	4	0															
<b>Eingang</b>			[bar]																		
			600	<sup>1</sup>		6	0	0	3												
			1000			1	0	0	4												
			1600			1	6	0	4												
			2000			2	0	0	4												
			2200			2	2	0	4												
			Sondermessbereiche			9	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																		
			Edelstahl 1.4404						8	5	0										
			andere						9	9	9										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 (Temperatureinsatzbereich: -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