



# 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

# DMP 334

Industrial Pressure Transmitter

Technical Data

<b>Input pressure range</b>					
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					
<b>Output signal / Supply</b>					
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>				
<b>Performance</b>					
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)					
<b>Thermal effects (Offset and Span) / Permissible temperatures</b>					
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
<b>Electrical protection</b>					
Short-circuit protection	permanent				
Reverse polarity protection	no damage, but also no function				
Electromagnetic compatibility	emission and immunity according to EN 61326				
<b>Mechanical stability</b>					
Vibration	10 g RMS (20 ... 2000 Hz)				
Shock	100 g / 11 msec.				
<b>Materials</b>					
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				
<b>Explosion protection (with option IS-protection)</b>					
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> ≤ 1 nF, 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				
<b>Miscellaneous</b>					
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)		
<b>Wiring diagrams</b>					
<b>2-wire-system (current)</b> 			<b>3-wire-system (current / voltage)</b> 		

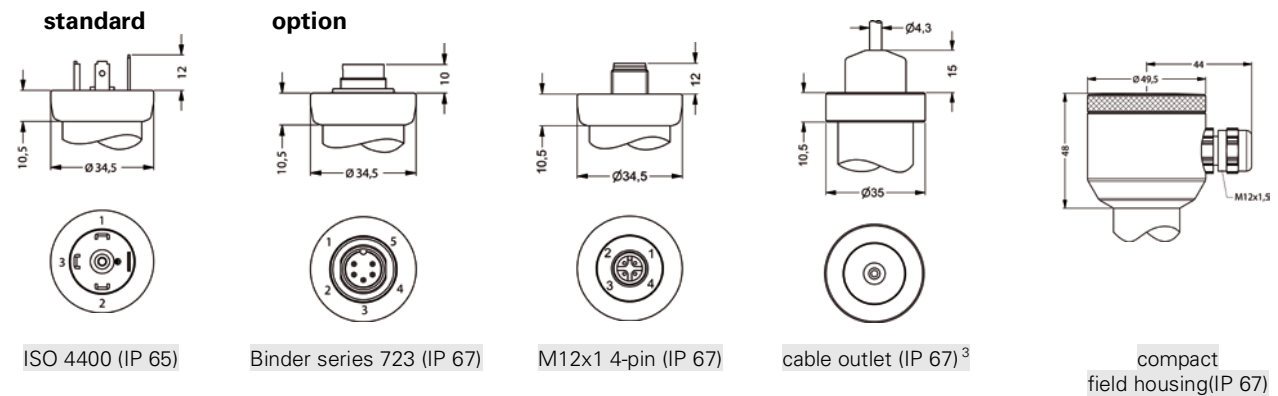
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Industrial Pressure Transmitter

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

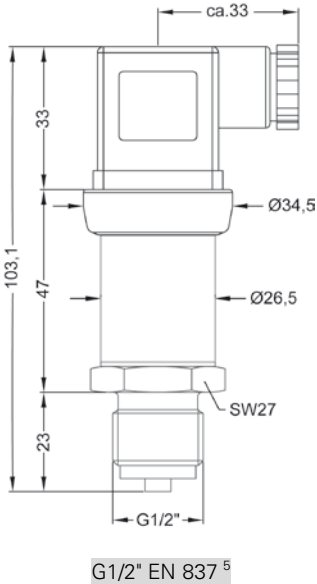
### Electrical connections (dimensions in mm)



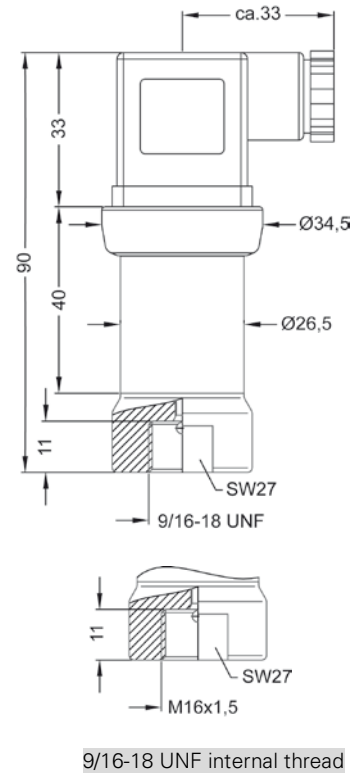
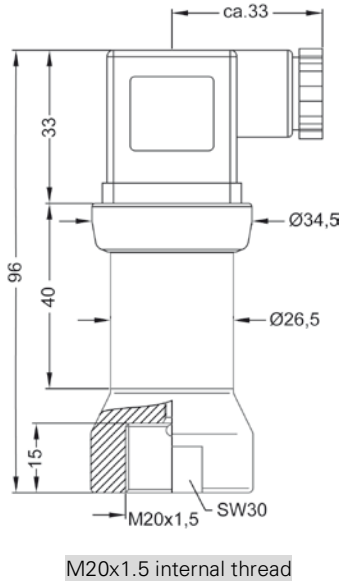
<sup>3</sup> standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)

### Mechanical connection (dimensions in mm)

#### standard<sup>4</sup>



#### option<sup>4</sup>



⇒ 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!

# Ordering code DMP 334

## DMP 334

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Pressure		1		4		0													
Input	gauge	1	4	0															
	[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													
	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
	Male plug Binder series 723 (5-pin)																		2
	Cable outlet with PVC cable <sup>2,3</sup>																		T
	Male plug M12x1 (4-pin) / metal																		M
	Compact field housing																		1
	stainless steel 1.4404 (316L)																		8
	customer																		5
																			9
																			9
																			consult
Mechanical connection																			
	G1/2" EN 837 <sup>4</sup>																		2
	M20x1.5 internal thread																		D
	9/16 UNF internal thread																		2
	customer																		V
																			0
																			0
																			0
																			9
																			9
																			consult
Seals																			
	without (welded version)																		2
	customer																		9
																			consult
Special version																			
	standard																		0
	adjustable <sup>5</sup>																		0
	customer																		4
																			1
																			9
																			9
																			consult

<sup>1</sup> only available with pressure port G1/2" EN 837  
<sup>2</sup> different cable types and lengths deliverable  
<sup>3</sup> standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C), optionally cable with ventilation tube  
<sup>4</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<sub>p</sub> > 260 N/mm<sup>2</sup> in accordance with DIN 17440. The maximum allowed pressure is 1600 bar!  
<sup>5</sup> not possible in combination with IS-version, compact field housing and cable outlet with PVC cable

## Website

[www.SensorsONE.co.uk](http://www.SensorsONE.co.uk)

## Email

enquiries [at] SensorsONE.co.uk

## QR Code

Save the SensorsONE website address to your mobile smartphone by scanning this QR code

