

# WMP 334



## Industrial Pressure Transmitter for High Pressure

Thin film Sensor

accuracy according to IEC 60770:  
0.35 % FSO

### Nominal pressure

- ▶ 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
- ▶ welded pressure sensor

### 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 WMP 334 has been especially designed for use in hydraulic systems up to 2200 bar. The base element of WMP 334 is a thinfilm sensor, which is welded with the pressure port and meets high demands of operational safety and reliability.

These characteristics and the excellent measurement data of WMP 334 as well as distinguished offset stability offer a pressure transmitter with easy handling, reliability, and robustness for hydraulic user. The WMP 334 is deliverable with standard HP connections.

### Preferred areas of use are



Plant and machine engineering



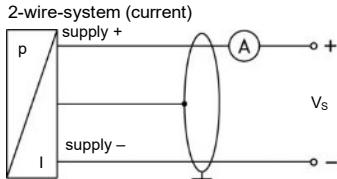
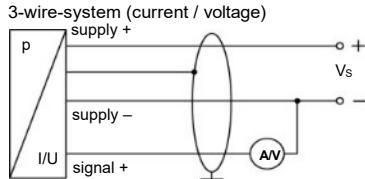
Commercial vehicles and mobile hydraulics

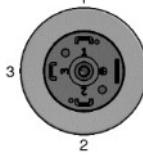
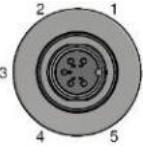
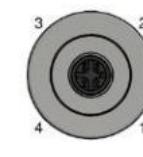
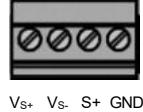
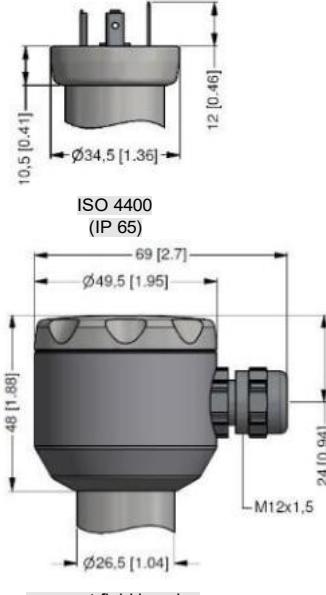
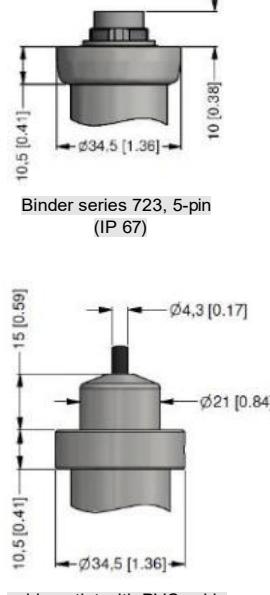
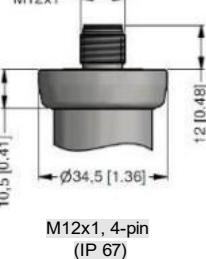
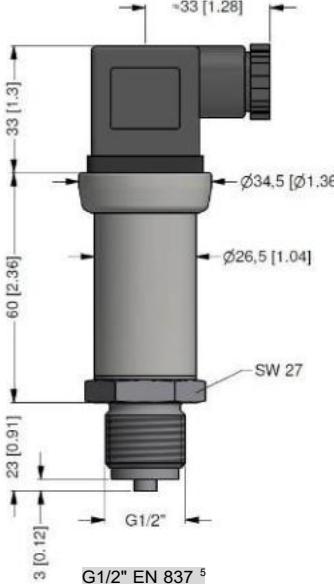
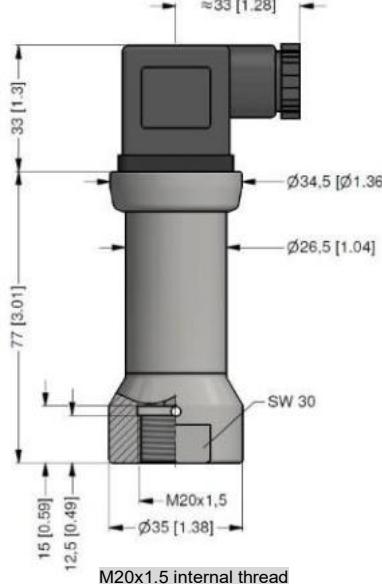
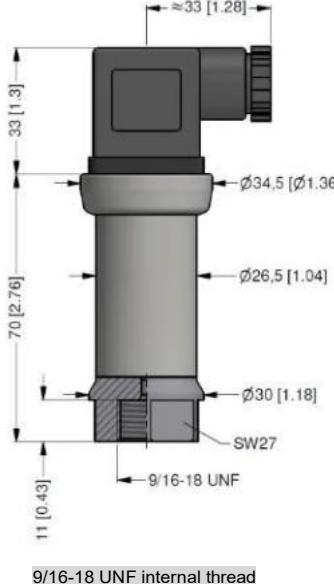


# WMP 334

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					
Burst pressure ≥	[bar]	3000	4000	6000	6000	6000					
<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 ... 30 V <sub>DC</sub>								
Performance											
Accuracy <sup>2</sup>		≤ ± 0.35 % FSO									
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 at reference conditions									
Response time		< 5 msec									
Adjustability <sup>3</sup>		adjustment of offset and span is possible within the range of ± 5 % of the nominal pressure range; please select "041" as a special version in the ordering code									
<sup>2</sup> accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)											
<sup>3</sup> adjustable version is not possible in combination with IS-version, compact field housing and cable outlet											
Thermal effects (offset and span)											
Thermal error		≤ ± 0.25 % FSO / 10 K									
in compensated range		-20 ... 85 °C									
Permissible temperatures											
Medium		-40 ... 140 °C									
Electronics / environment		-40 ... 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)		according to DIN EN 60068-2-6							
Shock		100 g / 11 msec.		according to DIN EN 60068-2-27							
Materials											
Pressure port		stainless steel 1.4542 (17-4 PH)									
Housing		stainless steel 1.4404 (316L)									
Option compact field housing		stainless steel 1.4301 (304); cable gland M12x1.5, brass, nickel plated (clamping range 2 ... 8 mm)									
Seals		none (welded version)									
Diaphragm		stainless steel 1.4542 (17-4 PH)									
Media wetted parts		pressure port, diaphragm									
Explosion protection (only for 4 ... 20 mA / 2-wire)											
Approvals		IBExU 10 ATEX 1068 X / IECEx IBE 12.0027X									
DX19-WMP 334		zone 0: II 1G Ex ia IIC T4 Ga		zone 20: II 1D Ex ia IIIC T135 °C Da							
Safety technical maximum values		U <sub>i</sub> = 28 V <sub>DC</sub> , I <sub>i</sub> = 93 mA, P <sub>i</sub> = 660 mW, C <sub>i</sub> ≈ 0 nF, L <sub>i</sub> ≈ 0 μH, the supply connections have an inner capacity of max. 27 nF to the housing									
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: -40/-20 ... 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. 8.5 mA							
Weight		approx. 240 g									
Installation position		any									
Operational life		p <sub>N</sub> = 600 bar: 100 million load cycles		p <sub>N</sub> > 600 bar: 10 million load cycles							
CE-conformity		EMC Directive: 2014/30/EU		Pressure Equipment Directive: 2014/68/EU (module A)							
ATEX Directive		2014/34/EU									
Wiring diagrams											
											
											

Pin configuration					
Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1 / metal (4-pin)	compact field housing	cable colours (IEC 60757)
					V <sub>s+</sub> V <sub>s-</sub> S+ GND
Supply + Supply - Signal + (only for 3-wire)	1 2 3	3 4 1	1 2 3	V <sub>s+</sub> V <sub>s-</sub> S+	WH (white) BN (brown) GN (green)
Shield	ground pin 	5	4	GND	GNYE (green-yellow)
Electrical connections (dimensions mm / in)					
					
compact field housing (IP 67)	cable outlet with PVC cable (IP 67) <sup>4</sup>	M12x1, 4-pin (IP 67)			
4 standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C); others on request					
Mechanical connection (dimensions mm / in)					
					
G1/2" EN 837 <sup>5</sup>	M20x1.5 internal thread	9/16-18 UNF internal thread			
<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 WMP 334

WMP 334

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

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

<sup>3</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!

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