



DMP 334

Industrial Pressure Transmitter for High Pressure

Thinfilmm 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
- ▶ 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 thinfilmm sensor, which is welded with the pressure port and meets high demands of 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 standard HP connections.

Preferred areas of use are



Plant and Machine Engineering



Commercial Vehicles and Mobile Hydraulics

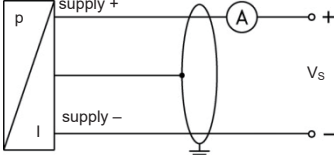
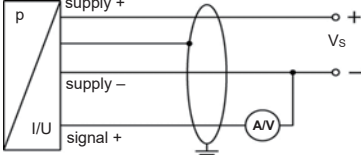


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Industrial Pressure Transmitter



All Sensors
Asia Pacific K.K.

| Input pressure range | | | | | | |
|--|--|--|--|---|-------------------------|-----------------------|
| Nominal pressure gauge | [bar] | 600 ¹ | 1000 | 1600 | 2000 | 2200 |
| Overpressure | [bar] | 800 | 1400 | 2200 | 2800 | 2800 |
| Burst pressure ≥ | [bar] | 3000 | 4000 | 6000 | 6000 | 6000 |
| ¹ only available with pressure port G1/2" EN 837 | | | | | | |
| Output signal / Supply | | | | | | |
| Standard | 2-wire: | 4 ... 20 mA / V _S = 12 ... 36 V _{DC} | | | | |
| Option IS-protection | 2-wire: | 4 ... 20 mA / V _S = 14 ... 28 V _{DC} | | | | |
| Option 3-wire | 3-wire: | 0 ... 10 V / V _S = 14 ... 30 V _{DC} | | | | |
| Performance | | | | | | |
| Accuracy | ≤ ± 0.35 % FSO IEC 60770 ² | | | | | |
| Permissible load | current 2-wire: R _{max} = [(V _S – V _S min) / 0.02 A] Ω voltage 3-wire: R _{min} = 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 | Adjustment of offset is possible within the range of ± 5 % of the nominal pressure range, without an influence of characteristic curve and accuracy. | | | | | |
| ² 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 (only for 4 ... 20 mA / 2-wire) | | | | | | |
| Approvals DX19-DMP 334 | IBExU 10 ATEX 1068 X / IECEx IBE 12.0027X zone 0: II 1G Ex ia IIC T4 Ga zone 20: II 1D Ex ia IIIC T 85°C Da | | | | | |
| Safety technical maximum values | U _i = 28 V _{DC} , I _i = 93 mA, P _i = 660 mW, C _i ≈ 0 nF, L _i ≈ 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 _{atm} 0.8 bar up to 1.1 bar in zone 1 or higher: -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 | | | | | |
| CE-conformity | EMC Directive: 2014/30/EU | | | Pressure Equipment Directive: 2014/68/EU (module A) | | |
| ATEX Directive | 2014/34/EU | | | | | |
| Wiring diagrams | | | | | | |
| 2-wire-system (current) | | | 3-wire-system (current / voltage) | | | |
|  | | |  | | | |

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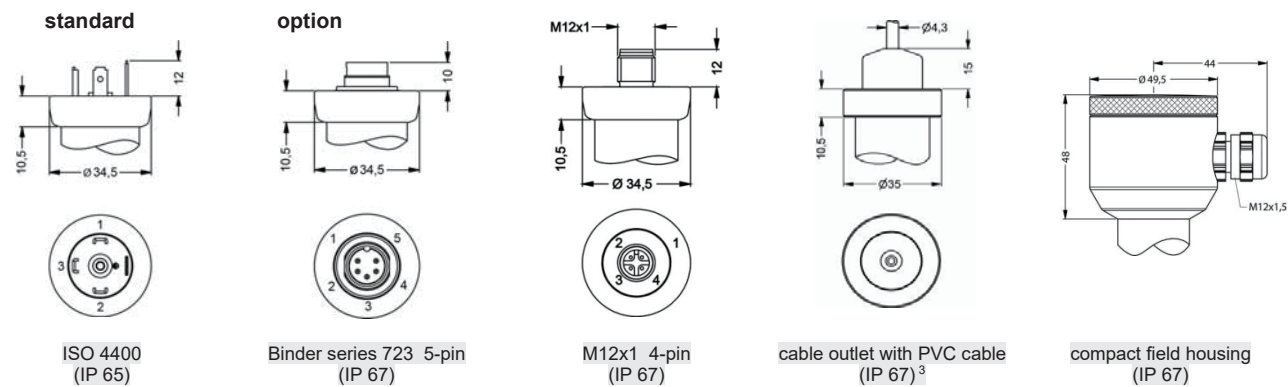


All Sensors
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Pin configuration

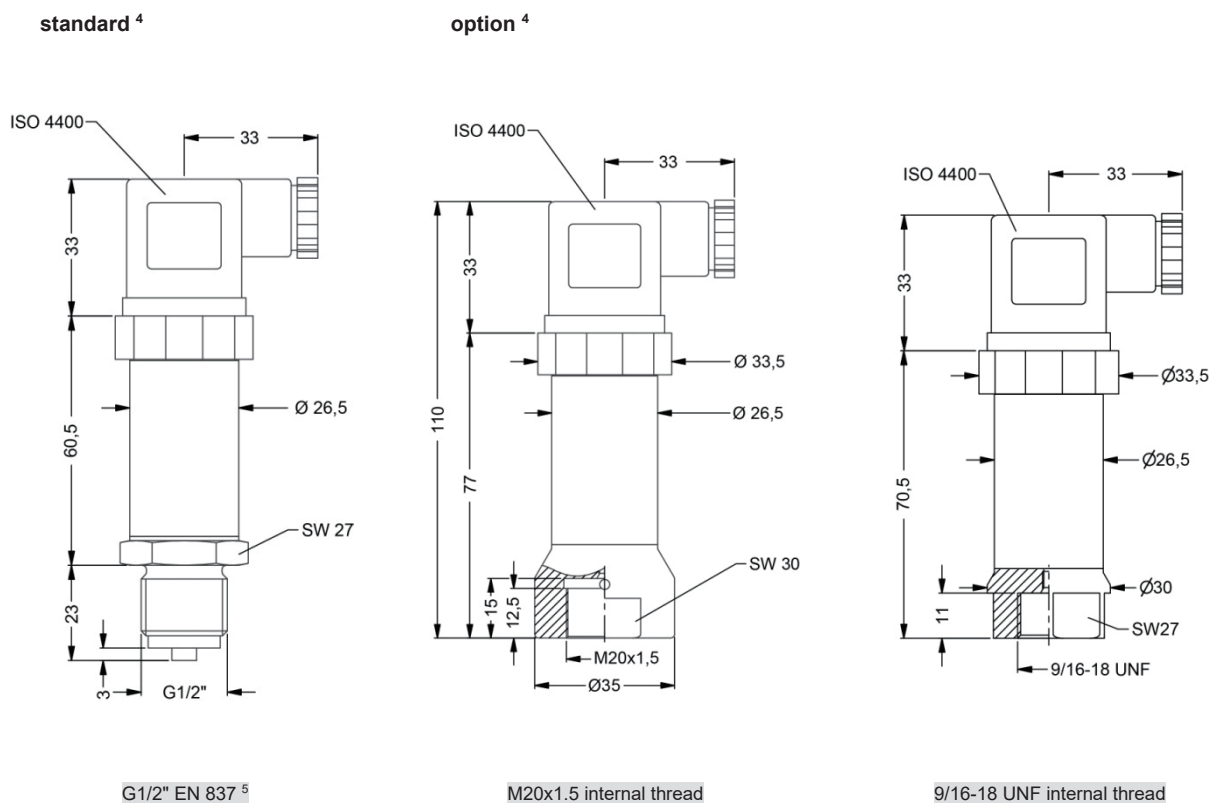
| Electrical connection | ISO 4400 | Binder 723 (5-pin) | M12x1/metal (4-pin) | Field housing | Cable colours (IEC 60757) |
|----------------------------|------------|--------------------|---------------------|---------------|---------------------------|
| Supply + | 1 | 3 | 1 | IN + | wh (white) |
| Supply - | 2 | 4 | 2 | IN - | bn (brown) |
| Signal + (only for 3-wire) | 3 | 1 | 3 | OUT+ | gn (green) |
| Shield | ground pin | 5 | 4 | | gnye (green-yellow) |

Electrical connections (dimensions in mm)



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

Mechanical connection (dimensions in mm)



G1/2" EN 837⁵

M20x1.5 internal thread

9/16-18 UNF internal thread

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

⁵ 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!

DMP 334

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|-----|-----|-----|---|-----|-----|-----|---|-----|---|-----|---|-----|-----|-----|---|-----|-----|-----|---|-----|-----|-----|

⁵ not possible in combination with IS-version, compact field housing and cable outlet with PVC cable