



DMP 334

Industrial Pressure Transmitter for very high Pressure

Thinfilim 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

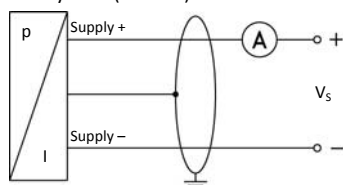
Industrial Pressure Transmitter

Technical Data

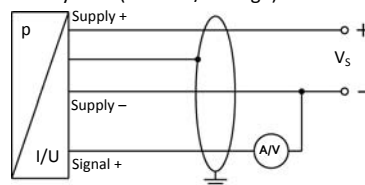
| Input pressure range | | | | | | |
|--|--|---|---|-----------------------|-------------------------|------|
| Nominal pressure gauge | [bar] | 600 ¹ | 1000 | 1600 | 2000 | 2200 |
| Overpressure | [bar] | 800 | 1400 | 2200 | 2800 | 2800 |
| ¹ only available with pressure port G1/2" EN 837 | | | | | | |
| 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 ... 36 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 | | | | | |
| 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 (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 _i = 28 V, I _i = 93 mA, P _i = 660 mW, C _i ≤ 1nF, L _i ≤ 10 μH | | | | | |
| 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: -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)

standard

ISO 4400 (IP 65)

option

Binder series 723 (IP 67)

M12x1 4-pin (IP 67)

cable outlet (IP 67)³

compact field housing (IP 67)

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

Mechanical connection (dimensions in mm)

standard⁴

G1/2" EN 837⁵

option⁴

M20x1,5 internal thread

9/16-18 UNF

⇨ IS-version: total length increases by 25 mm!

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!

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

