

Features

- Ranges from 100 mbar to 700 bar
- $\pm 0.15\%$ accuracy
- -54°C to 121°C operation
- 400% overpressure
- Compact and rugged design
- Low power consumption with amplified output

The PMP 317 series has been designed to withstand the extreme temperature, vibration and shock levels of automotive test applications. A micro machined silicon sensing element is mounted within a high integrity pressure module constructed from stainless steel 316L and Hastelloy C276. This provides hostile media compatibility, high overpressure and burst ratings.

The temperature compensated signal is a customer specific high level output voltage ideal for interfacing with data acquisition hardware. Pressure and electrical interfaces can also be selected by the customer.

The PMP 317 series can be powered directly from the vehicle battery, even during the start cycle. It is suitable for measurements where temperature cannot be controlled and reliable high performance measurement is required. Applications include fuel system, transmission, manifold and turbo pressure, air conditioning, braking system and crankcase pressures.

PMP 317 Series

Druck High Performance Automotive Pressure Transducers

PMP 317 Series is a Druck product. Druck has joined other GE high-technology sensing businesses under a new name—GE Sensing.



PMP 317 Specifications

Pressure Measurement

Operating Pressure Ranges

Any Zero Based Pressure Range Between:

- 100 mbar to 60 bar gauge
- 350 mbar to 700 bar absolute
- 70 bar to 700 bar sealed gauge

Bi-directional gauge and compound ranges available

Other engineering units can be specified

Overpressure

The rated pressure can be exceeded by the following without degrading performance:

- 4 x full scale (FS) up to 60 bar (200 bar (maximum))
- 2 x FS above 60 bar (900 bar maximum)

Media Compatibility

Fluids compatible with stainless steel 316L and Hastelloy C276

Excitation Voltage

7 to 30 VDC (<2 mA at no load)

Output Voltage

- Three-wire: 1 to 6 V
- Four-wire: 0 to 5 V
- Alternatives available - refer to Druck

Performance

Accuracy

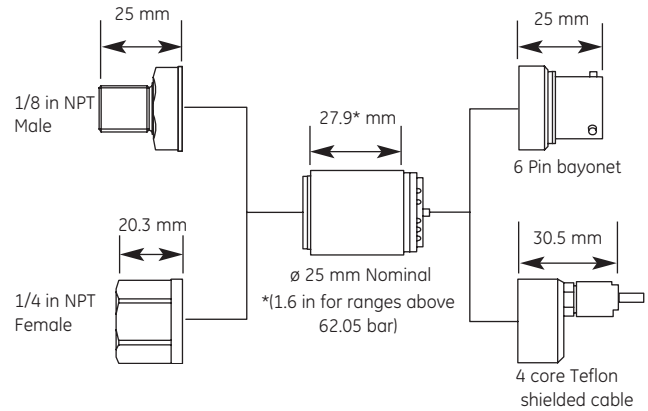
- $\pm 0.15\%$ FS BSL combined effects of non-linearity, hysteresis and repeatability
- Better than $\pm 0.1\%$ FS - refer to Druck

Zero Offset & Span Setting

$\pm 1\%$ FS

Long Term Stability

Less than 0.1% FS per annum



Electrical Connections - Three-wire

Red:	PIN A: Supply Positive
Yellow:	PIN B: Output Positive
Blue:	PIN D: Common 0 V

Other Pins Not Connected

Electrical Connections - Four-wire

Red:	PIN A: Supply Positive
Yellow:	PIN B: Output Positive
Green:	PIN C: Output Negative
Blue:	PIN D: Supply Negative

Other Pins Not Connected

Installation Drawing - Dimensions in inches

Operating Temperature Range

-54°C to 121°C

Temperature Effects

Total Error Band (TEB) or average coefficients (% FS/°F) includes thermal zero shift, span sensitivity shift and thermal hysteresis:

- -40°C to 121°C $\pm 1.5\%$ TEB ($\pm 0.005\%$ FS/°F)
- For ranges below 350 mbar FS, these values may increase

Improved Performance

Transducers with improved accuracy for special applications can be supplied. For more detailed information refer to Druck

Insulation Resistance

Greater than 100 M Ω at 500 VDC

Acceleration Sensitivity

Typically 0.02% FS/g for 350 mbar and below, decreasing to 0.0003% FS/g for ranges above 60 bar, along the sensitive axis

Mechanical Shock

1000 g, 1 ms half sine pulse in each of three mutually perpendicular axes will not affect performance

Vibration

Response less than 0.05% FS/g at 30 g peak 10 Hz to 2 kHz, limited by 0.5 in double amplitude

PMP 317

Specifications

Physical

Weight

4.3 oz (121 g) nominal

Pressure Connection

Ranges up to 62 bar:

- 1/8" NPT Male
- 7/16" - 20 UNJF to MS33656-4 (1/4" AN)

Ranges up to 700 bar:

- 1/4" NPT Female
- Others available - refer to Druck

Electrical Connection

PTIH-10-6 P 6 pin bayonet plug or four conductor Teflon shielded cable (3 ft (0.91 m) supplied as standard) Alternatives available - refer to Druck

Options

- (A) Mating connector for bayonet plug
- (B) Male/male pressure adapters for ranges above 60 bar. Specify thread required
- (C) Additional Teflon cable (length to be specified)
- (D) Shunt Cal (Refer to Druck)

Calibration Standards

Pressure transducers manufactured by Druck are calibrated against precision pressure calibration equipment which is traceable to international standards.

Statement of conformity supplied as standard.

Ordering Information

Please state the following:

- (1) Model number (PMP 317)
- (2) Pressure range and units
- (3) Gauge, sealed gauge or absolute
- (4) Output voltage (three or four-wire)
- (5) Pressure connection
- (6) Electrical connection
- (7) Options (if required)



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