

PMP 317 Series

Automotive Pressure Transducers

- Ranges from 100 mbar to 700 bar
- $\pm 0.15\%$ accuracy
- Wide temperature range
- 400% overpressure
- Compact and rugged design
- Low power consumption



The PMP 317 series has been designed to withstand the extreme temperature, vibration and shock levels of automotive test applications. A micromachined 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.

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Automotive Pressure Transducers



STANDARD SPECIFICATION

Pressure Measurement

Operating Pressure Ranges

Any zero based pressure range between
100 mbar to 60 bar gauge
350 mbar to 700 bar absolute
60 bar to 700 bar sealed gauge

Bi-directional gauge and compound ranges available

Other engineering units can be specified

Overpressure

The rated pressure range can be exceeded by the following multiples with negligible effect on calibration
4 x 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 (<2mA at no load)

Output Voltage

3 Wire: 1 to 6 Volts
4 Wire: 0 to 5 Volts

Alternatives available - refer to Druck

Performance Specification

Accuracy

±0.15 % FS BSL combined effects of non-linearity, hysteresis and repeatability

Zero Offset & Span Setting

± 1% FS

Long Term Stability

Less than 0.1% FS per annum

Operating Temperature Range

-55° to +125°C

Temperature Effects

±1.5% FS TEB over -40 to +125°C

Insulation Resistance

Greater than 100MΩ at 500Vdc

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

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

Vibration

Response less than 0.05% FS/g at 30g peak 10Hz to 2kHz, limited by 12mm double amplitude

Safety

CE marked
EMC emissions: BS 50081-1
EMC immunity: BS 50082-2

Physical Specification

Weight

120 grams nominal

Pressure Connection

100mbar to 60 bar ranges

Male:-

G1/8B (60° Int cone)

G1/4B (60° Int cone or flat end)

1/4" NPT

7/16" UNF to MS33656-4

M10 x 1

Bulkhead fittings

Female:-

G1/4

1/4" NPT

Others available - refer to Druck

Above 60 bar to 700 bar ranges

G1/4 female

Adaptors available - refer to options

Electrical Connection

MIL-C-26482 6 pin bayonet plug or 4 core

PTFE shielded cable(1m supplied as standard)

Alternatives available - refer to Druck

OPTIONS

(A) Mating connector for bayonet plug

(B) Male/male pressure adaptors for ranges above 60 bar. Specify thread required

(C) Additional PTFE cable (length to be specified)

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

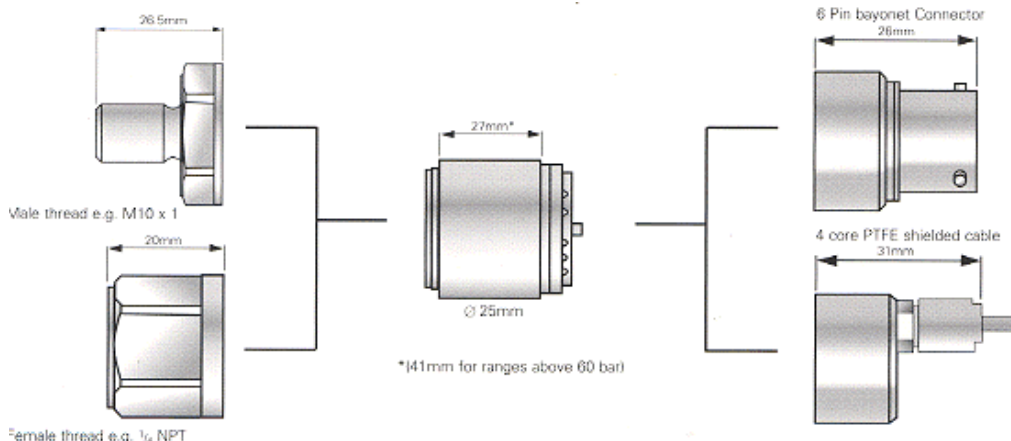
Please state the following

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

Continuing development sometimes

necessitates specification changes without notice

INSTALLATION DRAWINGS - Dimensions mm



ELECTRICAL CONNECTIONS - 3 WIRE

RED: PIN A: SUPPLY POSITIVE
YELLOW: PIN B: OUTPUT POSITIVE
BLUE: PIN D: COMMON 0 V

OTHER PINS NOT CONNECTED

ELECTRICAL CONNECTIONS - 4 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

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