

Pressure Sensor - EPT3100



- Up to 5000 Bar pressure range
- High strength, rugged stainless steel design
- Competitively priced

The **EPT3100** is a high quality all stainless steel pressure transducer, intended for use in the measurement of gases and liquids compatible with stainless steel.

The **EPT3100** is suitable for automotive, industrial hydraulics, refrigeration, off-road, construction and agricultural applications.

With additional EMI / RFI protection, low static and thermal errors and high resistance to shock and vibration as standard, the **EPT3100** assures trouble free operation at temperatures up to 125°C. The **EPT3100** piezo resistive sensing element coupled with the latest ASIC circuitry, assures excellent accuracy, choice of high level outputs and long stability, protected within a rugged, stainless steel housing.

The **EPT3100** high strength stainless steel construction contains no silicone oil and no internal O- rings. Measurements are available in gauge and absolute pressure, with ranges up to 5,000 bar and are backed by a one-year warranty.



Specification

| Performance | | | Environment | |
|--|---|---|--|---|
| Accuracy @ RT | % of the range (gauge and vacuum sensors) < 0.5 BFSL ≤ 0.125 | (incl. nonlinearity, hysteresis, repeatability, zero-offset and final offset acc. to IEC 61298-2) | Temperature [°C]: | |
| | % of the range (absolute sensors) < 1.0 | | Measuring medium | -40...125 |
| Non-linearity | % of the range ≤ 0.15 | | Ambience | -40...105 |
| Repeatability | % of the range ≤ 0.10 | | Storage | -40...125 |
| Stability/year | % of the range ≤ 0.10 | | Compensated range | -20...85 |
| For pressure ranges above 2000 bar: | | | Temperature coefficient within the compensated range: | |
| Accuracy @ RT | % of the range (gauge and vacuum sensors) < 1.0 BFSL ≤ 0.5 | (incl. nonlinearity, hysteresis, repeatability, zero-offset and final offset acc. to IEC 61298-2) | Mean TC offset | % of the range ≤ 0,15 / 10K |
| | % of the range (absolute sensors) < 1.0 | | Mean TC range | % of the range ≤ 0,15 / 10K |
| Non-linearity | % of the range ≤ 0.30 | | Shock | 1000 G, 11 msec., 1/2 Sine |
| Repeatability | % of the range ≤ 0.20 | | Vibration | 25 G peak, 20 to 2000 Hz |
| Stability/year | % of the range ≤ 0.20 | | Sealing | IP 66, optional IP69K |
| Response time | (10..90%) t(ms)1 | | Electronics | |
| Overrange pressure | up to 2x rated pressure | | 0 - 10 V → 12 - 32 VDC | |
| Burst pressure | up to 5x rated pressure | | 0 - 5 V → 8 - 32 VDC non ratiometric | |
| Pressure cycles | > 10 million | | 1 - 5 V → 8 - 32 VDC non ratiometric | |
| | | | 0.5 - 4.5V → 5V ratiometric | |
| | | | 4 - 20 mA → 10 - 32 VDC | |
| | | | I ² C → 5 VDC | |
| | | | Output impedance | < 100 Ω |
| | | | Current consumption | < 10 mA |
| | | | Reverse voltage protection | Yes |
| | | | Mechanics | |
| | | | Housing | 304 stainless steel |
| | | | wetted parts | up to 2000 bar 17-4PH stainless steel above 2000 bar: titanium |
| | | | Pressure port | see select table |
| | | | Electrical connection | see select table |
| | | | Weight | ca. 60 g |

Ordering Information

(Please use the characters in the chart below to construct your product code)

Sample Code: EPT3100 - A - 01000 - B - 4 - A

| Series | Port Configuration | Pressure Range | Pressure Unit | Output Signal | Electrical Interface |
|----------|---|----------------------------------|--|---|---|
| EPT 3100 | A* - G 1/4" Male | Please use code from table below | A - absolute pressure B - gauge pressure V - vacuum pressure | 1 = 0 -10 V 2 = 4..20 mA 3 = 1..5 V 4 = 0..5 V 5 = 0.5..4.5 V - (with 5V supply voltage) 6 = I ² C, digital (only with electrical interface A or F) | A - 600 mm cable B - Miniature EN175301-803-C connector C - Packard Metripac connector D - Standard EN175301-803-A connector F - M12x1 Round connector K** - Moulded cable |
| | B* - 1/4" NPT Male | | | | |
| | C - 1/8" NPT Male | | | | |
| | D - 7/16" -20 UNF Male | | | | |
| | E - 9/16" -18 UNF Male | | | | |
| | F - M14x1.5 Male | | | | |
| | G - 1/4" SAE Female | | | | |
| | ±7/16" UNF Female incl. Schrader opener | | | | |
| | H - 3/8x24 UNF Male (Dash Size 3) | | | | |
| | M10 - M10 x 1 | | | | |

Custom options available on request

| Pressure Range | |
|-------------------|---|
| Bar | 0.6 1.0 1.6 2.5 4 6 10 16 25 40 50 60 100 160 250 400 600 1000 1600 2000 4000 5000 |
| Order Code | 00060 00100 00160 00250 00400 00600 01000 01600 02500 04000 05000 06000 10000 16000 25000 40000 60000 100000 160000 200000 400000 50000 |

The EPT3100 series is backed by a 1 Year Warranty. The purchaser is responsible for compatibility of the media, functional adequacy and correct installation of the transmitter.



PITCH TECHNOLOGIES
 Votre distributeur agréé VARIOHM en France
 01 34 85 54 68
<https://pitch-technologies.fr>
info@pitch-technologies.fr

Subject to change without notice

Ordering Information stock models

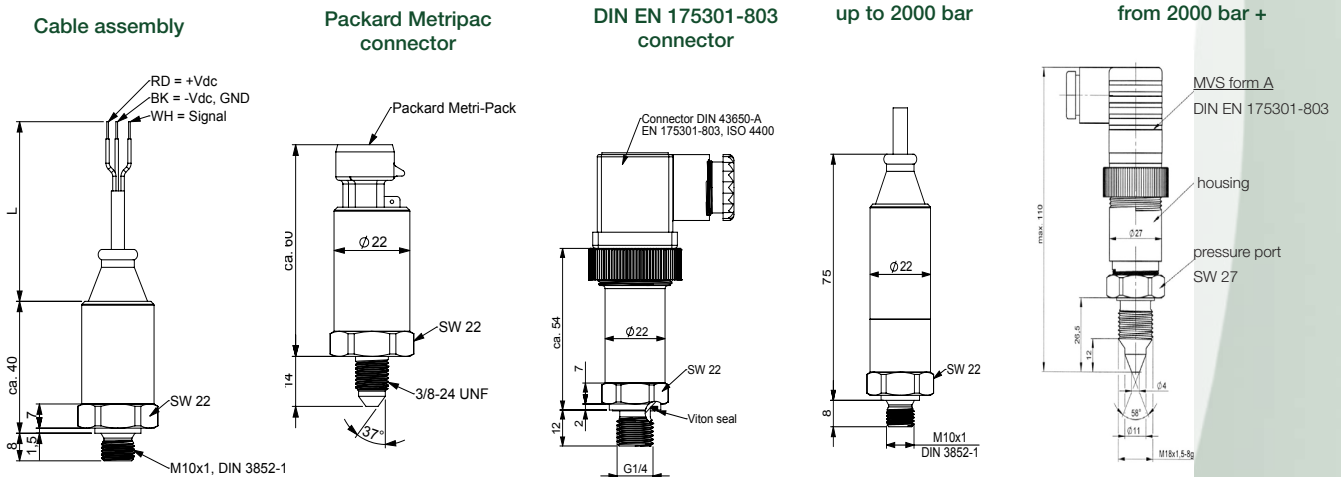
The following models are typically available from stock:

| | | | |
|-----------------------|-----------------------------|--------------------------|---------------------------|
| EPT3100-A-00600-B-2-F | EPT3100-C-01000-B-5-A | EPT3100-H-01000-B-5-A | EPT3100-M10x1-01000-B-5-A |
| EPT3100-A-00600-B-4-F | EPT3100-C-01000-B-5-C | EPT3100-H-01000-B-5-C | EPT3100-M10x1-10000-B-5-A |
| EPT3100-A-01000-B-1-F | EPT3100-C-01700-B-5-C | EPT3100-H-01600-B-5-C | EPT3100-M10x1-16000-B-5-A |
| EPT3100-A-01000-B-2-F | EPT3100-C-(-1/+4bar)-B-5-C | EPT3100-H-06000-B-4-A | |
| EPT3100-A-02500-B-2-F | EPT3100-C-(-1...7bar)-B-5-C | EPT3100-H-10000-B-5-A | |
| EPT3100-A-10000-B-2-F | EPT3100-C-100PSI-B-5-C | EPT3100-H-16000-B-4-A | |
| EPT3100-A-16000-B-1-D | EPT3100-C-500PSI-B-5-C | EPT3100-H-16000-B-5-A | |
| EPT3100-A-25000-B-2-F | EPT3100-C-2000PSI-B-5-C | EPT3100-H-2400 PSI-B-3-A | |
| EPT3100-A-40000-B-2-F | | (Range 0 to 2400PSI) | |

Dimensions

Gauge pressure dimensions

Absolute pressure dimensions



Wiring

| Type | Output | PIN 1 | PIN 2 | PIN 3 | PIN 4 |
|-------------------------------|-------------------------------|------------------|------------------|------------------|----------|
| DIN EN 175301-803-A and C | 0.5 - 4.5V, 1 - 5 V, 0 - 10 V | + Supply | - Supply | Output + | - |
| | 4..20mA | + Supply | Current output - | N/A | - |
| | °C | N/A | N/A | N/A | - |
| Round connector M12x1 A | 0.5 - 4.5V, 1 - 5 V, 0 - 10 V | + Supply | N/A | - Supply | Output + |
| | 4..20mA | + Supply | N/A | Current output - | N/A |
| | °C | 1 V+ | 2 V- | 3 SCL | 4 SDA |
| Packard Metripac | Output | PIN A | PIN B | PIN C | - |
| | 0.5 - 4.5V, 1 - 5 V, 0 - 10 V | - Supply | + Supply | Output + | - |
| | 4..20mA | Current output - | + Supply | N/A | - |
| Cable assembly | Output | Red | Black | White | Green |
| | 0.5 - 4.5V, 1 - 5 V, 0 - 10 V | + Supply | - Supply | Output + | - |
| | 4..20mA | + Supply | Current output - | N/A | - |
| | °C | V+ | V- | SCL | SDA |

PITCH TECHNOLOGIES

Votre distributeur agréé VARIOHM en France

01 34 85 54 68
<https://pitch-technologies.fr>
 info@pitch-technologies.fr

Variohm EuroSensor - Williams' Barn - Tiffeld Road - Towcester - Northants - NN12 6HP - UK
 sales@variohm.com • www.variohm.com • +44 (0) 1327 351004

Subject to change without notice