

# Pressure Sensor - EPT3100



- Up to 4000 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 4,000 bar and are backed by a one-year warranty.



## Specification

### Performance

Accuracy @ RT	% of the range (gauge and vacuum sensors) < 0.5	(incl. nonlinearity, hysteresis, repeatability, zero-offset and final offset acc. to IEC 61298-2)
	BFSL ≤ 0.125	
	% of the range (absolute sensors) < 1.0	

Non-linearity	% of the range ≤ 0.15
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Repeatability	% of the range ≤ 0.10
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Stability/year	% of the range ≤ 0.10
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#### For pressure ranges above 2000 bar:

Accuracy @ RT	% of the range (gauge and vacuum sensors) < 1.0	(incl. nonlinearity, hysteresis, repeatability, zero-offset and final offset acc. to IEC 61298-2)
	BFSL ≤ 0.5	
	% of the range (absolute sensors) < 1.0	

Non-linearity	% of the range ≤ 0.30
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Repeatability	% of the range ≤ 0.20
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Stability/year	% of the range ≤ 0.20
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Response time	(10..90%) t(ms)1
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Overrange pressure	up to 2x rated pressure
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Burst pressure	up to 5x rated pressure
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Pressure cycles	> 10 million
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### Environment

Temperature [°C]:	
Measuring medium	-40...125
Ambience	-40...105
Storage	-40...125
Compensated range	-20...85

Temperature coefficient within the compensated range:	
Mean TC offset	% of the range ≤ 0,15 / 10K
Mean TC range	% of the range ≤ 0,15 / 10K

Shock	1000 G, 11 msec., 1/2 Sine
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Vibration	25 G peak, 20 to 2000 Hz
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Sealing	IP 66, optional IP69K
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### Electronics

Output → Supply	0 - 10 V → 12 - 32 VDC
	0 - 5 V → 8 - 32 VDC non ratiometric
	1 - 5 V → 8 - 32 VDC non ratiometric
	4 - 20 mA → 10 - 32 VDC
	I <sup>2</sup> C → 5 VDC

Output impedance	< 100 Ω
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Current consumption	< 10 mA
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Reverse voltage protection	Yes
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### Mechanics

Housing	304 stainless steel
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wetted parts	up to 2000 bar 304 stainless steel above 2000 bar: titanium
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Pressure port	see select table
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## 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 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 H - 3/8x24 UNF Male (Dash Size 3) M10 - M10 x 1	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 <sup>2</sup> 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

Custom options available on request

\* Standard option  
\*\* Sealing IP69K

Pressure Range	
Bar	Order Code
0,6	00060
1,0	00100
1,6	00160
2,5	00250
4	00400
6	00600
10	01000
16	01600
25	02500
40	04000
50	05000
60	06000
100	10000
160	16000
250	25000
400	40000
600	60000
1000	100000
1600	160000
2000	200000
4000	400000



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.

## Ordering Information stock models

The following models are typically available from stock:

EPT3100-A-00600-B-2-F  
 EPT3100-A-01000-B-2-F  
 EPT3100-A-02500-B-2-F  
 EPT3100-A-10000-B-2-F  
 EPT3100-A-25000-B-2-F  
 EPT3100-A-40000-B-2-F

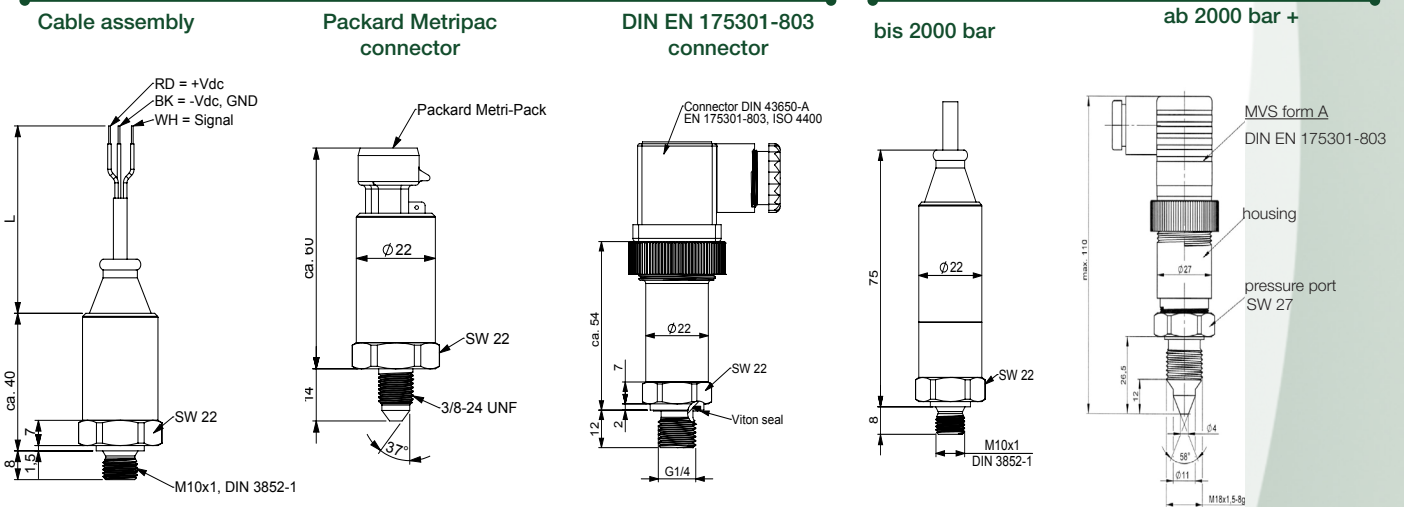
EPT3100-H-01000-B-5-A  
 EPT3100-H-10000-B-5-A  
 EPT3100-H-16000-B-4-A  
 EPT3100-H-16000-B-5-A  
 EPT3100-H-01000-B-5-C  
 EPT3100-H-01600-B-5-C

EPT3100-M10X1-01000-B-5-A  
 EPT3100-M10x1-16000-B-5-A  
 EPT3100-A-16000-B-1-D

## 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