Pressure Sensor - EPT3100

VARIOHM
EUROSENSOR

- ## 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	
Repeatability	% of the range ≤ 0.10	
Stability/year	% of the range ≤ 0.10	

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

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
Vibration	25 G peak, 20 to 2000 Hz
Sealing	IP 66, optional IP69K

Electronics

Output → Supply	0 - 10 V → 12 - 32 VDC
	0 - 5 V → 6 - 32 VDC non ratiometric
	1 - 5 V → 6 - 32 VDC non ratiometric
	4 - 20 mA → 10 - 32 VDC
	I²C → 5 VDC
Output impedance	< 100 Ω
Current consumption	< 10 mA
Reverse voltage protection	Yes

Mechanics

Housing incl. wetted parts	304 stainless steel
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 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 = I²C, 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	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
Order Code	00060	00100	00160	00250	00400	00600	01000	01600	02500	04000	05000	06000	10000	16000	25000	40000	60000	100000	160000	200000	400000

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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.

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Ordering Information stock models

The following models are typically available from stock:
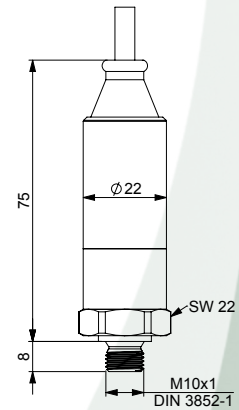
EPT3100-A-00600-B-2-F	EPT3100-H-01000-B-5-A	EPT3100-M10X1-01000-B-5-A
EPT3100-A-01000-B-2-F	EPT3100-H-10000-B-5-A	EPT3100-M10x1-16000-B-5-A
EPT3100-A-02500-B-2-F	EPT3100-H-16000-B-4-A	
EPT3100-A-10000-B-2-F	EPT3100-H-16000-B-5-A	EPT3100-A-16000-B-1-D
EPT3100-A-25000-B-2-F		
EPT3100-A-40000-B-2-F	EPT3100-H-01000-B-5-C	
	EPT3100-H-01600-B-5-C	

Dimensions

Gauge pressure dimensions | Absolute pressure dimensions

Cable assembly

RD = +Vdc
BK = -Vdc, GND
WH = Signal

L

ca. 40

7
8
1.5

SW 22

M10x1, DIN 3852-1

Packard Metripac connector

Packard Metri-Pack

ca. 60

⌀ 22

14

SW 22

3/8-24 UNF

37°

DIN EN 175301-803 connector

ca. 54

⌀ 22

7
12
2

SW 22

Viton seal

G1/4

⌀ 22

75

8

SW 22

M10x1
DIN 3852-1
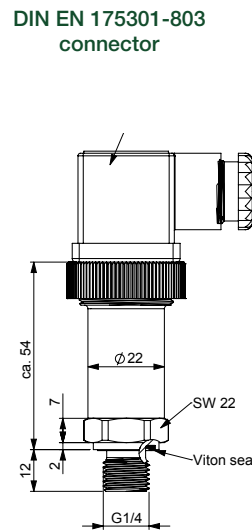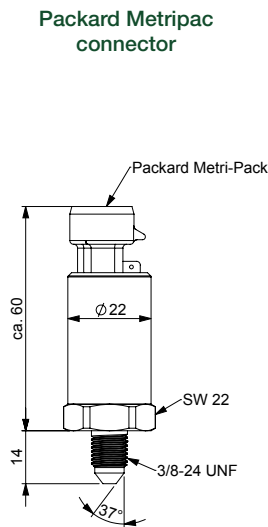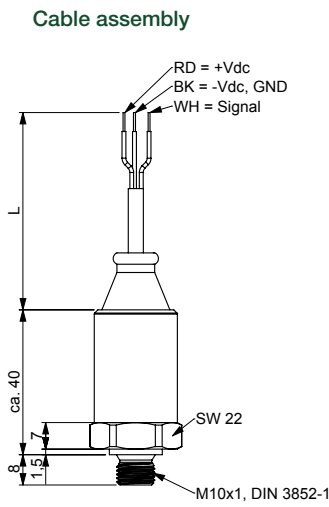
Wiring

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	-
	I²C	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
	I²C	1 | V+	2 | V-	3 | SCL	4 | SDA

Type	Output	PIN A	PIN B	PIN C	-
Packard Metripac	0.5 - 4.5V , 1 - 5 V , 0 - 10 V	- Supply	+ Supply	Output +	-
	4..20mA	Current output -	+ Supply	N/A	-
	I²C	N/A	N/A	N/A	-

Type	Output	Red	Black	White	Green
Cable assembly	0.5 - 4.5V , 1 - 5 V , 0 - 10 V	+ Supply	- Supply	Output +	-
	4..20mA	+ Supply	Current output -	N/A	-
	I²C	V+	V-	SCL	SDA

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Subject to change without notice