

# EPRB-1 Pressure Transducer



- Miniature design (body ø11 mm)
- Any liquid or gas media compatible with stainless steel
- Operating temperature up to 150 °C (300 °F)
- Rugged for severe environment
- CE approved

## DESCRIPTION

Ultra miniature pressure transducer, 100% stainless steel welded construction with amplified output, designed for severe environment where minimum size and weight are required.

## FEATURES

- Liquid and gas media compatible with SS
- Ranges from 3.5 to 700 bar (50 to 10,000 PSI)
- Operating Temperature up to 150° C (300° F)
- Combined NL&H  $\pm 0.25\%$

## APPLICATIONS

- Motorsports
- Downhole Exploration
- Hydraulic Pressures
- Transportation

## STANDARD RANGES

Pressure ranges		Pressure Reference	Pressure Overload	Burst Pressure
(BAR)	(PSI)	abs. (type3)	(rated pressure)	(rated pressure)
3.5	50	•	2 x FS	3 x FS
6	100	•	2 x FS	3 x FS
10	150	•	2 x FS	3 x FS
20	300	•	2 x FS	3 x FS
35	500	•	2 x FS	3 x FS
60	1K	•	2 x FS	3 x FS
100	1.5K	•	2 x FS	3 x FS
200	3K	•	2 x FS	3 x FS
350	5K	•	2 x FS	3 x FS
700	10K	•	1.5 x FS	2 x FS

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## PERFORMANCE SPECIFICATIONS

All values are typical at temperature  $20 \pm 1^\circ \text{C}$

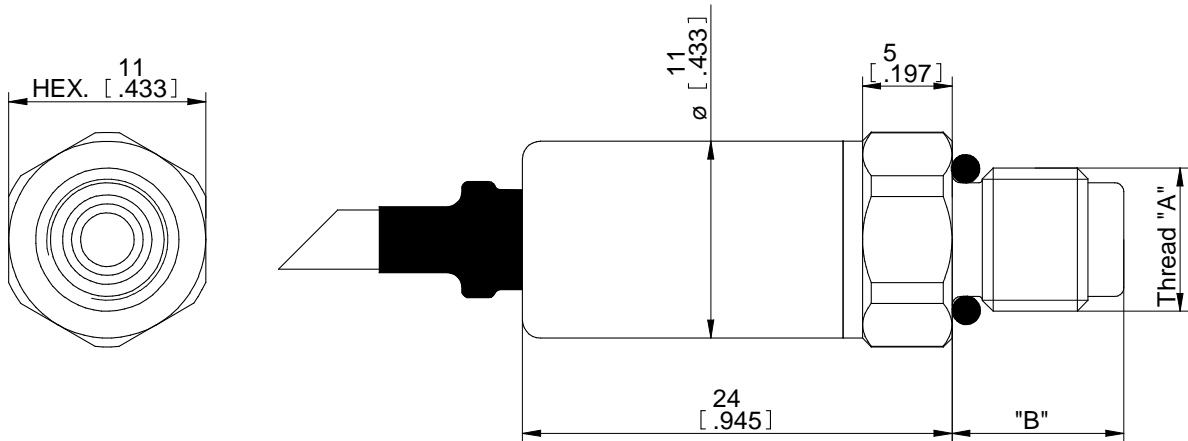
PARAMETERS	VALUES	NOTES
Supply Voltage	Version U: 8 to 32VDC ; Version R: 5 VDC reg.	
Max Current	< 8 mA	
Non-Repeatability	$\pm 0.05\%$ FSO typ.	
CNL & H	$\pm 0.25\%$ FSO	
Long term stability	Offset = $0.1\%$ span/year ; Span = $0.1\%$ /year	
Bandwidth (-3 dB)	400 Hz	
Thermal Zero Shift "TZS"	$\pm 1\%$ FSO / $100^\circ \text{C}$ ( $\pm 2\%$ FSO/ $100^\circ \text{C}$ for ranges $\leq 10$ bar or 150 psi)	
Thermal Sensitivity Shift "TSS"	$\pm 1\%$ / $100^\circ \text{C}$ ( $\pm 1.5\%$ / $100^\circ \text{C}$ for ranges $\leq 10$ bar or 150 psi)	
Operating Temperature	$-40^\circ \text{C}$ to $150^\circ \text{C}$	
Compensated Temperature	$0^\circ \text{C}$ to $100^\circ \text{C}$	See option for other Temperature
Output "FSO"	0.5 to 4.5V = $4\text{V} \pm 50\text{mV}$	
Zero Offset at $23^\circ \text{C}$	$0.5\text{V} \pm 50\text{mV}$ ( $0.5\text{V} \pm 100\text{mV}$ for ranges $\leq 10$ bar or 150 psi)	
Vibration	2g (10Hz to 60Hz) and 20g (60Hz to 1 KHz)	
Shock (1/2 sine)	50g (11 ms) and 200g (6 ms)	
Weight (without cable)	13 g + 20 g per meter of cable	
Ingress Protection	IP66	

## CE compliance

EN55022 Emissions Class A & B  
 IEC61000-4-2 Electrostatic Discharge Immunity (1kV contact)  
 IEC61000-4-3 EM Field Immunity (3V/m)  
 IEC61000-4-4 Electrical Fast Transient Immunity (1kV)

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## DIMENSIONS



### PHYSICAL (SEE BLOCK DIAGRAM)

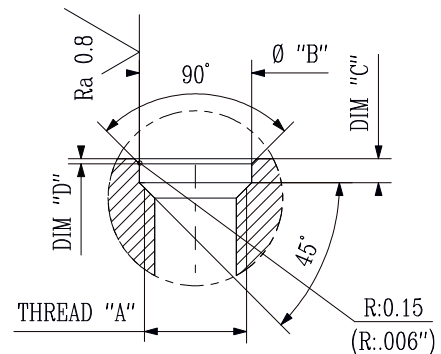
MODEL	THREAD "A"	THREAD LENGTH "B"	O-RING SUPPLIED	RECOMMENDED INSTALLATION TORQUE
N	M5x0.8	8.6 (.34")	Ø3.5x1.5 VITON	1 Nm (2 Nm max.)
V	10-32 UNF-2A	8.6 (.34")	Ø3.5x1.5 VITON	1 Nm (2 Nm max.)
S	M8x1	9.6 (.38")	Ø6.35x1.6 VITON	2.5 Nm (5 Nm max.)
Q	5/16-24 UNF-2A	9.6 (.38")	Ø6.35x1.6 VITON	2.5 Nm (5 Nm max.)

## INSTALLATION & CONNECTION

### RECOMMENDED MOUNTED PORT

Thread "A"	Dim. "B"	Dim. "C"	Dim. "D"
M5x0.8	5.6 mm	1.5 mm	0.2 mm
10-32 UNF	0.22"	0.060"	0.01"
M8x1	8.8 mm	1.9 mm	0.4 mm
5/16-24 UNF-2A	0.35"	0.075"	0.015"

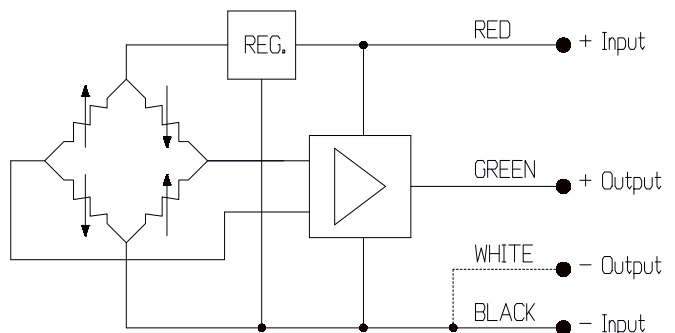
Tolerances on dimensions =  $\pm 0.05$  mm (0.002")



### WIRING:

Standard: 1 meter of unshielded cable 3 x AWG24

Option SC00M: shielded cable 4 x AWG26  
(Replace "00" with total length in meter)



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## OPTIONS AND ACCESSORIES

OPTIONS	CODES	DESCRIPTIONS
Compensated Temperature Ranges	Z1 Z35	-20° C to 40° C +20° C to 120° C
Shielded cable (4 leads x AWG26)	SC00M	Replace "00" with total length in meters (SC1M ; SC3M ; SC5M...)
Acceptance Test Report	ATR	ATR for a complete Acceptance Test Report provided with transducer

## ORDERING INFORMATION

Model	-	Pressure Port	Supply Voltage	Output Signal	Pres. Ref.	-	Range/Unit	-	Options
EPRB-1	-	N = M5x0.8 V = 10-32 UNF S = M8x1 Q = 5/16-24 UNF	U = 8 to 32 VDC R = 5 VDC reg.	3 = 0.5 to 4.5 V	3 = Absolute	-	3.5B 50P 6B 100P 10B 150P 20B 300P 35B 500P 60B 1KP 100B 1.5KP 200B 3KP 350B 5KP 700B 10KP	-	/Z1 /Z35 /SC00M /ATR

Example : **EPRB-1-VU33-500P-/Z1/SC5M**

The **psi** range models are only supplied with imperial thread design.

The **bar** range models are only supplied with metric thread design.

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