

## FEATURES

- ◆ Liquid and gas media compatible with Stainless Steel
- ◆ Miniature design (body  $\varnothing$ 12 mm)
- ◆ Pressure port M8x1 or 5/16-24 UNF
- ◆ IP66 rating

## APPLICATIONS

- ◆ Motorsports
- ◆ Downhole Exploration
- ◆ Hydraulic Pressures
- ◆ Transportation

## EPRB-3

### Miniature Pressure Transducer

#### SPECIFICATIONS

- ◆ Pressure + temperature measurement
- ◆ Ranges from 3.5 to 700 bar (50 to 10,000 psi)
- ◆ Unique pressure reference version Absolute
- ◆ Operating temperature up to 150 °C (300 °F)
- ◆ 0.5 to 4.5V amplified pressure output

**EPRB-3** is an ultra-miniature pressure transducer of 100% stainless steel welded construction. It is designed for severe environments where minimum size and light weight are required.

**EPRB-3** design is constructed with an independent platinum **PT1000** probe to sense the physical media temperature.

**EPRB-3** models have amplified output, either 5V<sub>DC</sub> ratiometric or 8-30V<sub>DC</sub> for use on vehicle, military, test equipment or on a test bench.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

## EPRB-3

Miniature Pressure Transducer with temperature probe

### 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

### PERFORMANCE SPECIFICATIONS (typical values at temperature 23±3°C)

PARAMETERS	VALUES	NOTES
Supply Voltage	Version U: 8 to 32V <sub>DC</sub> Version R: 5 V <sub>DC</sub> regulated	
Max Current	< 8 mA	
Non-Repeatability	±0.05% FSO	
Combined Non-Linearity & Hysteresis	±0.25% FSO	
Long term stability	Zero Offset = 0.1%span/year ; FSO = 0.1%/year	
Bandwidth (-3 dB)	400 Hz	
Thermal Zero Shift "TZS" in CTR	±2%FSO/100 °C ±1%FSO /100 °C	Ranges ≤ 10 bar or 150 psi Ranges > 10 bar or 150 psi
Thermal Sensitivity Shift "TSS" in CTR	±1.5% /100 °C ±1% /100 °C	Ranges ≤ 10 bar or 150 psi Ranges > 10 bar or 150 psi
Operating Temperature Range (OTR)	-40 °C to 150 °C	
Compensated Temperature Range (CTR)	0 °C to 100 °C	
Sensitivity "FSO"	4V ± 50mV	Signal output 0.5 to 4.5V for 0 to FS
Zero Offset	0.5V ±100mV 0.5V ± 50mV	Ranges ≤ 10 bar or 150 psi Ranges > 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)	15g + 23g per meter of cable	
Temperature sensor RTD	1000 ohms Platinum DIN EN 60751	63% response time : 3 sec. max.
Ingress Protection	IP66	

### CE compliance

EN55022 Emissions Class A & B

IEC61000-4-2 Electrostatic Discharge Immunity (1kV contact)

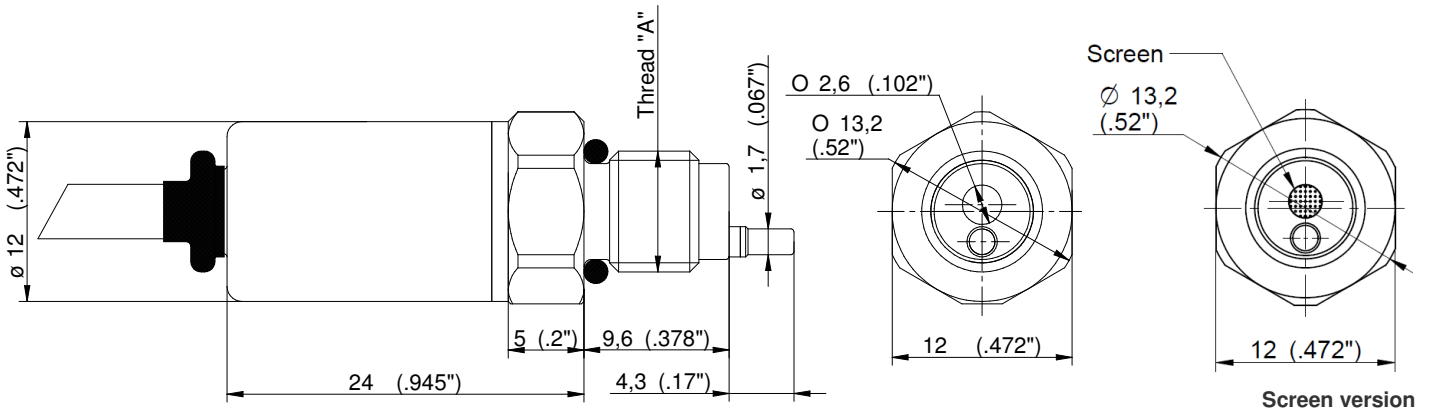
IEC61000-4-3 EM Field Immunity (3V/m)

IEC61000-4-4 Electrical Fast Transient Immunity (1kV)

## EPRB-3

Miniature Pressure Transducer with temperature probe

## DIMENSIONS



### PHYSICAL (SEE BLOCK DIAGRAM)

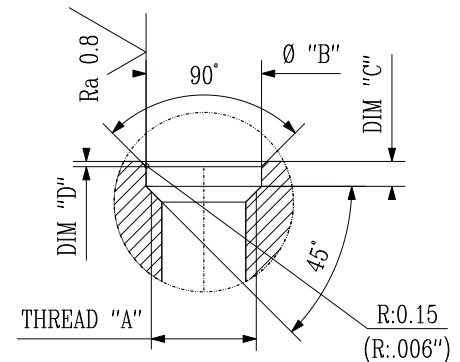
MODEL	THREAD "A"	O-RING SUPPLIED	INSTALLATION TORQUE
S	M8X1	Ø6.35x1.6 FKM Fluoroelastomer	2.5 Nm (5 Nm max.)
Q	5/16-24 UNF-2A	Ø6.35x1.6 FKM Fluoroelastomer	2.5 Nm (5 Nm max.)

## INSTALLATION & CONNECTION

### RECOMMENDED MOUNTED PORT (1)

Thread "A"	Dim. "B"	Dim. "C"	Dim. "D"
M8x1	8.8 mm	1.9 mm	0.4 mm
5/16-24 UNF-2A	0.35"	0.075"	0.015"

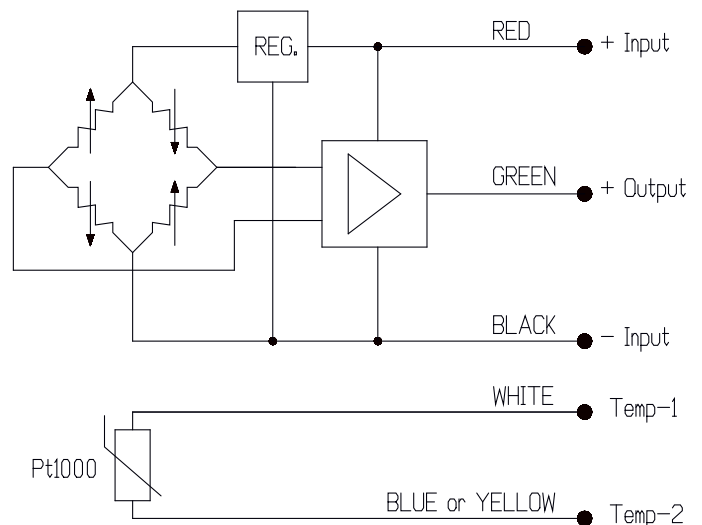
1. Tolerances on dimensions =  $\pm 0.05$  mm (0.002")



### WIRING:

Standard: 1 meter of unshielded cable 5 x AWG26

Option **SCOOM**: shielded cable 5 x AWG24  
(Replace "00" with total length in meter;  
The shield is not connected to sensor's body)



## EPRB-3

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## OPTIONS & ACCESSORIES

OPTIONS	CODES	DESCRIPTIONS
Compensated Temperature Ranges	<b>Z1</b> <b>Z35</b>	-20°C to 40°C +20°C to 120°C
Shielded cable	<b>SC00M</b>	Replace "00" with total length in meters (SC1M ; SC3M ; SC5M...)
Screen	<b>GR</b>	Screen version (see dimension page 2)
Acceptance Test Report	<b>ATR</b>	ATR for a complete Acceptance Test Report provided with transducer

## ORDERING INFORMATION

EPRB-3 – Q R 3 3 – 300P – /Z1/SC3M

Pressure Port	
<b>S</b>	M8x1
<b>Q</b>	5/16-24UNF

Supply Voltage	
<b>U</b>	8 – 32V <sub>DC</sub>
<b>R</b>	5 V <sub>CV</sub> reg

Output Signal	
<b>3</b>	0.5 – 4.5V

Pressure Reference	
<b>3</b>	Absolute

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

Options	
	/Z1
	/Z35
	/SC00M
	/GR
	/ATR

Pressure Range/Unit	
3.5B	50P
6B	100P
10B	150P
20B	300P
35B	500P
60B	1KP
100B	1.5KP
200B	3KP
350B	5KP
700B	10KP

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