

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_{DC} regulated or 8-30V_{DC} 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.

STANDARD RANGES

RANGES (FS)		REF. PRESSURE abs. (type3)	PROOF PRESSURE (rated pressure)	BURST PRESSURE (rated pressure)
bar	psi			
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°C)

PARAMETERS	VALUES	NOTES
Supply Voltage	Version U: 8 to 32V _{DC} Version R: 5 V _{DC} 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	±1%FSO/50 °C ± 0.5%FSO /50 °C	Ranges ≤ 10 bar or 150 psi Ranges > 10 bar or 150 psi
Thermal Sensitivity Shift "TSS" in CTR	±0.75% /50 °C ±0.5% /50 °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

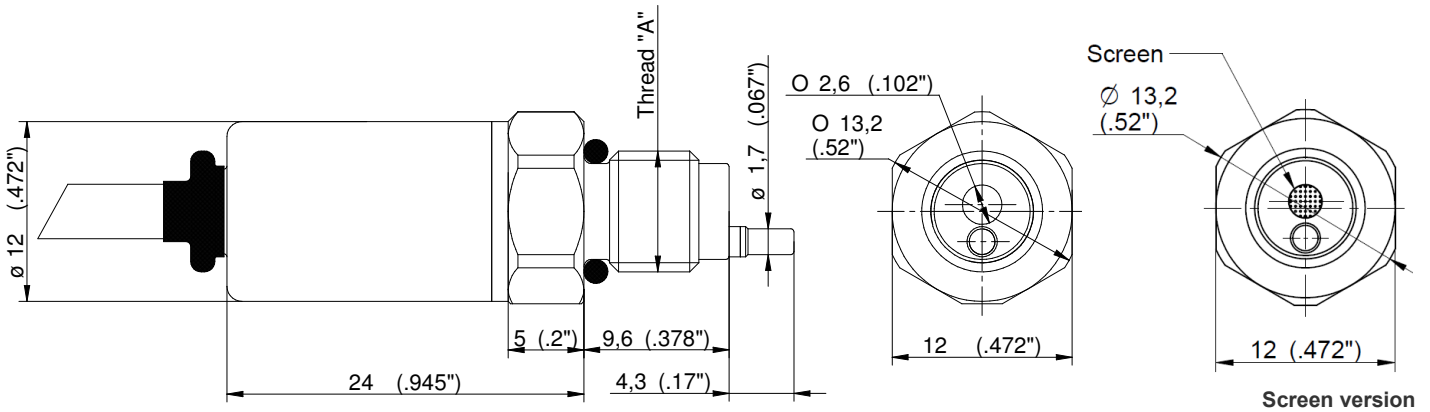
EN55022 Emissions Class A & B

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

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

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

DIMENSIONS



PHYSICAL (SEE BLOCK DIAGRAM)

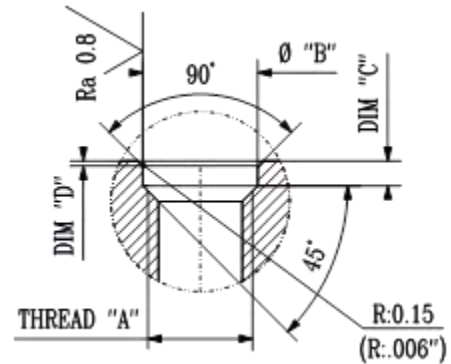
MODEL	THREAD "A"	O-RING SUPPLIED	INSTALLATION TORQUE
S	M8X1	Ø6.07x1.78 FKM Fluoroelastomer	2.5 Nm (5 Nm max.)
Q	5/16-24 UNF-2A	Ø6.07x1.78 FKM Fluoroelastomer	2.5 Nm (5 Nm max.)

INSTALLATION & CONNECTION

RECOMMENDED MOUNTED PORT

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"

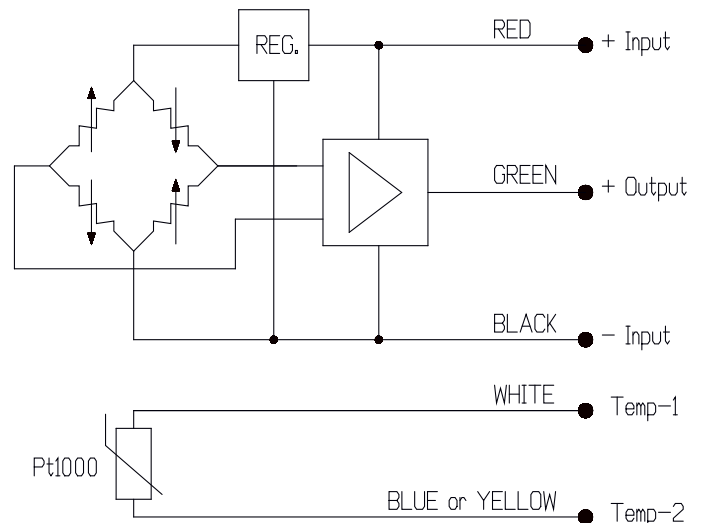
Tolerances on dimensions = ± 0.05 mm (0.002")



WIRING:

Standard: 1 meter of unshielded cable 5 x AWG26

Option **SC00M**: shielded cable 5 x AWG24
 (Replace "00" with total length in meter;
 The shield is connected to sensor's body)



OPTIONS & ACCESSORIES

OPTIONS	CODES	DESCRIPTIONS
Compensated Temperature Ranges	Z1 Z35	-20°C to 40°C +20°C to 120°C
Shielded cable	SC00M	Replace "00" with total length in meters (SC1M ; SC3M ; SC5M...)
Screen	GR	Screen version (see dimension page 3)
Acceptance Test Report	ATR	ATR for a complete Acceptance Test Report provided with transducer

ORDERING INFORMATION

EPRB-3 – Q R 3 3 – 300P – /Z1/SC3M

Pressure Port	
S	M8x1
Q	5/16-24UNF

Supply Voltage	
U	8 – 32V _{DC}
R	5 V _{CV} reg

Output Signal	
3	0.5 – 4.5V

Pressure Reference	
3	Absolute

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

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

Options
/Z1
/Z35
/SC00M
/GR
/ATR

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