

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.

EPRB-3

Miniature Pressure Transducer with temperature probe

STANDARD RANGES

RANGES (FS)		REF. PRESSURE	PROOF PRESSURE	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°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)

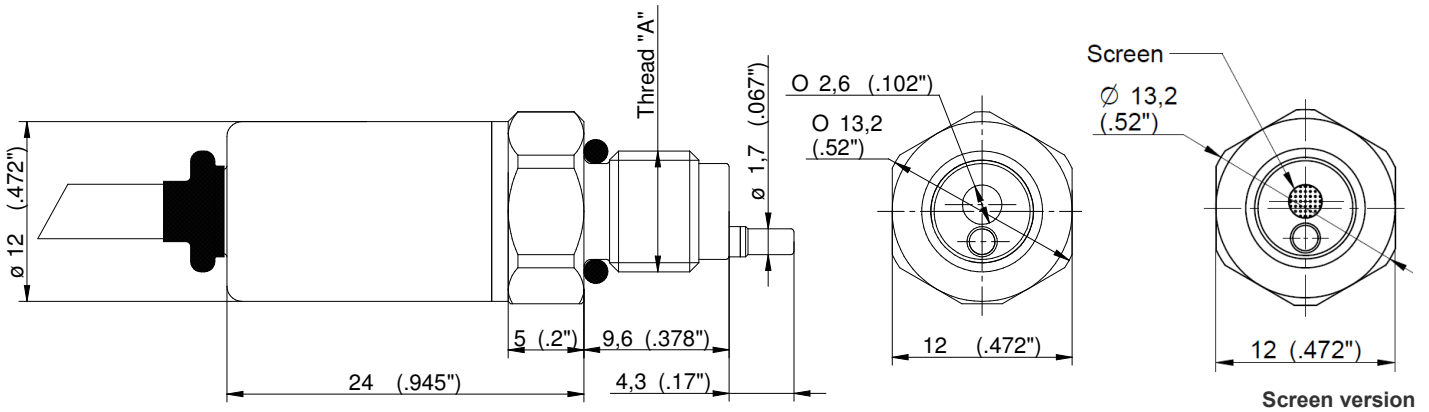
IEC61000-4-3 EM Field Immunity (3V/m)

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

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DIMENSIONS



PHYSICAL (SEE BLOCK DIAGRAM)

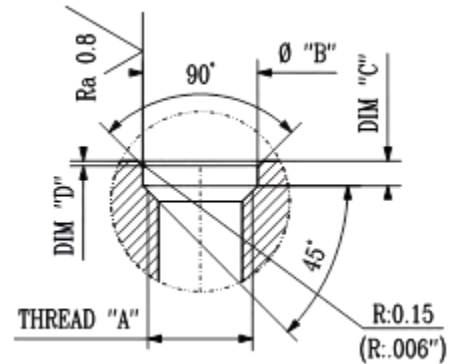
MODEL	THREAD "A"	O-RING SUPPLIED	INSTALLATION TORQUE
S	M8X1	$\phi 6.07 \times 1.78$ FKM Fluoroelastomer	2.5 Nm (5 Nm max.)
Q	5/16-24 UNF-2A	$\phi 6.07 \times 1.78$ FKM Fluoroelastomer	2.5 Nm (5 Nm max.)

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"

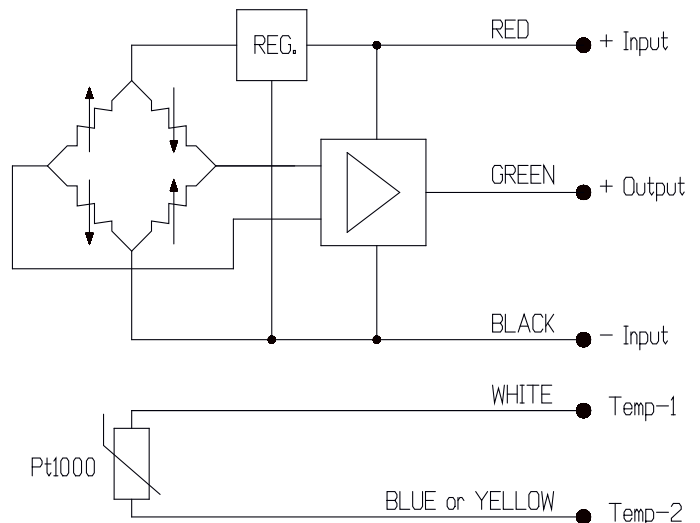
Tolerances on dimensions = ± 0.05 mm (0.002")



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)



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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