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 ±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

EPRB-1 Pressure Transducer

PERFORMANCE SPECIFICATIONS

All values are typical at temperature 20±1 °C

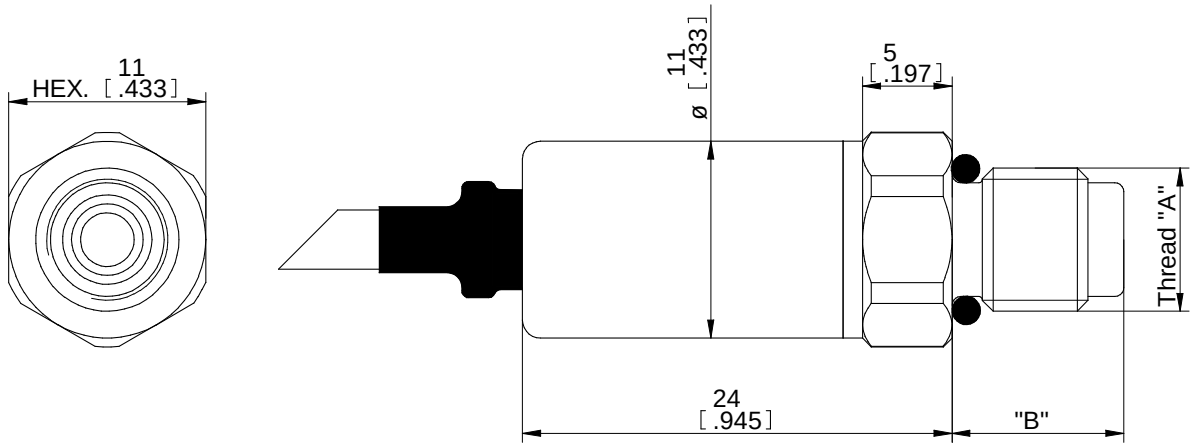
PARAMETERS	VALUES	NOTES
Supply Voltage	Version U: 8 to 32VDC ; Version R: 5 VDC reg.	
Max Current	< 8 mA	
Non-Repeatability	± 0.05% FSO typ.	
CNL & H	± 0.25% FSO	
Long term stability	Offset = 0.1%span/year ; Span = 0.1%/year	
Bandwidth (-3 dB)	400 Hz	
Thermal Zero Shift "TZS"	± 1%FSO /100° C (±2% FSO/100°C for ranges ≤ 10 bar or 150 psi)	
Thermal Sensitivity Shift "TSS"	± 1% /100° C (±1.5%/100°C for ranges ≤ 10 bar or 150 psi)	
Operating Temperature	- 40° C to 150° C	
Compensated Temperature	0° C to 100° C	See option for other Temperature
Output “FSO”	0.5 to 4.5V = 4V ± 50mV	
Zero Offset at 23°C	0.5V ± 50mV (0.5V ±100mV for 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)	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)

EPRB-1 Pressure Transducer

DIMENSIONS

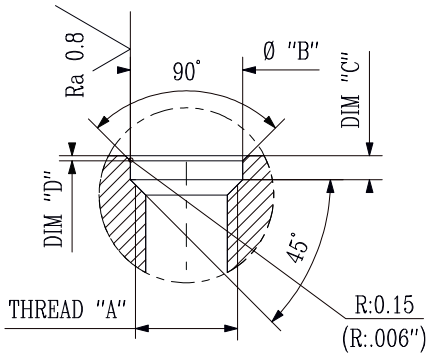


PHYSICAL (SEE BLOCK DIAGRAM)				
MODEL	**THREAD "A"**	**THREAD LENGTH "B"**	**O-RING SUPPLIED**	**RECOMMENDED INSTALLATION TORQUE**
N	M5x0.8	8.6 (.34")	Ø3.5x1.5 VITON	1 Nm (2 Nm max.)
V	10-32 UNF-2A	8.6 (.34")	Ø3.5x1.5 VITON	1 Nm (2 Nm max.)
S	M8X1	9.6 (.38")	Ø6.35x1.6 VITON	2.5 Nm (5 Nm max.)
Q	5/16-24 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"

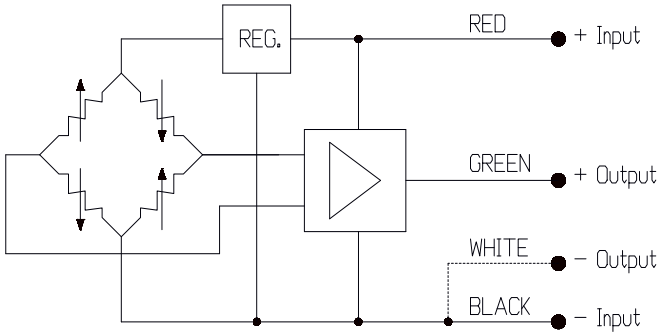
Tolerances on dimensions = ± 0.05 mm (0.002")



WIRING:

Standard: 1 meter of unshielded cable 3 x AWG24

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



EPRB-1 Pressure Transducer

OPTIONS AND ACCESSORIES

OPTIONS	CODES	DESCRIPTIONS
Compensated Temperature Ranges	Z1 Z35	-20° C to 40° C +20° C to 120° C
Schielded 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 6B 10B 20B 35B 60B 100B 200B 350B 700B	50P 100P 150P 300P 500P 1KP 1.5KP 3KP 5KP 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.

NORTH AMERICA

Measurement Specialties, Inc.
Vibration Design Center
32 Journey - Suite 150
Aliso Viejo, CA 92656
United States USA
Tel: 1-949-716-0877
Fax: 1-949-916-5677
t&m@meas-spec.com

EUROPE

Measurement Specialties
(Europe), Ltd.
26 Rue des Dames
78340 Les Clayes-Sous-Bois,
France
Tel: +33 (0) 130 79 33 00
Fax: +33 (0) 134 81 03 59
pfg.cs.emea@meas-spec.com

ASIA

Measurement Specialties
(China), Ltd.
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen
518057
China
Tel: +86 755 3330 5088
Fax: +86 755 3330 5099
pfg.cs.asia@meas-spec.com