EPRB-2 Pressure Transducer

- **Small size with amplified output**
- **Any liquid or gas media compatible with stainless steel**
- **Operating temperature up to 150 ℃ (300 ℉)**
- **Variety of pressure ports**
- **Available as gage and absolute**
- **CE approved**

DESCRIPTION

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 0.35 to 700 bar (5 to 10,000 PSI)
- Operating temperature up to 150 ℃ (300 ℉)
- Combined NL & H ± 0.25%

APPLICATIONS

- Motorsports
- Downhole Exploration
- Off-Road Vehicles
- Pipeline Pressures

STANDARD RANGES

Pressure ranges		**Pressure Reference**		**Pressure Overload (rated pressure)**	**Burst Pressure (rated pressure)**
(BAR)	(PSI)	**gage*** (type1)	**abs.** (type3)		
0.35	5	•	•	3 x FS	5 x FS
0.6	10	•	•	3 x FS	5 x FS
1	15	•	•	3 x FS	5 x FS
2	30	•	•	3 x FS	5 x FS
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

* Gage model (type 1) is vented to atmosphere through one hole into sensor housing (sensor to be used into dry and clean environment)

EPRB-2 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	< 10 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 ≤ 1 bar or 15 psi)	
Thermal Sensitivity Shift "TSS"	± 1% /100°C (±1.5% /100°C for ranges ≤ 1 bar or 15 psi)	
Operating Temperature	- 40°C to 150°C	
Compensated Temperature	0°C to 100°C	See option f or other Temperature
Output “FSO”	Type 3: 0.5 to 4.5V = 4V ± 50mV Type 6: 0 to 5V = 5V ± 50mV	Type 3 available on version R and U Type 6 available on version U only
Zero Offset at 23°C	Type 3 = 0.5V ± 50mV (0.5V ±100mV for ranges ≤ 1 bar or 15 psi) Type 6 = ± 50mV (± 50mV ±100mV for ranges ≤ 1 bar or 15 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)	20 g + 25 g per meter of cable	
Ingress Protection	IP66	IP30 for vented gage model (type 1)

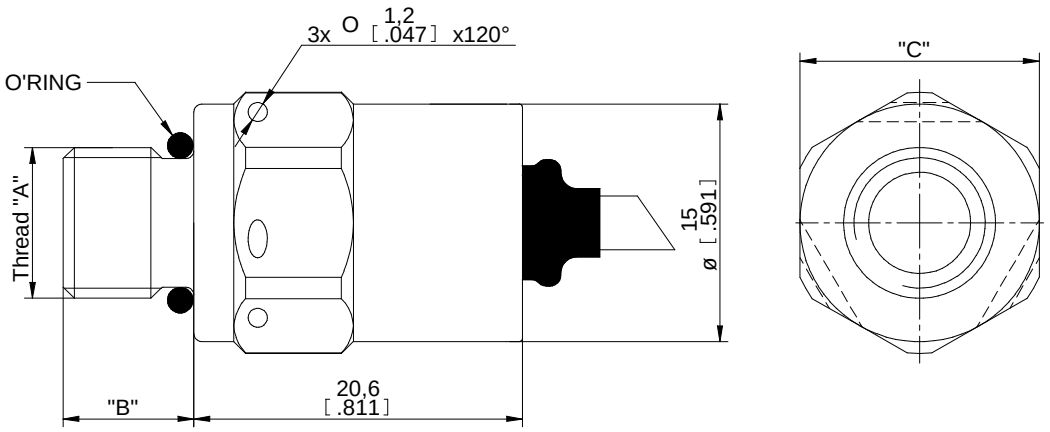
CE compliance

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-2 Pressure Transducer

DIMENSIONS

STANDARD EPRB-2 WITH SHIELDED CABLE OUTPUT (standard length = 1m)

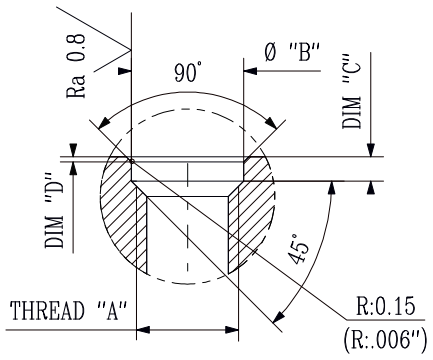


PHYSICAL					
MODEL	**THREAD "A"**	**THREAD LENGTH "B"**	**DIM. "C"**	**O-RING SUPPLIED**	**INSTALLATION TORQUE (MAX.)**
N	M5X0.8	8.2 (.323")	15 mm (.590")	Ø3.5x1.5 FKM Fluoroelastomer	1 Nm (2 Nm max.)
V	10-32 UNF-2A	8.2 (.323")	15 mm (.590")	Ø3.5x1.5 FKM Fluoroelastomer	1 Nm (2 Nm max.)
S	M8X1	8.2 (.323")	15 mm (.590")	Ø6.35x1.6 FKM Fluoroelastomer	2.5 Nm (5 Nm max.)
Q	5/16"-24 UNF-2A	8.2 (.323")	15 mm (.590")	Ø6.35x1.6 FKM Fluoroelastomer	2.5 Nm (5 Nm max.)
P	M10X1	8.2 (.323")	15 mm (.590")	Ø7.65x1.63 FKM Fluoroelastomer	3 Nm (6 Nm max.)
X	3/8"-24 UNF-2A	8.2 (.323")	15 mm (.590")	Ø7.65x1.63 FKM Fluoroelastomer	3 Nm (6 Nm max.)
Z	7/16"-20 UNF-2A	8.2 (.323")	18 mm (.71")	Ø8.92x1.83 NBR	5 Nm (10 Nm max.)
W	G 1/4A (BSP)	11.7 (.460")	18 mm (.71")	Not Supplied	5 Nm (10 Nm max.)
Y	¼"-18 NPT	14 (.551")	18 mm (.71")	Not Supplied	5 Nm (10 Nm max.)

INSTALLATION & CONNECTION

RECOMMENDED MOUNTING 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"	0.06"	0.01"
M8x1	8.8 mm	1.9 mm	0.4 mm
5/16-24 UNF	0.35"	0.075"	0.015"
M10x1	10.4 mm	2.0 mm	0.4 mm
3/8"-24 UNF	0.41"	0.077"	0.015"
7/16"-20 UNF	0.48"	0.086"	0.015"

Tolerances on dimensions = ± 0.05 mm (0.002")

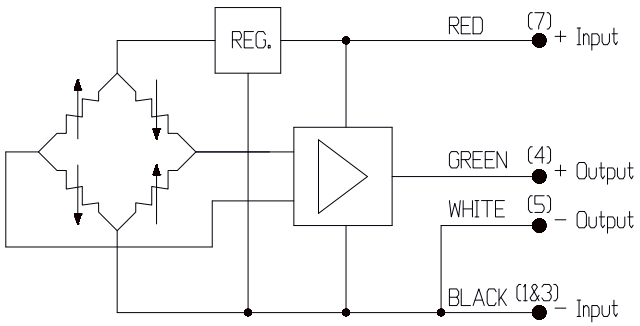


EPRB-2 Pressure Transducer

WIRING: shielded cable (4 x AWG26)

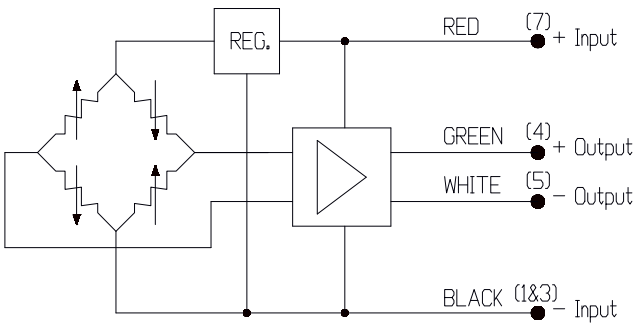
Output signal type 3

(-Output and -Input are common)



Output signal type 6 and 8

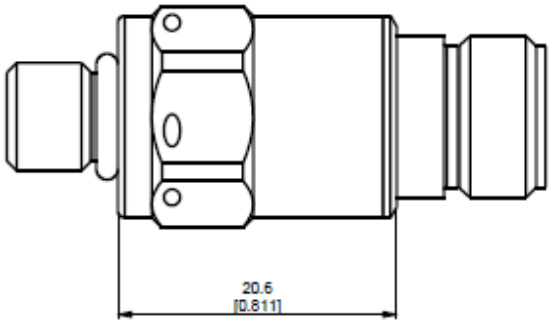
(VCM = 0.5 V from -Output to -Input)



CONNECTOR OUTPUT OPTIONS

Option **CM1**(connector recommended for Mil-Aero applications): integral connector Deutsch **DCS11T8-7PN**

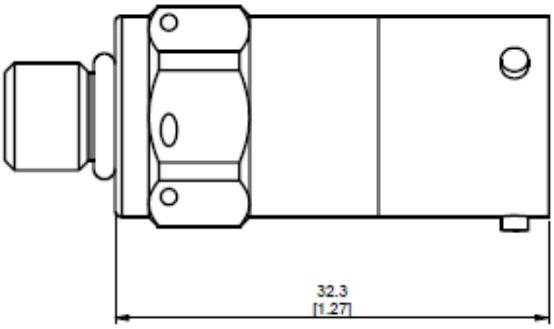
➔ Mating connector **DCS07T8-7SN** not supplied



Pin number	EPRB-2-/CM1
1 & 3	-INPUT
2	not used
4	+OUPUT
5	-OUPUT
6	not used
7	+INPUT

Option **CM2**: integral connector **MIL-C 26482 MS3113H10-6P** (limited to operating temperature 125℃)

➔ Mating connector **85106J06S50** not supplied



Pin name	EPRB-2-/CM2
A	+INPUT
B	+OUTPUT
C	-OUTPUT
D	-INPUT
E	not used
F	not used

See following table to order mating connector with wired shielded cable 4 leads AWG26 (to be used with CM2)

Cable length	Reference
1 meter	ECS-CM2-/L1M
3 meter	ECS-CM2-/L3M
5 meter	ECS-CM2-/L5M
10 meter	ECS-CM2-/L10M

EPRB-2 Pressure Transducer

OPTIONS AND ACCESSORIES

OPTIONS	CODES	DESCRIPTIONS
Compensated Temperature Ranges	Z1 Z35	-20°C to 40°C +20°C to 120°C
Special Cable Length (standard = 1 m)	L00M	Replace “00” with total length in meters (L3M ; L5M ; L10M…)
Integral connector	CM1 or CM2	See drawings page 4
Acceptance Test Report	ATR	A complete Acceptance Test Report provided with transducer

ORDERING INFORMATION

Model	-	Pressure Port	Supply Voltage	Output Signal	Pres. Ref.	-	Range/Unit		-	Options
EPRB-2	-	N = M5x0.8 V = 10-32 UNF S = M8x1 Q = 5/16-24 UNF P = M10x1 X = 3/8-24UNF Z = 7/16-20 UNF W = G 1/4A Y = ¼-18 NPT	U = 8 to 32 VDC R = 5 VDC reg.	3 = 0.5 to 4.5 V 6 = 0 to 5 V	1 = Gauge 3 = Absolute	-	0.35B 0.6B 1B 2B 3.5B 6B 10B 20B 35B 60B 100B 200B 350B 700B	5P 10P 15P 30P 50P 100P 150P 300P 500P 1KP 1.5KP 3KP 5KP 10KP	-	/Z1 /Z35 /L00M /CM1 /CM2 /ATR

Example: **EPRB-2-XU63-500P-/Z1/L5M** (cable output) or **EPRB-2-PR33-35B-/CM2/ATR** (connector output)
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
cs.lcsb@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

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer’s technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.