EPRB-2 Pressure Transducer

- **Small size with amplified output**
- **Any liquid or gas media compatible with stainless steel**
- **Operating temperature up to 150 °C (300 °F)**
- **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 °C (300 °F)
- 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)

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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 for 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)

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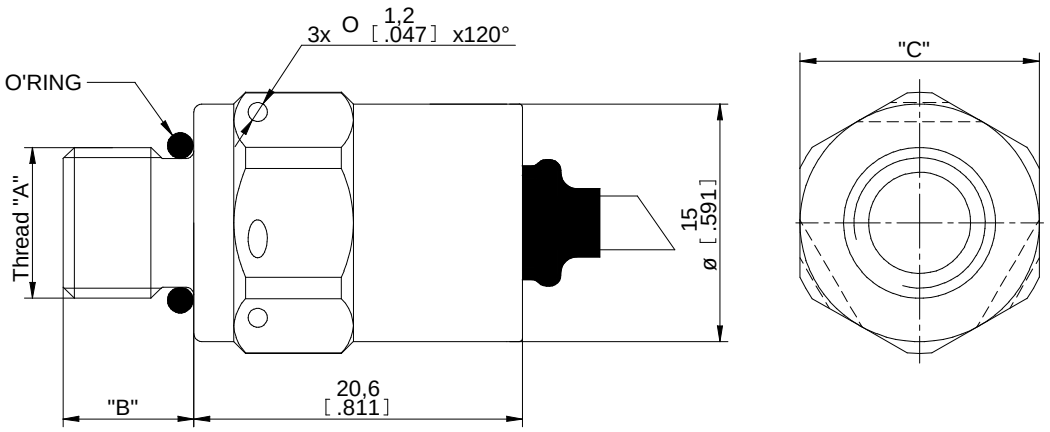
DIMENSIONS

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

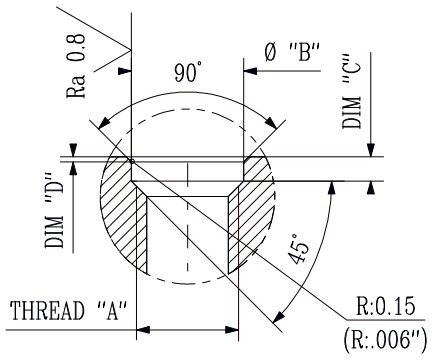


PHYSICAL					
MODEL	**THREAD "A"**	**THREAD LENGTH "B"**	**DIM. "C"**	**O-RING SUPPLIED**	**INSTALLATION TORQUE (MAX.)**
N	M5X0.8	8.2 (.323")	15 mm (.590")	Ø3.5x1.5 VITON	1 Nm (2 Nm max.)
V	10-32 UNF-2A	8.2 (.323")	15 mm (.590")	Ø3.5x1.5 VITON	1 Nm (2 Nm max.)
S	M8X1	8.2 (.323")	15 mm (.590")	Ø6.35x1.6 VITON	2.5 Nm (5 Nm max.)
Q	5/16"-24 UNF-2A	8.2 (.323")	15 mm (.590")	Ø6.35x1.6 VITON	2.5 Nm (5 Nm max.)
P	M10X1	8.2 (.323")	15 mm (.590")	Ø7.65x1.63 VITON	3 Nm (6 Nm max.)
X	3/8"-24 UNF-2A	8.2 (.323")	15 mm (.590")	Ø7.65x1.63 VITON	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")



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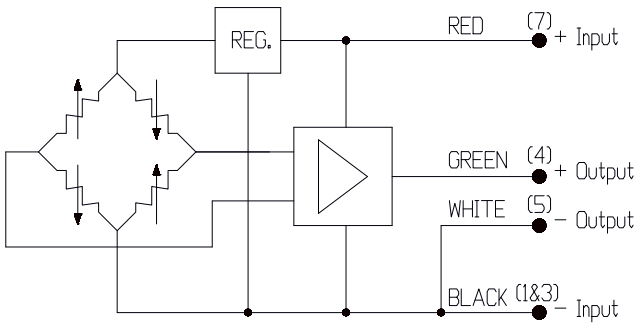
WIRING: shielded cable (4 x AWG26)

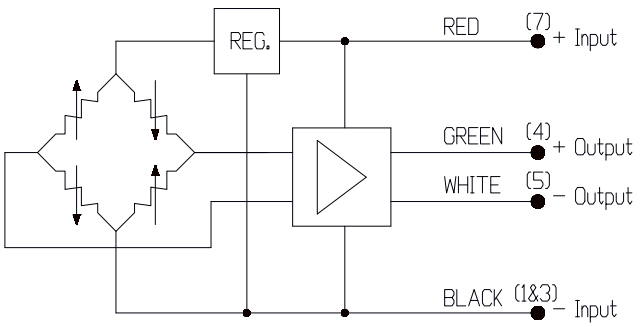
Output signal type 3

(-Output and -Input are common)



Output signal type 6 and 8

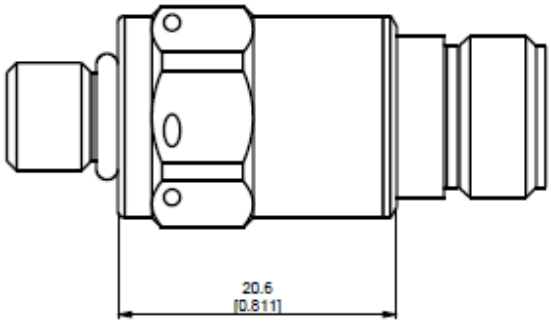
(VCM = 0.5 V from -Output to -Input)



CONNECTOR OUTPUT OPTIONS

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

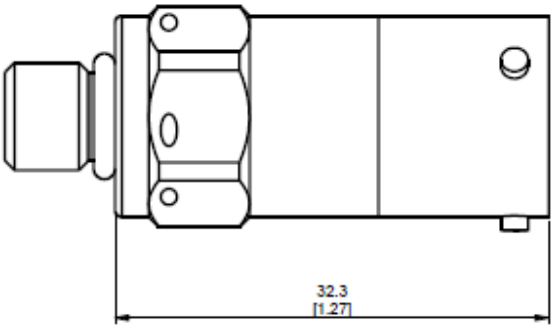
➔ Mating connector **DCS07T8-7SN** not supplied



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°C)

➔ 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

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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.

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