

## EPB-PW

### Miniature Pressure Transducer

#### SPECIFICATIONS

- ◆ Miniature design (body  $\varnothing$ 6.4 mm)
- ◆ Titanium Construction
- ◆ EMI Protected per CE Compliance
- ◆ IP68 Ingress Protection
- ◆ Sealed Gauge reference

The **EPB-PW** pressure transducer is specifically designed for pore water applications in either centrifuges or laboratory equipment. Using either ceramic or bronze sintered filters, the sensor can be used on clay or sand-based materials.

Made of titanium, the **EPB-PW** provides a rugged construction and is not affected by external clamping forces when fitted. Having a miniature design of 6.4 x 11.4mm ensures it is backwards compatible with other older manufacturers' products.

This miniature pressure transducer features an **IP68** rating, flexible cable and is available with options such as a **PT1000** temperature sensor upon request.

The standard version is suitable for many applications, but the dedicated design team at our Transducer Engineering Centre stands ready to provide a custom design as required.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

#### FEATURES

- ◆ Porous stones available
- ◆ -40°C to +80°C Operating Temperature
- ◆ Accuracy up to  $\pm$ 0.5%

#### APPLICATIONS

- ◆ Pore Water Measurement
- ◆ Centrifuge
- ◆ Laboratory

**STANDARD RANGES**

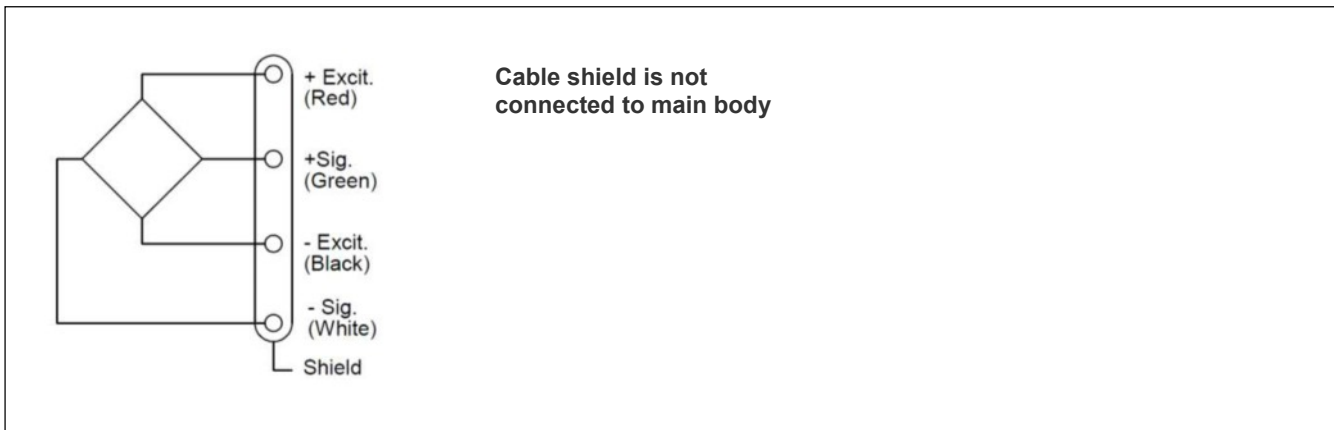
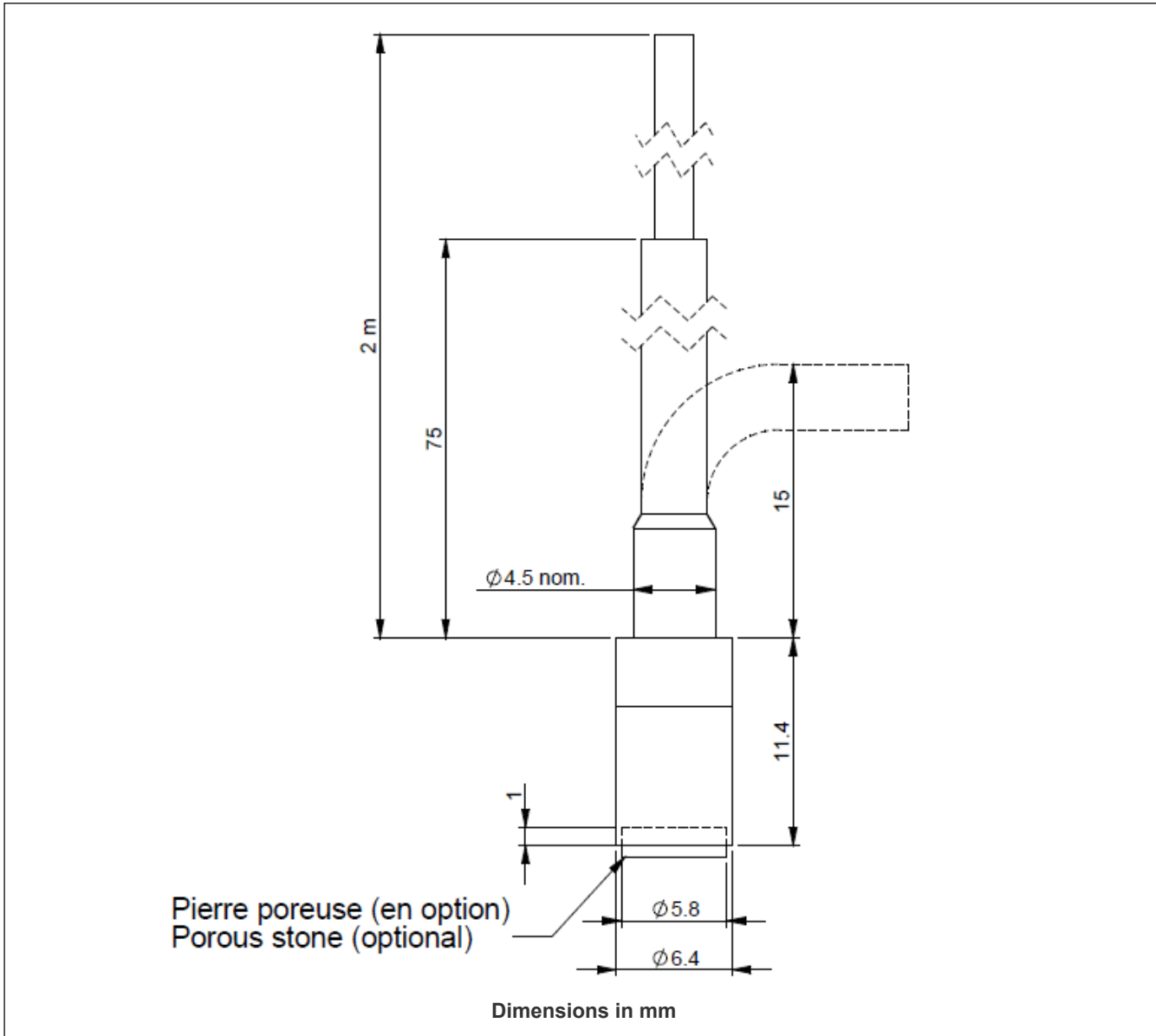
Ranges (FS)		Pressure Reference Sealed	Pressure Limit	Sensitivity "FSO" (nom.)	CNL&H (%FS)	Thermal Zero Shift "TZS" (/50°C)
bar	psi					
1	15	♦	4.5 x FS	5 mV/V	±1%	±4% FSO
1.5	25	♦	3 x FS	7.5 mV/V	±1%	±2% FSO
3.5	50	♦	2 x FS	10 mV/V	±1%	±2% FSO
7	100	♦	2 x FS	12.5 mV/V	±0.5%	±1.5% FSO
15	250	♦	2 x FS	12.5 mV/V	±0.5%	±1.5% FSO
35	500	♦	2 x FS	12.5 mV/V	±0.5%	±1.5% FSO
70	1K	♦	2 x FS	12.5 mV/V	±0.5%	±1.5% FSO

**PERFORMANCE SPECIFICATIONS (typical values at temperature 23±3°C)**

PARAMETERS	VALUES
Supply Voltage	1 to 10Vdc regulated
Input Resistance	1000Ω nom.
Output Resistance	400Ω nom.
Non-Repeatability	±2.5% FSO
Thermal Sensitivity Shift "TSS" in CTR	±2% / 50°C [1/100 ° F]
Operating Temperature Range (OTR)	-40°C to 80°C [-40 to 170 ° F]
Compensated temperature Range (CTR)	0°C to 60°C [32 to 140 ° F]
Zero Offset	± 10 mV
Ingress Protection	IP68 – 10 meters (1bar)
CE conformance according to	EN 61010-1, EN 50081-1, EN 50082-1

Sensors are calibrated with 10Vdc power supply as standard.  
For custom configurations, consult factory.

**DIMENSIONS & WIRING SCHEMATIC (IN METRIC)**



**OPTIONS**

<b>Z0</b> : Compensation Temperature Range -40 to 20°C [-40 to 70°F]
<b>V5</b> : Excitation 5 Vdc and signal 50% of the FSO range
<b>PCxx</b> : Porous Ceramic installed. Replace “xx” by air entry value 0.5; 1; 3 or 5 bar
<b>V00</b> : Non-standard power supply calibration, replace “00” with value in Volt (standard 10Vdc)
<b>L00M</b> : Special cable length, replace “00” with total length in meters

**ORDERING INFORMATION**

<b>EPB-PW</b>	-	<b>20B</b>	<b>S</b>	-	<b>/L5M</b>
Model	-	Pressure Range	Pressure reference	-	Options
<b>E P B-P W</b>		<b>1B</b> <b>1.5B</b> <b>3.5B</b> <b>7B</b> <b>15B</b> <b>35B</b> <b>70B</b>	<b>15P</b> <b>25P</b> <b>50P</b> <b>100P</b> <b>250P</b> <b>500P</b> <b>1KP</b>	<b>S</b> : sealed	<b>Z0</b> <b>V5</b> <b>L00M</b>

**RECOMMENDED ACCESSORIES**

Description	Air entry value	Maximum pore size	Part Number
<b>PC</b> : Porous Ceramic with air entry from 0.5 to 5 bar ordered separately	Porous Ceramic 0.5 bar	6.0 µm	ZPBS6220040.5
	Porous Ceramic 1 bar	2.5 µm	ZPBS6220041
	Porous Ceramic 3 bar	0.7 µm	ZPBS6220043
	Porous Ceramic 5 bar	0.5 µm	ZPBS6220045
<b>BF</b> : Bronze Filter	Consult factory	Consult factory	Consult factory

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