

**HUBA****516 Series Pressure Sensor**

*OEM Ceramic Pressure Sensor, F.S. Ranges from -1 to 16 bar (-14.5 to 232 psi)*

**DESCRIPTION**

This pressure transmitter is based on ceramic technology, developed by Huba Control and used for the last 10 years, in millions of applications.

Used in combination with a unique integrated electronic design, this gives the type 516 series a high degree of accuracy for all temperature ranges.

This technology with an amplified ratiometric output signal, supports direct assembly without the need for the user to adjust for temperature or pressure.



- **NEGLIGIBLE TEMPERATURE INFLUENCE ON ACCURACY**
- **NO CUSTOMER SPECIFIC ADJUSTMENT OF ZERO POINT AND TEMPERATURE COMPENSATION NECESSARY**
- **INTEGRATED AMPLIFIER ELECTRONICS**
- **EASY PC BOARD MOUNTING**

**SPECIFICATIONS**

Medium: Liquids and neutral gases

Pressure ranges:

Absolute: 0 to 1 to 16 bar (0 to 14.5 to 232 psia)

0.8 to 1.4 bar (bar. sensor. 23.6 to 41.3 " Hg)

Relative/Gauge: -1 to 0 to 16 bar (-14.5 to 0 to 232 psig)

Overload / Rupture pressure:

3.0 x Measuring range at -1 to 4 bar (-14.5 to 58 psi)

2.5 x Measuring range at 6 to 16 bar (87 to 232 psi)

Material in contact with the medium:

Measuring connection: PA

Measuring cell: Ceramic Al<sub>2</sub>O<sub>3</sub> (96%)

Sealing material: NBR, FPM spec.

Temperature Medium and ambient with sealing:

NBR -25 to +80 °C (-13 to +176 °F)

FPM spec. -30 to +80 °C (-22 to +176 °F)

Storage -40 to +80 °C (-40 to +176 °F)

Storage In packaging -40 to +65 °C (-40 to +149 °F)

Accuracy:

Resolution: 0.1% fs

Long-term stability acc. DIN IEC 60770: ±0.5% fs

Total of linearity, hysteresis and repeatability:

max. ±0.5% fs

Barometrical sensor: max. ±0.8% fs

Temp.Coeff. Zero point: Max. ±0.3% fs/10K

Temp.Coeff. Sensitivity: Max. ±0.2% fs/10K

Test Conditions: 25 °C, 45% RH, Power Supply

5 VDC; Temp. Coeff. -15 to 80 °C

Power supply / Output:

Power supply: 5 VDC (4.75 to 5.25 V)

Output with full scale adjustment:

ratiometric 0.5 to 4.5 V

10 to 90% of power supply

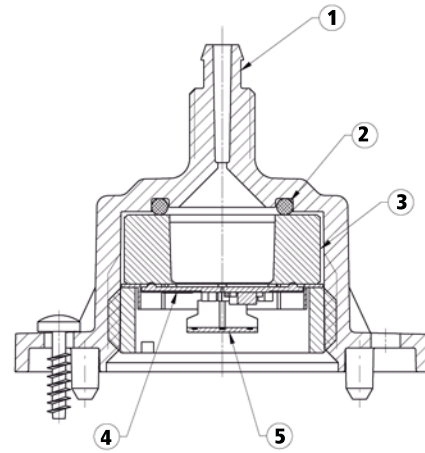
Output without full scale adjustment:

0.5 to 3 ±1.2 V

Load: > 10 kOhm / < 100 nF

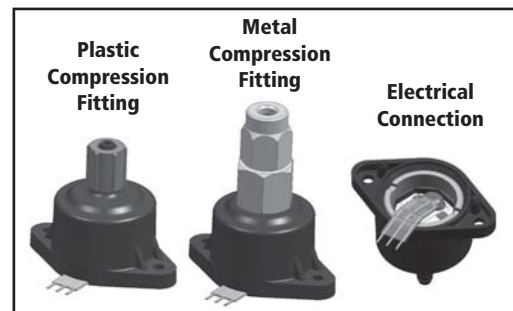
Current consumption: At nominal pressure

without load: < 4 mA



**Cross-section Drawing Legend**

1	Pressure Connections
2	O-Ring Seal
3	Ceramic Measuring Cell
4	Amplifier Electronics
5	Electrical Connection



## SPECIFICATIONS

Dynamic response: Suitable for static and dynamic measurements

Response time: < 2 ms, 1 ms Typ.

Load cycle: < 100 Hz

Electrical connection:

Flexible connector Contact Spacing: 2.54 mm (100 mil)

Tests: Vibration acc. DIN IEC 600-68-2-620 g, 2 ... 2000 Hz with amplitude  $\pm 15$  mm, 10 Octave/min. all 3 directions, 3 constant load

Protection standard: IP 00

Pressure connection: Plastic quick fitting or Metal quick fitting

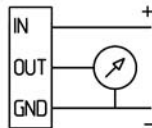
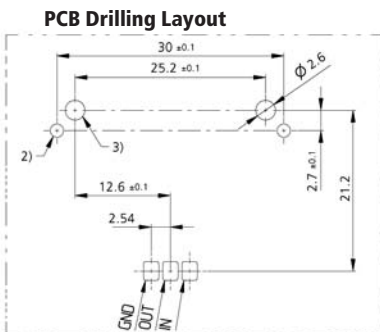
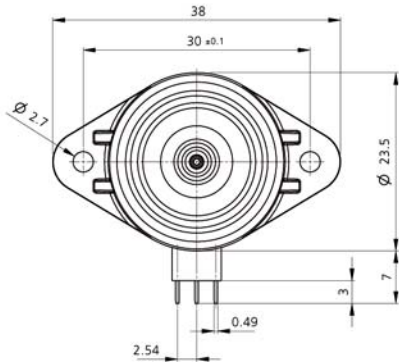
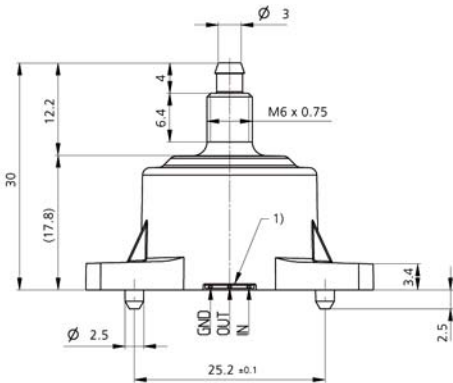
ESD-handling: Necessary

Weight: With plastic quick fitting approx. 15 g; With metal quick fitting approx. 25 g

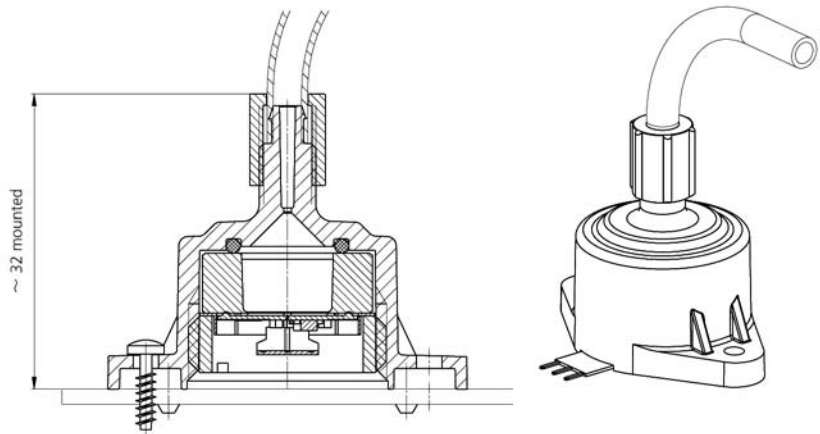
Packaging:

Multiple packaging: 4 blisters in covering box (140 pcs)

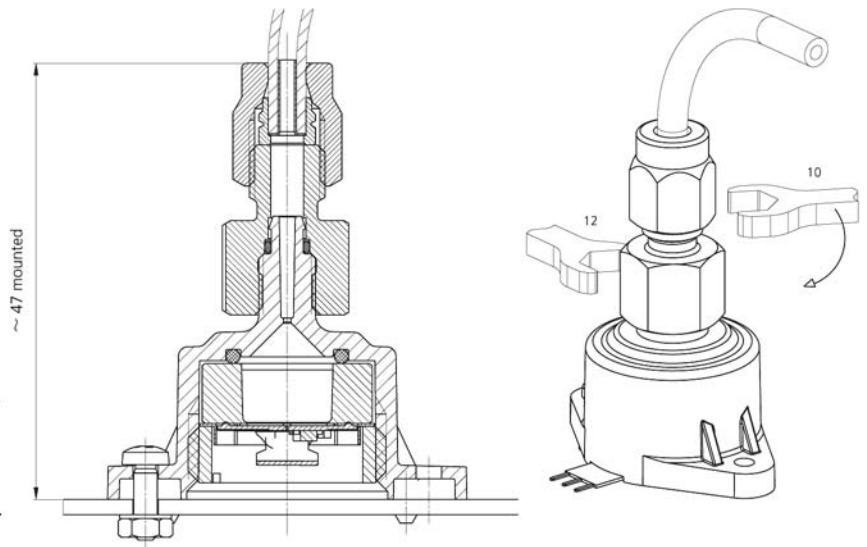
## DIMENSIONS MM



Pressure connection: Plastic compression fitting for higher pressure / higher temperature



Pressure connection: Metal compression fitting for higher pressure / higher temperature



1) Keep the space at the flex cable open for relative/gauge pressure for the pressure compensation. Do not seal or cover it.

2) Securing holes:

- for self tapping screw (K22) [ 1.75 mm
- for metric screw (M2.5) [ 2.7 mm

We recommend metric screws with nut instead of self tapping screws for higher pressure or eventual mechanical loads.

**Installation of metal compression fitting:**

- 1) It is essential to connect the tube to the sensor before mounting on the pcb.
- 2) Assemble finger tight, final adjustment 1.5 turn with spanner 10.

**ORDERING INFORMATION      A-B-C-D-E (516-9-17-2-0)**

A Model	B Pressure	C PressureRange	D O-Ring/Connection Type	E Calibration
516	9= Relative/ Gauge 8= Absolute	00= -1 to 0 bar (RelativeOnly) 10= 0.8 to 1.4 bar (Barometric Sensor-Absolute Only) 11= 0 to 1 bar 12= 0 to 1.6 bar 14= 0 to 2.5 bar 15= 0 to 4 bar 17= 0to 6 bar 30= 0 to 10 bar 31= 0 to 16 bar	2= NBR/Plastic Compression Fitting 6= FPM Spec./Plastic Compression Fitting 3= NBR/Metal Compression Fitting (brass) 7= FPM Spec./Metal Compression Fitting (brass)	0= Factory Adjusted Zero Point & Full Scale 1= Factory Adjusted Zero Point Only (Relative Models Only)

**Accessory Part Numbers**

108436	Self tapping fillister head screw WN 1412, KA22x8
111423	Mounting set for 35 pieces (screws, serrated lock washers, nuts) M 2.5 x 10
104551	Calibration certificate