

IDAC 180

Piezoelectric High-Pressure Sensor



Special characteristics

- ▶ High sensitivity
- ▶ Suitable for dynamic pressure changes up to 8000 bar
- ▶ Long service life and excellent long-term stability

Description

The piezoelectric pressure sensor was developed for detecting dynamic pressure changes up to 8000 bar in hydraulic systems. The unique GaPO₄ sensor element allows a sensitivity of 2.3 pC/bar. It is therefore ideal for resolving small pressure fluctuations across the entire pressure range. The front-sealing sensor in conjunction with the compression fitting is not influenced by either installation or installation position.

Applications

Hydraulic systems

Pipe monitoring (water hammer effect)

Valves

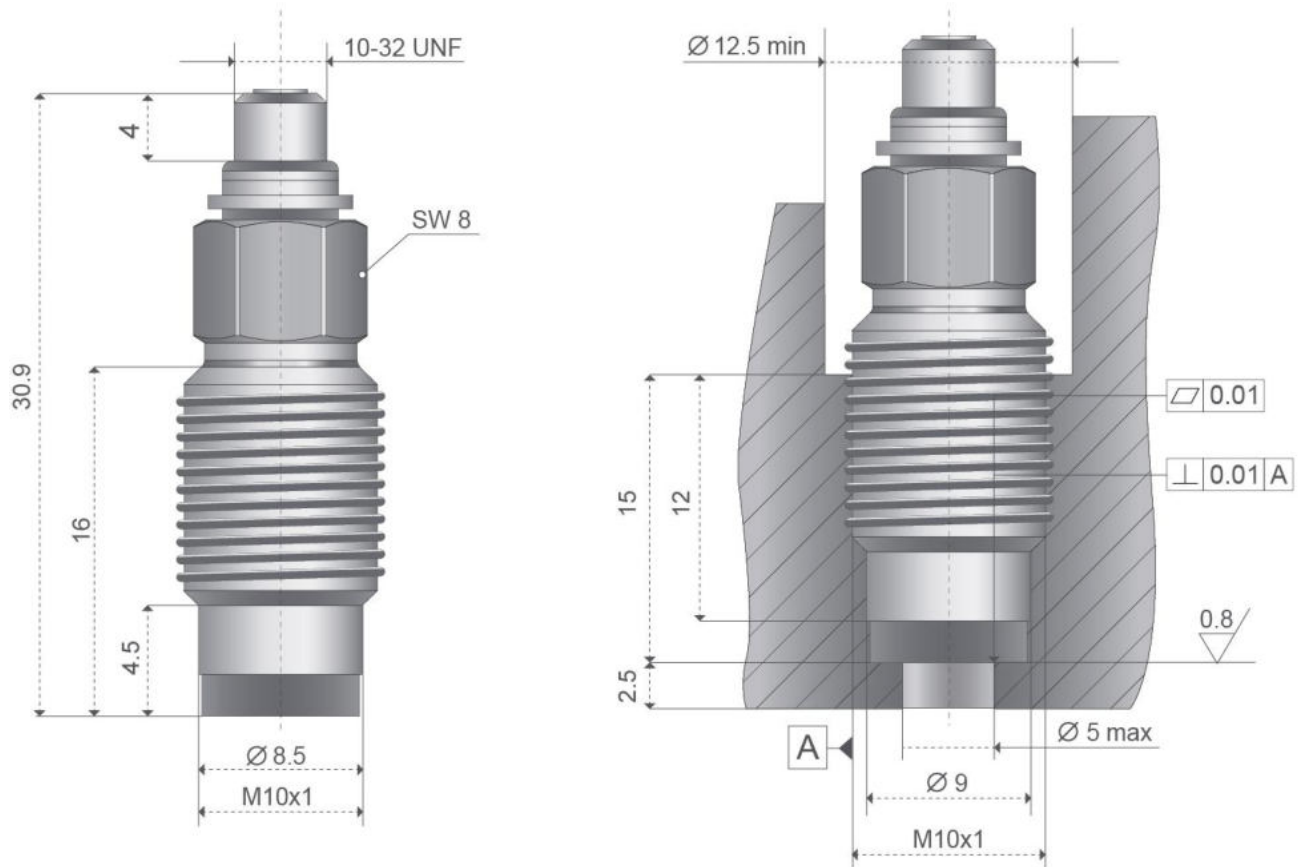
Technical Data		
Nominal pressure range	[bar]	0 ... 8000 (0 ... 116000 psi)
Overload	[bar]	8800 (127600 psi)
Sensitivity	[pC/bar]	2.3 (0.2 pC/psi)
Linearity	[%/FSO]	≤ ± 1
Operating temperature	[°C]	-50 ... 200 (-58 ... 392 °F)
Insulation resistance at 20 °C	[Ω]	> 1*10 ¹³
Acceleration sensitivity	(typ.)	axial: 0.002 bar/g radial: 0.005 bar/g
Shock (axial/transverse)		25,000 g /10,000 g
Natural frequency	[kHz]	> 240
Capacitance	[pF]	8
Tightening torque	[Nm]	20
Thermal sensitivity	[%/°C]	± 0.02
Increase time	[μs]	1
Plug		10-32 UNF
Weight (without cable)	[g]	approx. 12

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Technical Data

Dimensions in mm and mounting



All cables can be removed.

UNF piezo input cable (1 m) and 10 x seal rings are included in the scope of supply.

Accessories

Name	quantity	BDS-order number
Piezo Input cable UNF	2 m	BDU0065
Piezo Input cable UNF	3 m	BDU0066
M4/0.35 to BNC coupling	piece	BDU2077