

# IDAC 160

## Piezoelectric High-Pressure Sensor



### Special characteristics

- Single crystal of gallium phosphate  $\text{GaPO}_4$
- Very high pressures up to 6000 bar
- High sensitivity
- Excellent long-term stability

### Description

The IDAC 160 was developed for detecting dynamic pressure changes up to 6000 bar in hydraulic systems. The unique  $\text{GaPO}_4$  sensor element allows a sensitivity of 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

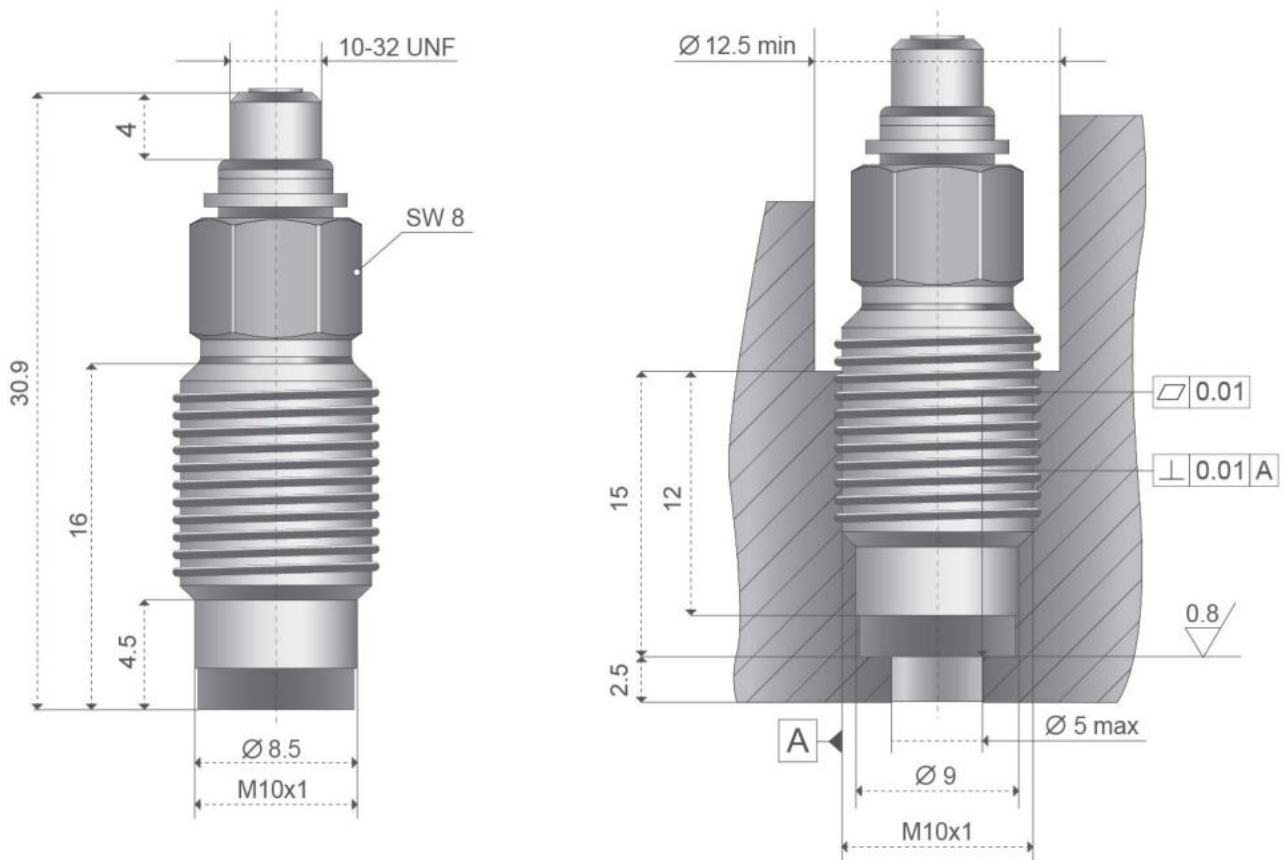
Technical Data		
Nominal pressure range	[bar]	0 ... 6000 (0 ... 87000 psi)
Overload	[bar]	6600 (95700 psi)
Sensitivity	[pC/bar]	3 (0.2 pC/psi)
Linearity	[%/FSO]	$\leq \pm 1$
Operating temperature	[%/°C]	-50 ... 200 (-58 ... 392 °F)
Insulation resistance at 20 °C	[Ω]	$> 1 \cdot 10^{13}$
Acceleration sensitivity	(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]	$\pm 0.02$
Increase time	[μs]	1
Plug		10-32 UNF
Weight (without cable)	[g]	approx. 12

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## 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