

IDAC 106 L



Piezoelectric Pressure Sensor

Special characteristics

- Compact construction
- High-pressure range
- High temperature resistance (400 °C / 752 °F)
- High natural frequency
- Constant sensitivity across the entire service life

Description

The IDAC 106 L has a very slim contour thanks to an M3 cable connector and enables very precise measurements with an M5-size sensor. Its good performance is achieved by means of thermally optimized piezoelectric crystal elements and the special Double Shell™ design. Due to the construction of the sensor, the piezoelectric elements can be decoupled from the negative influences of thermal expansion and other mechanical stresses.

Applications

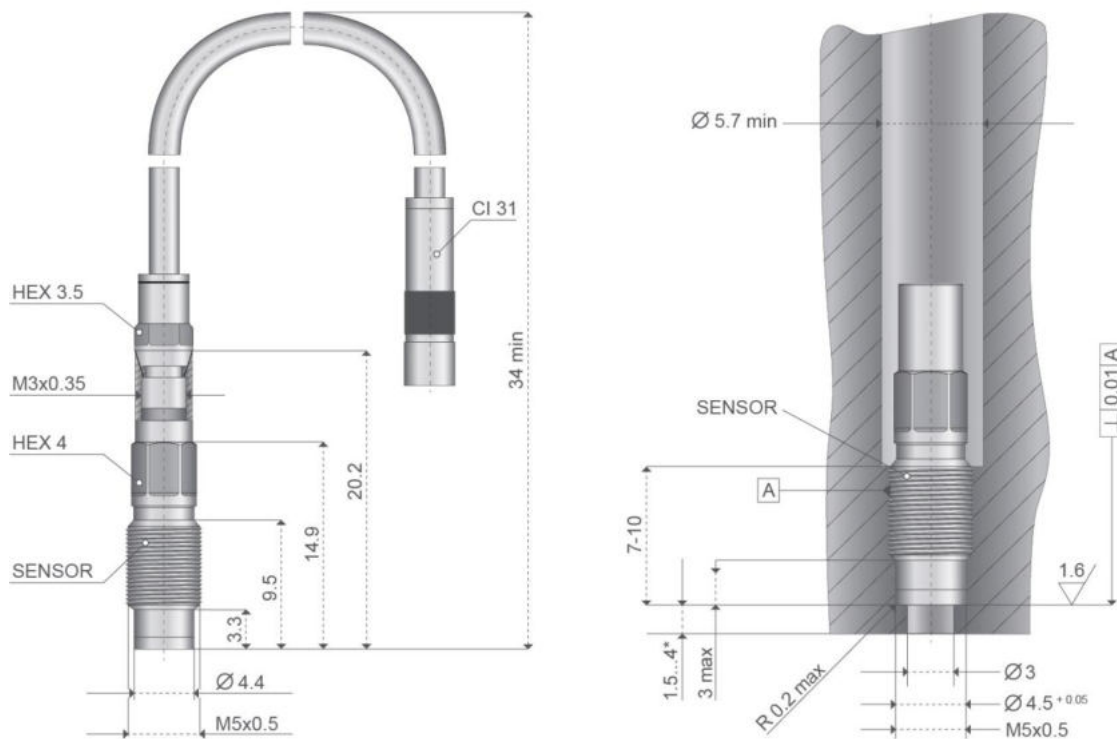
For high pressures and high thermal loads

Laboratory applications

Technical Data

Nominal pressure range	[bar]	0 ... 500 (0 ... 7250 psi)
Overload	[bar]	600 (8700 psi)
Sensitivity (nominal)	[pC/bar]	10 (0.7 pC/psi)
Linearity	[%]	≤ ± 0.5
Operating temperature	[°C]	-40 ... 400 (-40 ... 752 °F)
Insulation resistance at 20 °C	[Ω]	≥ 10 ¹³
Acceleration sensitivity	(typ.)	approx. 0.0005 bar/g [axial]
Shock	[g]	≥ 2000
Natural frequency	[kHz]	approx. 170
Capacitance	[pF]	7.5
Tightening torque	[Nm]	1.5
Thermal sensitivity		≤ 1 % 20 ... 400 °C ≤ ± 0.35 % 250 ± 100 °C
Thread diameter (front sealing)		M5x0.5
Cable connection (negative)		M3x0.35
Weight (without cable)	[g]	1.6
Housing material		Stainless steel, hermetically welded

Dimensions in mm and mounting



*1.5 mm steel, 4mm gray cast iron or aluminum

The sensor can be screwed directly into the object to be measured. The sensor front side ($\varnothing 4.4$ mm) seals the sensor in the mounting hole. Rapid changes in pressure are best detected when the volume in front of the membrane is kept as small as possible.

All cables can be removed.

Teflon piezo input cable (1 m) is included in the scope of supply.

Accessories

Name	quantity	BDS-order number
Piezo Input cable Teflon	2 m	BDV4712
Piezo Input cable Teflon	3 m	BDV5041
Piezo Input cable steel braid	1 m	BDV2444
Piezo Input cable steel braid	2 m	BDV2446
Piezo Input cable steel braid	3 m	BDV4954
Piezo Input cable Viton	1 m	BDV4707
Piezo Input cable Viton	2 m	BDV4708
Piezo Input cable Viton	3 m	BDV5806
M4/0.35 to BNC coupling	piece	BDU2077