

# Piezoelectric Miniature Pressure Sensor

- ✓ Miniature Design
- ✓ Pressure range up to 500 bar (7250 psi)
- ✓ High temperature stability up to 400 °C (750 °F)
- ✓ Virtually constant sensitivity over the entire lifetime

R&D measurements in modern, highly integrated and compact apparatus are among the most challenging applications for sensors. The mechanical integration is the bottleneck for many available sensors due to the size and adverse physical influences such as temperature, heat flux or mechanical stresses are subject to great variation due to experimental character of R&D. The T-Series is developed for these complex conditions which is reflected in its miniature housing and design features.

The sensors of the T-Series are a new generation which incorporate Piezocryst's technology portfolio in the smallest package ever. With the robustness of the S-Series, only 3.5 mm mounting diameter and the exceptional signal quality of GaPO4 crystal elements, the sensors of the T-series allow to study previously not accessible components. The sensors endure high temperature and pressure gradients and still produce a reliable, stable output.

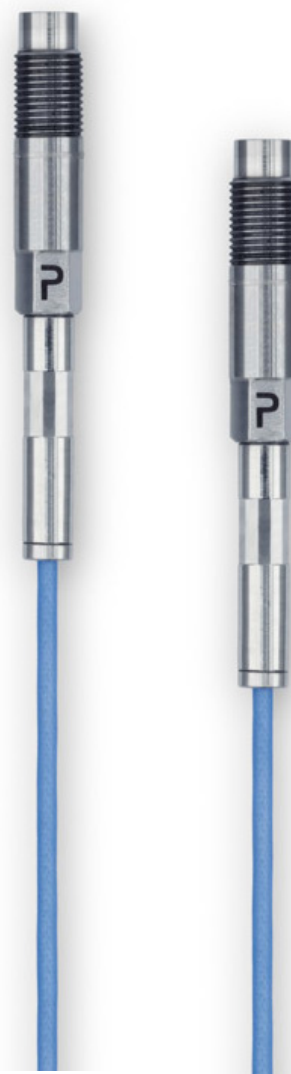


Questi prodotti sono distribuiti e supportati in Italia da:



Instrumentation Devices Srl  
Via Acquanera 29 - 22100 COMO (Italy)  
ph +39 031 525 391- fax +39 031 507 984  
info@instrumentation.it - www.instrumentation.it

1/2



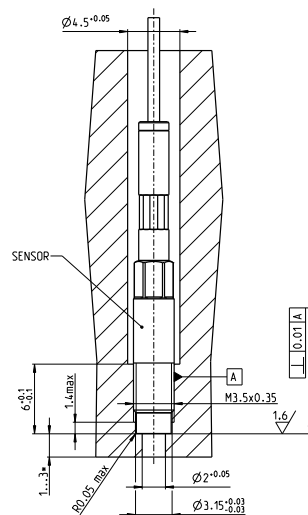
# Specifications

Name	T1-A1	T1-K1*
Operating principle	Piezoelectric, charge output	
Sensing element	GaPO <sub>4</sub> (gallium phosphate)	
Dynamic measuring range	0 ... 300 bar, (0 ... 4350 psi)	0 ... 500 bar, (0 ... 7250 psi)
Overload pressure	350 bar, (5075 psi)	550 bar, (8000 psi)
Sensitivity (nominal)	5.3 pC/bar (0.37 pC/psi)	
Linearity	≤ ± 0.5% FSO	
Operating temperature (continuous)	-55°C ... +400°C, (-67°F ... +750°F)	-55°C ... +120°C, (-67°F ... +250°F)
Internal insulation resistance	> 10 <sup>13</sup> Ω (25°C / 77°F), > 10 <sup>9</sup> Ω (400°C / 750°F)	
Shock resistance	> 2000 g	
Natural Frequency	170 kHz	
Capacitance (nominal)	3.5 pF pole/ground	
Mounting torque	0.5 Nm	
Scope of Supply		
Sensor	✓	
Cable	1m Teflon™ cable M2x0.25 to M2x0.25	
Coupling	M2x0.25 to BNC coupling	
Accessory kit	Protection cap and 2 spare o-rings	
Test record, Documentation	✓	
Accessories		
Cables	1 ... 5m Teflon™ coated cable	
Machining tool	Step drill, tap drill	
Mounting tool	Mounting tool set including socket and torque wrench	

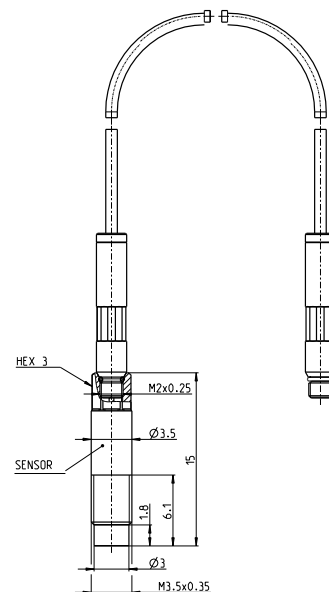
\* Preliminary values

Piezocryst reserves the right to change specifications and accessories without notice.

## Sensor & Mount Dimensions



All dimensions are in mm.



## Customer support

We are reachable  
by phone:

+43 316 787 530

Write us an E-Mail and we get  
back to you

[info@piezocryst.com](mailto:info@piezocryst.com)

### Piezocryst

Advanced Sensorics GmbH  
Hans-List-Platz 1 | A-8020 Graz  
Austria

Questi prodotti sono distribuiti e supportati in Italia da:



### Instrumentation Devices Srl

Via Acquanera 29 - 22100 COMO (Italy)  
ph +39 031 525 391- fax +39 031 507 984  
[info@instrumentation.it](mailto:info@instrumentation.it) - [www.instrumentation.it](http://www.instrumentation.it)