

Quartz High-Pressure Sensor

Type 6215...

for Ballistic Pressure Measurement to 6 000 bar

The front sealed high pressure sensor suitable for ballistic pressure measurement up to 6 000 bar.

- NATO Standard
- Extremely long service life
- Very good long term stability

Description

Compared to the shoulder sealing used so far, the front sealing technically improves the sensor considerably. The resulting main advantages are a considerably lower mechanical and thermal stress of the sensor, no mounting gap (small dead volume) and a largely reduced surface pressure in the sealing part.

The Type 6215... has been accepted by NATO as the successor to Kistler Type 6203 (AC/225 LG/3-SG/1). The existing NATO Standardization Agreements (STANAGs) and Manuals of Proof and Inspections (MOPIs) are being amended accordingly.

Application

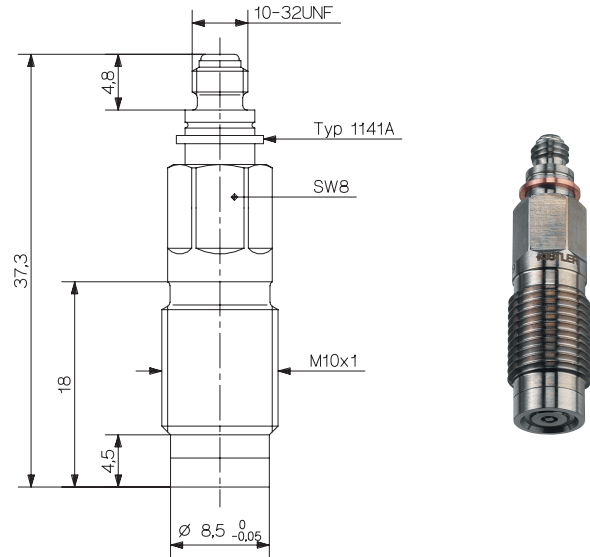
Use for all ballistic measurements. Depending on the measuring configuration, the sensor can be installed with an additional thermal protection shield or a diaphragm protection.

Mounting

The front seal allows the use of an additional attachment.

Figure 3 shows the installation with thermal protection shield Type 6565A and thermal protective plate Type 1181A to reduce thermal shock error. For measurements in which the sensor is exposed to heat over the entire pressure profile (e.g. in pressure bombs and cartridge chambers).

Figure 4 shows the installation with diaphragm protector Type 6567. Recommended for measurements at the case mouth and along the measuring barrel as protection against mechanical damage from metal fragments and powder particles. It is essential to follow the operating instructions when machining the measuring hole and for installation.



Technical Data

Range	bar	0 ... 6 000
Calibrated partial range	bar	0 ... 600
Overload	bar	6 600
Sensitivity	pC/bar	-1,4
Natural Frequency	kHz	>240
Rise time	µs	1
Linearity for all ranges	% FSO	±1
Acceleration sensitivity		
axial	bar/g	<0,002
transverse	bar/g	<0,005
Shock resistance		
axial	g	25 000
transverse	g	10 000
Temperature coefficient of the sensitivity	%/°C	±0,02
Operating temperature range	°C	-50 ... 200
Capacitance	pF	≈8
Insulation resistance at 20 °C	Ω	>10 ¹³
Tightening torque	N·m	20
Weight	g	12

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Mounting Examples

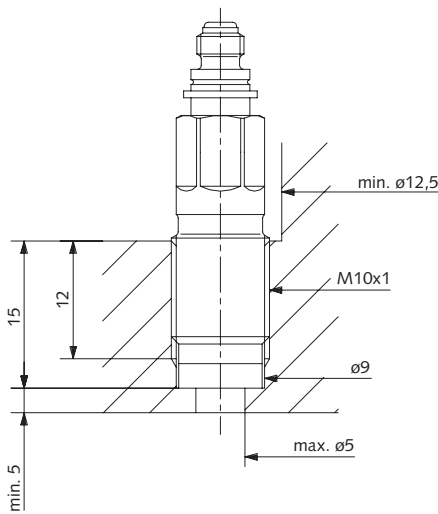


Fig. 1: Dimensions of the measuring bore

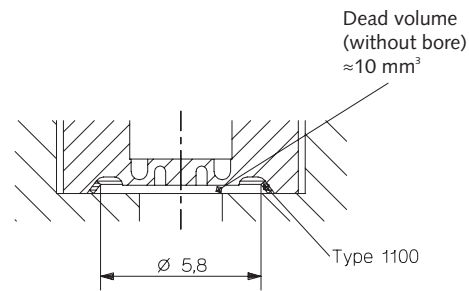


Fig. 2: Sealing part, sealing diameter

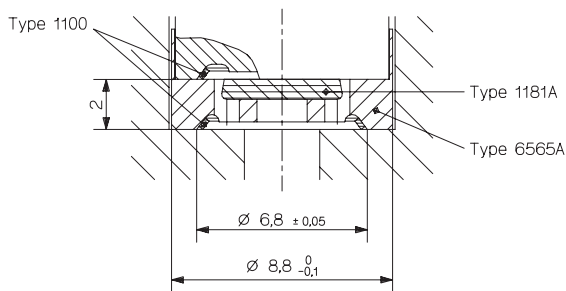


Fig. 3: Installation with thermal protection shield Type 6565A and thermal protective plate Type 1181A

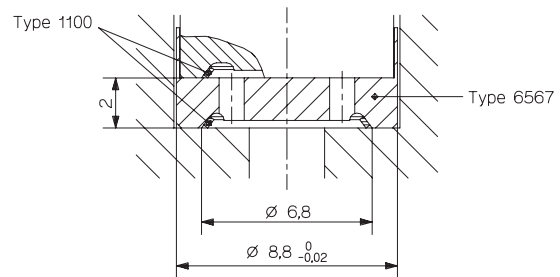


Fig. 4: Installation with thermal protector Type 6567

Accessories Included

- Sealing ring 10x
- Lubrication grease 1x

Type

1100
1063

Optional Accessories

- Thermal protective plate
- Thermal protection shield
- Diaphragm protection
- Sealing joint
- Dummy plug
- Adapter to pressure generator 6905A/6906
- Reduction sleeve
- Cable special
- Special drilling tool
- Screw tap M10x1
- Surface finishing tool
- Torque wrench
- Tubular socket wrench hex. 8 mm

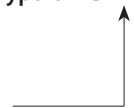
Type

1181A
6565A
6567
1100
6449
6925
Z14998
1699AA0,5
1327
1353
1300A25
1371B
1373

Ordering Key

Quartz High-Pressure Sensor	-
Quartz High-Pressure Sensor with additional accessories included Types 1300A25, 1327, 1352, 1373	A1

Type 6215



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