

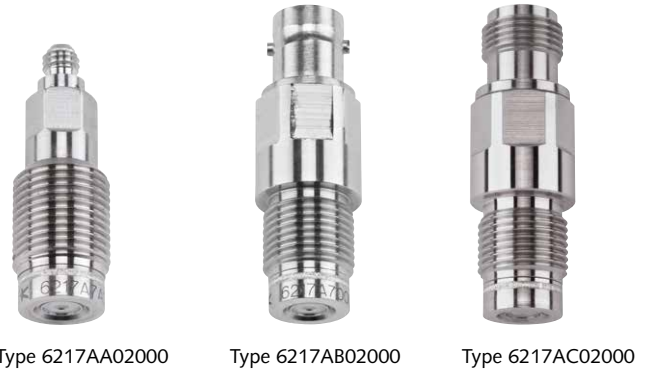
Quartz high-pressure sensor

Type 6217A...

For pressure measurement up to 2 000 bar

Modular high pressure sensor for universal applications up to 2 000 bar. Proven front sealing design for best accuracy even in harsh environments (e.g. high shock levels, hot gases with combustion particles).

- High sensitivity up to -13 pC/bar
- Front sealing
- Excellent long term stability
- Long operating life
- Acceleration compensated
- Standard version KIAG 10-32
- BNC and TNC options available



Description

Front sealing diaphragm, low mechanical and thermal load. No mounting gap (small dead volume) and reduced surface pressure. Thus, highest accuracy even in harsh environments. Connecting nipple interchangeable without tools (no weld between sensing element and nipple).

Application

Available in different backend configurations (KIAG 10-32, BNC and TNC) for a broad range of applications:

- Ballistic applications up to 2 000 bar
- Airbag inflator development and testing
- High-energy metal forming
- Closed vessel testing
- Pyrotechnic actuators
- Mortar tube pressure
- Energetic material testing

Technical Data

Type		6217A...
Range	bar	0 ... 2 000
Calibrated partial range	bar	0 ... 200
Overload	bar	2 400
Sensitivity (nom.)	pC/bar	-13
Linearity	%FSO	<0.5
Acceleration sensitivity	mbar/g	<2
Temperature coefficient of sensitivity	%/°C	±0.02
Natural frequency	kHz	>180
Shock resistance (half sine 1 ms)	g	20 000
Operating temperature range	°C	-50 ... 200
Insulation resistance @ 20 °C	Ω	>10 ¹³
Tightening torque	N·m	20

6217A_000-865e-04.22

Configurations and Dimensions

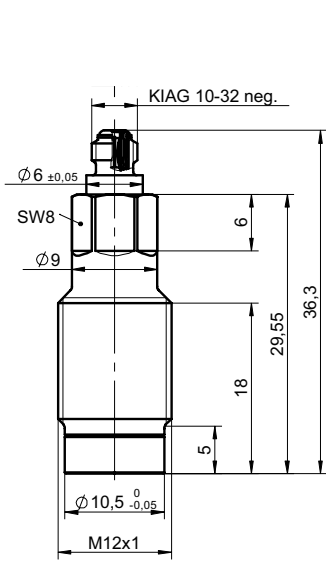


Fig. 1: Type 6217AA02000

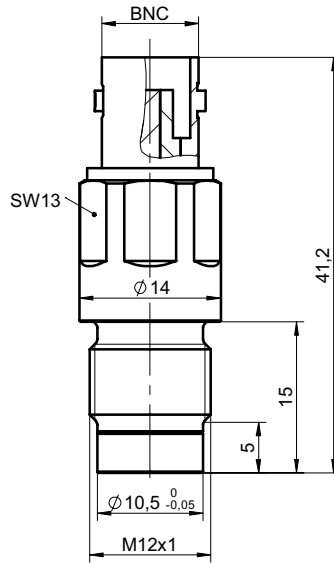


Fig. 2: Type 6217AB02000

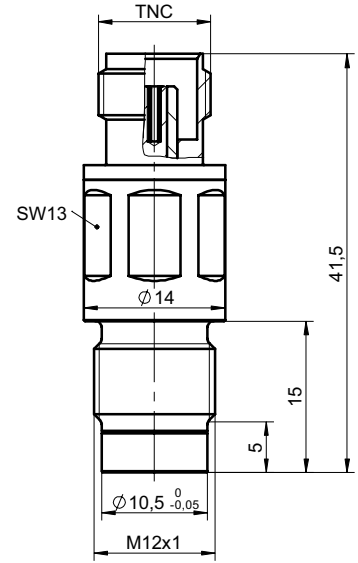
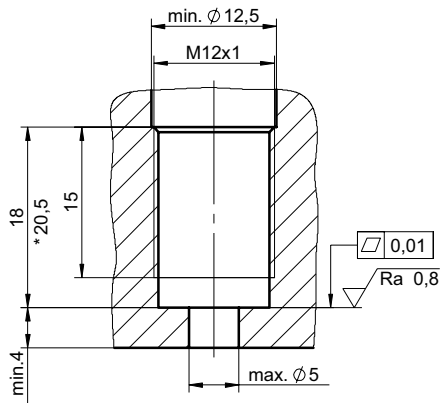


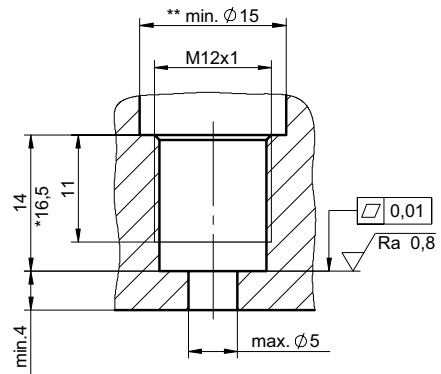
Fig. 3: Type 6217AC02000

Mounting Bores



* mounting with thermal protection shield Type 6563A or diaphragm protection Type 6564

Fig. 4: Mounting bore Type 6217AA02000



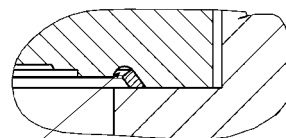
* mounting with thermal protection shield Type 6563A or diaphragm protection Type 6564

** mounting only for Type 6217AB02000

Fig. 5: Mounting bore Type 6217AB02000 and 6217AC02000

6217A_000-865e-04_22

Reworked mounting bores of Type 607C or 617C sensors may result in a web thickness (passage hole length) of 2,5 mm to <4 mm. Thus, the mounting torque should be limited to 20 N·m and pressure to 2 000 bar.



Sealing ring Type 1100

Fig. 6: Sealing detail with sealing ring Type 1100

Mounting

To mount the sensor, a threaded bore M12x1 is sufficient (Fig. 4 + 5). The contact surface needs to be finished with the surface finishing tool Type 1300A23. It is possible to install the sensor without thermal protection, using only the sealing ring Type 1100 (Fig. 6 + 7).

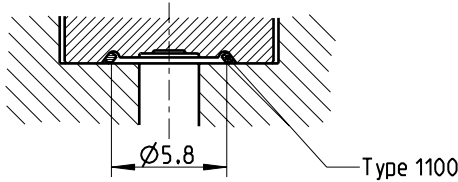


Fig. 7: Direct mounting

The front sealing principle allows the installation of attachments. For protection against powder particles and other fragments use of the diaphragm protection (Type 6564) is recommended (Fig. 8).

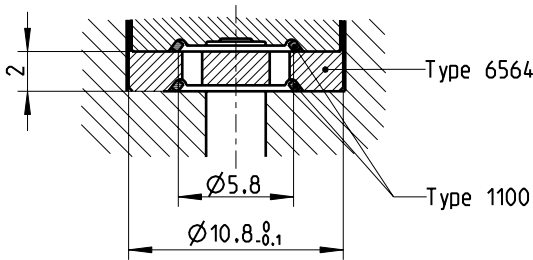


Fig. 8: Mounting with diaphragm protection Type 6564

For protection against hot gases installation of the thermal protective plate (Type 1181) and thermal protection shield (Type 6563A) is recommended (Fig. 9).

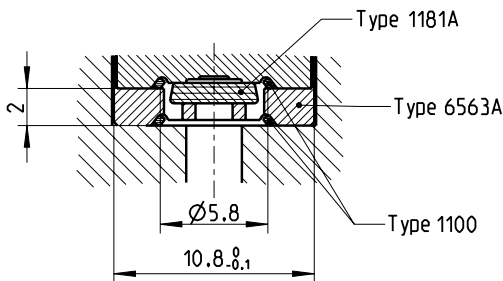


Fig. 9: Mounting with thermal protective plate (Type 1181) and thermal protection shield (Type 6563A)

Fig. 7. shows the diaphragm protector 6564A1 with slanted holes. The 6564A1 protects against particle and metal fragment hit, but its slanted holes also prevent a direct impact on the diaphragm. This leads to an increased life time of the sensor.

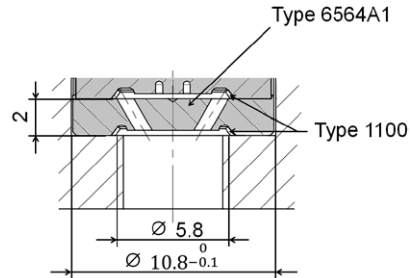


Fig. 10 Mounting with diaphragm protection with slanted holes (Type 6564A1)

Included Accessories

- Sealing ring, 10 pieces
- Special grease (Klüber)

Type/Mat. No.

- 1100
- 1063

Optional Accessories

- Thermal protective plate
- Thermal protection shield
- Diaphragm protection
- Diaphragm protection with slanted holes
- Sealing ring
- Special drilling tool
- Surface finishing tool
- Screw tap M12x1
- Torque wrench
- Tubular socket wrench hex. 8 mm
- Connecting nipple M12x1 – 10-32 UNF
- Connecting nipple M12x1 – BNC
- Connecting nipple M12x1 – TNC
- Diaphragm protection removal tool

Type/Mat. No.

- 1181A
- 6563A
- 6564
- 6564A1
- 1100
- 1341
- 1300A23
- 1355
- 1371B
- 1373A1
- 55056090
- 55058549
- 55120653
- 1255A

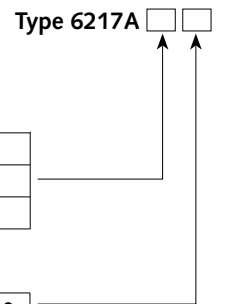
Ordering Key

Configuration

Kistler KIAG 10-32	A
BNC	B
TNC	C

Pressure Range

Range 2 000 bar	02000
-----------------	--------------



6217A_000-865e-04.22