KISTLER
measure. analyze. innovate.

ThermoCOMP®

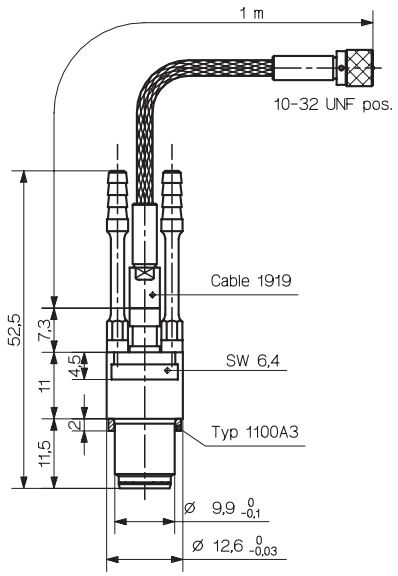
Type 6067C

Water-cooled Precision Cylinder Pressure Sensor

Water-cooled precision cylinder pressure sensor with small dimensions, especially suited for small combustion engines and for thermodynamic investigations in the laboratory.

Fitting with or without water cooling by means of a mounting sleeve. High sensitivity, high natural frequency and excellent zero point stability thanks to built-in water cooling.

- Smallest water-cooled cylinder pressure sensor
- Thermo-shock optimized double diaphragm
- Long life thanks to TiN coating and metal cable
- Modifications compared with Type 6067B:
  Optimized mounting sleeve for easy sensor dismounting





Technical Data

Range	bar	0 ... 250
Calibrated partial ranges	bar	0 ... 50
	bar	0 ... 5
Overload	bar	300
Sensitivity	pC/bar	≈–25
Natural frequency	kHz	≈90
Linearity, all ranges	% FSO	≤±0,5
Acceleration sensitivity		
axial (with cooling)	bar/g	≤0,01
radial (with cooling)	bar/g	≤0,001
Operating temperature range	°C	–50 ... 350
Cooling water flow	l/min	0,5 ... 1,0
Sensitivity shift		
50 ±35 °C	%	≤±0,5
50 ... 350 °C	%	≤±2
Thermo shock		
(at 1500 min -1,9 bar IMEP		
Δ p	bar	<±0,2
Δ IMEP	%	≤±1
Δ $p_{max.}$	%	≤±1
Insulation resistance		
at 20 °C	Ω	≥10^{13}
Shock resistance	g	2000
Tightening torque	Nm	10
Cooling water pressure	bar	≤6
Capacitance, (with cable)	pF	60
Weight	g	14
Connector, ceramaic insulator	Type	M4 x 0,35

Description

The use of polystable quartz elements assures security against twinning even under high mechanical loading. As a result, the sensitivity remains largely constant from –50 to 350 °C and the sensor continues to operated without damage even if the water cooling fails.

Thanks to its anticorrosive effect, the TiN coating extends the life of the diaphragm.

Application

The miniature sensor Type 6067C is well suited for thermodynamic measurements in small combustion engines where no space is available for mounting of the sensor Type 6067B (M10).

The low sensitivity to thermal shock and the excellent zero point stability, thanks to built-in water cooling, yield precise measuring results.

Moreover, the excellent linearity in the whole range and the high sensitivity allow gas exchange to be analyzed accurately.

000-021e-05.02 (DB03.6067Ce)

This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

Kistler Instrumente AG, PO Box, CH-8408 Winterthur
Tel +41 52-224 11 11, Fax 224 14 14, info@kistler.com, www.kistler.com

KISTLER
measure. analyze. innovate.

Mounting Examples

The sensor Type 6067C may be mounted directly into a ø10H9 hole. Fig. 1 shows flush mounting with the wall of the combustion chamber. Fig. 2 shows mounting with recessed diaphragm.

Fig. 3 shows the sensor Type 6067C fitted in a cylinder head using the mounting sleeve Type 6472Asp.

The flush mounting must be preferred in order to avoid pipe resonances.

Accessories	**Type/Art.No.**
• High temperature connecting cable M4 x 0,35 – 10-32 pos., l = 1 m	1919
• Coupling 10-32 neg. – BNC pos.	1721
• Coupling 10-32 neg. – BNC neg.	1725
• Cr-Ni-steel seal	1100A3
• Connecting tube for cooling water	1225A2
• Polyethylen hose for cooling water	1203Bsp
• Viton hose for cooling water	1203Csp
• Adapter for pressure generator 6905A	6954
• Adapter for pressure generator 6904	6586
• Dummy sensor, like 6067C	6444C
• Extractor for 6444	1319
• Dismounting tool for cable	1300A49

Mounting Accessories	**Type**
• Torque wrench 8 ... 40 Nm	1300A11
• Fork wrench hex.16 mm for 6472Asp and torque wrench 4 ... 20 Nm	1300A39
• Mounting sleeve	6472Asp 70...150

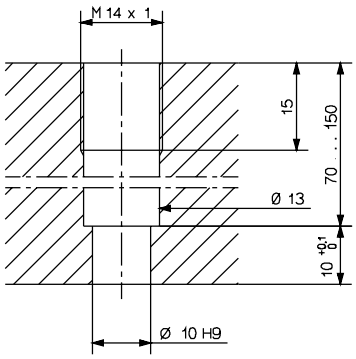


Fig. 1

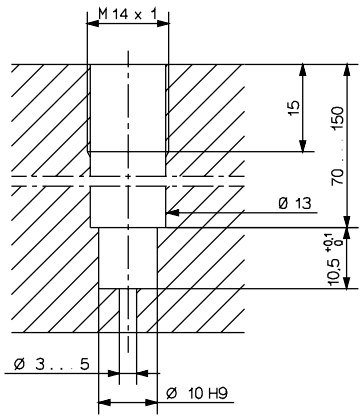


Fig. 2

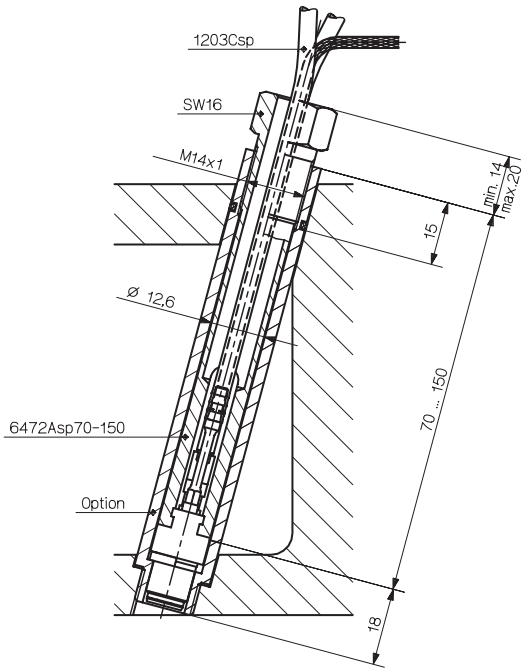


Fig. 3

000-021e-05.02 (DB03.6067Ce)

This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

Kistler Instrumente AG, PO Box, CH-8408 Winterthur
Tel +41 52-224 11 11, Fax 224 14 14, info@kistler.com, www.kistler.com