CONDUCTIVITY

TEMPERATURE

FLOW

HUMIDITY

Conductivity sensor with integrated temperature sensor

LFS1K0.155.6W.B.010-6

RoHS

General Information

The conductivity is a measurement of the ion concentration in a solution. It can be used to determine the quality, the amount of nutrients, salts or impurities in water or aqueous solutions. The temperature sensor on the device allows temperature measurement and compensation. It is placed directly in the measurement area to improve accuracy.

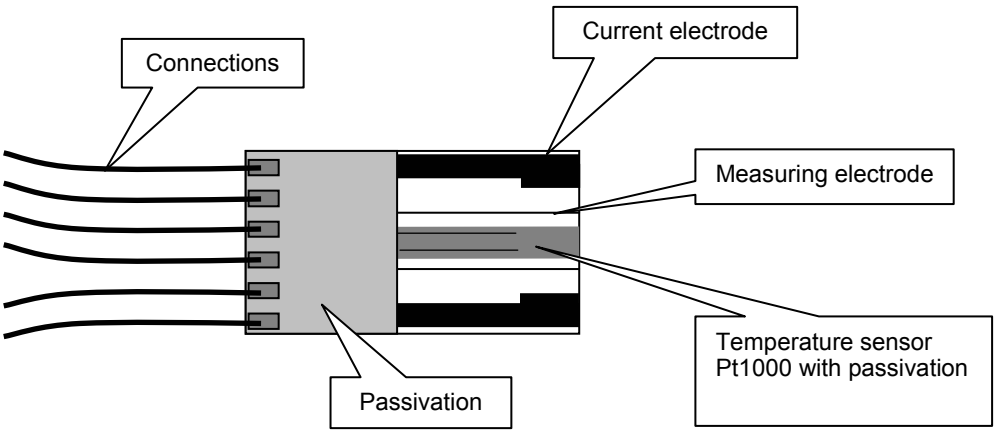
Construction

The conductivity sensor consists of a high-purity platinum layer patterned on a ceramic substrate. The integrated temperature sensor is coated with a glass passivation, which prevents it from mechanical damage. The current and measurement electrodes are available in thick film technology. The welded leadwires are covered with an additional fixation layer to offer best possible mechanical robustness.

Technical Data

Mechanical dimensions:	15 x 5.5 x 0.65 mm (LxWxH)
Substrate:	Al_2O_3
Operating temperature:	0 °C … +90 °C
Storage temperature:	-20 °C … +80 °C
Conductivity range:	~5 µS/cm to ~50 mS/cm (depending on the type and size)
Cell constant:	typ. 0.41 cm^{-1} 0.2 to 0.7 cm^{-1} (depending on the type and size)
Temperature sensor:	Pt1000, DIN EN 60751, class F 0.3
Electrodes:	Platinum electrodes
Connection:	6x Ni/Pt wires 0.2 mm, 10 mm long
Measurement frequency:	300 to 3000 Hz
Maximum supply voltage to the current electrode:	1.6 V_{pp} (without DC bias)

Schematic Layout



INNOVATIVE SENSOR TECHNOLOGY

ISO 9001

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