Innovative Sensor Technology

physical. chemical. biological.

LFS1498

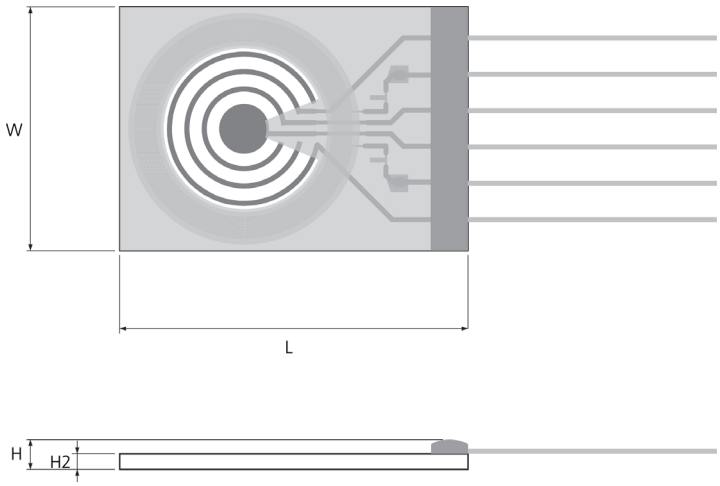
Conductivity Sensor

For various conductivity measurement applications

Benefits & Characteristics

- Very wide conductivity range
- Integrated RTD for temperature measurement and / or compensation
- 4-electrodes measurement
- Circular electrodes

Illustration[1)]



1) For actual size, see dimensions

Technical Data

Conductivity range[2)]:	10 µS/cm to 200mS/cm	
Cell constant[2)]:	typical 0.44 cm^{-1}	
Measurement frequency range:	100 Hz to 2 kHz	
Maximum excitation voltage (between pin 4 and pin 6):	< 0.7 Vpp (Electrolysis of the analyte has to be avoided)	
Operating temperature range[3)]:	-30 °C to +100 °C	
Temperature sensor:	Pt1000	
Temperature coefficient (Pt1000):	3850 ppm/K	
Measuring current (Pt1000)[4)]:	0.3 mA	
Temperature sensor accuracy (dependent on temperature range):*		IST AG reference
	IEC 60751 F0.3	B
Connection:*	Pt/Ni-wires, Ø 0.2 mm	

Temperature dependence of resistivity:	according to IEC 60751: -50 °C to 0 °C $R(T) = R_0 \times (1 + A \times T + B \times T^2 + C \times (T - 100) \times T^3)$ 0 °C to 150 °C $R(T) = R_0 \times (1 + A \times T + B \times T^2)$ A $= 3.9083 \times 10^{-3} \times °C^{-1}$ B $= -5.775 \times 10^{-7} \times °C^{-2}$ C $= -4.183 \times 10^{-12} \times °C^{-4}$ R_0 = resistance value in Ω at T = 0 °C T = temperature in accordance with ITS90
Storage temperature:	-20 °C to +100 °C

2) Geometry of the containing chamber or vessel in the final application can affect the cell constant and measurement range. Please contact IST AG for more information.

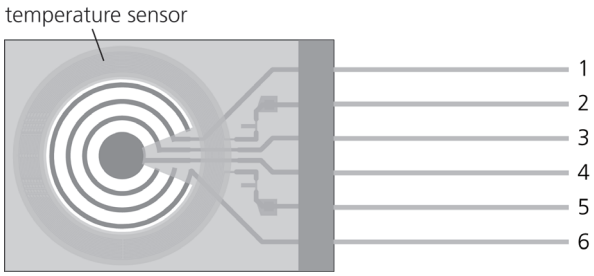
3) Although operating temperature is less than 100°C, device will temporally withstand higher temperatures.

4) Self-heating must be considered.

Note: Aggressive media can influence the long-term stability. Chemical resistance of the sensor in the end application must be tested by the customer.

* Customer-specific alternatives available

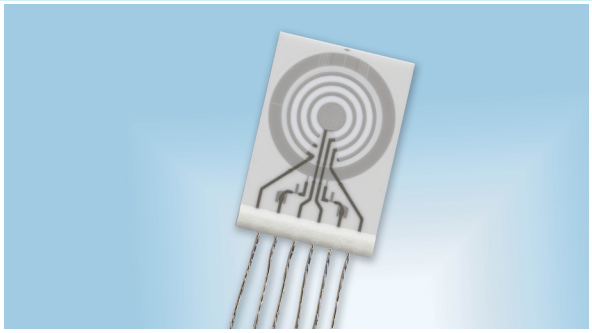
Pin Assignment



1	2	3	4	5	6
V+	T_1	V-	I-	T_2	I+

I: applied current, V: measured voltage, T: temperature sensor

Product image



Order Information - 6W (Ni/Pt-wires, Ø 0.2 mm, 10 mm*)

Size	Dimensions (L x W x H / H2 in mm)	F0.3 (class B)
Nominal resistance: 1000 Ω at 0 °C		
1498	13.9 ±0.3 x 9.7 ±0.3 x 0.63 ±0.1 / 1.2 ±0.3	LFS1K0.1498.6W.B.010-6
Order code		105103
Former order code		*390.00079*

** Other wire lengths upon request*

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