SD 125C 1-WIRE TEMPERATURE SENSOR WITH A PROBE AND A PLASTIC HEAD

rev11-20en

DESCRIPTION AND APPLICATION

This temperature sensor is designed for contact temperature measurement of liquid and gaseous substances. Combined with the centre holder, the sensor is suitable for measuring temperature in air conditioning ducts. With a thermowell, the sensor is then applicable for direct medium measurements in pipelines. For easy installation, the sensor feature the unique "S-head" design made by the SENSIT s.r.o. company.

The sensors consist of a plastic head and a metal case covering the temperature sensing element. The plastic head contains a screwless terminal box, the input cable for power supply and digital output signal is then connected through a grommet or a connector. The SD 125C sensor is based on the DS18B20 sensing element communicating via the 1-Wire bus.

The sensor's working temperature range is listed in the specification table. The sensor complies with the IP65 ingress protection according to amended.

The sensor is designed for chemically non-aggressive use, the usage method must be in compliance with the plastic head's temperature and chemical durability.

ACCESSORIES

- plastic holder (supplied in the package)

DECLARATION, CERTIFICATION, CALIBRATION

The manufacturer issues the **EU Declaration of conformity.**

Calibration– All Sensit products are subject to a final metrologic inspection performed by a comparison with etalons or working instruments. Continuity of etalons and working instruments is amended by Section 5 of Act no. 505/1990 on metrology. The manufacturer offers an option to deliver sensors calibrated in the SENSIT s.r.o. company laboratory (according to the requirements of the EN ISO/IEC 17025 standard as amended), or in an accredited laboratory.

SPECIFICATIONS

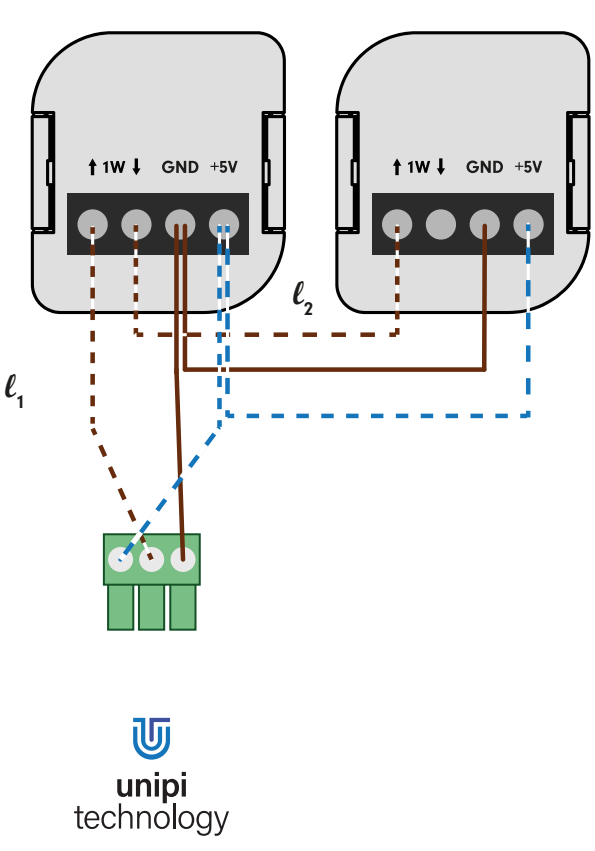
Sensor type	SD 125
Output signal	1-Wire / DS18B20
Measuring range	-30 to 125 °C
Ambient temperature	-30 to 100 °C
Sensor type/accuracy	± 0.5 °C in range of -10 to 80 °C ± 2 °C in range of 30 to 100 °C
U power voltage	3.5 to 5.5 V_{DC}
Nominal power voltage (U_n)	3.3 V_{DC}

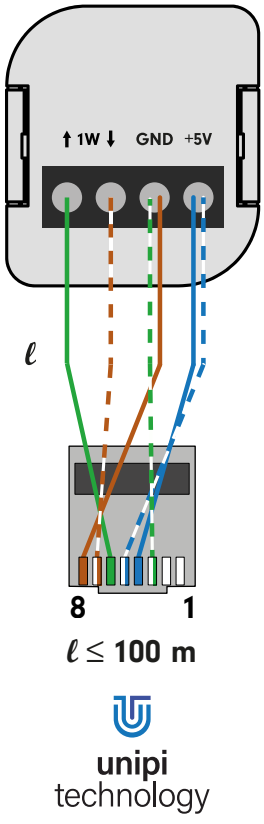
OTHER PARAMETERS

Power current	1 mA
Working conditions	ambient temperature: -30 to 100°C ambient humidity: max. 100% atmospheric pressure: 70 to 107 kPa
Ingress protection	IP 65 according to EN 60529 as amended
Response time	$\tau_{0,5} < 9$ s (in flowing water, 0.2 m.s^{-1})
Probe length	120 mm
Standard probe diameter	6 ± 0.2 mm
Probe material	DIN 1.4301 stainless steel
Pressure limit	PN 25 without thermowell PN 63 with thermowell
Insulation resistance	> 200 MΩ at 500 V_{DC}, 25 ± 3 °C; humidity < 85%
Head dimensions	70 × 63 × 33 mm
Head material	POLYAMIDE
Outside cable diameter	4 to 8 mm
Recommended wire gauge	0.35 to 1.5 mm^2
Weight	min 120 g

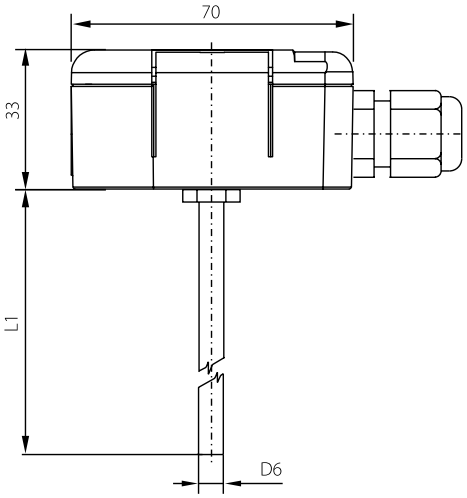
WIRING SCHEME

SD 125 with a grommet

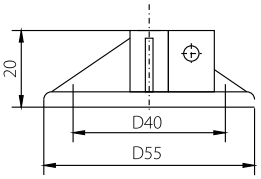




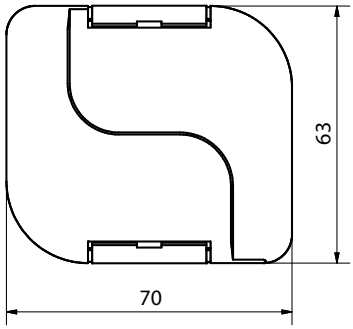
DIMENSIONS DRAFT



Accessories



Plastic holder



MODIFICATIONS AND CUSTOMIZATION OPTIONS

- variable probe design - L1 length, material, diameter, a variant with a screw thread
- thermowell screw head type

SENSIT s.r.o., Školní 2610, 756 61 Rožnov pod Radhoštěm, Česká republika
T +420 571 625 571 **F** +420 571 625 572 **E** obchod@sensit.cz