temperature

SD 115C 1-WIRE TEMPERATURE SENSOR FOR OUTDOOR AND INDUSTRIAL ENVIRONMENT

rev10-20eng

DESCRIPTION AND APPLICATION

This temperature sensors is designed for contact temperature measurement of gaseous substances in outdoor or industrial areas, on building walls, but also in rooms, offices or in pro-duction halls. For easy installation, the sensor features the unique "S-head" design made by the SENSIT s.r.o. company.

The sensor consists of a plastic head with a metal probe protecting the temperature sensing element. The input cable for voltage and output signal, routed through is connected through a grommet to the terminal box placed in the plastic head. The SD 115C model features the DS18B20 digital temperature sensor communicating via 1-Wire bus.



The sensor's temperature range is listed in the Specification table below. The sensor complies with the IP65 ingress protection standard according to EN 60529, as amended. Recommended installation of the sensor:

- outdoor air temperature measurement – the sensor should be installed on the coolest side of the building (northern or nortwestern wall) in a way to prevent exposition to direct sunlight. The placement should be in 2/3 of the building's wall height.
- indoor air temperature measurement in rooms, offices or factory halls - the sensor should be installed on an inner wall at a minimum height of 1.5 m in areas with personnel movement and without direct sunlight or thermal emissions from heaters or lighting.

The sensor is designed for chemically non-aggressive environments. When choosing the usage method,, thermal and chemical durability limits of the sensor head must be considered.

DECLARATION, CERTIFICATION, CALIBRATION

Manufacturer issues **EU Declaration of conformity**

Calibration - All the 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.

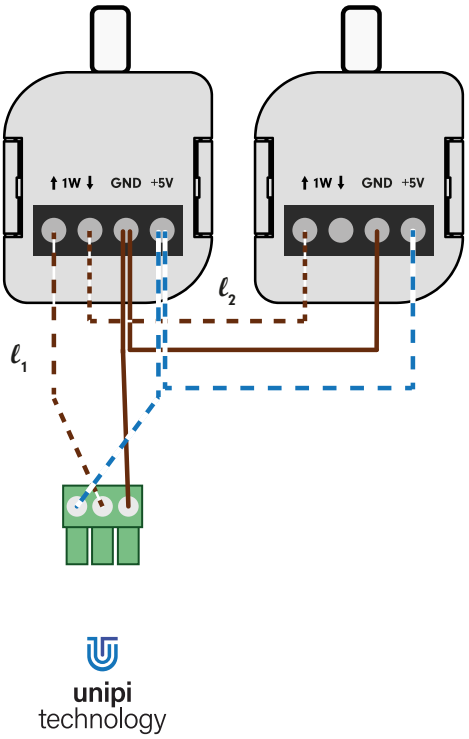
SPECIFICATIONS

Sensor type	SD115C
Output signal	1-Wire / DS18B20
Measuring range	-30 to 100 °C
Head ambient temperature	-30 to 100°C
Sensor accuracy	± 0.5 °C in range of 10 to 80°C ± 2°C in range of -30 to 100°C
Power voltage (U)	3 to 5 V_{DC}
Consumption/power current	1 mA
Connection	4-wire - screwless terminal box

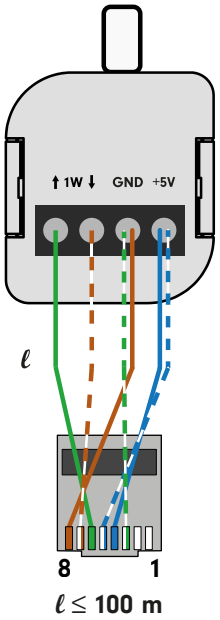
OTHER PARAMETERS

Working conditions	relative humidity: max. 100%
	atmospheric pressure: 70 to 107 kPa
Ingress protection	IP 65 according to EN 60529 as amended
Probe length	25 mm
Standard probe diameter	6 ± 0.1 mm
Probe material	17240 stainless steel
Insulation resistance	> 200 MΩ at 500 V_{DC}, 25 ± 3 °C; humidity < 85%
Head dimensions	70 × 63 × 33 mm
Head material	POLYAMIDE
Cable outside diameter	4 to 8mm
Recommended wire gauge	0.35 to 1.5 mm^2
Weight	min 100 g

WIRING SCHEME

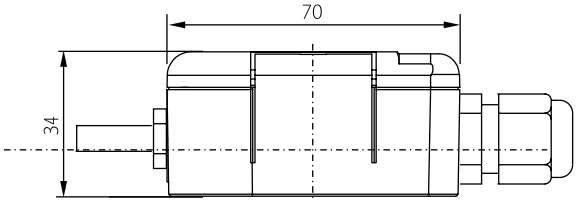


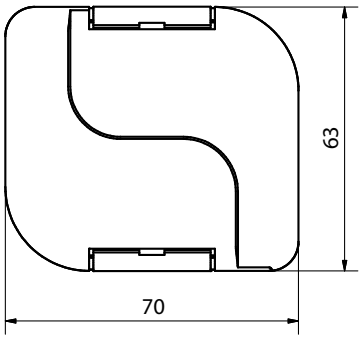
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DIMENSION DRAFT





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