SIEMENS

1 833

Cable Temperature Sensor QAP21.2

for applicatiions up to 180 °C

Use

The cable temperature sensor is used for acquiring high medium temperatures. It is especially suited for acquiring the medium temperature in flat solar collectors.

Ordering

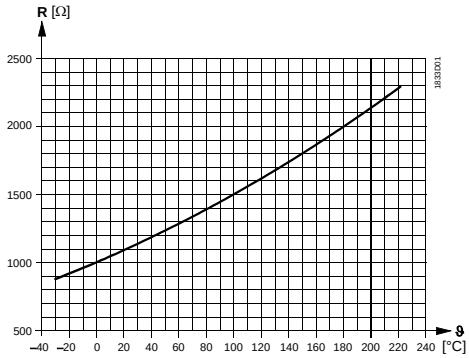
When ordering, please give type reference of cable temperature sensor and type reference of the accessories required.

Function

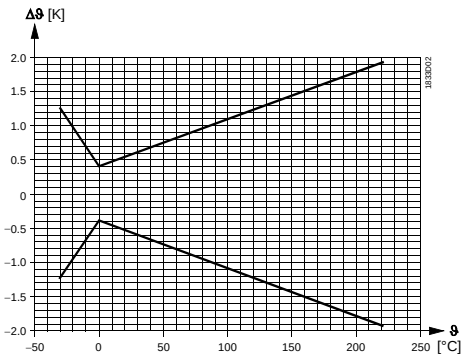
The sensor acquires the medium temperature in the solar panel with its nickel element. The resistance value of the element changes as a function of the temperature.
It is delivered for further handling by a suitable controller.

Sensing element

Characteristic



Accuracy



Legend

R	Resistance value in Ohm
ϑ	Temperature in degrees Celsius
Δϑ	Temperature differential in Kelvin

Mechanical design

The cable temperature sensor consists of a sleeve (6 mm diameter, 50 mm long), sensing element and connecting cable with ferrules.
The sensing element is accommodated in the sleeve which is flat on one side and to which the connecting cable is attached.
The sensor is not suited for direct immersion in liquid media (without using a protection pocket).

Accessories (not included with standard delivery)

Name	*Type reference*
Protection pocket, Ms63, PN10, immersion length 100 mm	**ALT-SB100** [1]

1) For other protection pocket accessories, refer to Data Sheet N1194.

Engineering notes

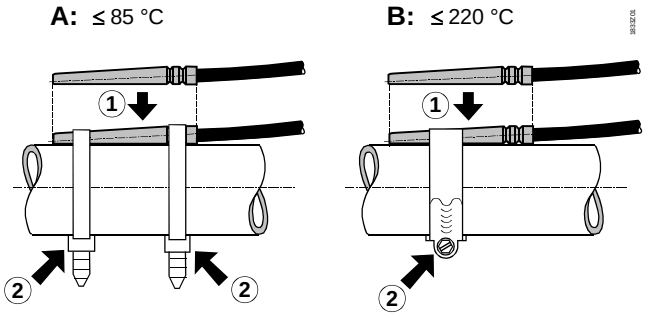
The permissible cable lengths are dependent on the type of controller used. For details, refer to the Data Sheet of the relevant controller.

Mounting notes

The following mounting choices exist:

On pipes

- Up to medium temperatures of 85 °C: with plastic cable tie (supplied by thirds)
- Up to medium temperatures of 220 °C: with stainless steel cable tie (supplied by thirds)



Indirect immersion

With the help of a protection pocket. The inside diameter of the pocket should match the diameter of the sensor's sleeve (e.g. 6.1 mm).
The sensor is supplied complete with Mounting Instructions.

Disposal

The device is considered electrical and electronic equipment for disposal in terms of the applicable European Directive and may not be disposed of as domestic garbage.

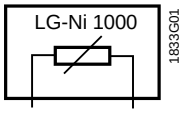
- Dispose of the device via the channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Technical data

Functional data	Measurement range	−30 ... +180 °C
	max. (1-2 h/d)	220 °C
	Sensing element	LG-Ni 1000
	Time constant t_{63}	
	When fitted to the pipe	<20 s
	With protection pocket	<30 s
	Measurement accuracy at 0 °C	±0.4 K (refer to "Function")
	Measurement and output	Passive
Degree of protection	Protection degree of housing	IP67 acccording to EN 60529
	Protection class	III acccording to EN 60730-1
Connections	Mechanically	Cable tie or protection pocket (supplied by thirds)
	Electrical connections	
	Connecting cable	2-core, interchangeable, with ferrules
	Cable length	Approx. 1.5 m
	Perm. cable length	Refer to "Engineering notes"
	EU conformity (CE)	A5W00040799 *)
Environmental conditions	Ambient temperature	
	Sensor sleeve	−30 ... +180 °C (220 °C for max. 1-2 h/d)
	Connecting cable	−50 ... +180 °C (220 °C for max. 1-2 h/d)
Environmental compatibility	The product environmental declaration CE1E1701*) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).	
Materials	Sensor sleeve	Stainless steel V4A (1.4571)
	Connecting cable	Silicon
	Packaging (minigrip® bag)	PVC
Weight	Including packaging	0.056 kg

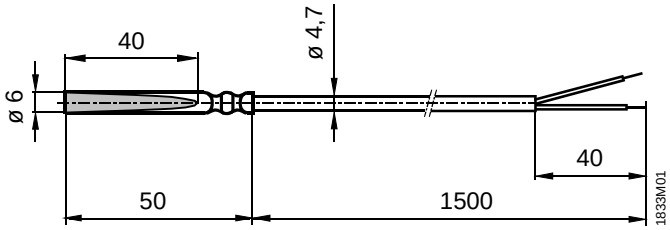
*) The documents can be downloaded from http://siemens.com/bt/download.

Internal diagram

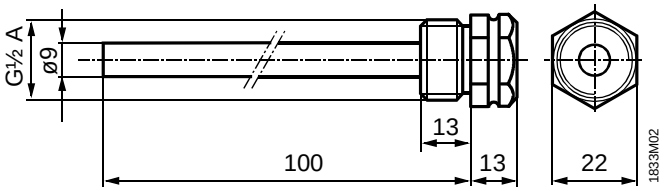


Dimensions

QAP21.2



ALT-SB100



Dimensions in mm

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