

## Cable Temperature Sensor QAP22

### Use

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The cable temperature sensor is for use in ventilation and air conditioning plants to acquire the room temperature or to provide changeover from heating to cooling, or vice versa.

It is designed for integration in terminal units such as fan coil units or induction units. The sensor can be installed either by the manufacturer of the terminal unit or on site.

### Ordering and delivery

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When ordering, please give name and type reference of cable temperature sensor and accessories, if required, for example: Cable temperature sensor **QAP22**.

The cable temperature sensor is supplied without any mounting accessories. These must be ordered separately. Mounting accessories with the exception of the protection pocket are supplied in sets of 20 pieces.

### Equipment combinations

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The QAP22 is suited for use with all types of systems / controllers that can handle analog, passive LG-Ni 1000 sensor signals.

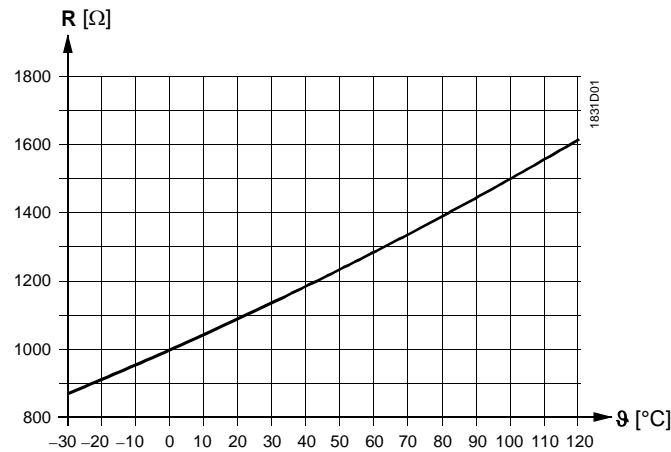
### Function

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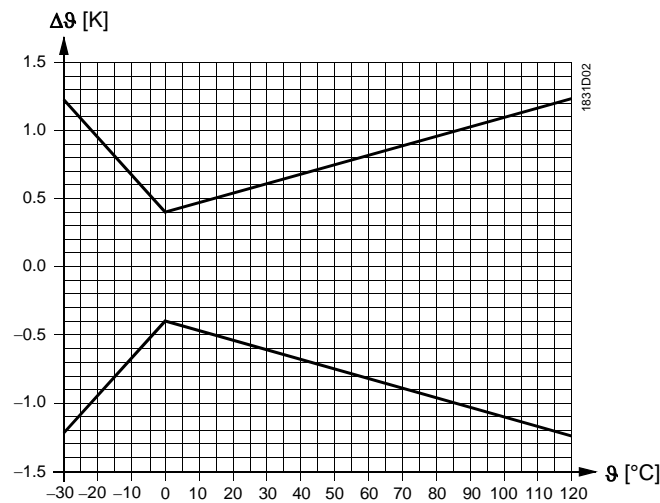
The sensor acquires the temperature via its sensing element. The resistance of the sensing element changes as a function of the ambient temperature. The resistance value is used for further handling by a suitable controller.

## Sensing element

### Characteristic



### Accuracy



### Legend

R	Resistance in Ohm
$\theta$	Temperature in degrees Celsius
$\Delta\theta$	Temperature differential in Kelvin

## Mechanical design

The sensor consists of sleeve (40.5 mm in length), LG-Ni 1000 sensing element, and 2-core connecting cable. The sensing element is encapsulated in the sleeve so that it is mechanically and electrically protected. The sleeve also ensures strain relief for the connecting cable. The end of the cable carries ferrules for easy connection.

Different accessories are available for fixing the sensor.

## Accessories

Name	Type reference
Protection pocket, Ms63, PN10, immersion length 100 mm	<b>ALT-SB100</b> <sup>1)</sup>
Changeover mounting kit For fitting on pipes (pipes of about 13...35 mm dia.), consisting of holding piece and cable ties (2x)	<b>ARG22.1</b>
Aluminium bar Consisting of bar with riveted holder and rubber grommet	<b>ARG22.2</b>

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

## Engineering notes

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The permissible cable lengths are dependent on the type of controller with which the sensor is used. They are specified in the Data Sheet of the relevant controller.

## Mounting notes

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The sensor must be able to acquire the air or medium temperature as accurately as possible. For this reason, it should be fitted in the location specified by the manufacturer of the terminal unit. If there is no such specification, it must be fitted in the return air flow of the induction or fan coil unit where it captures the temperature of the room air drawn in. It should be fitted as high as possible to minimize the floor effect. The sensor must be protected against heat radiation from the terminal unit. Its wires are interchangeable.

The mounting accessories are supplied with Mounting Instructions.

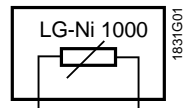
## Technical data

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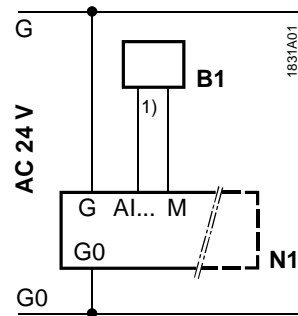
Functional data	Measuring range	-25...+95 °C
	Sensing element	LG-Ni 1000
	Time constant	
	Sensor with ARG22.1 (attached to pipe)	approx. 25 s
	Sensor with ARG22.2 in air at v = 3 m/s	<1 min
	Sensor with protection pocket	approx. 30 s
	Measuring accuracy	refer to "Function"
	Type of measurement and output	passive
Protective data	Degree of protection	IP 65 to IEC 529
	Insulation class	III to EN 60730
Electrical connections	Connection cable	2-core, interchangeable
	Cross-sectional area	2 x 0.34 mm <sup>2</sup>
	Length	2 m
	Perm. cable lengths	refer to "Engineering notes"
Environmental conditions	Perm. ambient temperature for cable	-25...+95 °C
	Short-time (2 h/d)	-25...+110 °C
	Perm. ambient humidity	95 % r. h.
Materials	Sensor sleeve	stainless steel 1.4571 (V4A)
	Connecting cable	PVC
	Packaging	corrugated cardboard
Weight	Incl. packaging	approx. 0.06 kg

## Diagrams

### Internal diagram



### Connection terminals

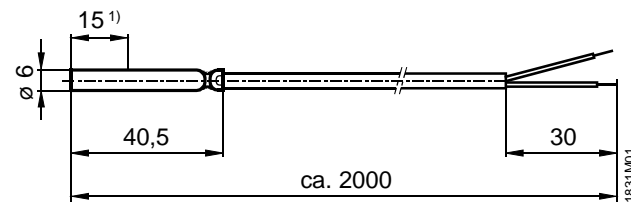


#### Legend

- 1) 2-wire connection (interchangeable)
- B1 Cable temperature sensor QAP22
- N1 Controller RCE91...

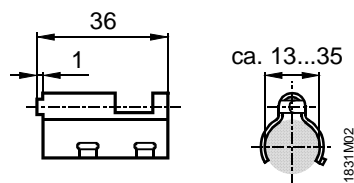
## Dimensions

### QAP22

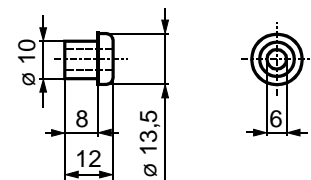
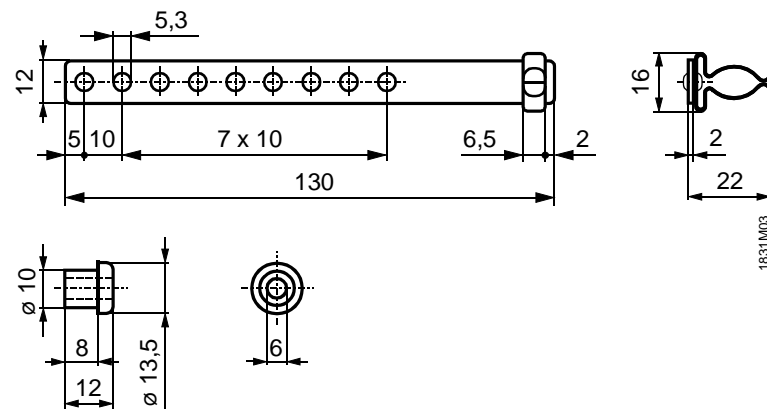


- 1) Active length of sensing element

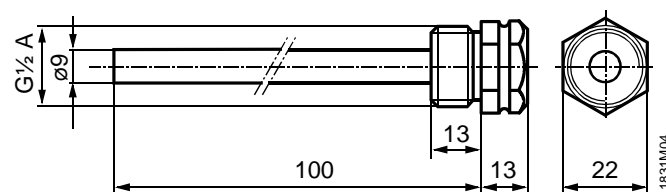
### ARG22.1



### ARG22.2



### ALT-SB100



Dimensions in mm