

Symaro™

## Room Temperature Sensor

QAA9020



### Room temperature sensor

- Acquisition and adjustment of room temperature

## Use

In heating, ventilating and air conditioning plants, especially where a high level of comfort is required.

Major field of application:

Acquisition and adjustment of room temperature.

## Function

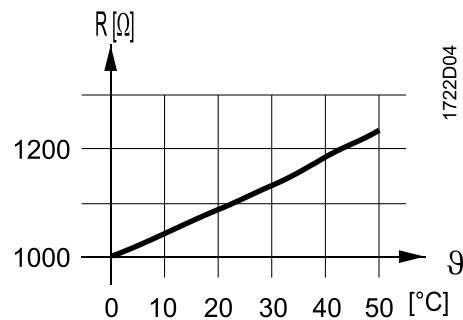
The sensor acquires the air temperature via its sensing element whose resistance changes as a function of the temperature.

The signal is delivered to a suitable controller for further handling.

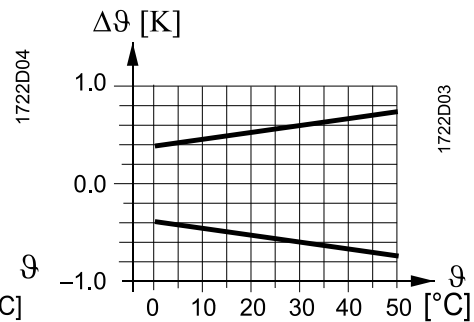
### Sensing elements

LG-Ni 1000

Characteristic



Accuracy



Legend

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

## Mechanical design

The units have been designed for wall mounting. They are suitable for use with most commercially available recessed conduit boxes. The cables can be introduced from the rear (concealed wiring) or from below or above (surface-run wires) through knock-out openings.

The units consist of two major sections: Casing and baseplate. Both snap together but can be detached again. The casing accommodates the temperature sensing element and, depending on the type of unit, various setting and operating elements. The baseplate carries the connecting terminals.

### Disposal

The major plastic components bear the material references in compliance with ISO/DIS 11 469 to facilitate environment-friendly disposal.

## Type summary

Type	Description	Packing size
QAA9020	Room temperature sensor	42 pieces in multipacks

## Ordering

When ordering, please give name and type reference, e.g.: Room temperature sensor QAA9020.

## Engineering

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 and installation

### Mounting location

On an inner wall of the space to be heated or air conditioned. Not in recesses, shelves, not behind curtains, not opposite or near heat sources.

The unit must not be exposed to direct solar radiation.

The end of the conduit at the sensor must be sealed to prevent false measurements due to draughts through the conduit.

The permissible ambient conditions should be observed.

Mounting instructions are printed on the packaging.

## Disposal



The device is considered an electronic device for disposal in accordance with the European Guidelines and may not be disposed of as domestic garbage.

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

## Technical data

Functional data	
Range of use	0...50 °C
Sensing element	LG-Ni 1000
Time constant	7 min (depending on air movement and thermal coupling to the wall)
Max. permissible line lengths and measured value errors	Refer to Engineering [→ 3]

Ambient conditions and protection classification	
Protection degree of housing	IP30 according to EN 60529
Protection class	III according to EN 60730
<b>Environmental conditions</b>	
Transport	EN 60721-3-2
• Climatic conditions	Class 2K3
– Temperature	-25...65 °C
– Humidity	<95 % r.h.
• Mechanical conditions	Class 2M2
Operation	EN 60721-3-3
• Climatic conditions	Class 3K5
– Temperature	0...50 °C
– Humidity	5...95 % r.h. (noncondensing)
• Mechanical conditions	Class 3M2

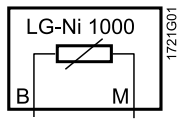
Standards, directives and approvals	
Product standard	EN 60730-1 Automatic electrical controls for household and similar use
Electromagnetic compatibility (Applications)	For use in residential, commerce, light-industrial and industrial environments
EU conformity (CE)	8000073890 *)
Environmental compatibility	The product environmental declaration (A5W00127986A *) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

General	
Connection terminals for cross-sectional areas of	1 × 2.5 mm <sup>2</sup> or 2 × 1.5 mm <sup>2</sup>
<b>Materials and colors</b>	
Housing front	ASA+PC, NCS S 0502-G (white)
Bottom section of housing	ASA+PC, NCS 2801-Y43R (grey)
Base	PC, NCS 2801-Y43R (grey)
Sensor (entirely)	Silicon-free
Weight	Approx. 0.1 kg

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

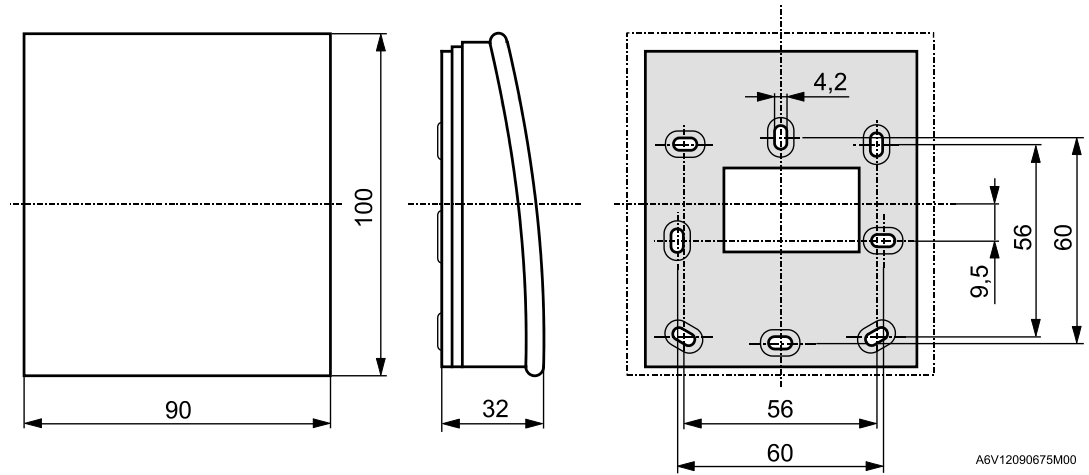
## Diagrams

### Connection terminals



Legend      B      Room temperature measuring signal  
                 M      Measuring neutral

### Dimensions



Dimensions in mm

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