



QAA24



QAA25...QAA27

Room Temperature Sensors

QAA24...27

with and without setpoint adjuster

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.

Type summary

<i>Type reference</i>	<i>Description</i>
QAA24	Room temperature sensor
QAA25	Room temperature sensor with setpoint adjuster (setting range 5...35 °C)
QAA26	Room temperature sensor with setpoint adjuster (setting range 5...30 °C)
QAA27	Room temperature sensor with setpoint adjuster (setting range ± 3 K)

Ordering

When ordering, please give name and type reference, for example:
Room temperature sensor **QAA24**

Function

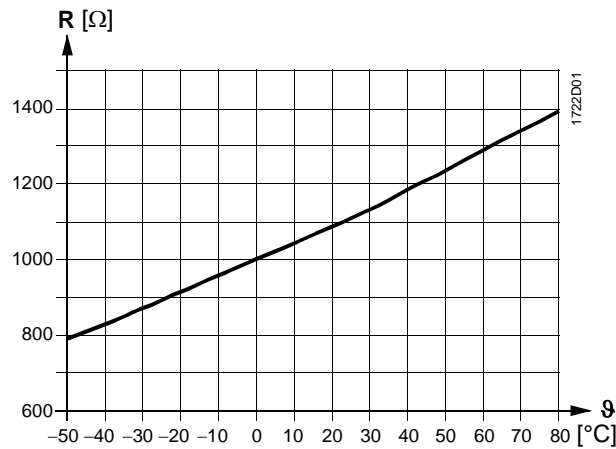
The sensor acquires the air temperature via its sensing element whose resistance changes as a function of the temperature.

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

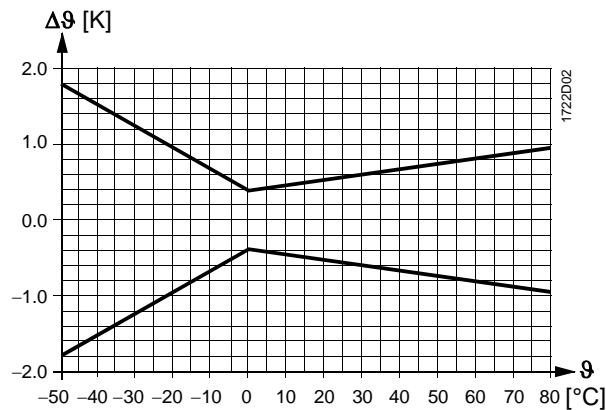
Sensing element

LG-Ni 1000

Characteristic:



Accuracy:



Legend

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

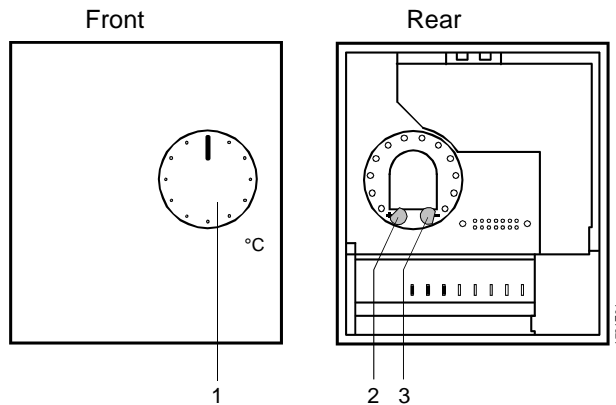
Mechanical design

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.

Setting and operating elements

(only with QAA25, QAA26 and QAA27)



Legend

- 1 Setting knob for infinite setpoint adjustment
- 2 Pin for mechanical maximum limitation of setpoint setting range
- 3 Pin for mechanical minimum limitation of setpoint setting range

Disposal

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

Engineering notes

For the permissible lengths of lines and measured value errors, refer to «Basic System Data» of the respective control system.

Following applies to the following systems/devices:

- UNIGYR[®]/VISONIK[®]

When using the **QAA26**, both the temperature sensor and the setpoint setting unit must be connected to a measured value input (B...) of the measured value module (PTM1.2R1K).

- AEROGYR[™] RWI65...

When using the **QAA26** in connection with the RWI65..., the latter must be set to the setpoint setting range "Heating". In that case, the setpoint of "Heating" on the RWI65... must be set to 20 °C and additionally, the following must be set:

- Data point 44 to –15 K and data point 45 to + 15 K for RWI65.01

or

- Commissioning data point 9 to –15 K and commissioning data point 10 to +15 K for RWI65.02

When using the **QAA27**, the setpoint adjustment knob must be set to its centre position. Additionally, the following must be set:

- Data point 44 to –4 °C and data point 45 to +5 °C for RWI65.01. The offset at data point 50 must be corrected until data point 2 has value 0.

- Commissioning data point 9 to –15 °C and commissioning data point 10 to +15 °C for RWI65.02. The offset at commissioning data point 15 must be corrected until normal data point 2 has value 0.

Fitting and installation notes

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.

Installation instructions

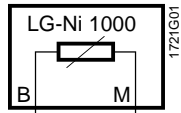
Installation instructions are printed on the packing.

Technical data

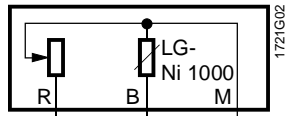
Sensor	Range of use	0...50 °C		
	Sensing element	LG-Ni 1000		
	Time constant	7 min (depending on air movement and thermal coupling to the wall)		
	Max. permissible line lengths and measured value errors	refer to «Engineering notes»		
Setpoint setting knob		QAA25	QAA26	QAA27
	Setpoint setting range	5...35 °C	5...30 °C	±3 K
	Resistance range	95...685 Ω	1000...1195 Ω	1000...1175 Ω
	Resistance value at setpoint			0 K ≙ 1091 Ω
	10 °C	193,9 Ω	1039 Ω	
	20 °C	390,0 Ω	1118 Ω	
	25 °C	488,3 Ω	1157 Ω	
30 °C	586,7 Ω	1195 Ω		
General data				
Connection terminals	Connection terminals for cross-sectional areas of	2 x 1.5 mm ² or 1 x 2.5 mm ²		
Protective data	Degree of protection	IP 30 to EN 60 529		
	Safety class	III to EN 60 730		
Environmental conditions	Operation to	IEC 721-3-3		
	Climatic conditions	class 3K5		
	Temperature	0...50 °C		
	Humidity	0...95 % r. h. (noncondensing)		
	Mechanical conditions	class 3M2		
	Transport to	IEC 721-3-2		
Climatic conditions	class 2K3			
Temperature	-25...+65 °C			
Humidity	<95 % r. h.			
Mechanical conditions	class 2M2			
Norms and standards	CE conformity to	EMC directive 89/336/EEC		
Materials and colors	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	with packaging	approx. 0,1 kg		

Internal diagram

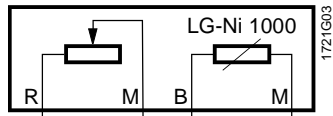
QAA24



QAA25, QAA26



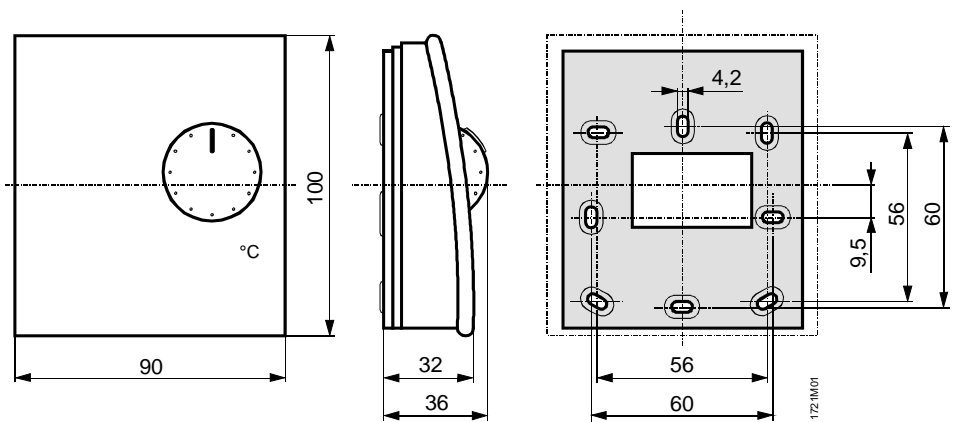
QAA27



Legend

- B1 Room temperature measuring signal
- M Measuring neutral
- R Setpoint signal

Dimensions



Dimensions in mm