



Outdoor sensors

QAC22
QAC32

Outdoor sensor for acquiring the outside temperature and - to a lesser degree - solar radiation, the effect of wind and the temperature of the wall.

Use

In Heating, ventilation and air conditioning plants as a:

- reference sensor for weather-compensated control
- measuring sensor, e.g. for optimization, or for measured value display, or for connection to a building management system

Type summary

Typ	Sensing element	Range of use	Time constant	Accuracy
QAC22	LG-Ni 1000	-50...+70 °C	approx. 14 min	±0.4 K at 0 °C
QAC32	NTC 575 (linearized)	-50...+70 °C	approx. 12 min	±1 K at -10...+20 °C

Ordering and delivery

When ordering, please give name and type reference, e.g. outdoor sensor **QAC22**.

Equipment combinations

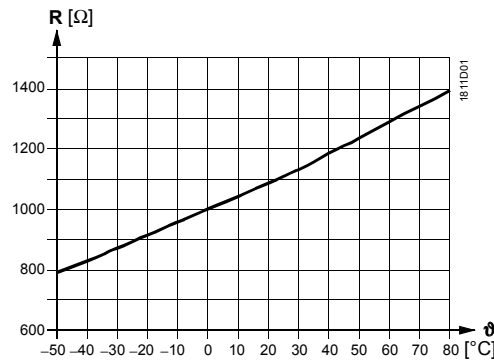
The outdoor sensor is suited for use with all types of controllers that can handle analog passive sensor signals.

The outdoor sensor acquires the outside temperature and – to a lesser degree – solar radiation, the effect of wind and the temperature of the wall. The sensing element changes its resistance value as a function of the temperature.

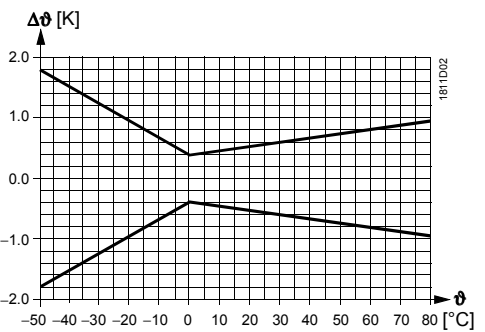
Sensing elements

LG-Ni 1000

Characteristic:



Accuracy:

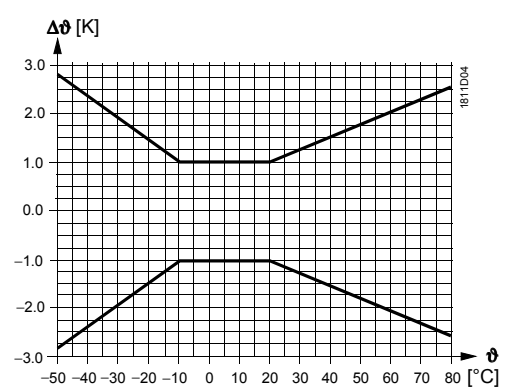


NTC 575

Characteristic:



Accuracy:



Legend

- R Resistance in Ohm
- ϑ Temperature in degrees Celsius
- $\Delta\vartheta$ Temperature differential in Kelvin

Mechanical design

The sensor has a plastic casing with a removable cover.
 The connection terminals can be accessed after removal of the cover.
 Cable entry is either from the rear (concealed wiring) or from below (surface-run wires).
 A cable entry gland Pg11 can be screwed into the bottom of the casing.

Engineering notes

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

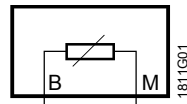
Mounting notes

	Depending on use, the sensor must be located as follows:
Mounting location	<ul style="list-style-type: none"> For control: On the wall of the house or building that has the windows of the occupied rooms, but the sensor must not be exposed to the morning sun. In case of doubt, it should be mounted on the wall facing north or north-west For optimization: Always on the coldest wall of the house or building (normally the wall facing north). The sensor must never be exposed to the morning sun
Mounting height	<p>Preferably in the middle of the house or building or heating zone, but at least 2.5 m above the ground.</p> <p>The sensor may not be fitted at the following locations:</p> <ul style="list-style-type: none"> Above windows, doors, air extracts or other heat sources Below balconies or the eave of the roof <p>To prevent measuring errors due to air circulation, the cable conduit at the sensor should be sealed.</p> <p>The sensor may not be painted over.</p> <p>Mounting Instructions are printed on the packaging.</p>

Technical data

Functional data	Range of use	see "Type summary"
	Sensing element	see "Type summary"
	Time constant	see "Type summary"
	Accuracy	see graph "Accuracy"
	Type of measurement and output	passive
Protective data	Degree of protection of housing	IP 54 to IEC 529
	Insulation class	III to EN 60 730
Electrical connections	Screw terminals for	2 x 1.5 mm ² or 1 x 2.5 mm ²
	Cable entry for	Pg 11 cable gland
	Perm. cable length	see "Engineering notes "
Environmental conditions	Operation	
	Climatic conditions	
	Temperature	-50...+70 °C
	Humidity	0... 100 % r. h.
	Storage/transportation to	IEC 721-3-2
	Climatic conditions	Class 2K3
	Temperature	-25...+65 °C
Humidity	<95 % r. h.	
Mechanical conditions	Class 2M2	
Materials and colors	Base	Plastic (ASA)
	Cover	Plastic (ASA), RAL9003
	Packaging	Cardboard
Weight	Without packaging	approx. 0.076 kg
	With packaging	approx. 0.093 kg

Internal diagram



The connecting wires are interchangeable.

Dimensions (in mm)

