



Strap-on temperature sensor

QAD22

Strap-on sensor for acquiring the temperature of pipework.

Use

- Acquisition of temperature of pipework for
- controlling or limiting the flow temperature
 - limiting the return temperature
 - controlling the d.h.w. temperature

Ordering

When ordering, please give type reference.

Equipment combinations

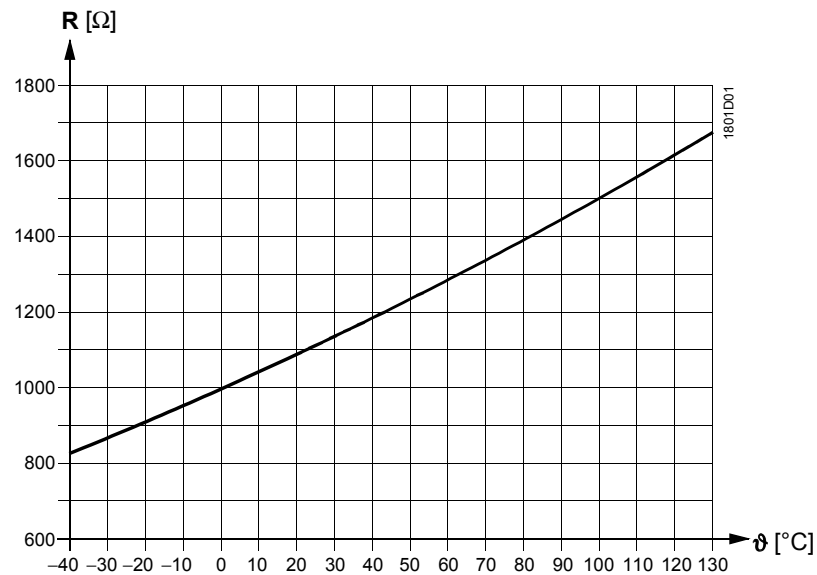
The QAD22 is suited for use with all types of controllers that can handle analog passive L&S Ni 1000 sensor signals.

Technical design

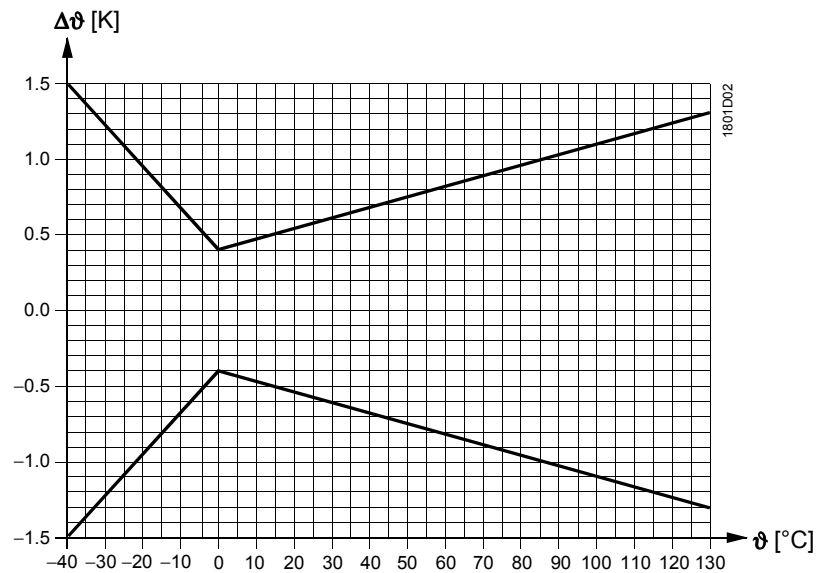
The sensor's nickel sensing element acquires the temperature of pipework. The resistance of the sensing element changes as a function of the medium temperature. The resistance value is used for handling by a suitable controller.

Sensing element

Characteristic



Accuracy



Legend

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

Mechanical design

The strap-on temperature sensor consists of the following components:

- Two-sectional plastic housing comprised of base with connection terminals, grommet and removable cover (snap-on design)
- The coupling sheet with sensing element is flexible and adapts to the pipe's surface
- Mounting clamp (adjustable strap-on band) for pipe diameters from 15...140 mm

The connection terminals can be accessed after removing the housing cover. Cable entry is made via a grommet (tension relief into housing). If required, the grommet can be replaced by a Pg 11 cable entry gland.

Technical data

General sensor data	Temperature range	–30...+130 °C
	Sensing element	L&S Ni 1000 (thin-film element)
	Time constant t_{63}	2 s (referred to the pipe's surface)
	Measurement accuracy	see graph " Accuracy "
	Measured medium	water, other liquid media
	Type of measurement and output	passive
Degree of protection and safety class	Degree of protection	IP 42 as per EN 60 529
	Safety class	III as per EN 60 730
Electrical connections	Screw terminals for	max. 1 x 2.5 mm ²
	Cable entry	grommet for cable of 5.5...7.2 mm dia.
	Pg 11 cable entry gland	can be fitted
	Permitted cable lengths	refer to Data Sheet of controller
Environmental conditions	Operation	as per IEC 721-3-3
	Climatic conditions	class 3K5
	Temperature (housing)	–5...+50 °C
	Humidity (housing)	5...95 % r.h.
	Transport	as per IEC 721-3-2
	Climatic conditions	class 2K3
	Temperature	–25...+70 °C
	Humidity	<95 % r.h.
Materials	Base	PA-GF35
	Housing cover	ASA Luran S
	Adjustable strap-on band	stainless steel
	Packaging	cardboard
Colors	Base	silver-grey, RAL 7001
	Housing cover	light-grey, RAL 7035
Weight	without packaging	0.072 kg
	incl. packaging	0.083 kg

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 and installation notes

Depending on the application, the sensor is to be located as follows:

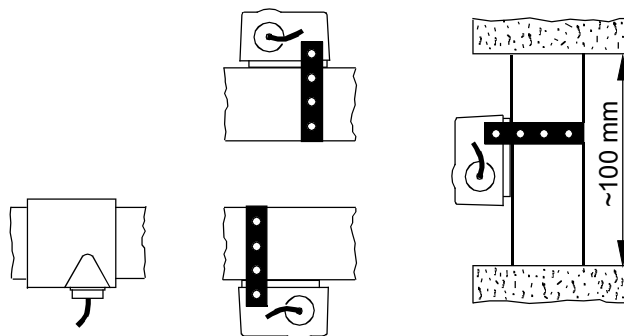
- For flow temperature control:
 - In the heating flow:
 - Directly after the pump if the pump is located in the flow
 - 1.5 to 2 m after the mixing valve if the pump is located in the return
- For limiting the return temperature:
 - In the return at a location where the temperature can be correctly acquired

The water must be well mixed where the temperature is acquired.

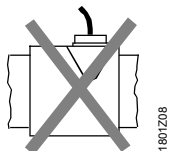
The pipe may not be lagged in the vicinity of the sensor.

The sensor should be mounted such that the cable does not enter from the top.

Permitted mounting positions

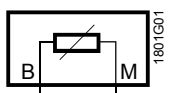


Not permitted mounting position



Mounting Instructions are printed on the packaging.

Internal diagram



The connecting wires are interchangeable.

Dimensions (in mm)

