SIEMENS

OEM

Strap-on Temperature Sensors

QAD...

- **The strap-on temperature sensor is designed for mounting on pipes to acquire the temperature of the medium inside the pipe**
- **The QAD... and this Data Sheet are intended for OEMs which use the temperature sensors in or on their products**

Use

- Control and limitation of the flow temperature
- Limitation of the return temperature

Type summary

Type reference	*Sensing element*	*Measure-ment range*	*Tolerance**	*Time constant*	*Weight*	*Packing size pieces*
QAD21/201	LG-Ni 1000 Ω at 0 °C	-30...130 °C	±0.4 K	2 s	72 g	45 **
QAD21/209						100 ***
QAD36/101	NTC 10 kΩ at 25 °C	-30...125 °C	±0,5 K	6 s	0,072 kg	45 **

* At 0 °C excluding conducting error and self-heating effect, NTC at 25 °C

** Individually packed in multipacks / *** Multipacks

Ordering

When ordering, please give type reference according to “Type summary“, e.g. **QAD21/209**

Technical design

The sensing element is a thin-film LG-Ni element with a resistance of 1000 Ω at 0 °C or a NTC 10 kΩ at 25 °C.

Mechanical design

The strap-on sensor consists of plastic housing with snap-on cover. The connection terminals are accessible after removal of the cover. The cable is introduced through a cable entry gland Pg11. A strap is used to mount the sensor on pipes having a diameter of 15 to 50 mm.

Notes

Planning, mounting and installation

Depending on the application, the sensor should be located as follows:

- Flow temperature control:
  On the heating flow pipe:
  – Immediately after the pump if the pump is installed in the flow
  – 1.5…2 m after the mixing valve if the pump is installed in the return
- Return temperature limitation:
  On the return pipe where the temperature to be limited can be correctly acquired. In any case, the sensor must be installed where the water is well mixed.

The sensor may not be covered by lagging.

Permissible cable lengths

The permissible cable lengths between controller and sensor are the following:

Cable		*Cable dia.*	*Max. cable length*
Copper cable	0.6 mm dia.	5.5 mm	20 m
Copper cable	1 mm^2	6.6 mm	80 m
Copper cable	1.5 mm^2	7.2 mm	120 m

Technical data

Norms and standards

Climatic conditions	to IEC 721-3
Mechanical conditions	to IEC 721-3
Product safety	
Degree of protection of housing	IP 42 to EN 60 529
Safety class	III to EN 60 529
Insulation resistance	>10 MΩ
Insulation voltage	>500 V
Electrical connections	
Connection terminals	interchangeable
Cable entry gland	Pg11
Color	RAL 7016 (anthracite)

Dimensions