



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 / order number	Sensing element	Measurement range	Tolerance *	Time constant	Cable (assembled)	Weight	Packing size pieces
QAD21/201 / BPZ:QAD21/201	LG-Ni 1000 Ω at 0 °C	-30...130 °C	± 0.4 K	2 s	-	72 g	45 **
QAD21/209 / BPZ:QAD21/209					-		100 ***
QAD36/101 / BPZ:QAD36/101	NTC 10 k Ω at 25 °C	-30...125 °C	$\pm 0,5$ K	6 s	-		45 **
QAD36/201 / BPZ:QAD36/201	NTC 10 k Ω at 25 °C	-30...125 °C	$\pm 0,5$ K	6 s	4 m		20 **
QAD36/109 / S55720-S460	NTC 10 k Ω at 25 °C	-30...125 °C	$\pm 0,5$ K	6 s	-		100 ***

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

** Individually packed in multipacks

*** Multipacks

Ordering

When ordering, please give quantity, order number and type.

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 k Ω at 25 °C.

Mechanical design

QAD.. The strap-on sensor consists of plastic housing with snap-on cover. The connection terminals are accessible after removal of the cover. A strap is used to mount the sensor on pipes having a diameter of 15 to 140 mm.

QAD36/201 With pre-assembled cable and plug after RAST5 norm "02-O" for heating circuit. The plug "02-O" is identical to the plug "AGP4S.02G/109.

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 to 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

Disposal



The device is considered electrical and electronic equipment for disposal in terms of the applicable European Directive and may not be disposed of as domestic garbage.

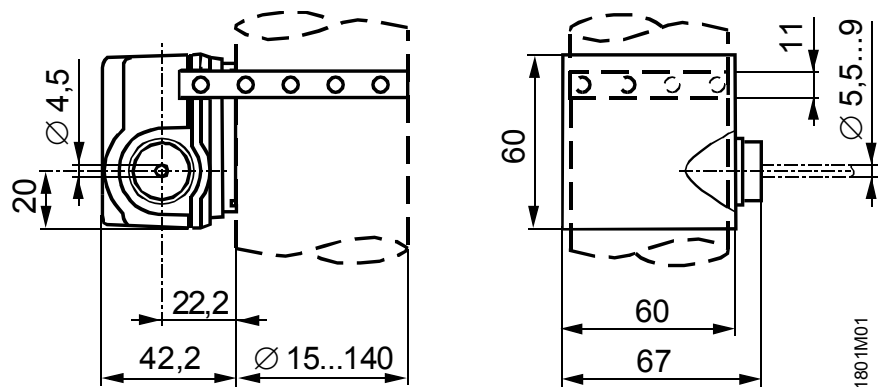
- Dispose of the device via the channels provided for this purpose
- Comply with all local and currently applicable laws and regulations.

Technical data

Directives and Standards	Product standard	EN 60730-1 Automatic electrical controls for household and similar use
	EU conformity (CE)	8000073890 *)
Environmental conditions	Operation	As per EN 60721-3-3
	Climatic conditions	Class 3K5
	Temperature (housing)	-5...+50 °C
	Humidity (housing)	5...95 % r.h.
Transport	Transport	As per EN 60721-3-2
	Climatic conditions	Class 2K3
	Temperature	-25...+70 °C
	Humidity	<95 % r.h.
Degree of protection	Mechanical conditions	Class 2M2
	Protection degree of housing	IP 42 according to EN 60529
	Protection class	III according to EN 60730-1
	Insulation resistance	>10 MΩ
	Insulation voltage	>500 V
	Electrical connections	
Connection terminals	Interchangeable	
Color		RAL 7016 (anthracite)

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

Dimensions



Published by:
Siemens Switzerland Ltd.
Building Technologies Division
International Headquarters
Gubelstrasse 22
6301 Zug
Switzerland
Tel. +41 58-724 24 24
www.siemens.com/buildingtechnologies

© Siemens Switzerland Ltd 2006
Delivery and technical specifications subject to change