Immersion Temperature Sensors QAE26.9...

Use

Acquisition of flow or return temperature in heating, ventilating, and air conditioning plants.

Type summary

Type	*Measuring range*	*Cable length*	*Time constant*	*Mounting length*	*Nominal pressure*
QAE26.9	−40...+180 °C	1,2 m	<3 s	260 mm	PN 40
QAE26.90	−50...+180 °C	2,0 m	<2,5 s	65 mm	PN 16
QAE26.91	−50...+180 °C	2,0 m	<2,5 s	125 mm	PN 16
QAE26.93	−50...+180 °C	2,0 m	<2.5 s	240 mm	PN 16
QAE26.95	−50...+180 °C	2,0 m	<2.5 s	465 mm	PN 16

Ordering

When ordering, please indicate give name and type reference, for example:
Immersion temperature sensor **QAE26.9**.

Equipment combinations

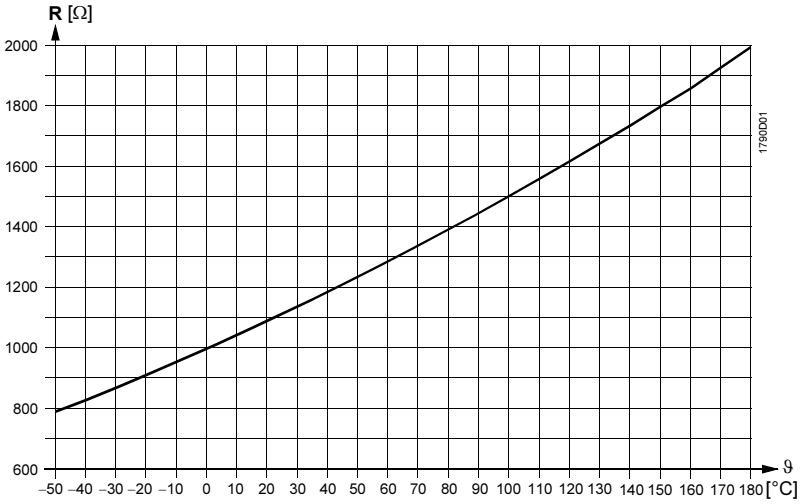
All systems or devices capable of acquiring and handling the sensor's passive LG-Ni 1000 output signal.

Function

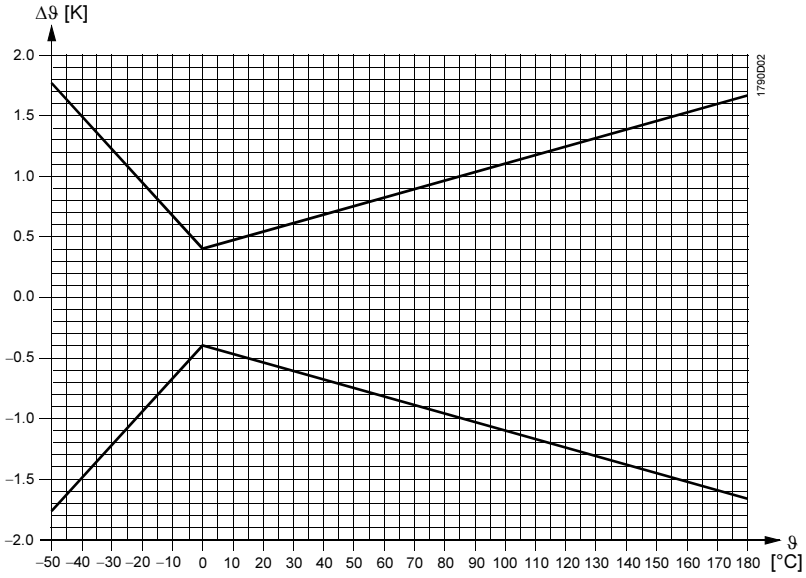
The sensor acquires the medium temperature via its sensing element whose resistance value changes as a function of the temperature.
The signal is delivered for further handling by a suitable controller.

Sensing element

Characteristic:



Accuracy:



Mechanical design

The immersion temperature sensor consists of a stainless steel immersion stem, a threaded bushing, and ready-wired connection cables. The sensing element is mounted and soldered to the end of the immersion stem by means of a heat transfer compound. The threaded bushing with screwed nipple R ¼ (sealing capacity within thread) is used to mount the sensor on the pipe. The interface between the connection cable and the immersion step is capped by a ca. 30 mm long shrink sleeve.

Technical data

Functional data	Measuring range	refer to "Type summary"
	Sensing element	LG-Ni 1000
	Time constant	see "Type summary"
	Measuring accuracy	refer to "Function"
	Mounting length	refer to "Type summary"
	Effective sensor length	
	QAE26.9	25 mm
	QAE26.90, QAE26.91, QAE26.93, QAE26.95	15 mm
Degree of protection	IP code	IP 64 as per IEC 529
	Protection class	III as per EN 60 730
Electrical connection	Connection cables	two-wire
	Core cross section	
	QAE26.9	0.35 mm^2
	QAE26.90, QAE26.91, QAE26.93, QAE26.95	0.14 mm^2
	Cable length	refer to "Type summary"
Mechanical connection	Screwed nipple	R ¼ (sealing capacity inside thread)
Ambient conditions	Permissible cable temperature	−50...+180 °C
	Permissible humidity	<95 % r.h.
Materials	Immersion stem	stainless steel 1.4571 (V4A)
	Threaded bushing	Ms nickel-plated
	Connection cables	silicone
Weight	incl. packing	
	QAE26.9	0.104 kg
	QAE26.90	0.074 kg
	QAE26.91	0.074 kg
	QAE26.93	0.079 kg
	QAE26.95	0.093 kg

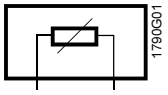
Engineering notes

The permissible electrical line lengths depend on the controller. Refer to the respective controller's data sheet for more information.

Mounting and installation notes

To mount the immersion temperature sensor, weld a T-junction or a threaded fitting with a cylindrical pipe thread for a sealing connection inside the thread (Rp ¼) so that the immersion stem faces the direction of the flow.
In order to ensure temperature acquisition along the entire immersion stem, the immersion length for the QAE26.9 must be at least 25 mm and 15 mm for QAE26.90, QAE26.91, QAE26.93 and QAE26.95.
If the connection cable needs to be extended, use a branching box.

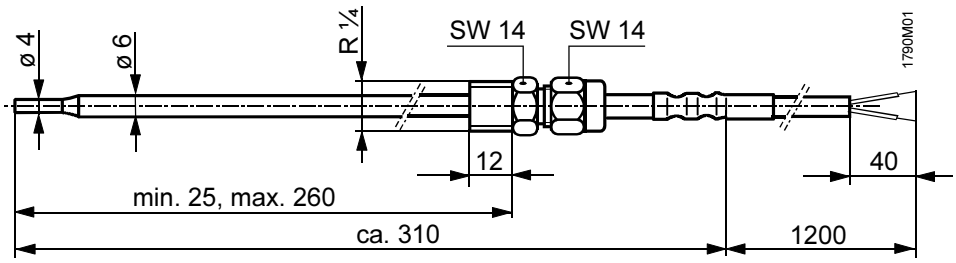
Internal diagram



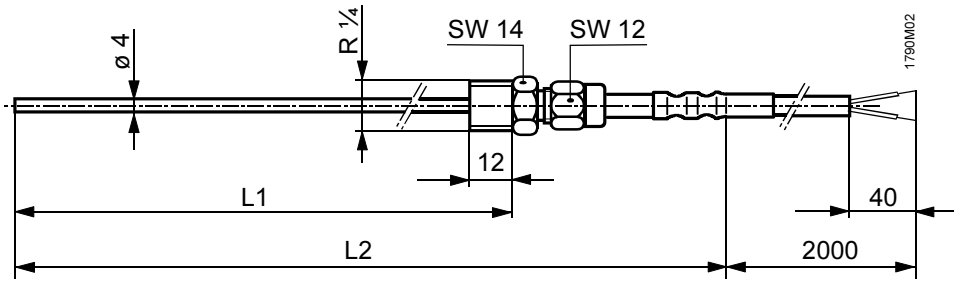
The internal diagram applies to all types.
The connections are interchangeable.

Dimensions (in mm)

QAE26.9



QAE26.90, QAE26.91
QAE26.93, QAE26.95



Type	L1 min.	L1 max.	L2
QAE26.90	15	65	ca. 100
QAE26.91	15	125	ca. 160
QAE26.93	15	240	ca. 275
QAE26.95	15	465	ca. 500