



## 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	Material connecting cable	Time constant	Mounting length	Nominal pressure
<b>QAE26.9</b>	-40...+180 °C	1,2 m	silicone	<3 s	260 mm	PN 40
<b>QAE26.90</b>	-50...+180 °C	2,0 m	silicone	<2,5 s	65 mm	PN 16
<b>QAE26.91</b>	-50...+180 °C	2,0 m	silicone	<2,5 s	125 mm	PN 16
<b>QAE26.93</b>	-50...+180 °C	2,0 m	silicone	<2.5 s	240 mm	PN 16
<b>QAE26.95</b>	-50...+180 °C	2,0 m	silicone	<2.5 s	465 mm	PN 16
<b>QAE1020.024</b>	-5...+105 °C	2,0 m	PVC	<2.5 s	240 mm	PN 16

### Ordering

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

### Equipment combinations

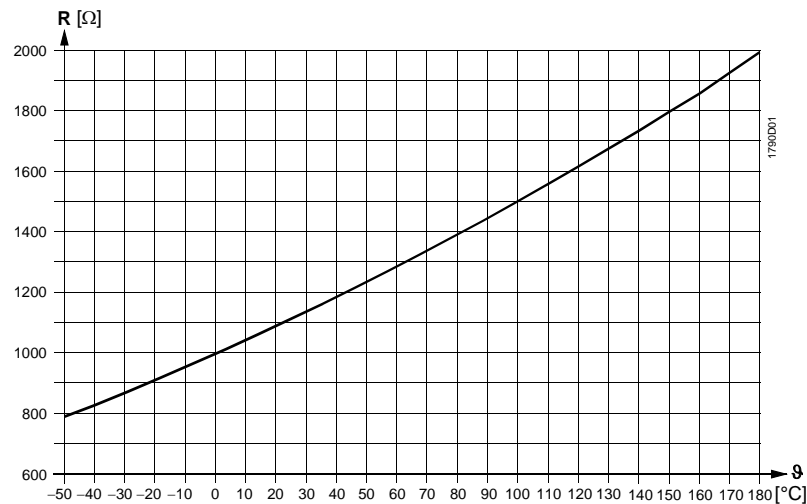
All systems or devices capable of acquiring and handling the sensor's passive LG-Ni 1000 output signal.

## Function

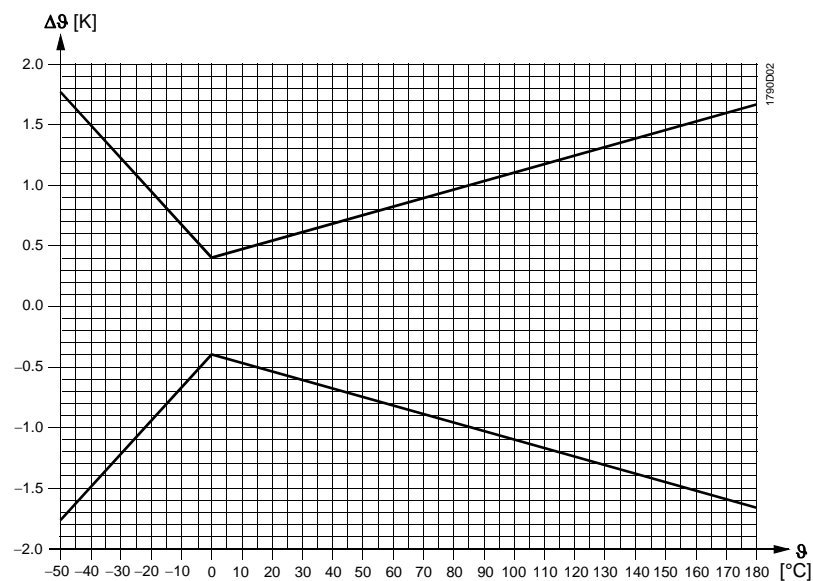
The sensor acquires the medium temperature via its sensing element whose resistance value changes as a function of the temperature.  
The signal is delivered for further handling by a suitable controller.

## 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, QAE1020.024	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 <sup>2</sup>
	QAE26.90, QAE26.91, QAE26.93, QAE26.95, QAE1020.024	0.14 mm <sup>2</sup>
	Cable length	refer to "Type summary"
Mechanical connection	Screwed nipple	R ¼ (sealing capacity inside thread)
Ambient conditions	Permissible cable temperature	
	QAE26.9, QAE26.90, QAE26.91, QAE26.93, QAE26.95	-50...+180 °C
	QAE1020.024	- 5...+105 °C
	Permissible humidity	<95 % r.h.
Materials	Immersion stem	stainless steel 1.4571 (V4A)
	Threaded bushing	Ms nickel-plated
	Connection cables	refer to "Type summary"
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
	QAE1020.024	0,079 kg

## Engineering notes

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

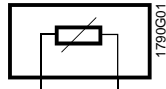
## Mounting and installation notes

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, QAE26.95 and QAE1020.024.

If the connection cable needs to be extended, use a branching box.

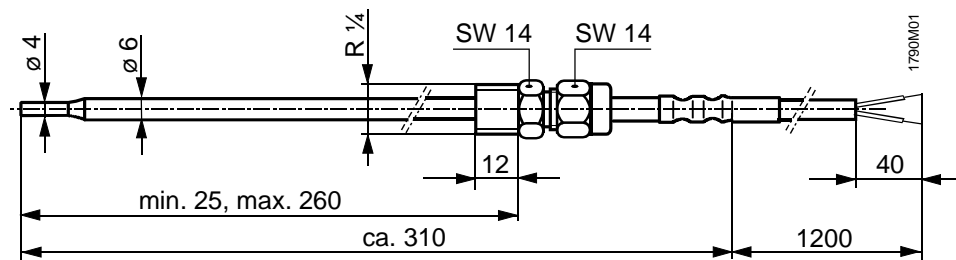
## Internal diagram



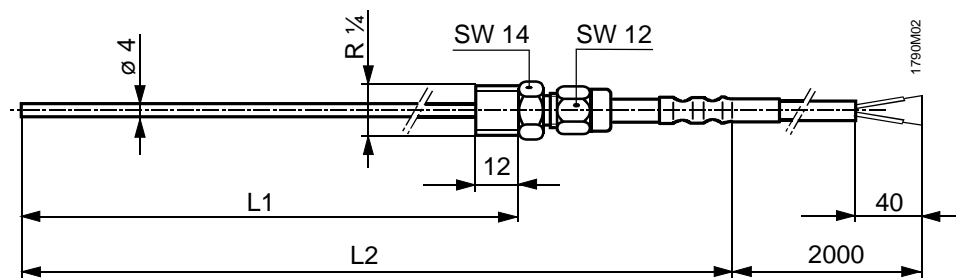
The internal diagram applies to all types.  
The connections are interchangeable.

## Dimensions (in mm)

### QAE26.9



### QAE26.90, QAE26.91 QAE26.93, QAE26.95 QAE1020.024



Typ	L1		L2
	min.	max.	
<b>QAE26.90</b>	15	65	ca. 100
<b>QAE26.91</b>	15	125	ca. 160
<b>QAE26.93</b>	15	240	ca. 275
<b>QAE26.95</b>	15	465	ca. 500
<b>QAE1020.024</b>	15	240	ca. 275