

Immersion Temperature Detectors

QAE22...



Immersion detector for acquiring the water temperature in pipes and tanks.

Use

Acquisition of water temperature for

- controlling or limiting the flow temperature
- limiting the return temperature
- controlling domestic water temperature

Type summary

Temperature detector with an immersion stem length of 100 mm, for use without protection pocket	QAE22
Temperature detector with an immersion stem length of 100 mm, for use with a protection pocket	QAE22A
Temperature detector with an immersion stem length of 100 mm, for use without protection pocket, with a threaded nipple	QAE22.2
Temperature detector with an immersion stem length of 150 mm, for use with a protection pocket	QAE22.5A

Ordering

When ordering, please give type reference according to "Type summary".

Mechanical design

The detector has a plastic casing with a snap-on cover and an immersion stem. The connection terminals can be accessed after removal of the cover. Cable entry is made via a cable entry gland Pg11. The detectors QAE22, QAE22A and QAE22.5A, for use with a protection pocket, have a clamp for securing the head. The QAE22.2 is provided with a threaded nipple. The immersion length is always a minimum of 60 mm.

Technical data

Measuring range	-30...+130 °C	Permissible ambient humidity	5...95 % r.h.
Sensing element	Ni 1000 Ω at 0 °C	Degree of protection of casing	IP42 to EN60529
Time constant		Insulation class	III to EN60529
With pocket	approx. 20 s	Electrical connections	terminals (interchangeable)
Without pocket	approx. 8 s	Cable entry gland	Pg11 (can be fitted)
Climatic requirements	to IEC 721-3	Weight	
Mechanical requirements	to IEC 721-3	With pocket	0.170 kg
Permissible ambient temperature		Without pocket	0.160 kg
Storage	-5...+50 °C		
Transportation	-25...+70 °C		
Operation	-5...+50 °C		

Notes

Engineering, mounting and installation

In applications with nominal pressures exceeding PN10 or temperatures exceeding 100 °C, a protection pocket with a flat seal is required.

Depending on use, the detector must be located as follows:

- For flow temperature control:
 - In the heating flow
 - Directly after the pump, if the pump is mounted in the flow
 - 1.5 to 2 m after the mixing valve, if the pump is mounted in the return
- For limitation of the return temperature:
 - In the return pipe where the detector can correctly acquire the temperature to be limited. The water must be well mixed where the detector is located.

The detector should be installed in an elbow such that the pocket points against the direction of flow. With all detector versions, the immersion length must be a minimum of 60 mm.

The detector may not be covered by lagging.

Mounting instructions are printed on the packing.

Permissible cable lengths

The permissible lengths of the measuring line between detector and controller are as follows:

Type of cable	Outside dia.	Line 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

Permissible protection pockets

The following protection pockets with an inside diameter of 7 mm can be used:

Material	Permissible temperature	PN	Seal type	Part no. for immersion stem lengths of	
				100 mm	150 mm
Nickel-plated brass *	130 °C	10	Threaded ½ in.	4 660 1600 0	4 660 1601 0
St 35.29	130 °C	16	Flat ½ in.	4 660 1610 0	4 660 1611 0
St 18/8/2.5 CrNiMo	130 °C	16	Flat ½ in.	4 660 1620 0	4 660 1621 0

* Standard protection pocket for detectors with type suffix...A

Dimensions

