

QAK36...

QAK21.462/109

Screwed Immersion Temperature Sensors

QAK...

with different types of sensing elements

- Temperature sensors for acquiring the medium temperature in boilers, d.h.w. storage tanks and heat exchangers
- The QAK... and this Data Sheet are intended for use by OEMs which integrate the temperature sensors in their products

Use

- QAK21... standard sensors: With sensing element LG-Ni 1000 for control or limitation of the medium temperature in boilers, d.h.w. storage tanks or heat exchangers. Suitable for use with controllers capable of handling resistance values from such sensors
- QAK21.462/109 for heat exchangers: With sensing element LG-Ni 1000 and a very short response time
- QAK36... for Boiler Management Units (BMUs): With sensing element NTC 10 kΩ for control of the d.h.w. temperature in gas-fired heating appliances. Suited for use with all BMUs type LMU... capable of handling resistance values from such sensors
- QAK39... flue gas temperature sensors: With sensing element NTC 1 MΩ for use with special types of burner controls

Type summary

Type reference	Sensing element	Measurement range	Thread	Material of housing	Time * constant	Tolerance at 0 °C	Immersion y in mm	Type of cable	Cable length x in mm	Packing size/pcs
QAK21.322/109	LG-Ni 1000	0...105 °C	G1/8"	Brass	6 s	0.4 K	30	PVC	2000	200
QAK21.462/109	LG-Ni 1000	-20...150 °C	M10x1	V4A	2 s	0.4 K	38	Silicon	2000	20
QAK21.5409	LG-Ni 1000	0...130 °C	G1/8"	V4A	7 s	0.4 K	155	PE	900	200

Type reference	Sensing element	Measurement range	Thread	Material of housing	Time * constant	Tolerance at 25 °C	Immersion y in mm	Type of cable	Cable length x in mm	Packing size/pcs
QAK36.350	NTC 10 kΩ	0...105 °C	G1/8"	Brass	6 s	0.5 K	30	PVC	100	150
QAK36.670/109	NTC 10 kΩ	-30...125 °C	M8	V4A	6 s	0.5 K	30	PE	100	200
QAK39.352/100	NTC 1 MΩ	0...150 °C	G1/8"	Brass	10 s	2 K	30	PE	2000	200

* τ_{63} in water at 0.4 m/s

Ordering

When ordering, please give type reference according to "Type summary", e.g.
QAK21.322/109

Mechanical design

The standard version of the QAK... temperature sensor consists of threaded housing with a hexagonal head made of nickel-plated brass or stainless steel, sensing element and connecting cable with ferrules or plug at the end.

Other types of sensing elements, cables and plugs are available on request.

Mounting and installation

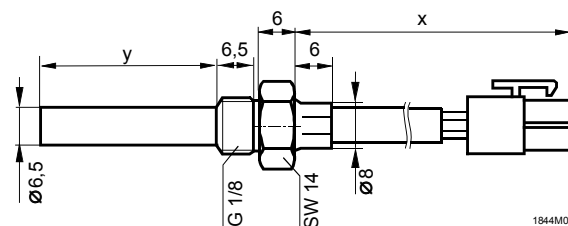
The sensor is for direct immersion into the medium to be controlled and screws into the threaded hole provided for that purpose. Use a heat-resistant seal ensuring a tight fit.

Technical data

For general sensor data, also refer to "Type summary"	Perm. ambient temperature	
	PVC cable	max. 95 °C
	PE cable	max. 125 °C
	Silicon cable	max. 180 °C
	Electrical strength	500 V
	Electrical connections	interchangeable
Norms and standards	Climatic and mechanical requirements	to IEC 721-3
	Safety class	III to EN 60 730

Dimensions

QAK21.5409
QAK36.350 / QAK39...



QAK21.462/109

