



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
- QAK36.. for Boiler Management Units (BMUs): With sensing element NTC 10 k Ω 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

Type summary

Type reference	Sensing element	Measurement range	Thread	Material of housing	Time constant *	Tolerance at 0 °C	Type of cable	Packing size/pcs
QAK21.350	LG-Ni 1000	0...105 °C	G1/8"	Brass	6 s	0.4 K	PVC	150
QAK36.350	NTC 10 k Ω	0...105 °C	G1/8"	Brass	6 s	0.5 K	PVC	150
QAK36.670/109	NTC 10 k Ω	0...105 °C	M8	V4A	6 s	0.5 K	PE	50

* τ_{63} in water at 0.4 m/s

Ordering

When ordering, please give type reference according to "Type summary", e.g.
QAK21.350

Mechanical design

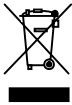
The standard version of the QAK.. temperature sensor consists of threaded housing with a hexagonal head made of nickel-plated brass or stainless steel, sensing element and connecting cable with plug at the end.

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.

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.

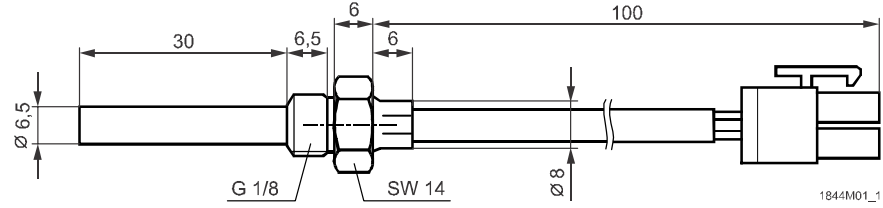
Technical data

For general sensor data, also refer to "Type summary"	Perm. ambient temperature	
	Cable	
	QAK21.350	Max. 95 °C
	QAK36.350	Max. 95 °C
	QAK36.670/109	Max. 125 °C
	Electrical strength	500 V
	Electrical connections	Interchangeable
	Electrical connector	
	QAK21.350	Molex 39-01-2020 (Series 5557)
	QAK36.350	Molex 39-01-2021 (Series 5559)
	QAK36.670/109	Stocko EH 714-002-003-960
Directives and Standards	Product standard	EN 60730-1 Automatic electrical controls for household and similar use
	EU conformity (CE)	8000073890 *)
Degree of protection	Protection class	II according to EN 60730-1

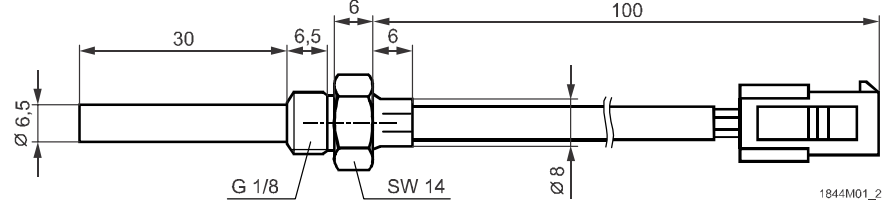
*) The documents can be downloaded from <http://siemens.com/bt/download>.

Dimensions

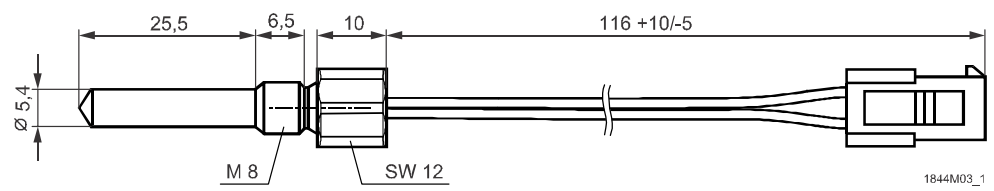
QAK21.350



QAK36.350



QAK36.670/109



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