

Clamp-on temperature sensor

QAD100.1

Use

The sensor is used for acquiring the medium temperature on the surface of pipes (e.g. the heating water in heating, ventilation or air conditioning plants). It is designed for use in connection with automation equipment, display and logging devices.

Ordering and delivery

When ordering, please give name and type reference: clamp-on temperature sensor **QAD100.1**
The sensors are packed individually in plastic bags; clamping bands are not included.

Function

The sensor acquires the medium temperature on the surface of the pipe through which the medium flows using a Pt100 sensing element with a positive temperature coefficient (PTC). The measuring signal is linear and dependent on the temperature.

Mechanical design

The clamp-on temperature sensor consists of the sensing head and a 1.5 m long two-wire cable. The sensing head is comprised of a brass sleeve and a soldered bent strap for fitting on the pipe. The sensing element is accommodated in the brass sleeve and attached to one end of the cable. The cable features tension relief and terminating sleeves at the other end. The sensor is designed for clamping on a pipe.

Technical data

General sensor data	Measuring range	-50...+150 °C
	Range of use	DN15 to DN100
	Sensing element	Pt100 (class B)
	Measuring tolerance	±0.3 K at 0 °C
	Type of measurement and output	Passive
	Permitted ambient temperature	-50...+150 °C
	Permitted ambient humidity	80 % r. h.
	Degree of protection	IP 43 as per EN 60 529
	Materials	
	Sleeve and strap	brass
	Cable	silicon (1.5 m, 2 x 0.25 mm ²)
	Connections	
	Mechanical	clamping band (delivered by others)
Electrical	terminating sleeves	
Weight	0.047 kg	
Norms and standards	Product safety	
	Automatic electric controls for household and similar use	EN 60 730-1
	CE conformity	
	Electromagnetic compatibility	89/336/EEC
Low voltage directive	73/23/EEC	

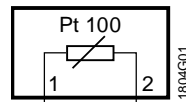
Mounting notes

Mounting orientation: optional

Due to the heat conductivity of pipes (steel, copper, plastic, etc.), the sensing head and at least 30 cm of the cable must be placed under the pipe's lagging. The remaining error is negligible. To improve conductivity, use thermal conductive paste.

The sensor is supplied together with mounting instructions.

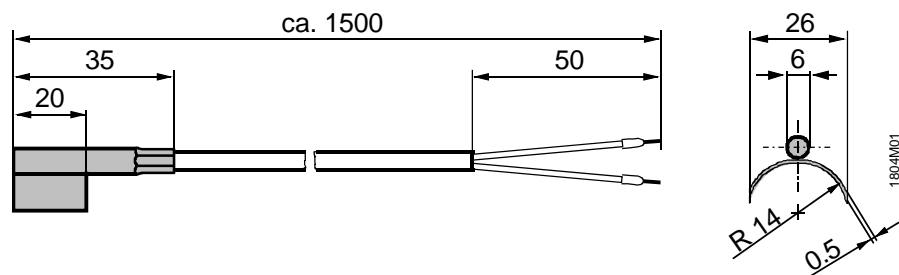
Connection diagram



Resistance characteristic Pt100 (DIN IEC 751, class B)

Temp. in °C	-50	-40	-30	-20	-10	0	+10	+20	+25	+30
Widerst. in Ω	80,31	84,27	88,22	92,16	96,09	100,00	103,90	107,79	109,74	111,67
Temp. in °C	+40	+50	+60	+70	+80	+90	+100	+110	+120	
Widerst. in Ω	115,54	119,40	123,24	127,07	130,89	134,70	138,50	142,29	146,06	

Dimensions



Dimensions in mm