Clamp-on Temperature Sensor QAD26.220

Use

Heating, ventilation, air conditioning and refrigeration plant.
Acquisition of the medium temperature in pipes from –35 to +90 °C to provide measurement, limitation, compensation, or control.

Ordering and delivery

When ordering, please give name and type reference:
clamp-on temperature sensor **QAD26.220**
The sensor is individually packed and supplied in a plastic bag, complete with a clamping band made of plastic, and mounting instructions.

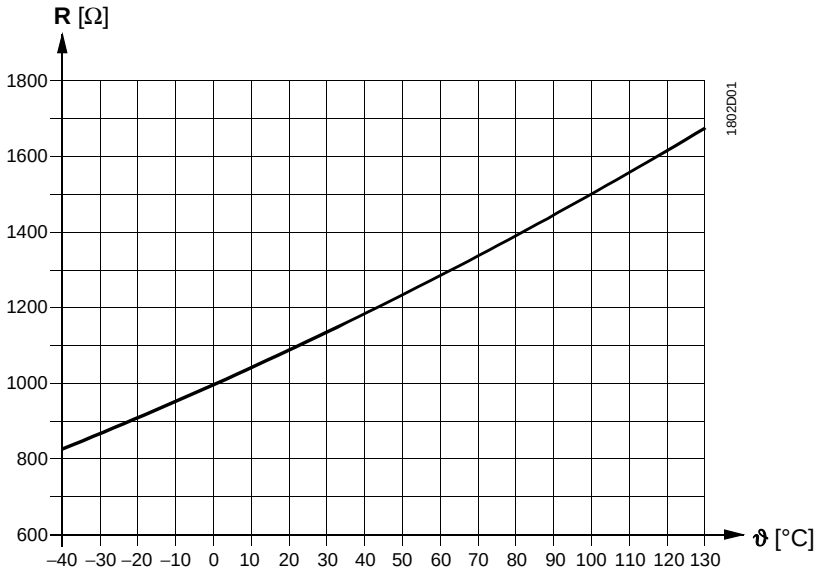
Equipment combinations

The QAD26.220 is suited for use with all types of controllers that can handle analog, passive LG-Ni1000 sensor signals.

Technical design

The sensing element is a nickel thin-film element having a basic resistance of 1000 Ω at 0 °C. The resistance of the element increases in function of the temperature at a rate of about 5 Ω per Kelvin.

Characteristic of the sensing element



Legend

R Resistance in Ohm
ϑ Temperature in degree Celsius

Mechanical design

Hermetically sealed plastic casing, with resilient lateral wings to facilitate positioning on the pipe. The casing accommodates the sensing element (LG-Ni1000 Ohm at 0 °C) with a ready connected two-wire cable. Sensing element and cable entry are encapsulated.
The casing has a resilient top to compensate for thermal expansion resulting from temperature changes.
The cable is two meters long and provided with terminating sleeves at its end. It features tension relief.
The QAD26.220 is fitted to the pipe with the help of the heat-resistant plastic clamping band supplied with the sensor.
The sensor can be fitted to pipes having a diameter from 10 to 50 mm.

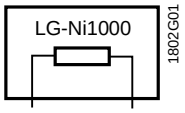
Mounting notes

The clamp–on temperature sensor can be mounted either under the lagging or on a piece of unlagged pipe. When placed under the lagging, the response time is shorter. When used in the field of refrigeration, the sensor must always be fitted under the pipe's lagging.
The pipe's surface where the sensor is placed must be bare. When fitting the sensor, press it firmly on the pipe and tighten the clamping band.
The QAD26.220 is supplied complete with mounting instructions.

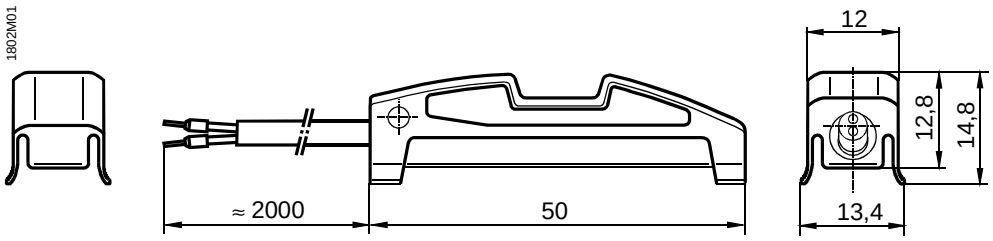
Technical data

Measurement range	−35...+90 °C
Sensing element	Ni1000 Ω at 0 °C
Measurement accuracy	±0.5 K at 25 °C, without considering the conductance error and the self-heating effect
Self-heating	0.1 K/mW
Perm. measuring current	≤2 mA (self-heating <0.5 K)
Time constant t_{63}	<10 s
Perm. ambient temperature	
Operation	−35...+90 °C
Transport and storage	−25...+60 °C
Perm. ambient humidity	100 % r. h.
Cable tension relief	max. 30 N
Degree of protection	IP 65 to EN 60 529
Safety class	III to EN 60 730, sensor must operate on extra low voltage
Dielectric strength	500 V against the pipe
Electrical connections	two-wire cable
Cable length	2 m
End of cable	terminating sleeves
Weight	approx. 0.275 kg

Connection diagram



Dimensions



Dimensions in mm

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