Frode Pedersen temperature sensors

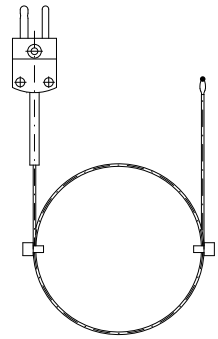
Thermocouple wire sensor TT

handheld, for general use

Data sheet
2304

Application

- For measuring temperature where a portable, flexible and fast responsing sensor is needed.
- Used in solid and gassous medias up to 400°C
- Fields of application
  - With handheld digital thermometers
  - Heating and ventilation (HVAC)
  - Laboratories and tests



Technical features

- Thermocouple type T and K according to IEC 584-1 (EN50584-1)
- TT consist of an insulated thermocouple wire, welded together in one end to an exposed hot- junction
- Small wire diameter and welding means fast response time

Ordering

The requested sensor is selected from the table below
The colour code means:

Standard: Built of standard modules (short delivery time)

Variant: Modified standard modules

We are specialist in temperature measurement
Please contact us and we will do our best to solve your specific measuring task

Ordering information

Sensor

Specification number	2304-											

Thermocouple

NiCr-Ni	type K	0
Cu-CuNi	type T	1

Insulation, TC wire / Temp. range

Fibreglass, silicone varnished	-20 + 400°C	0
PVC	-10 + 105°C	1
Teflon	-75 + 200°C	3

Wire diameter

2 x 0.2mm (Only for insulation 0)	0
2 x 0.5mm	1

Plug

0	With mini compensation plug
1	Without mini compensation plug

Tolerance acc to IEC 584-1 (EN60584-1) [1)]

0	Class 2, for K, i.e. ±2.5°C or 0.0075 x t_{actual} (°C)	2)
1	Class 2, for T, i.e. ±1.0°C or 0.0075 x t_{actual} (°C)	2)

Note 1: Tolerance applies for temp. > -40°C
Note 2: The highest value apply

Nominal length (mm)

01500	1500
03000	3000
05000	5000
10000	10000
xxxxx	Interim lengths (Min. 50, max. 99,999mm)

Accessories

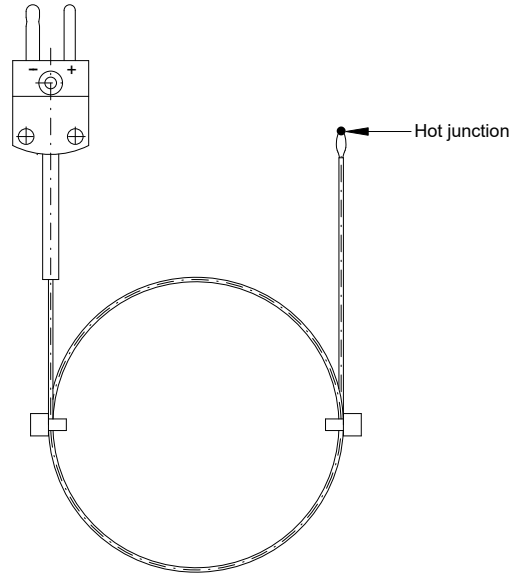
TC wire: See data sheet 9152

AMETEK®
SENSORS, TEST & CALIBRATION

TECHNICAL DATA

All dimensions in mm

Dimensions



Properties for insulation of TC wire

Conductor diam.	Overall dimensions	Insulation	Temperature range	Application
0.2	1.0 x 0.8	Fiberglass, silicone varnished	- 20 + 400°C	High temperature, not water tight
0.5	1.8 x 1.1	Fiberglass, silicone varnished	- 20 + 400°C	High temperature, not water tight
0.5	2.2 x 3.4	PVC	- 5 + 105°C	General use, low temperature
0.5	2.1 x 3.1	Teflon	- 75 + 200°C	Corrosion and heat/cold resistance

Response time

Conductor diam.	Response time in seconds (guidelines)	
	In air @ 2m/sec.	
	$t_{0.5}$	$t_{0.9}$
0.2	0.7	2.5
0.5	1.8	6

Note:

The 0.5/0.9 time is the time that it takes the sensor to reach 50%/90% of the final value of a temperature change of a medium.
If media and velocity are different from the ones stated, the time can change significantly.

Connection diagram

1xK	1xT
Green + − White	Braun + − White

AMETEK DENMARK A/S Gydevang 32-34, 3450 Allerød, DK, Tlf: 48168000, E-mail: jofra@ametek.com, Web: www.jofra.com

SS-FP-TT2304-UK. Version 202401