

THERMOCOUPLE THERMOMETER

Measuring insert: Fixed

Type:
TC-AM/AMC

Sheet No.
3-8 V2.1

5150-E010721V3.1

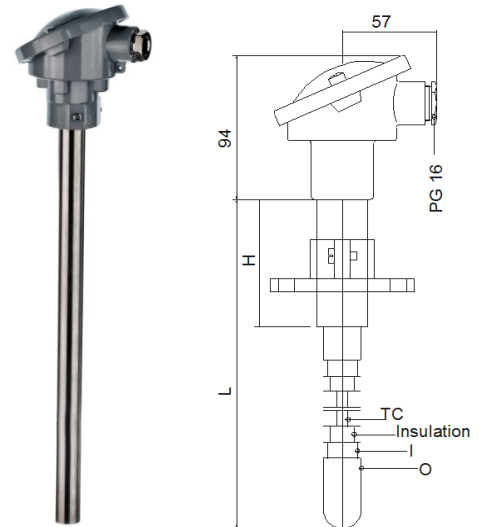


Application:

- Measurement of high temperatures in large ovens and channels for flue gases and air
- Field of application: Up to 1700°C (depending on thermocouple)
- Usually applied in: Tile works, refuse disposal plants and processing plants

Properties:

- Thermocouple thermometer type K, J, E, N, R, S or B in accordance with DIN IEC 60584-1
- Constructed in accordance with DS/EN 50446:2006
- Measuring insert: Interchangeable
- Process attachment: Adjustable flange or coupling
- Gas-proof ceramic internal tube protects thermocouple against pollution
- Outer protective sheath: Heat-proof steel
- Modular construction and standard length minimizes the number of spare parts
- Can be delivered with head mounted transmitter
- Approved by: GOST and TRCU (on request)



MECHANICAL SPECIFICATIONS

Protective tube O: -----
Heat-proof steel 4C54, according to DIN 50446 Special.

Internal tube according to DIN 50446: -----
Ceramics KER610
Ceramics KER799
None

Sensor diameter [mm]: -----
Ø22
Ø26

Nominal length [mm]: -----
500 / 710 / 1000 / 1400
Special

Process attachment: -----
1" BSP Adjustable nipple
Flange according to DIN 50446

Protection head: -----
A (aluminum, enameled, low cap, IP62)
A special (aluminum, enameled, low cap, IP65)
AHSH (aluminum, enameled, high cap, IP54)
Other on request

Cable gland (pre-mounted in Head): -----
Plastic
Nickle plated brass
Stainless acid-proof steel
None

Please specify cable diameter: -----

ELECTRICAL SPECIFICATIONS

---Plug (pre-mounted in Head):
M12 (for M20)
Harting (specify type)
Other on request
None

---Cable (pre-mounted in Head):
PP (Plastic-Plastic)
SBS (Silicone-Inner Braided-Silicone)
TBT (Teflon-Inner Braided-Teflon)
Other on request
None

---Cable length [m]:

---Sensor type:
Type T (Cu-CuNi) max. +300°C
Type J (Fe-CuNi) max. +700°C
Type E (NiCr-CuNi) max. +800°C
Type K (NiCr-Ni) max. +1150°C
Type N (NiCrSi-Ni) max. +1250°C
Type S (Pt10Rh-Pt) max +1600°C
Type R (Pt13Rh-Pt) max +1600°C
Type B (Pt30Rh-Pt6Rh) max +1700°C
Others on request

---Number of thermocouples:
1xTC
2xTC
Others on request

---Tolerance in acc. with IEC 60584-1:
Class 1 for T (i.e. ±0,5°C or ±(0,0040xT))
Class 1 for J, E, K, N (i.e. ±1,5°C or ±(0,0040xT))
Class 1 for S, R (±1,0°C [±1,0°C+(T (actual)-1100°C)]°C)
Class 2 for T (i.e. ±1,5°C or ±(0,0075xT))
Class 2 for J, E, K, N (i.e. ±2,5°C or ±(0,0075xT))
Class 2 for S (i.e. ±1,25°C or ±(0,0025xT))
Class 2 for R, B (i.e. ±1,5°C or ±(0,0025xT))

Link for further information: [TC Tolerance](#)

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Calibration:

Temperature calibration are used to verify and certify the sensor to have the correct accuracy. We can do either: "In house" or "Accredited" calibration. Accredited is certified by 3.e part. Normally we do a calibration in 3 points.

Enhanced performance services:

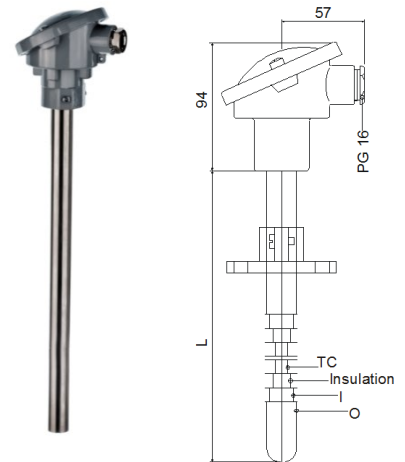
Cold applications (below -50°C) will influence the material and the measurement. CRYO treatment is needed to ensure a correct and working sensor down to -196°C.

A sensor will always drift over time, especially when there are high temperature fluctuations.

With "Ageing treatment" we stabilize the sensor to ensure a minimum drift over time. The benefits are long term stability, more correct measurement and easier planning of calibration periods.

Documentation:

Please order the correct documentation when ordering the sensor.



SIGNAL PROCESSING

Head mounted transmitter

Ceramic socket mounted in terminal head. -----

Prepared for transmitter w/o ceramic socket. -----
 w/long leads

Programmable head mounted transmitter. -----

Measuring range min/max: -200/+850°C

Output: 2-wire, 4-20 mA

Min. span: 25°C

Ambient temperature min/max: -40/+85°C

[5334A Uninsulated for TC](#)

[5334D EEX Uninsulated for TC](#)

[5331A Galvanic Isolated RTD / TC](#)

[5331D EEX Galvanic Isolated RTD / TC](#)

[5335A Hart 5 Protocol Standard](#)

[5335D Hart 5 Protocol CSA, FM, ATEX, IECEx](#)

[5337A Hart 5 & 7 Protocol](#)

[5337D Hart 5 & 7 Protocol CSA, FM, ATEX, IECEx](#)

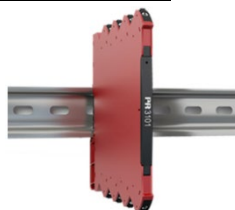


Transmitter Type:			
4 mA =	C°	20 mA =	C°

Link to further information:

[Transmitter Overview](#)

[Programmable rail mounted transmitter](#)



CALIBRATION

---Calibration:

In house (Span)

Accredited – in laboratory

1.	Point	°C
2.	Point	°C
3.	Point	°C

Enhanced performance services

-----Cryo treatment.

For temperature sensor under -50°C

-----Ageing:

For long term stability.

-----Documentation

Certificate: 3.1 Material

Certificate of origin

Certificate of conformity

Certificate of GOST