

THERMOCOUPLE THERMOMETER
Measuring insert: Fixed

Type:
TC-BM/BMC

Sheet No.
3-15 V2

5153-E010721V3.1

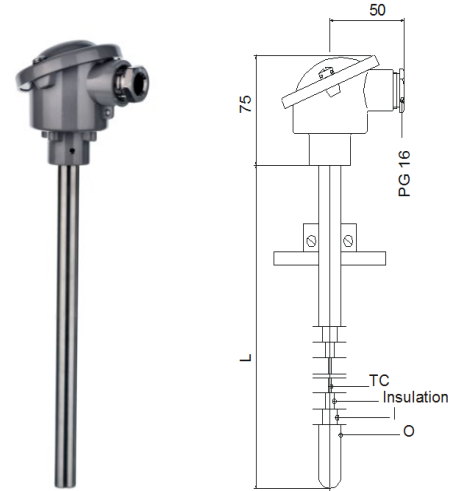


Application:

- 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: Fixed
- Process attachment: Adjustable flange or coupling
- Gas-proof ceramic internal tube protects thermocouple against pollution
- Outer protective sheath: Heat-proof steel or stainless acid-proof steel
- Modular construction and standard length minimizes the number of spare parts
- Can be delivered with head mounted transmitter
- Approved by: GOST. 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]: -----
Ø15 mm

Nominal length L [mm]: -----
500 mm
710 mm
1000 mm
1400 mm
Other on request

Process attachment: -----
½" BSP
¾" BSP
Ø15 flange according to DIN 50446

Protection head: -----
B: (Aluminum, enameled, low cap, IP62)
BSBH: (Aluminum, enameled, high cap, IP62)
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
Other 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](#)

THERMOCOUPLE THERMOMETER
Measuring insert: Interchangeable

Type:
TC-BM/BMC

Sheet No.
 3-15 V2

5153-E010721V3.1



Calibration:

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

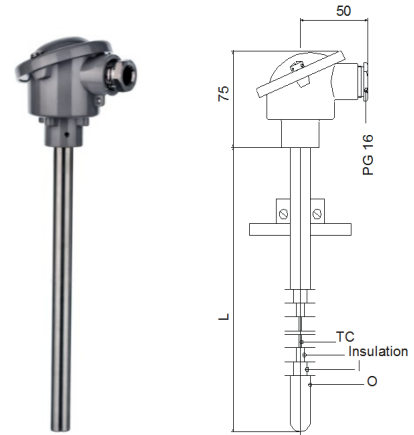
Enhanced performance services:

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:

Remember to order the correct documentation when ordering the sensor.



SIGNAL PROCESSING

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