

Temperature transducer GTMU



cpl. with Pt100 or NiCr-Ni (type K) sensor

General

You can choose between 5 design types of the GTMU and 2 sensor types to get an optimised solution for Your needs.

The types 1 - 4 are supplied cpl. with sensor, measuring transducer etc., calibrated and thus ready for use. Type 5 does not include sensor which is either already existing at your works or will have to be ordered separately acc. to your specifications (p.r.t. pages 128-129, 132-133)



design type 1 for direct screw connection	design type 2 for high temperatures	design type 3 indoor / outdoor probe	design type 4 duct probe	design type 5 for external probes
probe with threaded stem "G"	threaded stem at a distance of HL (collar tube) from housing	for direct wall mounting	centrally mounted sensor tube pointing downwards. (for clamping ring screw connection p.r.t. page 136)	measuring transducer for Pt 100 or NiCr-Ni sensors already existing on site or for applications where sensor and housing need to be spaced. (e.g. due to extremely high ambient temperatures or to design reasons).
<u>Standard:</u> G = 1/2", FL = 100 mm, D = 6 mm	<u>Standard:</u> G = 1/2", HL = 50 mm FL = 100 mm, D = 6 mm	<u>Standard:</u> FL = 50 mm, D = 3 mm	<u>Standard:</u> FL = 100 mm, D = 6 mm	

Specification

Practical sensor elements:

- resistance thermometer: Pt100 class B (higher sensor precision p.r.t. page 123)
- thermocouple: NiCr-Ni class 1

Max. measuring ranges:

- (not available for every design type)
- Pt100: -200 ... +800 °C
 - NiCr-Ni: -200 ... +1372 °C

Standard measurements ranges:

- Pt100: 0...100 °C, 0...200 °C, -50...+50 °C, -50...+150 °C
- NiCr-Ni: 0...100 °C, -50...+150 °C, -200...+300 °C, 0...600 °C, 0...1200 °C
- Optional: any other measuring range against upcharge

Accuracy electronics:

±0.2% FS (Pt100) or ±0.2% ±0.5°C (NiCr-Ni)

Higher precision e.g. via optionally different transducer (GITT01, RT420)

Output signal:

- Standard: 4 - 20 mA (2-wire)
- Optional: 0-1 V, 0-2 V, 0-5 V, 0-10 V (3- or 4-wire) (not available for GITT01, RT420)

Auxiliary energy:

Uv = 12 ... 30 V DC (at 0-10 V: Uv = 18 ... 30 V DC)

(for special types GTMU/GITT and GTMU/RT420: 8 ... 30 V)

Reverse voltage protection:

50 V permanently

Allowable burden (for 4-20mA):

RA [Ω] = (Uv [V] - 12V) / 0.02 A

(for special types GITT and RT420 refer to this pages)

Allowable load (for 0-__ Volt):

RL > 3000 Ω

Ambient temperature electronics:

0 ... +70 °C (-40...+85 °C at .../RT420 and .../GITT)

Temperature coefficient:

Pt100: 0.01 % / °C

NiCr-Ni: 0.05 % / °C

Storage temperature:

-20 ... +70 °C

Housing:

ABS (IP65)

Probe tube:

stainless steel

Probe length:

optional: for standard length please refer to design type, any other tube length possible

Thread "G":

optional: 1/2" (Standard), G1/4", G3/8", M5, M6, M8, M10, M12

Probe diameter "D":

3, 4, 5, 6 or 8 mm

Sensor installation:

Pt100: sensors will be electrically insulated at our works.

NiCr-Ni: sensors are not electrically insulated as a standard (connection between sensor and outer sheathing).

Optional electrically insulated design-type available.

Mounting:

with holes for wall mounting

Mounting distance:

70 x 50 mm (W x H)

Fixing screws:

max. shaft-Ø 4 mm

Electric connection:

elbow plug acc. to EN 175301-803/A (IP65)

Sensor connection: (for type 5)

Pt 100: 2- or 3-wire connection possible

NiCr-Ni: 2-wire only

PG 7 screwed conduit entry for sensor cable

connection by screw-type terminal on PC board

Ordering information

At least necessary ordering information: design type, sensor and meas. range

If no additional data is added to the design type, the probe will be manufactured with standard dimensions.

Ordering examples:

GTMU, type 1, Pt100 DIN KL.B., 0...100 °C

GTMU, type 3, NiCr-Ni, 0...1200 °C, FL=100 mm, D=4 mm, POT

Prices - temperature transducer

GTMU design type 1

GTMU design type 2

GTMU design type 3

GTMU design type 4

GTMU design type 5

Upcharge - transducer options

GTMU / GITT electrically isolated transducer

(available sensors: Pt100, Pt1000, NiCr-Ni, only output 4-20 mA possible)

GTMU / RT420 transducer for outdoor usage

(available sensors: Pt100, only output 4-20 mA possible)

Options / upcharges

- AV...: other output signal

(please state desired output voltage - not available with GITT and RT420)

- MB...: any other measuring range

(please state desired measuring range)

No upcharge for option -AV... -MB if more than 10 pcs per type are ordered.

- LACK: encapsulated PC board

(for outdoor application, i.e. applications where condensation is possible)

- POT: electrically insulated NiCr-Ni-probe

- FL=...: longer tube, each started further 100mm

- HL=...: longer collar tube, each started further 100mm

- D=...: other probe diameter

- G=...: other thread

- VO: on-site display

(for output signal 4-20mA, auxiliary energy Uv = 17 ... 30 V DC)

Prices - sensor housing without transducer

We also offer the sensors without the integrated transducer.

The sensor connection then are directly connected to the elbow plug.

GTMU-OMU design type 1

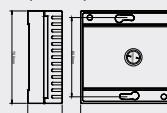
GTMU-OMU design type 2

GTMU-OMU design type 3 or design type 4

(available sensors: Pt100 (4-wire), Pt1000 (4-wire), NiCr-Ni)

GTU-2R-OMU designer housing for ambient

(available sensors: Pt100 (4-wire), Pt1000 (4-wire))



Note: the housing also maybe mounted directly to a concealed distribution box.