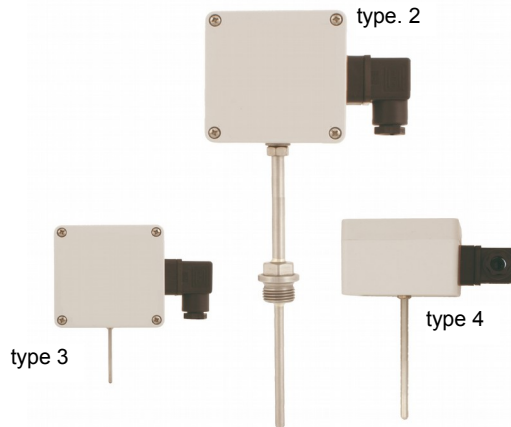


Product Information

Temperature

Temperature Probe with Transmitter GTMU



- Optimal adaptability due to 4 different design types
- PT100 or NiCr-Ni probe incl. transmitter
- Ready for assembly

Characteristics

The GTMU is a temperature probe with integrated transmitter. There are 4 basic design types and 2 sensor types. This ensures optimal adaptability to different conditions like higher temperatures, outdoor usage or wall mounting.

The measurement is done by means of a resistive temperature sensor (Pt100, 2- or 3- wire) or thermocouple (NiCr-Ni). The transmitter outputs linear current or voltage signals.

The transmitter is completely customized according to customer requirements.

Technical data

Sensor element : Pt100
NiCr-Ni

Standard measuring range

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..1150 °C
other measuring ranges upon request

Max. possible measuring range

Pt100 : -200..+800 °C

NiCr-Ni : -200..1150 °C

Accuracy

Pt100 : DIN class B

NiCr-Ni : class 1

Output signal : standard 4..20 mA (2-wire)
optional 0..1 V, 0..2 V, 0..5 V, 0..10V (3- or 4-wire)

Power supply U_v : 12..30 V DC (at 0..10 V: 18..30 V DC)

Permissible burden R_A : (at 4..20 mA) $R_A = (U_v - 12 \text{ V}) / 0,02 \text{ A}$

Permissible load R_L : (at ... V) $R_L > 3000 \Omega$

Working temperature : 0..70 °C

(-40..+85 °C at option RT420 / GITT)

Housing material : ABS

Probe material : stainless steel

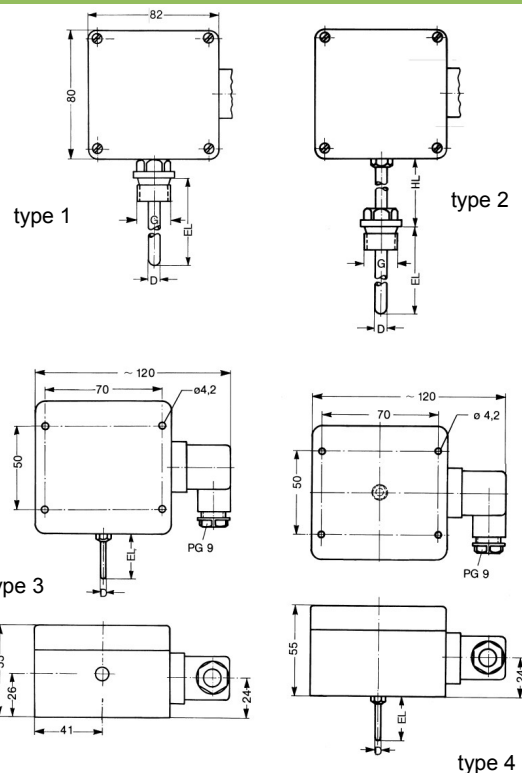
Protection class : IP65
Sensor installation : sensors are isolated
Mounting : with fastening holes for wall mounting
Electrical connection : elbow-type plug (EN 175301-803/A)

	type 1	type 2	type 3	type 4
Process connection (standard)	G ½		—	—
Fitting length (standard)	EL = 100 mm	EL = 100 mm	EL = 50 mm	EL = 100 mm
Neck tube length (standard)	—	HL = 50 mm	—	—
Diameter (standard)	D = 6 mm	D = 6 mm	D = 3 mm	D = 6 mm

Design types

Type 1	with process connection G ½ for screw-in
Type 2	for higher temperatures, process connection G ½ in distance to housing, HL = length of neck tube
Type 3	indoor / outdoor probe for wall mounting (potting of electronics necessary for outdoor application)
Type 4	duct probe with centrally mounted sensor tube pointing downwards

Dimensions



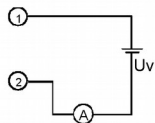
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Product Information

Temperature

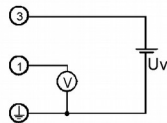
Connection diagram

2-wire connection (4...20 mA)



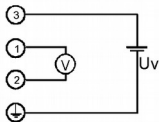
1 = supply voltage +Uv
2 = GND / signal

3-wire connection (... V DC)



1 = signal +
3 = supply voltage +Uv
2 = supply voltage -Uv
signal -

4-wire connection (... V DC)



1 = signal +
2 = signal -
3 = supply voltage +Uv
4 = supply voltage -Uv

Ordering code

1. 2. 3. 4. 5. 6. 7. 8. 9.
GTMU - - - - - - - - -

1. Design type	
A1	duct / wall design with thread
A2	duct design for higher temperatures
A3	indoor / outdoor probe
A4	duct design without thread
2. Sensor element	
P	resistance thermometer Pt100
K	thermocouple NiCr-Ni
3. Measuring range (MB)	
MB1	0...100 °C <i>Pt100 / NiCr-Ni</i>
MB2	-50...+150 °C <i>Pt100 / NiCr-Ni</i>
MB3	0...200 °C <i>only Pt100</i>
MB4	-50...+50 °C <i>only Pt100</i>
MB5	-200...+300 °C <i>only NiCr-Ni</i>
MB6	0...600 °C <i>only NiCr-Ni</i>
MB7	0...1150 °C <i>only NiCr-Ni</i>
MBx	desired measuring range (e.g. -50...+400 °C) max. possible measuring range: Pt100: -200...+800 °C / NiCr-Ni: -200...+1150 °C
4. Output signal	
A1	4...20 mA (2-wire) (standard)
V1	0...1 V (3-/ 4-wire)
V3	0...2 V (3-/ 4-wire)
V4	0...5 V (3-/ 4-wire)
V2	0...10 V (3-/ 4-wire)
5. Fitting length EL	
050	50 mm (standard A3)
100	100 mm (standard A1, A2, A3)
xxx	any EL in mm (e.g.: 200 = 200 mm)

6. Probe diameter D	
3	Ø 3 mm (standard A3)
4	Ø 4 mm
5	Ø 5 mm
6	Ø 6 mm (standard A1, A2, A4)
8	Ø 8 mm
7. Process connection G (only at design type A1 and A2)	
G1	G ½ (V4A) (standard)
G2	G ¼ (V4A)
G3	G ⅜ (V4A)
M5	M5 (V4A)
M6	M6 (V4A)
M8	M8 (V4A)
M10	M10 (V4A)
M12	M12 (V4A)
8. Length of neck tube HL (only at design type A2)	
050	50 mm (standard)
xxx	any HL in mm (e.g.: 200 = 200 mm)
9. Options (combination of multiple options upon request)	
00	without Option
VO	on-site display (display and control panel)
LACK	board varnished on both sides (for outdoor usage)
GITT	transmitter with electrical isolation (only output 4...20 mA possible)
RT420	transmitter particular for outdoor usage (only with sensor element Pt100 and output 4...20 mA possible)