Outdoor and indoor resistance thermometer

sturdy design

Type series GA810.

Features

- Outdoor and indoor resistance thermometer for ambient temperature measuring
- Sturdy design
  - with die-cast aluminium case
  - with stainless steel field housing
- Measuring resistor 1 x Pt 100, 3- wire technology, class A
- Media temperature -40…80°C
- Fast response

Options

- Approvals/Certificates
  - Explosion protection
  - Classification per SIL2
- As per UKCA regulations
- Various transmitters can be integrated
- Temperature switch can be integrated
- Protection sleeve against direct solar radiation and draught

Application area

- Goods depots
- Cold storage room
- Freezer compartments
- Gas regulating and metering station
- Refrigerated containers
- Damp locations
- Outdoor applications
- Shipping industry
- Green houses
- Fermentation gas container

Application

The resistance thermometer is suitable for measuring ambient temperature. The design allows applications indoors as well as outdoors.

Technical data

Constructional design

Design:	sturdy die-cast aluminium case with mounting plate and separate earth terminal
Dimensions:	80 x 75 x 57 mm
Degree of protection:	IP 66 per DIN EN 60529
Elec. connection:	■ M20 x 1,5 cable gland for cable Ø 5 - 9, material MS-nickel plated ■ M20 x 1,5 cable gland Skintop blue for cablel Ø 5-9, material PA
	alternative:
Design:	stainless steel field housing for wall mounting or for pipe and frame mounting
Dimensions:	diameter: 60 mm, height: 51 mm
Degree of protection:	IP 66 per DIN EN 60529
Elec. connection:	■ circular connector M12 x 1 (4-pin) ■ M12 x 1 cable gland for cable Ø 3-6,5, Material MS-nickel plated
Socket:	ceramic Ø 42 mm mounted on mounting plate

Temperature sensor

Sensor (U_1) :	Ø 6 x 50 mm, material: stainless steel mat.-no. 1.4404 (316L)
Measuring resistor:	1 x Pt 100 in 3-wire technology, class A per DIN EN 60751

Accuracy

Measuring resistor Pt 100 per DIN EN 60751, class A

Temperature ranges

Media:	-40…80°C
Storage:	-40…80°C

Transmitter /temperature switch

Integration:	Suitable Pt 100 transmitter or temperature switches (without Ex) can be mounted in cases for wall mounting. ■ Transmitter for head mounting, Type series PA210., 4…20 mA, programmable ■ Transmitter for head mounting, Type series PA220., electrically isolated, classification per SIL 2 ■ Transmitter for head mounting, Type series PA230., electrically isolated, classification per SIL 2, HART

Tests and certificates

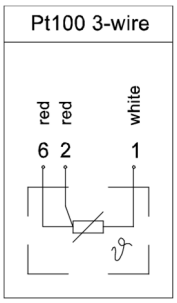
Ex approval:

Marking:	TÜV 08 ATEX 554093 X ⟨Ex⟩ II 1G Ex ia IIC T6/T5/T4 ⟨Ex⟩ II 2G Ex ib IIC T6/T5/T4 ⟨Ex⟩ II 1D Ex iaD 20 T89 °C ⟨Ex⟩ II 2D Ex ibD 21 T129 °C $U_i \leq 30$ V $P_i \leq 200$ mW C_i and L_i negligible small
UK:	Intrinsically safe per EN 60079-11, P5.7 simple electrical apparatus

Further technical data see Ex instruction XA_001.

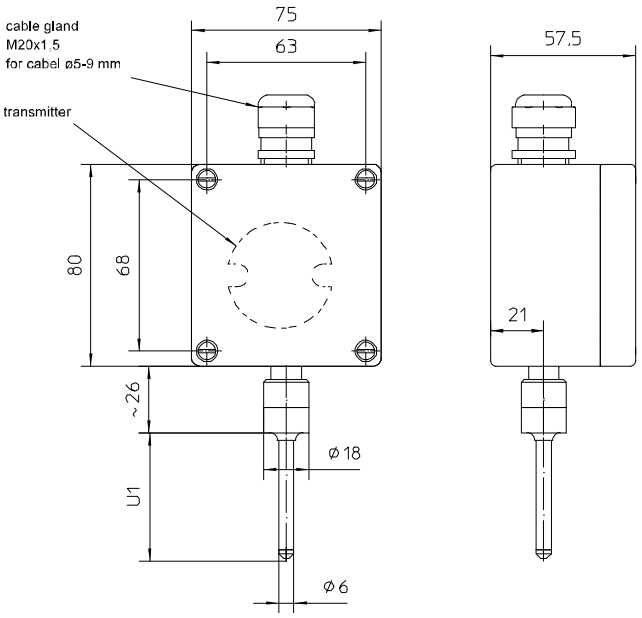
SIL 2:	Functional safety per EN 61508, classification per SIL 2; transmitter and temperature switch have to be considered separately.

Connection diagram

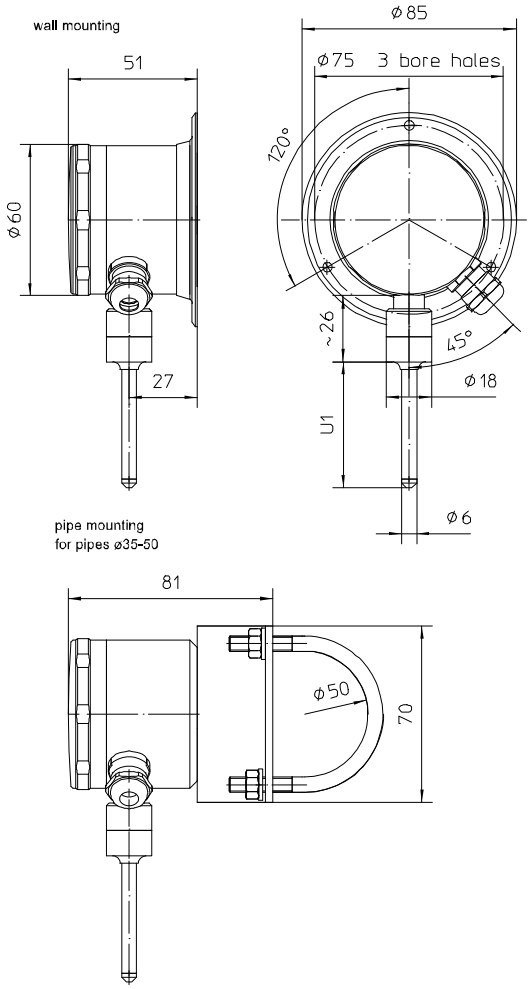


Dimensions

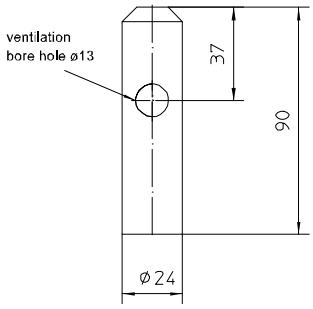
Design aluminium



Design stainless steel



Protection sleeve against direkt solar radiation and draught



Order details

Outdoor and indoor resistance thermometer, sturdy design, Type series GA810.

Order code GA810.			
GA810.	Outdoor and indoor resistance thermometer, sturdy design		
0	Explosion protection	without	
1		Explosion protection, marking as follows	
N2	type of sensor	1 x Pt 100, 3-wire technology	
T60	electrical connection	die-cast aluminium case	M20 x 1,5 cable gland for cable Ø 5 - 9, material MS-nickel plated
T60.14			M20 x 1,5 cable gland Skintop blue for cable Ø 5-9, material PA
T471.22		stainless steel field housing Ø 60 mm for wall mounting	M12 x 1 cable gland for cable Ø 3-6,5, material MS-nickel plated
T471.51			circular connector M12 x 1 (4-pin)
T472.22		stainless steel field housing Ø 60 mm for pipe and frame mounting	M12 x 1 cable gland for cable Ø 3-6,5, material MS-nickel plated
T472.51			circular connector M12 x 1 (4-pin)

Additional features (to be indicated if required)		
R60	position of electrical connection	3^{00}
R61		6^{00}
R63		9^{00}
P10		protection against direct solar radiation and draught
S71	Ex marking	Ⓔx II 1G Ex ia IIC T6/T5/T4
S72		Ⓔx II 2G Ex ib IIC T6/T5/T4
S73		Ⓔx II 1D Ex iaD 20 T89 °C
S74		Ⓔx II 2D Ex ibD 21 T129 °C
S52		Intrinsically safe per EN 60079-11, P5.7 simple electrical apparatus (UK)
Z1	incl. transmitter	mounting in field housing (selection of transmitter see product group T4)
W2604	functional safety per IEC/EN 61508, classification of Pt100 element per SIL 2 [1]	
W2660	as per UKCA regulations	

example (order code): GA8100 – N2 – T471.22 - …

[1] Transmitter and temperature switch must be considered separately