

Multipoint resistance thermometer for installation in a separate thermowell Type series GA8140



Features

- Resistance thermometer with individually selectable measuring points
- Up to 3 measuring inserts in one case
- Measuring inserts with a length of up to 36000 mm
- Fast response
- Robust case

Options

- Approvals / Certificates
 - Explosion protection

Application

The resistance thermometer is designed for installation in a separate thermowell and is used in reactors and fuel depots. With up to 3 measuring inserts of different installation lengths, the GA8140 is ideally suited for temperature layer measurement in tanks and hotspot measurements in reactors.



Application area

- Chemical and petrochemical industry
- Shipping
- Fuel depots

Technical data

Constructional design

Design:	case with screw cap material: Polyester top-hat rail with terminal block 2.5 mm ² and 1 x PE, with brass offshore plate 3 mm measuring insert pressure-resistant fixed with cutting ring fitting
Degree of protection:	IP 66 per EN 60529
Electrical connection:	cable gland M20 x 1.5 (one per measuring insert) or one cable gland M32 x 1.5 material: brass nickel-plated

Measuring insert

Design:	sheathed cable Ø 3 mm
Material:	stainless steel mat. no. 1.4404 (316L)
Length:	1000 until 36000 mm
Measuring resistor:	Pt100 in 4-wire circuit

Process connection

Process connection:	cutting ring fitting G1/2 A or G3/4 A material: stainless steel working pressure: PS 10 bar ≤ 250 °C
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Accuracy

Pt100:	per EN 60751, class A
Response time:	according to EN 60751, test in running water: t ₉₀ = 2.9 sec. (+15/-5 %)

Temperature ranges

Ambient:	-40...85 °C
Media:	-200...600 °C
Storage:	-40...85 °C

Tests and certificates

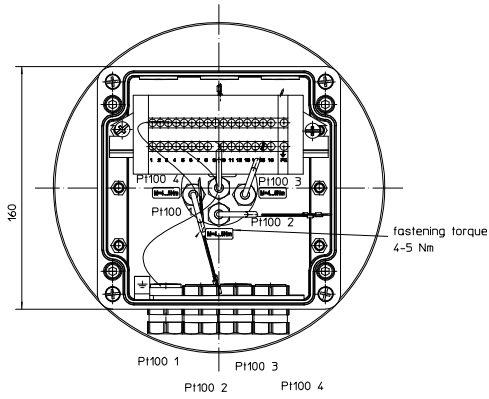
Ex approval:

measuring insert:
simple apparatus per
EN 60079-11:2012, section 5.7 and
IEC 60079-11:2023, section 5.5
Ex ia IIC T1...T6 Gb
Ex ia IIIC T135°C Db

case:
PTB 00 ATEX 1002
II 2G Ex ia IIC T6 Gb
II 2D Ex tb IIIC T85 °C Db

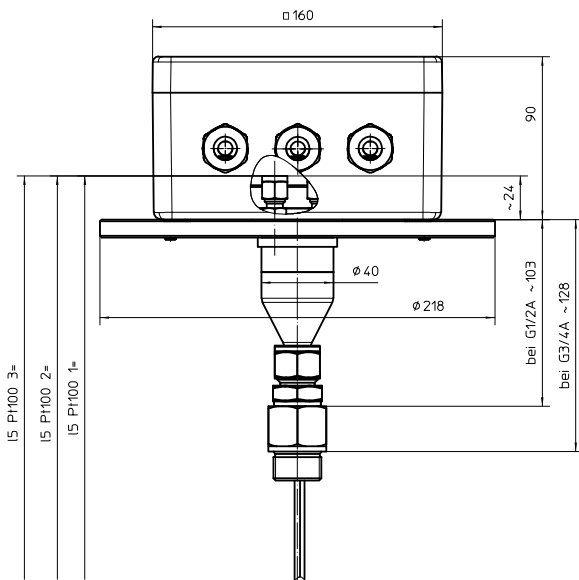
Detailed information can be found in the Ex instructions XA_037.

Connection diagram



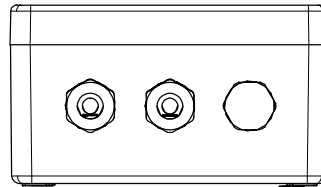
Pt100	RD	RD	WH	WH
Pt100 1	1	2	3	4
Pt100 2	5	6	7	8
Pt100 3 (optional)	9	10	11	12

Dimensions

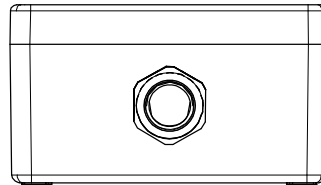


Further variants:

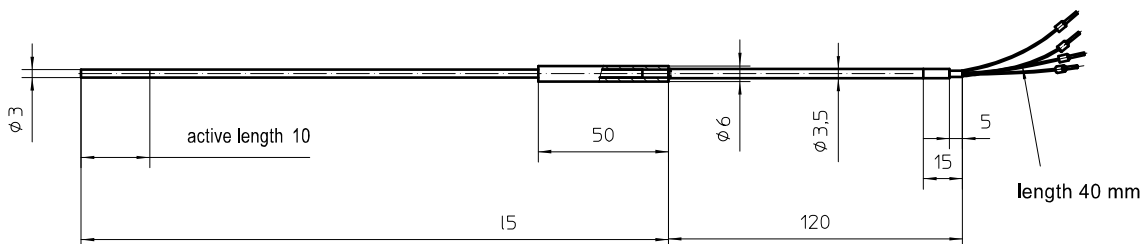
2 x cable gland M20 x 1.5



1 x cable gland M32 x 1.5



Replacement measuring insert GA2180



Order details

Resistance thermometer in stepped design for installation in a separate thermowell		
GA8140	Resistance thermometer in stepped design for installation in a separate thermowell	
A2410	process connection	with cutting ring fitting G1/2 A
A2411		with cutting ring fitting G3/4 A
D1	diameter measuring insert	Ø 3 mm
M2.	accuracy	class A per EN 60751
1	temperature range	-200...600 °C
P2.....	number of measuring insert	2 measuring insert, each with 1 x Pt100 in 4-wire circuit
P3.....		3 measuring insert, each with 1 x Pt100 in 4-wire circuit
2000	length of measuring insert l5	2000 mm
3500		3500 mm
4500		4500 mm
5000		5000 mm
6500		6500 mm
9000		9000 mm
9500		9500 mm
12000		12000 mm
13000		13000 mm
15000		15000 mm
16000		16000 mm
18000		18000 mm
25000		25000 mm
29000		29000 mm
34500		34500 mm
T61.		case
2	electrical connection	2 x cable gland M20 x 1.5, brass nickel-plated, for cables Ø 6.5...14 mm
3		3 x cable gland M20 x 1.5, brass nickel-plated, for cables Ø 6.5...14 mm
6		1 x cable gland M32 x 1.5, brass nickel-plated, for cables Ø 17...26.3 mm

Additional features (to be indicated if required)

S54	Ex-proof design	simple apparatus per EN 60079-11:2012, section 5.7 and IEC 60079-11:2023, section 5.5 measuring insert: Ex ia IIC T1...T6 Gb Ex ia IIIC T135°C Db case: PTB 00 ATEX 1002 II 2G Ex ia IIC T6 Gb II 2D Ex tb IIIC T85 °C Db
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Order code (example): **GA8140 - A2410 - D1 - M21 - P2.5000.6500 - T61.2**

Replacement measuring insert		
GA2180	Replacement measuring insert	for GA8140
D1	diameter measuring insert	3 mm
M2.	accuracy	class A per EN 60751
1	temperature range	-200...600 °C
P1.....	measuring insert	1 x Pt100 in 4-wire circuit
2000	length of measuring insert l5	2000 mm
3500		3500 mm
4500		4500 mm
5000		5000 mm
6500		6500 mm
9000		9000 mm
9500		9500 mm
12000		12000 mm
13000		13000 mm
15000		15000 mm
16000		16000 mm
18000		18000 mm
25000		25000 mm
29000		29000 mm
34500		34500 mm

Additional features (to be indicated if required)		
S55	Ex-proof design	simple apparatus per EN 60079-11:2012, section 5.7 and IEC 60079-11:2023, section 5.5 Ex ia IIC T1...T6 Gb Ex ia IIIC T135°C Db

Order code (example): **GA2180 - D1 - M21 - P1.5000**