Measuring insert for In-process calibration

Type Series GA310.

Features

- Measuring insert per DIN 43735 with additional test pipe
- Measuring insert Ø 6 mm
- Temperature range -50…400 °C
- Measuring resistor per DIN EN 60751
- Accuracy per DIN EN 60751, class A
- Electrical connection in 4-wire technology

Options

- Ex-protection
- As per UKCA regulations
- Classification per SIL2
- Measuring insert Ø 4 mm
- Prepared for transmitter mounting

Application area

· Food industry
· Pharmaceuticals
· Chemical and petrochemical industry
· Machinery construction

Application

The measuring inserts per DIN 43735 are additonally equipped with a test pipe. A calibrated reference sensor (e.g. LABOM type GA3110, data sheet T4-025-46) can be inserted in the test pipe. This makes it possible to calibrate the installed resistance thermometer without disassembling the measuring insert.

Technical Data

Mechanical design
measuring insert with connection socket per DIN 43735 and with additional test pipe
measuring insert: stainless steel mat.-no. 1.4571 (316 Ti),
length and Ø see order details.

The measuring insert is spring loaded (spring travel: max. 10 mm) to ensure that the measuring insert is pressed down on the bottom of the thermowell. Instead of the terminal socket a transmitter can
be installed, or the measuring insert is prepared for transmitter mounting.

Reference sensor see data sheet T4-025-46, Type series GA3110.

Measuring resistor
measuring resistor Pt100 4-wire per DIN EN 60751
nominal value of Pt100 sensor: 100 Ohm at 0 °C
Option: 2x Pt100 in 3-wire
Class A per EN60751

Temperature range
-50…400 °C

Accuracy
measuring resistor:
class A per EN 60751
in the range between -50...300 °C,
above this class B

Insulation resistance
> 100 MOhm bei 20 °C (500 VDC)

Ex-approval
IBExU 13 ATEX 1017 X
Ex II 2G Ex ia IIC T6-T1 Gb
U_i ≤ 30 V
P_i ≤ 750 mW
L_i max. 10 µH/m
C_i max. 500 pF/m

Intrinsically safe per EN 60079-11, P5.7 simple electrical apparatus (UK).

More technical information and restrictions see Ex instructions XA_003.

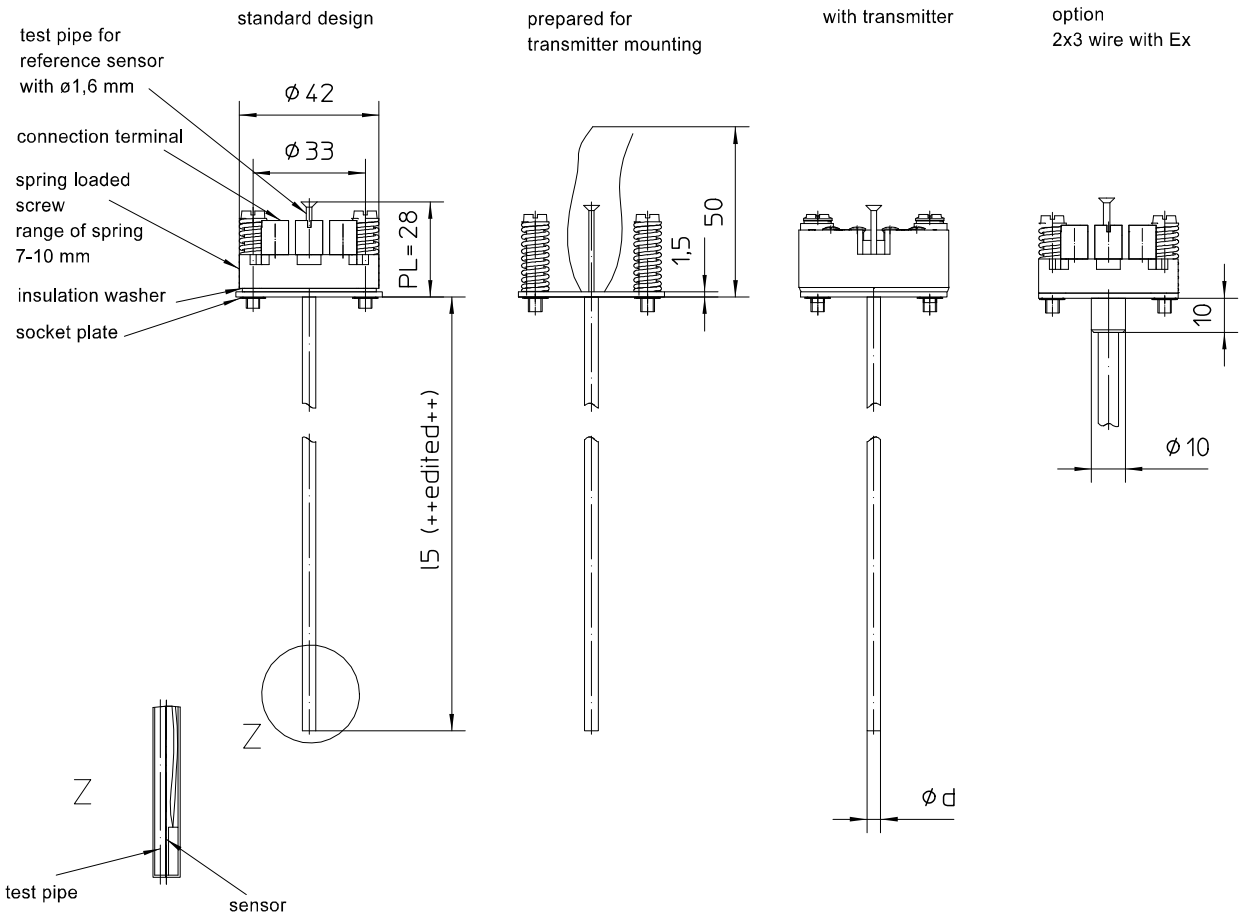
Functional safety
classification of Pt100 sensor per SIL2, per EN 61508

Measuring insert length
The length of the measuring insert is to be selected so that the measuring insert stands on the thermowell bottom. This ensures good heat transfer.
We recommend the use of thermolube.

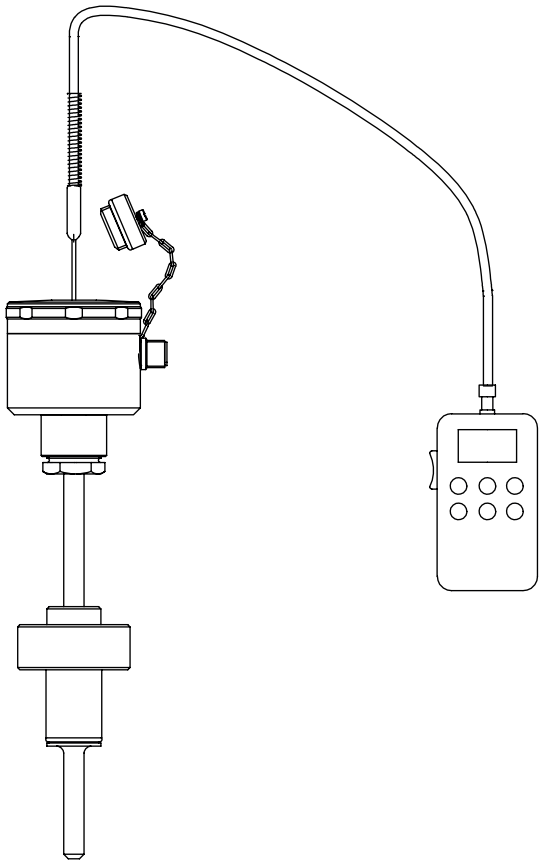
Standard lengths see order details.
Special lengths are possible.

Mounting of transmitter
Pt100 transmitter for head mounting can be mounted instead of terminal socket.

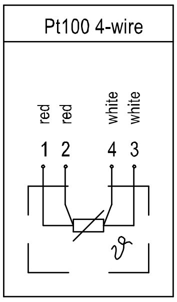
Dimensions



Reference sensor during test condition



Connection diagram



Order details

Measuring inserts for n-process calibration				**GA310 .**						
ex-design	· without			**0**						
	· ex-protection, type of protection see below			**1**						
	standard lenghts									
length l5 of measuring insert	100 mm				**B09**					
	105 mm				**B10**					
	125 mm				**B13**					
	140 mm				**B16**					
	190 mm				**B19**					
	205 mm				**B22**					
	250 mm				**B25**					
	255 mm				**B28**					
	275 mm				**B31**					
	290 mm				**B34**					
	315 mm				**B37**					
	375 mm				**B40**					
	405 mm				**B43**					
	435 mm				**B46**					
	525 mm				**B49**					
	555 mm				**B52**					
meas. insert class A per DIN EN 43735	diameter, design, material	operating range	test pipe							
	· 6 mm, rigid, st. steel	-50...400 °C [2]	28 mm			**D22-M24**				
	· 4 mm, rigid, st. steel [1]	-50...400 °C [2]	28 mm			**D42-M24**				
type of sensor	· 1 x Pt100 in 4-wire technology						**N3**			
	· 1 x Pt100 in 3-wire technology [3,4]						**N5**			
additional features (to be indicated in case of need, only):										
type of ex-protection	· ⟨Ex⟩ II 2G Ex ia IIC T6-T1 Gb IBExU 13 ATEX 1017 X							**S75**		
	· intrinsically safe per EN 60079-11, P5.7 simple electrical apparatus (UK)							**S53**		
functional safety per EN 61580, classification per SIL2									**W2604**	
as per UKCA regulations									**W2660**	
transmitter (head mounting) mounted in connection head instead of terminal block (without transmitter)										**Z1**
order code (example):				**GA3101**	**B31**	**D22-M24**	**N3**			

[1] not in Ex-design
[2] up to 300 °C accuracy class A, above this class B
[3] not possible with measuring insert 4 mm (D42 - M24)
[4] In Ex version not possible with Labom field housing