

Resistance thermometer Pt100 with weld-in thermowell Type Series GA252 .



Application area

- Chemical and petrochemical industry
- Machinery construction
- General process technology

Features

- Resistance thermometer with weld-in thermowell DIN 43772 model 4 or custom-made design
- Pt100 connection in 3- or 4-wire technology
- Measuring insert 1 x Pt100 or 2 x Pt100
- Measuring insert interchangeable

Options

- Explosion protection
- As per UKCA regulations
- Classification per SIL2
- Transmitter can be integrated
- Measuring insert for In-process calibration

Application

The resistance thermometer with weld-in thermowell is suited for operation on tanks and pipes. Weld-in thermowells per DIN 43772 model 4 or custom-made versions are available. Because of its robust design it is suitable for use in a great number of technological processes. The resistance thermometer can be supplied with a built in transmitter. A variety of transmitters for head mounting is available for different applications.

For In-process calibration the integration of a special measuring insert with additional test pipe is possible (data sheet T4-025-45, Type GA3100, reference sensor: data sheet T4-025-46, Type GA3110).

Technical Data

Mechanical design

Measuring insert interchangeable with connection head and neck-tube

Connection head

selective

- model B, cap with 2 slotted screws, mat. aluminium, IP 54
 - model BUZH, high spring cover with slotted screw, mat. aluminium, IP 65
 - field housing Ø 60 mm, screw cap, stainless steel mat.-no. 1.4305 (303), IP 67
- further connection heads upon request

Neck tube

stainless steel mat.no. 1.4571 (316Ti)
neck tube Ø 9 mm
reinforced design Ø 11 mm
length and connection see order details

Measuring insert

material stainless steel, interchangeable, DIN 43735.
length of measuring insert l_5 = thermowell length L + 10 mm + M.
Ø of meas. insert 6 mm
resistor Pt100 according to EN 60751
Optional: Measuring insert with connection socket per DIN 43735 and with additional test pipe for In-process calibration.
Material: stainless steel, mat.-no. 1.4571 (316 Ti) (see data sheet T4-025-45)

Type of sensor/class/circuit

see order details

Ex-approval

Ex-type examination certificate for Standard measuring insert:

BVS 04 ATEX E 144 X

Ⓔ II 2G EEx ia IIC T4/T6

$U_i \leq 30 \text{ V}$

$P_i \leq 200 \text{ mW}$

More technical information see XA_002.

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

More technical information see XA_030.

Measuring insert In-process calibration:

IBExU 13 ATEX 1017 X

Ⓔ II 2G Ex ia IIC T6...T1 Gb

$U_i \leq 30 \text{ V}$

$P_i \leq 750 \text{ mW}$

L_i max. 10 µH/m

C_i max. 500 pF/m

More technical information see XA_003.

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

More technical information see XA_003.

Functional safety

per EN 61508, classification per SIL 2; without transmitter, only

Accuracy of the measuring resistor

class A per EN 60751

For In-process measuring insert: class A in the range -50...300 °C, above this class B

Thermowell

weld-in thermowell acc. to DIN 43772 model 4 or custom-made design
applications and materials see order code option: certification of material testing per DIN EN 10204

Upon request a calculation for thermowells can be made (for static or dynamic application) with certificate.

Integration of transmitter

suitable Pt100 transmitters can be integrated into the connection head.

Options:

- a) instead of terminal block
- b) mounting in the spring cover of the connection head BUZH

see product group T4 for analog or digital transmitters

LED-on-site indication

programmable LED-on-site indication for stainless steel field housing (Ø 60 mm), see data sheet M6-031.

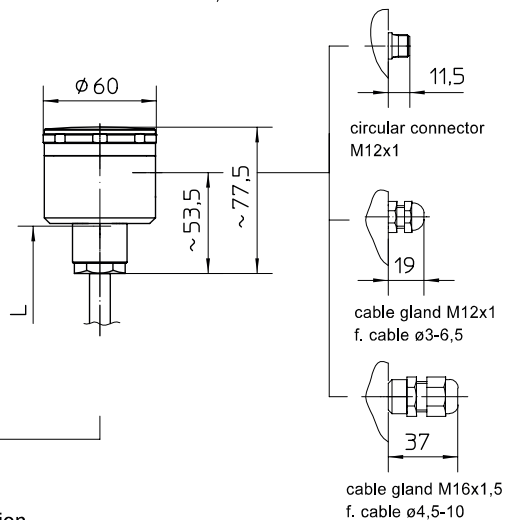
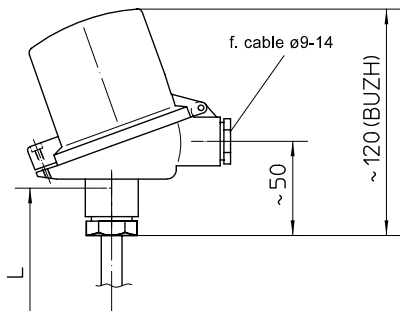
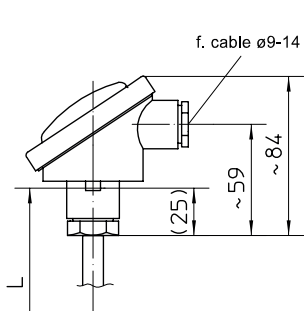
Dimensions

connection heads

model B, cap with
2 slotted screws
mat. aluminium, IP 54

model BUZH, high spring cover
with slotted screw,
mat. aluminium, IP 65

connection head field housing,
screw cap,
mat. stainless steel, IP 67

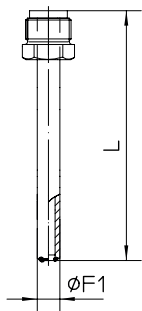


thermowell models

process connection

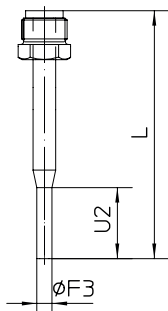
thermowell according to DIN 43772:

insertion/
welding



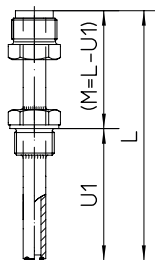
model 2

insertion/
welding



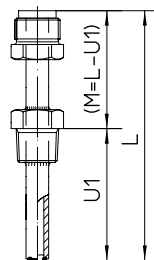
similar model 3
with reduced tip

screw-in



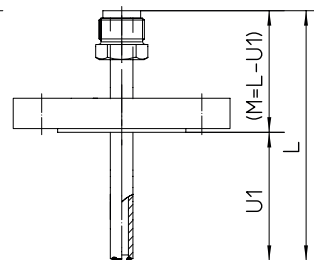
model 2 G/3 G
parallel thread
G1/2B
G3/4B
G1B
M20x1,5

screw-in



model 2 G/3 G
conical thread
1/2"NPT
3/4"NPT

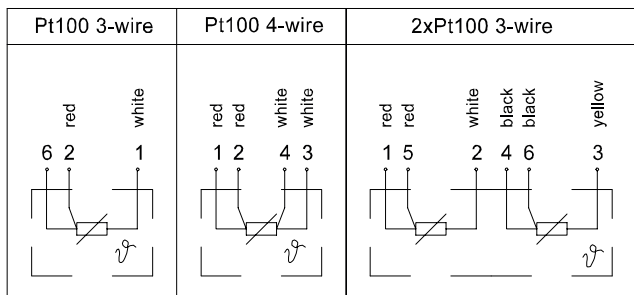
flanged



model 2 F/3F
DIN-flange
DN50/PN10/40
model B1 (DIN EN 1092-1)
DN25/PN10/40
model B1 (DIN EN 1092-1)

Connection diagram

connection head



circular connector
M12x1

