



Standard Screw-in Pt100
with and without neck tube for hazardous areas

Description

Basis of the ACS ex-RTD Series PTX form standardized, high-grade platinum measuring resistors with a nominal resistance of 100 ohms at 0 ° C, the tolerance classes AA, A, B according to IEC 60751st ACS ex-Pt100 probes are characterized by high accuracy, repeatability and reliability. PTX-resistance thermometers are approved for gas and dust explosion requirements, and are generally delivered with exchangeable measuring insert Pt100. Thus, the actual sensor may be removed from the probe tube and possibly replaced without draining the pipe or the container. This saves costs and avoids loss of production.

Application

- Long term stable temperature sensor platinum Pt100 – IEC 60751
- 2 -, 3 - or 4-wire connection
- in 2-gang version in 2-wire connection for redundancy
- in accuracy classes AA, A or B
- ATEX II 1 G Ex ia IIC T6 ... T1 Ga or ATEX II 1 D Ex ia IIIC Tx ° C. Da
- 2-wire technology with current signal 4 .. 20 mA, fixed
- 2-wire technology with current signal 4 .. 20 mA, programmable

Advantages

- Registering of process temperature from -200°C to 600 °C
- Wide variety of process connections, optionally with coating
- Interchangeable measuring insert
- Certification for the use in explosion hazardous areas
- Integrated temperature head transmitter



Special



highest
process-
stability &
self-
monitoring



V4A



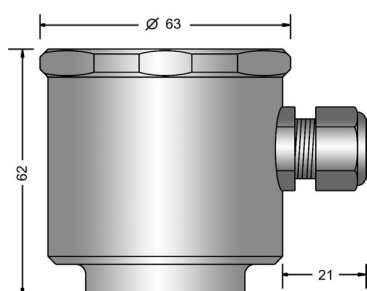
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Technical data

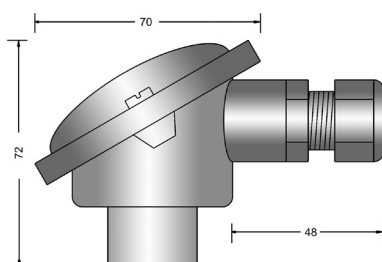
Certification	
ATEX classes	ATEX II 1 G Ex ia IIC T6...T1 Ga ATEX II 1 D Ex ia IIIC Tx°C Da
Measuring accuracy IEC 60751	
Accuracy class B – typee B	$T = -50...400^{\circ}\text{C} \leq \pm(0,3\text{K} + 0,005 * T)$
Accuracy class A – typee A	$T = -50...250^{\circ}\text{C} \leq \pm(0,15\text{K} + 0,002 * T)$ $T = 250...400^{\circ}\text{C} \leq \pm(0,3\text{K} + 0,005 * T)$
Accuracy class AA – typee C	$T = 0...100^{\circ}\text{C} \leq \pm(0,1\text{K} + 0,0017 * T)$ $T = -50...0^{\circ}\text{C} / 100...250^{\circ}\text{C} \leq \pm(0,15\text{K} + 0,002 * T)$ $T = 250...400^{\circ}\text{C} \leq \pm(0,3\text{K} + 0,005 * T)$
Type S – Accuracy class B	$T = -200...600^{\circ}\text{C} \leq \pm(0,3\text{K} + 0,005 * T)$
Type S – Accuracy class A	$T = -200...600^{\circ}\text{C} \leq \pm(0,15\text{K} + 0,002 * T)$
Type S – Accuracy class AA	$T = -50...250^{\circ}\text{C} \leq \pm(0,1\text{K} + 0,0017 * T)$ $T = -50...0^{\circ}\text{C} / 250...600^{\circ}\text{C} \leq \pm(0,15\text{K} + 0,002 * T)$
Materials	
Protection tube: (process wetted)	Steel 1.4404 (AISI 316L) / 1.4571 (AISI 316Ti), Wall thickness $\geq 1\text{mm}$
Process connection: (process wetted)	Steel 1.4404 (AISI 316L) / 1.4571 (AISI 316Ti)
Neck tube:	CrNi-Steel
Terminal enclosure:	CrNi-steel / Aluminium lacquered / PP / POM
Environmental conditions	
Environmental temperature:	$-40^{\circ}\text{C}...+130^{\circ}\text{C}$ (limitation by material see technical manual)
Process temperature:	Limitation by category / temperature class/ electrical power, see EC conformity certificate maximum $-50^{\circ}\text{C}...+400^{\circ}\text{C}$ / high temperature version $-200^{\circ}\text{C}...+600^{\circ}\text{C}$
Process pressure:	depending on process connection, maximum $\leq 60\text{ bar}$
Protection:	IP67 (EN/IEC 60529)

$|T|$ = Numerical value of temperature in $^{\circ}\text{C}$, no leading sign

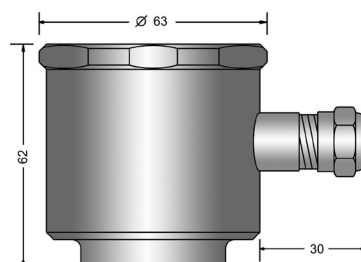
Terminal enclosure type 2 / B



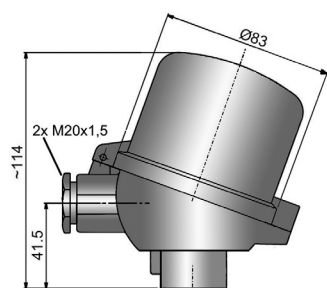
Terminal enclosure type 4



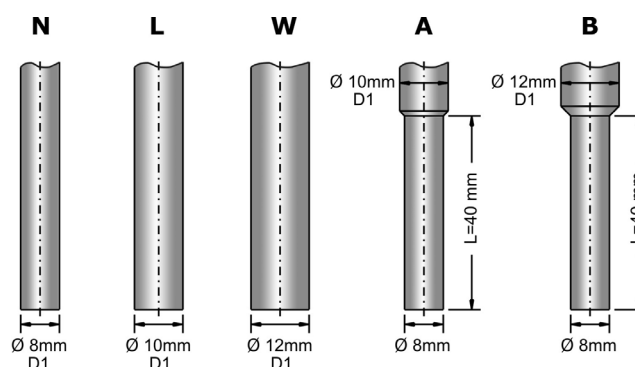
Terminal enclosure type 5



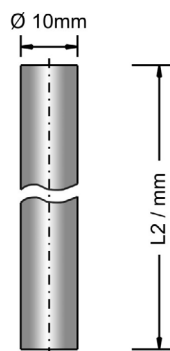
Terminal enclosure type G



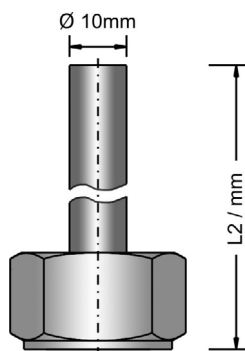
Probes



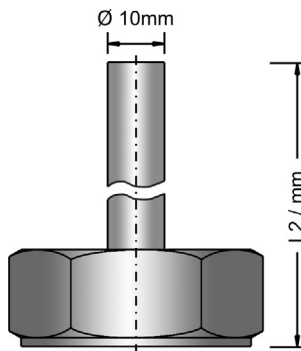
Neck tube
process connection
type E / F



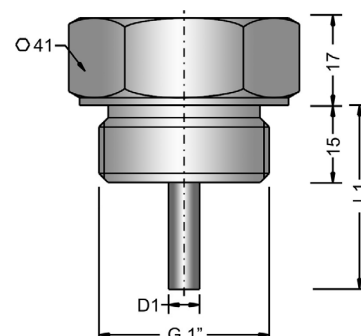
Neck tube
process connection
type 1



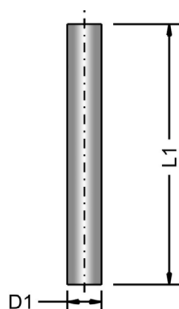
Neck tube
process connection
type 2



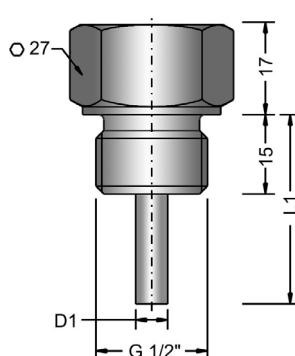
Process connection
type 2 - G 1" ISO 228-1



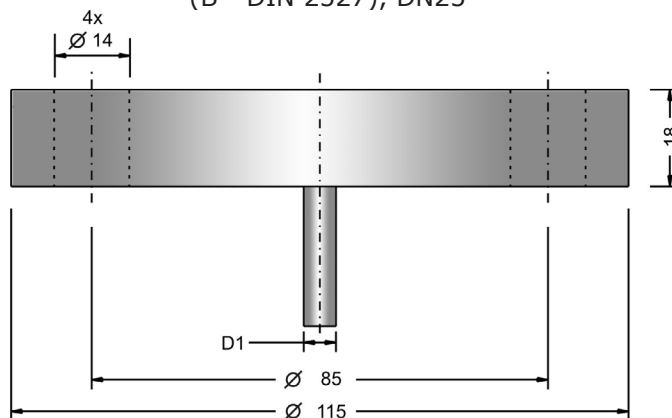
Process connection
type 0 - without
(for sliding sleeve)



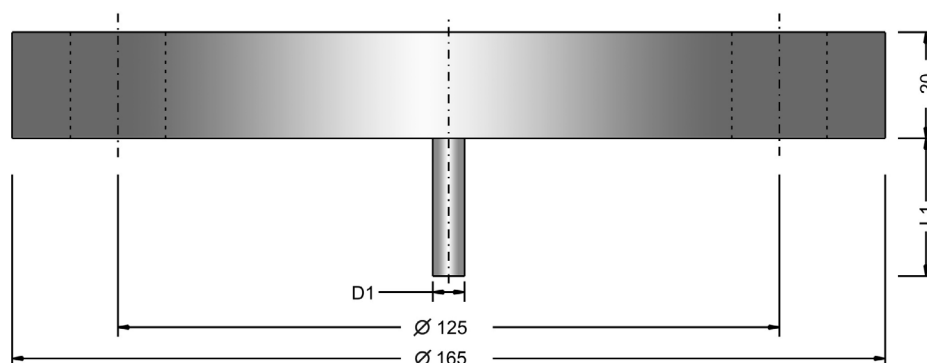
Process connection
type 1 -
G 1/2" ISO 228-1



Type E - flange DIN EN 1092-1, A
(B - DIN 2527), DN25



Type F - flange DIN EN 1092-1, A(B - DIN 2527), DN50



Type certificate

- 1
- 2
- ATEX II 1 G Ex ia IIC T6...T1 Ga
- ATEX II 1 G Ex ia IIC T6...T1 Ga / ATEX II 1 D Ex ia IIIC Tx°C Da
- Only with connection type K / M
- Only with material terminal enclosure type 4 / 5
- Not with surface coating

Sensor type

- 1
- 2
- 3
- 4
- 1x Pt100 / 2-wire
- 1x Pt100 / 3- wire
- 1x Pt100 / 4- wire
- 2x Pt100 / 2- wire

Accuracy class / Process temperature

- B
- A
- C
- Y
- Class B - IEC 60751 / -50°C...+400°C
- Class A - IEC 60751 / -50°C...+400°C not for sensor type 4
- Class AA - IEC 60751 / -50°C...+400°C not for sensor type 4
- others (e.g. high temperature type -200...+600°C, not for sensor type 4/ surface coating e.g. ETFE)

Process connection

- 0
- 1
- 2
- E
- F
- Y
- without
- Thread ISO 228-1 – G½”B
- Thread ISO 228-1 – G1”B
- Flange DIN EN 1092-1, A (B - DIN 2527), DN25, PN10-40
- Flange DIN EN 1092-1, A (B - DIN 2527), DN50, PN10-40
- others

Material process connection/probe (process wetted) - probe diameter D1

- N
- L
- W
- A
- B
- Y
- CrNi-steel – Ø8 mm
- CrNi-steel – Ø10 mm
- CrNi-steel – Ø12 mm
- CrNi-steel – Ø10 mm - reduced tip Ø8 mm/L=40 mm
- CrNi-steel – Ø12 mm - reduced tip Ø8 mm/L=40 mm
- others

Neck tube

- A
- B
- Y
- without
- Neck tube L2=100mm
- Neck tube L2/mm

Material terminal enclosure

- B
- 2
- 4
- 5
- G
- Y
- PP
- POM
- Aluminum form B – EN 50446
- CrNi-steel
- Aluminum double size
- others

Measuring insert

- W
- Exchangeable measuring insert

Connection type

- K
- M
- X
- D
- G
- L
- Y
- Terminal socket
- Head transmitter ExKTM- _A0 (4...20mA/fix adjusted) integrated
- Head transmitter UTN500-B (4...20mA/programmable) integrated
- Loose wires
- 1x terminal socket / 1x head transmitter type M/X/T/others terminal enclosure type G
- 2x terminal socket terminal enclosure type G
- others

Sensor length L1 / mm

Neck tube length L2 / mm

Order code

PTX

W

mm

mm