

Euro gauge

Electrical contact type temperature gauge

Model : T521(H), T522(H/L), T523(L), T524(H/HH), T525(L/LL)

Spec. sheet no. TD05-03

Service intended

Contact type temperature gauge is installed with electric contact actuated by pointer. It provides the function which electrical circuit can be opened or closed by manual set point. It is applicable where signal is required (Audible or visual alarm) for control of resistance or any other application with auxiliary relay and contact.



Nominal diameter

100 mm

Accuracy

±2.0% of full scale

Measuring system (SAMA class IIIB)

Organic gas : 0 ~ 200°C

Inert gas : -200 ~ 700°C

Working range

Maximum scale value



Standard features

Location of stem and mounting

Bottom connection, surface, case mounting

Case

304SS

Cover

304SS

Bayonet type

Capillary

Capillary : 1.6/0.2 mm, 316SS

Armored tube : 7.5/5.5 mm, 304SS

Window

Safety glass

Polycarbonate

Dial

White aluminium with black graduation

Contacts

Maximum voltage : 250 V AC

Contact rating : AC 220 V, 0.25 A

DC 100 V, 0.5 A

With max. no of contact : 2 sets per gauge

Pointer

Black painted aluminium alloy

Stem

8.0, 10.0 and 12.0 mm

316SS and 316L SS

Stem, process connection

$\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ " PT, NPT and PF

Optional

Special accuracy, ±1.0% of full scale

Main order

Ordering information

1. Base model

- T521** Electrical contacts type temperature gauge (High alarm)
- T522** Electrical contacts type temperature gauge (High and low alarm)
- T523** Electrical contacts type temperature gauge (Low alarm)
- T524** Electrical contacts type temperature gauge (High and high alarm)
- T525** Electrical contacts type temperature gauge (Low and low alarm)

2. Nominal diameter and window material

- 4** 100 mm and safety glass
- 5** 100 mm and polycarbonate window

3. Type of mounting

- A** Bottom connection (Only direct mounting)
- B** Bottom connection, surface, case mounting plate
- N** Lower back entry and panel mounting

4. Stem material

- 1** 316SS
- 2** 316L SS

5. Stem, process connection

- A** None
- D** $\frac{3}{8}$ "
- E** $\frac{1}{2}$ "
- F** $\frac{3}{4}$ "

6. Stem connection type (CF: Compression fitting)

- A** None
- B** PF
- C** PT
- D** NPT
- E** CF + PT
- F** CF + NPT
- G** CF + PF
- H** MT + PT (Movable thread)
- I** MT + NPT (Movable thread)
- J** MT + PF (Movable thread)

7. Stem outer diameter (mm)

- 2** 8.0
- 3** 10.0
- 4** 12.0 (Standard)

8. Range

- XXX** Refer to scale range table

9. Capillary length

- A** Direct mounting type
- P** 2 metre
- Q** 3 metre
- S** 5 metre
- V** 8 metre
- X** 10 metre
- Z** Other

10. Accessories

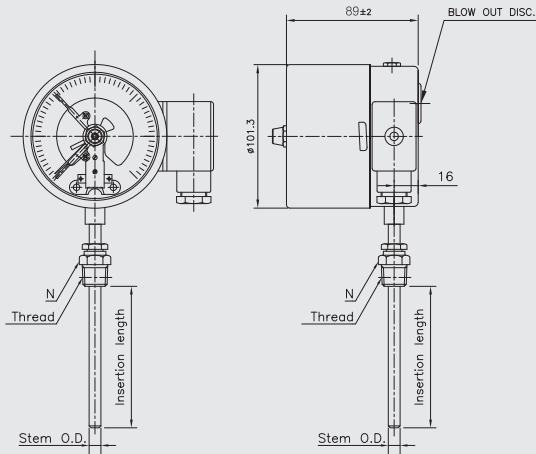
- 0** None
- 1** Thermowell
- 2** Special accuracy ($\pm 1.0\%$ of full scale)
- 3** Thermowell and special accuracy

1	2	3	4	5	6	7	8	9	10
T521	4	B	1	E	C	3	XXX	P	1

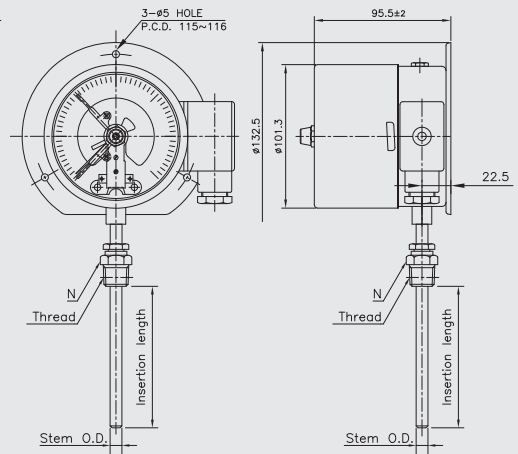
Sample
ordering code

T52X : Type of mounting

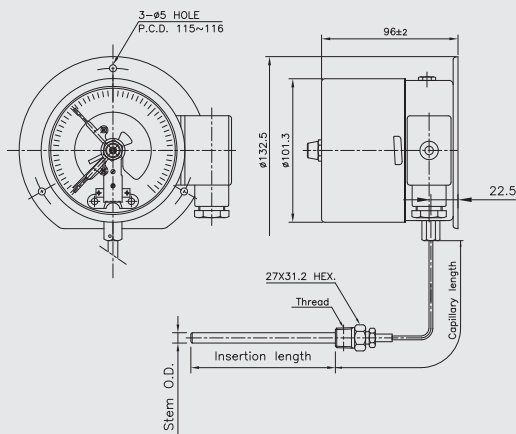
Code A



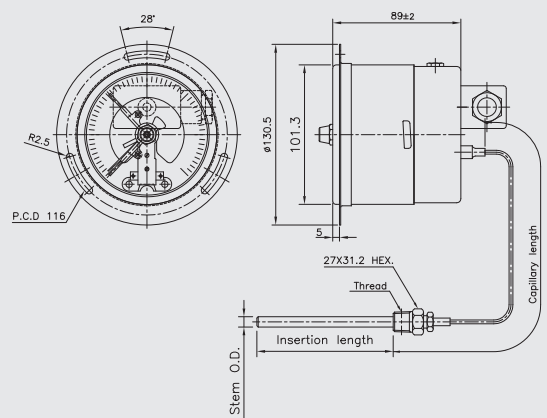
Code B



Code B*



Code N



Snap-action contacts

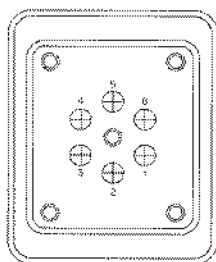
General

Electromechanical limit switches in pointer type measuring instruments are auxiliary current switches which open or close electrical circuits at set limit value by means of a contacts arm which is moved by the actual value pointer. The snap action contact is a mechanical contact for switching capacities up to 30W 50VA max. Contact making will be delayed or advanced in relation to the movement of the actual value pointer. To closed the circuit, the contact pin of the movable contact arm is attracted in a jump by the permanent magnet fasten to the supporting arm shortly before the set value has been reached. Due to the retention force of the magnet, snap action contacts are more resistance against shock and vibration. The switching safety is increased by the increased contact pressure. When the circuit is opened, the magnet keeps the contact arm in its place until the restoring force of the measuring element exceeds the magnetic force, and the contact opens in a jump.

Technical data

Normal operating voltage	Max. 250 V
Making and breaking current	Max. 1.0 A
Permanent current	Max. 0.6 A
Switching capacity	Max. 30 W 50 VA
Contact material	Ag80-Ni20
Switching accuracy	Approx. 2-5% of full scale value
No. of contact	Max. 2

Terminal block arrangement



- ① No.1 contact (High or low)
- ② Common
- ③ HH or LL
- ④ Ground
- ⑤ Not used
- ⑥ Not used

Scale ranges

Code	Scale range (°C)	Scale spacing(°C)	Minimum stem length (mm)			Standard stem length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50 ~ 50	2	100	85	65	200	130	130
037	-50 ~ 100	5	100	88	65	200	130	130
054	-30 ~ 50	2	100	85	65	200	150	150
059	-30 ~ 100	2	100	85	65	200	130	130
061	-30 ~ 120	5	100	85	65	200	130	130
069	-20 ~ 50	2	100	85	65	200	130	130
074	-20 ~ 100	2	100	85	65	200	130	130
079	-20 ~ 150	5	100	85	65	200	130	130
084	-10 ~ 50	1	100	85	65	200	130	210
099	0 ~ 50	1	100	85	65	200	130	210
100	0 ~ 60	1	100	85	65	200	130	190
101	0 ~ 70	2	100	85	65	200	130	130
102	0 ~ 80	2	100	85	65	200	130	130
104	0 ~ 100	2	100	85	65	200	130	130
106	0 ~ 120	2	100	85	65	200	130	130
109	0 ~ 150	5	100	85	65	200	130	130
114	0 ~ 200	5	100	85	65	200	130	130
119	0 ~ 250	5	100	85	65	200	130	130
124	0 ~ 300	5	100	45	40	200	130	130
129	0 ~ 350	5	100	45	40	200	130	130
134	0 ~ 400	10	100	45	40	200	130	130
144	0 ~ 500	10	100	45	40	200	130	130
154	0 ~ 600	10	100	45	40	200	130	130
164	0 ~ 700	10	100	45	40	200	130	130

* 0 ~ 700°C/Special range

Insertion length

(For direct mounting)

Code	1	2	3	4	5	6	7	8	9	A	B	C
Length (mm)	50	60	70	80	100	120	130	150	175	200	225	250

Code	D	E	F	G	H	J	K	L	M	N	P
Length (mm)	275	300	350	375	400	450	500	550	1,000	1,500	2,000

