

### Description & Features

- For temperatures from -200 to +1600°C
- Available with different thermocouples
- As single or twin thermocouple
- With transmitter option
- Explosion proof (EEx d IIC T5, EEx d IIC T6)

### Applications

Thermocouples are preferred for measuring temperatures in liquids and gases. An important selection criterion is their reliable sealing against both negative and positive pressures. Applications include heating installations, ovens, furnaces and plant engineering, as well as process technology.

The terminal head is suitable for ambient temperatures up to +100°C.

Protection tubes in different materials protect the measuring insert from chemical effects and mechanical damage. The choice of the appropriate protection tube material depends on the site conditions. Versions with two thermocouples are also available.

### Specifications

#### Terminal head

- Aluminium box and temperature transmitter can be installed in JIS standard
- Explosion-proof aluminium box (EEx d IIC T5)
- Explosion-proof stainless steel box (EEx d IIC T6)
- Field display LED/LCD Explosion-proof temperature transmitters
- **Caution: reduced ambient temperature when using transmitters**

#### Measuring insert

insulated assembly:

- 1xFe-CuNi J, operating temperature -40 to +750°C
- 1xCu-CuNi T, operating temperature -40 to +350°C
- 1xNiCr-CuNi E, operating temperature -40 to +800°C
- 1xNiCr-NiAl K, operating temperature -40 to +1000°C
- 1xPt 13 Rh-Pt R, operating temperature 0 to +1100°C
- 1xPt 10 Rh-Pt S, operating temperature 600 to +1600°C
- 1xPt 30 Rh-Pt6Rh B, operating temperature 600 to +1700°C Class II
- 2xFe-CuNi J, operating temperature -40 to +750°C
- 2xCu-CuNi T, operating temperature -40 to +350°C
- 2xNiCr-CuNi E, operating temperature -40 to +800°C
- 2xNiCr-NiAl K, operating temperature -40 to +1000°C
- 2xPt 13 Rh-Pt R, operating temperature 0 to +1100°C
- 2xPt 10 Rh-Pt S, operating temperature 600 to +1600°C
- 2xPt 30 Rh-Pt6Rh B, operating temperature 600 to +1700°C Class II

### Order Information

Series/ Dial Size/ Case Materials/ Wetted Parts/ Configuration/ Connection Size/ Thread/ Range/ Option



#### Protection tube

- Material: 304SS, 316SS, 316LSS
- Outside diameter:  
Standard: 9mm, 11mm, 12mm  
Option: 6mm, 8mm, 10mm, 16mm

#### Process connection

- Without thermowell
- Thermowell with threaded process connection
- Thermowell with flanged process connection
- Thermowell with sanitary type process connection
- Please refer to catalogues of thermowells

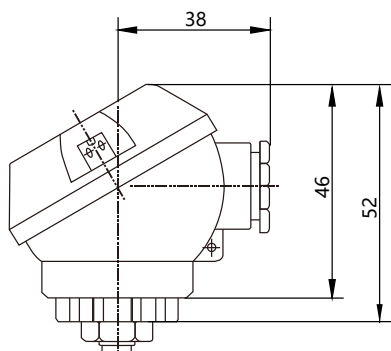
#### Transmitter

- Isolated smart temperature transmitter - Thermocouple input
- Isolated smart temperature transmitter - RTD /Thermocouple input
- Non Intrinsic safety type temperature transmitter  
2-wire transmitter with HART® protocol
- Intrinsic safety type temperature transmitter  
2-wire transmitter with HART® protocol
- Intrinsic safety type temperature transmitter Profibus PA/Foundation  
Fieldbus bus protocol

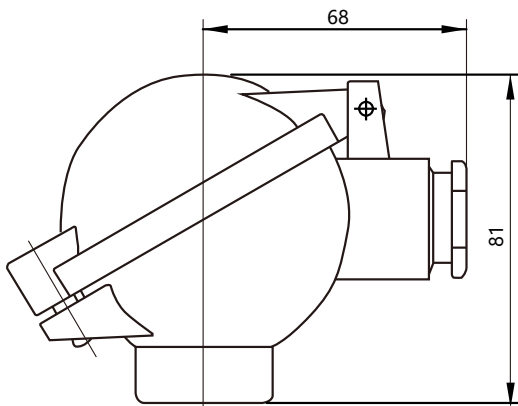
#### Accessories

Thermowell

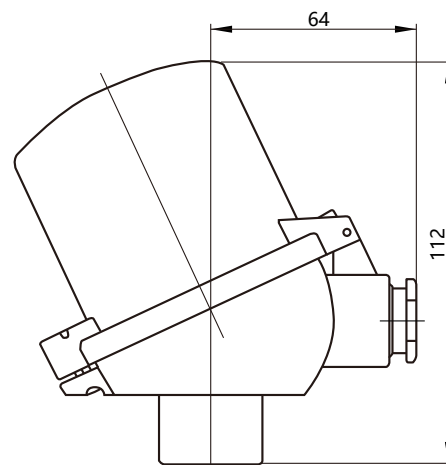
## Dimension of terminal head (mm)



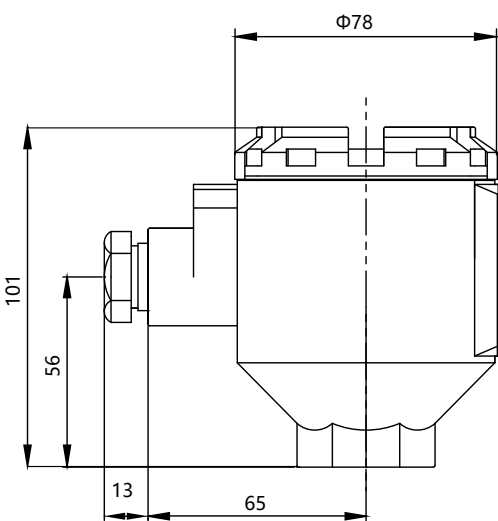
JM connection head



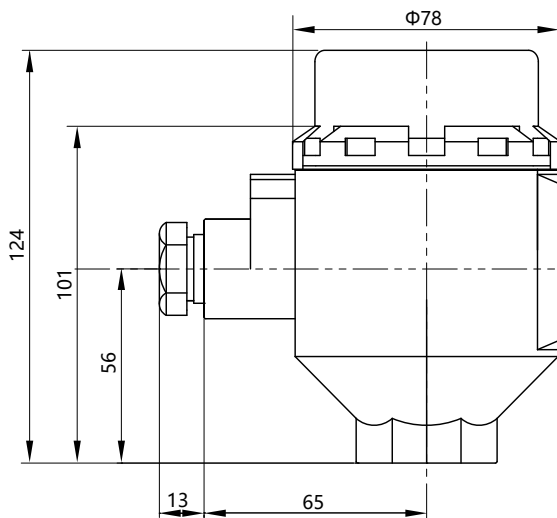
BS connection head



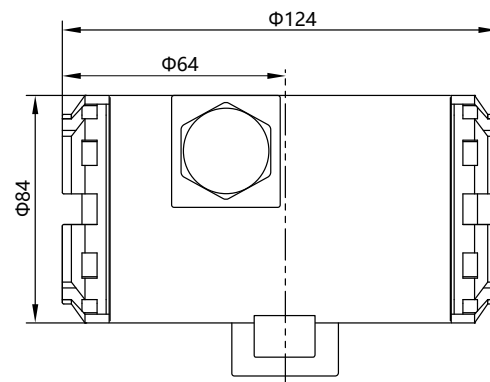
BH connection head



EX connection head

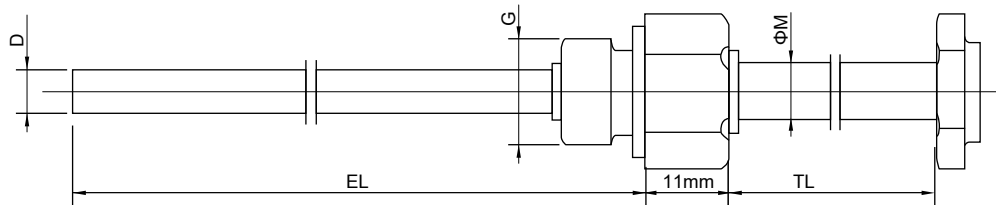


DX connection head



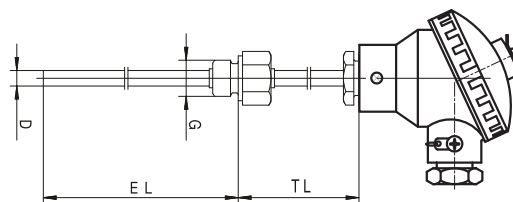
DD connection head

## Stem dimension



## TCJ Series Ordering Code

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- With transmitter option
- Explosion proof (EEx d IIC T5, EEx d IIC T6)



## Code Specifications

Terminal Head Form		
1.	BS	DIN form B type
	JM	J type (mini)
	BH	High housing
	EX	Explosion proof (Exd IIC T6)
	DX	Explosion-proof s,display available(EEx d IIC T6)
	DD	Two cable connection
Measuring Insert / Operating Temperature in °C		
2.	1J	1xFe-CuNi J,operating temperature -40 to +750°C
	1T	1xCu-CuNi T,operating temperature -40 to +350°C
	1E	1xNiCr-CuNi E,operating temperature -40 to +800°C
	1K	1xNiCr-NiAl K,operating temperature -40 to +1000°C
	1R	1xPt 13 Rh-Pt R,operating temperature 0 to +1100°C
	1S	1xPt 10 Rh-Pt S,operating temperature 600 to +1600°C
	1B	1xPt 30 Rh-Pt6Rh B,operating temperature 600 to +1700°C Class II
	2J	2xFe-CuNi J,operating temperature -40 to +750°C
	2T	2xCu-CuNi T,operating temperature -40 to +350°C
	2E	2xNiCr-CuNi E,operating temperature -40 to +800°C
	2K	2xNiCr-NiAl K,operating temperature -40 to +1000°C
	2R	2xPt 13 Rh-Pt R,operating temperature 0 to +1100°C
	2S	2xPt 10 Rh-Pt S,operating temperature 600 to +1600°C
	2B	2xPt 30 Rh-Pt6Rh B,operating temperature 600 to +1700°C Class II
Tolerance Class to IEC 584		
3.	1	Class I
	2	Class II
Extension length TL in mm		
4.	00	0mm
	50	50mm
	75	75mm
	100	100mm
	150	150mm
	ZZZ	Special request
Protection tube outside diameter D in mm		
5.	06	6mm
	08	8mm
	09	9mm
	10	10mm
	11	11mm
	12	12mm
	16	16mm
	ZZ	Special request

## TCJ Series Ordering Code

Code		Specifications
6.		<b>Protection tube material</b>
		T 304SS
		S 316SS
		L 316LSS
		Z Special request
7.		<b>Insertion Length EL in mm</b>
		050 50mm
		075 75mm
		100 100 mm
		160 160mm
		220 220mm
		250 250mm
		280 280mm
		400 400mm
		ZZZ Special request
8.		<b>Connection Size</b>
		0 None
		2 1/2"
		4 1/4 "
		3 3/4"
9.		<b>Thread Type</b>
		0 None
		N NPT
		G G
		B BSP
		T BSPT
		M M20 X 1.5
		E M27 X 2
		Z Special request
10.		<b>Process Connection</b>
		00 Without thermowell
		TP Thermowell with threaded process connection
		FP Thermowell with flanged process connection
		SP Thermowell with sanitary type process connection
11.		<b>Transmitter</b>
		ZZ Special request
		WO Without transmitter
		TTYC Thermocouple input two-wire temperature transmitter (Isolated)
		TTHN Non intrinsic safety type temperature transmitter 2-wire transmitter with HART® protocol
		TTHA Intrinsic safety type temperature transmitter 2-wire transmitter with HART® protocol
		TTAF Intrinsic safety type temperature transmitter Profibus PA/Foundation Fieldbus bus protocol
		TTRC RTD/Thermocouple input two-wire temperature transmitter (USB interface, Isolated)