DATASHEET

Temperature

Armored Thermocouple Temperature Sensor For General Industrial Applications

Model PWT4400 series

Applications

- Petroleum machinery
- Chemical machinery
- Electric power
- Boiler
- Natural gas
- Agricultural
- Automatic temperature measurement

Temperature Sensor PWT4400 series

Features

- K, N, E, J, T, S type thermocouple
- High accuracy I and II class
- Good mechanical strength
- Good pressure and vibration resistance
- Fast response
- Universal for fluid, steam, gas and solid
- Easy installation

Description

PWT4400 Armored thermocouple temperature sensors are widely used in various production processes to directly measure the temperature of liquid, steam and gas media and solid surfaces within the range of -40 to 1600°C, and are used in conjunction with display instruments, recording instruments, etc. to form a field monitoring system.

Thermocouples are mainly composed of junction boxes, terminal blocks, protective tubes, insulating sleeves, and hot electrodes, and are equipped with various installation and fixing devices. The temperature sensor adopts a fully welded structure and a high-strength stainless steel shell. It is widely used in automated temperature measurement and control systems such as petroleum machinery, chemical machinery, electricity, boilers, and natural gas.

Specifications

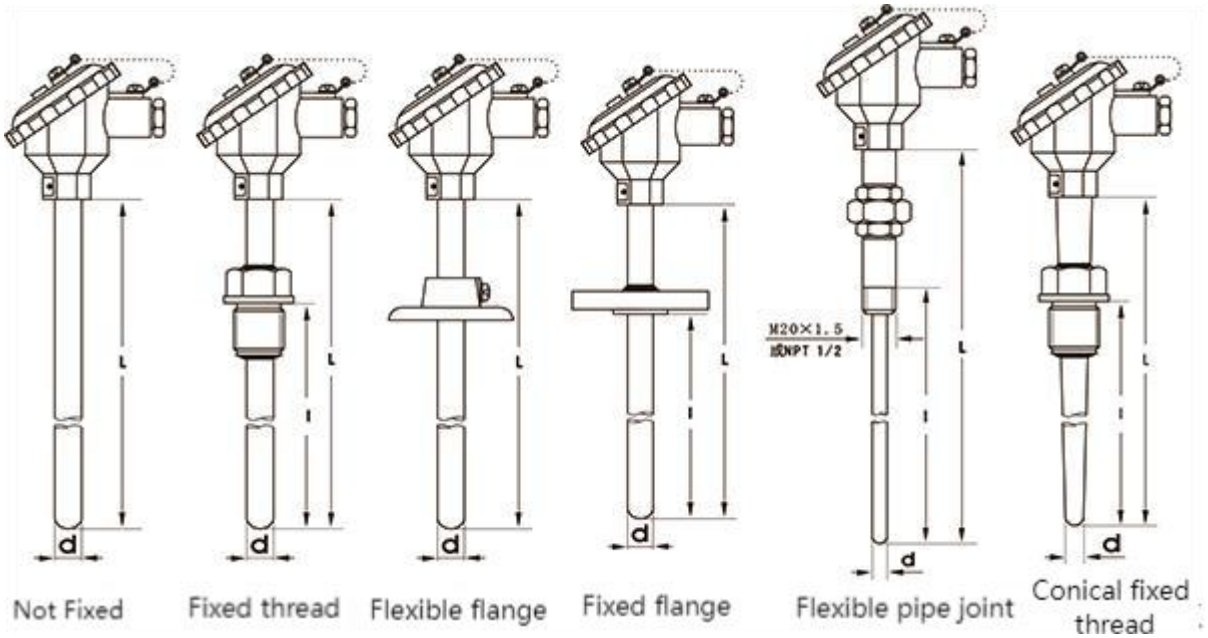
Measuring Range and Permit Tolerance				
Type	Ⅰ class		Ⅱ class	
	Measuring Range	Permit Tolerance	Measuring Range	Permit Tolerance
K	-40~+375℃	±1.5℃	-40~+333℃	±2.5℃
N	-40~+375℃	±1.5℃	-40~+333℃	±2.5℃
E	-40~+375℃	±1.5℃	-40~+333℃	±2.5℃
J	-40~+375℃	±1.5℃	-40~+333℃	±2.5℃
T	-40~+125℃	±1.5℃	-40~+333℃	±1℃
S	0~+1100℃	±1℃	0~+600℃	±2.5℃

Thermal Response Time			
Type	Protection Tube Material	Pipe Diameter	Thermal Response Time
B	Corundum tube No fixed installation method	Φ16	< 150S
		Φ25	< 360S
R, S	High aluminum tube No fixed installation method	Φ16	< 150S
		Φ25	< 360S
N, K, E, T, J	1Cr18Ni9Ti	Φ16	< 60S
		Φ20	< 90S
	Carbon steel 20#	Φ16	< 60S
		Φ20	< 90S

*Φ25 is double layer casing tube.

Nominal Pressure		
No.	Installation Method	Nominal Pressure
1	Not fixed	Atmospheric
2	Fixed thread	≤10MPa
3	Flexible flange	Atmospheric
4	Fixed flange	≤2.5MPa
5	Flexible pipe joint type	Atmospheric
6	Conical fixed thread type	≤30MPa

Product Appearance

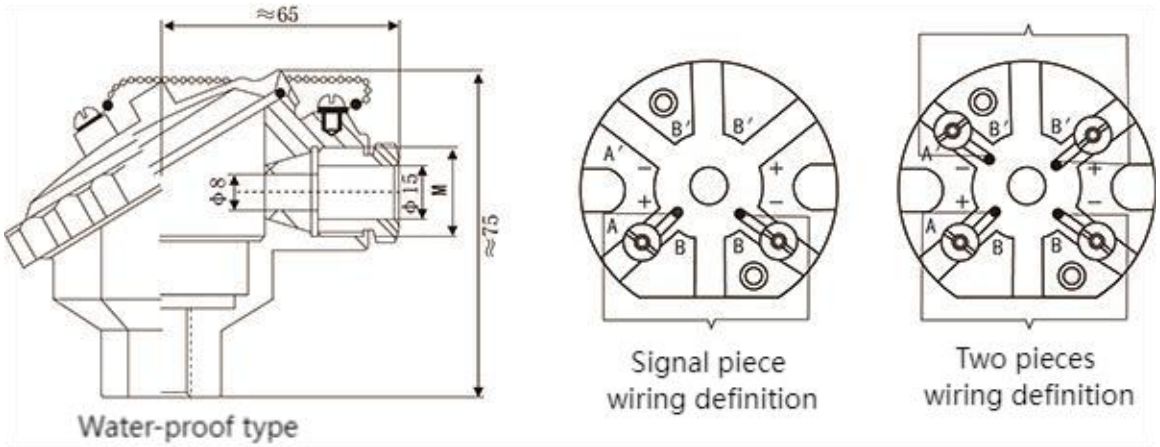


Insertion Depth of Protection Tube

Installation Method	Insertion Depth(mm)									
Not fixed	150	200	250	300	350	400	500	750	1000	1500
Fixed thread	150	200	250	300	350	400	500	750	1000	1500
Flexible flange	150	200	250	300	350	400	500	750	1000	1500
Fixed flange	150	200	250	300	350	400	500	750	1000	1500
Conical fixed thread	150	200	250	300	350	400	500			
Flexible pipe joint	250	275	300	350	400	450	550	650	750	900

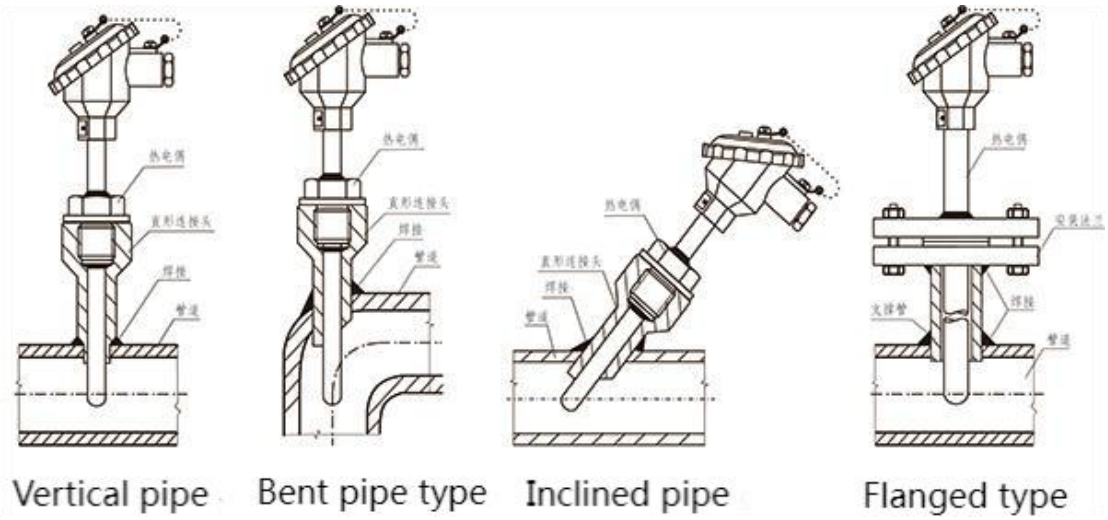
*Protection tube total length: L=l+150; Special insertion depth and tube material can be customized.

Electrical Connection



*No special specification the electrical connection M is M20x1.5

Installation Diagram



How to Order

Example Part Number: 4400K0230G

Model Number	4400		4400
Temperature Sensing Element Material: Index	N= Nickel-chromium-silicon-nickel-silicon: N K= Nickel-chromium-nickel-silicon: K E= Nickel-chromium-copper-nickel: E J= Iron-copper-nickel: J T= Copper-copper-nickel: T S= Platinum-rhodium 10-platinum: S R= Platinum-rhodium 13-platinum: R B= Platinum-rhodium 30-platinum 6: B		K
Thermocouple Wire Quantity	0=Signal piece	2=Two pieces	0
Installation Method	1=Not fixed 3=Flexible flange 5=Flexible pipe joint type	2=Fixed thread 4=Fixed flange 6=Conical fixed thread type	2
Electrical Connection	3=Water-proof		3
Protection Tube Diameter	0=Φ16 2=Φ16 high aluminum tube 4=Φ25(optional)	1=Φ20 3=Φ20 high aluminum tube	0
Working End Section Form	G=Variable section		G

Note 1: After part selection, the accuracy level, protection tube material and insertion length must be specified.

Note 2: Typical accuracy is Ⅱ if not specified in the order.

Note 3: Typical material of the protection tube is SS304 if not specified; special materials are determined by negotiation between the two parties.