

## Temperature sensor

## General description

### Temperature sensor assembly

Type	Model	Description
Lead wire type	<b>TK-101</b>	Bolt head
		Round tube : a round tube with sensor element extended to outside of protection tube
		C protection tube : a round shoulder is provided for inner connection between lead wire and sensor element
		D protection tube : a hexagon shoulder is provided for inner connection between lead wire and sensor element
		Special type
T head	<b>TK-201</b>	Small T head : made of aluminum alloy, provides an open terminal block for external wiring
	<b>TK-301</b>	Big t head : made of aluminum alloy, provides an open terminal block for external wiring
Round head (enclosed type)	<b>TK-201</b>	Small round head : made of aluminum alloy, external wiring is attached inside the enclosed head.
	<b>TK-301</b>	Big round head : made of aluminum alloy, external wiring is attached inside the enclosed head.
	<b>TK-201-B</b>	Small bakelite round head : made of bakelite (phenol resin), external wiring is attached inside the enclosed head.
	<b>TK-301-B</b>	Big bakelite round head : made of bakelite (phenol resin), external wiring is attached inside the enclosed head.

Model : **TK-101**



Model : **TK-102**



Model : **TK-103-1**



Model : **TK-101-6**



Model : **SK-30**



Model : **SK-40-KS**



Model : **TK-201-TL**, Ceramic Tube



Model : **TK-201-TS**, Ceramic Tube



Model : **TK-501**



Model : **TK-201-KL**



Model : **TK-201-KS**



Model : **TK-301-2** fixed flange type



Model : **TK-301-KL**



Model : **TK-301-KS**

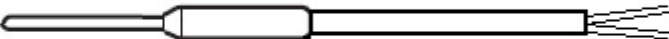


Model : **TK-601-2** Explosion proof



**Temperature sensor**

**Sheath type**



**To order, specify : 1.sensor 2.tube diameter, length, material  
3. Lead length**

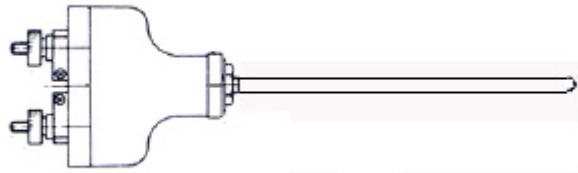
Model	<b>SK-30</b> (C protection tube)		
Sensor	<b>PT100 3W</b>		
Tube diameter	<b>3.2mmΦ</b>	<b>4.8mmΦ</b>	<b>6.4mmΦ</b>
Tube length (mm)	150, 200, 350	200, 350, 500	
Tube material	SUS316		
Lead wire length (M)	1, 2, 4, 8 others : to order		
Sensing range	-200 to 450°C		
Class	0.5		

Sensor	<b>K</b>		<b>K</b>		<b>K</b>		<b>K</b>		<b>K</b>		<b>K</b>	
Tube diameter (mm)	<b>1Φ</b>		<b>1.6Φ</b>		<b>3.2Φ</b>		<b>4.8Φ</b>		<b>6.4Φ</b>		<b>8Φ</b>	
Tube length (mm)	150, 200, 350		150, 200, 350		150, 200, 350, 500		200, 350, 500		200, 350, 500		200, 350, 500	
Tube material	SUS316	Inconel	SUS316	Inconel	SUS316	Inconel	SUS316	Inconel	SUS316	Inconel	SUS316	Inconel
Sensing range	500°C	600°C	600°C	700°C	750°C	800°C	800°C	900°C	850°C	1000°C	900°C	1050°C
Class	0.75		0.75		0.75		0.75		0.75		0.75	
Sensor	<b>J</b>		<b>J</b>		<b>J</b>		<b>J</b>		<b>J</b>		<b>J</b>	
Tube diameter (mm)	<b>1Φ</b>		<b>1.6Φ</b>		<b>3.2Φ</b>		<b>4.8Φ</b>		<b>6.4Φ</b>		<b>8Φ</b>	
Tube length (mm)	150, 200, 350		150, 200, 350		150, 200, 350, 500		200, 350, 500		200, 350, 500		200, 350, 500	
Tube material	SUS316		SUS316		SUS316		SUS316		SUS316		SUS316	
Sensing range	400°C		450°C		500°C		700°C		750°C		750°C	
Class	0.75		0.75		0.75		0.75		0.75		0.	



**To order, specify : 1.Sensor 2.Tube Diameter/Length  
3.Lead wire L 4.Earthling**

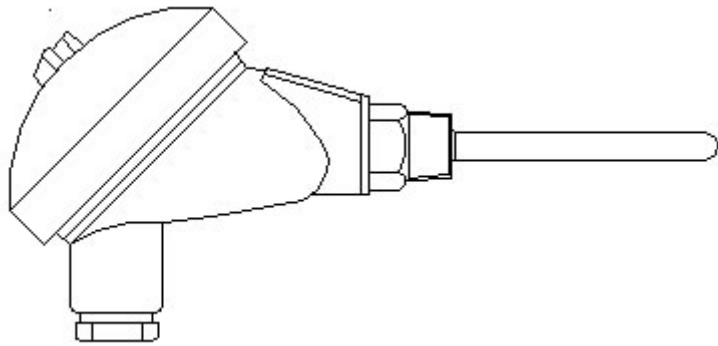
Model	<b>TK-30</b> (round tube)		
Sensor	<b>K</b>	<b>J</b>	<b>PT100 3W</b>
Tube diameter (mm)	<b>3.2Φ, 4.8Φ, 6.4Φ, 8Φ</b>		
Tube length (mm)	100, 150, 200, 350, 500		
Lead wire length (M)	1, 2, 4 others : to order		
Tube material	SUS304		
Sensing range	0 - 350°C	0 - 200°C	-20 to 250°C
Earthing	earthed, isolated(un-earthed)		isolated
Class	0.75	0.75	0.5
Other Size	Please Contact us		



Model		<b>SK-40-TS</b> (aluminum alloy small T head)			
Sensor	<b>J</b>	<b>J</b>	<b>J</b>	<b>J</b>	
Tube diameter mm	<b>3.2Φ</b>	<b>4.8Φ</b>	<b>6.4Φ</b>	<b>8Φ</b>	
Tube length (mm)	200,350,500	200, 350, 500, 750		350,500,750	
Tube material	SUS316	SUS316	SUS316	SUS316	
Sensing range	500°C	700°C	750°C	750°C	
Class	0.75	0.75	0.75	0.75	
Other Size	Please Contact us				

**To order, specify : 1.sensor 2.tube diameter, length, material**

Sensor	<b>K</b>		<b>K</b>		<b>K</b>		<b>K</b>	
Tube diameter (mm)	<b>3.2Φ</b>		<b>4.8Φ</b>		<b>6.4Φ</b>		<b>8Φ</b>	
Tube length (mm)	200, 350, 500		200, 350, 500, 750		200, 350, 500, 750		350, 500, 750	
Tube material	SUS316	Inconel	SUS316	Inconel	SUS316	Inconel	SUS316	Inconel
Sensing range	750°C	800°C	800°C	900°C	850°C	1000°C	900°C	1050°C
Class	0.75		0.75		0.75		0.75	



Model		<b>SK-40-KS</b> (aluminum alloy small round head)			
Sensor		<b>PT100 3W</b>			
Tube diameter (mm)	<b>3.2Φ</b>	<b>4.8Φ</b>	<b>6.4Φ</b>		
Tube length (mm)	200, 350, 500	200, 350, 500, 750			
Tube material	SUS316	SUS316	SUS316		
Sensing range	-200 to 450°C				
Class	0.5				
Other Size	Please Contact us				

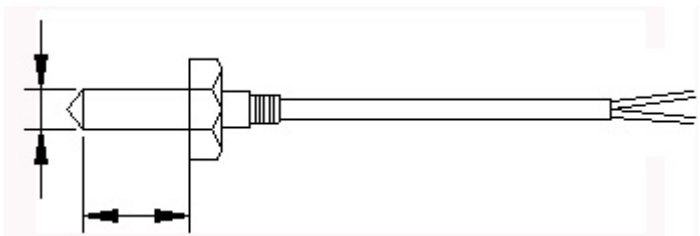
**to order, specify : 1.sensor 2.tube diameter, length, material**

Sensor	<b>K</b>	<b>J</b>	<b>K</b>	<b>J</b>	<b>K</b>	<b>J</b>	<b>K</b>	<b>J</b>
Tube diameter (mm)	<b>3.2Φ</b>		<b>4.8Φ</b>		<b>6.4Φ</b>		<b>8Φ</b>	
Tube length (mm)	200, 350, 500		200, 350, 500, 750		200, 350, 500, 750		350, 500, 750	
Tube material	SUS316	Inconel	SUS316	SUS316	Inconel	SUS316	SUS316	Inconel
Sensing range	750°C	800°C	500°C	800°C	900°C	700°C	850°C	1000°C
Class	0.75		0.75		0.75		0.75	

**Please specify when ordering if the sensor will be used in a special environment e.g. high temperature, wet, corrosive, etc.**

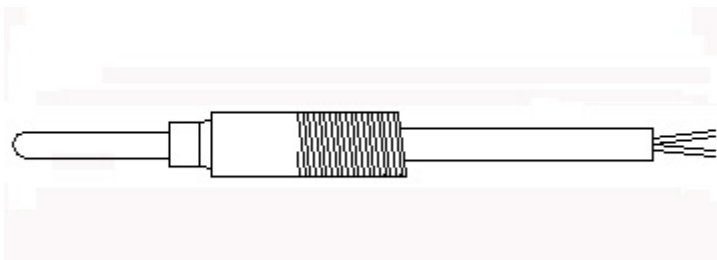
## Temperature sensor

## Common type



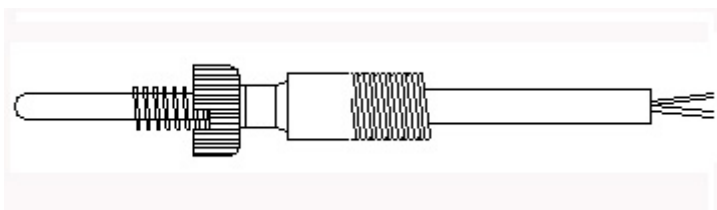
To order, specify : 1.Sensor 2.Thread  
3.Lead wire length 4.Earthing

Mode	<b>TK-101</b> (bolt head)	
Sensor	<b>K</b>	<b>J</b>
Length	<b>10mm</b>	
Thread	NC1/4-20, NC5/16-18, M6, M8	
Lead wire length (mm)	1, 2, 4 others : to order	
Bolt material	SUS304	
Sensing range	0 - 400°C	0 - 350°C
Earthing	earthed, isolated(un-earthed)	
Class	0.75	



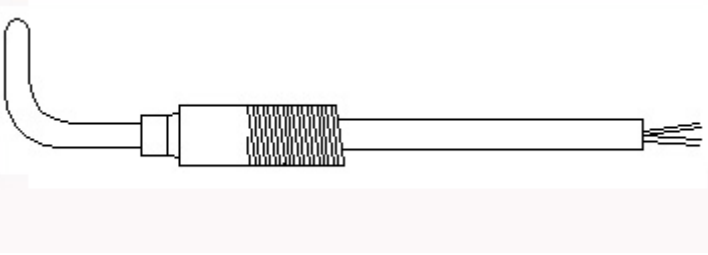
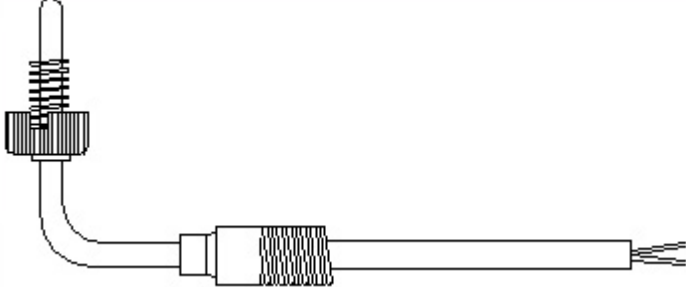
To order, specify : 1.sensor 2.tube Diameter/Length 3.leadwire L 4.earthing

Model	<b>TK-103</b> (C tube with tail spring)	
Sensor	<b>K</b>	<b>J</b>
Tube diameter (mm)	<b>5mmΦ</b>	
Tube length (mm)	50, 100, 150, 200	
Lead wire length (M)	1, 2, 4 others : to order	
Tube material	SUS304	
Sensing range	0 - 400°C	0 - 350°C
Earthing	earthed, isolated(un-earthed)	
Class	0.75	0.75
Other Size	Please Contact us	

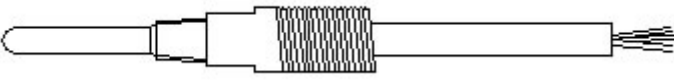
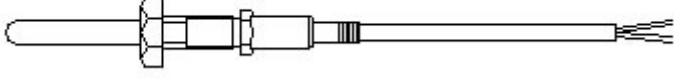


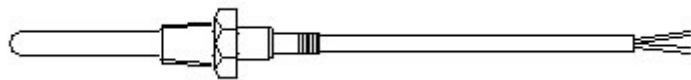
To order, specify : 1.sensor 2.tube length L,L3 3.leadwire L 4.earthing

Model	<b>TK-103-1</b> (C bayonet tube with tail spring)	
Sensor	<b>K</b>	<b>J</b>
Tube diameter (mm)	<b>5mmΦ</b>	
Tube length (mm)	50, 100, 150, 200	
Lead wire length (M)	1, 2, 4 others : to order	
Tube material	SUS304	
Sensing range	0 - 400°C	0 - 350°C
Earthing	earthed, isolated(un-earthed)	
Class	0.75	0.75
Other Size	Please Contact us	

Model	<b>TK-103-L</b> (C L-shape tube with tail spring)	Model	<b>TK-103-1-L</b> (C L-shape bayonet tube with tail spring)
Specifications	refer to <a href="#">TK-103</a>	Specifications	refer to <a href="#">TK-103-1</a>
 <p>To order, specify : 1.sensor 2.tube length L1,L2 3.leadwire L 4.earthing</p>		 <p>To order, specify : 1.sensor 2.tube length L1,L2,L3 3.leadwire L 4.earthing</p>	

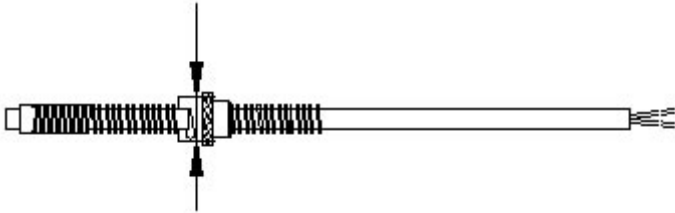
**Temperature sensor** **Common type**

 <p>To order, specify : 1.sensor 2.tube length 3.leadwire length 4.earthing</p>	Model	<b>TK-102-1</b> (C tube with thread shoulder & tail spring)		
	Sensor	<b>K</b>	<b>J</b>	<b>PT100 3W</b>
	Tube diameter	<b>5mmΦ</b>		<b>5mmΦ</b>
	Tube length (mm)	100, 150, 200, 300		
	Lead wire length (M)	1, 2, 4, 6 others : to order		
	Tube material	SUS304		
	Sensing range	0 - 400°C	0 - 350°C	0 - 300°C
	Earthing	earthed, isolated		isolated
	Class	0.75	0.75	0.5
	Other Size	Please Contact us		
 <p>To order, specify : 1.sensor 2.tube length 3.leadwire length 4.earthing</p>	Model	<b>TK-102</b> (D tube)		
	Sensor	<b>K</b>	<b>J</b>	<b>PT100 3W</b>
	Tube diameter	<b>5mmΦ</b>		<b>5mmΦ</b>
	Tube length (mm)	100, 150, 200, 300		
	Lead wire length (M)	1, 2, 4, 6 others : to order		
	Tube material	SUS304		
	Sensing range	0 - 400°C	0 - 350°C	0 - 300°C
	Earthing	earthed, isolated		isolated
	Class	0.75	0.75	0.5
	Other Size	Please Contact us		



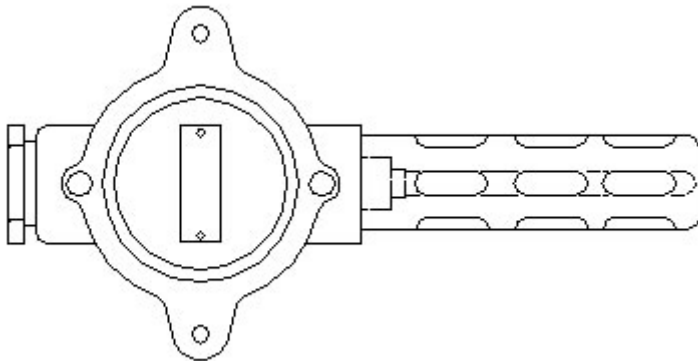
To order, specify : 1.sensor 2.tube length 3.leadwire length 4.earthing

Model	<b>TK-102-S</b> (D tube with tail spring)		
Sensor	<b>K</b>	<b>J</b>	<b>PT100 3W</b>
Tube diameter	<b>5mmΦ</b>		<b>5mmΦ</b>
Tube length (mm)	100, 150, 200, 300		
Lead wire length (M)	1, 2, 4, 6 others : to order		
Tube material	SUS304		
Sensing range	0 - 400°C	0 - 350°C	0 - 300°C
Earthing	earthed, isolated		isolated
Class	0.75	0.75	0.5
Other Size	Please Contact us		



To order, specify : 1.sensor 2.tube length L 3.leadwire length 4.earthing

Model	<b>TK-101-6</b> (tube with bayonet & loose spring)		
Sensor	<b>K</b>	<b>J</b>	
tube diameter	<b>5mmΦ</b>		
Tube length (mm)	100, 150, 200, 300		
Lead wire length (M)	1, 2, 4, 6 others : to order		
Tube material	SUS304		
Sensing range	0 - 400°C	0 - 350°C	
Earthing	earthed, isolated		
Class	0.75	0.75	
Other Size	Please Contact us		

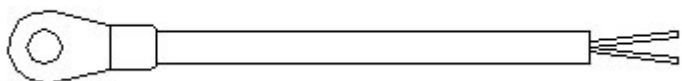


To order, specify : lead wire length

Model	<b>TK-501</b> (sleeved with aluminum alloy wiring box)		
Sensor	<b>PT100 3W</b>		
Tube diameter	<b>8mmΦ</b>		
Tube length	100mm		
Lead wire length	2M others : to order		
Tube material	SUS304		
Sleeve diameter			
Sensing range	-50 to 60°C		
Class	0.5		
Other Size	Please Contact us		

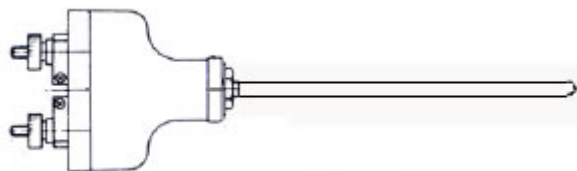
**Temperature sensor**

**Common type T head**



**To order, specify : 1.sensor 2.terminal size 3.leadwire length**

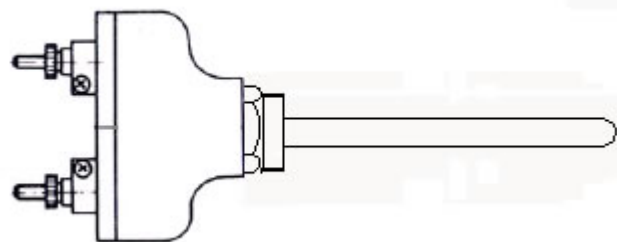
Model	<b>TK-001</b> (terminal fixing type)	
Sensor	<b>K</b>	<b>J</b>
Terminal size	<b>round type M4, M5, M6</b>	
Lead wire length (M)	1M, 2M	
Sensing range	0 - 300°C	0 - 300°C
Earthing	earthed	
Class	0.75	0.75
Other Size	Please Contact us	



**To order, specify : 1.sensor 2.tube diameter 3.tube length 4.tube material**

Model	<b>TK-201-TS</b> (aluminum alloy small T head)	
Sensor	<b>PT100 3W</b>	
Tube diameter (mm)	<b>8mmΦ</b>	<b>9.6mmΦ</b>
Tube length (mm)	200, 350, 500	350, 500,750,1000
Tube material	SUS304	
Sensing range	0 - 400°C	
Class	0.5	
Other Size	Please Contact us	

Sensor	<b>K</b>		<b>J</b>		<b>K</b>		<b>J</b>				
Tube diameter (mm)	<b>8Φ</b>			<b>9.6Φ</b>			<b>12.7Φ</b>				
Tube length (mm)	200, 350, 500			350, 500,750,1000			350, 500,750,1000				
Tube material	SUS316	SUS310S	SUS316	SUS316	SUS310S	SUS316	SUS316	SUS310S	SUS316		
Sensing range	600°C		400°C		750°C		450°C		850°C		500°C
Class	0.75		0.75		0.75		0.75		0.75		
Other Size	Please Contact us										



**To order, specify : 1.sensor 2.tube diameter 3.tube length 4.tube material**

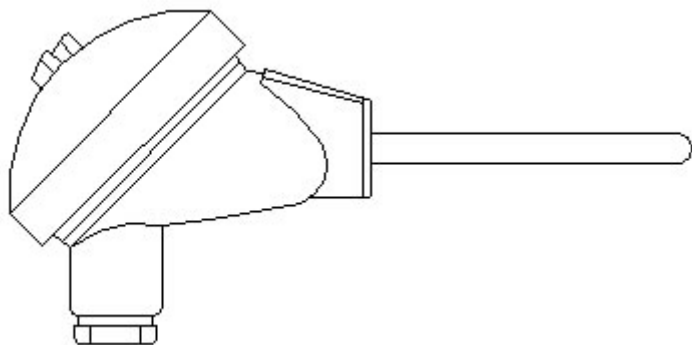
Model	<b>TK-201-TL</b> (aluminum alloy big T head)			
Sensor	<b>J</b>			
Tube diameter (mm)	<b>9.6Φ</b>	<b>12.7Φ</b>	<b>15Φ</b>	<b>21.7Φ</b>
Tube length (mm)	350, 500,750,1000			
Tube material	SUS316			
Sensing range	450°C	500°C	550°C	600°C
Class	0.75			
Other Size	Please Contact us			

Sensor	<b>K</b>		<b>K</b>		<b>K</b>		<b>K</b>	
Tube diameter (mm)	<b>9.6Φ</b>		<b>12.7Φ</b>		<b>15Φ</b>		<b>21.7Φ</b>	
Tube length (mm)	350, 500,750,1000		350, 500,750,1000		350, 500,750,1000		500,750,1000	
Tube material	SUS316	SUS310S	SUS316	SUS310S	SUS316	SUS310S	SUS316	SUS310S
Sensing range	750°C		850°C		900°C		900°C	
Class	0.75							
Other Size	Please Contact us							

### Common tube diameter applicable to T head and Round head

Sensor assembly type		Common type		Sheath type	
Sensor		PT100 3W	K , J	PT100 3W	K , J
Head type	Model	mating tube diameter (mm)	mating tube diameter (mm)	mating tube diameter (mm)	mating tube diameter (mm)
Small T	<b>SK-40-TS</b>	6.4Φ, 8Φ, 9.6ψ	8Φ, 9.6Φ, 12.7Φ	3.2Φ, 4.8Φ, 6.4Φ, 8Φ	3.2Φ, 4.8Φ, 6.4Φ, 8Φ
Big T	<b>TK-201-TL</b>	8Φ, 9.6Φ	9.6Φ,12.7Φ,15Φ, 1.7Φ		
Small round	<b>SK-40-KS</b>	6.4Φ, 8Φ, 9.6Φ	8Φ, 9.6Φ, 12.7Φ	3.2Φ, 4.8Φ, 6.4Φ, 8Φ	3.2Φ, 4.8Φ, 6.4Φ, 8Φ
Big round	<b>TK-201-KL</b>	8Φ, 9.6Φ	9.6Φ,12.7Φ,15Φ, 21.7Φ		
S bakelite round	<b>TK-201-B</b>	6.4Φ, 8Φ, 9.6Φ	8Φ, 9.6Φ, 12.7Φ	3.2Φ, 4.8Φ, 6.4Φ, 8Φ	
Big bakelite round	<b>TK-301-B</b>	8Φ, 9.6Φ	9.6Φ,12.7Φ,15Φ,21.7Φ		

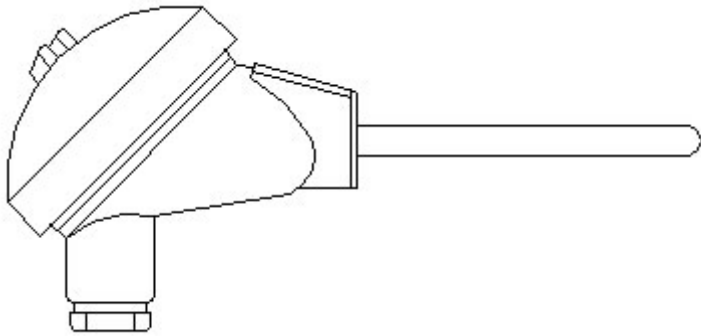
### Temperature sensor Common type Round head



To order, specify : 1.sensor 2.tube diameter 3.tube L 4.tube material

Model	<b>TK-201-KS</b> (aluminum alloy small round head)	
Sensor	<b>PT100 3W</b>	
Tube diameter (mm)	<b>8Φ</b>	<b>9.6Φ</b>
Tube length (mm)	200, 350, 500	350, 500, 750, 1000
Tube material	SUS316	
Sensing range	0 - 400°C	
Class	0.5	
Other Size	Please Contact us	

Sensor	<b>K</b>		<b>J</b>		<b>K</b>		<b>J</b>	
Tube diameter (mm)	<b>8Φ</b>		<b>9.6Φ</b>		<b>12.7Φ</b>			
Tube length (mm)	200, 350, 500		350, 500, 750, 1000		350, 500, 750, 1000			
Tube material	SUS316	SUS310S	SUS316	SUS316	SUS310S	SUS316	SUS316	SUS316
Sensing range	600°C		400°C		750°C		450°C	
Class	0.75		0.75		0.75		0.75	
Other Size	Please Contact us							



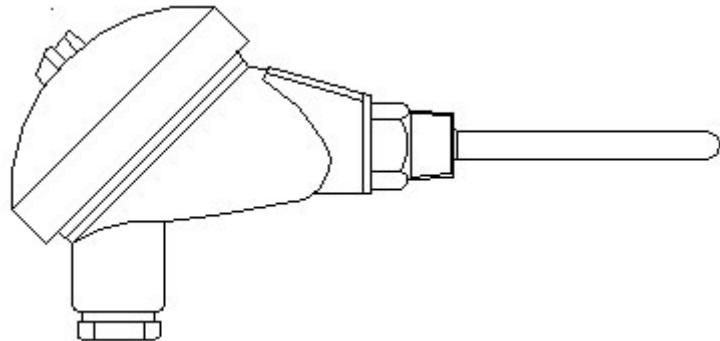
Model	<b>TK-201-KL</b> (aluminum alloy big round head)	
Sensor	<b>PT100 3W</b>	
Tube diameter (mm)	<b>8Φ</b>	<b>9.6Φ</b>
Tube length (mm)	200, 350, 500	350, 500, 750, 1000
Tube material	SUS316	
Sensing range	0 - 400°C	
Class	0.5	
Others	Please contact us	
Sensor	<b>R (PR)</b>	
Tube diameter (mm)	<b>17Φ</b>	
Tube length (mm)	500, 750, 1000	
Tube material	ceramic	
Sensing range	0 - 1400°C	
Class	0.25	
Other Size	Please Contact us	

**To order, specify : 1.sensor 2.tube diameter 3.tube L 4.tube material**

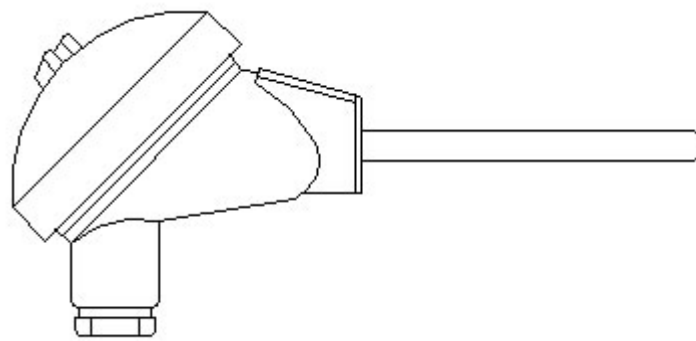
Sensor	<b>K</b>			<b>J</b>			<b>K</b>			<b>J</b>			<b>K</b>			<b>J</b>								
Tube diameter (mm)	<b>9.6Φ</b>						<b>12.7Φ</b>						<b>15Φ</b>						<b>21.7Φ</b>					
Tube length (mm)	350, 500,750,1000						350, 500,750,1000						350, 500,750,1000						500,750,1000					
Tube material	SUS316	SUS310S	SUS316	SUS316	SUS310S	SUS316	SUS316	SUS310S	SUS316	SUS316	SUS310S	SUS316	SUS316	SUS310S	SUS316									
Sensing range	750°C		450°C		850°C		500°C		850°C		900°C		550°C		900°C		1000°C		600°C					
Class	0.75																							
Other Size	Please Contact us																							

Model	<b>TK-301-KS, with Thread</b> (small round head)
Specifications	refer to <b>TK-201</b> (aluminum alloy small round head)

Model	<b>TK-201-KL-B</b> (bakelite block big round head)
Specifications	refer to <b>TK-201-KL</b> (aluminum alloy big round head)



**To order, specify : 1.sensor 2.tube diameter 3.tube L 4.tube material**



**To order, specify : 1.sensor 2.tube diameter 3.tube L 4.tube material**

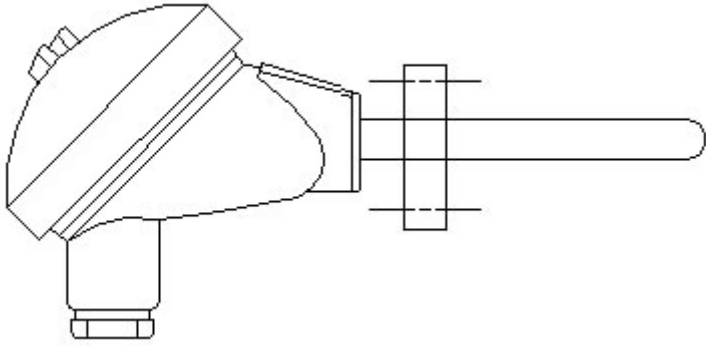
Please specify when ordering if the sensor will be used in special environment e.g. high temperature, wet, corrosive, etc.

## Temperature Sensor

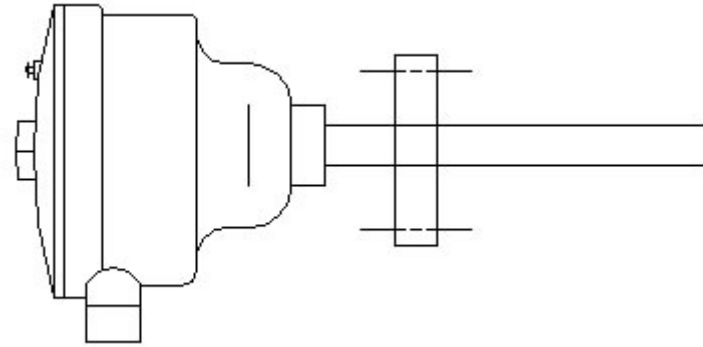
## Other Sensor Assembly Accessories

Other sensor assembly : Please request for details

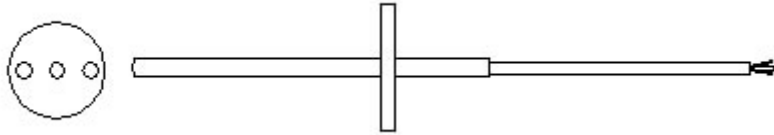
Model : **TK-301-2**, Flanged round head



Model : **TK-601-2**, explosion proof type  
with Flanged Round head



Model : **TK-103-2** (flanged B tube)



Model : **TK-101-7** (tube with bayonet & close spring)

## Compression fittings

Materials : main body-- stainless steel SUS304 fitting sphere - bronze

unit : mm

Model	Size	diameter of mating tube mmΦ	Thread	Dimensions					
			a	b	c	d	b (parallel)	c (parallel)	
<b>SXC125</b>	PT1/8	1, 1.6, 3, 3.2, 4, 4.8	PT1/8						
<b>SXC250</b>	PT1/4	3.2, 4, 4.8, 6.4	PT1/4						
<b>SXC375</b>	PT3/8	8	PT3/8						
<b>SXC500</b>	PT1/2	10	PT1/2						
<b>SXCM12</b>	M12	4.8	M12						

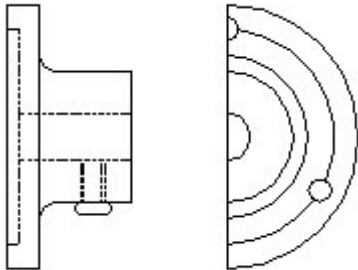
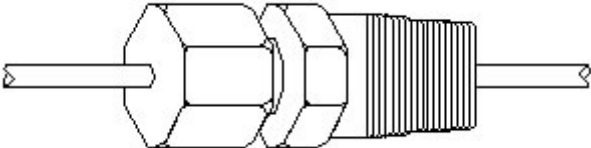
**SUS304 loose flange**

unit : mm

Model	Diameter of mating tube mmΦ	D1	D2	d	H1	H2	h	PCD	S
<b>SXF1</b>	3.2, 4, 4.8, 6.4, 8								
<b>SXF2</b>	9.6, 12.7, 15, 21.7								

**Compression fitting**

**SUS304 loose flange**



**If you do not find the temperature sensor assembly that you are looking for in this catalog  
please contact your dealer/distributor for more information**