

## Temperature sensor / Extension wire series

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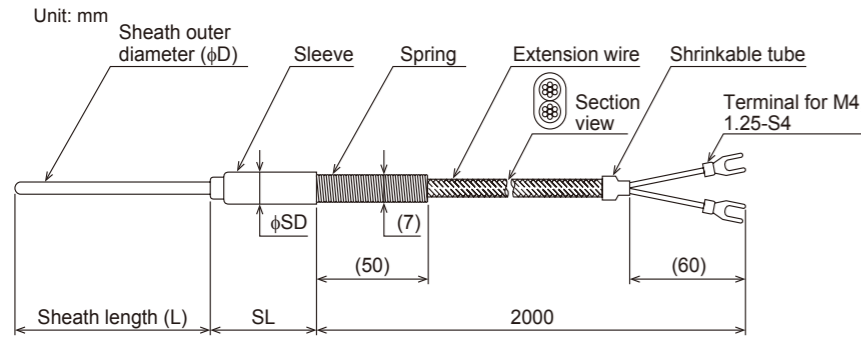
■ Thermocouple

Among the many types of temperature sensors, thermocouples are a widely used type of temperature sensor. A thermocouple uses a phenomenon called the Seebeck effect, which is "a thermoelectric force is created depending on the temperature difference when one side is heated in a closed circuit of two different kinds of electrically connected metal". The created thermoelectric force can be used to measure temperature.

■ T-35 sheath thermocouple (type K)

A sheath thermocouple is an electrical device consisting of thermocouple wires running through a heat resistant metal tube (SUS316) that is filled and sealed with high-purity insulator. It is a narrow piece of metal, and has excellent response speed.

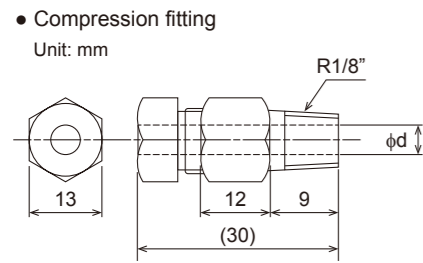
• Shapes •



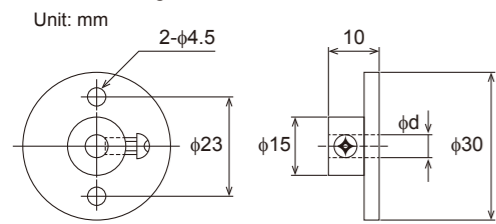
• Specifications •

- Wire type: K
  - Sheath material: SUS316
  - End shape: grounded type, ungrounded type
  - Extension wire: heat resistant glass coating (blue)
  - EMF: conforms to JIS C1605
  - Tolerance: JIS class 2 (K)
- ( Class 2: -40°C to 333°C, ±2.5°C  
333°C to 1200°C, ±0.00751 |t|\* )
- \*|t|: A temperature value (°C) represented irrespective of the + and - signs of measured temperatures.

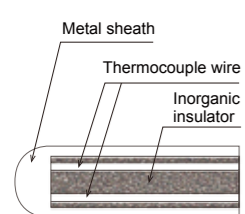
• Metal fittings •



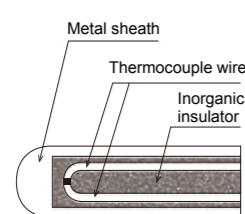
• Movable flange



• Grounded type



• Ungrounded type



• Specifications •

Sheath outer diameter (φD)	Dimensions (mm)		Product code	
	Sheath length (L)	Sleeve (φSD×SL)	Grounded type	Ungrounded type
1.0 (to 650°C)	100	6.4 × 36	T35101	T35101H
	200		T35102	T35102H
	300		T35103	T35103H
	500		T35105	T35105H
	1000		T351010	T351010H
1.6 (to 650°C)	100	6.4 × 36	T35161	T35161H
	200		T35162	T35162H
	300		T35163	T35163H
	500		T35165	T35165H
	1000		T351610	T351610H
2.3 (to 750°C)	100	8.0 × 36	T35231	T35231H
	200		T35232	T35232H
	300		T35233	T35233H
	500		T35235	T35235H
	1000		T352310	T352310H
3.2 (to 750°C)	100	8.0 × 36	T35321	T35321H
	200		T35322	T35322H
	300		T35323	T35323H
	500		T35325	T35325H
	1000		T353210	T353210H
4.8 (to 800°C)	100	10.0 × 43	T35481	T35481H
	200		T35482	T35482H
	300		T35483	T35483H
	500		T35485	T35485H
	1000		T354810	T354810H

Precautions for Use

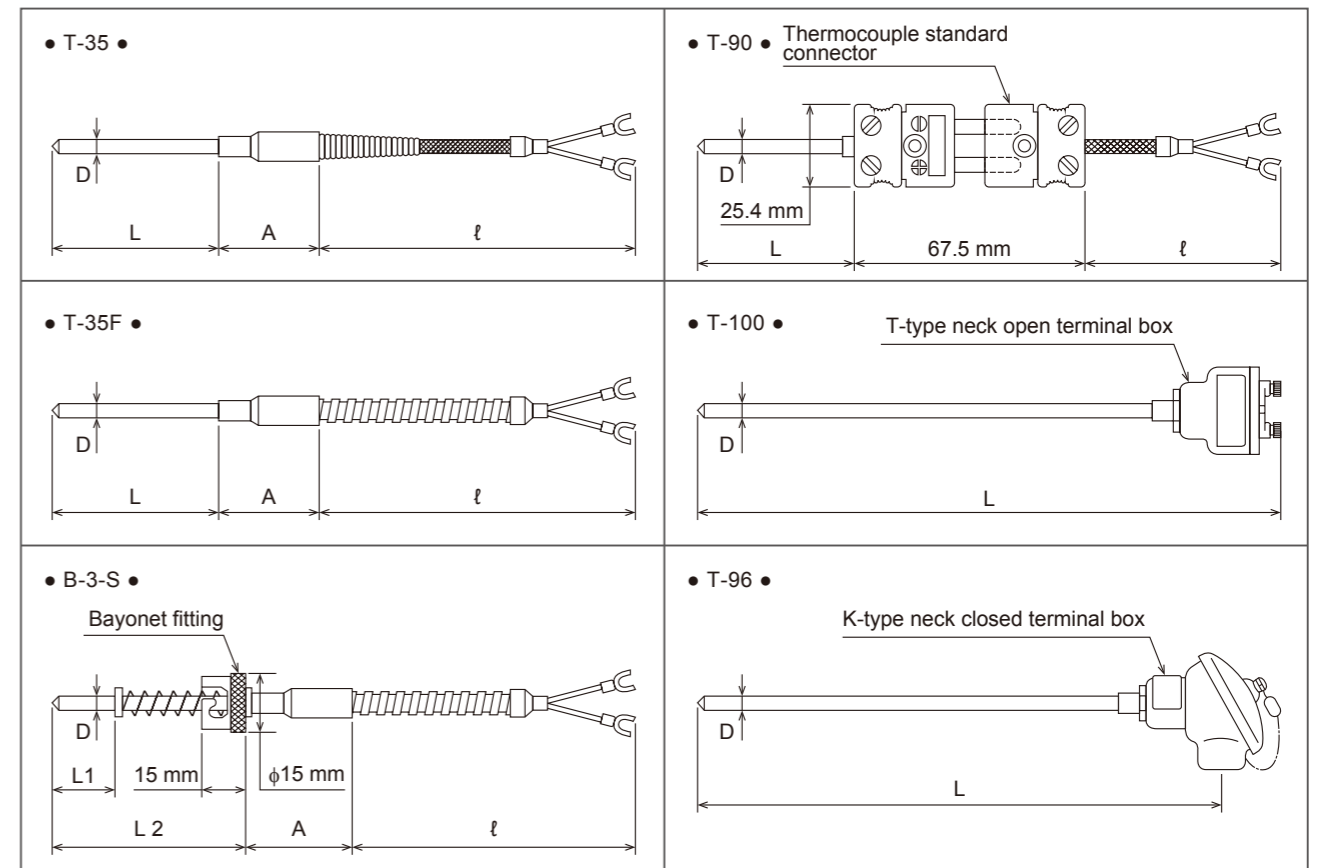
Do not operate the product when the sleeve temperature reaches 70°C or higher.  
When the sleeve temperature exceeds 70°C during use, contact our sales representative.

■ Sheath thermocouples

Sheath thermocouples are used as temperature sensors in many fields; however, the type of sheath thermocouple to be used varies depending on the usage condition. The tube diameter, extension wire and terminal box of the sheath thermocouple to be used are manufactured according to the customer's specifications.

The standard type thermocouples are shown below. Custom sheath thermocouples are designed and manufactured after pre-arrangement.

• Shapes •



- Since the products are manufactured to order, the dimensions of A, D, L, L1, L2 and ℓ shown in the above diagrams must be specified. Metal fittings, materials, and custom made components are available on request.
- Although SUS316 is used as standard material for the sheaths, Incoloy can be used alternatively.

• Types of thermocouple •

• Ungrounded type



• Grounded type

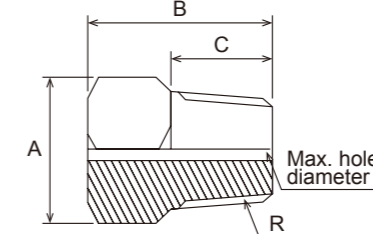


• Exposure type

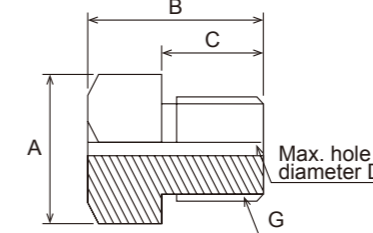


• Metal fittings •

• Taper screws, R



• Parallel screws, G



• Measurement chart •

• Taper screws, R

Nominal diameter	Dimensions (mm)			
	A	B	C	D
1/8"	13	15	10	6.4
1/4"	14	23	13	8
3/8"	19	25	15	12
1/2"	23	35	20	18
3/4"	32	35	20	21
1"	38	40	25	25

• Parallel screws, G

Nominal diameter	Dimensions (mm)			
	A	B	C	D
1/8"	13	15	10	6.4
1/4"	17	23	13	8
3/8"	21	25	15	12
1/2"	26	35	20	18
3/4"	32	35	20	21
1"	41	40	25	25

■ Extra-fine sheath thermocouple

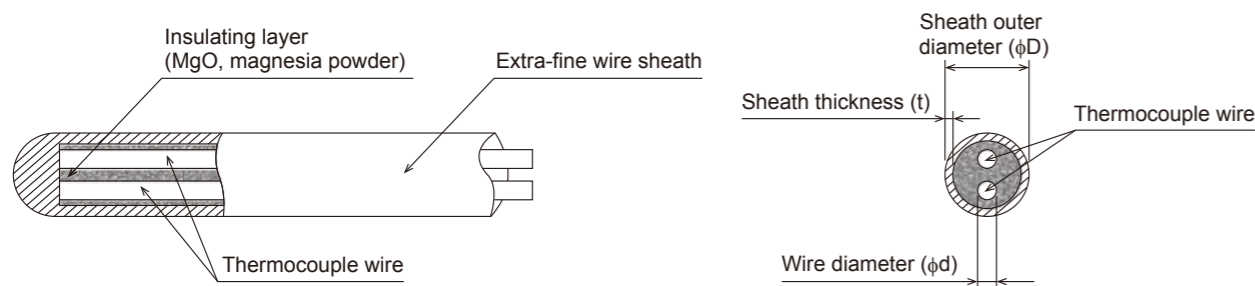
Extra-fine sheath thermocouples using extra-fine wires can be used due to our specialized technique, which has achieved a minimum sheath outer diameter of 0.25 mm and a wire diameter of 0.05 mm. The available measurement range has thus been shrunk from "surface" to "point". The extra-fine sheath thermocouple opens up new possibilities for accurate temperature measurement, such as temperature measurement at a point or at an extremely small area, or temperature measurement requiring an instantaneous thermal response.

● Features ●

- Accurate temperature measurement at an extremely small area.  
When the temperature at only a given point of a metal surface needs to be measured, it is possible to "measure the point" by welding the thermocouple contact end to the point to be measured.
- Excellent thermal response  
When compared to conventional thermocouples, this type of product detects temperature more quickly, having thinner sheaths from 0.0035 to 0.10 mm.
- Accurate temperature measurement  
If there is a clearance between the thermocouple and the target object, accurate temperature measurement is impossible. If an extra-fine wire is used for temperature measurement, you can cut a small groove in the target object and embed the thermocouple wire in it to measure the temperature.

● Design ●

As with the standard type thermocouples, the custom thermocouples are composed of thermocouple wires running through the protective metal tube (sheath) which is filled with compressed high purity insulator.



● Specifications ●

Dimensions (mm)			Sheath material	Thermocouple wire	Allowable operating temperature (*1) (°C)
Sheath outer diameter (φD)	Wire diameter (φd)	Sheath thickness (t)			
0.25	0.05	0.035	Inconel	Chromel-alumel (K)	500
0.3	0.05	0.06	Inconel	Chromel-alumel (K)	500
0.5 (*2)	0.10	0.07	SUS316	Chromel-alumel (K)	500
0.65	0.13	0.1	Inconel	Chromel-alumel (K)	500

\*1 The allowable operating temperature varies depending on the usage conditions or the atmosphere in which the thermocouple is used.

For details, contact our sales representative.

\*2 These products are held in stock: Product code: 100 ℓ/sheath length (T35051), 200 ℓ/sheath length (T35052), and 300 ℓ/sheath length (T35053)

Precautions for use

- If extra-fine wire thermocouples are used at temperatures exceeding the allowable operating range, their service life will be shortened. Be sure to use them within the allowable operating range.
- Care must be taken not to damage the instruments used for measurement because the internal resistance of each thermocouple wire becomes high during measurement.
- When the thermocouple is used in a corrosive atmosphere, be sure to fully consider the corrosion-resistant characteristic of inconel.
- Thermocouples contain fine-wires. Care must be taken not to accidentally break any wire.

■ Sheet type thermocouple (thermocouple sheet)

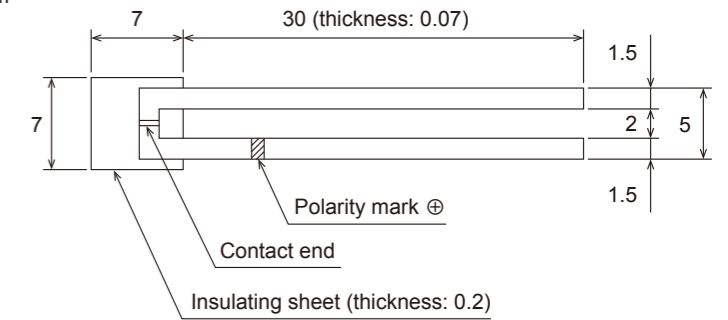
Thermocouple sheet is equipped with any of the thermocouples (type J, T and K) on insulating sheet. This type of thermocouple can be directly affixed to an object to measure its surface temperatures ranging from -100°C to +200°C. When a quick response is required or a target object is composed of insulating material, it can be used without the insulating sheet (glass fiber/polyimide).

● Features ●

- For measuring temperature of target objects (-100°C to +200°C)
- Faster response time (approx. 50 msec)
- Can be adhered or attached (using silicone adhesive)
- Best suited for temperature measurement in an experiment.

● Shapes ●

Unit: mm



● Specifications ●

Model	Types of thermocouple	Operating temperature range (°C)	Product code
PR6442A/100 model	Iron-constantan (J)	(-180) -100 to +200	TCSTJ
PR6452A/100 model	Copper-constantan (T)	(-180) -100 to +200	TCSTT
PR6462B/100 model	Chromel-alumel (K)	(-180) -100 to +200	TCSTK

\* -180°C is only applicable for a short period of time in the event of absolute necessity.

How to use

- To measure the surface temperature, affix the thermocouple sheet by using an adhesive or bond it by applying pressure to a target object.
  - When the temperature of the surface to be measured is low, use adhesive tape to affix the thermocouple sheet, which can be used repeatedly.
  - Although the response time depends on the adhesive condition, it is approx. 50 msec, and is 2-5 msec for thermocouples without insulating sheet.
- \* Care must be taken when affixing the thermocouple sheet to a target object. A layer of air between the sheet and the object significantly increases the response time.

■ End-welded thermocouple

The thermocouple is readily available after installation since the ends of the thermocouple wires are welded and treated at a certain length.

● Specifications ●

Product name	Dimensions (mm)	Product code
Glass coating (type K)	φ0.2 × 2000L ★	TCKG022
Glass coating (type T)	φ0.2 × 2000L ★	TCTG022
Fluorine resin coating (type K)	φ0.2 × 2000L ★	TCKT022
Fluorine resin coating (type T)	φ0.2 × 2000L ★	TCTT022
Thermocouple sheet (type K)	7 × 7 sq × 2000L ★	TCSTL
Thermocouple sheet (type T)	7 × 7 sq × 2000L ★	TCSTLT
Element wire (type K)	φ0.32 × 1000L	TCK0321
	φ0.65 × 1000L	TCK0651
	φ1.0 × 1000L	TCK1001
Element wire (type T)	φ0.32 × 1000L	TCT0321
	φ0.65 × 1000L	TCT0651
	φ1.0 × 1000L	TCT1001
Element wire (type R) (PtPtRh13%)	φ0.3 × 300L	TCR0303
	φ0.3 × 500L	TCR0305
	φ0.3 × 1000L	TCR0310
	φ0.5 × 300L	TCR0503
	φ0.5 × 500L	TCR0505
	φ0.5 × 1000L	TCR0510



● Specifications of individual element ●

- Wire type  
K, T, and R
- Range of operating temperature of coating material  
Glass coating: Up to 250°C  
Fluorine resin coating: -200°C to +200°C
- Coating color  
Glass coating (K): Blue spirals on a white background  
Glass coating (T): Brown spirals on a white background  
Fluorine resin coating (K): Blue  
Fluorine resin coating (T): Brown

The wires marked with ★ are equipped with a crimp terminal for M4, while others are left untreated.



■ Coated thermocouples

When coated thermocouple wires are used, they must be cut off to the required length, and the cut-off end must be welded.

● Glass coated thermocouple wires (Operating temperature: up to +250°C) ●

Product name	Type	Wire diameter (mm)	Length (m)	Product code
K-H	K	0.1	100	KH010
		0.2	100	KH020
		0.32	100	KH032
		0.65	100	KH065
		1.0	100	KH100
T-H	T	0.1	100	TH010
		0.2	100	TH020
		0.32	100	TH032
		0.65	100	TH065
J-H	J	0.32	100	THMCWX
		0.65	100	THMCWX



● Fluorine resin coated thermocouple wires (Operating temperature: up to + 200°C) ●

Product name	Type	Wire diameter (mm)	Length (m)	Product code
K-6F	K	0.1	100	K6010
		0.2	100	K6020
		0.32	100	K6032
		0.65	100	K6065
T-6F	T	0.1	100	T6010
		0.2	100	T6020
		0.32	100	T6032
		0.65	100	T6065

● Omega · fluorine resin coated thermocouple wires, ANSI standard (+ Pole: yellow, - Pole: red) ●

Type	Wire diameter (mm)	Product code
K	0.127	K60127C

● Gordon · ceramic fiber coated thermocouple wires (can be continuously operated at 1000°C) ●

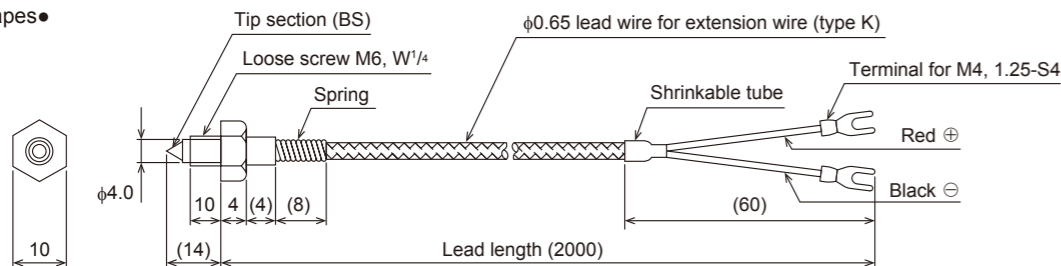
Type	Wire diameter (mm)	Product code
K	0.127	KCF0814C

■ PSC type thermocouples (type K, grounded type)

Since the PSC type thermocouple has loose screw threads, secure it to a heat plate with a screw to take measurements.

Product name	Product code
PSCM6	TCPSCM
PSCW <sup>1/4</sup>	TCPSCW

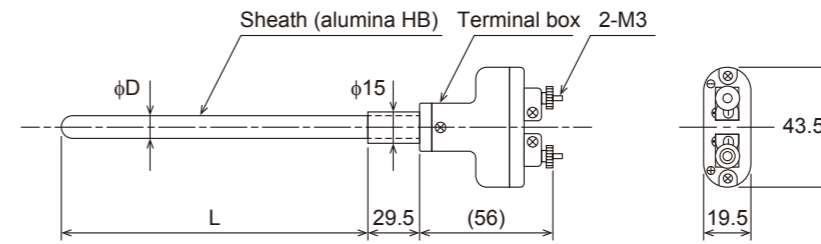
●Shapes●



■ Thermocouples with T-shaped neck

This is a type of thermocouple equipped with a terminal together with a ceramic sheath, through which the thermocouple wires run. Best suited for high temperature measurement.

● Shapes ●



● Specifications ●

Product name	Dimensions (φD×L)	Wire diameter (φ)	Product code
T-shaped neck (small) type (type K)	10×300	0.65	THK65103
T-shaped neck (small) type (type K)	10×150	0.65	THK651015
T-shaped neck (small) type (type R)	10×300	0.65	THR5103

Unit: mm

■ Thermocouple description

The thermocouple is readily available after installation since the ends of the thermocouple wires are welded and treated at a certain length.

● Types and materials of thermocouples ●

Symbol	Previous symbol	Constituent materials	
		+ side leg	- side leg
K	CA	Ni · Cr alloy	Ni alloy
T	CC	Cu	Cu · Ni alloy
J	IC	Fe	Cu · Ni alloy
E	CRC	Ni · Cr alloy	Cu · Ni alloy
R		Rh13%Pt · Rh alloy	Pt
S		Rh10%Pt · Rh alloy	Pt
B		Rh30%Pt · Rh alloy	Rh6% Pt · Rh alloy
N		Ni · Cr alloy	Ni · Si alloy
* wRe5-26		w95% · Re5% alloy	w74% · Re26% alloy
* AF		Ni · Cr alloy	Au · Fe alloy
* Ni-Mo		Ni	Ni82% · Mo18% alloy
* PN		Pt · Pd · Au alloy	Pd · Au alloy
Remarks	The thermocouples marked with * are not included in JIS. Ni: Nickel      Cr: Chromium      Si: Silicon Cu: Copper      Fe: Iron              Rh: Rhodium Pt: Platinum    W: Tungsten            Re: Rhenium Mo: Molybdenum   Pd: Palladium        Au: Gold		

● Normal operating temp. limit and overheat operating temp. limit ●  
JIS C1602-1995

Symbol	Wire diameter (mm)	Normal operating temp. limit (°C)	Overheat operating temp. limit (°C)
K	0.65	650	850
	1.00	750	950
	1.60	850	1050
	2.30	900	1100
	3.20	1000	1200
T	0.32	200	250
	0.65	200	250
	1.00	250	300
	1.60	300	350
J	0.65	400	500
	1.00	450	550
	1.60	500	650
	2.30	550	750
	3.20	600	750
E	0.65	450	500
	1.00	500	550
	1.60	550	600
	2.30	600	750
	3.20	700	800
R · S	0.50	1400	1600
B	0.50	1500	1700

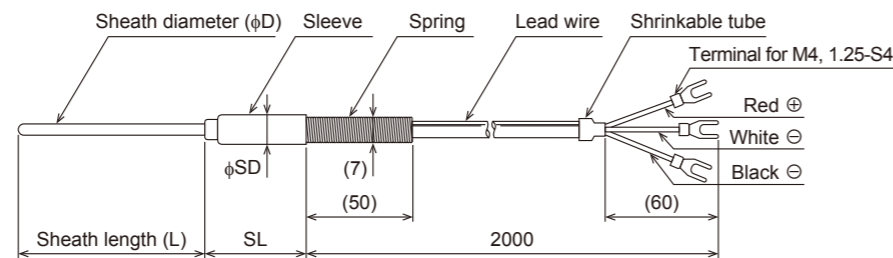
Normal operating temp. limit: The maximum temperature at which continuous operation of a thermocouple is possible in the ambient air.  
Overheat operating temp. limit: The maximum temperature at which a thermocouple can be operated in a short period of time in the event of absolute necessity.

■ Resistance thermometer sensor

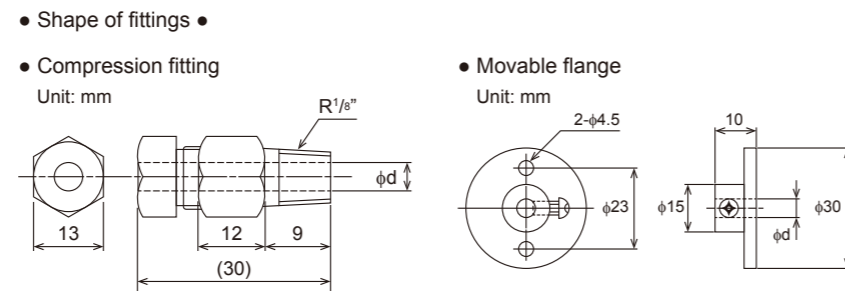
Being standardized by JIS, this is a reliable temperature sensor that uses the characteristics of platinum (Pt), which has a long heat life and shows stable electrical resistance against temperature change. A platinum resistance thermometer sensor measures the resistance that changes according to the temperature when low current is applied to the platinum wire or thin film, the resistance of which is kept constant (usually 100 Ω), and then converts the measured resistance to a temperature value. To prevent the lead wire resistance from being added, it usually adopts a three-wire design.

- R-35 sheath type resistance thermometer sensor ●
- Shapes ● Unit: mm

Dimensions (mm)			Product code
Sheath diameter (φD)	Sheath length (L)	Sleeve (φSD×SL)	
3.2	100	8×36	R35321NA
	200		R35322NA
4.8	100	10×43	R35481NA
	200		R35482NA



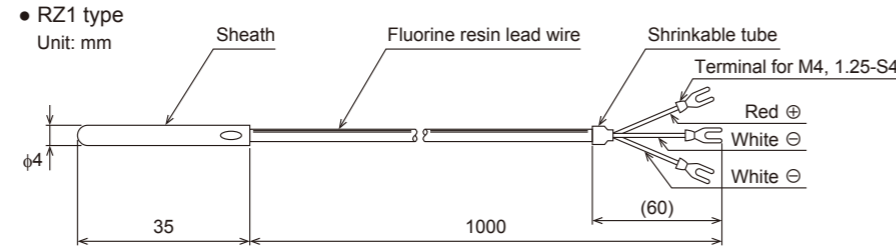
- Specifications ●
- Sheath material: SUS316
- Lead wire: Vinyl coated wire
- Type: Pt 100 Ω  $R_{100}/R_0 = 1.3851$
- Reference resistance: Refer to JIS C1604.
- Tolerance: Grade B
- \* If the sheath needs to be bent when it is used, consult our sales representative when placing an order.



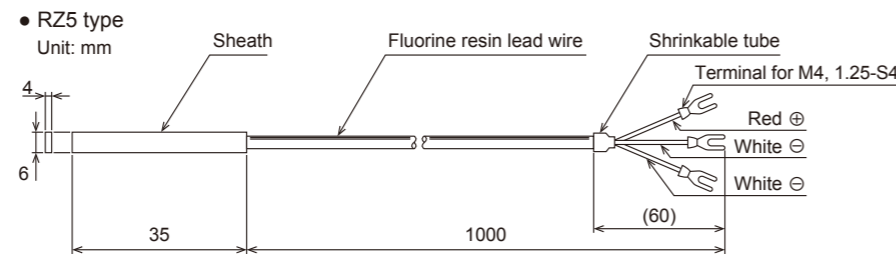
- RZ type resistance thermometer sensor (Operating temperature: up to +200°C) ●

Dimensions (mm)		Product code
Sheath diameter	Sheath length	
φ4.0	35	RZ1
width: 6.0×4t	35	RZ5

- Shapes ●

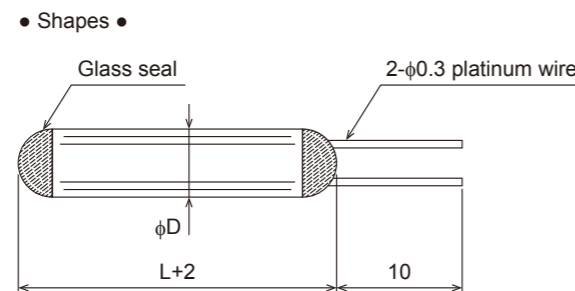


- Specifications ●
- Sheath material: RZ1 type/SUS304
- RZ5 type /Cu+nickel plating
- Lead wire: Fluorine resin coated wire
- Type: Pt 100 Ω  $R_{100}/R_0 = 1.3851$
- Reference resistance: Refer to JIS C1604.
- Tolerance: Grade B



- Ceramic platinum resistance element ●

Dimensions (mm)		Product code
Sheath diameter (φD)	Sheath length (L)	
2.8	30	RESIA283
2.0	20	RESIA202



- Specifications ●
- Sheath material: Alumina
- Lead wire: Platinum
- Type: Pt 100 Ω  $R_{100}/R_0 = 1.3851$
- Reference resistance: Refer to JIS C1604.
- Tolerance: Grade B

■ Extension wire

Usually a thermocouple is used by connecting it to a conducting wire having almost the same thermoelectric force as the thermocouple. The above mentioned conducting wire is called an extension wire, which is defined by the JIS standard.

- Inventory of standard extension wires ●

JIS C1610-1995

Type	Product code	Nominal cross-sectional area (mm <sup>2</sup> )	Core wire configuration Wire qty./Wire diam. (mm)	Thermocouple used	Tolerance (μV)	Coating color (JIS class 2)		
						Surface coat	Polarity color	
WX-H Glass coated	WH050	0.5	7/0.3	K	±100	Blue	Red ⊕	White ⊖
	WH075	0.75	30/0.18					
	WH125	1.25	4/0.65					
VX-G Vinyl coated	VG050	0.5	7/0.3	K	±100	Blue	Red ⊕	White ⊖
	VG075	0.75	30/0.18					
	VG125	1.25	4/0.65					
TX-H Glass coated	TH050	0.5	7/0.3	T	±100	Brown	Red ⊕	White ⊖
	TH125	1.25	4/0.65					
TX-G Vinyl coated	TG050	0.5	7/0.3	T	±100	Brown	Red ⊕	White ⊖
	TG125	1.25	4/0.65					
RX-H Glass coated	RH050	0.5	7/0.3	R	±60	Black	Red ⊕	White ⊖
	RH200	2.0	7/0.65					

- Specific extension wires are also available on request.

Reference materials

■ Extension wire description

- Types and symbols ●

JIS C1610-1995

Type of thermocouples used in combination	Type		Symbol (*)	Previous symbol (1981)
	Constituent materials of core wires			
	+ side core wire	- side core wire		
B	Copper	Copper	BC	BX
R	Copper	Alloy mainly containing copper and nickel	RCA	RX
	Copper	Alloy mainly containing copper and nickel	RCB	
S	Copper	Alloy mainly containing copper and nickel	SCA	SX
	Copper	Alloy mainly containing copper and nickel	SCB	
N	Alloy mainly containing nickel and chromium	Alloy mainly containing nickel and silicon	NX	-
	Alloy mainly containing copper and nickel	Alloy mainly containing copper and nickel	NC	
K	Alloy mainly containing nickel and chromium	Alloy mainly containing nickel	KX	KX
	Alloy mainly containing nickel and chromium	Alloy mainly containing nickel	KCA	
	Iron	Alloy mainly containing copper and nickel	KCB	
E	Copper	Alloy mainly containing copper and nickel	KCC	VX
	Alloy mainly containing nickel and chromium	Alloy mainly containing copper and nickel	EX	
J	Iron	Alloy mainly containing copper and nickel	JX	JX
T	Copper	Alloy mainly containing copper and nickel	TX	TX

\* The symbols of the extension wire types are represented with the type of thermocouples to be used in combination and core wire materials. X indicates the extension type core wire that is composed of the same material as the thermocouple used in combination. C indicates the compensation type core wire that is composed of a material different from the thermocouple used in combination. If it is necessary to further categorize the compensation type core wires in terms of tolerance or compensating contact temperature, each category must be distinguished by adding A or B next to the symbol.

■ Extension wire description

Type of thermocouples used in combination	Symbol	Previous symbol	Constituent materials (*)	Standard color code					
				Japan (JIS)		America (ANSI)		Germany (DIN)	
				Outer sheath	Polarity	Outer sheath	Polarity	Outer sheath	Polarity
K	KX	KX	Chromel	Blue	Red ⊕	Yellow	Yellow ⊕	Green	Red ⊕
			Alumel	White ⊖	Red ⊖	Green ⊖	Green	Green ⊖	
K	KCB	WX	Iron	Blue	Red ⊕	White	Green ⊕	Green	Red ⊕
			Constantan	White ⊖	Red ⊖	Green ⊖	Green	Green ⊖	
K	KCC	VX	Copper	Blue	Red ⊕	Red	Brown ⊕	Green	Red ⊕
			Constantan	White ⊖	Red ⊖	Green	Green	Green ⊖	
T	TX	TX	Iron	Brown	Red ⊕	Blue	Blue ⊕	Brown	Red ⊕
			Constantan	Brown	White ⊖	Blue	Red ⊖	Brown	Brown ⊖
J	JX	JX	Iron	Yellow	Red ⊕	Black	White ⊕	Blue	Red ⊕
			Constantan	Yellow	White ⊖	Black	Red ⊖	Blue	Blue ⊖
E	EX	EX	Chromel	Purple	Red ⊕	Purple	Purple ⊕	Black	Red ⊕
			Constantan	Purple	White ⊖	Purple	Red ⊖	Black	Black ⊖
R	RCA	RX	Copper	Black	Red ⊕	Green	Black ⊕	White	Red ⊕
	RCB		Copper	Black	White ⊖	Green	Red ⊖	White	White ⊖
S	SCA	SX	Copper	Black	Red ⊕	White	Black ⊕	White	Red ⊕
	SCB		Constantan	Black	White ⊖	White	Red ⊖	White	White ⊖
B	BC	BX	Copper	Gray	Red ⊕	Gray	Gray ⊕	Gray	Red ⊕
			Copper	Gray	White ⊖	Gray	Red ⊖	Gray	White ⊖

Extension wire usage classifications

- Vinyl-base for general use (G): -20°C to +90°C
- Glass-base for heat resistance (H): 0°C to +150°C
- Tetrafluoroethylene-base for high heat-resistance (S): -25°C to +200°C

\* Constituent material

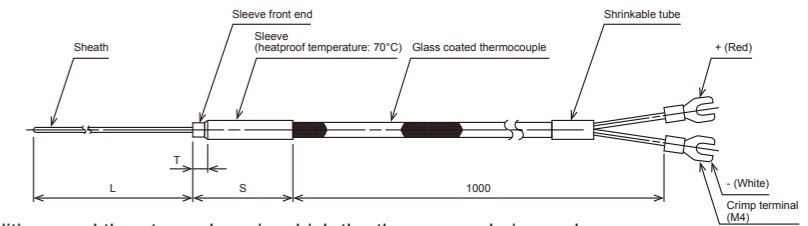
- Chromel: NiCr alloy
- Alumel: Ni alloy
- Constantan: Copper-Ni alloy

● T-35 φ0.15 extra-fine sheath thermocouple ●

Meas. temp. contact point	Sheath diameter (φD)	Sheath length (L)	Sleeve front end size diameter (φ) × length (S)	Sleeve size diameter (φ) × length (S)	Extension wire length	Product code
Grounded	0.15	50	2 × 6	5 × 30	1000	T350155

● Specifications ●

Type of thermocouple: K  
 Sheath material: inconel  
 Tolerance class: 2 (equivalent to grade 0.75) (conforms to JISC 1605-1995)  
 Lead wire: Heat-resistant glass coated thermocouple (blue cloth)  
 Thermoelectric force: Conforms to JISC 1605-1995  
 Normal operating temp. limit: 200°C (\*)  
 \* The temperature varies depending on the usage conditions and the atmosphere in which the thermocouple is used.



● Precautions for use ●

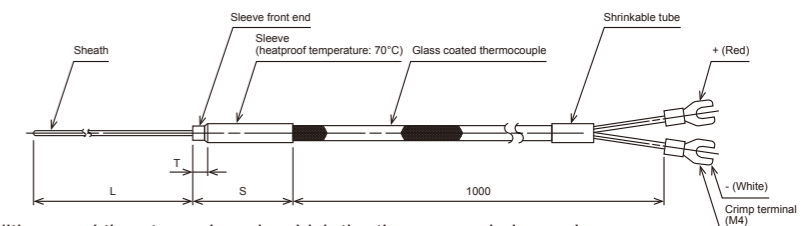
Do not use set screws (hexagon socket set screws). Tightening with set screws may damage the product.  
 Do not operate the product when the sleeve temperature reaches 70°C or higher.  
 The minimum bend radius (R) must be ten times the sheath outer diameter (1.5 mm R) or greater.

● T-35 type-K extra-fine sheath thermocouple ●

Meas. temp. contact point	Sheath diameter (φ)	Sheath length (L)	Sleeve front end size diameter (φ) × length (S)	Sleeve size diameter (φ) × length (S)	Extension wire length	Product code
Ungrounded	0.25	100	2.5 × 6	6.4 × 36	1000	T350251H
		200				T350252H
Grounded	0.5	100	2 × 5	5 × 35	1000	T35051
		200				T35052
		300				T35053

● Specifications ●

Type of thermocouple: K  
 Sheath material: φ0.25/inconel φ0.5/SUS316  
 Tolerance class: 2 (equivalent to grade 0.75) (conforms to JISC 1605-1995)  
 Lead wire: Heat-resistant glass coated thermocouple (blue cloth)  
 Thermoelectric force: Conforms to JISC 1605-1995  
 Normal operating temp. limit: 500°C (\*)  
 \* The temperature varies depending on the usage conditions and the atmosphere in which the thermocouple is used.



● Precautions for use ●

Do not use set screws (hexagon socket set screws). Tightening with set screws may damage the product.  
 Do not operate the product when the sleeve temperature reaches 70°C or higher.  
 The minimum bend radius (R) of the φ0.25 sheath must be six times the sheath outer diameter (1.5 mm R) or greater, and that of the φ0.5 sheath must be three times the sheath outer diameter (1.5 mm R) or greater.

● Magnet surface sensor ●

Product name	Meas. temp. contact point	Measured temp. (°C)	Connected extension wire	Case material	Type	Product code
Thermocouple magnet sensor, horizontal type	Grounded	Max. 200	2 m with fluorine resin coated thermocouple	PEEK	K T	MGTK MGTCT
Resistance thermometer magnet sensor, horizontal type	-	Max. 200	2 m with fluorine resin coated thermocouple	PEEK	3-wire type	GPT100

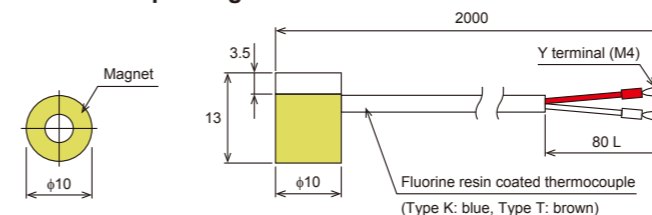
● Specifications ●

Tolerance class: Thermocouple magnet sensor/JIS class 2 resistance thermometer magnet sensor/JIS class B  
 Responsivity: On the metal surface at 100°C  
 Thermocouple magnet sensor/time required for the sensor to reach 90%: approx. 60 sec.  
 Resistance thermometer magnet sensor/time required for the sensor to reach 90%: approx. 70 sec.  
 Thermocouple magnet sensor/time required for the sensor to reach 80%: approx. 30 sec.  
 Resistance thermometer magnet sensor/time required for the sensor to reach 80%: approx. 40 sec.

Sheath material: Thermocouple magnet sensor/inconel  
 Resistance element: Resistance thermometer magnet sensor/Pt 100 Ω (100 Ω at 0°C)  
 Specified current: Resistance thermometer magnet sensor/1 mA

\* The measured temperature varies depending on the usage conditions and the atmosphere in which the thermocouple is used.

Thermocouple magnet sensor



Resistance thermometer magnet sensor

