

Temperature Sensors

Connector Type, Double Element, Chemical Resistant

Be sure to refer to "Precautions for Use" in the Temperature Sensor Overview on P.1653.

Connector Type

MCNF (Sheath Side K Thermocouple) **MCNM** (Lead Side)

MCNF, MCNM

Type of Thermocouple	K Thermocouple
Precision	JIS Class 2
Temperature Measurement Contact Point	Isolated Neutral Type
Temperature	0 ~ 650°C
Measurement Range	0 ~ 750°C
Material	Sheath: EN 1.4401 Equiv. Connector: PPS
Heat Resistance Temperature of Connector	220°C
Lead Wire (Operating Temp. Range)	Glass Wool Coating (0~150°C)

Features: Suitable to use in a place where removing of sheath is difficult since replacement of lead wire is only required when the wire is broken.

Sheath Side (K Thermocouple)

Part Number	Type	D	L Selection	Unit Price	
				L300	L500
MCNF		1.6	300		
		3.2	500		

Lead Side

Part Number	F Selection (Unit: m)	Unit Price	
		F2	F4
MCNM	2		
	4		

Double Element

MSWK (K Thermocouple)

MSWK

Type of Thermocouple	K Thermocouple
Precision	JIS Class 2
Temperature Measurement Contact Point	Isolated Neutral Type
Temperature	0 ~ 750°C
Measurement Range	0 ~ 800°C
Material	Sheath: EN 1.4401 Equiv. Sleeve: EN 1.4301 Equiv.
Heat Resistance Temperature of Sleeve	80°C
Lead Wire (Operating Temp. Range)	Vinyl Coating (-20~70°C)

Features: Temperature measurements can be connected to two indicators, controllers, etc. Since the temperature always indicates synchronicity, one can be used for temperature control and the other for detecting abnormal high temperature.

Part Number	Type	D	L Selection	Unit Price		
				L100	L200	L300
MSWK		3.2	100			
			200			
		4.8	300			

Chemical Resistant

MFLS (K Thermocouple)

MFLS

Type of Thermocouple	K Thermocouple
Precision	JIS Class 2
Temperature Measurement Contact Point	Isolated Neutral Type
Temperature Measurement Range	0 ~ 180°C
Material	Protection Tubes: Sheath: EN 1.4401 Equiv. + Fluororesin (FEP) Tube Sleeve: EN 1.4301 Equiv.
Heat Resistance Temperature of Sleeve	80°C
Lead Wire (Operating Temp. Range)	Vinyl Coating (-20~70°C)

Features: Sheath is coated with Fluororesin (FEP) tube, and excels in chemical resistance and corrosion resistance.

Part Number	Type	D	L Selection	Unit Price	
				L200	L400
MFLS		5.3	200		
			400		

Chemical Resistance (Reference) of Fluororesin (FEP) Tube Coating
The list below is for reference only and not a product guarantee.

Mineral Oil	Water	Hydrochloric Acid (10%, RT)	Ammonia Water	Gasoline	Organic Solvent
○	○	○	○	○	○

○ = Excellent. Little affected.
○ = Good. Affected or swollen to some extent but usable depending on conditions.
(RT is for room temperature=20°C, % is concentration of solution.)

Ordering Example

Part Number	-	L
MSWK3.2	-	100
MFLS5.3	-	200
Part Number	-	F
MCNM	-	F2

The upper limit of temperature measurement is at the measurement point (the tip of sheath). When measuring, keep the sleeve temperature at or below the heat resistance temperature (80°C). The wire may break due to heat expansion of the sleeve. Especially when a heated object temperature exceeds 100°C, a long type of sheath L length is recommended, which is used to put maximum distance between the sleeve and the heated object, or Temperature Sensors, Heat Resistant Type (P.1656) is recommended.

Temperature Sensors

Ring Terminal, Ring Terminal for Moving Parts, Spade Terminal

Be sure to refer to "Precautions for Use" in the Temperature Sensor Overview on P.1653.

Ring Terminal Type

MSNDS (K Thermocouple)

MSNDS

Type of Thermocouple	K Thermocouple
Precision	JIS Class 2
Temperature Measurement Contact Point	Grounded Type
Temperature Measurement Range	0 ~ 150°C
Heat Resistance Temperature of Silicon Tube	150°C
Lead Wire (Operating Temp. Range)	Glass Wool Coating + Outer Shield Winding (0 ~ 250°C)

Features: Easily attachable by cutting a tap on the heated object.

Part Number	Type	No.	Terminal Size	D	d	Unit Price
		5	M5	8	5.3	

Ring Terminal for Moving Parts

MFMT (K Thermocouple)

MFMT

Type of Thermocouple	K Thermocouple
Precision	JIS Class 2
Temperature Measurement Contact Point	Grounded Type
Temperature Measurement Range	0 ~ 150°C
Heat Resistance Temperature of Silicon Tube	150°C
Lead Wire (Operating Temp. Range)	Silicon Coating (0~150°C)
Lead Wire Minimum Bending R	20

Features: Highly flexible silicon covered lead wire is usable in bending applications. (Avoid excessive bending.)

Part Number	Type	No.	Terminal Size	D	d	F (m)	Unit Price
4	2						
4-5	5						
5-1	M5	8	5.3	1			
5				2			
5-5		5					

Spade Terminal Type

MSNY (K Thermocouple)

MSNY

Type of Thermocouple	K Thermocouple
Precision	JIS Class 2
Temperature Measurement Contact Point	Grounded Type
Temperature Measurement Range	0 ~ 150°C
Heat Resistance Temperature of Silicon Tube	150°C
Lead Wire (Operating Temp. Range)	Glass Wool Coating (0~150°C)

Features: It can be fixed or exchanged without completely removing set screw.

Part Number	Type	No.	Terminal Size	Unit Price
		5	M5	

Ordering Example

Part Number	MSNDS5
	MFMT4
	MSNY4

