

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 Measurement Range	0 ~ 650°C
Temperature Measurement Range	0 ~ 750°C
Material	Sheath SUS316 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)			Unit Price		Lead Side			Unit Price	
Part Number	D	L Selection	L300	L500	Part Number	F Selection (Unit: m)	F2	F4	Unit Price
MCNF	1.6	300			MCNM	2			
	3.2	500				4			

Double Element

MSWK (K Thermocouple)

MSWK

Type of Thermocouple	K Thermocouple
Precision	JIS Class 2
Temperature Measurement Contact Point	Isolated Neutral Type
Temperature Measurement Range	0 ~ 750°C
Temperature Measurement Range	0 ~ 800°C
Material	Sheath SUS316 Sleeve SUS304
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	D	L Selection	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 SUS316 + Fluororesin (FEP) Tube Sleeve SUS304
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	D	L Selection	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.)

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.

Ordering Example

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

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	Isolated Neutral 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	No.	Terminal Size	D	d	Unit Price
MSNDS	4	M4	8	4.3	
	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	Isolated Neutral 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	No.	Terminal Size	D	d	F (m)	Unit Price
MFMT	4-1	M4	8	4.3	1	
	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	Isolated Neutral 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	No.	Terminal Size	Unit Price
MSNY	4	M4	
	5	M5	

Ordering Example

Part Number	
MSNDS5	
MFMT4	
MSNY4	

