

# Magnet Mount Temperature Sensors (Thermocouples)

## STM-A Series



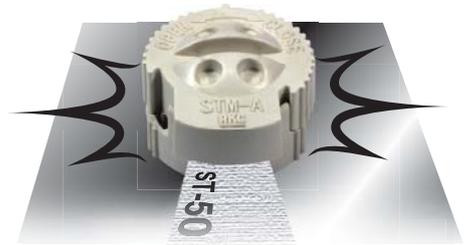
Operating Temperature Range

0 to 300°C

A magnetic adapter type temperature sensor with a tiny surface measuring sensor ST-50 (adhesive type). It is possible to measure temperature for metal surface by attaching a magnetic adapter.

- Its usage is for magnetic metals only.

Connector Cable for ST-50/ST-51 <W-ST50A>  
• Sold separately

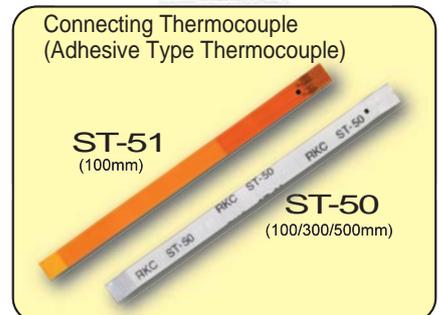


### ● Easy sensor exchange

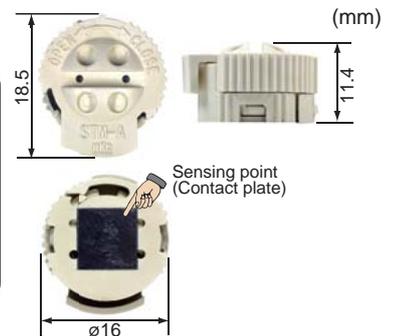
Sensor can be easily exchanged in case of a sensor break.

### ● Realize an inexpensive magnetic type.

Simple composition and excellent cost performance.



External Dimension of Magnet Adapter



#### Type and Model Code

Model Code  
**STM-A-G-100**

Temperature Sensor (Thermocouple)  
: ST-50 (Glass cloth base type)

Length of Sensor : Approx. 85mm  
Width of Sensor : 6.7mm

Model Code  
**STM-A-P-100**

Temperature Sensor (Thermocouple)  
: ST-51 (Polyimide sheet type)

Length of Sensor : Approx. 85mm  
Width of Sensor : 6.7mm

Model Code  
**STM-A-G-300**

Temperature Sensor (Thermocouple)  
: ST-50-300 (Glass cloth base type)

Length of Sensor : Approx. 285mm  
Width of Sensor : 6.7mm

Model Code  
**STM-A-G-500**

Temperature Sensor (Thermocouple)  
: ST-50-500 (Glass cloth base type)

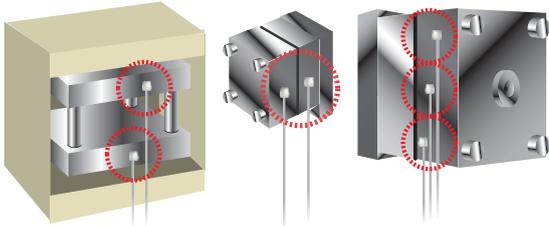
Length of Sensor : Approx. 485mm  
Width of Sensor : 6.7mm

## Specifications

- (1) Thermocouple Type K, Class 2 (JIS C 1602-1995)  
 (2) Operating Temperature 0 to 300°C (Non condensing)  
 (3) Measuring accuracy  $\pm 2^\circ\text{C}$  (100°C flat magnetic surface)  
 (4) Response time STM-A-P/G-100 : 0.5sec (90%) Typical Value  
 STM-A-G-300/500 : 1.5sec (90%) Typical Value  
 Evaluation method  
 • Sensor put at room temperature is attached with 100°C flat magnetic surface.  
 Time is evaluated when temperature reached to 90% of temperature stable point  
 (5) Magnetic attraction 3N to 7N (100°C flat magnetic surface)  
 (6) Contact plate material SUS304  
 (7) Adapter material Liquid crystal polymer resin  
 (8) Sensor sheet material STM-A-P-100: Polyimide sheet  
 STM-A-G-100/300/500: Glass cloth base sheet  
 (9) Net weight Approx. 10g  
 • Please find the ST-50 series catalog for ST-50's specification details.

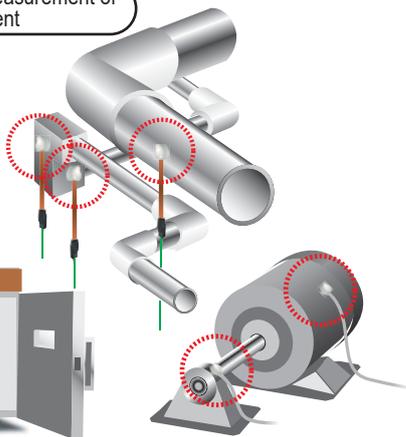
## Applications

- Cable need to be fixed at several points if it is dangling in order to prevent a sensor from falling.



Mold surface temperature measurement for press machine, extruder or injection molding machine.

Temperature measurement of pipe arrangement



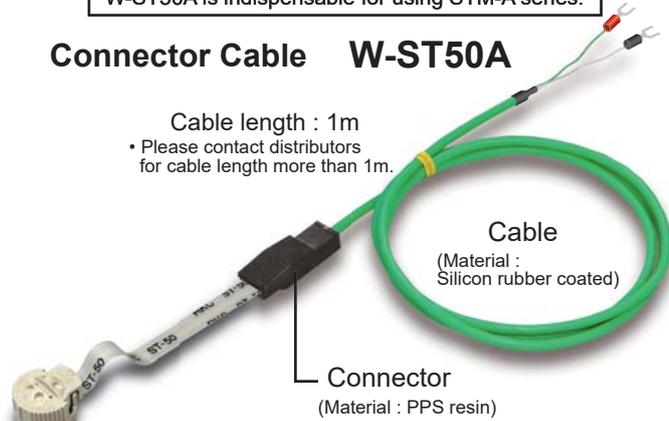
Temperature measurement of metallic body

Heating temperature of a shaft bearing and a motor.

## Accessories

W-ST50A is indispensable for using STM-A series.

### Connector Cable W-ST50A



### Cable termination list

- Y-shaped terminal lug  
**W-ST50A-1000-Y3**

- Miniature-thermocouple connector plug (CMP-01)  
**W-ST50A-1000-TM1**

- Solder treatment  
**W-ST50A-1000-N**

- Non-treatment  
**W-ST50A-1000-C**

- Connector for DP-700  
**W-ST50A-1000-6C**

- Connector for DP-350  
**W-ST50A-1000-3C**

Indicator, Controller, Recorder



Temperature measuring instrument (Thermocouple K input type)

Handheld Thermometer



**High Temperature Caution**

Immediately after the temperature measurement, the measuring part of the sensor may be too hot. Do not touch the measuring part soon after the measurement.

**Caution to magnetic**



A strong magnet is embedded in this product. Too close contact of this product with such as wristwatches, credit cards, or etc, it causes them failure and broken.



Safety Warning

- This product is intended for use with industrial machines, test and measuring equipment. It is not designed for use with medical equipment.
- If it is possible that an accident may occur as a result of the failure of the product or some other abnormality, an appropriate independent protection device must be installed.
- Do not touch the sensor with high-voltage connections or high-current line such as power supply terminals, or do not stick the sensor to avoid electric shock or failure.

Caution for the export trade

All transactions must comply with laws, regulations, and treaties.

Caution for imitated products

As products imitating our product now appear on the market, be careful that you don't purchase these imitated products. We will not warrant such products nor bear the responsibility for any damage and/or accident caused by their use.

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