

[KDS-1002]

# Thermocouple Temperature Sensor

User's Manual



## Specifications

- ① Range:  $-200^{\circ}\text{C} \sim +1200^{\circ}\text{C}$
- ② Resolution:  $\pm 0.6^{\circ}\text{C}$
- ③ Sensor properties: Type K Temperature element, stainless steel
- ④ Linearity:  $0 \sim 400^{\circ}\text{C} (\pm 3^{\circ}\text{C})$ ,  $-200^{\circ}\text{C} \sim 0^{\circ}\text{C}$
- ⑤ Chemical Resistance: 15minutes (1M HCl)

## Thermocouple Temperature Sensor Description

The thermocouple Temperature Sensor enables various temperature-related experiments between temperatures  $-200^{\circ}\text{C}$  and  $+1200^{\circ}\text{C}$ . Avoid soaking the probe in liquid for long periods at a time. For more professional chemical experiments, it is recommended that you use a probe which has higher levels of chemical endurance.

## Experiment safety instructions

- ① Take precautions against injuries due to explosions and fire hazards during heat-related experiments.
- ② Take special safety precautions during experiments involving heating apparatus.

## Constructing experiment

- ① Remember the transforming factors, such as the container, probe, heat from the atmosphere and characteristics of the heating source used in to consideration when constructing the experiment.
- ② The gauged value is only a percentage of the actual temperature (temperature read percentage) and will differ according to the gauge gaps (time gaps). In general temperature experiments, the gauge gap is set to 0.5sec or longer. The setting can be controlled from [experiment settings] -

[gauge gap]. To observe the aptitude of temperature change in an experiment with more rapid temperature changes, shorten the [gauge gap]. This is will allow for gauging without the influence of the temperature read percentage

## **Experiments**

Before the experiment, set [gauge gaps] and [experiment time] from [experiment settings] according to the details of your experiment.