THERMOELECTRIC TEMPERATURE TRANSDUCER

HTP1 - □□□□

HTP1-K8F5
(103(w/R.J.C)×50×121mm/350g)

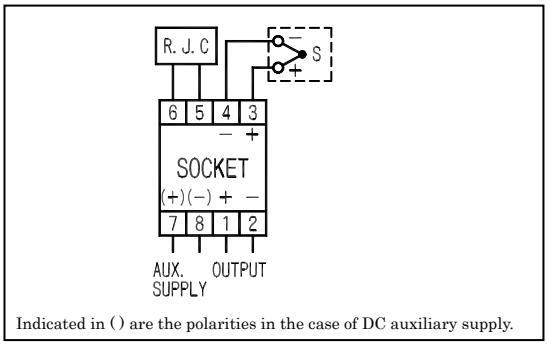
■ Use

By inputting thermal electromotive forces of various kinds of thermocouples based on the JIS, the device insulates and converts thermal electromotive force into an output proportional to temperature.

■ Features

1. Constant voltage/current output
2. Withstand voltage between input, output, auxiliary supply and outer case (earth) is AC1, 500V (50/60Hz), complete insulation for 1 minute.
3. Impulse withstands voltage 5kV, 1.2/50μs (between electric circuit and outer case), and positive/negative polarity 3 times each is guaranteed.
4. With output line surge protection (2,000A, 8/20μs, positive/negative polarity), can transmit an output directly to a distant place.

■ Connection diagram



Indicated in ( ) are the polarities in the case of DC auxiliary supply.

■ Specification

Kind of thermocouple	Standard input range	Input	Output (load resistance)	Auxiliary supply	Common specification
B	7 - 9	1 : 0-200℃ 2 : 0-300℃ 3 : 0-400℃ 4 : 0-500℃ 5 : 0-600℃ 6 : 0-800℃ 7 : 0-1000℃ 8 : 0-1200℃ 9 : 0-1400℃ 0 : other than those above	1 : DC0-100mV (≧200Ω) 2 : DC0-1V (≧200Ω) 3 : DC0-5V (≧1kΩ) 4 : DC 0-10V (≧2kΩ) 5 : DC1-5V (≧1kΩ) A : DC0-1mA (≦10kΩ) B : DC0-5mA (≦2kΩ) C : DC0-10mA (≦1kΩ) D : DC0-16mA (≦600Ω) E : DC1-5mA (≦3kΩ) F : DC4-20mA (≦750Ω) 0 : other than those above	1 : AC100V±10%, 50/60Hz 2 : AC110V±10%, 50/60Hz 3 : AC200V±10%, 50/60Hz 4 : AC220V±10%, 50/60Hz 5 : DC24V±10% 6 : DC48V±10% 0 : other than those above	Tolerance: ±0.5% *2 Response time: ≦1sec./99% Consumption VA: AC power source:3VA DC power source:4W Weight: AC power source:700g DC power source:350g
R	7 - 9				
S	7 - 9				
K	2 - 8				
E	1 - 5				
J	1 - 5				
T	1 - 2				

●Open of current output: even if the current output terminal is used in a state of regular open, there is no problem. Also, a voltage of approx. 25V occurs on the output terminal.
●Please consult with us for N thermocouple.

●Built-in linearizer

Thermal electromotive force of a thermocouple is not proportional to temperature. Thermal electromotive force is converted into an output proportional to temperature by a linearizer.

●Built-in burnout

Detects disconnection of thermocouple and does scale-out of output to positive (+) side.
Scale-out to negative side is also manufacturable if specified.

●Cold junction compensation

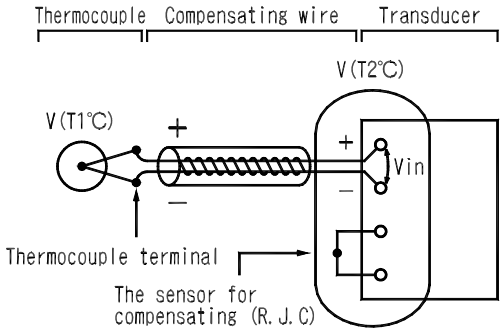
In principle, a thermocouple generates a thermal electromotive force equivalent to V (T1℃) −V (T2℃) as the Vin.

A sensor for compensation compensates for a thermal electromotive force equivalent to V (T2℃)

In the case of cold junction compensation, the sensor for compensation is connected to terminal part (5・6), and it compensates for temperature of terminal (5・6) as temperature of input terminal (3・4).

●Compensating wire

A compensating wire compensates for the temperature difference between thermocouple terminals and transducer terminals. Because color (material) of compensating wire varies according to thermocouple type, choose a compensating wire compatible with thermocouple. Match positive/negative polarities when connecting.



●External resistance range

External resistance range is the resistance value of a reciprocating circuit. The reciprocating circuit consists of thermocouple, compensating wire and connecting wire connected to a transducer. Use the product within an external resistance range less than or equal to 25Ω.

●Input wiring

Because a signal of input wiring is very weak, try to make the wirings away from noise sources such as an electrical power line, a precipitous voltage or a line with current fluctuation.

■ Purchase specification

●Item to specify