CS1W-PTS01-V1 Isolated-type Thermocouple Input Unit
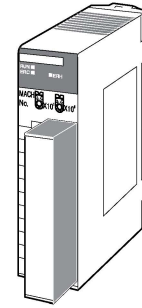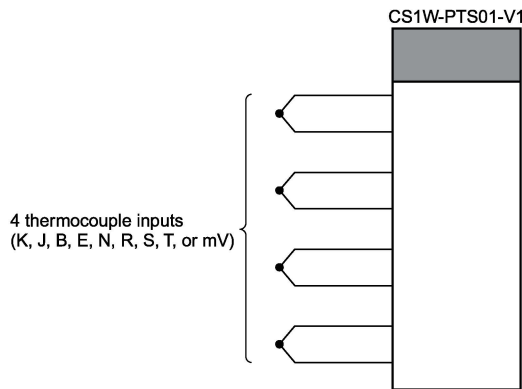
Overview

The CS1W-PTS01-V1 Isolated-type Thermocouple Input Unit provides four direct thermocouple inputs, and sends the data to the CPU Unit each cycle. All inputs are isolated.

System Configuration

CS1W-PTS01-V1

4 thermocouple inputs
(K, J, B, E, N, R, S, T, or mV)

Specifications

Item		Specifications	
Model number		CS1W-PTS01-V1	
Applicable PLC		CS Series	
Unit type		CS-series Special I/O Unit	
Mounting position		CS-series CPU Rack or CS-series Expansion Rack (Cannot be mounted to C200H Expansion I/O Rack or SYSMAC BUS Remote I/O Slave Rack.)	
Maximum number of Units		80 (within the allowable current consumption and power consumption range)	
Unit numbers		00 to 95 (Cannot duplicate Special I/O Unit numbers.)	
Areas for data exchange with CPU Unit	Special I/O Unit Area	10 words/Unit Thermocouple Input Unit to CPU Unit: All process values, process value alarms (LL, L, H, HH), rate-of-change values, rate-of-change alarms (L, H), disconnection alarms, cold junction sensor errors	
	DM Area words allocated to Special I/O Units	100 words/Unit CPU Unit to Thermocouple Input Unit: Temperature sensor type, input range (user set), scaling of process value data to be stored in allocated words in CIO area, number of items for moving average, process value alarm setting (LL, L, H, HH), rate-of-change alarm setting (L, H), zero/span adjustment value, etc.	
Number of temperature sensor inputs		4	
Temperature sensor types		Thermocouple B, E, J, K, N, R, S, T or −80 to 80 mV. (Set separately for each of four inputs.)	Sensor type, input range, and scaling to industrial units are separate for each of the 4 inputs. **Note:** Sensor type, input range, and scaling to industrial units are set in the DM Area.
Input ranges		The input range can be set within any of the measurable input ranges shown in Table 1 (below). **Note:** Internally, inputs are processed in five ranges (refer to Table 2 below), so accuracy and resolution accord with these internal ranges.	Example: Thermocouple: K; input range: 0 to 500°C; industrial unit scaling: 0 to 500°C. DM Area settings are as follows: Thermocouple: 3 (0003 hex) Input signal maximum: 5000 (1388 hex) Input signal minimum: 0 (0000 hex) Industrial unit maximum value stored: 500 (01F4 hex) Industrial unit minimum value stored: 0 (0000 hex)
Scaling in industrial units		Data to be stored in the allocated words in the CIO area must be scaled (with the minimum and maximum values set). Data can be stored at 0% to 100%.	
Data storage in the CIO Area		The value derived from carrying out the following processing in order of the actual process data in the input range is stored in four digits hexadecimal (binary values) in the allocated words in the CIO Area. 1) Mean value processing → 2) Scaling → 3) Zero/span adjustment → 4) Output limits	