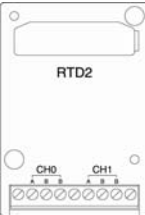


## ■ AFPX-RTD2

	Name	Specifications	I/O No.	Product No.
	FP-X RTD cassette	2-channel RTD input (insulated) (insulated between channels)	CH0 WX10 WX20 CH1 WX11 WX21	AFPX-RTD2

Item	Specifications
No. of input points	2 channels/cassette
Input range	RTD Pt100 <sup>Note1)</sup> (-200.0 to +850.0 °C)
Digital conversion value	In normal condition : K-2000 to K8500 When exceeding rated range : K-2150 to K-2001, K8501 to K8650 <sup>Note2)</sup> When wire is broken : K20000 When data is getting ready : K20001 <sup>Note3) Note4)</sup>
Resolution	0.1 °C (Minimum unit)
Conversion speed	200 ms or less <sup>Note5)</sup>
Total accuracy	±0.2% F.S. or less (Ambient temperature: 0 to +55°C) <sup>Note6)</sup>
Allowable input wire resistance	Resistance value per wire: 10 Ω or less
Insulation	Between analog input circuit and internal circuit: Transformer insulation, photo coupler insulation Between analog input channels: Transformer insulation
Occupation No. of I/O contacts	Input 32 points <sup>Note7)</sup>
Current consumption	100V AC 20mA or less 200V AC 10mA or less 24V DC 35mA or less
Weight	Approx. 25 g
Control unit version	Ver.2.40 or more

Note1) Use a 3-wire type RTD.

Note2) When exceeding the rated range, reference values which are not in the range of the conversion accuracy assurance are indicated up to ±15 °C. However, if the temperature drops (below -230 °C) or rise (over 900 °C) more, the data will be the same value (K20000) as the one at the time of disconnection.

Note3) The digital value will be K20001 from the Power-on to the converted data Ready (approx. 3 seconds) or when an error occurs (watchdog timer time-out error) on the microcomputer for the RTD cassette. Take care of the use of the data during this period not to influence other programs.

Note4) From the disconnection to the recovery and converted data Ready (approx. 3 seconds), the digital value will be K20001. Take care of the use of the data during this period not to influence other programs.

Note5) The conversion speed is 200 ms or less regardless of the number of channels to be used.  
And it will be reflected in the internal data register after the completion of a scan.

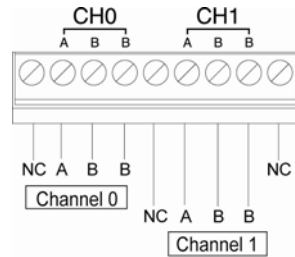
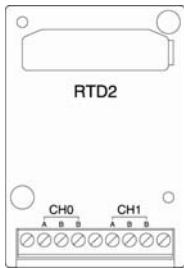
Note6) The full scale (F.S.) is -200 to 850 °C for the accuracy range of RTD Pt100.

Note7) Each channel data is allocated as I/O data as the table below.

RTD cassette Input channel	Installed slot	
	Expansion slot 0 (Cassette position)	Expansion slot 1 (Cassette position)
Channel 0 (CH0)	WX10	WX20
Channel 1 (CH1)	WX11	WX21

Note8) Supply power for 15 minutes or more after the power-on for performing the accurate measurement before using the cassette.

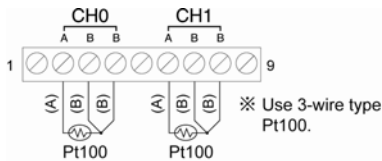
## Terminal layout



<b>CH0</b>	<b>A</b>	RTD input A
	<b>B</b>	RTD input B
	<b>B</b>	RTD input B
<b>CH1</b>	<b>A</b>	RTD input A
	<b>B</b>	RTD input B
	<b>B</b>	RTD input B
<b>NC</b>		Do not connect anything.

## Connection method

Connect each channel as mentioned below. After the connection, confirm that the polarity and terminal positions are correctly connected.



Note1) When extending the lead wire of RTD, use 3 wires in the same resistance and the same length.

Note2) Do not place the input signal line close to an AC power line or high-voltage line. Also, do not bundle it with them.

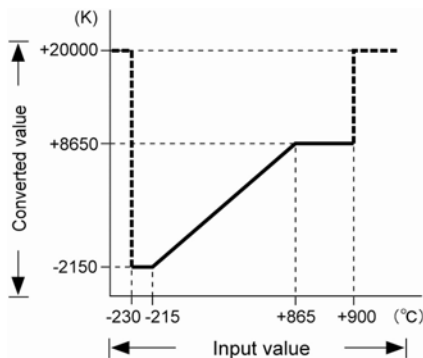
Note3) Use shielded wires for the input signal line. It is recommended to ground them.

However, depending on the conditions of the external noise, it may be better not to ground the shielding.

Note4) Do not connect one RTD to other equipment in parallel (input).

## RTD input range

### Conversion characteristics graph



### Table of converted values

Input value (°C)	Converted value
-200	-2000
0	0
850	8500

### When exceeding the rated range

(Reference values which accuracy is not assured are indicated up to  $\pm 15$  °C.)

Input value	Converted value
-215 °C or less	-2150
865 °C or more	8650
Disconnection	20000

Note) When exceeding the maximum/minimum value (exceeding the rated range), the converted values will be the values as mentioned above. However, if the temperature drops (below -230 °C) or rise (over 900 °C) more, the data will be the same value (+20000) as the one at the time of disconnection.



### Note:

#### About RTD input range

- From the Power-on to the converted data Ready (approx. 3 seconds), the digital value will be K20001.

Take care of the use of the data during this period not to influence other programs.

- From the disconnection or exceeding the rated range (digital value: K20000) to the recovery and converted data Ready (approx. 3 seconds), the digital value will be K20001.

Take care of the use of the data during this period not to influence other programs.