

50 (W) x 116 (H) x 125.5 (D) mm Approx. 400 g

This plug-in temperature signal converter is employed in combination with various types of thermocouples conforming to the JIS Standard. It is a high-performance converter, coming standard with a linearizer and reference-junction compensating circuit and a burnout circuit that issues an alarm upon sensor wire breakage. Together, these features ensure high-precision measurements. The converter can also be equipped with a built-in photocoupler-type isolater.

### Features

- The reference-junction compensating circuit eliminates without fail the adverse effects of variations in ambient temperature.
- Equipped with a burnout circuit capable of immediately detecting wire breakage in the sensor.
- Comes with a built-in linearizer that compensates for non-linearity of the sensor output.
- Input, output and power supply can be isolated from each other.
- Plug-in design enables mounting on DIN rails or direct installation.

Model WVP -  - \*  -

Input Thermocouple		Function		Power Supply	
J	IC	A	Non-isolated; Response time 200 msec/(0-90%)	1	AC 100 V $\pm$ 10%, 50/60 Hz
E	CRC	B	Isolated; Response time 200 msec/(0-90%)	2	AC 200 V $\pm$ 10%, 50/60 Hz
T	CC	C	Isolated; Response time 25 msec/(0-90%)	3	DC 24 V $\pm$ 10%
K	CA			4	AC 110 V $\pm$ 10%, 50/60 Hz
R	PR			5	AC 220 V $\pm$ 10%, 50/60 Hz

	Measuring Temperature Range				
	Temperature Range by Thermocouple				
	T	E	J	K	R
0-100°C	30	30	30	30	
0-150°C	31	31	31	31	
0-200°C	32	10	10	32	
0-250°C	11	11	11	11	
0-300°C	12	12	12	12	
0-400°C		13	13	13	33
0-500°C		14	14	14	34
0-600°C		15	15	15	35
0-800°C				16	36
0-1000°C				17	17
0-1200°C				18	18
0-1300°C					19
0-1400°C					20
0-1600°C					21
0-1800°C					
0-2000°C					
0-2300°C					
Other than the above (Please consult with us.)					99

\* Figures in the 30s above denote high-sensitivity ranges.  
For prices, please inquire.  
For figures in the 99s, please inquire about the possibility and costs of manufacture.

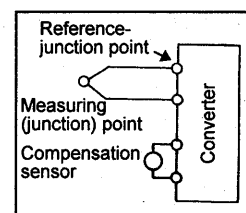
	Output Signal	
		Allowable Load Resistance
A	DC 4-20 mA	750 $\Omega$ or less
B	DC 1-5 mA	3 K $\Omega$ or less
C	DC 2-10 mA	1.5 K $\Omega$ or less
D	DC 0-1 mA	15 K $\Omega$ or less
E	DC 0-10 mA	1.5 K $\Omega$ or less
F	DC 0-16 mA	937 $\Omega$ or less
G	DC 0-20 mA	750 $\Omega$ or less
H	DC 1-5 V	2.5 K $\Omega$ or more
J	DC 0-10 mV	10 K $\Omega$ or more
K	DC 0-100 mV	100 K $\Omega$ or more
L	DC 0-1 V	500 $\Omega$ or more
N	DC 0-5 V	2.5 K $\Omega$ or more
P	DC 0-10 V	5 K $\Omega$ or more
S	Other than the above (Please consult with us.): Voltage output 10 V or less Current output 20 mA or less	

## Specification

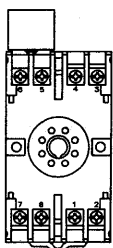
Input signal:	JIS-compliant thermocouple
Output signal:	DC voltage, DC current
Accuracy:	$\pm 0.4\% \cdot fs$ (at 23°C)
Input impedance:	100 K $\Omega$ or more
Allowable load resistance:	For voltage output, use the converter with a load current of 2 mA or less (1 $\mu A$ or less for an output below 1 V $\cdot fs$ ). For current output, use the converter with a voltage drop of 15 V or less between output terminals.
Operating temperature and humidity:	-5 to +55°C, 90% RH or less (without condensation)
Influence of ambient temperature:	$\pm 0.2\% \cdot fs/10^\circ C$
Insulation resistance:	100 M $\Omega$ or more with a 500 VDC megger between the input/output terminal and power supply terminal, and between input and output terminals (isolated type)
Dielectric strength:	2,000 VAC for 1 minute between input and output terminals (isolated type), and between the input/output terminal and power supply terminal
Power consumption:	Approx. 4 VA (AC), Approx. 120 mA (DC)
Standard equipment:	Reference-junction compensation: -5 to +55°C Linearizer: 30% $\cdot fs$ and less of the R-thermocouple are out of the linearizing range 30% $\cdot fs$ and less of the input range "20" to "24" of the WR-thermocouple are out of the linearizing range
Zero & span adjustment:	Burnout circuit (full upward deflection) $\pm 20\% \cdot fs$ each (multi-turn trimmer)

## Major Applications

**Cold Junction Compensation:** The thermoelectromotive force of a thermocouple represents a temperature at the measuring (junction) point, if the reference junction is at 0°C. However, if the reference-junction point is exposed to room temperature, the electromotive force will decrease accordingly. This converter unit is equipped with a cold junction compensation circuit that detects said decrease by a sensor and automatically compensates for it.



## Explanation of Terminals



No.	Symbol	Description
1	OUTPUT	+
2		-
3	INPUT	+
4		-
5		+
6		-
7	POWER	U (+)
8		V (-)