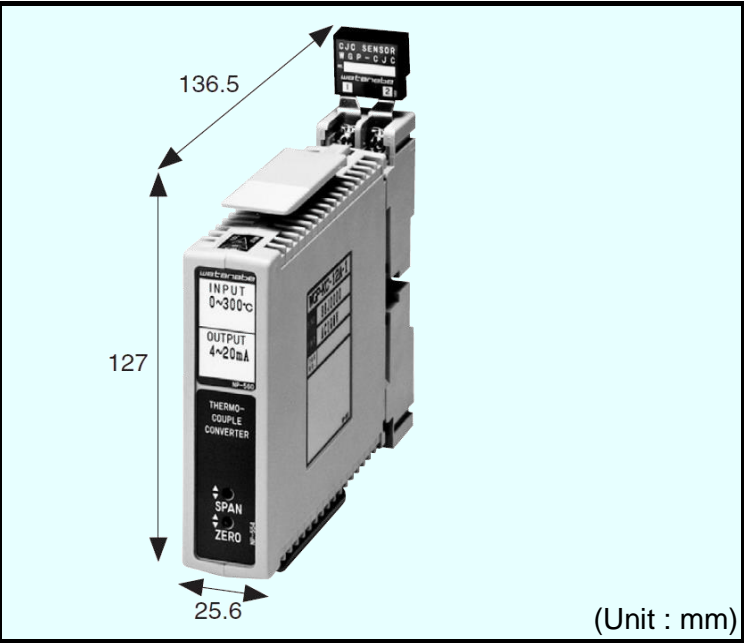


# Thermocouple Converter

WGP-JC / TC/  
K□ / RC / WRC



This compact plug-in converter accepts Thermocouples input conforming to JIS standard and provides optically isolated DC voltage or current output. This converter has a linearizer, a cold junction compensating circuit, and a burnout protection circuit as standard equipment which is required to measure temperature.

## Features

- ★ Linearizer, Cold junction compensating circuit, and Burnout protection circuit built-in
- ★ Able to measure low temperature by high sensibility amplifier
- ★ Dielectric strength of 2000Vac between input, outputs and power supply
- ★ Both AC and DC power supply are available
- ★ Accuracy at 0.4% FS, Response time 25ms
- ★ Easy to maintain by plug-in structure

## Ordering code

WGP-□□-□□□□-□□

Code	Input Thermocouple
J	J (IC)
T	T (CC)
K	K (CA)
R	R (PR)
WR	WRe 5/26

Code	Function
A	Non-isolated
C	Isolated Dielectric strength of 2000Vac for 1 minute

Temperature Range	Manufacturable Range by Thermocouple				
	T	J	K	R	W
0 to 100°C	30	30	30		
0 to 150°C	31	31	31		
0 to 200°C	32	10	32		
0 to 250°C	11	11	11		
0 to 300°C	12	12	12		
0 to 400°C		13	13	33	
0 to 500°C		14	14	34	
0 to 600°C		15	15	35	15
0 to 800°C			16	36	16
0 to 1000°C			17	17	17
0 to 1200°C			18	18	18
0 to 1300°C				19	19
0 to 1400°C				20	20
0 to 1600°C				21	21
0 to 1800°C					22
0 to 2000°C					23
0 to 2300°C					24
Other than above	99				
	(Contact us)				

Code	Power Supply
1	80 to 132Vac 50/60Hz Rated voltage : 100 to 120V ±10%
2	170 to 264Vac 50/60Hz Rated voltage : 200 to 240V ±10%
3	24Vdc ±10%
7	48Vdc ±10%
8	110Vdc ±10%

Code	Output	Allowable Load
A	4 to 20mA <sub>dc</sub>	750Ω or less
B	1 to 5mA <sub>dc</sub>	3kΩ or less
C	1 to 10mA <sub>dc</sub>	1.5kΩ or less
D	0 to 1mA <sub>dc</sub>	15kΩ or less
E	0 to 10mA <sub>dc</sub>	1.5kΩ or less
F	0 to 16mA <sub>dc</sub>	937Ω or less
G	0 to 20mA <sub>dc</sub>	750Ω or less
H	1 to 5V <sub>dc</sub>	2.5kΩ or more
J	0 to 10mV <sub>dc</sub>	10kΩ or more
K	0 to 100mV <sub>dc</sub>	100kΩ or more
L	0 to 1V <sub>dc</sub>	500Ω or more
N	0 to 5V <sub>dc</sub>	2.5kΩ or more
P	0 to 10V <sub>dc</sub>	5kΩ or more
S	Contact us for other than the above Current output 20mA or less Voltage output 10V or less	

## Specifications

Accuracy	±0.4% FS (at 23±10°C)
Response time	Approx. 25ms (0 to 90%)
Input resistance	1MΩ or more
Allowable load resistance	Current output 15V or less of voltage drop Voltage output Load current 2mA or less For 1V FS or less of output the current is 1μA or less
Zero & span adjustment	±10% FS (3 turn trimmer)
Operating temperature	-5 to +55°C
Operating relative humidity	90% or less (non-condensing)
Temperature coefficient	±0.015% FS of span per °C
Cold junction compensating Accuracy	±0.5°C (±1°C or less for R and WR)
Cold junction compensating Temperature	10 to 40°C
Linearization	Available
Burnout protection	Upscale
Isolation	Between input, output, and power supply
Insulation resistance	100MΩ or more with a 500V <sub>dc</sub> megger Between input, output, and power supply terminal
Dielectric strength	2000Vac for 1 minute
Power consumption	Approx. 5VA (AC), Approx. 100mA (DC)
Power supply variation	±0.1% FS (within the range of rated voltage)
Dimensions	127(H) X 25.6(W) X 136.5(D)mm
Weight	Approx. 200g
Structure	Plug-in
Connection	M3.5 SEMS screw part of the base socket
Material of terminal screw	Chromated iron
Case color and material	Ivory, heat-resistant ABS resin(94V-0)
Mounting	DIN rail or wall surface

## Terminal connections



No	Signal	Description
1	WGP-CJC	Cold junction temperature compensation
2		
3	INPUT(+)	Input
4	INPUT(-)	
5	OUTPUT(+)	Output
6	OUTPUT(-)	
7	POWER U(+)	Power Supply
8	POWER V(-)	

\* Specification is subject to change without notice