General Specifications

Model GT5
Thermocouple Converter
(Free Range Type)

GS 77M01T05-01E

■ General

The GT5 is a free range type thermocouple converter that is connected to an IEC/JIS-standard thermocouple (TC), such as a Type K, T, E, J, R, S, B or N thermocouples to convert temperature signals into isolated DC current or DC voltage signals.

- Selection of input type (sensor type), temperature unit (°C, K), input range setting, burnout setting, output adjustment, I/O monitoring can be made using the optional Parameter Setting Tool (VJ77) or Handy Terminal (JHT200).
- Seven different types of output signals are available. it can be set easily by plugging a short-circuiting socket into pin-header for a output signal setting.
- For the Fahrenheit display, specify the option "/DF".

■ Model and Suffix Codes

GT5 - T□ - □ * B / B □ / □□

Model

Input Signal
IEC/JIS specifications thermocouple
K:Type K(CA) R:Type R
T:Type T(CC) S:Type S
E:Type E(CRC) B:Type B(BH)
J:Type J(IC) N:Type N

Output signal
1:0 to 10 V DC
2:0 to 5 V DC
3:0 to 1 V DC
4:0 to 100 mV DC
5:0 to 10 mV DC
6:1 to 5 V DC
7:4 to 20 mA DC
Z:Custom order

Burnout
U:UP
D:DOWN
N:OFF

Optional specification
DF : Fahrenheit display function

Power Supply
20 to 130 V DC/80 to 138 V AC AC/DC use

■ Ordering Information

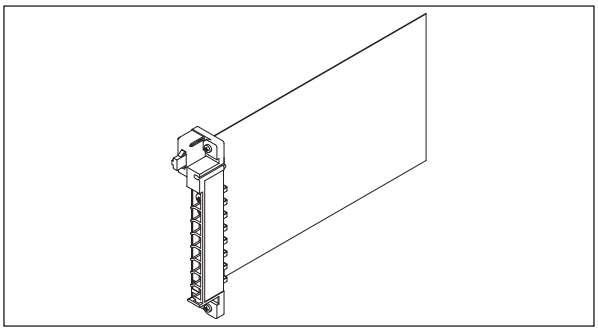
Specify the following when ordering.

- Model and suffix codes: e.g. GT5 –TK–6*B/BU
- Input range: e.g. 0 to 500 °C

When the burnout is not specified, the product is manufactured as /BU.

■ Input/Output Specifications

Input signal: An IEC/JIS-standard thermocouple (ITS-90, JIS C 1602: '95, IEC 584: '95)



Input type and Measuring range:

InputType	Measuring Range (°C)	Measuring Span	Zero Elevation
Type K	- 200 to + 1200	3 mV or more	Within 3 times of the measuring span or ± 25 mV , whichever is smaller
Type T	- 200 to + 350		
Type E	- 200 to + 800		
Type J	0 to 750		
Type R	0 to 1600		
Type S	0 to 1600		
Type B	600 to 1700		
Type N	- 200 to + 1200		

Input resistance: 1 MΩ or more (10 kΩ or more when power off)
Bournout detective current: 0.1 µA
Permissible applied voltage: - 0.5 to + 4.0 V DC
Signal source resistance: 500 Ω or les
Output signal: DC voltage or DC current signal
Output resistance and Allowable load resistance:

DC voltage signal			
Code	**Output signal**	**Output resistance**	**Allowable load resistance**
1	0 to 10 V DC	1 Ω or less	10 kΩ or more
2	0 to 5 V DC	1 Ω or less	2 kΩ or more
3	0 to 1 V DC	1 Ω or less	2 kΩ or more
4	0 to 100 mV DC	100 or less	250 kΩ or more
5	0 to 10 mV DC	100 or less	250 kΩ or more
6	1 to 5 V DC	1 Ω or less	2 kΩ or more
DC current signal			
7	4 to 20 mA DC	500 kΩ or more	750 Ω or less

Input adjustment: ± 1% of span (Zero/Span)
Output adjustment: ± 10% of span (Zero/Span)

■ Standard Performance

Accuracy rating: ± 0.3% of span
If you have changed the factory default settings, the adjustment should be made.
Accuracy of reference junction compensation:
Other than Type R and S: ± 1 °C (0 to 50 °C)
Type R and S: ± 2 °C (0 to 50 °C)
Type B: Reference junction compensation is not included.
Response speed: 150 ms, 63% response (10 to 90%)
Burnout: Up, Down or Off; the maximum burnout time is specified as 60 seconds.

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Effect of power supply voltage fluctuations: ± 0.1% of span or less for the fluctuation within the operating range of power supply voltage specification.
Effect of ambient temperature change: ± 0.2% of span or less for a temperature change of 10 °C.
Effect of leadwire resistance change: ± 15 μV or less for a change of 100 Ω (Need adjustment when combining with BARD-600)

■ Environmental Conditions

Operating temperature range: 0 to 50 °C
Operating humidity range: 5 to 90% RH (no condensation)
Avoid the following environments for installation locations:
Areas with vibration, corrosive gases, dust, water, oil, solvents, direct sunlight, radiation, a strong electric field, and/or a strong magnetic field, altitude of more than 2000 m above sea level.

■ Power Supply and Isolation

Supply input voltage range: 20 to 130 V DC or 80 to 138 V AC (47 to 63 Hz) (Ripple content 5% p-p or less).
Power consumption current: 24 V DC 2.8 W 100 V AC 7.2 VA
Insulation resistance: 100 MΩ minimum at 500 V DC between input, output, power supply and grounding terminals mutually.
Withstanding voltage: 1000 V AC/minute between input, output, power supply and grounding terminals mutually.

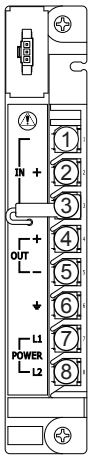
■ Mounting and Appearance

Mounting method: Rack mounting
Connection method: M4 screw terminals
External dimensions: 148 (H) × 27 (W) × 248 (D) mm
Weight: Approx. 350 g

■ Accessories

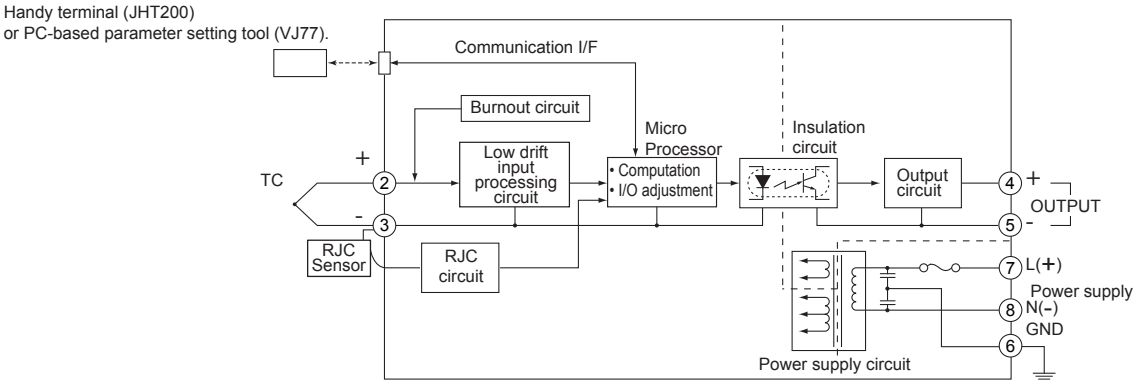
Spare fuse (0.5 A): 1, Tag number label: 4

■ Terminal Assignments



1	DO NOT use	
2	Input	+
3	Input RJC	–
4	Output	+
5	Output	–
6	GND	⏚
7	Power supply	L +
8	Power supply	N –

■ Block Diagram



■ External Dimensions