

Temperature Input Units

# GT1-TS04□

## Temperature Input Units for use with MULTIPLE I/O TERMINAL

- Four inputs.
- Thermocouples and platinum resistance thermometer models are available.
- Conversion time is only 250 ms for 4 inputs.
- The Configurator can be used to calibrate temperatures.
- The circuit section can be removed, so rewiring isn't required during maintenance.
- DIN track mounting.



### Ordering Information

I/O classification	I/O points	I/O connections	Power supply voltage	Input specification	Model
Temperature inputs	4 inputs	Terminal Block	24 VDC	Thermocouple	GT1-TS04T
				Platinum resistance thermometer	GT1-TS04P

### General Specifications

I/O power supply voltage	20.4 to 26.4 VDC (24 VDC -15%/+10%)	
Current consumption	I/O Unit interface	Internal power supply
	50 mA max.	80 mA max.
Vibration resistance	10 to 150 Hz, 0.7-mm amplitude or 50 m/s <sup>2</sup>	
Shock resistance	150 m/s <sup>2</sup>	
Dielectric strength	500 VAC	
Mounting method	DIN 35 mm-track mounting	
Ambient operating temperature	-10°C to 55°C	
Ambient operating humidity	25% to 85% (with no condensation)	
Ambient storage temperature	-25°C to 65°C	
Accessories	I/O Unit Connecting Cable (40 mm)	

### Input Specifications

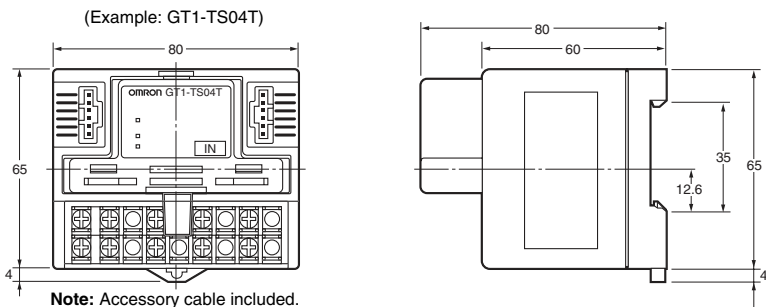
Item	Model	GT1-TS04T	GT1-TS04P
Input type		R, S, K, J, T, L, or B selectable	Pt100 or Jpt100 selectable
Indicator accuracy		(±0.3% of indication value or ±1°C, whichever is larger) ±1 digit max. *	-200.0 to 650.0°C input range: (±0.3% of indication value or ±0.8°C, whichever is larger) ±1 digit max. -200 to 200°C input range: (±0.3% of indication value or ±0.5°C, whichever is larger) ±1 digit max.
Conversion cycle		250 ms/4 points	
Temperature conversion data		Binary data	
Insulation method		Between input and communication lines: Photocoupler insulation	Between temperature input signals: Photocoupler insulation

\* K or T below -100°C: +2°C ±1 digit max. L: ±2°C ±1 digit max.  
R or S below 200°C: ±3°C ±1 digit max. B below 400°C: No standard set

### Dimensions

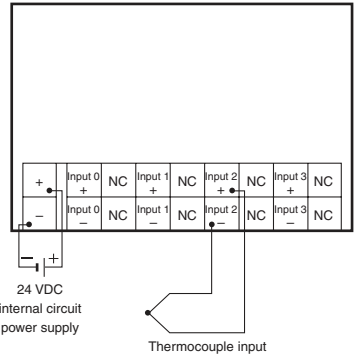
(Unit: mm)

GT1-TS04T  
GT1-TS04P

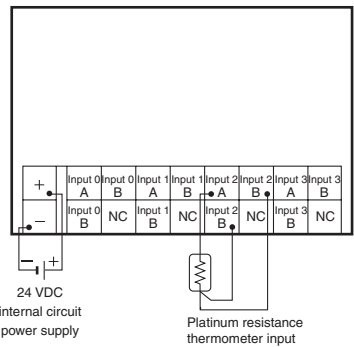


### Wiring Diagrams

GT1-TS04T



GT1-TS04P



## Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

## Warranty and Limitations of Liability

### WARRANTY

OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, REGARDING NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR PARTICULAR PURPOSE OF THE PRODUCTS. ANY BUYER OR USER ACKNOWLEDGES THAT THE BUYER OR USER ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. OMRON DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

### LIMITATIONS OF LIABILITY

OMRON SHALL NOT BE RESPONSIBLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.

In no event shall the responsibility of OMRON for any act exceed the individual price of the product on which liability is asserted.

IN NO EVENT SHALL OMRON BE RESPONSIBLE FOR WARRANTY, REPAIR, OR OTHER CLAIMS REGARDING THE PRODUCTS UNLESS OMRON'S ANALYSIS CONFIRMS THAT THE PRODUCTS WERE PROPERLY HANDLED, STORED, INSTALLED, AND MAINTAINED AND NOT SUBJECT TO CONTAMINATION, ABUSE, MISUSE, OR INAPPROPRIATE MODIFICATION OR REPAIR.

## Application Considerations

### SUITABILITY FOR USE

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of products in the customer's application or use of the products.

At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use that apply to the products. This information by itself is not sufficient for a complete determination of the suitability of the products in combination with the end product, machine, system, or other application or use.

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of the products, nor is it intended to imply that the uses listed may be suitable for the products:

- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

### PROGRAMMABLE PRODUCTS

OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

## Disclaimers

### CHANGE IN SPECIFICATIONS

Product specifications and accessories may be changed at any time based on improvements and other reasons.

It is our practice to change model numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special model numbers may be assigned to fix or establish key specifications for your application on your request. Please consult with your OMRON representative at any time to confirm actual specifications of purchased products.

### DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

### PERFORMANCE DATA

Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of OMRON's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to the OMRON Warranty and Limitations of Liability.

### ERRORS AND OMISSIONS

The information in this document has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical, or proofreading errors, or omissions.

2009.8

In the interest of product improvement, specifications are subject to change without notice.

**OMRON Corporation**  
Industrial Automation Company

<http://www.ia.omron.com/>

(c)Copyright OMRON Corporation 2009 All Right Reserved.