THERMO ELECTRIC PELTIER CONTROLLER

Model TA-150 / TA-150C

◆ Features ◆

Downsizing High Precision Peltier Controller

Temperature Control ◆ ±0.1 °C
External Dimension ◆ W 146 × D 127 × H 47 mm

High Cost Performance by Simple Basic Function

Input Volt ◆ 12 V ~ 24 V
Output Current ◆ 7 A max.
Temp. Control Range ◆ −80 °C ~ +150 °C

Simple Method of Handling

The method of Temperature and parameters are very simple and easy.

PC Communication function* loaded

Temperature setting and supervision are possible from PC by communication function*.

*Communication function is option.
No communication function model : TA-150
Communication function model : TA-150C

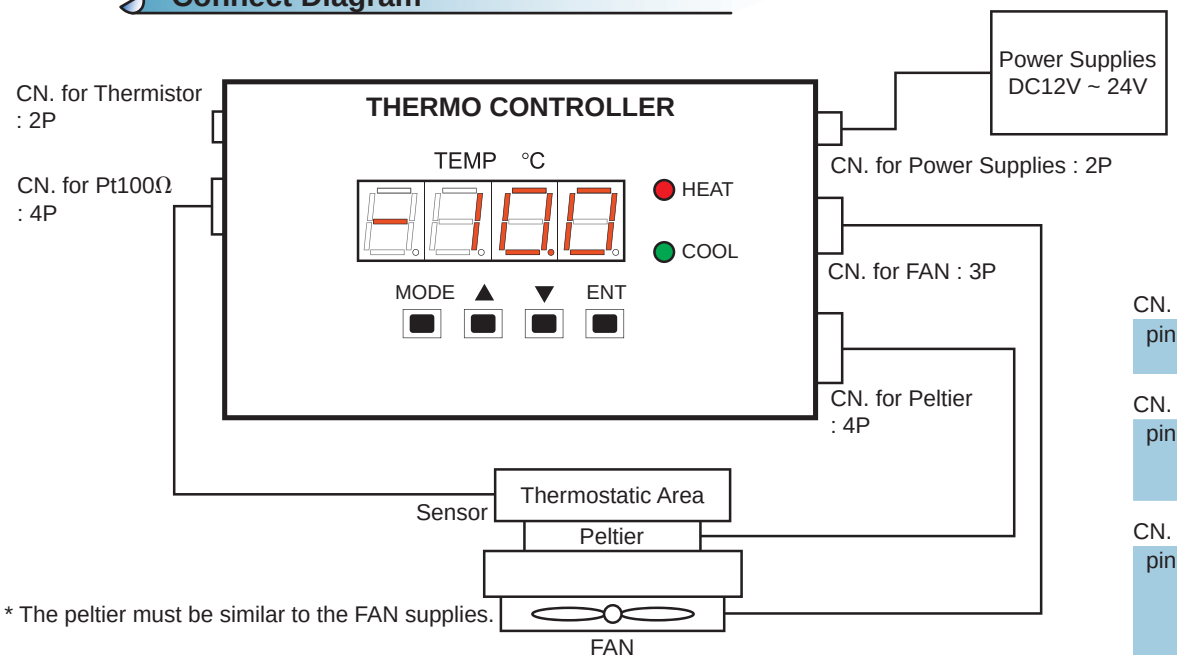
Please consult for needs of a substrate.

Specifications

Temperature Range		−80 °C ~ +150 °C (Pt100 Ω in use) −30 °C ~ +80 °C (Thermistor in use)
Temperature Setting		Possible in increments of 0.1 °C
Temperature Indication		Possible in increments of 0.1 °C
Indicator	Temperature	LED indicator
	Function	Red LED in heating Green LED in cooling
Control Method		PI control
P Range		0.1 to 99.9 °C
I Range		1 to 1999 sec.
Peltier Drive Method		PWM drive
Temp. Sensor		Thermistor, Pt100 Ω (Impossible to use simultaneously)
Safety Function		At braking a sensor, the power is off.
Input / Output Connector		2P connector for Power Supplies, 4P connector for Peltier, 3P connector for FAN 2P connector for Thermistor, 4P connector for Pt100 Ω
PC Communication function (option)		PC to Controller : RS-232C*1, USB*1, RS-422*1, RS-485*1 Controller to Controller : RS-485 Controller maximum connection quantity : 32
Recommended Sensor		Pt100 Ω : in conformity with New JIS standard C-1604-1989 Thermistor : 10 kΩ at 25 °C Tolerance : ±1 % B standard figure : 3435 K ±1 % (Temperature precision depends on sensor precision.)
Power Supplies		Outer supplies (DC 12 V to DC 24 V)
Electric Current		DC 24 V 0.15 A, DC 12 V 0.25 A (Controller Unit)
Peltier Drive Capability		DC 24 V 7 A (at Maximum)
Working Environment		Inside area
Working Temp. Range		+10 °C ~ +40 °C
Working Humidity Range		85 % max. (No evidence of dew)
Outer Dimensions		W 146 × D 127 × H 47 mm (Except projection)
Weight		640 g (for the main unit only)

It is impossible to use simultaneously, USB, RS-232C, RS-422 and RS-485.

Connect Diagram



CN. for Power Supplies : 2P

pin		
	1	+V
	2	0V

CN. for FAN : 3P

pin		
	1	+V
	2	NC
	3	0V

CN. for Peltier : 4P

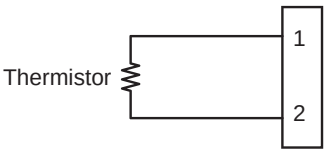
pin		
	1	+V
	2	+V
	3	0V
	4	0V

Matching Connector Housing and Contact

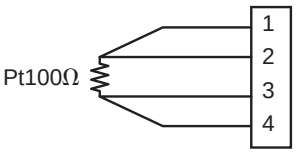
For Thermistor	H2P-SHF-AA	JST Mfg. Co., Ltd.
For Pt100Ω	H4P-SHF-AA	JST Mfg. Co., Ltd.
For FAN	H3P-SHF-AA	JST Mfg. Co., Ltd.
(Matching Contact	SHF-001T-0.8BS	JST Mfg. Co., Ltd.)
For Power Supplies	VHR-2N	JST Mfg. Co., Ltd.
For Ppeltier	VHR-4N	JST Mfg. Co., Ltd.
(Matching Contact	SVH-21T-P1.1	JST Mfg. Co., Ltd.)

Connector Pin Assign

◆ CN. for Thermistor : 2P



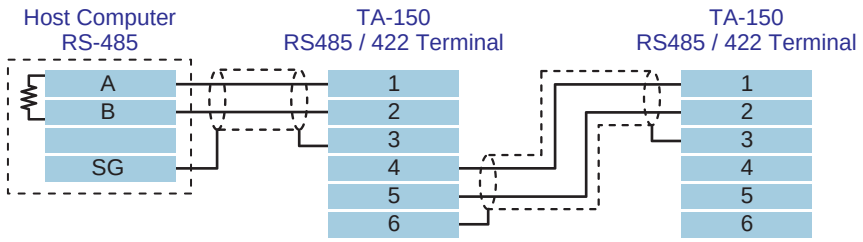
◆ CN. for Pt100Ω : 4P



Example of Connection

To use communication, it is necessary to set the unit numbers from 0 to 99 as each controller with the panel switch of a main part.

Connection of RS-485, and a switch setup



1 : OFF	[TRx SELECT SW]
2 : ON	
3 : ON	A setup of those other than an end Controller.
4 : OFF	

1 : ON	[TRx SELECT SW]
2 : ON	
3 : ON	A setup of an end Controller.
4 : OFF	

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