

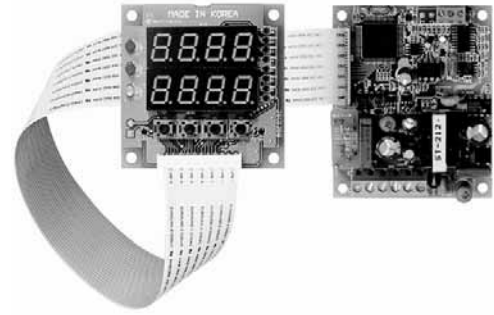
TB42 Series

Board type Temperature controller

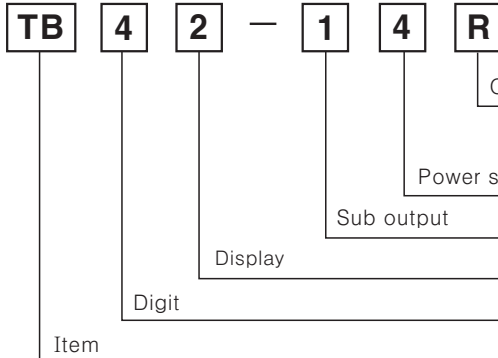
■ Features

- High quality and economical product
- Convenient organization of panel to use
- Dual PID control
- Time reservation

⚠ Please read "Caution for your safety" in operation manual before using.



■ Ordering information



R	Relay output
S	SSR drive output
C	Current output (DC4-20mA)
N	PV Transmission output (DC4-20mA)
4	100-240VAC 50/60Hz
1	EVENT1 output type
2	2 Display
4	4 Digit
TB	Temperature Board

※PV transmission output type does not have EVENT1 output.

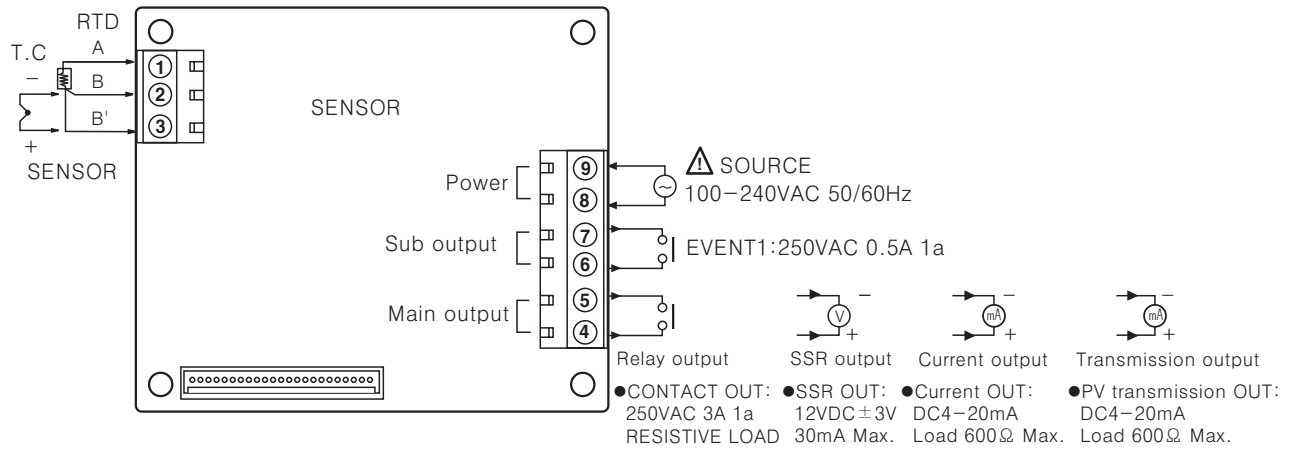
■ Specifications

Model	TB42-14R	TB42-14S	TB42-14C	TB42-14N
Power supply	100-240VAC 50/60Hz ±10%			
Power consumption	Approx. max. 5VA			
Display method	7 Segment LED Display [Processing value (PV):Green, Setting value (SV):Red]			
Character size	W8×H10mm			
Input	Thermocouple	K (CA), J (IC) [Tolerance outer resistance is max. 100Ω]		
	RTD	Pt100Ω, JIS Pt100Ω [Allowable line resistance is max. 5Ω per a wire]		
Output	Relay	250VAC 3A 1a	—————	—————
	SSR drive	—————	12VDC ±3V 30mA Max.	—————
	Current	—————	—————	DC4-20mA Load 600Ω Max.
	Transmission	—————	—————	—————
Sub output	• Event1 output : Relay output (250VAC 0.5A 1a) • Event2 output : OK monitoring display by LED			
Control method	ON/OFF control, P, PI, PD, PIDF, PIDS			
Setting type	Front push buttons			
Display accuracy	F.S ±0.5% rdg ±1 Digit based on SV or 3°C Max.			
Hysteresis	Adjustable 1 ~ 100°C (0.1 ~ 100.0°C) at ON / OFF control			
Proportional band(P)	0.0 ~ 100.0%			
Integral time(I)	0 ~ 3600sec			
Derivative time(D)	0 ~ 3600sec			
Control cycle(T)	1 ~ 120sec			
Sampling period	0.5sec			
Dielectric strength	2000VAC 50/60Hz for 1 minute (Between input and power terminal)			
Vibration	0.75mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 2 hours			
Relay life cycle	Main output	Mechanical : Min. 10,000,000, Electrical : Min. 100,000 (250VAC 3A resistive load)		
	Sub output	Mechanical : Min. 20,000,000, Electrical : Min. 200,000 (250VAC 0.5A resistive load)		
Insulation resistance	Min. 100MΩ (500VDC mega)			
Noise strength	±2kV the square wave noise (pulse width:1μs) by the noise simulator			
Memory protection	10 years (When using non-volatile semiconductor memory type)			
Ambient temperature	-10 ~ 50°C			
Storage temperature	-20 ~ 60°C			
Ambient humidity	35 ~ 85% RH			
Approval				
Unit weight	Approx. 113.5g			

Board Type PID Controller

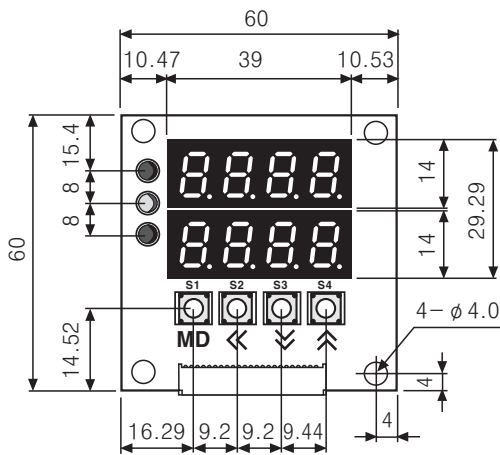
Connections

※RTD(Resistance Temperature Detector) : DIN Pt 100Ω , JIS Pt 100Ω(3-wire type) ※Thermocouple : K, J

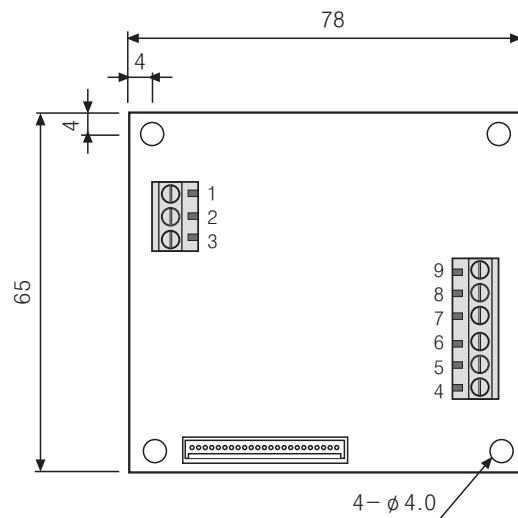


Dimensions

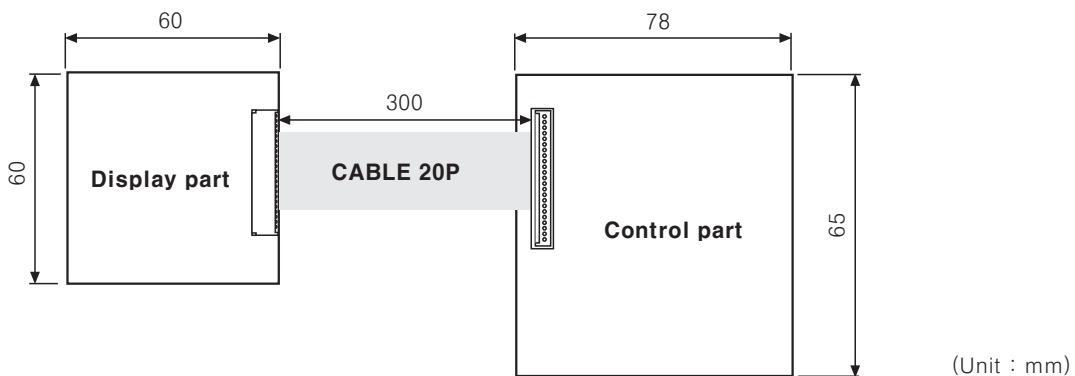
Display part



Control part



Layout



※Cable length is 300mm.

※The size of board is based on user's application. (Customizable)

(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

(I) Switching power supply

(J) Proximity sensor

(K) Photo electric sensor

(L) Pressure sensor

(M) Rotary encoder

(N) Stepping motor & Driver & Controller

(O) Graphic panel

(P) Field network device

(Q) Production stoppage models & replacement