

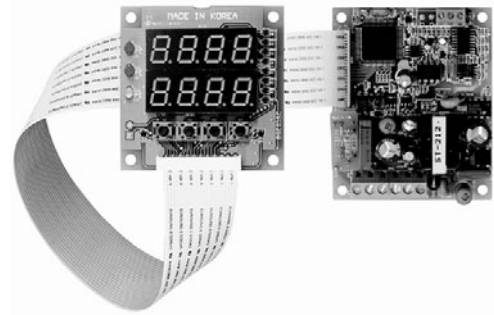
# TB42 Series

## Dual PID control board type

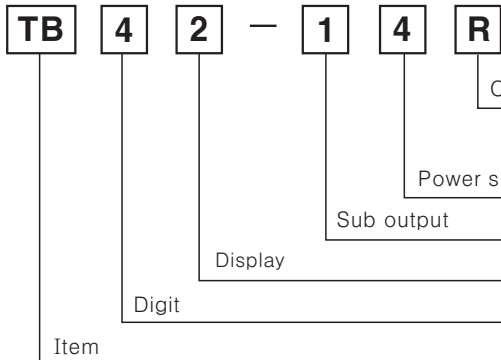
### ■ Features

- 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	9999(4 Digit)
TB	Temperature Controller Board

※PV transmission output type does not have EVENT1 output.

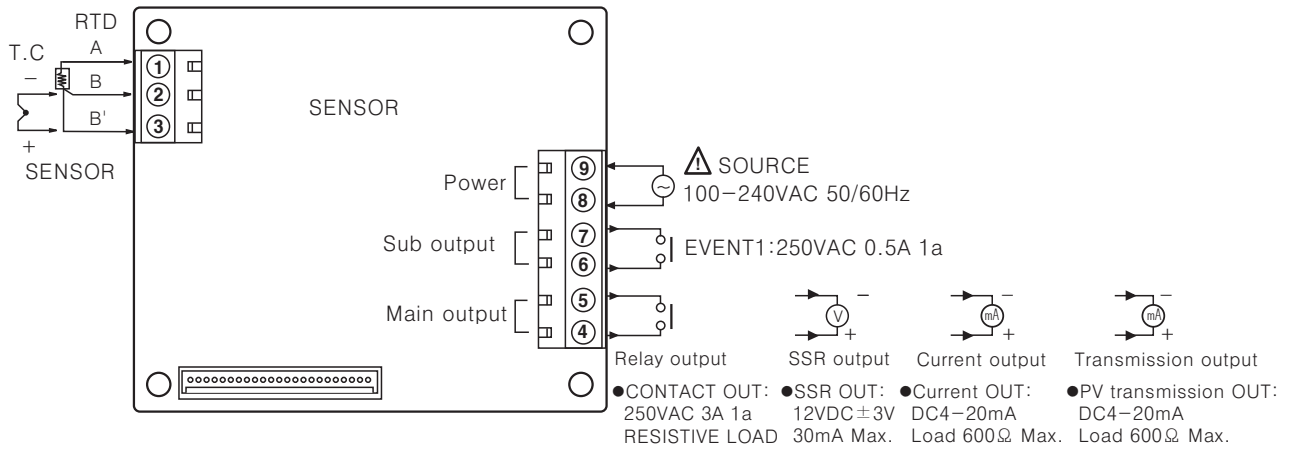
### ■ Specifications

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 [Allowable line resistance is max. 5Ω per a wire]		
Control 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℃ Max.			
Hysteresis	Adjustable 1 to 100℃ (0.1 to 100.0℃) at ON / OFF control			
Proportional band(P)	0.0 to 100.0%			
Integral time(I)	0 to 3600sec.			
Derivative time(D)	0 to 3600sec.			
Control cycle(T)	1 to 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 to 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 megger)			
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 to 50℃			
Storage temperature	-20 to 60℃			
Ambient humidity	35 to 85% RH			
Approval				
Unit weight	Approx. 113.5g			

# Dual PID Control Board Type

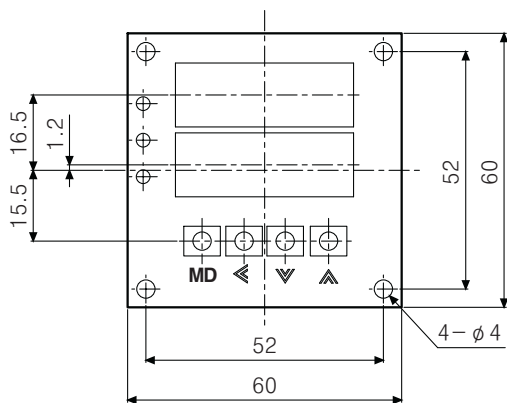
## Connections

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

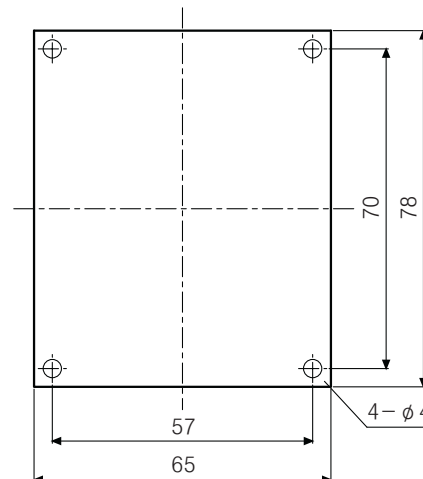


## Dimensions

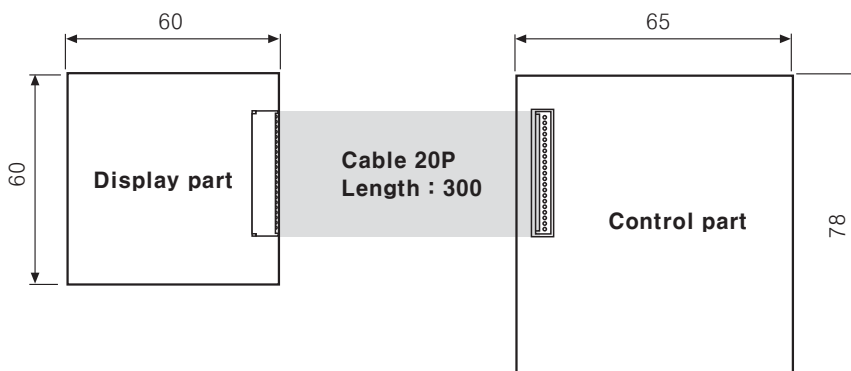
●Display part



●Control part



●Layout



※Cable length is 300mm.

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

(Unit : mm)

(A) Photo electric sensor

(B) Fiber optic sensor

(C) Door/Area sensor

(D) Proximity sensor

(E) Pressure sensor

(F) Rotary encoder

(G) Connector/Socket

(H) Temp. controller

(I) SSR/Power controller

(J) Counter

(K) Timer

(L) Panel meter

(M) Tacho/Speed/Pulse meter

(N) Display unit

(O) Sensor controller

(P) Switching power supply

(Q) Stepping motor & Driver & Controller

(R) Graphic/Logic panel

(S) Field network device

(T) Production stoppage models & replacement