

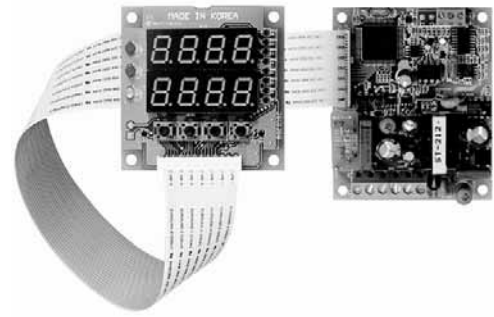
Board Type PID Controller

Board type Temperature controller

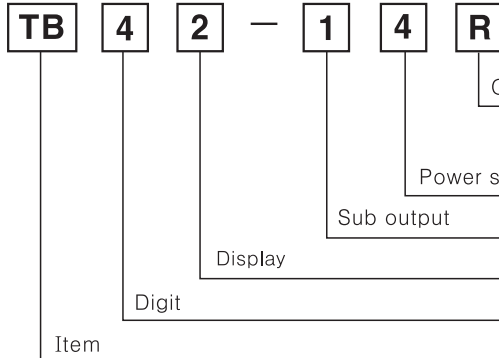
■ Features

- 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 output
C	Current output(4~20mADC)
N	PV Transmission output(4~20mADC)
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

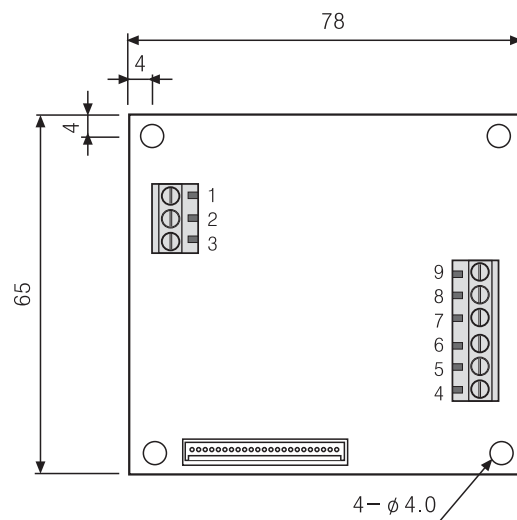
Model		TB42-14R	TB42-14S	TB42-14C	TB42-14N
Power supply		100-240VAC 50/60Hz ±10%			
Power consumption		Approx. max. 5VA			
Display method		7 Segment LED Display [Processing value(PV):Green, Setting value(SV):Red]			
Character size		W8×H10mm			
Input	Thermocouple	K(CA), J(IC) [Tolerance outer resistive is max. 100Ω]			
	RTD	Pt100Ω, JIS Pt100Ω [Allowable line resistance is max. 5Ω per a wire]			
Output	Relay	250VAC 3A 1a	_____	_____	_____
	SSR	_____	12VDC ±3V 30mA Max.	_____	_____
	Current	_____	_____	DC4-20mA Load 600Ω max.	_____
	Transmission	_____	_____	_____	4-20mADC, load Max. 600Ω for PV
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 ~ 100℃ (0.1 ~ 100.0℃) 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 fixed			
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)			
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℃			
Storage temperature		-20 ~ 60℃			
Ambient humidity		35 ~ 85% RH			
Approval					
Unit weight		Approx. 113.5g			

- (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) Production stoppage models & replacement

■ Connections

▣ Dimensions

- Control part



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- The diagram illustrates the connection between the **Display part** and the **Control part** using a **CABLE 20P**. The **Display part** has a width of 60 and a height of 60. The **Control part** has a width of 78 and a height of 65. The cable, labeled **CABLE 20P**, is 300 units long and connects the two parts. The cable is shown as a grey rectangular block with a vertical line indicating the connection point on the **Control part**.

- ※Cable length is 300mm.
- ※The size of board is based on user's application. (Optional)