# **Dual PID Auto tuning controller**

### ■ Features

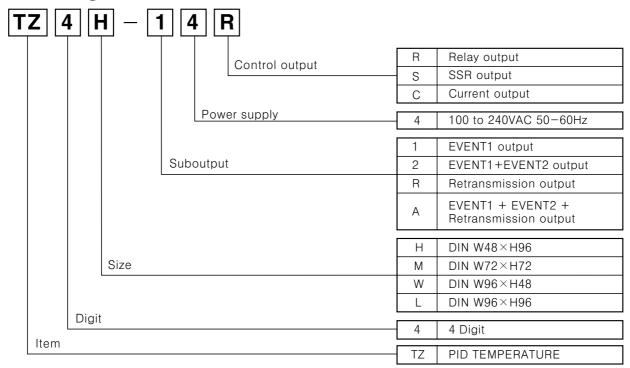
- Multi-input type selectable 15 kinds of input modes.
- Diverse output for Relay output, SSR output Current output(4 to 20mA),

Sub-output (EVENT1, EVENT2)

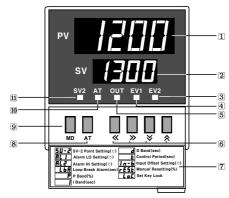
- \*\*Each EVENT1, EVENT2 can select one mode amoung 7 kinds of alarm modes & LBA, SBA \*\*TZ4SP has EVENT1 only.
- Free power voltage.100 to 240VAC 50-60Hz, 100 to 240VDC
- Dual PID funiction selectable fast response PID action(PIDF) or slow response PID action(PIDS).
  \*\*PIDS mode is to minimize overshoot.
- Indicating accuracy of  $\pm 0.3\%$  (F.S)



### Ordering information



### ■ Part name



\*PRODUCT: TZ4M(W72×H72mm)

- 1 PV:Processing value indicator(Red color)
- 2 SV:Setting value indicator(Green color)
- 3 EV2:EVENT2 Output signal lamp.
- 4 EV1:EVENT1 Output signal lamp.
- **5** OUT:Output signal lamp.
- 6 « » : Key shifting the display.

- **7** Information for operation mode.
- 8 AT Key: The mode key to execute Auto tuning function.
- MD Key: The mode key to change the items to be set, such as alarm value, etc.
- 10 AT: Flashing signal lamp while Auto tuning is being executed.
- 11 SV2: Signal lamp for SV2 operation.

## Rating

Model	TZ4H	TZ4M	TZ4W	TZ4L
Power supply	100 to 240VAC 50-60Hz			
Operating voltage range	90 to 110% of rated voltage			
Power consumption	About 6VA			
Display method	7Segment LED display [processing value(PV):red color, setting value(SV):green color]			
Input sensor	Thermocouple: K(CA), J(IC), R(PR), E(CR), T(CC), S(PP), N(NN), W(TT) (tolerance outer resistive is 100 Ω)			
	RTD:DIN Pt100 $\Omega$ , JIS Pt100 $\Omega$ , (3 wires type, tolerance of outer resistive is $5\Omega$ per a wire)			
	Voltage:1 to 5VDC, 0 to 10VDC, Current:DC4 to 20mA			
Control method	ON/OFF Control(Hysteresis:1 to 100℃ adjustable)			
	P, PI, PD, PIDF, PIDS			
Control output	Relay output:250VAC 3A SPDT(1c)			
	SSR output:12VDC ±2V 30mA Max.			
	Current output:DC4 to 20mA(load: Max. 600Ω)			
Retransmission output	PV value : DC4 to 20mA(load : Max. 600Ω)			
Sub output	EVENT1,2 output:Relay output 250VAC 1A SPST(1a)			
Indicating accuracy	±0.3% based on SV or 3℃ Max.			
Setting accuracy	Setting by front push buttons			
Hysteresis	Adjustable 1 to 100(0.1 to 100.0) °C at ON / OFF control action			
Proportional band(P)	0 to 100%			
Integral time(I)	0 to 3600sec.			
Derivative time(D) 0 to 3600sec.				
	1 to 120sec.			
Sampling time	0.5sec.			
LBA setting time	1 to 999sec.			
RAMP setting time	Ramp up, Ramp down at 1 to 99 minute			
Dielectric strength	2000VAC for 1min. Between power circuit and external sensor power.			
Mechanical durability	5 to 55Hz 0.5mm double amplitude at X, Y, Z directions for 2 hour			
Insulation resistance	Min. 100MΩ (500VDC)			
Noise	±2KV R Phase & S Phase 1μs			
Memory retention	10 years(by EEPROM)			
Ambient operating temperature	-10 to 50°C(at non-freezing status)			
Ambient storage temperature	-20 to 60°C (at non-freezing status)			
Ambient humidity	35 to 85% RH			
Weight	About 259g	About 270g	About 270g	About 360g

<sup>\*</sup>The weight of above chart is net weight.

## ■How to change the set value



flashed.





②Push "≪" key, and then the digit will be shifted step by step.





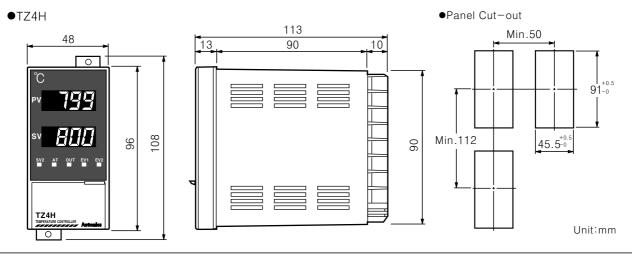
③Push "♥" or "♠" at the flashing digit, and then change the set value.

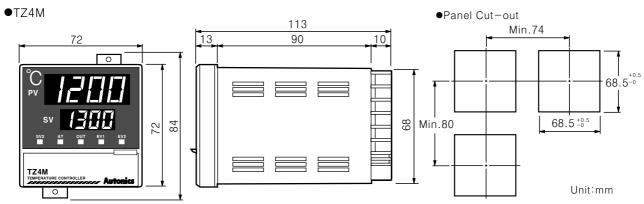


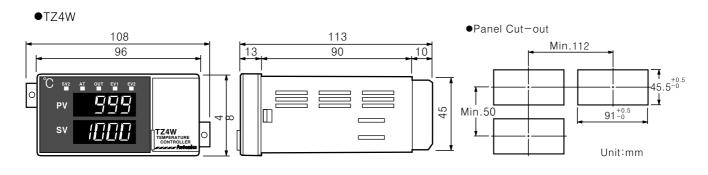
④Push MD key after setting the set value to be changed and then flashing of the digit stops and the reset value is applied at status of RUN.

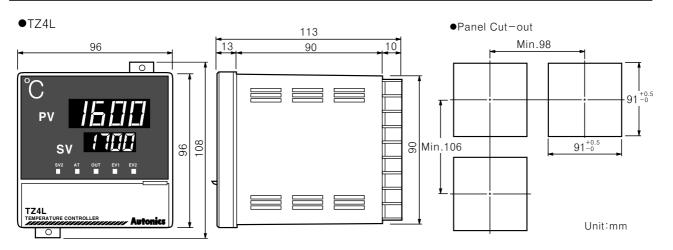
# **TZ SERIES**

### Dimension



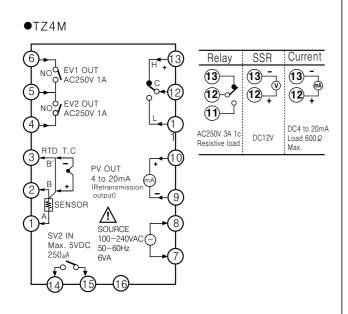


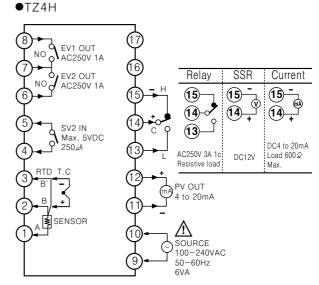




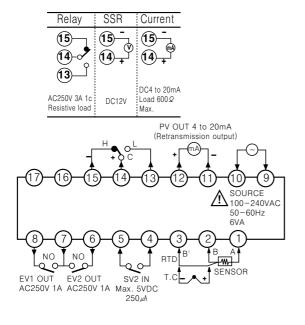
# **DUAL PID AUTO TUNING TYPE**

### Connections





#### ●TZ4W



#### ●TZ4L

