



PID Temperature Controllers

The **TZ4 Series** of **PID controllers** offer front panel selection of all operating functions except output type. Programming flexibility includes selection of a second temperature set value, sensor type and all PID function parameters.

Another unique selectable feature is fast or slow PID response. When set in the slow response (PIDS) mode, very little, if any overshoot will occur. If selected, Auto-tune control will monitor the system output response and after 3 response cycles will automatically calculate and replace the PID constants with optimal process control parameters.

Standard **TZ4** temperature controllers are equipped with two (2) alarm outputs. Some OEM customers prefer a single alarm output because it simplifies wiring and lowers costs. If you have a need for single alarm TZ4 temperature controllers, please specify model number TZ4SP-14R (See Ordering Information Chart)

PID Controllers // TZ4 Series

- Function options are all front panel selectable including sensor input. Only output must be ordered by model
- 2 temperature set values can be entered. Operator can then manually select between the two separate set values
- Fast or slow PID response selectable — In slow response overshoot eliminated.
- 2 independent alarm outputs, each with 9 operating modes
- Powerful but inexpensive
- Indicating accuracy of $\pm 0.3\%$ Full Scale
- Diverse outputs include Relay, SSR driver, and 4-20mA analog
- Multi-input type selectable 15 kinds of input modes

PROCESS APPLICATIONS

- Temperature
- Level

ORDERING INFORMATION

Model Number	Size	Output
TZ4ST-14R	48 x 48 mm	Single Relay
TZ4ST-24C	48 x 48 mm	4-20 mA
TZ4ST-24R *	48 x 48 mm	2 Relay
TZ4ST-24S	48 x 48 mm	SSR Driver Output
TZ4L-14R	96 x 96 mm	Single Relay
TZ4L-24C	96 x 96 mm	4-20 mA
TZ4L-24R	96 x 96 mm	2 Relay
TZ4L-24S	96 x 96 mm	SST Driver Output
TZ4M-14R	72 x 72 mm	Single Relay
TZ4M-24R	72 x 72 mm	2 Relay
TZ4SP-14R	72 x 72 mm	Single Relay
TZ4H-14R	48 x 96mm Up right	Single Relay
TZ4H-24C	48 x 96mm	4-20 mA
TZ4H-24R	48 x 96 mm	2 Relay
TZ4H-24S	48 x 96 mm	SSR Driver Output
TZ4W-14R	96 x 48 mm Wide	Single Relay
TZ4W-24R	96 x 48 mm	2 Relay

*Available in 11-Pin, 1 Alarm Output, Socket Mount — TZ4ST-14R



STANDARD TZ4 FEATURES 5 Models In Sizes From 1/16 To 1/4 DIN

- Two Alarm Outputs Standard Each With Nine Selectable Alarm Functions
- Dual Display Process Value and Set Value
- 2 Temperature Set Values
- C-UL Recognized
- One Button Auto-Tuning
- ON-OFF or PID Control
- Programmable Input (15 Selections)
- Thermocouple, RTD, Voltage or Current
- Selectable Fast or Slow Response PID
- Slow Response Eliminates Overshoot
- Programmable For Fahrenheit or Centigrade
- Loop Break Alarm
- Programmable For Heating or Cooling Control
- Non-Volatile EEPROM Memory
- Universal Voltage Input 100-240VAC/DC
- Relay, SSR Driver or Current Outputs

SPECIFICATIONS

INPUTS	Thermocouple	J, K, R, E, T, S, N, W
	3 Wire RTD	DIN Pt 100, JIS Pt 100
	Voltage	1 to 5VDC, 0 to 10VDC
	Current	4 to 20mA DC
ACCURACY SETTING & INDICATION	±0.3% of Full Scale ± 1 digit	
SAMPLING TIME	500 milliseconds	
OPERATING VOLTAGE	100 to 240 VAC, 50/60Hz, 100 to 240 VDC	
POWER CONSUMPTION	5VA @ 120 VAC	
SETTING METHOD	Front Panel Keypad	
FRONT PANEL DISPLAYS	Set Value	4 Digit Green LED
	Set Value 2	Indication - Red LED
	Process Value	4 Digit Red LED
	Output Relay Indication	Red LED
	Auto-Tune Indication	Red LED
	Event 1 & 2 (Alarm)	Red LED
OUTPUT	Relay	SPDT, 3A @ 240 VAC Resistive
	SSR Driver	0-12VDC, ± 2V, 30mA Max.
	Current	4-20mA, DC, <600 Ohms Max.
ALARM OUTPUTS	Relay; SPST, 1A @ 240 VAC Resistive	
MEMORY	Non-Volatile, 10 Year Retention	
MOUNTING	Front Panel	
TERMINATION	Screw Rear-Mounted	
OPERATING TEMP.	-10 to +50 °C	
HUMIDITY	35% to 85% RH	
RETRANSMISSION (OPTIONAL)	TZ4L, TZ4W, TZ4H, TZ4M, Only	
PROGRAMMABLE FUNCTIONS	Input Sensor Type (15 options)	
	Reverse (Heating) or Direct (Cooling) Action	
	Upper/Lower Temp Limit Alarm Setting	
	Input Offset Compensation	
	Display Selection of °C or °F	
	Auto-Tuning	
	Proportional or ON/OFF Control	
	Integral Time	
	Derivative	
	Control Period Time	
FRONT PANEL DIMENSIONS	TZ4ST	48 x 48mm
	TZ4M	72 x 72mm
	TZ4L	96 x 96mm
	TZ4H	48 x 96mm
	TZ4W	96 x 48mm
	WEIGHT	Net: 13 oz.

	DIMENSIONS (INCHES/MILLIMETERS)	WIRING
TZ4ST		
TZ4SP		
TZ4H		
TZ4M		
TZ4W		
TZ4L		