

SELEC TEMPERATURE CONTROLLERS TC344 TEMPERATURE CONTROLLERS



BASIC PID CONTROLLERS

ORDERING INFORMATION



FEATURES

- High Performance
- Dual Display, 4 digit, 7 segment LED
- LED Status Indicator: Relay ON, Tune, Soak
- 3 Front Panel Control buttons
- TC / RTD Input
- PID, ON/OFF Control
- Two Setpoints
- °C / °F Selectable
- Control Output : Relay or SSR Drive
- Auxiliary Output : Relay or SSR Drive
- Easy to use

Part No.	Supply Voltage		Control Output		Auxiliary Output	
	85 - 270V AC/DC	24V AC/DC	Relay	SSR (12V DC)	Relay	SSR (12V DC)
TC544A	■		■	■	■	
TC544A-1	■		■	■		■
TC544A-24V		■	■	■	■	
TC544A-1-24V		■	■	■		■
TC244AX	■		■	■	■	
TC244AX-1	■		■	■		■
TC244AX-24V		■	■	■	■	
TC244AX-1-24V		■	■	■		■
TC344AX	■		■	■	■	
TC344AX-1	■		■	■		■
TC344AX-24V		■	■	■	■	
TC344AX-1-24V		■	■	■		■

TERMINAL CONNECTIONS

TC544

*Only SSR terminal available for TC544A-1

TC244

*Only SSR terminal available for TC244AX-1

TC344

*Only SSR terminal available for TC344AX-1

UL US Cable Size (AWG): 16-13; Stud Hole for Lug (inch): 0.137; Tightening Torque (Lb-inch): 7

IEC Cable Size (mm²): 1.5-2.5; Stud Hole for Lug (mm): 3.5; Tightening Torque (N-m): 0.8

TECHNICAL SPECIFICATIONS

INPUT SPECIFICATIONS

Inputs	Thermocouple (J,K,T,R,S) / RTD (Pt100)
Sampling time	250 ms
Input Filter (FTC)	0.2 to 10.0 sec
Resolution	0.1/1° for TC/RTD inputs (fixed 1° for R & S type TC input)
Temperature Unit	°C / °F selectable
Indication Accuracy	For J, K & T inputs: 0.25% of F.S. ±1° For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time for TC inputs) For RTD inputs: 0.1% of F.S. ±1° (F.S. = Full Scale)

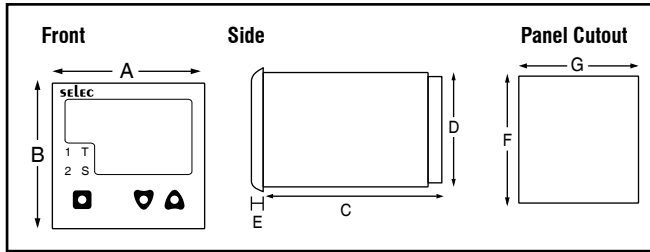
FUNCTIONAL SPECIFICATIONS

Control Action	1) PID 2) ON-OFF
Proportional Band (P)	1.0 to 400.0°
Integral Time (I)	0 to 9999 sec
Derivative Time (D)	0 to 9999 sec
Cycle Time	0.1 to 99.9 sec
Hysteresis Width	0.1 to 99.9°
Manual Reset Value	-19.9 to 19.9°

TC544 / TC244 / TC344

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DIMENSIONS



MODELS	DIM	A	B	C	D	E	F	G
TC513A/TC513AX		52	52	94	45	4	46	46
TC221A/TC203AX		72	72	83.7	67	4.5	69	69
TC303A/TC303AX		96	96	73	90.5	5	92	92

All dimensions are in mm (to convert to inches, multiply by 0.03937)

INPUT RANGES

Input (for RTD)		Ranges	
Resolution		1	0.1
Pt100	°C	-150 to 850	-150 to 850
	°F	-238 to 1562	-199 to 999

Input (for Thermocouple)		Ranges	
Resolution		1	0.1
J	°C	-199 to 750	-199 to 750
	°F	-328 to 1382	-199 to 999
K	°C	-199 to 1350	-199 to 999
	°F	-328 to 2462	-199 to 999
T	°C	-199 to 400	-199 to 400
	°F	-328 to 750	-199 to 750
R & S	°C	0 to 1750	N/A
	°F	32 to 3182	N/A

TECHNICAL SPECIFICATIONS

FUNCTIONAL SPECIFICATIONS

Dwell Timer	OFF, 1 to 9999 min
Heat-cool	
Control Action	PID (with auto-tuning)
Proportional Band-Cool	0.0 to 400.0°
Cycle Time-Cool	0.1 to 99.9 sec
Dead Band	Programmable from setpoint low limit to setpoint high limit.
Settings for Alarm Output	
Modes	Deviation, Absolute
Hysteresis	0.1 to 99.9°

OUTPUT SPECIFICATIONS

Control	Max. 2
Contact Rating	5A @ 250V AC / 30V DC, resistive
SSR Drive (Voltage Pulse)	12V DC ±10%, 50mA
Alarm	Max. 1
Contact Rating	5A @ 230V AC / 30V DC, resistive
SSR Drive (Voltage Pulse)	12V DC ±10%, 50mA

GENERAL SPECIFICATIONS

Supply Voltage	85 to 270V AC/DC (50 / 60Hz) OPTIONAL - 24V AC/DC, ±20%
Power Consumption	6VA max @230V AC
Temperature	Operating: 0 to 50°C (32 to 122°F) Storage: -20 to 75°C (-4 to 167°F)
Humidity (non-condensing)	95% RH
Weight	180 g (0.3968 lbs)
Protection Level	IP65 for faceplate