TC513 - TC203 - TC303 - PID TEMPERATURE CONTROLLER

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PENDING PENDING

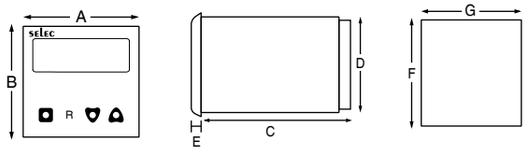
Features

- **High Performance**
- **Single Display, 3 digit, 7 segment LED**
- **LED Status Indicator: Relay ON**
- **3 Front Panel Control buttons**
- **TC / RTD Inputs**
- **PID, ON/OFF Control**
- **Single Setpoint**
- **°C / °F Selectable**
- **Control Output : Relay or SSR Drive**
- **Easy to use**

Ordering Information

Part No.	Supply Voltage		Control Output	
	85 - 270V AC/DC	24V AC/DC	Relay	SSR (12V DC)
TC513A	▪		▪	
TC513A-1	▪			▪
TC513AX	▪		▪	▪
TC513AX-24		▪	▪	▪
TC221A	▪		▪	
TC221A-1	▪			▪
TC203AX	▪		▪	▪
TC203AX-24V		▪	▪	▪
TC303A	▪		▪	
TC303A-1	▪			▪
TC303AX	▪		▪	▪
TC303AX-24V		▪	▪	▪

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
Pt100	°C	-150 to 850
	°F	-199 to 999

Input (for TC)		Ranges
J	°C	-199 to 750
	°F	-199 to 999
K	°C	-199 to 999
	°F	-199 to 999
T	°C	-199 to 400
	°F	-199 to 750
R & S	°C	0 to 999
	°F	32 to 999

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	Fixed 1°
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 to 400°
Integral Time (I)	0.0 to 99.9 min
Derivative Time (D)	0 to 200 sec
Cycle Time	0.1 to 99.9 sec
Hysteresis Width	0.1 to 99.9°
Manual Reset Value	-19.9 to 19.9°

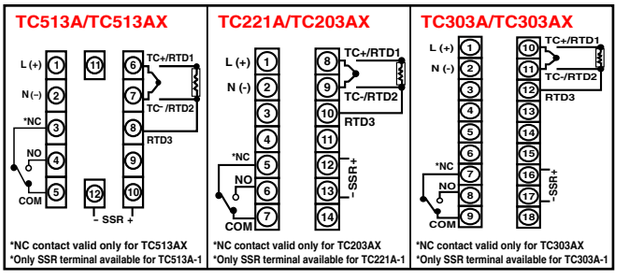
OUTPUT SPECIFICATIONS

Contact Rating	10A @ 250V 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	5VA 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	129gms / 180gms / 240gms
Protection Level	IP65 for faceplate

Terminal Connections



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

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

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