



48 x 48mm

72 x 72mm

96 x 96mm

Features :

- 3 Digits, 7 Segment LED Single Display
- TC / RTD Inputs
- ON - OFF / PID Control
- Single Set Point
- °C / °F Selectable
- Field selectable Control Output (Relay or SSR)

Certifications :

Display Specifications

Display	3 Digits, 7 Segment LED single display TC513 : Height of Display 0.3785" TC203 : Height of Display 0.5385" TC303 : Height of Display 0.5510"
LED Indications	Control output ON

Input Specifications

Inputs	Thermocouple (J, K, T, R, S) / RTD (PT100)
Resolution	Fixed 1°
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)
Temperature Unit	°C / °F selectable
Input Filter (FTC)	0.2 to 10.0 sec
Sampling time	250 ms

Output Specifications

Control Output (Relay or SSR user selectable)	
Relay contact (SPST)	10A resistive @ 250V AC / 30V DC (For TC221A, TC303A)
Relay contact (SPDT)	10A resistive @ 250V AC / 30V DC (For TC513AX, TC203AX, TC303AX)
SSR drive (Voltage Pulse)	12V DC, 50 mA

Functional Specifications

Control Action	1) PID Control with auto tuning 2) ON - OFF Control
Proportional Band (P)	1 to 400°
Integral Time (I)	0.0 to 99.9 min
Derivative Time (D)	0 to 999 sec
Cycle Time	0.1 to 99.9 sec
Hysteresis Width	0.1 to 99.9°
Manual Reset Value	-19.9 to 19.9°

Auxiliary Supply Specifications

Supply Voltage	90 to 270V AC / DC (AC : 500 / 60 Hz)
Power Consumption	5 VA max @ 230V AC

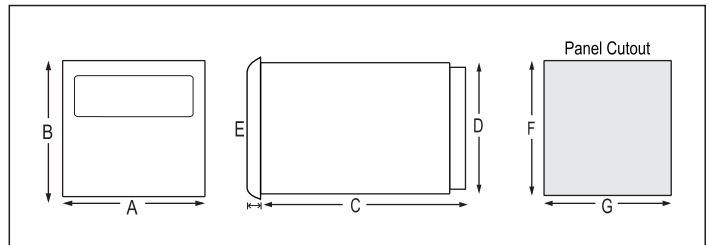
Environmental Specifications

Temperature	Operating : 0 to 50°C (32 to 122°F) Storage : -20 to 75°C (-4 to 167°F)
Humidity (non-condensing)	95% RH

Mechanical Specifications

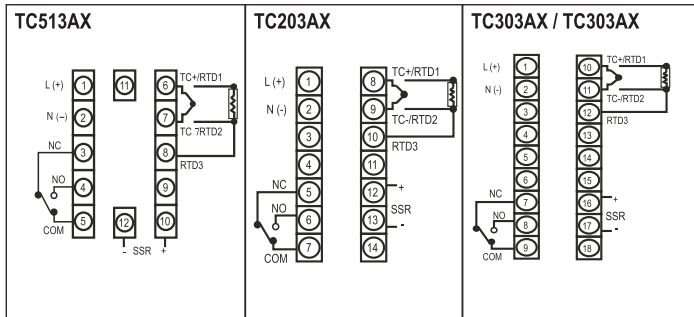
Mounting	Panel
Weight	TC513 : 129gms / TC203 : 180gms / TC303 : 240gms

Dimensions



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

Terminal Connections



Note : NC Contact Valid for TC303AX

UL 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

Compliance

Applicable EMI / EMC Standards		
Product Standard : IEC 61326-1		
Category		Standards Compliance
ESD Immunity	IEC 61000-4-2	Level III
Surge Immunity	IEC 61000-4-5	+/- 2 kV common mode, +/- 1 kV differential mode
Radiated Susceptibility	IEC 61000-4-3	Level III, 80 to 1000MHz Level II, 1.4GHz to 2GHz Level I, 2GHz to 2.7GHz
Conducted Susceptibility	IEC 61000-4-6	Level II
Voltage Dips and Interruptions	IEC 61000-4-11	Dips : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C) 70% residual voltage / 25 cycles 50Hz / 30 cycles 60Hz (Criteria C) Interruptions : 0% residual voltage / 250 cycles 50Hz / 300 cycles 60Hz (Criteria C)
Conducted Emission	CISPR-11	
Radiated Emission	CISPR-11	
Electrical Fast Transient	IEC 61000-4-4	Level III

Ordering Information

PRODUCT CODE	OUTPUT	SUPPLY VOLTAGE	CERTIFICATION	
TC513AX	RELAY	SSR	90-270V AC / DC	CE
TC513AX-CE	RELAY	SSR	90-270V AC / DC	CE
TC513AX-CU	RELAY	SSR	90-270V AC / DC	CE, UL
TC203AX	RELAY	SSR	90-270V AC / DC	CE
TC203AX-CE	RELAY	SSR	90-270V AC / DC	CE
TC303AX	RELAY	SSR	90-270V AC / DC	CE
TC303AX-CE	RELAY	SSR	90-270V AC / DC	CE
TC303A	RELAY	SSR	90-270V AC / DC	CE

Accessories (Optional)

Standard SELEC accessories that can be used with this product.

Adapter plate

- 1) AP7248 : Plastic adapter plate, used to mount 1 / 16 DIN (cutout size 48 x 48) Instrument into existing (72 x 72) cutout size.
- 2) AP9648 : Plastic adapter plate, used to mount 1 / 16 DIN (cutout size 48 x 48) Instrument into existing (96 x 96) cutout size.
- 3) AP9672 : Plastic adapter plate, used to mount 72 x 72mm size instrument into existing (96 x 96) cutout size.
- 4) AP4896-4848-G-C : Plastic adapter plate, used to mount 1 / 16 DIN (cutout size 48 x 48) Instrument into existing (48 x 96) cutout size.

Mounting Accessories (Supplied with units)

For TC513 : 48 x 48 Collar clamp ACL4802

For TC203 / TC303 : Clamp side with screw assembled

Input Sensor Ranges For TC / RTD Inputs)

Sensor type	Resolution	Ranges
		1
PT100	°C	-150 to 850
	°F	-199 to 999
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