



48 x 48mm

Features :

- 3 Digits, 7 Segment LED single display
- TC / RTD inputs
- ON - OFF / PID control
- Auto tuning / Self tuning
- Single set point
- °C / °F selectable
- Field selectable control output : Relay or SSR

Certifications : **Display specifications**

Display	3 Digits, 7 Segment LED single display Height of display 10mm
LED indications	R : 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. $\pm 1^{\circ}\text{C}$ For R & S inputs : 0.5% of F.S. $\pm 2^{\circ}\text{C}$ (20 min of warm up time for TC inputs) For RTD inputs : 0.1% of F.S. $\pm 1^{\circ}\text{C}$ (F.S. = Full scale)
Temperature unit	°C / °F selectable
Input filter (FTC)	0.2 to 10.0sec
Sampling time	250 ms

Output specifications

Relay contact (SPDT)	10A @ 230V AC / 30V DC, Resistive
SSR drive (Voltage pulse)	12V DC, 30mA

Functional specifications

Control action	1) PID control with auto or self tuning 2) ON - OFF control
Proportional band (P)	1 to 400°C, 1.0 to 752.0 °F
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°C
Manual reset value	-19.9 to 19.9°C / °F

Auxiliary supply specifications

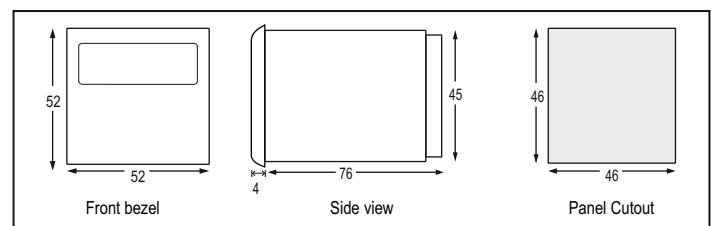
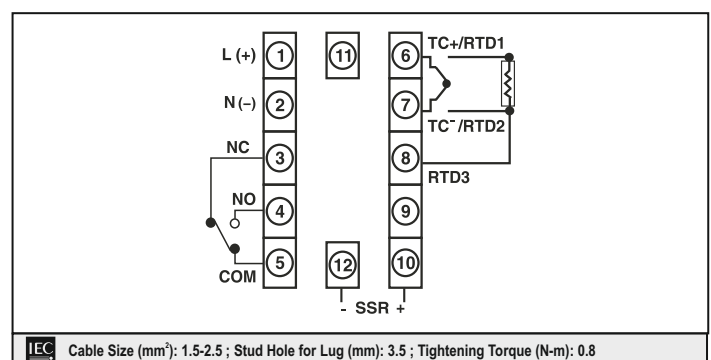
Supply voltage	90 to 270V AC / DC (50 / 60Hz)
Power consumption	6 VA max @ 230V AC

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	111 gms

Dimensions (All are in mm)**Terminal connections**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 1		Supply voltage	Certification
TC513BX	RELAY	SSR	90 - 270V AC / DC	---
TC513BX-CE	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) 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 48 x 48 Collar clamp	ACL4802
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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