Temperature Controller

TC513AX

48 x 48mm

Features :

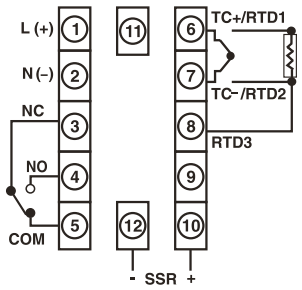
- 3 digits, 7 segment LED single display
- TC/ RTD input
- PID/ ON - OFF control
- Single set point
- °C/°F selectable
- Field selectable control output: Relay or SSR

Certifications :

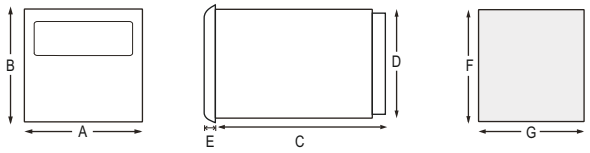
Technical specifications

Display specifications	
Display	3 digits, 7 Segment LED single display
Height of display	10 mm
LED indication	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. ±1°C For R & S inputs: 0.5% of F.S. ±2°C (20 min of warm up time for TC inputs) For RTD inputs: 0.1% of F.S. ±1°C (F.S. = Full scale)
Temperature unit	°C/°F selectable
Input filter (FTC)	0.2 to 10.0 sec
Sampling time	250 ms
Output specifications	
Relay contact (SPDT)	Main Output: NO: 10A 250 VAC/ 24 VDC NO/ NC: 5A/ 5A 250 VAC/ 24 VDC
SSR drive (Voltage pulse)	12 VDC, 50 mA
Functional specifications	
Control action	1) PID Control with auto tuning 2) ON-OFF control
Proportional band (P)	1.0 to 400.0°C
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°C/°F
Auxiliary supply specifications	
Supply voltage	90 to 270 VAC/ DC (50/ 60Hz)
Power consumption	5 VA max @ 230 VAC
Environment specifications	
Temperature	Operating: 0°C to 50°C (32 to 122°F); Storage: 20°C to 75°C (-4 to 167°F)
Humidity (non - condensing)	95% RH
Mechanical specifications	
Mounting	Panel
Weight	129 gms

Terminal connections



Dimensions (All are in mm)



Front bezel | Side view | Panel Cutout

MODELS / DIM	A	B	C	D	E	F	G
TC513AX	52	52	76	45	4	46	46

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 cycles50Hz / 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
	Relay	SSR		
TC513AX	RELAY (10A)	SSR (12 VDC)	90 to 270 VAC/ DC	CE
TC513AX-CE	RELAY (10A)	SSR (12 VDC)	90 to 270 VAC/ DC	CE
TC513AX-CU	RELAY (10A)	SSR (12 VDC)	90 to 270 VAC/ DC	CE cULus