Temperature Controller

TC544C

48 x 48mm

Features :

- 4+4 digits, 7 segment LED dual display
- Auto tune/ Self tune PID
- PID/ ON - OFF control
- TC/ RTD input
- Two set points
- °C/°F selectable
- Field selectable control output (Relay or SSR)
- Dwell timer
- IDM applicable
- Auxiliary output: Relay

Certifications: CE

Technical specifications

Display specifications	
Display	4+4 digits, 7 Segment LED dual display
Height of display	Upper display: 15.3 mm, Lower display: 8 mm
LED indication	1. Output 1 ON T: Auto tune 2. Output 2 ON S: Dwell timer
Input specifications	
Inputs	Thermocouple (J, K, T, R, S)/ RTD (PT100)
Resolution	0.1 / 1° for TC/ RTD input (fixed 1° for R & S type TC input)
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)	5A resistive @ 230 VAC/ 30 VDC
SSR drive (Voltage pulse)	12 VDC, 30 mA
Auxiliary output	
Relay contact (SPST)	5A resistive @ 230 VAC/ 30 VDC
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 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°
Heat- cool	
Control action	PID
Proportional band-cool	0.0 to 400.0°
Cycle time-cool	0.1 to 99.9 sec
Dead band	Programmable from set point low limit to set point high limit.
Settings for alarm output	
Modes	Deviation, Absolute
Hysteresis	0.1 to 99.9°

Auxiliary supply specifications	
Supply voltage	90 to 270 VAC/ DC (50/ 60Hz)
Power consumption	6 VA max @ 230 VAC
Environment specifications	
Temperature	Operating: 0°C to 50°C; Storage: -20°C to 75°C
Humidity (non - condensing)	95% RH
Mechanical specifications	
Mounting	Panel
Weight	116 gms

Terminal connections

Dimensions (All are in mm)

MODELS / DIM	A	B	C	D	E	F	G
TC544C	52	52	76	45	3.5	46	46

Independent downloader module (IDM)

IDM Level	
Display	Parameter Description
Idñ	Independent Downloader Module
UPLd	Upload from product to IDM
dNLd	Download from IDM to product
dONE	Operation Successful
ERR	Operation unsuccessful

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

Applicable EMI / EMC Standards		
Product Standard : IEC 61326-1		
Category		**Standards Compliance**
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	Class A (150KHz to 30MHz)
Radiated Emission	CISPR-11	Class A (30MHz to 1GHz)
Electrical Fast Transient	IEC 61000-4-4	Level III

Ordering information

Product code	Output 1		Output 2	Supply voltage	Certification
	Relay	SSR			
TC544C	RELAY (5A)	SSR (12 VDC)	RELAY (5A)	90 to 270 VAC/ DC	CE