# Temperature Controller

# TC244AX, TC344AX

72 x 72mm

96 x 96mm

## Features :

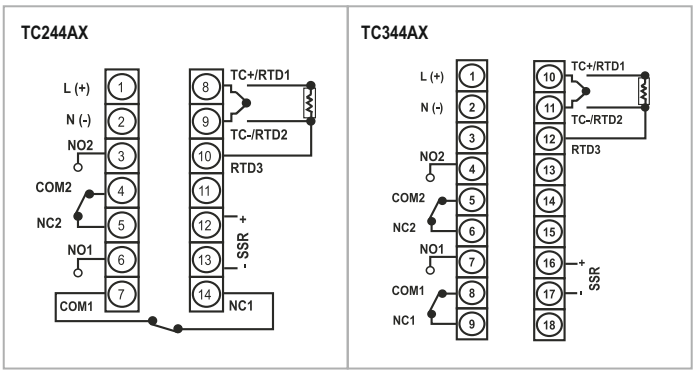
- 4+4 digits, 7 segment LED dual display
- TC/ RTD input
- ON- OFF/ PID control
- Two set points
- °C/°F selectable
- Field selectable control output (Relay or SSR)
- Auxiliary output: Relay

## Technical specifications

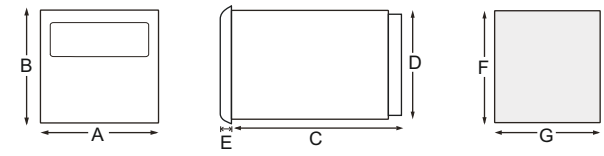
| | |
|---|---|
| **Display specifications** | |
| Display | 4+ 4 digits, 7 Segment LED dual display |
| LED indication | OUT 1: ON T: Auto Tune<br>OUT 2: ON S: Dwell timer |
| **Input specifications** | |
| Inputs | Thermocouple (J, K, T, R, S) / RTD (PT100) |
| Resolution | 0.1/ 1° for TC/ RTD inputs (fixed 1° for R & S type TC input) |
| Indication accuracy | For J, K & T inputs: 0.25% of F.S. ±1°<br>For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time for TC inputs)<br>For RTD input: 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 (SPDT) | Main Output: NO: 10A 250 VAC/ 24 VDC<br>NO/ NC: 5A/ 5A 250 VAC/ 24 VDC |
| SSR drive (Voltage pulse) | 12 VDC, 50 mA |
| **Auxiliary output** | |
| Relay contact (SPDT) | NO: 10A 250 VAC/ 24 VDC<br>NO/ NC: 5A/ 5A 250 VAC/ 24 VDC |
| **Functional specifications** | |
| Control action | 1) PID Control with auto tuning<br>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 | 1.0 to 400.0°C |
| Cycle time-cool | 0.1 to 99.9 sec |
| Dead band | SPLL to SPHL (Programmable) |
| **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 | TC244AX - 200 gms ; TC344AX - 252 gms |

## Terminal connections




## Dimensions (All are in mm)




| MODELS / DIM | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| **TC244AX** | 76 | 76 | 83.7 | 67 | 4.5 | 69 | 69 |
| **TC344AX** | 100 | 100 | 73 | 90.5 | 5 | 92 | 92 |

## Ordering information

| Product code | Output 1 | | Output 2 | Supply voltage | Certification |
|---|---|---|---|---|---|
| | Relay | SSR | | | |
| **TC244AX** | RELAY (5A) | SSR (12 VDC) | RELAY (5A) | 90 to 270 VAC / DC | - - - |
| **TC344AX** | RELAY (5A) | SSR (12 VDC) | RELAY (5A) | 90 to 270 VAC / DC | - - - |