## 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**

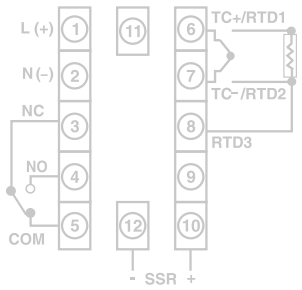
**48 x 48mm**

**Certifications :**

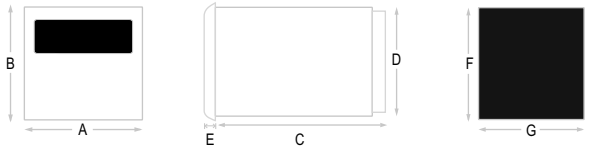
## Technical specifications

| | |
|---|---|
| Display | 3 digits, 7 Segment LED single display |
| Height of display | 10 mm |
| LED indication | R: Control output ON |
| 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<br>For R & S inputs: 0.5% of F.S. ±2°C (20 min of warm up time for TC inputs)<br>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 |
| 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 |
| 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) | 0.0 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 |
| Supply voltage | 90 to 270 VAC/ DC (50/ 60Hz) |
| Power consumption | 5 VA max @ 230 VAC |
| 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 |
| Mounting | Panel |
| Weight | 129 gms |

## Terminal connections




## Dimensions (All are in mm)




Front bezel | Side view | Panel Cutout

| 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,<br>+/- 1 kV differential mode |
| Radiated Susceptibility | IEC 61000-4-3 | Level III, 80 to 1000MHz<br>Level II, 1.4GHz to 2GHz<br>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)<br>**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

| | | | | |
|---|---|---|---|---|
| **TC513AX** | RELAY (10A) | SSR (12 VDC) | 90 to 270 VAC/ DC | |
| **TC513AX-CE** | RELAY (10A) | SSR (12 VDC) | 90 to 270 VAC/ DC | |
| **TC513AX-CU** | RELAY (10A) | SSR (12 VDC) | 90 to 270 VAC/ DC | c us |