



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

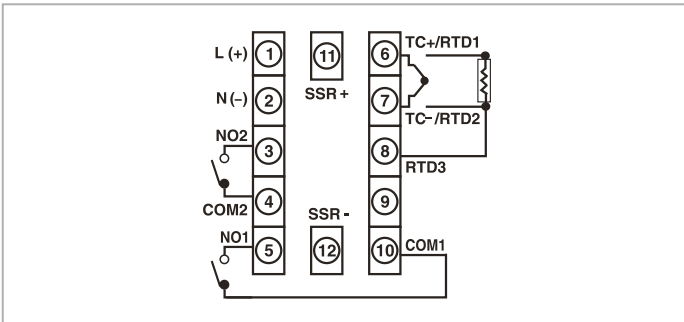
Certifications: 

## Technical specifications

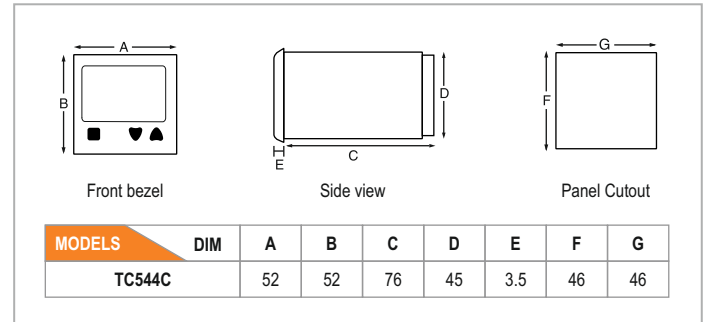
| Display specifications                               |   |
|--|---|
| Display  | 4+4 digits, 7 Segment LED dual display  |
| Height of display                                    | Upper display: 15.3 mm, Lower display: 8 mm   |
| LED indication                                       | 1. Output 1 ON      T: Auto tune<br>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°<br>For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time for TC inputs)<br>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                                |   |
| <b>Control output</b> (Relay or SSR user selectable) |   |
| Relay contact (SPST)                                 | 5A resistive @ 230 VAC/ 30 VDC  |
| SSR drive (Voltage pulse)                            | 12 VDC, 30 mA   |
| <b>Auxiliary output</b>                              |   |
| Relay contact (SPST)                                 | 5A resistive @ 230 VAC/ 30 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°  |
| <b>Heat- cool</b>                                    |   |
| 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.  |
| <b>Settings for alarm output</b>                     |   |
| 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  |

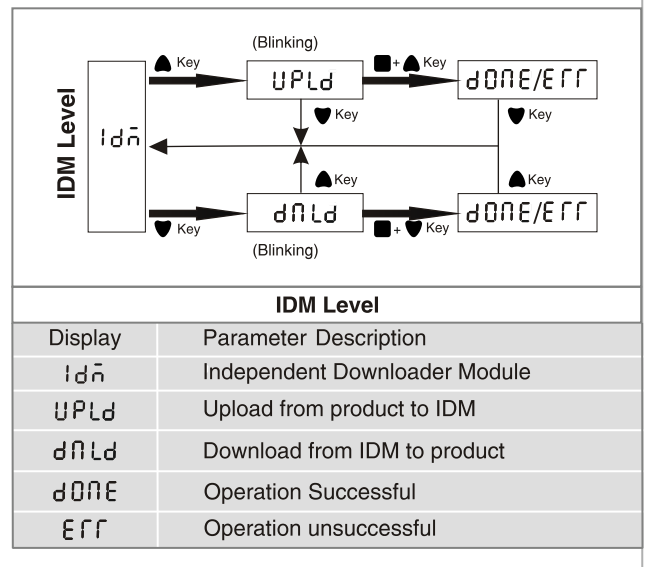
## Terminal connections



## Dimensions (All are in mm)



## Independent downloader module (IDM)



## 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  |

| Applicable EMI / EMC Standards |                |   |
|--------------------------------|----------------|---|
| Product Standard : IEC 61326-1 |                |   |
| Category                       |                | Standards Compliance  |
| Voltage Dips and Interruptions | IEC 61000-4-11 | <b>Dips</b> : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C)<br>70% residual voltage / 25 cycles 50Hz / 30 cycles 60Hz (Criteria C)<br><b>Interruptions</b> : 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          |            |                   |               |
| <b>TC544C</b> | RELAY (5A) | SSR (12 VDC) | RELAY (5A) | 90 to 270 VAC/ DC | <b>CE</b>     |