



**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 / SSR

Certifications :

**Display Specifications**

|                |  |
|----------------|--|
| Digits         | 4+4 Digits, 7 Segment LED Dual Display                         |
| 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 inputs<br>(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°<br>(20 min of warm up time for TC inputs)<br>For RTD input : 0.1% of F.S. ±1°<br>(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 (SPDT)                                 | 5A resistive @ 250V AC / 30V DC<br>(TC544A) : SPST RLY) |
| SSR drive (Voltage Pulse)                            | 12V DC, 50 mA   |
| <b>Auxiliary Output</b>                              |   |
| Relay Contact (SPDT)                                 | 5A resistive @ 250V AC / 30V DC<br>(TC544A) : SPST RLY) |
| SSR drive (Voltage Pulse)                            | 12V DC, 50 mA   |

**Functional Specifications**

|                           |   |
|---------------------------|---|
| Control Action            | 1) PID Control with auto tuning.<br>2) ON - OFF Control         |
| Proportional Band (P)     | 1.0 to 400.0°   |
| 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 setpoint low limit<br>to setpoint high limit. |
| Settings for Alarm Output |   |
| Modes                     | Deviation, Absolute   |
| Hysteresis                | 0.1 to 99.9°  |

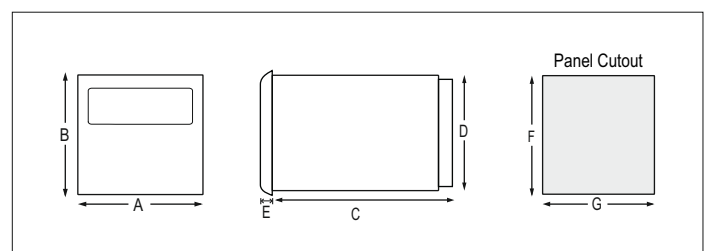
**Auxiliary Supply Specifications**

|                   |  |
|-------------------|--|
| Supply Voltage    | 90 to 270V AC / DC (50 / 60Hz)<br>OPTIONAL - 24V AC / DC, ±10% |
| Power Consumption | 6 VA max @ 230V AC   |

**Environmental Specifications**

|                             |   |
|-----------------------------|---|
| Temperature                 | Operating : 0 to 50°C<br>Storage : -20 to 75°C        |
| Humidity (non - condensing) | 95% RH  |
| Weight                      | TC544 : 142 gms<br>TC244 : 200 gms<br>TC344 : 252 gms |

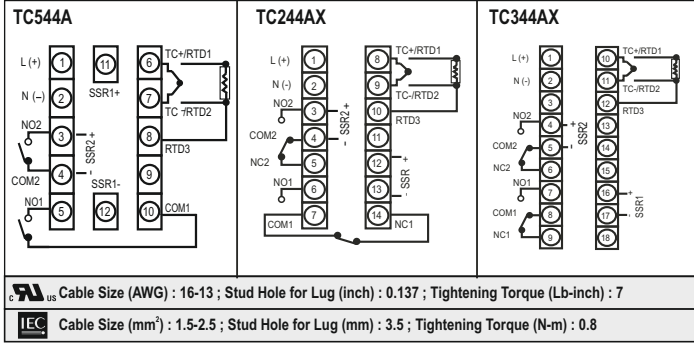
**Dimensions**



| MODELS  | DIM | A  | B  | C    | D    | E   | F  | G  |
|---------|-----|----|----|------|------|-----|----|----|
| TC544A  |     | 52 | 52 | 94   | 45   | 4   | 46 | 46 |
| TC244AX |     | 72 | 72 | 83.7 | 67   | 4.5 | 69 | 69 |
| TC344AX |     | 96 | 96 | 73   | 90.5 | 5   | 92 | 92 |

All dimensions are in mm

Terminal Connections



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 | <b>Dips</b> : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C)<br><b>Interruptions</b> : 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 1 |              | OUTPUT 2 |              | SUPPLY VOLTAGE  |        | CERTIFICATION |
|--------------|----------|--------------|----------|--------------|-----------------|--------|---------------|
|              | RELAY    | SSR (12V DC) | RELAY    | SSR (12V DC) | 90-270V AC / DC | 24V DC |               |
| TC544A       | ■        | ■            | ■        | -            | ■               | -      | CE            |
| TC544A-CU    | ■        | ■            | ■        | -            | ■               | -      | CE            |
| TC544A-24V   | ■        | ■            | ■        | -            | -               | ■      | CE            |
| TC244AX      | ■        | ■            | ■        | -            | ■               | -      | CE            |
| TC344AX      | ■        | ■            | ■        | -            | ■               | -      | CE            |

Accessories (Optional)

Standard SELEC accessories that can be used with this product.

- Adapter plate
- 1) AP7248 : Plastic adapter plate, used to mount 1 / 16 DIN (cutout size 48 x 48) Instrument into existing (72 x 72) cutout size.
  - 2) AP9648 : Plastic adapter plate, used to mount 1 / 16 DIN (cutout size 48 x 48) Instrument into existing (96 x 96) cutout size.
  - 3) AP9672 : Plastic adapter plate, used to mount 72 x 72mm size instrument into existing (96 x 96) cutout size.
  - 4) AP4896-4848-G-C : Plastic adapter plate, used to mount 1 / 16 DIN (cutout size 48 x 48) Instrument into existing (48 x 96) cutout size.

Mounting Accessories (Supplied with units)

- For TC544 : 48 X 48 Collar clamp ACL4802  
 For TC244/TC344 : Clamp side with screw assembled

Input Sensor Ranges (For TC / RTD Inputs)

| Sensor type | Resolution | Ranges       |             |
|-------------|------------|--------------|-------------|
|             |            | 1            | 0.1         |
| PT100       | °C         | -150 to 850  | -150 to 850 |
|             | °F         | -238 to 1562 | -199 to 999 |
| J           | °C         | -199 to 750  | -199 to 750 |
|             | °F         | -328 to 1382 | -199 to 999 |
| K           | °C         | -199 to 1350 | -199 to 999 |
|             | °F         | -328 to 2462 | -199 to 999 |
| T           | °C         | -199 to 400  | -199 to 400 |
|             | °F         | -328 to 750  | -199 to 750 |
| R & S       | °C         | 0 to 1750    | N/A         |
|             | °F         | 32 to 3182   | N/A         |