



96 x 48mm

### Features :

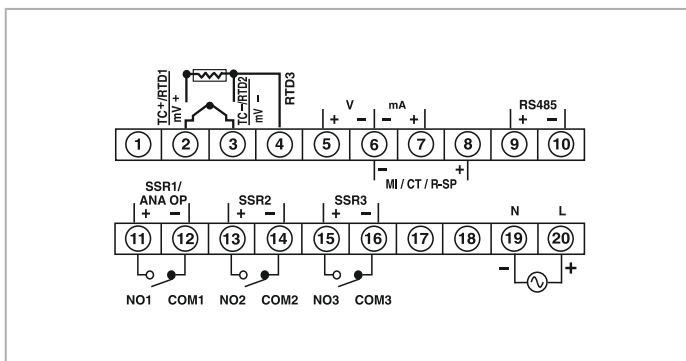
- ▶ 4+4 Digits, 7 Segment LED dual display
- ▶ Universal input
- ▶ ON - OFF/ PID control
- ▶ °C/°F selectable
- ▶ Heat cool PID
- ▶ Ramp soak
- ▶ Soft start
- ▶ RS485 Communication MODBUS RTU Protocol
- ▶ Retransmission analog output

## Technical specifications

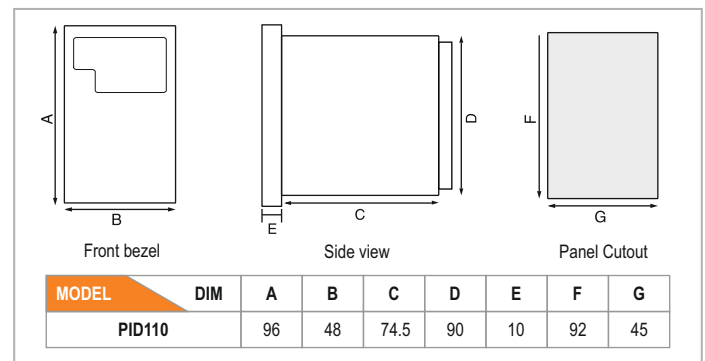
| Display specifications             |   |
|------------------------------------|---|
| Display                            | 4+4 digits 7 Segment LED dual display   |
| Height of display                  | Upper display: 10 mm, Lower display: 7 mm   |
| LED indication                     | 1: Main output ; 2, 3: Alarm output ; M: Manual output ; T: Tune  |
| Input specifications               |   |
| Inputs                             | Thermocouple (J, K, T, R, S, C, E, B, N, L, U, W, Platinel II), RTD (PT100), Signal inputs (- 5 to 56mV, 0 to 10V, 0 to 20mA)   |
| Resolution                         | 1/ 0.1 for TC/ RTD only (fixed 1° resolution for R & S type TC)<br>Decimal point position selectable: 1/ 0.1/ 0.01/ 0.001 for analog input  |
| Indication accuracy                | For TC inputs: 0.25% of F.S. ±1°<br>For R & S type TC 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° For Analog input: ±0.5%, ±1° digit (F.S. = Full scale) |
| Temperature unit                   | °C/°F selectable  |
| Input filter (FTC)                 | 1 to 99 sec   |
| Sampling time                      | 200 ms  |
| Output specifications              |   |
| <b>Control output</b> (Optional)   | 1   |
| Contact rating (SPST)              | 5A @ 230 VAC/ 30 VDC, resistive   |
| SSR drive (Voltage pulse)          | 12 VDC, 20 mA   |
| Current                            | 4 to 20mA DC (loop impedance: 500Ω max)   |
| Voltage                            | 0 to 10 VDC (load resistance: 10KΩ min)   |
| <b>Auxiliary output</b> (Optional) | 2   |
| Contact rating (SPST)              | 5A @ 230 VAC/ 30 VDC  |
| SSR drive                          | 12 VDC, 20 mA   |
| Functional specifications          |   |
| Control action                     | 1) PID Control 2) ON-OFF control  |
| Proportional band (P)              | 0.0 to 400.0°C  |
| Integral time (I)                  | 0 to 3600 sec   |
| Derivative time (D)                | 0 to 200 sec  |
| Cycle time                         | 0.1 to 100.0 sec  |
| Hysteresis width                   | 0.1 to 99.9°  |
| Manual reset value                 | - 99.9 to 19.9°   |
| Heat-cool                          |   |
| Control action                     | PID   |
| Proportional band-cool             | 0.0 to 400.0°   |
| Cycle time-cool                    | 0.1 to 100 sec  |
| Dead band                          | Programmable from set point low limit to set point high limit.  |

| Settings for alarm output       |  |
|---------------------------------|--|
| Modes                           | Deviation high/ low, Absolute high/ low, Band, Sensor break                |
| Hysteresis                      | 0.1 to 99.9°   |
| Ramp rate                       | 1 to 9999°/ hr   |
| Soak time                       | 0 to 1440 min  |
| Soft start time                 | 0 to 999 min   |
| Auxiliary supply specifications |  |
| Supply voltage                  | 90 to 270 VAC/ DC (50/ 60Hz)   |
| Power consumption               | 5 VA max @ 230 VAC   |
| Environment specifications      |  |
| Temperature                     | Operating: 0°C to 50°C (32 to 122°F); Storage: 20°C to 75°C (- 4 to 167°F) |
| Humidity (non - condensing)     | 85% max. from 0 to 50°C  |
| Mechanical specifications       |  |
| Mounting                        | Panel  |
| Weight                          | 250 gms  |

## Terminal connections



## Dimensions (All are in mm)



## Ordering information

| Product code  | Output 1   | Output 2   | Output 3   | Comm. (RS485) | Supply voltage    | Certification |
|---------------|------------|------------|------------|---------------|-------------------|---------------|
| PID110-2-0-04 | 4-20 mA    | RELAY (5A) | RELAY (5A) | YES           | 90 to 270 VAC/ DC | ---           |
| PID110-0-0-01 | RELAY (5A) | RELAY (5A) | RELAY (5A) | ---           | 90 to 270 VAC/ DC | ---           |