



48 x 48mm

Features :

- ▶ 4+4 Digits, (Red/White + Orange) LED display
- ▶ Capacitive touch keypad, Multicolor PV display (Red / White)
- ▶ Universal input / output
- ▶ Retransmission analog output
- ▶ Adaptive - Auto - Self tune PID / ON - OFF Control
- ▶ Heat cool PID
- ▶ 24V DC, 30mA inbuilt sensor supply
- ▶ Profile Controller up to 128 steps
- ▶ Horizontal bar graph with 10 levels
- ▶ RS485 MODBUS RTU Communication
- ▶ IDM applicable

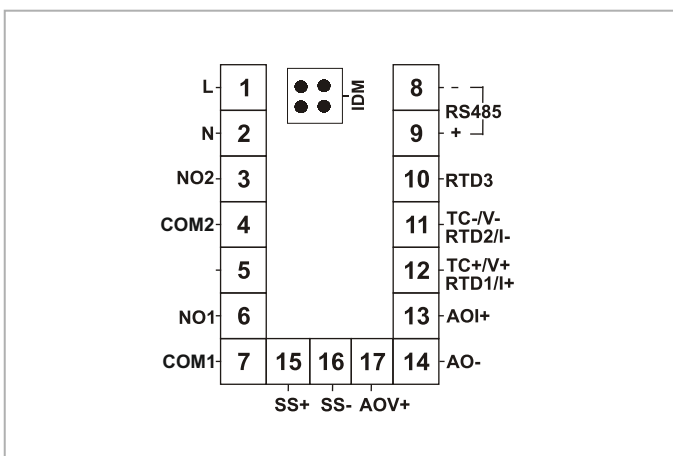
Certifications : CE , IP65

Technical specifications

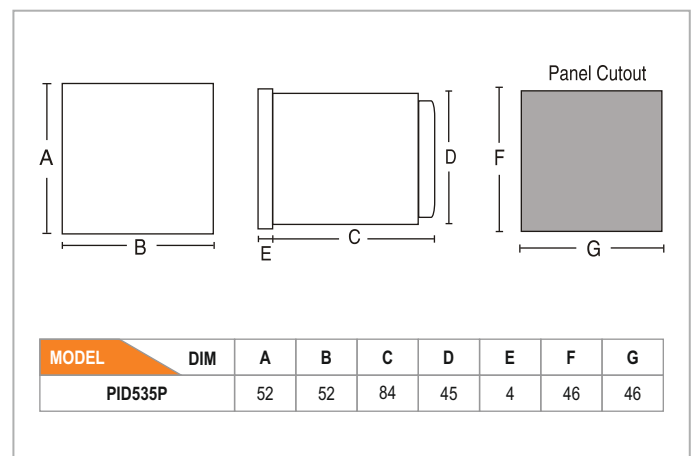
| Display specifications | |
|-------------------------------------|---|
| Display | 4+4 digits 7 Segment LED dual display |
| Height of display | Upper display : 12.93mm (White/Red), Lower display : 8mm (Orange) |
| LED indication | 1 : Main output AT : Auto tune 2 : Alarm output M : Manual output 3 : Alarm output ADT : Adaptive tune |
| Input specifications | |
| Inputs | Thermocouple (J, K, T, R, S, C, E, B, N, L, U, W, Platinel II), RTD (PT100, PT1000) |
| Resolution (Decimal point position) | 1 / 0.1 for TC / RTD ; 1 / 0.1 / 0.01 / 0.001 for analog input |
| Signal input | -5 to 90mV, 0 to 10V, 0 to 20mA DC (Programmable scale type) |
| Indication accuracy | For TC inputs : 0.1% of span at 25°C For R & S type inputs : 0.25% of span at 25°C For RTD input : 0.1% at 25°C; For Analog input : 0.1% at 25°C (F. S. = Full scale) |
| Temperature unit | °C / °F selectable |
| Input filter (FTC) | 1 to 99sec, OFF |
| Sampling time | 50 ms |
| Output specifications | |
| Contact rating | Relay 1, Relay 2 : 5A@250V AC / 30V DC; Life expectancy : 100000 cycles at maximum load rating |
| SSR drive (Voltage pulse) | 18V DC |
| Sensor supply | 24V DC, 30mA |
| Current | 0-20mA DC, 4-20mA DC (Maximum output load resistance: 500E) |
| Voltage | 0-5V DC, 0-10V DC (Minimum output load resistance: 10KΩ) |
| Retransmission | |
| Current | 0 / 4-20 mA (Maximum output load resistance: 500E) |
| Voltage | 0-5V DC, 0-10V DC (Minimum output load resistance:-10KΩ) |
| Update rate | 100 msec |
| Functional specifications | |
| Control action | 1 : Adaptive - Auto - Self tune PID, 2 : ON-OFF |
| 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 | 0.1 to 99.9°C |
| Manual reset value | -99.9 to 99.9 (for 0.1° resolution), -999 to 999 (for 1°C) |

| Heat-cool | |
|---------------------------------|---|
| Control action | PID / ON-OFF |
| Proportional band-cool | 0.0 to 400.0° |
| Cycle time-cool | 0.1 to 100 sec |
| Dead band | Programmable |
| Settings for alarm output | |
| Modes | Deviation high, Deviation low, Band, Full scale high, Full scale high, Sensor break |
| Hysteresis | 0.1 to 99.9°C |
| No. of profile program | 8 |
| No. of steps in each program | 16 |
| Other profile parameters | Link profiles, Programmable repeat cycles, Power down resume / restart options, Deviation hold, Alarm at each step with configurable alarm duration |
| Auxiliary supply specifications | |
| Supply voltage | 90 to 270V AC / DC (50 / 60Hz) |
| Power consumption | 6 VA max |
| Environment specifications | |
| Temperature | Operating : 0°C to 50°C ; Storage : -20°C to 75°C |
| Humidity (non - condensing) | 85% RH |
| Mechanical specifications | |
| Mounting | Panel |
| Weight | 140 gms |
| Optional specifications | |
| Serial communication | |
| Interface standard | RS485 |
| Communication address | 1 to 99, maximum of 32 units per line |
| Transmission mode | Half duplex |
| Transmission protocol | MODBUS RTU |
| Transmission distance | 500m maximum |
| Transmission speed | 115200, 57600, 38400, 19200, 9600, 4800, 2400, 1200 bits / sec |
| Parity | None, Odd, Even |
| Stop bits | 1 or 2 |
| Response time | 100 ms (Max and independent of baud rate) |

Terminal connections



Dimensions (All are in mm)



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

| Product code | Input | Supply voltage | Communication (RS485) | Certification |
|--------------|-----------|-------------------|-----------------------|---------------|
| PID535-P-C-1 | Universal | 90 - 270V AC / DC | Yes | CE |