



96 x 96mm

Features :

- ▶ 4+4 Digits, (White+Green) LED display
- ▶ Capacitive touch keypad, Short depth
- ▶ Universal input / output
- ▶ Retransmission analog output
- ▶ Adaptive - Auto - Self tune PID / ON - OFF Control
- ▶ Heat cool PID
- ▶ Profile Controller up to 128 steps
- ▶ 24V DC inbuilt sensor supply
- ▶ RS485 MODBUS RTU Communication (optional)
- ▶ IDM applicable

Certifications :   , IP65

Technical specifications

Display specifications	
Display	4+4 digits 7 Segment LED dual display
Height of display	Upper display : 15.3mm (White), Lower display : 8mm (Green)
LED indication	1 : Main output T : Tune 2 : Alarm output M : Manual output 3 : Alarm output A : Adaptive tune
Input specifications	
Contact rating	Thermocouple (J, K, T, R, S, C, E, B, N, L, U, W, Platinel II), RTD (PT100)
Signal input	-5 to 56mV, 0 to 10V, 0 to 20mA DC (Programmable scale type)
Accuracy / Resolution	
Resolution (Decimal point position)	1 / 0.1 for TC / RTD ; 1 / 0.1 / 0.01 / 0.001 for analog input
Signal input	-5 to 56mV, 0 to 10V, 0 to 20mA DC (Programmable scale type)
Indication accuracy	For TC inputs : 0.25% of F.S. ±1; For R & S type TC inputs : 0.5% of F. S. ±2 (20 min of warm up time for TC inputs); 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 99sec, OFF
Sampling time	200 ms
Output specifications	
Contact rating	Relay 1, Relay 2 : 7A@250V AC or 28V DC; Life expectancy : 100000 cycles at maximum load rating Relay 3 : 10A@250V AC or 28V DC
SSR drive (Voltage pulse)	15V DC
Sensor supply	24V DC inbuilt
Voltage (Optional)	0-5V DC, 0-10V DC (load resistance : 10KΩ min)
Retransmission	
Current	0 / 4 to 20mA DC (loop impedance : 500Ω max)
Voltage (For PID500-U-0-1)	0 to 5 / 10V DC (load resistance : 10KΩ min)
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 width	0.1 to 99.9°
Manual reset value	-19.9 to 19.9°
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 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°
No. of profile program	8
No. of steps in each program	16
Program 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	5 VA max @ 230V AC
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% RH
Mechanical specifications	
Mounting	Panel
Weight	210 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, 9600, 4800, 2400, 1200 bits / sec
Parity	Non, Odd, even, Mark, Space
Stop bits	1 or 2
Response time	100 ms (Max and independent of baud rate)

Terminal connections

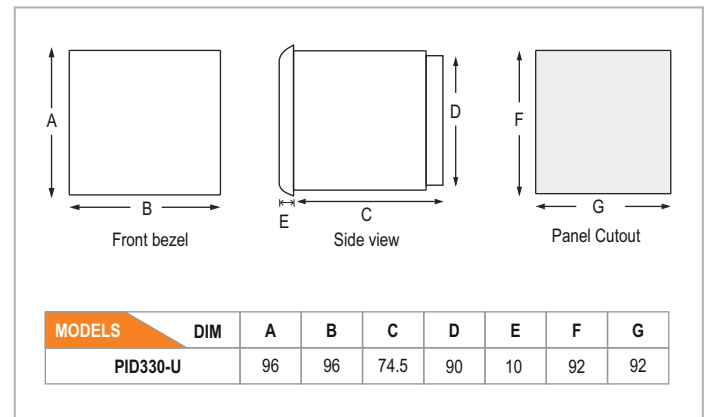
PID330-U-0-1			
L (+)	1	10	TC+/RTD1
N (-)	2	11	TC-/RTD2/V-/I-
NO1	3	12	RTD3
COM1	4	13	AIV+
NO2	5	14	All+
COM 2/3	6	15	AOI+/SSR+
NO3	7	16	AOI-/SSR-
24V SS +	8	17	AOV+
24V SS -	9	18	AOV-

PID330-U-C-1			
L (+)	1	10	TC+/RTD1
N (-)	2	11	TC-/RTD2/V-/I-
NO1	3	12	RTD3
COM1	4	13	AIV+
NO2	5	14	All+
COM 2/3	6	15	AOI+/SSR+
NO3	7	16	AOI-/SSR-
24V SS +	8	17	RS485+
24V SS -	9	18	RS485-

Compliance

Applicable EMI / EMC Standards		
Product Standard		
Category	Reference Standards	Testing Level
Electrostatic Discharge	IEC 61000-4-2	Level-3
Electrical Fast Transient / Burst	IEC 61000-4-4	Level-3
Electromagnetic Field	IEC 61000-4-3	Level-3
Surge	IEC 61000-4-5	Level-3
Conducted RF	IEC 61000-4-6	Level-2
Rated Power Frequency	IEC 61000-4-8	Level-4
Voltage Dip / Short Interruptions	IEC 61000-4-11	Level-3
Conducted Emissions	CISPR-11	Class-B
Rated Emissions	CISPR-22	Class-A
Emission & Immunity	IEC 61326-1	
Safety	IEC 61010-1	
PFMF (Passing criteria)	IEC 61000-4-8	Class A

Dimensions (All are in mm)



Ordering information

Product code	Input	Supply voltage	Communication (RS485)	Certification
PID330-U-0-1	Universal	90 - 270V AC / DC	---	CE
PID330-U-C-1	Universal	90 - 270V AC / DC	YES	CE