

# PROCESS CONTROLLER

## PTC-4202A-M1



## TECH SPECS

<b>Dimension</b> (HxWxD) mm	48 x 48 x 111								
<b>Panel Cutout</b>	45 x 45								
<b>Input</b>	<table border="0"> <tr> <td>Thermocouple</td> <td>J / K (Configurable)</td> </tr> <tr> <td>RTD</td> <td>PT-100/3Wire (Configurable)</td> </tr> <tr> <td>Analog</td> <td>0-10V DC, 0-20mA DC, 4-20mA DC (Configurable)</td> </tr> </table>	Thermocouple	J / K (Configurable)	RTD	PT-100/3Wire (Configurable)	Analog	0-10V DC, 0-20mA DC, 4-20mA DC (Configurable)		
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Output 3	4 to 20mA DC Controlling or Retrans. (Selectable)								
Output 4	RS-485 RTU MODBUS Communication Protocol								
<b>Control Action</b>	PID / ON-OFF ( Configurable )								
<b>Power Supply</b>	100-270V AC, 50/60 HZ, Approx 7VA								
<b>Certification</b>									

## APPLICATIONS

Pharmaceutical Industries

Extrusion Machinery

Furnace & Boilers

Ovens & Incubators

Process Industry

# Technical Specifications

Input	
Input Type	Thermocouple : J, K RTD : PT-100, PT.1 Analog : 0-10V DC 4-20mA DC 0-20mA DC
Display Range	<b>Refer ( Table 1 )</b>
Accuracy	± 1% of FSD
ADC Resolution	10 Bit
Display Resolution	Thermocouple :- 1° C RTD :- For PT: 1° C For PT.1: 0.1° C
Sample Time	600 msec
Sample Rate For Analog I/P	0.1 Sec To 10 Sec (Configurable)
CJC Error	± 2° C
Sensor Open	Thermocouple:- J, K, RTD:- PT, Analog:- 4 to 20mA
Sensor Burnout Current	1.10uA
RTD Excitation Current	0.2mA
CMRR	>120 dB ( Typical )
Max Voltage	20V DC
Response Time	675mS

**Table 1 ( Input Range )**

J	0 to 600°C
K	0 to 1200°C
PT-100	-99 to 400°C
PT.1	-99.0 to 400.0°C
0-10V DC	-999 to 9999
4-20mA DC	-999 to 9999
0-20mA DC	-999 to 9999

## Power Supply

Standard	100 - 250V AC @ 50/60 Hz
Optional	24V DC
Consumption	7VA

Output	
Control Output	
Control Type	ON-OFF, Auto tune PID
Proportional Band	0000 to 999.9
Integral Time	0000 to 9999
Derivative Time	0000 to 9999
Cycle Time For SSR and Relay	4 sec to 99 sec
Relay Control Output	
Relay	1 ( NO - C )
Rating	Relay 1: 5A @230V AC / 28V DC Resistive Load Relay 2: 5A @230V AC / 28V DC Resistive Load
SSR Control Output	
Rating	12V DC @25mA
Analog Output	
Current	4-20mA@500Ω max
Voltage	0-10V @400Ω min

## Display & Keys

Display	<b>Upper</b> :- 4 Digit 7 seg 0.39" White LED Display <b>LOWER</b> :- 4 Digit 7 seg 0.28" Green LED Display
LED Status	Relay Indication LED
4 controlling keys for configuration and operation SET, UP, DOWN, ENT	

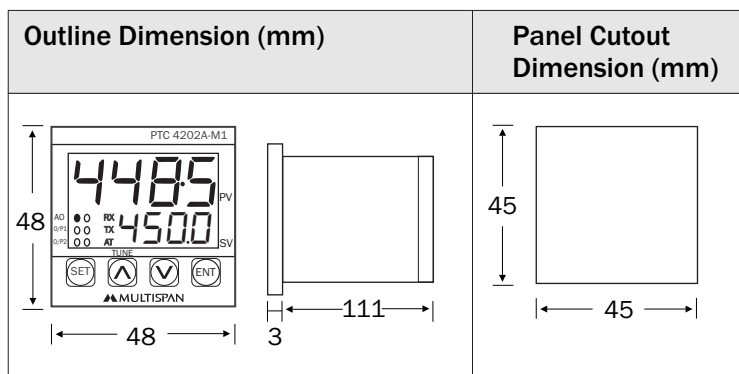
## Environmental

Operating Temperature	0 to 55°C
Storage Temperature	0 to 70°C
Humidity	95% RH Non-condensing
Protection	IP 65 ( Front Side )

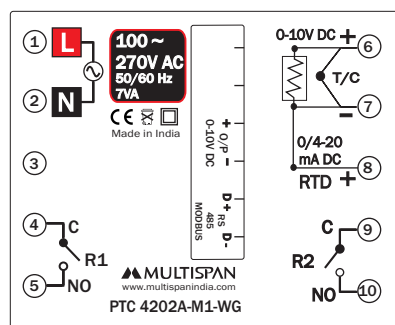
Communication	
Type	RS 485
Protocol	MODBUS RTU
Baud Rate	4800, 9600, 19200
Isolation	2500 V <sub>RMS</sub> Isolation as per UL 1577

Physical	
	PTC 4202A-M1
Mount	Panel
Enclosure	Molded ABS
Weight (gm)	170
Color	Black
Front Bezel ( mm )	48 x 48
Panel cutout ( mm )	45 x 45
Depth behind panel (mm)	95
Accessories	1 pair of Mounting clamp
Terminal Cable Size	Barrier Type terminal Cable Size ( 2.5 mm <sup>2</sup> )

## Mechanical Dimension



## Connection Diagram



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