



PROCESS TEMPERATURE CONTROLLER WITH MODBUS

PTC-4202A-M1

APPLICATIONS

Pharmaceutical Industries

Extrusion Machinery

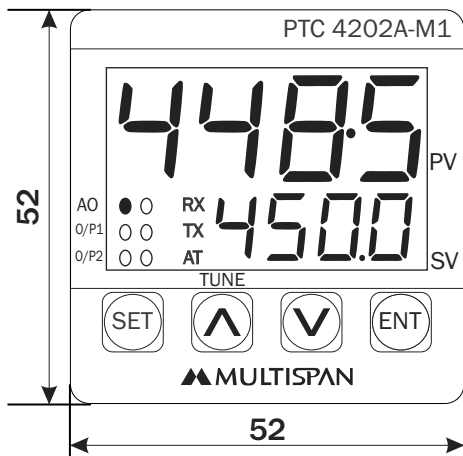
Furnace & Boilers

Ovens & Incubators

Process Industry

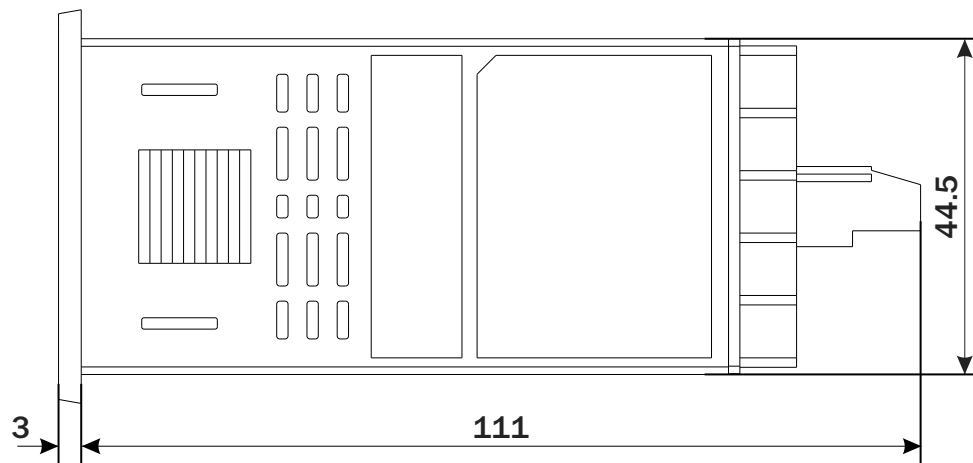
Mechanical Dimensions

Body Dimensions



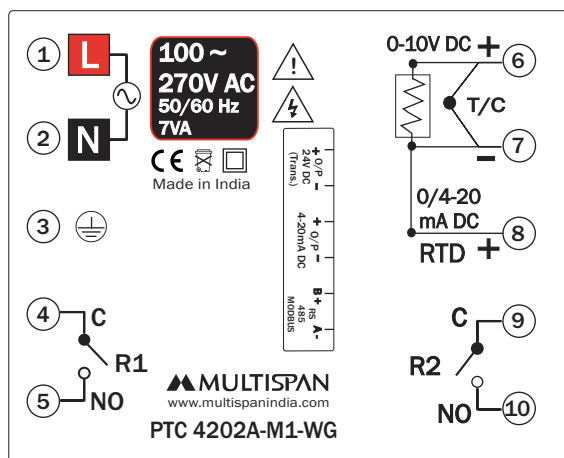
FRONT VIEW

All dimensions are in mm

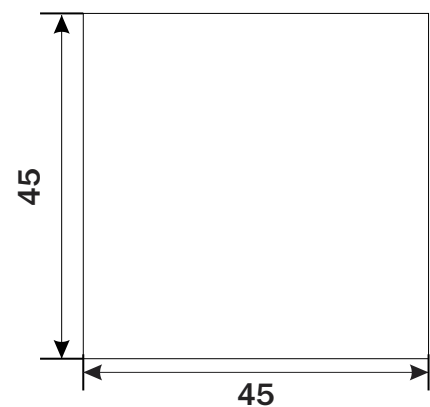


RIGHT SIDE VIEW

Connection Diagram



Panel Cutout



TECHNICAL DATA

Input	Thermocouple	J / K (Configurable)
	RTD	PT-100/3 Wire (Configurable)
	Analog	0-10V DC, 0-20mA DC, 4-20mA DC (Configurable)
Range	Thermocouple	J: (0 to 600 °C), K: (0 to 1200 °C)
	RTD	PT-100: (-99 to 400 °C)/ PT.1: (-99.0 to 400.0 °C)
	Analog	(-999 to 9999)
Output	Output 1	Relay 1 C/O, 5A@230V AC For Resistive Load or SSR 12V DC,20mA (1 st Set point)
	Output 2	Relay 1 C/O, 5A@230V AC For Resistive Load or SSR 12V DC,20mA (2 nd Set point)
	Output 3	4 to 20mA DC Controlling or Retrans. (Selectable)
	Output 4	RS-485 MODBUS Communication
	Output 5	24V DC Transmitter Supply
Control Action		PID / ON-OFF (Configurable)
Power Supply		100-270V AC, 50/60 HZ, Approx 7VA
Certification		

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

Display & Keys

Display	Upper:- 4 Digit, 7 seg. 0.56" White LED Display
	Lower:- 4 Digit, 7 seg. 0.33" Green LED Display
LED Status	Relay Indication LED
4 Controlling Keys for configuration and operation SET, UP, DOWN, ENT	

Power Supply

Standard	100-270V AC, 50/60 Hz
Optional	24V DC
Consumption	7VA

Communication

Type	RS 485
Protocol	MODBUS RTU
Baud Rate	4800, 9600, 19200
Isolation	2500 V _{RMS} Isolation as per UL 1577

Input	
Input Type	Thermocouple : J, K RTD : PT-100, PT.1 Analog : 0-10V DC 4-20mA DC 0-20mA DC
Accuracy	± 1% of FSD
ADC Resolution	12 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

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	2 (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@500 max
Voltage	0-10V @400 min
Transmitter Supply	24V DC

Environmental Characteristics	
Working Temperature	0 to 55 °C
Storage Temperature	0 to 55 °C
Relative Humidity	95% RH Non-condensing
Warm up time	5 minutes
Ingress Protection	IP 65 (Front Side)

Mechanical Characteristics	
Mounting Type	Panel Mount
Dimension (HxWxD) mm	52 x 52 x 111
Panel Cutout (HxW) mm	45 x 45
Material	Body Enclosure
	Polycarbonate (PC) ABS
Terminal Screw Size	M3.5
Screw Torque (N.m)	1
Wire Gauge (AWG)	26-14
Weight (Approx) gms	Unpacked : 165 Packed : 195
Accessories	1 Pair of Clamps