



PROCESS TEMPERATURE CONTROLLER WITH MODBUS

PTC-382A-M1

APPLICATIONS

Pharmaceutical Industries

Extrusion Machinery

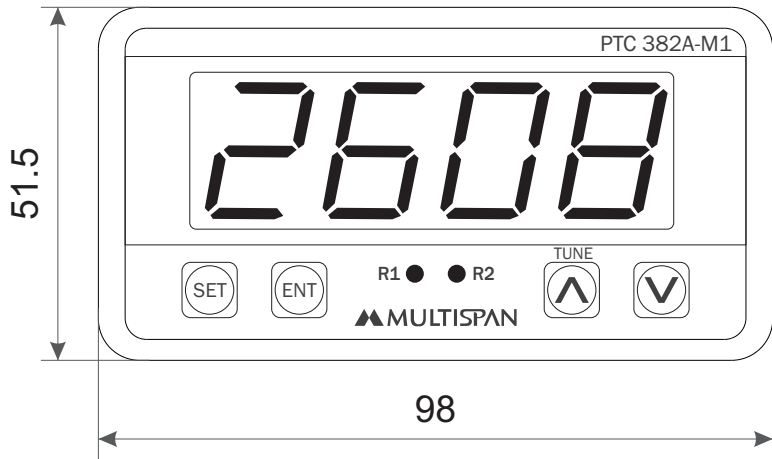
Furnace & Boilers

Ovens & Incubators

Process Industry

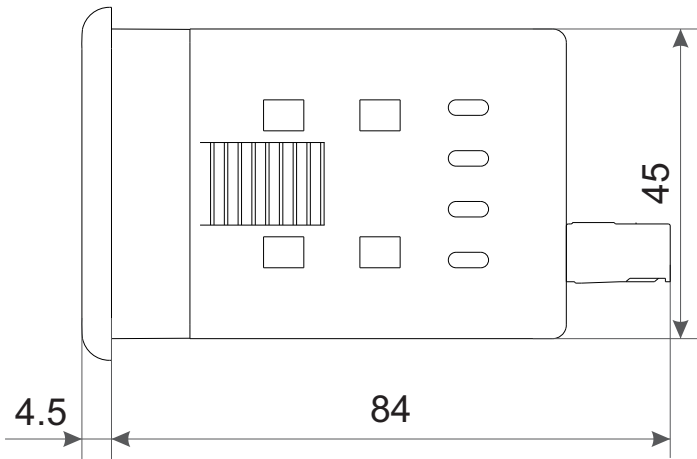
Mechanical Dimensions

Body Dimensions



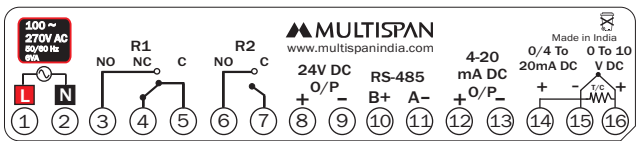
FRONT VIEW

All dimensions are in mm

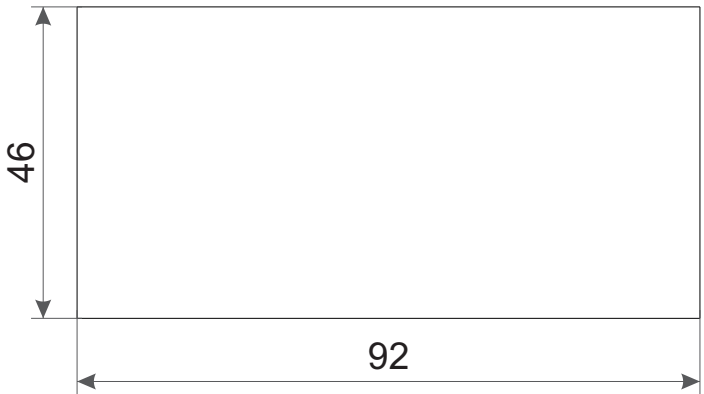


RIGHT SIDE VIEW

Connection Diagram



Panel Cutout



TECHNICAL DATA

Input	Thermocouple	J / K (Configurable)
	RTD	PT-100/ 2 or 3Wire (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: (-99.9 to 400.0 °C)
	Analog	-1999 to 9999
Output	Output 1	Relay 1 C/O, 5A@230V AC For Resistive Load or SSR 12V DC (1 ST Set point)
	Output 2	Relay 1 C/O, 5A@230V AC For Resistive Load or SSR 12V DC (2 nd Set point)
	Output 3	0 to 10V DC / 4 to 20mA DC Controlling & Retrans.(Selectable)
	Output 4	RS 485 Modbus Communication
	Output 5	24V DC Transmitter supply (25mA)
Control Action		PID / ON-OFF (Configurable)
Power Supply		100-270V AC, 50/60 Hz, Approx 6VA
Certification		

Input Table	
Input Type	Range
J	0 to 600 °C
K	0 to 1200 °C
PT-100	-99 to 400 °C
PT.1	-99.9 to 400.0 °C
0-10V DC	-1999 to 9999
4-20mA DC	-1999 to 9999
0-20mA DC	-1999 to 9999

Communication	
Type	RS 485
Protocol	MODBUS RTU
Baud Rate	4800, 9600, 19200,38400
Isolation	2500 V _{RMS} Isolation as per UL 1577

Power Supply	
Standard	100 - 270V AC @ 50/60Hz
Optional	24V DC
Consumption	6VA

Display & Keys	
Display	4 Digit 7 seg 0.8" RED
LED Status	Relay Indication LED
4 controlling keys for configuration and operation SET, ENT, UP, DOWN	

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	16 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

Output		
Control Output		
Control Type	Auto tune PID,ON-OFF	
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	1R	NO - C - NC
	2R	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@ 500Ω min	

Environmental Characteristics

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

Mechanical Characteristics

Mounting Type	Panel Mount
Dimension (HxWxD) mm	51.5 x 98 x 84
Panel Cutout (HxW) mm	46 x 92
Material	Front Enclosure
	Polycarbonate (PC) ABS
Terminal Screw Size	M3
Screw Torque (N.m)	1
Wire Gauge (AWG)	28-12
Weight (Approx) gms	Unpacked : 210 Packed : 240
Accessories	1 Pair of Mounting Clamps