



# 8 CHANNEL TEMPERATURE SCANNER WITH MODBUS FACILITY

MS-1248-M1

## APPLICATIONS

Motor Protection

---

Generator  
Monitoring & Protection

---

Electrical Sub-station monitoring

---

Metal and Mining applications

---

Machine Condition Monitoring

---

Gas Detection

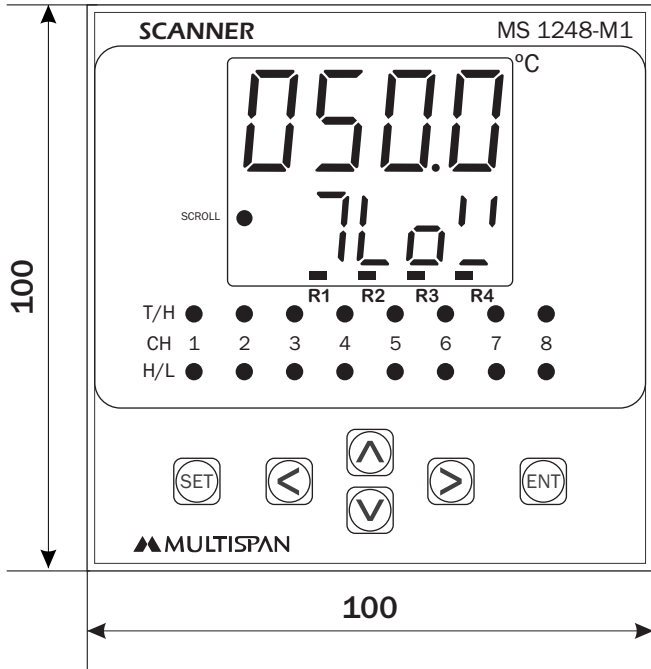
---

Laboratory Equipment Monitoring

---

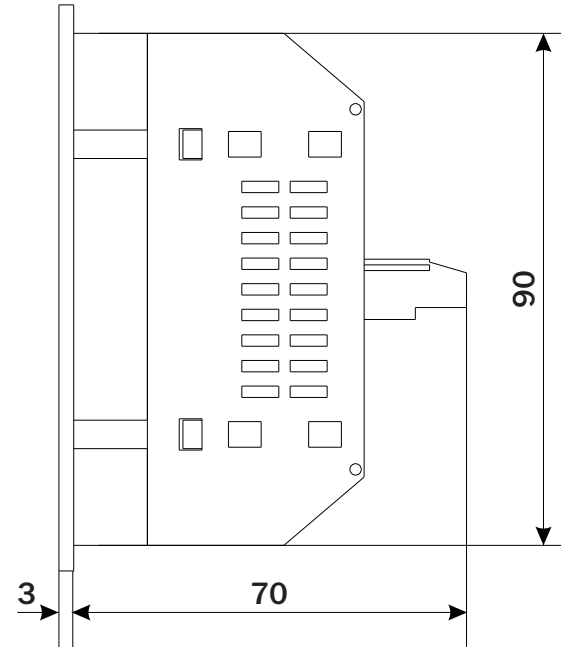
# Mechanical Dimensions

## Body Dimensions



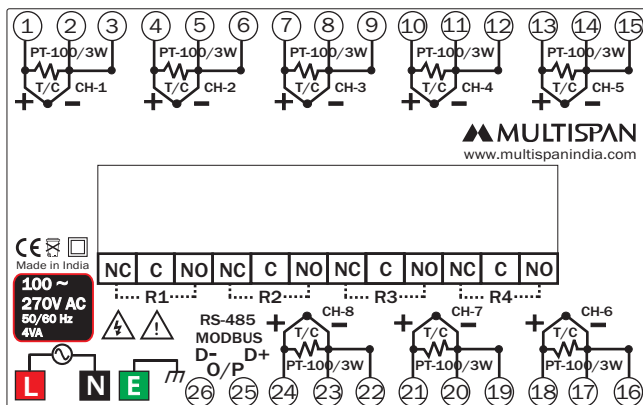
**FRONT VIEW**

All dimensions are in mm

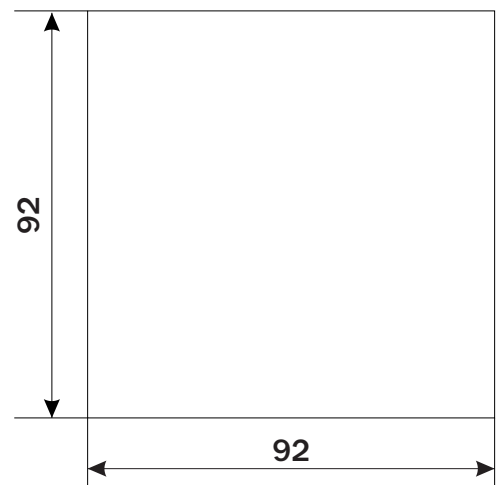


**RIGHT SIDE VIEW**


## Connection Diagram



## Panel Cutout



# TECHNICAL DATA

<b>Input</b>	J/K/PT-100 2W/3W (Configurable)	
<b>Range</b>	J: 0 to 600° C, K: 0 to 1200° C PT-100: -99° C to 400° C , PT.1: -99.0° C to 400.0° C	
<b>Output</b>	<b>Output 1</b>	4 Relay With Grouping Facility
	<b>Output 2</b>	RS 485 Modbus Communication
<b>Control Action</b>	ON / OFF	
<b>Power Supply</b>	100 to 270V AC,50/60Hz,Approx 4VA	
<b>Accuracy</b>	± 1 % FSD	
<b>Certification</b>		

## Input

<b>ADC Resolution</b>	12 Bit
<b>Display Resolution</b>	Thermocouple : 1° C RTD : For PT-100 : 1° C / for PT.1: 0.1° C
<b>Sampling Rate</b>	250 mS / Channel

## Output

<b>Relay Output</b>	
<b>Relay</b>	4
<b>Type</b>	1 C/O , NO , C , NC
<b>Rating</b>	5A @ 230V AC / 30V DC

## Input Range

<b>Input Type</b>	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

## Display

<b>Process Value</b>	<b>Upper</b> : 0.70" 4 Digit Red LED 7 Segment Display
<b>Channel No. and Relay Status</b>	<b>Lower</b> : 0.50" 4 Digit Green LED 7 Segment Display
<b>LED Indications</b>	Status of each relay and Alarm

## Power Supply

<b>Standard</b>	100 - 270V AC, 50/60Hz
<b>Optional</b>	24V DC
<b>Consumption</b>	4VA

## Keys

6 controlling keys for configuration and operation

### Accuracy

J , K , PT-100 , PT.1	± 1 % FSD for J,K, ± 0.5 % for PT-100, PT.1
CJC error	±3 °C
Sensor Open	All
T/C Burnout current	1.10uA
RTD excitation current	0.2mA
CMRR	> 120 db ( Typical )
Input Impedance	> 1 M
Max Voltage	20V DC

### Communication (Optional)

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

### Environmental Characteristics

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

### Mechanical Characteristics

Mounting Type	Panel Mount
Dimension (HxWxD) mm	100 x 100 x 70
Panel Cutout (HxW) mm	92 x 92
Material	Body Polycarbonate (PC) Enclosure ABS
Terminal Screw Size	M3.5
Screw Torque (N.m)	1
Wire Gauge (AWG)	26-14
Weight (Approx) gms	Unpacked : 320 Packed : 375
Accessories	1 Pair of Clamps