CE

MULTISPAN

User Manual

MS-1208-M1

Multispan Control Instruments Pvt Ltd

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Technical Specification

INPUT:

	Input	Range
Input Types	J	0 to 600°C DP Selectable
	K	0 to 1200°C DP Selectable
	PT-100	-99 to 400°C DP Selectable
Resolution	J,K,PT-100/3W = 1°C	

DISPLAY, KEY & LED:

Display	UPPER : 4 Digit 7 Seg 0.68", White LED LOWER : 4 Digit 7 Seg 0.43", Green LED
Key	SET, ENT, INC & DEC

DIMENSION:

Size	101 (H) x 101(W) x 54(D) mm
Panel Cutout	92 (H) x 92 (W) mm

OUTPUT SPECIFICATION:

RS-485 Modbus Output

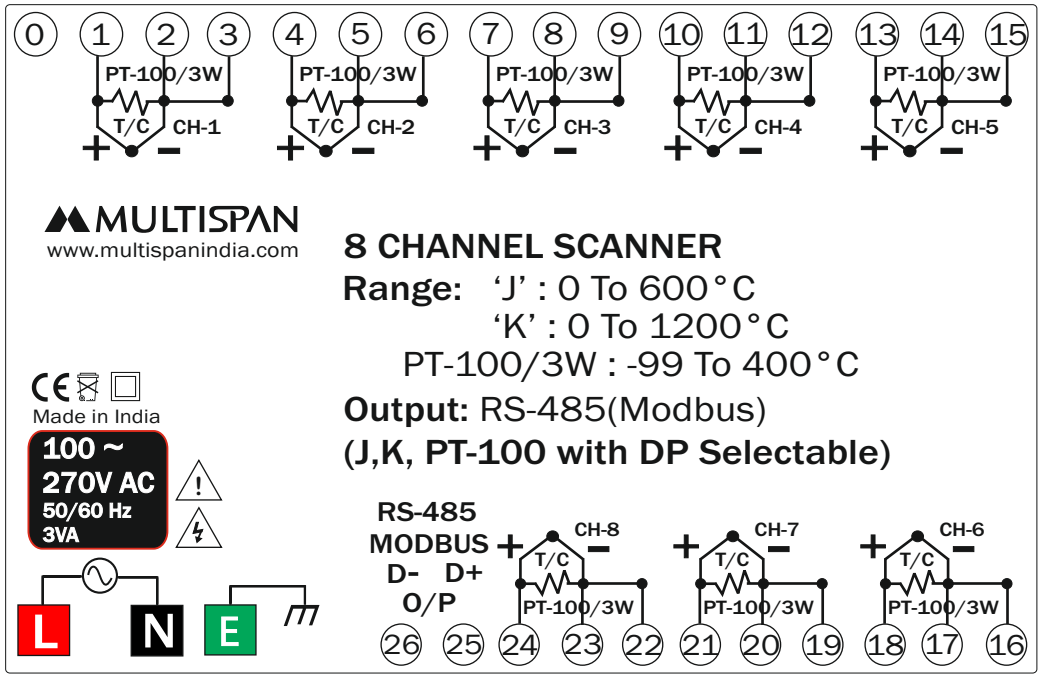
AUXILIARY SUPPLY:

Supply voltage	100 To 270V AC,50/60 Hz,
Power consumption (VA RATING)	Approx 3VA @ 230V AC MAX,

ENVIRONMENT CONDITION:

Operating Temp.	0°C to 55°C
Relative Humidity	UP to 95% RH (non-condensing)
Protection Level (AS Per Request)	IP-65 (Front side) As per IS/IEC 60529 : 2001

Terminal Diagram



Key Operation

* Press ∧ & ∨ key to change the parameter setting.
* Press SET + ∧ key for 5 sec to enter in Modbus menu.
* Press ∧ + ∨ key for 5 sec to set OFFSET.
* Press ENT key to in scroll & hold mode.

Procedure

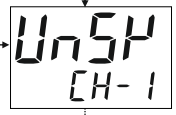
1) Do all connection as shown in connection diagram.
2) To enter in parameter menu, press SET key for 3 sec
   Configure:
3. Scan time, 1 to 99
4. Sensor Selection (J, K or PT-100 Selectable & DP Selectable) (1-8) Channel
5. Skip or unskip channel (1-8) Channel
6) If needed to add offset, press ∧ + ∨ together for 5 Sec.
   Set offset for each channel if required.(1-8) Channel
   Off set range will be -99°C to + 99°C.
7) Press ENT Key for continuous scrolling or manual scrolling.
8) In hold mode use ∧ & ∨ Key to select next channel.

Parameter Menu

Press SET key for 3 Sec to enter in menu

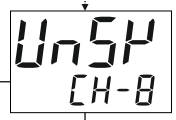
Display shows scan time use ∧ & ∨ key to change it.
(1 to 99)

Press SET key to go to next parameter



Channel Skip or Unskip using ∧ & ∨ Key to change it.
(Repeat the same procedure for all 8 channels)

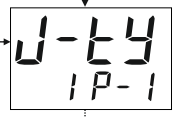
Press SET key to go to next channel



Channel Skip or Unskip using ∧ & ∨ Key to change it.

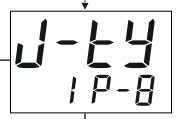
Press SET key to go to next parameter

(K type & RTD)



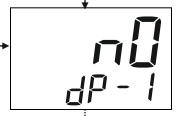
Display shows sensor type. Use ∧ & ∨ key to change it.

Press SET key to go to next channel
(Repeat the same procedure for all 8 channels)



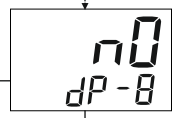
Display shows sensor type.Use ∧ & ∨ key to change it

Press SET key to go to next parameter



Channel DP YES or NO using ∧ & ∨ Key to change it.
(Repeat the same procedure for all 8 channels)

Press SET key to go to next channel



Channel DP YES or NO using ∧ & ∨ Key to change it.

Press ENT key to save & exit

Modbus Parameter

Press ∧ + SET key for 5 sec to set modbus parameter

Modbus Address

Set modbus address using ∧ & ∨ key to change it
(1 to 127)

Press SET key to go to next parameter

Select baudrate using ∧ & ∨ Key to change it

19.2 = 19200 bps

38.4 = 38400 bps

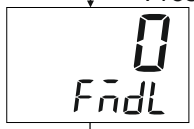
Press SET key to go to next parameter

Select parity using ∧ & ∨ Key to change it
Even
Odd

Press SET key to go to next parameter

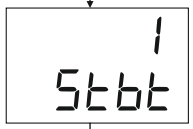
Select data type using ∧ & ∨ Key to change it
Flot
sign integer

Press SET key to go to next parameter



Set frame delay using ∧ & ∨ key to change it
(0 TO 99m Second)

Press SET key to go to next parameter

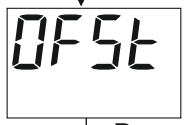


1 Bit 2 Bit

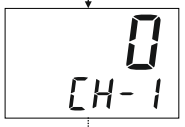
Press ENT key to save & exit

Offset Settng

Press ∧ & ∨ key for 5 sec to offset parameter

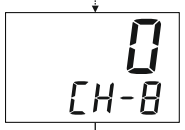


Press SET key to go to next parametert



J , K & PT-100
Without DP : -99 TO 99
With DP : -99.9 to 99.9

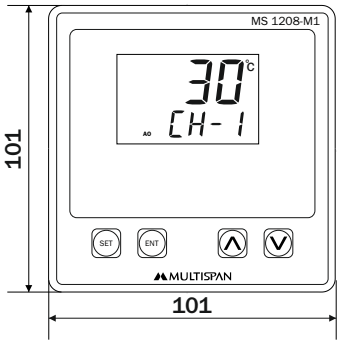
Press SET key to go to next channel
(Repeat the same procedure for all 8 channels)



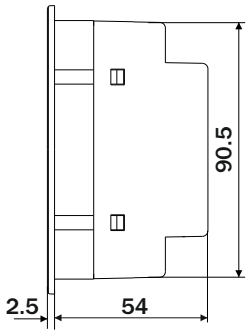
Change the value of by ∧ & ∨ Key change it

Press ENT key to save & exit

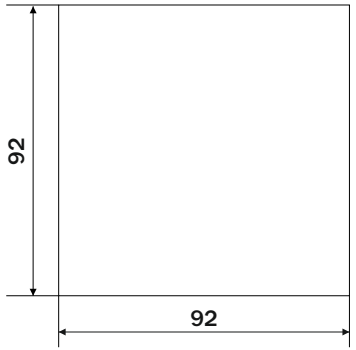
Mechanical Dimemsions & Installation



FRONT VIEW

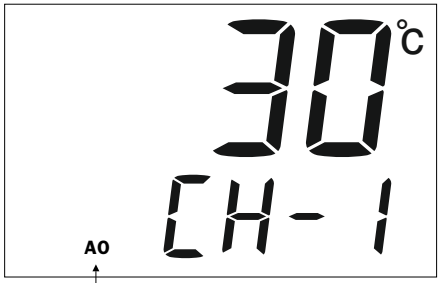


RIGHT SIDE VIEW



Panel Cutout

SCROLL & HOLD MODE



Press ENT key to in scroll & hold mode

MODBUS

Salve Address :	1 to 127
Baudrate :	9600,19200,38400 bps
Parity :	None,Even,Odd
Datatype :	Sign integer,Long, Float (32 Bit Little Endian Byte Swap)
Read Function Register :	0x03
Write Function Register :	0x10

Note :-
Sensor open - 15000
Channel Skip - 18000
SRE - 19000

Sr.No	Access Type	Parameter	Register Data Type Integer	Register Data Type Float /Long
1	R	Channel 1 Temperature	0	0
2	R	Channel 2 Temperature	1	2
3	R	Channel 3 Temperature	2	4
4	R	Channel 4 Temperature	3	6
5	R	Channel 5 Temperature	4	8
6	R	Channel 6 Temperature	5	10
7	R	Channel 7 Temperature	6	12
8	R	Channel 8 Temperature	7	14
9	R/W	Scroll Mode: Auto 0, Manual 1	8	16
10	R/W	Scan Time	9	18
11	R/W	Ch.1-Skip/Unskip: Unskip 0, Skip 1	10	20
12	R/W	Ch.2-Skip/Unskip: Unskip 0, Skip 1	11	22
13	R/W	Ch.3-Skip/Unskip: Unskip 0, Skip 1	12	24
14	R/W	Ch.4-Skip/Unskip: Unskip 0, Skip 1	13	26
15	R/W	Ch.5-Skip/Unskip: Unskip 0, Skip 1	14	28
16	R/W	Ch.6Skip/Unskip: Unskip 0, Skip 1	15	30
17	R/W	Ch.7-Skip/Unskip: Unskip 0, Skip 1	16	32
18	R/W	Ch.8-Skip/Unskip: Unskip 0, Skip 1	17	34
19	R/W	Ch.1 Input Type: RTD Type 0, J Type 1, K Type 2	18	36
20	R/W	Ch.2 Input Type: RTD Type 0, J Type 1, K Type 2	19	38
21	R/W	Ch.3 Input Type: RTD Type 0, J Type 1, K Type 2	20	40
22	R/W	Ch.4 Input Type: RTD Type 0, J Type 1, K Type 2	21	42
23	R/W	Ch.5 Input Type: RTD Type 0, J Type 1, K Type 2	22	44
24	R/W	Ch.6 Input Type: RTD Type 0, J Type 1, K Type 2	23	46
25	R/W	Ch.7 Input Type: RTD Type 0, J Type 1, K Type 2	24	48
26	R/W	Ch.8 Input Type: RTD Type 0, J Type 1, K Type 2	25	50
27	NA	NA	26	52
28	R/W	Channel 1 Offset	27	54
29	R/W	Channel 2 Offset	28	56
30	R/W	Channel 3 Offset	29	58
31	R/W	Channel 4 Offset	30	60
32	R/W	Channel 5 Offset	31	62
33	R/W	Channel 6 Offset	32	64
34	R/W	Channel 7 Offset	33	66
35	R/W	Channel 8 Offset	34	68
36	R/W	Address	35	70
37	R/W	Baudrate: B 9600 0, B 19200 1, B 38400 2	36	72
38	R/W	Parity: None 0, Even 1, Odd 2	37	74
39	R/W	Data Type: Float 0, Long 1, Sign Integer 2	38	76
40	R/W	Frame Delay 0-99	39	78
41	R/W	STOP BIT: STOP BIT 1, STOP BIT 2	40	80
42	R/W	Ch.1 DP Selection: NO 0, YES 1	41	82
43	R/W	Ch.2 DP Selection: NO 0, YES 1	42	84
44	R/W	Ch.3 DP Selection: NO 0, YES 1	43	86
45	R/W	Ch.4 DP Selection: NO 0, YES 1	44	88
46	R/W	Ch.5 DP Selection: NO 0, YES 1	45	90
47	R/W	Ch.6 DP Selection: NO 0, YES 1	46	92
48	R/W	Ch.7 DP Selection: NO 0, YES 1	47	94
49	R/W	Ch.8 DP Selection: NO 0, YES 1	48	96

SAFETY PRECAUTION

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If all the equipment is not handled in a manner specified by the manufacturer, it might impair the protection provided by the equipment.


Read complete instructions prior to installation and operation of the unit.


WARNING : Risk of electric shock.

WARNING GUIDELINES

WARNING : Risk of electric shock.

1. To prevent the risk of electric shock, power supply to the equipment must be kept OFF while doing the wiring arrangement. Do not touch the terminals while power is being supplied.
2. To reduce electro magnetic interference, use wire with adequate rating and twists of the same of equal size shall be made with shortest connection.
3. Cable used for connection to power source, must have a cross section of 1mm or greater. These wires should have insulations capacity made of at least 1.5kV.
4. When extending the thermocouple lead wires, always use thermocouple compensation wires for wiring for the RTD type, use a wiring material with a small lead resistance (5Ω max per line) and no resistance differentials among three wires should be present.
5. A better anti-noise effect can be expected by using standard power supply cable for the instrument.

INSTALLATION GUIDELINES

1. This equipment, being built-in-type, normally becomes a part of main control panel and in such case the terminals do not remain accessible to the end user after installation and internal wiring.
2. Do not allow pieces of metal, wire clippings, or fine metallic fillings from installation to enter the product or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.
3. Circuit breaker or mains switch must be installed between power source and supply terminal to facilitate power 'ON' or 'OFF' function. However this mains switch or circuit breaker must be installed at convenient place normally accessible to the operator.
4. Use and store the instrument within the specified ambient temperature and humidity ranges as mentioned in this manual.

MECHANICAL INSTALLATION GUIDELINES

1. Prepare the panel cutout with proper dimensions as shown above.
2. Fit the unit into the panel with the help of clamp given.
3. The equipment in its installed state must not come in close proximity to any heating source, caustic vapors, oil steam, or other unwanted process Byproducts.
4. Use the specified size of crimp terminal (M3.5 screws) to wire the terminal block. Tightening the screws on the terminal block using the tightening torque of the range of 1 N.m.
5. Do not connect anything to unused terminals.

MAINTENANCE

1. The equipment should be cleaned regularly to avoid blockage of ventilating parts.
2. Clean the equipment with a clean soft cloth. Do not use isopropyl alcohol or any other cleaning agent.
3. Fusible resistor must not be replaced by operator.