



MULTISPAN

User Manual

MS-1208A-M1



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Technical Specification

INPUT:

	Input	Range
Input Types	0 -10V DC	-1999 to 9999 DP Selectable
	0-20mA DC	
	4-20mA DC	
ACCURACY:	Class 1.0 (Standard)	

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

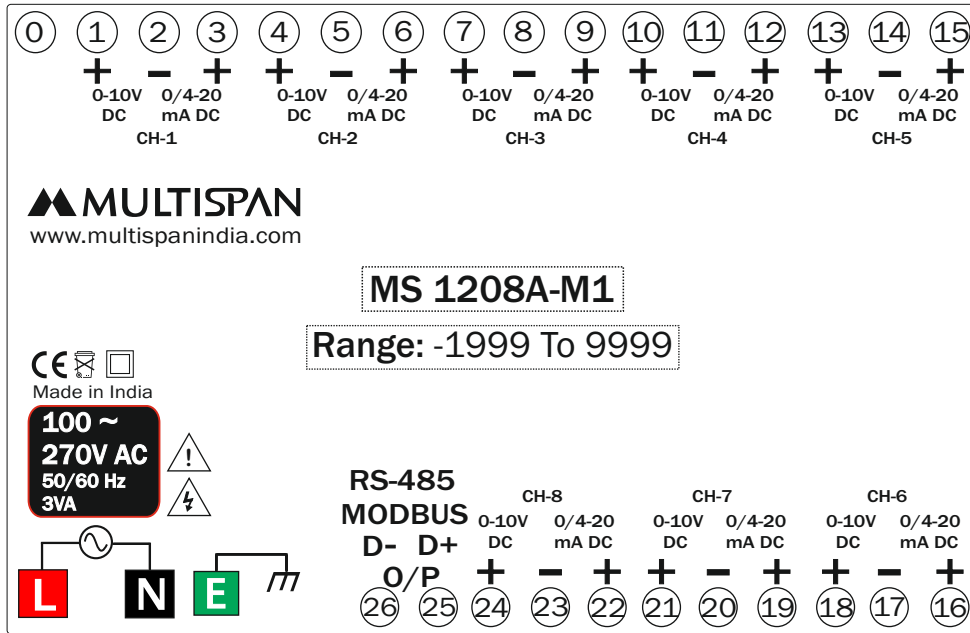
AUXILIARY SUPPLY:

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



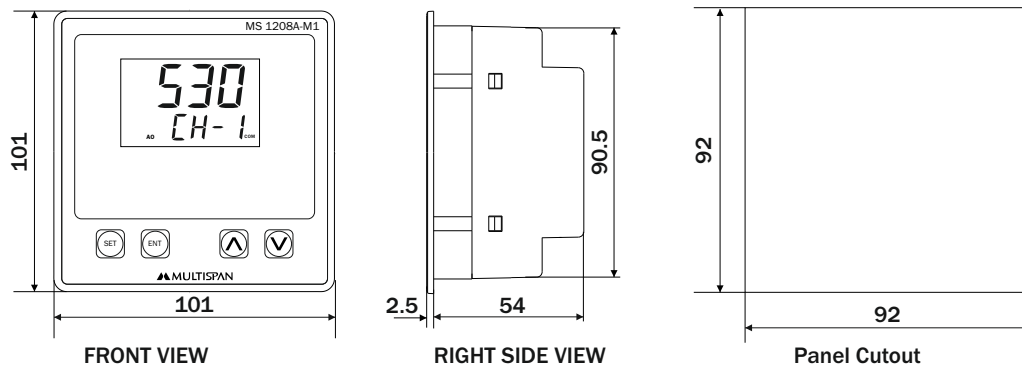
Key Operation

- * Press **SET** key for 5 sec to enter in set value menu.
- * Press **▲** & **▼** key to change the parameter setting.
- * Press **SET** + **▲** key for 5 sec to enter in Modbus menu.
- * Press **SET** + **▼** key for 5 sec to set Range & DP.
Press **▲** + **▼** key for 5 sec to set OFFSET.
- * Press **ENT** key to in scroll & hold mode.

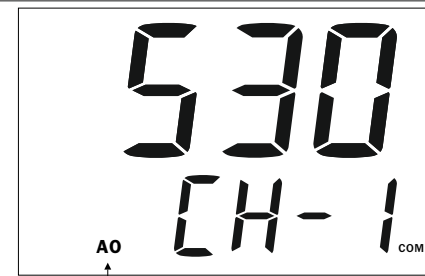
Procedure

- 1) Do all connection as shown in connection diagram.
- 2) To enter in parameter menu, press **SET** key for 5 sec Configure:
3. Scan time, 1 to 99
4. Input Selection (0-10V DC, 0-20mA DC, 4-20mA DCSelectable & 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 -999 to +999.
- 7) Press **ENT** Key for continuous scrolling or manual scrolling.
- 8) In hold mode use **▲** & **▼** Key to select next channel.

Mechanical Dimensions & Installation

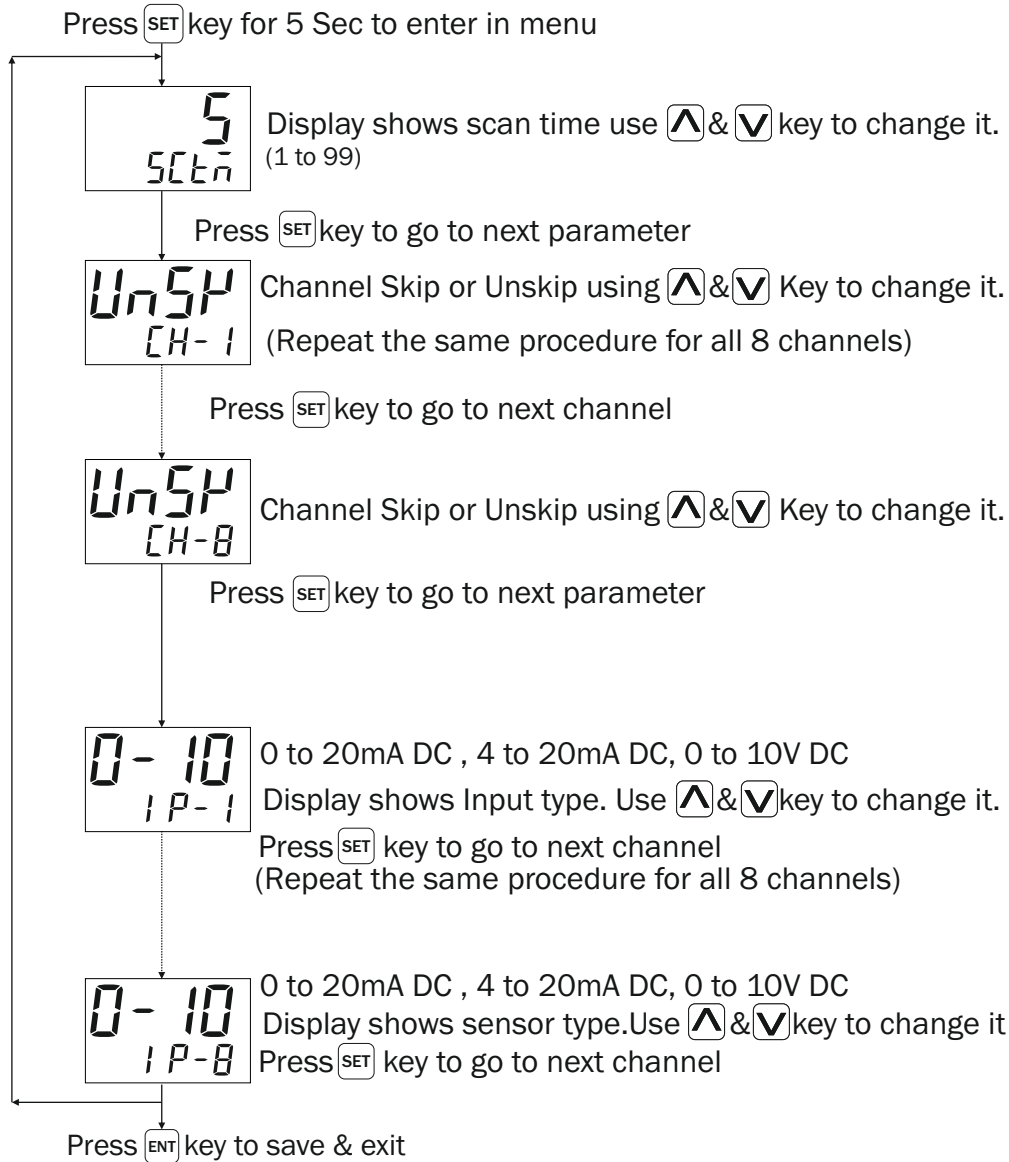


SCROLL & HOLD MODE

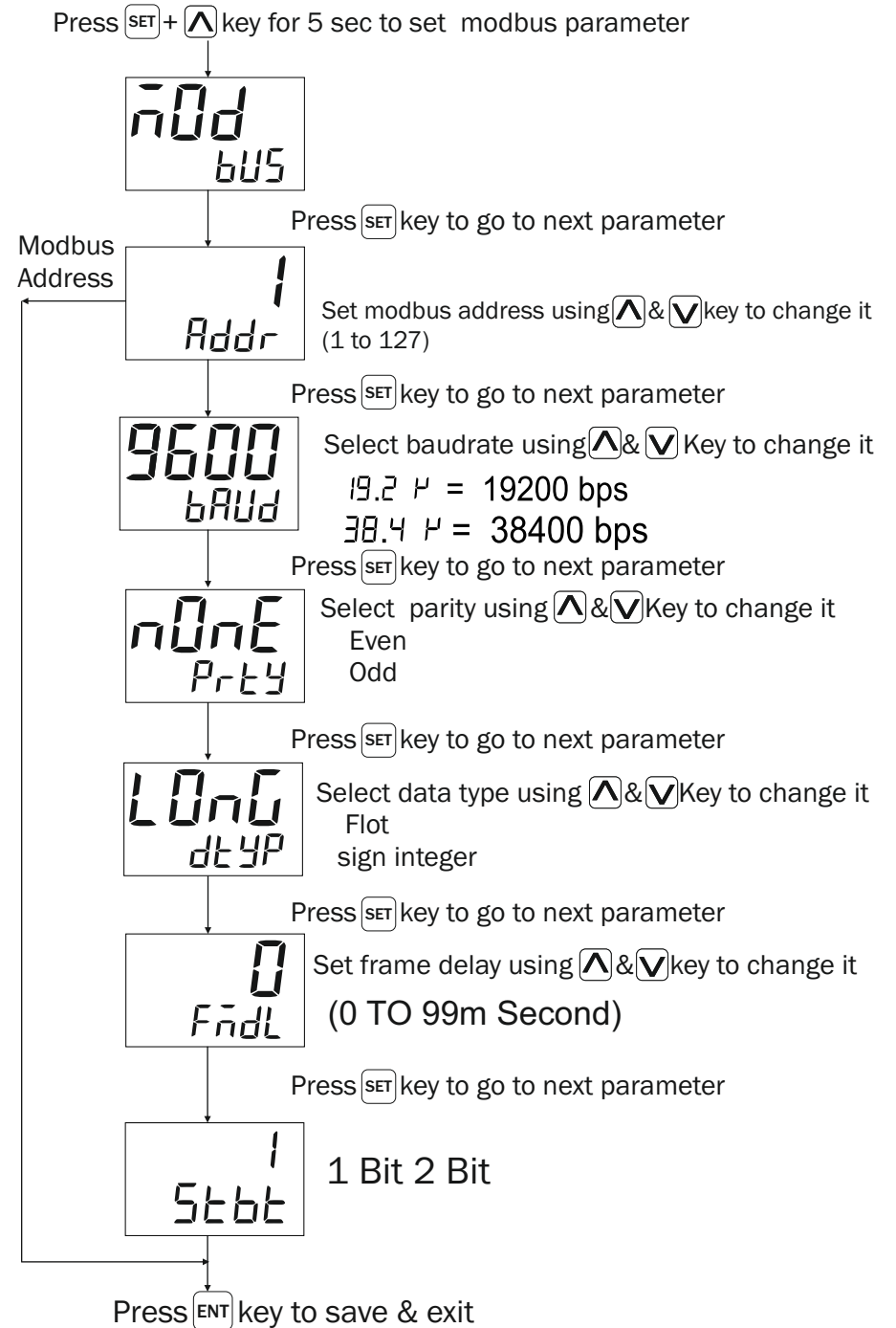


Press **ENT** key to in scroll & hold mode

Parameter Menu



Modbus Parameter



Range Setting

Press **SET** & **V** key for 5 sec to range setting .

SET
rAnG

Press **SET** key to go to next parameter

0
dP-1 (0, 0.0, 0.00, 0.000)
Using **^** & **v** Key to Select DP.

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

0
dP-8 (0, 0.0, 0.00, 0.000)
Using **^** & **v** Key to Select DP.

Press **SET** key to go to next parameter

-1999
Lrn1 (-1999 To 9999)
Using **^** & **v** Key to Select Range.

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

-1999
Lrn8 (-1999 To 9999)
Using **^** & **v** Key to Select Range.

Press **SET** key to go to next parameter

9999
Hrn1 (-1999 To 9999)
Using **^** & **v** Key to Select Range.

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

9999
Hrn8 (-1999 To 9999)
Using **^** & **v** Key to Select Range.

Press **ENT** key to save & exit

Offset Setting

Press **^** & **V** key for 5 sec to offset parameter

OFSt
CrFc

Press **SET** key to go to next parameter

0
OF-1 (-999 To 999)

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

0
OF-8 (-999 To 999)
Change the value of by **^** & **v** Key change it

Press **SET** key to go to next parameter

0
CF-1 (-999 To 999)

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

0
CF-8 (-999 To 999)
Change the value of by **^** & **v** Key change it

Press **ENT** key to save & exit

MODBUS

Slave Address :	1 to 127
Baudrate :	9600,19200,38400 bps
Parity :	None,Even,Odd
Datatype :	Sign integer, Float,Long
Read Function Register :	0x03
Write Function Register :	0x10

Note :-
 Low - 15000
 Channel Skip - 18000
 Over - 19000

Sr.No	Access Type	Parameter	Register											
			Data Type											
			Integer	Float /Long										
1	R	Channel 1 Process Value	0	0										
2	R	Channel 2 Process Value	1	2										
3	R	Channel 3 Process Value	2	4										
4	R	Channel 4 Process Value	3	6										
5	R	Channel 5 Process Value	4	8										
6	R	Channel 6 Process Value	5	10										
7	R	Channel 7 Process Value	6	12										
8	R	Channel 8 Process Value	7	14										
9	R/W	<table border="1"> <tr> <th colspan="2">Scroll Mode</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Auto</td> <td>0</td> </tr> <tr> <td>Manual</td> <td>1</td> </tr> </table>	Scroll Mode		Selection	Value	Auto	0	Manual	1	8	16		
Scroll Mode														
Selection	Value													
Auto	0													
Manual	1													
10	R/W	Scan Time	9	18										
11	R/W	<table border="1"> <tr> <th colspan="2">Ch.1-Skip/Unskip</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Unskip</td> <td>0</td> </tr> <tr> <td>Skip</td> <td>1</td> </tr> </table>	Ch.1-Skip/Unskip		Selection	Value	Unskip	0	Skip	1	10	20		
Ch.1-Skip/Unskip														
Selection	Value													
Unskip	0													
Skip	1													
12	R/W	<table border="1"> <tr> <th colspan="2">Ch.2-Skip/Unskip</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Unskip</td> <td>0</td> </tr> <tr> <td>Skip</td> <td>1</td> </tr> </table>	Ch.2-Skip/Unskip		Selection	Value	Unskip	0	Skip	1	11	22		
Ch.2-Skip/Unskip														
Selection	Value													
Unskip	0													
Skip	1													
13	R/W	<table border="1"> <tr> <th colspan="2">Ch.3-Skip/Unskip</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Unskip</td> <td>0</td> </tr> <tr> <td>Skip</td> <td>1</td> </tr> </table>	Ch.3-Skip/Unskip		Selection	Value	Unskip	0	Skip	1	12	24		
Ch.3-Skip/Unskip														
Selection	Value													
Unskip	0													
Skip	1													
14	R/W	<table border="1"> <tr> <th colspan="2">Ch.4-Skip/Unskip</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Unskip</td> <td>0</td> </tr> <tr> <td>Skip</td> <td>1</td> </tr> </table>	Ch.4-Skip/Unskip		Selection	Value	Unskip	0	Skip	1	13	26		
Ch.4-Skip/Unskip														
Selection	Value													
Unskip	0													
Skip	1													
15	R/W	<table border="1"> <tr> <th colspan="2">Ch.5-Skip/Unskip</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Unskip</td> <td>0</td> </tr> <tr> <td>Skip</td> <td>1</td> </tr> </table>	Ch.5-Skip/Unskip		Selection	Value	Unskip	0	Skip	1	14	28		
Ch.5-Skip/Unskip														
Selection	Value													
Unskip	0													
Skip	1													
16	R/W	<table border="1"> <tr> <th colspan="2">Ch.6Skip/Unskip</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Unskip</td> <td>0</td> </tr> <tr> <td>Skip</td> <td>1</td> </tr> </table>	Ch.6Skip/Unskip		Selection	Value	Unskip	0	Skip	1	15	30		
Ch.6Skip/Unskip														
Selection	Value													
Unskip	0													
Skip	1													
17	R/W	<table border="1"> <tr> <th colspan="2">Ch.7-Skip/Unskip</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Unskip</td> <td>0</td> </tr> <tr> <td>Skip</td> <td>1</td> </tr> </table>	Ch.7-Skip/Unskip		Selection	Value	Unskip	0	Skip	1	16	32		
Ch.7-Skip/Unskip														
Selection	Value													
Unskip	0													
Skip	1													
18	R/W	<table border="1"> <tr> <th colspan="2">Ch.8-Skip/Unskip</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Unskip</td> <td>0</td> </tr> <tr> <td>Skip</td> <td>1</td> </tr> </table>	Ch.8-Skip/Unskip		Selection	Value	Unskip	0	Skip	1	17	34		
Ch.8-Skip/Unskip														
Selection	Value													
Unskip	0													
Skip	1													
19	R/W	<table border="1"> <tr> <th colspan="2">Ch.1 Input Type</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0 to 10V DC</td> <td>0</td> </tr> <tr> <td>4 to 20mA DC</td> <td>1</td> </tr> <tr> <td>0 to 20mA DC</td> <td>2</td> </tr> </table>	Ch.1 Input Type		Selection	Value	0 to 10V DC	0	4 to 20mA DC	1	0 to 20mA DC	2	18	36
Ch.1 Input Type														
Selection	Value													
0 to 10V DC	0													
4 to 20mA DC	1													
0 to 20mA DC	2													

20	R/W	<table border="1"> <tr> <th colspan="2">Ch.2 Input Type</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0 to 10V DC</td> <td>0</td> </tr> <tr> <td>4 to 20mA DC</td> <td>1</td> </tr> <tr> <td>0 to 20mA DC</td> <td>2</td> </tr> </table>	Ch.2 Input Type		Selection	Value	0 to 10V DC	0	4 to 20mA DC	1	0 to 20mA DC	2	19	38		
Ch.2 Input Type																
Selection	Value															
0 to 10V DC	0															
4 to 20mA DC	1															
0 to 20mA DC	2															
21	R/W	<table border="1"> <tr> <th colspan="2">Ch.3 Input Type</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0 to 10V DC</td> <td>0</td> </tr> <tr> <td>4 to 20mA DC</td> <td>1</td> </tr> <tr> <td>0 to 20mA DC</td> <td>2</td> </tr> </table>	Ch.3 Input Type		Selection	Value	0 to 10V DC	0	4 to 20mA DC	1	0 to 20mA DC	2	20	40		
Ch.3 Input Type																
Selection	Value															
0 to 10V DC	0															
4 to 20mA DC	1															
0 to 20mA DC	2															
22	R/W	<table border="1"> <tr> <th colspan="2">Ch.4 Input Type</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0 to 10V DC</td> <td>0</td> </tr> <tr> <td>4 to 20mA DC</td> <td>1</td> </tr> <tr> <td>0 to 20mA DC</td> <td>2</td> </tr> </table>	Ch.4 Input Type		Selection	Value	0 to 10V DC	0	4 to 20mA DC	1	0 to 20mA DC	2	21	42		
Ch.4 Input Type																
Selection	Value															
0 to 10V DC	0															
4 to 20mA DC	1															
0 to 20mA DC	2															
23	R/W	<table border="1"> <tr> <th colspan="2">Ch.5 Input Type</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0 to 10V DC</td> <td>0</td> </tr> <tr> <td>4 to 20mA DC</td> <td>1</td> </tr> <tr> <td>0 to 20mA DC</td> <td>2</td> </tr> </table>	Ch.5 Input Type		Selection	Value	0 to 10V DC	0	4 to 20mA DC	1	0 to 20mA DC	2	22	44		
Ch.5 Input Type																
Selection	Value															
0 to 10V DC	0															
4 to 20mA DC	1															
0 to 20mA DC	2															
24	R/W	<table border="1"> <tr> <th colspan="2">Ch.6 Input Type</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0 to 10V DC</td> <td>0</td> </tr> <tr> <td>4 to 20mA DC</td> <td>1</td> </tr> <tr> <td>0 to 20mA DC</td> <td>2</td> </tr> </table>	Ch.6 Input Type		Selection	Value	0 to 10V DC	0	4 to 20mA DC	1	0 to 20mA DC	2	23	46		
Ch.6 Input Type																
Selection	Value															
0 to 10V DC	0															
4 to 20mA DC	1															
0 to 20mA DC	2															
25	R/W	<table border="1"> <tr> <th colspan="2">Ch.7 Input Type</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0 to 10V DC</td> <td>0</td> </tr> <tr> <td>4 to 20mA DC</td> <td>1</td> </tr> <tr> <td>0 to 20mA DC</td> <td>2</td> </tr> </table>	Ch.7 Input Type		Selection	Value	0 to 10V DC	0	4 to 20mA DC	1	0 to 20mA DC	2	24	48		
Ch.7 Input Type																
Selection	Value															
0 to 10V DC	0															
4 to 20mA DC	1															
0 to 20mA DC	2															
26	R/W	<table border="1"> <tr> <th colspan="2">Ch.8 Input Type</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0 to 10V DC</td> <td>0</td> </tr> <tr> <td>4 to 20mA DC</td> <td>1</td> </tr> <tr> <td>0 to 20mA DC</td> <td>2</td> </tr> </table>	Ch.8 Input Type		Selection	Value	0 to 10V DC	0	4 to 20mA DC	1	0 to 20mA DC	2	25	50		
Ch.8 Input Type																
Selection	Value															
0 to 10V DC	0															
4 to 20mA DC	1															
0 to 20mA DC	2															
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	<table border="1"> <tr> <th colspan="2">Baudrate</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>B 9600</td> <td>0</td> </tr> <tr> <td>B 19200</td> <td>1</td> </tr> <tr> <td>B 38400</td> <td>2</td> </tr> </table>	Baudrate		Selection	Value	B 9600	0	B 19200	1	B 38400	2	36	72		
Baudrate																
Selection	Value															
B 9600	0															
B 19200	1															
B 38400	2															
38	R/W	<table border="1"> <tr> <th colspan="2">Parity</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>None</td> <td>0</td> </tr> <tr> <td>Even</td> <td>1</td> </tr> <tr> <td>Odd</td> <td>2</td> </tr> </table>	Parity		Selection	Value	None	0	Even	1	Odd	2	37	74		
Parity																
Selection	Value															
None	0															
Even	1															
Odd	2															
39	R/W	<table border="1"> <tr> <th colspan="2">Data Type</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>Float</td> <td>0</td> </tr> <tr> <td>Long</td> <td>1</td> </tr> <tr> <td>Sign Integer</td> <td>2</td> </tr> </table>	Data Type		Selection	Value	Float	0	Long	1	Sign Integer	2	38	76		
Data Type																
Selection	Value															
Float	0															
Long	1															
Sign Integer	2															
40	R/W	Frame Delay 0-99	39	78												
41	R/W	<table border="1"> <tr> <th colspan="2">STOP BIT</th> </tr> <tr> <td>STOP BIT</td> <td>1</td> </tr> <tr> <td>STOP BIT</td> <td>2</td> </tr> </table>	STOP BIT		STOP BIT	1	STOP BIT	2	40	80						
STOP BIT																
STOP BIT	1															
STOP BIT	2															
42	R/W	<table border="1"> <tr> <th colspan="2">Ch.1 DP Selection</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0.0</td> <td>1</td> </tr> <tr> <td>0.00</td> <td>2</td> </tr> <tr> <td>0.000</td> <td>3</td> </tr> </table>	Ch.1 DP Selection		Selection	Value	0	0	0.0	1	0.00	2	0.000	3	41	82
Ch.1 DP Selection																
Selection	Value															
0	0															
0.0	1															
0.00	2															
0.000	3															

43	R/W	<table border="1"> <tr> <th colspan="2">Ch.1 DP Selection</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0.0</td> <td>1</td> </tr> <tr> <td>0.00</td> <td>2</td> </tr> <tr> <td>0.000</td> <td>3</td> </tr> </table>	Ch.1 DP Selection		Selection	Value	0	0	0.0	1	0.00	2	0.000	3	42	84
Ch.1 DP Selection																
Selection	Value															
0	0															
0.0	1															
0.00	2															
0.000	3															
44	R/W	<table border="1"> <tr> <th colspan="2">Ch.1 DP Selection</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0.0</td> <td>1</td> </tr> <tr> <td>0.00</td> <td>2</td> </tr> <tr> <td>0.000</td> <td>3</td> </tr> </table>	Ch.1 DP Selection		Selection	Value	0	0	0.0	1	0.00	2	0.000	3	43	86
Ch.1 DP Selection																
Selection	Value															
0	0															
0.0	1															
0.00	2															
0.000	3															
45	R/W	<table border="1"> <tr> <th colspan="2">Ch.1 DP Selection</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0.0</td> <td>1</td> </tr> <tr> <td>0.00</td> <td>2</td> </tr> <tr> <td>0.000</td> <td>3</td> </tr> </table>	Ch.1 DP Selection		Selection	Value	0	0	0.0	1	0.00	2	0.000	3	44	88
Ch.1 DP Selection																
Selection	Value															
0	0															
0.0	1															
0.00	2															
0.000	3															
46	R/W	<table border="1"> <tr> <th colspan="2">Ch.1 DP Selection</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0.0</td> <td>1</td> </tr> <tr> <td>0.00</td> <td>2</td> </tr> <tr> <td>0.000</td> <td>3</td> </tr> </table>	Ch.1 DP Selection		Selection	Value	0	0	0.0	1	0.00	2	0.000	3	45	90
Ch.1 DP Selection																
Selection	Value															
0	0															
0.0	1															
0.00	2															
0.000	3															
47	R/W	<table border="1"> <tr> <th colspan="2">Ch.1 DP Selection</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0.0</td> <td>1</td> </tr> <tr> <td>0.00</td> <td>2</td> </tr> <tr> <td>0.000</td> <td>3</td> </tr> </table>	Ch.1 DP Selection		Selection	Value	0	0	0.0	1	0.00	2	0.000	3	46	92
Ch.1 DP Selection																
Selection	Value															
0	0															
0.0	1															
0.00	2															
0.000	3															
48	R/W	<table border="1"> <tr> <th colspan="2">Ch.1 DP Selection</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0.0</td> <td>1</td> </tr> <tr> <td>0.00</td> <td>2</td> </tr> <tr> <td>0.000</td> <td>3</td> </tr> </table>	Ch.1 DP Selection		Selection	Value	0	0	0.0	1	0.00	2	0.000	3	47	94
Ch.1 DP Selection																
Selection	Value															
0	0															
0.0	1															
0.00	2															
0.000	3															
49	R/W	<table border="1"> <tr> <th colspan="2">Ch.1 DP Selection</th> </tr> <tr> <td>Selection</td> <td>Value</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0.0</td> <td>1</td> </tr> <tr> <td>0.00</td> <td>2</td> </tr> <tr> <td>0.000</td> <td>3</td> </tr> </table>	Ch.1 DP Selection		Selection	Value	0	0	0.0	1	0.00	2	0.000	3	48	96
Ch.1 DP Selection																
Selection	Value															
0	0															
0.0	1															
0.00	2															
0.000	3															
50	R/W	Channel 1 Low Range	49	98												
51	R/W	Channel 2 Low Range	50	100												
52	R/W	Channel 3 Low Range	51	102												
53	R/W	Channel 4 Low Range	52	104												
54	R/W	Channel 5 Low Range	53	106												
55	R/W	Channel 6 Low Range	54	108												
56	R/W	Channel 7 Low Range	55	110												
57	R/W	Channel 8 Low Range	56	112												
58	R/W	Channel 1 High Range	57	114												
59	R/W	Channel 2 High Range	58	116												
60	R/W	Channel 3 High Range	59	118												
61	R/W	Channel 4 High Range	60	120												
62	R/W	Channel 5 High Range	61	122												
63	R/W	Channel 6 High Range	62	124												
64	R/W	Channel 7 High Range	63	126												
65	R/W	Channel 8 High Range	64	128												
66	R/W	Channel 1 Correction Factor	65	130												
67	R/W	Channel 2 Correction Factor	66	132												
68	R/W	Channel 3 Correction Factor	67	134												
69	R/W	Channel 4 Correction Factor	68	136												
70	R/W	Channel 5 Correction Factor	69	138												
71	R/W	Channel 6 Correction Factor	70	140												
72	R/W	Channel 7 Correction Factor	71	142												
73	R/W	Channel 8 Correction Factor	72	144												



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. 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.

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. 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 ($5\ \Omega$ 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.