

Quick User Guide

masibus

408-M



DIGITAL INDICATOR

SPECIFICATIONS

Input type	Range
PT100 (0.1°C)	-199.9 to 850.0 °C
PT100 (1°C)	-200 to 850°C
J	-199.9 to 1200°C
K	-199.9 to 1372°C
T	-199.9 to 400°C
R	0 to 1768°C
S	0 to 1768°C
*4-20mA / 1-5VDC	-1999 to 9999 (Field Scalable)
*0-20mA / 0-5VDC	
0-10VDC	

*Use external 250ohms, 0.1% for current Input
Table 1.1

Inputs

Input Type	Thermocouple, RTD (Pt100), Current, Voltage
Accuracy T /C and RTD : Linear:	$\pm 0.25\%$ of FS ± 1 degree $\pm 0.1\%$ of FS ± 1 count
Resolution	ADC:16bits Display:0.1°C/1°C
Sampling Rate	5 Samples/Sec
CJC Error	± 2.0 °C Max
Sensor Burnout current	0.25uA
RTD excitation current	0.166mA (Approx.)
Allowable wiring resistance for RTD	Maximum 15 ohms/wire (Conductorresistance between three wires should be equal)
NMRR	> 40 dB
CMRR	> 120 dB
Input	> 1MΩ (Voltage Input)

Impedance	250Ω (Current Input)
Max Voltage	20VDC

Display & Keys

PV	4-Digit, 7-Segment, 0.56" or 0.8" High,Red
Keys	Enter,Increase,Decrease

Output Types

Loop Power Supply	24VDC ($\pm 10\%$) @26mAwith Inbuilt Short Circuit Protection
--------------------------	---

Power Supply

Standard	85-265VAC/ 100-300VDC
Optional	18-36VDC
Power consumption	<5VA

Isolation (Withstanding voltage)

• Between primary terminals* and secondary terminals**:
At least 1500 V AC for 1 minute

• Between primary terminals* and grounding terminal:
At least 1500 V AC for 1 minute

• Between grounding terminal and secondary terminals**:
At least 1500 V AC for 1 minute

• Between secondary terminals**:
At least 500 V AC for 1 minute

* Primary terminals indicate power terminals and relay output terminals.

** Secondary terminals indicate analog I/O signal and Communication O/P.

Insulation resistance: 20MΩ or more at 500 V DC between power terminals and grounding terminal.

Insulation resistance: 20MΩ or more at 500 V DC between power terminals and grounding terminal.

Physical

Dimension (WxHx D)mm	96 x 48 x 85
Front Bezel(H x W)mm	48 x 96
Panel Cutout mm	92 x 46
Depth Behind Panel mm	75
Weight Approx.	260g.
Enclosure Material	ABS Plastic
Enclosure Protection	IP 20
Terminal Cable Size	2.5mm ²

Environmental Conditions

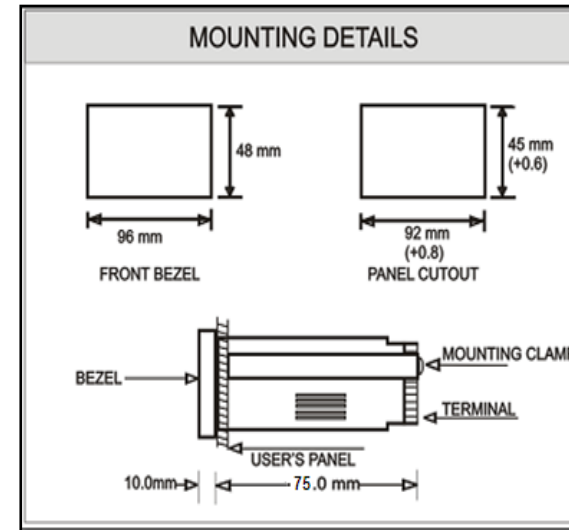
TEMPCO	< 100ppm/°C
---------------	-------------

Humidity	20% to 95% RH (Non-Condensing)
Ambient temperature	0 to 55°C
Storage Temperature	0 to 80°C

Advance Feature

- Input scalability for linear input

MOUNTING DETAILS



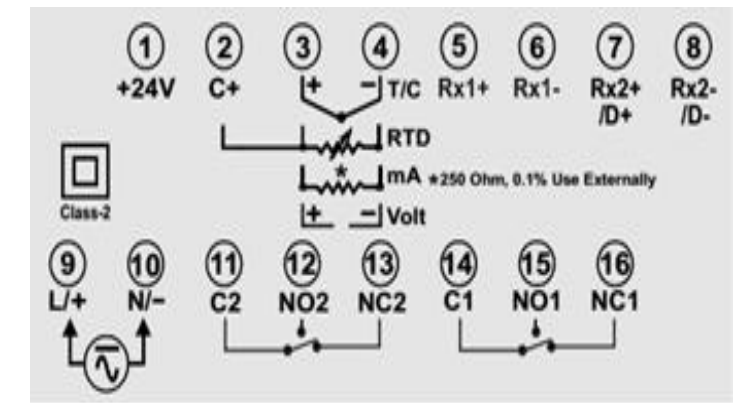
ORDERING CODE

Model	Input		Auxiliary Power Supply		Display	
	408-M	1	J	U1	85-265 VAC /100-300 VDC	5
	2	K	8			0.8"
	3	T	U2	18-36 VDC		
	4	R				
	5	S				
	6	Pt-100				
	C	4-20mA				
	D	0-20mA				
	E	1-5 V				
	F	0-5 V				
	G	0-10 V				

TERMINAL CONNECTIONS

Terminal No.	Description
1 LPS+	24VDC Loop power supply Terminal 4 is ground Reference.
2 C+	For RTD Input Only (Three wire Compensation).
3 TC+ / V+	For Thermocouple, RTD &Linear Input
4 TC- / V- / LPS-	

9 L/+	Power Supply Input
10 N/-	



SAFETY/WARNING PRECAUTIONS

To ensure that the device can be operated safely and all functions can be used, please read these instructions carefully.

Installation and Start-up must be carried out by qualified personnel only. The relevant county-specific regulations must also be observed.

Before start-up it is particularly important to ensure:

• Terminal wiring: check that all cables are correctly connected according to the connection diagram

• All wiring must confirm to appropriate standards of good practice and local codes and regulations. Wiring must be suitable for voltage, current and temperature rating of the system.

• Unused control terminals should not be used as jumper points as they may be internally connected, which may cause damage to the unit.

FRONT PANEL DESCRIPTION

Name of Part	Symbol	Function
Increment Key		<ul style="list-style-type: none"> • Increment the Value of any Parameter in edit mode. • Shuffle to next parameter in the Sub Menu
Decrement Key		<ul style="list-style-type: none"> • Decrement the Value of any Parameter in edit mode. • Shuffle to previous

		parameter in the Sub Menu. • Shows ambient value for T/C Input in RUN mode.
Enter Key (Menu Key)		<ul style="list-style-type: none"> It is used to enter in the sub menu. It's used to enter in the edit mode. It is also used to save the parameters to nonvolatile memory, when user setting a proper data by Increment and decrement key for parameter configuration.
PV(Process Value)Display	PV	<ul style="list-style-type: none"> 4 digit 0.56 inch RED Display 4 digit 0.8 inch RED Display Display process value. Display parameter name when user set parameter. Display Parameter Value when in Edit mode. Display error message when an error occurs.

		Range with changing of Input Type (ReferTable1.1) Can be set to any value within the Input Range & less the SPAN Value.	
SPAN (SPAN)	Span	Automatically change to the Input Higher Range with changing of Input Type (ReferTable1.1) Can be set to any value within the Input Range & greater the ZERO Value.	850.0
*DP (dP)	Decim-al Point	Set position of Decimal Point on Display. 0/ 0.0/ 0.00/ 0.000 0:0 1:0.0 2:0.00 3:0.000	0
BRHT (brHt)	Bright-ness	Adjust Brightness of the 7-segment Display. 10 to 100	50
PASS (PASS)	Passw-ord	Set Device Password 0 to 99	1
VERS (vEr5)	Version	Shows the Version of the Current Firmware	-

*parameter shows only if input type is linear.

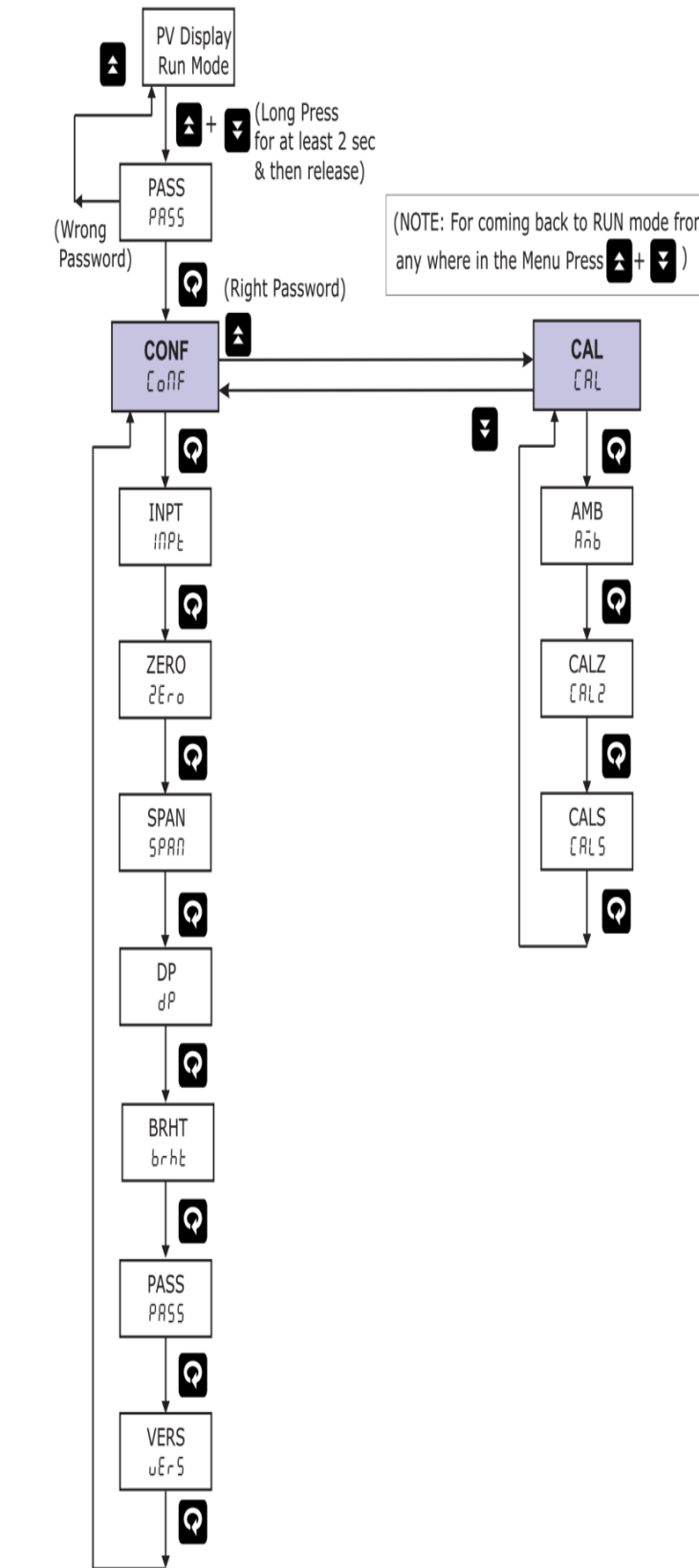
CAL Mode

(PV display)		Setting Name & Description
Symbol	Name	
**AMB (Añb)	Ambient	Ambient Adjustment
ZERO (ZEro)	Calibration Zero	Calibration Zero for PV Input(PV/SV Display:PV)

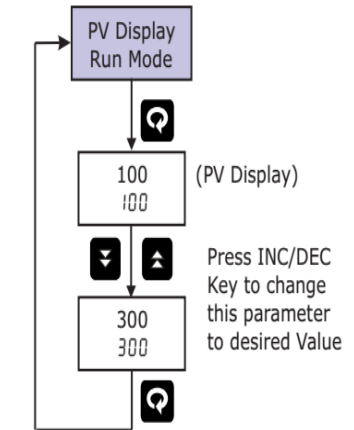
SPAN (SPAN)	Calibration Span	Calibration Span for PV Input(PV/SV Display :PV)
--------------------	------------------	--

**parameter showsonly if input type is TC.

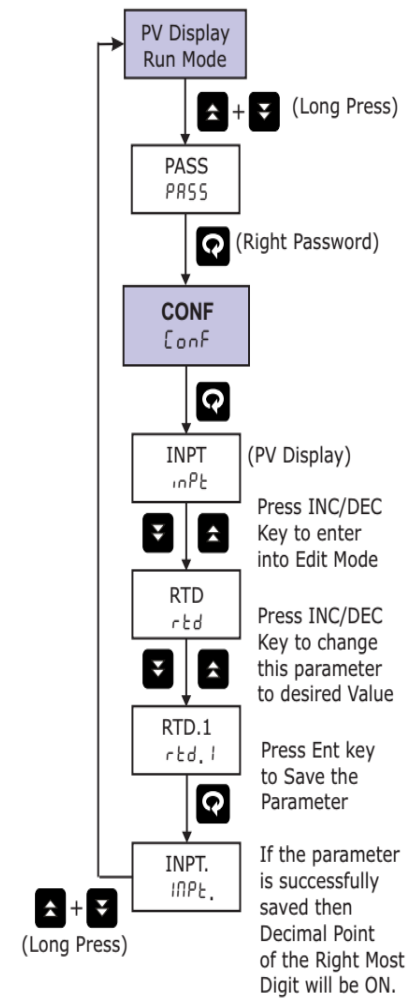
MENU LAYOUT FOR 408-M



Examples: How to change Set Point



How to change Input Type



PARAMETER SETTINGS

Parameter (PV display)		Setting Name & Description	Default Value
Symbol	Name		
INPT (inPt)	INPUT Type	Set PV Input Type tC J / tC t / tC P / tC r / tC S / rtd1 / rtd .1 / 0-5u / 1-5u / 0-10 (ReferTable1.1)	RTD.1
ZERO (ZEro)	Zero	Automatically change to the Input Lower	-199.9

For operation manual please visit www.masibus.com
Specifications are subject to change without notice due to Continuous improvements.
Masibus Automation And Instrumentation Pvt. Ltd.
B-30, GIDC Electronics Estate, Sector-25, Gandhinagar-382044, Gujarat, India.
Tel:+91 79 23287275-79 Fax: +91 79 23287281
Web:www.masibus.comEmail:support@masibus.com