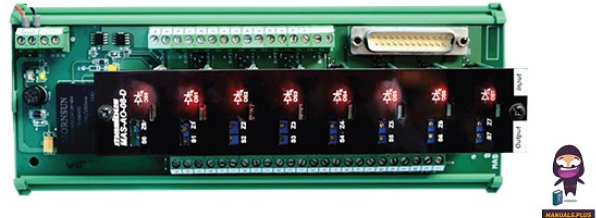


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MAS-AO-08-D Analog Output Field Interface



masibus MAS-AO-08-D Analog Output Field Interface Board User Guide

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masibus MAS-AO-08-D Analog Output Field Interface Board



Masibus Analog Output Field Interface Board has 8 channels that accepts various types of current/voltage signals and converts them to isolated current/voltage signals. It is compact universal DIN rail mounted with labeled input and output connections. Independent zero & span adjustment for each channel is possible.

APPLICATION

- Eliminate Ground Loop problems
- Protect Expensive control systems against Field Faults
- Isolate and Translate System Signals
- Field Interface for PLC/DCS/SCADA systems

SPECIFICATION

Input

- No. of Channels & Type 8 Channel DC Volt/Current (Factory Set)
- Input Range
 - For Voltage: 1-5VDC, 0-5VDC, 0-10VDC
 - For Current: 4-20ma, 0-20ma
- Input Impedance Current I/P: 100 Ohms, Voltage I/P :> 5M
I/P connection MKDS or 25pin D Type connector
- Output
 - Output Type
 - Voltage/ Current
- Output Range
 - For Voltage: 1-5VDC, 0-5VDC, 0-10VDC
 - For Current: 4-20mA, 0-20ma
- Output Load resistance
 - 0/1 to 5V@ 1KΩ min,
 - 0 to 10V@ 3KΩ min
 - 0/4mA to 20mA@750Ω max
- Fault LED Indication
- Red LED for over/under range (1-5V/4-20mA only)
- Response Time ≤20milisecond
- Accuracy 0.1% of output span
- Drift 0.1% per Year
- Calibration Zero & Span Individual per channel by multi-turn trim pots O/P connection MKDS connector

Power supply

- Power Supply 24VDC $\pm 10\%$
- Power Consumption < 12VA
- Fuse Rating 2Amp (Fast Blown)
- LED Indication Green LED – Healthy Status, Red LED –Fault Status
- Isolation 1.5KV AC Input to Power, Output to Output and Input to Output , Output to Power

Environmental

- Operating temperature Operating at 0 to 50C
- Temp. Co-efficient ≤ 100 PPM
- Relative humidity 30 to 95% RH non- condense
- Environmental Protection Conformal Coating on PCB

Physical

- Mounting Type DIN Rail (35 mm width)
- Dimensions 225(L) x 90(W) x 90(D)
- Weight Approx 400 gm

Terminal Detail

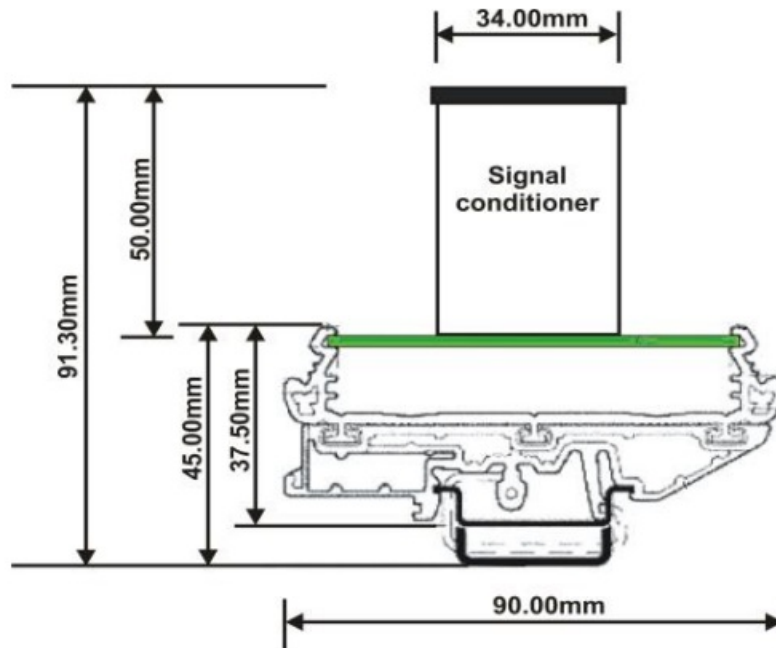
- Terminal Block UL, CSA standard
- Terminal Cable Size up to 2.5mm² conductor



- 8 channel configurations
- Wide range of DC inputs and outputs
- Independent zero & span for each channel
- Easy to calibrate
- Accepts non-std. signal input option
- DIN rail mounted
- Compact Size

Dimension

225(L) x 90(W) x 90(D)



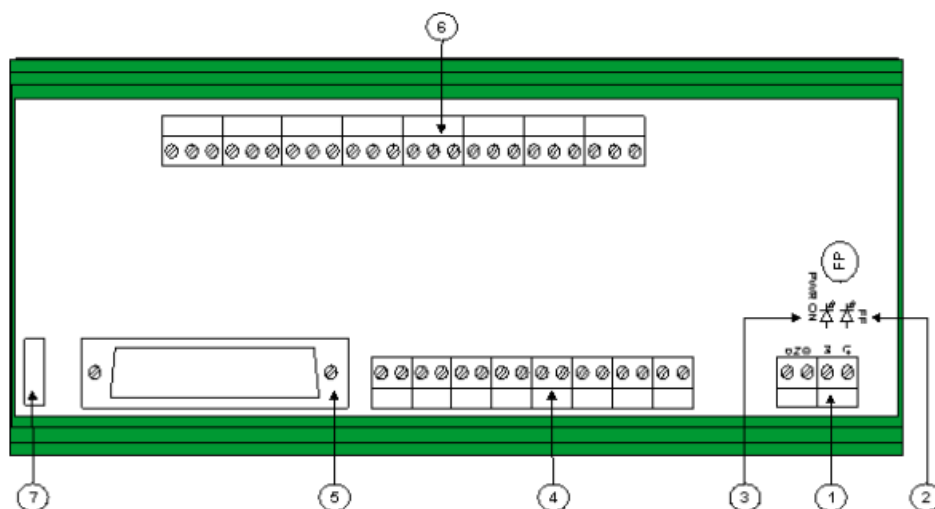
- **All Dimension in mm.**

SAFETY AND WARNING

As MAS-AO-08-D with front panel potentiometer calibration, must not be exposed to heavy shocks or vibration which may cause SCM to get out of calibration. To avoid Electrostatic Discharge (ESD) to the SCM, which may cause permanent damage, always ground yourself by touching some ground equipment. Before installation or beginning of any troubleshooting procedures the power to all equipment must be switched off and isolated. Units suspected of being faulty must be disconnected and removed first and brought to a properly equipped workshop for testing and repair. Component replacement and internal adjustments must be made by a company person only. Wiring must be carried out by personnel, who have basic electrical knowledge and practical experience. 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. Beware not to over-tighten the terminal screws.

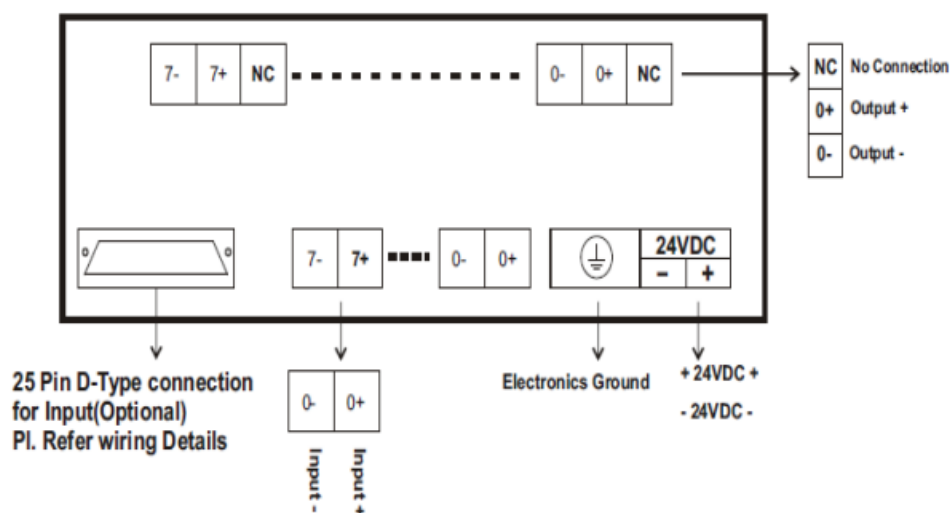
CONNECTION

Control Elements



Item nos.	Details
1	Main Power supply with electronic grounding
2	Fuse Fail LED indication
3	Power ON LED indication
4	MKDS Interface connector to DCS
5	25 Pin D type Male interface connector to DCS
6	Field output terminals
7	Product serial no.

Connection details

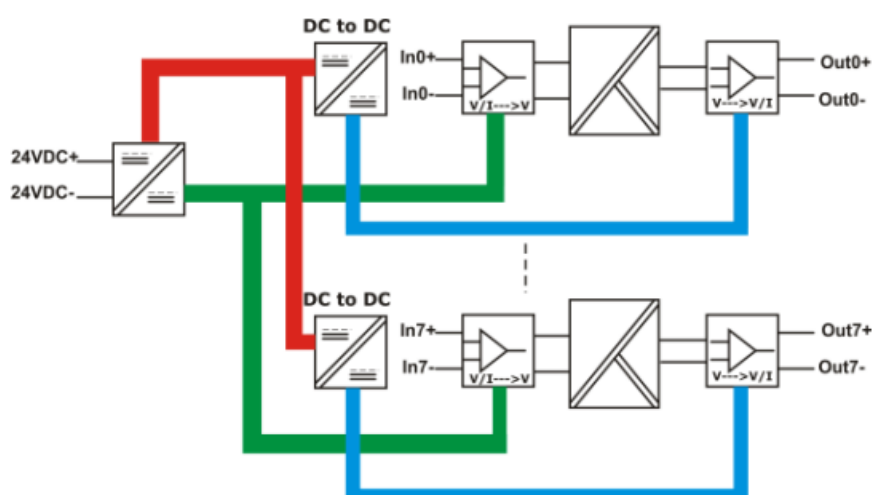


Connect rated power at terminal where 24vdc+ & 24VDC- is described in the wiring diagram. Field Input/output Terminals: Connect input between terminal where Input+ & Input- for particular channel for Input Or 25 pin D type PCB mounted male connector & take output from where Output+ & Output- described in connection details.

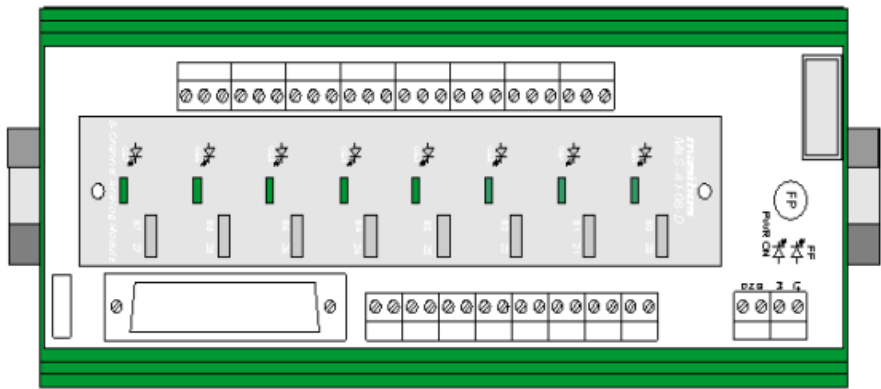
Input Connection Details for 25 Pin D Type

Pin No.	Description
1	Input0+
2	Input0-
3	Input1+
4	Input1-
5	Input2+
6	Input2-
7	Input3+
8	Input3-
9	Input4+
10	Input4-
11	Input5+
12	Input5-
13	Input6+
14	Input6-
15	Input7+
16	Input7-

BLOCK DIAGRAM



INSTALLATION



Mounting:

Place the module with the DIN rail guide way on the bottom edge of the DIN rail and then snap it downwards. The housing is mounted on the DIN rail by swiveling it into place. The Horizontal mounting arrangement Shown here, allows good vertical air circulation .It is also recommended to keep the adequate gap between two SCM.

Removal:

Release the snap-on catch using a screwdriver and then detach the module from the bottom edge of the DIN Rail.

ORDERING CODE

ORDERING CODE						
Model	Input Type & Range		Output Type & Range		Input Connection	
MAS-AO- 08-D	x		x		x	
	C	4-20mA	C	4-20mA	0	PCB Terminal Block
	D	0-20mA	D	0-20mA	1	D Type connector
	E	1-5VDC	E	1-5VDC		
	F	0-5VDC	F	0-5VDC		
	G	0-10VDC	G	0-10VDC		
	S	Special	S	Special		

CABLE ORDERING CODE		
Model	Input Type & Range	
m-PC-D25F-LG	XX	
	C	2.5 Meter
	D	3.0 Meter
	E	3.5 Meter
	F	5.0 Meter
	G	7.0 Meter
	S	Special

TROUBLE SHOOTING

Unit Not Turning ON?

If RED LED on the module is ON, then the problem can be bad connection or due to incorrect rating of power fuse blows. If GREEN LED on the module is ON, it indicates the module is in healthy condition.

Unstable/Vague Reading

Check for loose connections.

First verify that all conventional instrumentation norms have been followed for wiring. Make noise away from the module. Check for ripple on power supplies of Input & Output section. Output not matching with the expected value Kindly make sure that the output is really incorrect with respect to input signal before attempting any re-calibration.

Fluctuation in Reading

The reason can be reverse input connections.

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FAQ

- **Q: How many channels does the MAS-AO-08-D have?**
 - A: The MAS-AO-08-D has 8 channels.
- **Q: What is the operating temperature range of the product?**

- A: The product operates at temperatures ranging from 0 to 50°C.
- **Q: How can I calibrate the output for each channel?**
 - A: Calibration for zero & span for each channel can be adjusted individually using multi-turn trim pots.

Documents / Resources

	<p>masibus MAS-AO-08-D Analog Output Field Interface Board [pdf] User Guide MAS-AO-08-D Analog Output Field Interface Board, MAS-AO-08-D, Analog Output Field Interfac e Board, Output Field Interface Board, Field Interface Board, Interface Board</p>
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References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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