

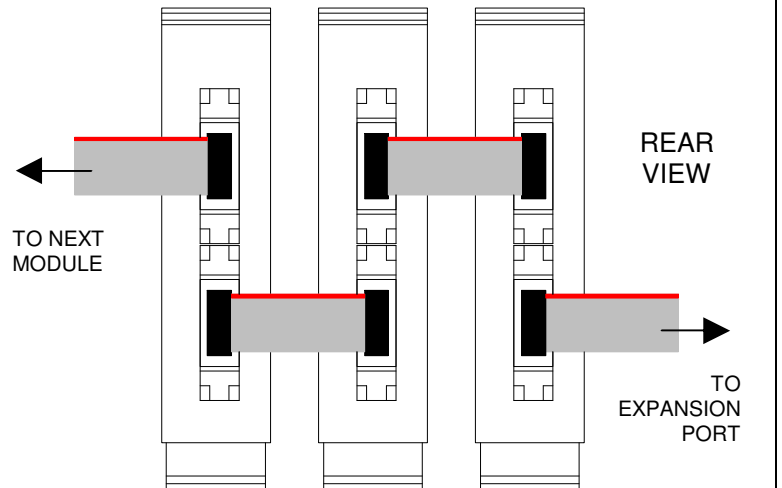
The DRM Analogue Input Module V2 is connects to the MSRx Charge Controller Expansion Port and provides 1 x Voltage Input, 1 x Temperature Input and 1 x Pyranometer Input.

Fitting and Connection of Modules

The modules clip onto standard 35mm symmetrical and 32mm asymmetrical din-rail. Each unit is supplied with 10-way IDC ribbon cable assemblies for connection to the controller Expansion Port and to an adjacent Din-rail unit.

Currently it is only possible to use one Auxiliary Analogue Input Module on a system and its address must be set to '1'.

Note: all ribbon-cable connections should be made before the controller is powered up. Cables can be plugged into either upper or lower connectors.



Connection of Inputs:

To prevent damage to the module, it is essential that the inputs are connected with the correct polarity.

The Voltage Input will accept an input between 0V and 64V DC and should be within the system voltage of the charge controller the module is connected to. Connect the positive and negative inputs to their respective terminals.

The Temperature Sensor Input connects to a standard MSRx Temperature Sensor. Connect the positive, negative and screen cores to their respective terminals.

The Pyranometer Input will accept a nominal 100mV signal representing 1000 W/m² and has been designed for use with the Micha Pyranometer (Part Number 102443). Connect the positive and negative inputs to their respective terminals.



Setup and Calibration

Navigate to the MSRx Controller Settings Menu E > 'Set Exp Module: Analog Inputs'

Sub Menu L	Screen	Analog Input Module Settings Description
Analogue I/p Mod:1 Select: Disable	0	Analog Input Module 1: Select: Enable to enable the Module
Analogue I/p Mod:1 V Input: Disable	1	Analog Input Module 1: Voltage Input: Enable / Disable
Analogue I/p Mod:1 T Input: Disable	2	Analog Input Module 1: Temperature Input: Enable / Disable
Analogue I/p Mod:1 S Input: Disable	3	Analog Input Module 1: Solar Pyranometer Input: Enable / Disable
Analogue I/p Mod:1 V In: Aux Volts	4	Analog Input Module 1: Voltage Input Select: Aux Volts / Battery Voltage 2 and functions
Analogue I/p Mod:1 T In: Aux Temp	5	Analog Input Module 1: Temperature Input Select: Aux Temp / Battery Temp 2 and functions

Note: Only 1 x Analogue Input Module can be connected to an MSRx Controller. Address = 1

Note: The Module Address applies only to modules of this type. For example, it is permissible to have a 4-20mA Module at Address 1 and an Auxiliary Analogue Input Module at Address 1.

Calibration

Auxiliary Voltage Input: No calibration is available as it is internally trimmed to give 1% accuracy.

Auxiliary Temperature Input: Connect the MSRx Temperature Sensor and allow the sensor head to stabilise at a known temperature for 10 minutes. With the temperature displayed on the MSRx Controller, adjust the CAL1 trimmer until the correct reading is shown.

Solar Reference Cell Input: With known Solar Irradiation applied to the input, adjust the CAL2 trimmer until the correct reading is shown on the display.

Specifications:

Voltage Measurement:	Input Impedance: approx.. 300K Accuracy: ±1%
Temperature Sensor:	Input Current: 1µA/K° Working Range: -30 to +60 C° (243 to 333 K°)
Solar Irradiation:	90-100mV Input Signal / 1000W/m2
Module Power Consumption:	140mW
Dimensions:	82mm x 91mm x 102mm
Weight (approx.):	0.1kg
Enclosure material:	Polyamide UL94-V0
Manufacturer:	The Micha Design Company Limited
Country of Origin / HS Code:	United Kingdom / Commodity Code: 90328900

Note: A maximum of 1W may be drawn from the controller expansion port. Where the total consumption of all modules exceeds this value, a DRM Power Supply Module must be used.