

Product Overview

The AX-DIM6-MI multiplexes 6 VFC or 24Vac/dc signals into a single analogue output. 0-10Vdc, 2-10Vdc or 4-20mA, and 0-20mA output variants are available making the unit compatible with a large range of BMS equipment. The input registers as active when the contact is closed. Additionally, jumpers are fitted to allow each input to be manually overridden for commissioning and testing purposes. The output sequence can also be reversed as required by some types of controller and control strategies.

Features

- 6 x VFC or 24Vac/dc inputs
- Voltage and current output variants
- Operates from 24Vac/dc power supply
- Input simulation
- Reverse Action
- DIN rail mounting
- LED input status indication

Product Specifications

Inputs:		6 x Volt free contacts or 24Vac/dc input signals
Output:	Voltage	0-10Vdc at maximum load 10mA. (2-10Vdc link selectable)
	Current	4 to 20mA (link selectable 0-20mA), max resistance of load 500Ω
LED Indication:		ON when input is ON
Power Supply:		24Vac/dc (±15%)
Power Consumption:	24Vdc	40mA maximum
	24Vac	60mA maximum
Terminals:		Rising clamp for 0.5-2.5mm ² cable
Ambient Temperature:		0-50°C
Dimensions:		68(w) x 82(h) x 44(d)mm (maximum)
Weight:		120gms
Country of Origin:		United Kingdom

Order Codes

- AX-DIM6-MI-V 6 Digital Input Multiplexer - Voltage Output
- AX-DIM6-MI-I 6 Digital Input Multiplexer - Current Output

AX-DIM6-MI

Six Channel Digital Input Multiplexer - Multiple Input



Installation

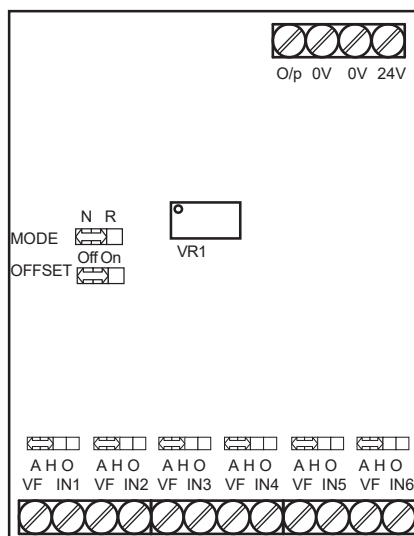
The AX-DIM6-MI should be installed by a suitably qualified technician in conjunction with any guidelines for the equipment which it is to be connected to. Field wiring should be installed to satisfy the requirements set out by the manufacturer of the equipment that the module is being connected to using screened cabled where necessary. Please note that these AX-DIM6-MI modules are not suitable for use with mains voltage.

The AX-DIM6-MI would typically be located within the controller section of a BMS control panel. The module can be snapped on to standard "top hat" profile DIN rail by levering the clip downwards to allow the unit to locate without the need for excessive force.

Connection

The diagram below shows the terminal designations for the AX-DIM6-MI.

The digital input terminals are for use with volt free contacts or 24V signals or a combination of either signals.



Jumpers

Mode: Normal or reverse action:

N = Normal

R = Reverse

Offset: Voltage versions

Off = 0-10V

On = 2-10V

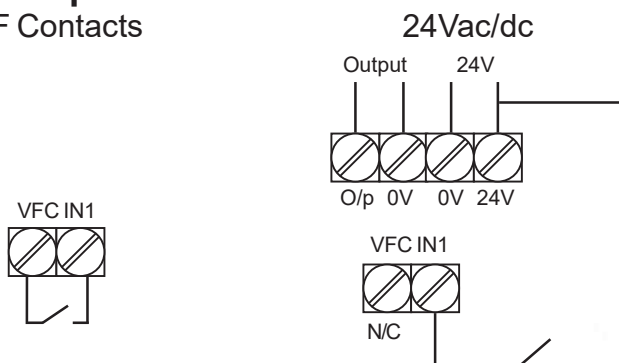
Current versions

Off = 0-20mA

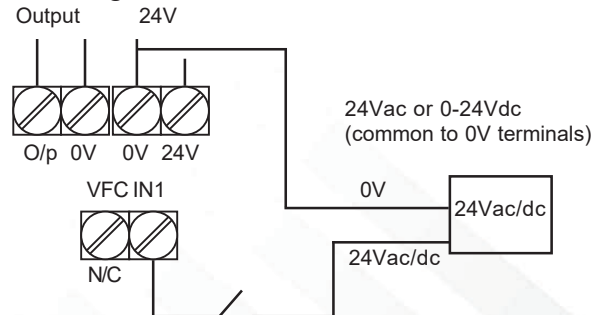
On = 4-20mA

Example Connections:

VF Contacts



Voltage Source



Commissioning and Testing

The module has six independent inputs giving a total number of 64 different output values. The output value is calculated based on binary encoding method as shown in the table below. Each input status has an output value associated with it. The module output value is the sum of all these output values.

Outputs	IN 1	IN 2	IN 3	IN 4	IN 5	IN 6
0-10Vdc	0.15625	0.3125	0.625	1.25	2.5	5
2-10Vdc	0.125	0.25	0.5	1	2	4

For 2-10Vdc outputs, it is necessary to add 2V to the total value.

0-20mA	0.3125	0.625	1.25	2.5	5	10
4-20mA	0.25	0.5	1	20	4	8

For 4-20mA outputs, it is necessary to add 4mA to the total value.

Outputs	Steps	Minimum	Maximum
0-10Vdc:	0.15625Vdc	0Vdc	9.84Vdc
2-10Vdc:	0.125Vdc	2Vdc	9.87Vdc
0-20mA:	0.3125mA	0mA	19.6875mA
4-20mA:	0.25mA	4mA	19.75mA

Examples:

0-10Vdc:	Inputs 1, 2 and 6 are ON	=>	$0.15625 + 0.3125 + 5$	5.47Vdc
2-10Vdc:	Inputs 1, 2 and 6 are ON	=>	$2V + 0.125 + 0.25 + 4.0$	6.27Vdc
0-20mA:	Inputs 1, 2 and 6 are ON	=>	$0.3125 + 0.625 + 10$	10.94mA
4-20mA:	Inputs 1, 2 and 6 are ON	=>	$4mA + 0.25 + 0.5 + 8$	12.75mA

Factory settings:

The module is factory tested and set to normal mode.
No offset for V and offset for I (0-10Vdc & 4-20mA)

Trend Scaling

Scaling Type	5 - characterise
Input 1	0
Output 1	2
Input 2	9.84
Output 2	254
Input Type	Voltage
Upper Limit	User defined
Lower Limit	User defined
Points used	2

Datasheet Contents

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