MMP 6

Features

- **6 x Volt Free Contact Inputs**

- **Voltage and Current Outputs Variants**

- **Input Simulation**

- **Reverse action**

- **LED Input status Indication**

- **DIN Rail (TS35) Mounting**

- **High Quality Rising Clamp Terminals**

- **Expands controller input capacity**

- **Operates from 24Vac/dc power supply**

Technical Data

Inputs	6 x Volt Free Contacts or 24Vac/dc input signals
Output	
Voltage	0-10 Vdc át maximum load 10mA (2-10Vdc link selectable)
Current	4 to 20ma (link selectable 0-10mA), max resistance of load 500ohm
LED Indication:	ON when Input is ON
Power Supply:	24Vac or dc (+/-15%) 40mA max@24Vdc
Terminals:	Rising Clamp for 0.5-2.5mm^2 Cable
Ambient Temp Range:	0-50°C
Dimensions:	75(w) x 68h) x 45mm

Product Overview

The MMP 6 multiplexes 6 VFC or 24ac/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 mannually overriden for commissioning and testing purposes.

The output sequence can also be reversed as required by some types of controller and control strategies.

Ordering

MMP 6V   6 Digital Mulitplexer, Voltage output

MMP 6C   6 Digital Mulitplexer, Current output

Installation

The MMP should be installed by a suitable qualified technician in conjuction 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 MMP 6 modules are not suitable for use with mains voltage.

Connection

The diagram below shows the terminal designations for the MMP 6.

The digital terminals are for use with volt free contacts or 24´v signals or combination of either signals.
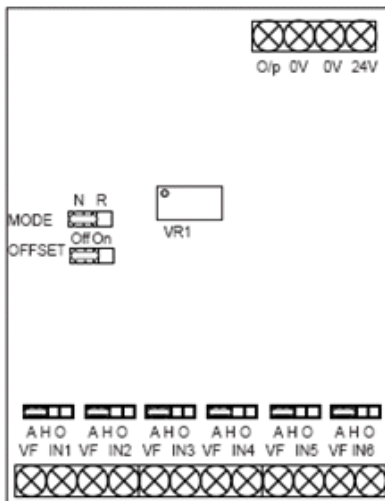
Jumpers

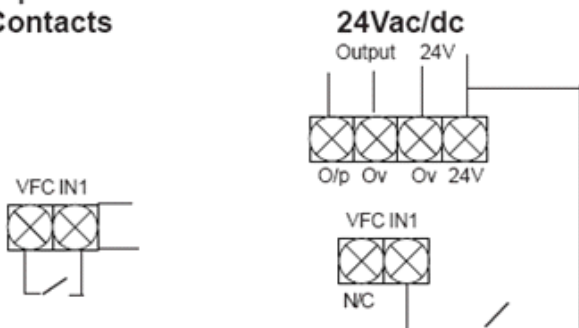Mode: Normal or Reverse Action :

N = Normal

R = Reverse

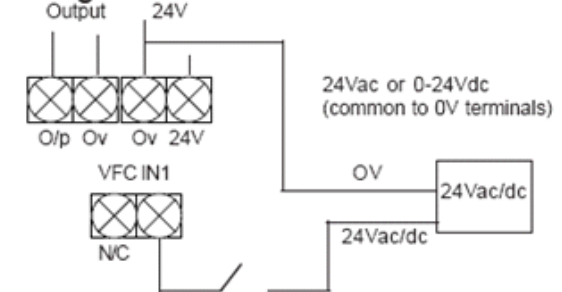Offset: Voltage versions

Off = 0-10V

On = 2-10V

Current versions

Off = 0-20mA

On = 4-20mA

Example Connections:
VF Contacts

Commissioning and Testing

The module has six independant inputs giving a total number of 64 different outputs 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	In1	In2	In3	In4	In5	In6
0-10Vdc	0.15625	0.3125	0.625	1.25	2.5	5.0
2-10Vdc	0.125	0.25	0.5	1.0	2.0	4.0

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

Outputs	In1	In2	In3	In4	In5	In6
0-20mA	0.3125	0.625	1.25	2.5	5.0	10.0
4-20mA	0.25	0.5	1.0	2.0	4.0	8.0

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

Outputs	Steps	Minimum	Maximum
0-10Vdc:	0.15625 Vdc	0 Vdc	9.84 Vdc
2-10Vdc:	0.125 Vdc	2 Vdc	9.87 Vdc
0-20mA:	0.3125 mA	0 mA	19.87 mA
4-20mA:	0.25 mA	4 mA	19.75 mA

Examples:

0-10Vdc:	Inputs 1, 2 and 6 are ON.	⇒	$0.15625 + 0.3125 + 5$	$= 5.47$ Vdc
2-10Vdc:	Inputs 1, 2 and 6 are ON.	⇒	$2V + 0.125 + 0.25 + 4.0$	$= 6.37$ Vdc
0-20mA:	Inputs 1, 2 and 6 are ON	⇒	$0.3125 + 0.625 + 10$	$= 10.94$ mA
4-20mA:	Inputs 1, 2 and 6 are ON	⇒	$4mA + 0.25 + 0.5 + 8$	$= 12.75$ mA

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