



Features

- 4 x Volt Free Digital Inputs
- 0-10 Vdc Output
- Input Status Simulation
- Reverse Action
- DIN Rail (TS35) Mounting
- High Quality Rising Clamp Terminals
- LED Indication
- Expands controller input capacity
- Very Compact
- 24Vac/dc

Technical Data

Inputs:	4 x Volt Free Contacts
Output Signal:	0-10 Vdc (See Table Overleaf)
LED Indication:	ON when Input is ON
Power Supply:	24 Vac or Vdc (+/-15%) (40 mA typical @ 24 Vdc)
Terminals:	Rising Clamp for 0.5-2.5mm ² Cable
Ambient Temperature:	0-50°C
Dimensions:	47(w) x 92.5(h) x 47mm (approx.)

General

The MMP multiplexes 4 volt free digital signals into a single analogue 0-10 Vdc output.

Each combination of inputs corresponds to a voltage output which can be decoded e.g. by a BMS Controller.

Jumper links are fitted for input simulation as an aid for commissioning.

A Reverse Action Link is also fitted.

The MMP 4 is powered from 24 Vac or Vdc and is designed for mounting on TS35 section DIN Rail.

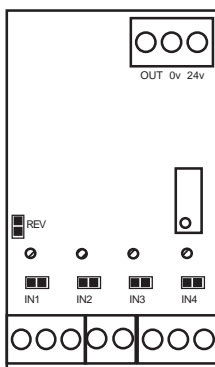
Ordering Code

MMP 4 Digital Input Multiplexer 24Vac/dc

Installation

The MMP 4 is supplied with the output factory set as shown in Table 1 below, with all four inputs ON, the output voltage is 9 V.

However, it is possible to adjust the output of the MMP to suit most types of BMS Controller using the multi-turn potentiometer on the pcb.



To re-adjust the MMP 4, place all the Input Jumper Links on to their headers to simulate an ON, and connect a voltmeter to the output terminals.

Apply power to the MMP 4 and adjust the potentiometer to suit.

Input Simulation: Jumpers IN1 to IN4,
Jumper ON simulates Input ON

Reverse Action : JP1 ON = Normal
JP1 OFF = Reverse Action

Table 1

Factory set multiplexing voltages:	
Input A	4.8 Vdc
Input B	2.4 Vdc
Input C	1.2 Vdc
Input D	0.6 Vdc

Table 2

Input ON	Output Voltage Vdc
D	0,6
C	1,2
C+D	1,8
B	2,4
B+D	3,0
B+C	3,6
B+C+D	4,2
A	4,8
A+D	5,4
A+C	6,0
A+C+D	6,6
A+B	7,2
A+B+D	7,8
A+B+C	8,4
A+B+C+D	9,0

Installation and Connection Details

All connections to BEMS controllers, data recorders etc. should be made using screened cable.

Normally, the screen should be earthed at one end only (usually the controller end) to avoid earth hum loops which can create noise.

Low voltage signal and supply cables should be routed separately from high voltage or mains cabling.

Separate conduit or cable trays should be used. Where possible, the controller's earth should be connected to a FUNCTIONAL EARTH, rather than the mains safety earth.

This will provide better immunity to high frequency noise.

Most modern buildings have a separate earth for this purpose.