

CABLING

Cables are to be selected in accordance with the requirements of the current issue of BS5839. Two pairs of connection terminals (L+ and L-) are provided on the terminal block. These terminals are used for connecting the module onto the addressable circuit. A maximum of one 1.5mm² or one 2.5mm² cable may be connected at any one terminal.

ORDERING INFORMATION

MIO800 Small Addressable Multi-I/O Module: F16N82026

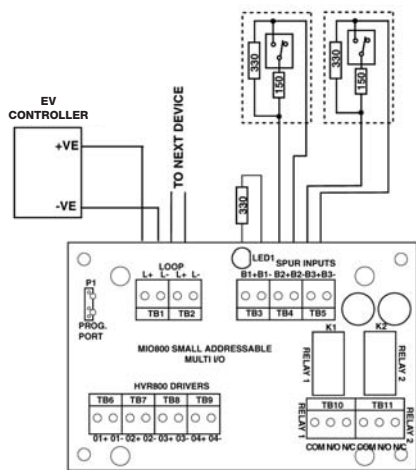


Fig. 5 Spur Circuits (Class B) Normally Open Contacts Short Circuit = Fault

- Note:**
- 1) All spur inputs must be terminated with A 330 OHM EOL resistor.
 - 2) MX 5000N configuration selection - style C (normally open).
 - 3) One contact for each spur circuit.

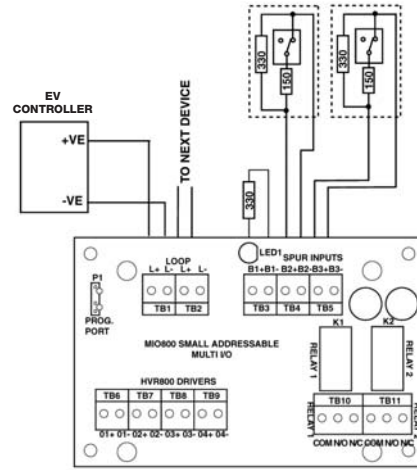


Fig. 6 Spur Circuits (Class B) Normally Closed Contacts Short Circuit = Fault

- Note:**
- 1) All spur inputs must be terminated with A 330 OHM EOL resistor.
 - 2) MX 5000N configuration selection - style C (normally closed).
 - 3) One contact for each spur circuit.

ELECTROMAGNETIC COMPATIBILITY

The EV-MIO complies with the following:
Product family standard EN50130-4 in respect of Conducted Disturbances, Radiated Immunity, Electrostatic Discharge, Fast Transients and Slow High Energy EN 61000-6-3 for emissions

TECHNICAL SPECIFICATION

Type Identification Value:	53
System Compatibility:	Use only with Evolution Fire Alarm Controllers which support these devices
Environment:	Indoor Application only
Operating Temperature:	-25° to +70°C
Storage Temperature:	-40° to +80°C
Operating Humidity:	Up to 95% non-condensing
Dimensions (HWD):	72 x 110 x 18mm
Mounting Requirements:	Ancillary Housing or Din Rail

Battery Requirements:	From addressable loop:
Standby current:	0.7mA
Alarm current:	6.25mA
Relay Contact Rating:	DC - 2A @ 24V dc
Note:	The unit must not be used to switch mains voltages.

Wire Size:	Min 1.5mm ² Max 2.5mm ²
Maximum Wiring Resistance Monitored Circuit:	40ohms.

Addressable Device Conditions:	
- Normal	- Device Type Invalid
- Active	- Device No Response
- Short Circuit wiring fault	- Output Stuck

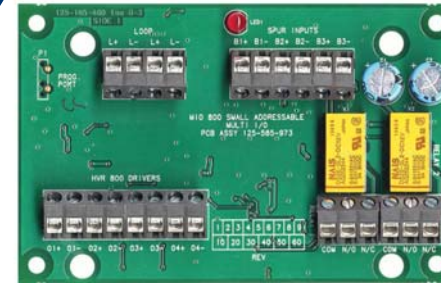


Fig. 1 EV-MIO Small Addressable Multi-I/O Module

INTRODUCTION

The EV-MIO Multi-Input/Output Module has three class B inputs and two outputs from latching relays. The class B inputs can monitor fire contacts such as extinguishing system control, ventilation control, fire door control etc. The two relays outputs are dry form C that provide volt-free relay changeover contacts. There are also four control outputs (O1+/O1- to O4+/O4-) to drive external EV-240V MRA relays. Two of the outputs control both the latching relays and the EV-240V MRA modules.

Each of the three EV-MIO class B SPUR inputs can be configured to either:

- STYLE B - Monitor multiple normally open contacts with a short on the zone giving an alarm.
- STYLE C - Monitor a single normally open or normally closed contact with a short or open on the zone, giving a fault.

FEATURES

The EV-MIO monitoring and control features include the following configurable items:

- Addressable functionality.
- Monitoring three Class B circuits either normally open or normally closed contacts.
- The status of the identified monitored contact signals to the Fire Controller.
- The status of the wiring to the relay contacts.
- The LED lights when a contact, on any of three monitored zones, has switched to the active (off normal) state.
- The LED when normally off, will pulse when the EV-MIO is polled by the controller.
- For the two on-board relays, the control panel sends a command to operate the relay, then reports an activated or deactivated state back to the fire alarm control panel through the use of a set of contacts dedicated to monitor the state of each relay.

WIRING & INSTALLATION NOTES

- 1) There are no user-required settings (switches, headers) on the EV-MIO.
- 2) All conductors to be free of earths.
- 3) All wiring must conform to current edition of IEE Wiring Regulations and BS5839 Part 1.
- 4) See Figs 5 to 8 for EV-MIO simplified wiring diagrams.
- 5) For 24V dc powered applications, only use a regulated supply suitable for fire protective signalling service.
- 6) For powered circuit operation, route the positive conductor through the EV-MIO to the external device, while connecting the common (neutral) conductor to the external circuit.
- 7) For dry contact switching, connect the external circuit to the COM and N/O or N/C terminals for normally open or normally closed operation as required.
- 8) Verify the correct polarity of wiring before connecting the EV-240V MRA to the addressable loop circuit.
- 9) For connection to an EV-240V MRA High Voltage Relay module, refer to Installation Instructions EV-240V MRA issue 1 or later.

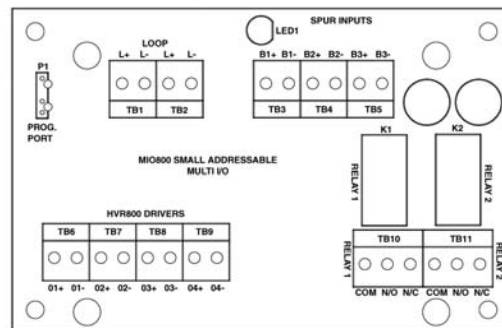


Fig. 2 EV-MIO PCB Layout

MOUNTING

EV-MIO is mounted in either a IP65 housing or on DIN Rail.

ADDRESS SETTINGS

The EV-MIO has a default factory set address of 255, this must be set to the loop address of the device using the 801 EV-AD2 Address Programming Tool. The EV-MIO may be programmed with the address prior to being installed by using the internal programming port (see Fig. 2).

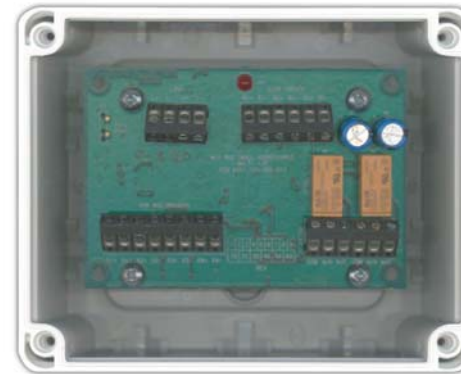


Fig. 3 EV-MIO Mounted in Housing



Fig. 4 EV-MIO Mounted to Din Rail

Note: Once the address has been programmed, take note of the device location and address number, to include on site drawings.

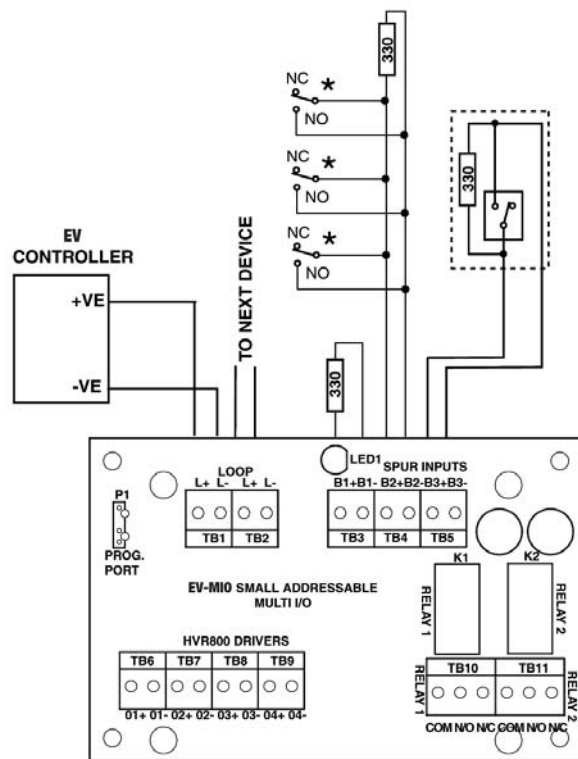


Fig. 7 Spur Circuit (Class B) Normally Open Contacts
Short Circuit = Alarm

- Note:
- 1) All spur inputs must be terminated with A 330 OHM EOL resistor.
 - 2) MX 5000N configuration selection - style B (normally closed).
 - 3) One contact for each spur circuit.

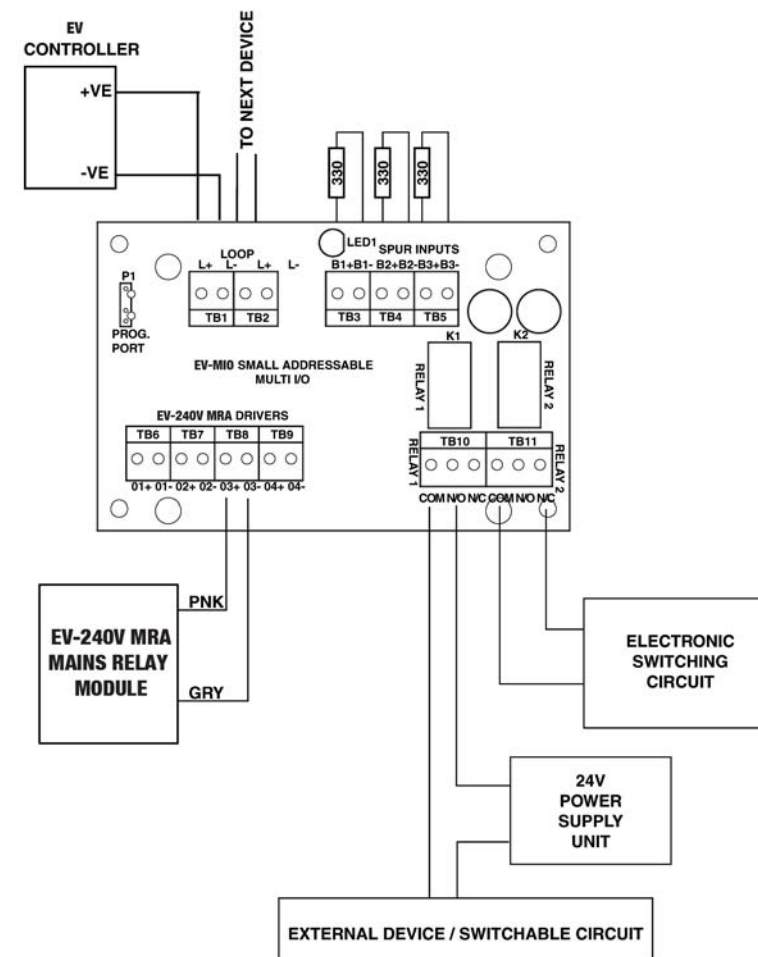


Fig. 8 Relay and EV-240V MRA Field Wiring