CIM800 Contact Input Module – Installation Instructions

Technical specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type Identification Value:</td>
<td>145</td>
</tr>
<tr>
<td>System Compatibility:</td>
<td>Use only with MX Fire Alarm Controllers</td>
</tr>
<tr>
<td>Environment:</td>
<td>Indoor Application only</td>
</tr>
<tr>
<td>Operating Temperature:</td>
<td>-25 °C to +70 °C</td>
</tr>
<tr>
<td>Storage Temperature:</td>
<td>-40 °C to +80 °C</td>
</tr>
<tr>
<td>Operating Humidity:</td>
<td>Up to 95 % non-condensing</td>
</tr>
<tr>
<td>Dimensions (HWD):</td>
<td>87 x 148 x 14 mm</td>
</tr>
<tr>
<td>Weight:</td>
<td>100 g</td>
</tr>
<tr>
<td>Mounting Requirements:</td>
<td>One MK backbox surface mount or an ANC-8 ancillary housing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Requirements:</td>
<td></td>
</tr>
<tr>
<td>Standby current:</td>
<td>0.505mA</td>
</tr>
<tr>
<td>Alarm current:</td>
<td>4.5mA</td>
</tr>
<tr>
<td>Wire Size:</td>
<td>Min 1.5 mm²</td>
</tr>
<tr>
<td></td>
<td>Max 2.5 mm²</td>
</tr>
<tr>
<td>Maximum Wiring Resistance Monitored Circuit:</td>
<td>10 ohm</td>
</tr>
<tr>
<td>Addressable Device Conditions:</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Short Circuit wiring fault</td>
</tr>
<tr>
<td></td>
<td>Open Circuit wiring fault</td>
</tr>
<tr>
<td></td>
<td>Device Type Invalid</td>
</tr>
<tr>
<td></td>
<td>Device No Response</td>
</tr>
</tbody>
</table>

Table 1: Technical Specifications

Electromagnetic Compatibility

The CIM800 complies with the following:
- Product family standard EN 50130-4 in respect of Conducted Disturbances, Radiated Immunity, Electrostatic Discharge, Fast Transients and Slow High Energy
- EN 61000-6-3 for emissions

Introduction

The CIM800 Contact Input Module is designed to monitor fire contacts such as extinguishing system control, ventilation control, fire door control etc. The CIM800 can be configured as:
- Two spur circuits (Class B) monitoring multiple normally open contacts, with short circuit giving a fault output.
Two spur circuits (Class B) monitoring single normally closed contacts, with short circuit giving a fault output.

Single loop circuit (Class A) monitoring a normally open contact, with short circuit giving a fault output.

Single loop circuit (Class A) monitoring a normally closed contact, with short circuit giving a fault output.

Two spur circuits (Class B) monitoring multiple normally open contacts, with short circuit giving an alarm.

Single loop circuit (Class A) monitoring multiple normally open contacts, with short circuit giving an alarm.

Features
The CIM800 monitoring features include the following configurable items:

- Identifies all monitored contacts and signals to the Fire Controller, the status of monitored contacts and wiring to the contacts.
- Can monitor a single normally closed contact.
- Can monitor two Class B spur circuits, or a single Class A loop circuit.
- When two Class B spur circuits are connected, each must be of the same style. A monitored contact going to the active state, on either spur circuit, will cause the CIM800 to report the Active State back to the MX controller.
- An LED reports the CIM800 status to the user.
- The LED lights when the contact monitored by the CIM800 has switched to the active (off normal) state.

The LED when normally off, will pulse when the CIM800 is polled by the controller.

Wiring notes

NOTICE
- There are no user-circuit required settings (such as switches or headers) on the CIM800.
- All wiring must conform to the current edition of IEE Wiring Regulations and BS5839 part 1.
- All conductors to be free of earths.
- Fit the PCB to the M520 cover/ANC-8 ancillary housing.
- Connect wiring to the monitored contact. For CIM800 typical wiring configurations (see Figures 6 to 11).
- Verify the correct polarity of wiring before connecting the CIM800 to the addressable loop

Mounting
Installation of modules into an ANC-8 ancillary housing
The housing can accommodate up to eight ancillary PCBs. A stacking kit is available if a second layer of PCBs is required.

How to install MX800 modules into an ANC-8 ancillary housing
1. Assemble the required ancillary PCBs onto the chassis plate as required, fixing as shown in Fig. 3.
2. Assemble the chassis plate into the housing and secure using fixing screw, see Fig. 2.
3 Connect the chassis plate earth lead to the housing, see Fig. 2.

**CAUTION**
Ensure only nylon stand-offs and washers are used.

**Fig. 2: ANC-8 - Chassis Plate**
1 – Chassis plate fixing screw
2 – Chassis plate
3 – Cover earth
4 – Chassis plate earth
5 – Transit screw
6 – Typical positions of 800 modules (4 per row)

**Fig. 3: ANC-8 - PCB Fixing Detail**
1 – Housing
2 – Plate
3 – Nylon spacer
4 – Ancillary PCB.
5 – Plain washer
6 – Nylon nut

**Installation to M520 double gang cover**

**How to install MX800 modules to an M520 double gang cover**
1 Assemble the CIM800 to the M520 Double Gang cover, using the four screws and washers provided,
2 Fit cover onto MK backbox.
3 If an IP22 rating is required additional sealing must be applied. Apply Loctite S1595 silicone sealant around the LED, as shown in Fig. 5. Note how the sealant fills the small gap between the LED and its hole in the cover.

**Fig. 4: CIM800 Fitted to Cover**
Avoid smearing sealant over the LED surface. Using a fine nozzle is recommended.

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**Address settings**

The CIM800 has a default factory set address of 255, this must be set to the loop address of the device using the 801AP MX Service Tool. The CIM800 may be programmed with the address prior to being installed by using the internal programming port (see Fig. 4) or after being installed by using the programming port on the front cover (see Fig. 6).

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**Cabling**

Cables are to be selected in accordance with Publication 17A-02-D and 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.

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**Associated equipment**

The module fits onto a standard dual-gang MK box, or an ANC8 ancillary housing.

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**NOTICE**

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

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**NOTICE**

- If only one circuit is used the user circuit must be terminated with 200/100 ohm resistors in parallel or a single 68 ohm EOL resistor.
- MX CONSYS configuration selection – style C (normally closed)
- Mode 3
Fig. 7: Spur Circuits (Class B) Normally Closed Contacts
Short Circuit A+ to A- or B+ to B = Fault
1 – MX Controller
2 – To next device
3 – Programming port

NOTICE
- If only one circuit is used the user circuit must be terminated with 200 ohm EOL resistor.
- MX CONSYS configuration selection – style C (normally open)
- Mode 2
**Fig. 8: Spur Circuits (Class B) Normally Open Contacts**

Short Circuit A+ to A- or B+ to B- = Fault
1 – MX Controller
2 – To next device
3 – Programming port

**NOTICE**
- MX CONSYS configuration selection – style E (normally closed)
- Mode 6

**Fig. 9: Loop Circuit (Class A) Normally Closed Contact**

Short Circuit A+ to A- or B+ to B- = Fault
1 – MX Controller
2 – To next device
3 – Programming port

**NOTICE**
- MX CONSYS configuration selection – style E (normally open)
- Mode 5
Fig. 10: Loop Circuit (Class A) Normally Open Contact
Short Circuit A+ to A- or B+ to B- = Fault

NOTICE
- MX CONSYS configuration selection
  – style B (normally open)
- Mode 1
- If only one circuit is used, the other circuit must be terminated with a 200 ohm EOL resistor

Fig. 11: Spur Circuit (Class B) Normally Open Contacts
Short Circuit between A+ and A- or B+ and B- = Alarm
1 – MX Controller
2 – To next device
3 – Programming port
NOTICE
- MX CONSYS configuration selection – style D (normally open)
- Mode 4

Ordering information

<table>
<thead>
<tr>
<th>Name</th>
<th>Stock code number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIM800 Contact Input Module</td>
<td>555.800.002</td>
</tr>
<tr>
<td>CIM800 Contact Input Module: c/w cover</td>
<td>555.800.032</td>
</tr>
<tr>
<td>M520 Double-Gang Cover</td>
<td>517.035.007</td>
</tr>
<tr>
<td>ANC8 Ancillary Housing assy.</td>
<td>557.180.096.T/A/Y</td>
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</table>

Table 2: Ordering information

Fig. 12: Loop Circuit (Class A) Normally Open Contacts
Short Circuit between A+ and A- or B+ and B- = Alarm
1 – MX Controller
2 – To next device
3 – Programming port