



MX945 MX Digital Loop Mini-IAM (Individual Addressable Module) Installation Instructions

MX945

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Safety Note

- ❗ **Note:** Read the safety information before you install the equipment. This equipment must be installed by a skilled person only. A skilled person is an installer with appropriate technical training. The installer must be aware of potential hazards during installation and measures available to minimize risks to the installer and other people.

Introduction

The MX945 MX Digital Loop Mini-IAM (Individual Addressable Module) communicates with the HSM3105 MX Digital Loop Card. It is used to monitor intrusion detection devices such as door/window contacts, motion detectors, etc. It provides one supervised and power-limited, Class B detection circuit for monitoring single or multiple normally open contacts.

Features

The MX945 identifies and communicates the status of the monitored contacts and wiring to the alarm system. The MX945 contains an output for an external LED (not supplied). If a remote LED is used, it must be located in the same electrical enclosure and be rated for 10mA. As a status indicator, the LED lights up when the monitored contact (normally off) switches to an active state.

LED on polling configuration option: An external LED connected to the MX945 can also be configured for blinking whenever the MX Expander module scans the device. Check panel configuration option for the same.

Mounting Instructions

Table 1: MX945 overall dimensions

| | | | |
|--------------|-------------|-------------|-------------|
| Height: 13mm | Width: 48mm | Depth: 57mm | Weight: 22g |
|--------------|-------------|-------------|-------------|

The MX945 may be mounted by itself in any listed electrical enclosure with sufficient depth to accommodate the MX945. A mounting tab is provided to secure the Mini IAM to its enclosure.

Environmental Characteristics

- Operating temperature: 32°F to 120°F (0°C to 49°C)
- Humidity: up to 93% relative humidity at 90°F (32°C)

Electrical Characteristics

- Input voltage (MX Digital Loop): 40 VDC maximum
- Standby current: 0.46 mA
- Alarm without remote LED: 0.67 mA (maximum spur circuit current at 2.7 VDC)
- Alarm with remote LED: 4.5 mA

Programming the address

The MX945's default factory set address is 255. The address must be set to the device's loop address by connecting the MX945 to the HSM3105 MX Expander module automatically.

Note: Once the address has been programmed, take note of the device location and address number in order to include it.

Cabling and Wiring

Two pairs of connection terminals (L+ and L-) are provided on the terminal block. These terminals are used for connecting the module to the HSM3105 MX Loop Card. Refer to the HSM3105 MX Loop Card manual for loop circuit ratings. A terminal (SH) is provided for the shield if shielded wiring is used. Only one cable (1.5mm² or 2.5mm²) can be connected at any one terminal.

For the wiring:

1. Contact wiring - maximum 10 ohms line resistance. Use a 10K resistance for ground fault testing.
2. If configuring the MX945 in non-interrupt mode, connect the wiring for the monitored contact as shown in Figure 2. Make sure all conductors are free of contacts to earth.
3. If configuring the MX945 in the interrupt mode to monitor a normally open contact, connect the wiring for the monitored contact as shown in Figure 3. In this mode, the MX945 does not monitor the wiring for the contact.
4. Verify the correct polarity of wiring before connecting the MX945 to the addressable loop circuit.
5. If used, the LED must be rated for 10 mA and located in the same enclosure as the Mini IAM.
6. All contact wiring must be located within the same electrical enclosure as the Mini IAM.
7. SLC wiring (MX Digital Loop) is supervised and power limited.
8. All contact wiring is supervised and power limited.

Figure 1: MX945 Wiring Diagram - Normally open

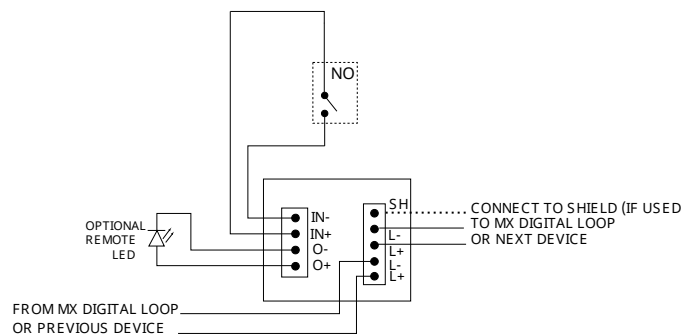


Diagram illustrating the wiring connections for the MX-DIGITAL-LOOP module:

- IN- / IN+:** Connected to the **OPTIONAL REMOTE LED**.
- O- / O+:** Connected to the **FROM MX DIGITAL LOOP OR PREVIOUS DEVICE**.
- SH:** Connected to the **CONNECT TO SHIELD (IF USED TO MX DIGITAL LOOP OR NEXT DEVICE)**.

Diagram illustrating the wiring connections for the MX module:

- Optional Remote LED:** Connected to the **IN-** and **IN+** terminals.
- 200 OHM END OF LINE RESISTOR:** Connected across the **O-** and **O+** terminals.
- Digital Loop Connections:**
 - IN-** and **IN+** terminals are connected to the **L-** and **L+** terminals of the next device or the shield.
 - O-** and **O+** terminals are connected to the **L-** and **L+** terminals of the previous device or the shield.
- Shield Connection:** A dashed line indicates the connection to the shield (if used) to the MX digital loop or the next device.

100 OHM MONITOR RESISTOR

NO

200 OHM END OF LINE RESISTOR

OPTIONAL REMOTE LED

IN-

IN+

O-

O+

SH-

SH+

CONNECT TO SHIELD (IF USED)

TO MX DIGITAL LOOP OR NEXT DEVICE

FROM MX DIGITAL LOOP OR PREVIOUS DEVICE

Table 2: Ordering Information

FCC and ISED Canada Information

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Modification statement

Tyco Safety Products Canada Ltd. has not approved any changes or modifications to this device by the user. Any changes or modifications could void the user's authority to operate the equipment.

Interference statement

This device complies with Part 15 of the FCC rules. Operations are subject to the following two conditions: (1) This device may not cause harmful interference and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4.

CAN ICES-3 (B)/NMB-3(B)

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