

MX-975 Installation instructions

Addressable door and window contact

Overview

MX-975 is a hardwired magnetic door and window contact device that is compatible with MX control panels and is addressable in an MX-loop. The detector has the following features:

- Front cover tamper detection
- Built-in reed switch that opens a circuit when the magnet is moved from its normal position
- Alarm and tamper LED indication

Figure 1: MX-975 detector parts

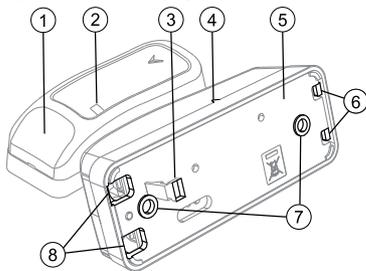


Table 1. Detector parts

Callout	Part
1	Screw cover
2	LED
3	Flexible retainer
4	Reed switch mark
5	Bracket
6	PCB support
7	Screw holes
8	Wiring inlets

Installation guidelines

- The device enters a two-minute stabilization period when it connects to the power supply for the first time. Slow LED blinks indicate this event, but only if the panel is in test mode.
- Do not install the device in the following locations:
 - Hazardous locations
 - Areas with a pollution degree higher than pollution degree 2
 - Circuits above overvoltage category II

Mounting guidelines

- Mount the detector on the part of the frame that is above the window or door and mount the magnet below it on the window or door.
- Do not mount the magnet more than 6 mm/0.25 in. from the marked side of the detector. To find the reed switch mark on the detector, see Reed switch mark in Table 1.

Mounting and wiring the detector

1. To remove the screw cover, insert a flat screwdriver in the slot and use the screwdriver as a lever. See Figure 2.
2. To remove the detector cover, remove the screw with a screwdriver and separate the cover from the bracket. See Figure 3.
3. To release the PCB, press the PCB support with your finger or a screwdriver. See Figure 4.
4. Hold the detector bracket in its final position on the door or window frame. Mark and drill two holes according to the mounting holes in the bracket. Fasten the detector bracket to the mounting surface with two countersunk screws. See Figure 5. **Note:** Ensure the reed switch mark on the detector faces the intended location of the magnet.
5. Fasten the magnet in its final position with double-sided adhesive tape or screws. See Figure 6. **Note:** Before you fix the magnet in its final position, align it according to the reed switch mark on the detector. For more information, see Range coverage directions.
6. Fit the PCB into the PCB support.
7. Wire the detector.
 - a. Remove the jacket at the end of both cables to expose the jacketed wires. To expose the wires, remove the insulation at the end of each wire. See Figure 7.
 - b. Feed both cables through the cable openings. See Figure 8.
 - c. For each cable, insert one wire in the positive terminal loop that is marked L+ and the other wire in the negative terminal loop that is marked L-. See Figure 9.
 - d. Close both terminals with a flat-head screwdriver. See Figure 10.
8. Close the detector and magnet covers. Close the detector cover with the screw and replace the screw cover. See Figure 5. Slide the magnet cover closed. See Figure 6.

Figure 2: Opening the screw cover

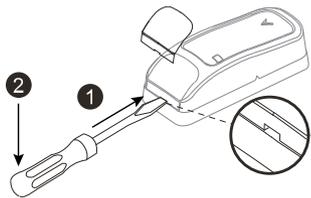


Figure 3: Opening the device cover

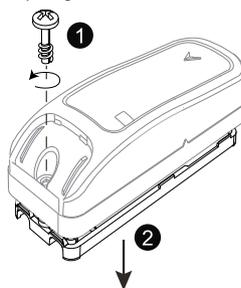


Figure 4: Removing the PCB

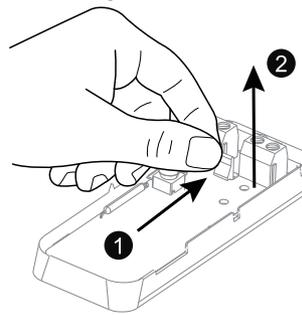


Figure 5: Marking, drilling, and screwing the detector to a frame

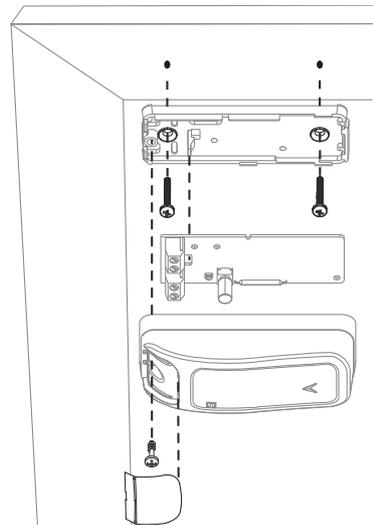


Figure 6: Marking, drilling, and screwing the magnet to a door or window

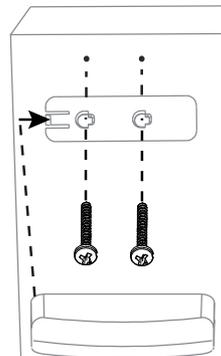


Figure 7: Removing the cable and wire jackets



Figure 8: Inserting the cables through the cable inlets

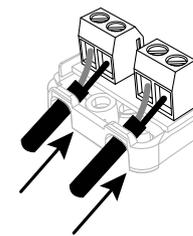


Figure 9: Positive and negative terminal loops

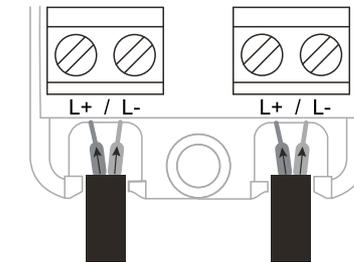


Figure 10: Screwing the terminal closed

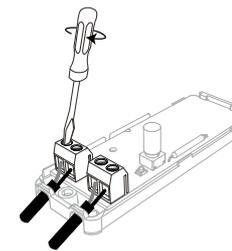
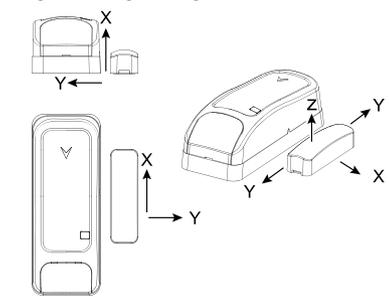


Figure 11: Range coverage directions



Enrolling the device

Refer to the panel installation manual to find the enrollment procedure.

Disabling or enabling the alarm LED indication

To enable or disable the LED indication, complete the following steps:

1. From the panel menu, select **DEVICE SETTINGS**.
2. From the **DEVICE SETTINGS** menu, select **Alarm LED**.
3. Optional: Select **LED OFF** to disable the LED.
4. Optional: Select **LED ON** to enable the LED.
5. Exit the **DEVICE SETTINGS** menu.

LED ON is the default setting.

Compatible receivers

This device functions with MX panels and with receivers that use MX technology.

LED event indications

Table 3. LED event indication

LED	Event
Fast blinks	Enrollment in progress
On for 3 s	Intruder detection

Specifications

General

- **Alarm input:** One internal input
- **Tamper alert:** Reports to the panel and the server when a tamper event occurs

Electrical

- **Communication protocol:** MX
- **Power supply:** MX bus 40 V
- **Current consumption:** 0.2 mA average quiescent, 3 mA maximum. Maximum current consumption occurs during an alarm or when the LED is on.

Environmental

- **Operating temperature:** 0°C to 49°C or 32°F to 120.2°F
- **Relative humidity (RH):** Average relative humidity of approximately 75% non-condensing.

Note:

- For 30 days per year, relative humidity may vary between 85% and 95% non-condensing.
- For UL installations, the relative humidity is 93%.

Physical

- **Dimensions (L x W x D):** 81 x 34 x 25 mm or 3.2 in. x 1.34 in. x 1 in.
- **Weight (including battery):** 53 g/1.9 oz

Range coverage directions

When mounting the magnet, ensure that the distance between the magnet and the reed switch mark on the detector does not exceed the opening and closing values in the following table. For more information on the X, Y, and Z directions, see Figure 11.

Table 2. Range coverage direction values

Non-metallic surface		Supports	Metallic surface	
Opening	Closing		Opening	Closing
> 21 mm (0.87 in.)	< 19 mm (0.75 in.)	X	> 16 mm (0.35 in.)	< 15 mm (0.20 in.)
> 27 mm (0.63 in.)	< 24 mm (0.55 in.)	Y	> 12 mm (0.47 in.)	< 10 mm (0.40 in.)
> 13 mm (1.06 in.)	< 12 mm (0.98 in.)	Z	> 12 mm (0.71 in.)	< 10 mm (0.60 in.)

Note:

- The values in Table 2 can vary by up to 10%.
- For UL installations, the gap cannot be greater than the measurements in Table 2.
- For steel installations, the gaps cannot be smaller than 3.175 mm.

Compliance with Standards



The MX-975 is listed by UL for commercial and residential burglary applications and listed by ULC for residential burglary applications in accordance with the requirements in the Standards UL 634 and ULC/ORDC634 for door and window contact.



Europe: EN 50131-2-6 Grade 2 Class II
According to EN 50131-1, this equipment can be applied in installed systems up to and including Security Grade 2, Environmental Class II.

W.E.E.E. Product Recycling Declaration
For information regarding the recycling of this product you must contact the company from which you originally purchased it. If you are discarding this product and not returning it for repair then you must ensure that it is returned as identified by your supplier. This product is not to be thrown away with everyday waste. Directive 2002/96/EC Waste Electrical and Electronic Equipment.

Limited Warranty

Digital Security Controls warrants that for a period of 12 months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, Digital Security Controls shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Digital Security Controls. Digital Security Controls neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product. In no event shall Digital Security Controls be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product.

Warning: Digital Security Controls recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Important Information: Changes or modifications not expressly approved by Digital Security Controls could void the user's authority to operate this equipment.

IMPORTANT - READ CAREFULLY: DSC Software purchased with or without Products and Components is copyrighted and is purchased under the following license terms:

• This End-User License Agreement ("EULA") is a legal agreement between You (the company, individual or entity who acquired the Software and any related Hardware) and Digital Security Controls, a division of Tyco Safety Products Canada Ltd. ("DSC"), the manufacturer of the integrated security systems and the developer of the software and any related products or components ("HARDWARE") which You acquired.

• If the DSC software product ("SOFTWARE PRODUCT" or "SOFTWARE") is intended to be accompanied by HARDWARE, and is NOT accompanied by new HARDWARE, You may not use, copy or install the SOFTWARE PRODUCT. The SOFTWARE PRODUCT includes computer software, and may include associated media, printed materials, and "online" or electronic documentation.

• Any software provided along with the SOFTWARE PRODUCT that is associated with a separate end-user license agreement is licensed to You under the terms of that license agreement. • By installing, copying, downloading, storing, accessing or otherwise using the SOFTWARE PRODUCT, You agree unconditionally to be bound by the terms of this EULA, even if this EULA is deemed to be a modification of any previous arrangement or contract. If You do not agree to the terms of this EULA, DSC is unwilling to license the SOFTWARE PRODUCT to You, and You have no right to use it.

LICENSE

The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is licensed, not sold.

1. GRANT OF LICENSE This EULA grants You the following rights:

(a) Software Installation and Use - For each license You acquire, You may have only one copy of the SOFTWARE PRODUCT installed.

(b) Storage/Network Use - The SOFTWARE PRODUCT may not be installed, accessed, displayed, run, shared or used concurrently on or from different computers, including a workstation, terminal or other digital electronic device ("Device"). In other words, if You have several workstations, You will have to acquire a license for each workstation where the SOFTWARE will be used.

(c) Backup Copy - You may make back-up copies of the SOFTWARE PRODUCT, but You may only have one copy per license installed at any given time. You may use the back-up copy solely for archival purposes. Except as expressly provided in this EULA, You may not otherwise make copies of the SOFTWARE PRODUCT, including the printed materials accompanying the SOFTWARE.

2. DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS

(a) Limitations on Reverse Engineering, Decompilation and Disassembly - You may not reverse engineer, decompile, or disassemble the SOFTWARE PRODUCT, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation. You may not make any changes or modifications to the Software, without the written permission of an officer of DSC. You may not remove any proprietary notices, marks or labels from the Software Product. You shall institute reasonable measures to ensure compliance with the terms and conditions of this EULA.

(b) Separation of Components - The SOFTWARE PRODUCT is licensed as a single product. Its component parts may not be separated for use on more than one HARDWARE unit.

(c) Single INTEGRATED PRODUCT - If You acquired this SOFTWARE with HARDWARE, then the SOFTWARE PRODUCT is licensed with the HARDWARE as a single integrated product. In this case, the SOFTWARE PRODUCT may only be used with the HARDWARE as set forth in this EULA.

(d) Rental - You may not rent, lease or lend the SOFTWARE PRODUCT. You may not make it available to others or post it on a server or web site.

(e) Software Product Transfer - You may transfer all of Your rights under this EULA only as part of a permanent sale or transfer of the HARDWARE, provided You retain no copies, You transfer all of the SOFTWARE PRODUCT (including all component parts, the media and printed materials, any upgrades and this EULA), and provided the recipient agrees to the terms of this EULA. If the SOFTWARE PRODUCT is an upgrade, any transfer must also

include prior versions of the SOFTWARE PRODUCT.

(f) Termination - Without prejudice to any other rights, DSC may terminate this EULA if You fail to comply with the terms and conditions of this EULA. In such event, You must destroy all copies of the SOFTWARE PRODUCT and all of its component parts.

(g) Trademarks - This EULA does not grant You any rights in connection with any trademarks or service marks of DSC or its suppliers.

3. COPYRIGHT
All title and intellectual property rights in and to the SOFTWARE PRODUCT (including but not limited to any images, photographs, and text incorporated into the SOFTWARE PRODUCT), the accompanying printed materials, and any copies of the SOFTWARE PRODUCT, are owned by DSC or its suppliers. You may not copy the printed materials accompanying the SOFTWARE PRODUCT. All title and intellectual property rights in and to the content which may be accessed through use of the SOFTWARE PRODUCT are the property of the respective content owner and may be protected by applicable copyright or other intellectual property laws and treaties. This EULA grants You no rights to use such content. All rights not expressly granted under this EULA are reserved by DSC and its suppliers.

4. EXPORT RESTRICTIONS

You agree that You will not export or re-export the SOFTWARE PRODUCT to any country, person, or entity subject to Canadian export restrictions.

5. CHOICE OF LAW

This Software License Agreement is governed by the laws of the Province of Ontario, Canada.

6. ARBITRATION

All disputes arising in connection with this Agreement shall be determined by final and binding arbitration in accordance with the Arbitration Act, and the parties agree to be bound by the arbitrator's decision. The place of arbitration shall be Toronto, Canada, and the language of the arbitration shall be English.

7. LIMITED WARRANTY

(a) NO WARRANTY - DSC PROVIDES THE SOFTWARE "AS IS" WITHOUT WARRANTY. DSC DOES NOT WARRANT THAT THE SOFTWARE WILL MEET YOUR REQUIREMENTS OR THAT OPERATION OF THE SOFTWARE WILL BE UNINTERRUPTED OR ERROR-FREE.

(b) CHANGES IN OPERATING ENVIRONMENT - DSC shall not be responsible for problems caused by changes in the operating characteristics of the HARDWARE, or for problems in the interaction of the SOFTWARE PRODUCT with non-DSC-SOFTWARE or HARDWARE PRODUCTS.

(c) LIMITATION OF LIABILITY; WARRANTY REFLECTS ALLOCATION OF RISK - IN ANY EVENT, IF ANY STATUTE IMPLIES WARRANTIES OR CONDITIONS NOT STATED IN THIS LICENSE AGREEMENT, DSC'S ENTIRE LIABILITY UNDER ANY PROVISION OF THIS LICENSE AGREEMENT SHALL BE LIMITED TO THE GREATER OF THE AMOUNT ACTUALLY PAID BY YOU TO LICENSE THE SOFTWARE PRODUCT AND FIVE CANADIAN DOLLARS (CAD\$5.00). BECAUSE SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

(d) DISCLAIMER OF WARRANTIES - THIS WARRANTY CONTAINS THE ENTIRE WARRANTY AND SHALL BE IN LIEU OF ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED (INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF DSC. DSC MAKES NO OTHER WARRANTIES. DSC NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON PURPORTING TO ACT ON ITS BEHALF TO MODIFY OR TO CHANGE THIS WARRANTY,

NOR TO ASSUME FOR IT ANY OTHER WARRANTY OR LIABILITY CONCERNING THIS SOFTWARE PRODUCT.

(e) EXCLUSIVE REMEDY AND LIMITATION OF WARRANTY - UNDER NO CIRCUMSTANCES SHALL DSC BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR ANY OTHER LEGAL THEORY. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF THE SOFTWARE PRODUCT OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF SUBSTITUTE OR REPLACEMENT EQUIPMENT, FACILITIES OR SERVICES, DOWN TIME, PURCHASERS TIME, THE CLAIMS OF THIRD PARTIES, INCLUDING CUSTOMERS, AND INJURY TO PROPERTY.

WARNING: DSC recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this SOFTWARE PRODUCT to fail to perform as expected.

Always ensure you obtain the latest version of the User Guide. Updated versions of this User Guide are available by contacting your distributor.

© 2018 Tyco International Ltd. and its Respective Companies. All Rights Reserved. The trademarks, logos, and service marks displayed on this document are registered in the United States [or other countries]. Any misuse of the trademarks is strictly prohibited and Tyco International Ltd. will aggressively enforce its intellectual property rights to the fullest extent of the law, including pursuit of criminal prosecution wherever necessary. All trademarks not owned by Tyco International Ltd. are the property of their respective owners, and are used with permission or allowed under applicable laws. Product offerings and specifications are subject to change without notice. Actual products may vary from photos. Not all products include all features. Availability varies by region; contact your sales representative.
Toronto, Canada • www.dsc.com • Printed in Israel • Tech. Support: 1-800-387-3630 (Canada, US), 905-760-3000



D-307588



29010618R001



©2019 Johnson Controls. All rights reserved.
Tech. Support: 1-800-387-3630
www.dsc.com
D-307588 Rev. 0 06/19



