1. Notes on Connecting

2. Removing the Module

3. Using the Spare Wire Pairs (Ports A and D)

4. Using the Uplink Port

5. Notes on Using the MxSwitch

6. Deactivating the Theft Protection

**Special Product Features**

- **Simple installation** – just click onto top-hat rail.
- **Integrated extensibility for additional top-hat rail modules** (“Backbone”).
- **4 PoE+-powered network ports** (max. 25.5 W per port, max. 75 W combined network connectivity and PoE+ power supply of up to 5-port network switch for top-hat rail installation, for combination with the MxSwitch and power devices).
- **4 LEDs to indicate activity on the network port above each LED**.
- **32.797-001_EN_12/2016**

**Notes on Using the MxSwitch**

1. Notes on Connecting

- **Notes on Connecting**
- **Installing the Module**
- **Removing the Module**

**Safety Warnings**

- **The MxSwitch** is designed to function in indoor environments and must be installed in locations that are free from moisture and any conductive or abrasive dust.
- **Only use an external power supply with 48 V DC and min. 2 A.**
- **Terminals 17/18: Power supply for disabling the theft protection** (e.g., switched by BellRFID or KeypadRFID). If the wires for deactivating the theft protection of a MOBOTIX frame are installed on top-hat rails (also “cap rail” or “DIN rail”), the module body must be installed on top-hat rails in the same location or, if not possible, after the module has been connected to the frame.
- **Terminals 19/20: Power supply for door opener** (e.g., switched by BellRFID or KeypadRFID).
- **Terminals 1 to 4: Spare wire pairs 4/5 and 7/8 on network port A.**
- **Terminals 5 to 12: Reserved for future extensions (“Backbone”).**
- **Terminals 13 to 16: Spare wire pairs 7/8 and 4/5 on network port D.**
- **Terminals 17/18: Power supply for disabling the theft protection** (see also section “Deactivating the Theft Protection”).
- **Terminals 4 to 12: Reserved for future extensions (“Backbone”).**
- **Terminals 1 to 4: Spare wire pairs 4/5 and 7/8 on network port A.**
- **Terminals 5 to 8: Power supply for door opener (e.g., switched by BellRFID or KeypadRFID).**
- **Terminals 9/10 (Port B)**: Power supply for disabling the theft protection (see also section “Deactivating the Theft Protection”).
- **Terminals 11/12 (Port C)**: Power supply for disabling the theft protection (see also section “Deactivating the Theft Protection”).

**Connectors – Overview**

<table>
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<tr>
<th>Terminal #</th>
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**Notes on Using the MxSwitch**

1. **Installing the Module**

   - Place the module onto the top-hat rail at the desired location, then gently press the module onto the rail at the indicated locations until it clicks into place.

2. **Removing the Module**

   - After connecting these wires, always run a functional test to make sure that disabling the theft protection actually works (please see the pertinent product documentation on page 2).

## Cartridge – Danger of Switch-off Power to the Switch Box Before Working on the Switch Box and Make Sure Not the Power is on!

**1. Installing the Module**

   - Place the module onto the top-hat rail at the indicated locations, then gently press the module onto the rail at the indicated locations until it clicks into place.

**2. Removing the Module**

   - After removing the module, lightly press on the clips; they will jump back into their original position.

**3. Using the Spare Wire Pairs (Ports A and D)**

   - For these two ports, the wire pairs 4/5 and 7/8 have been looped through the network installation cables so they can be used for other purposes (see also section “Example Scenarios”).

   - Make sure all extra cables are on the inside of the module (not on the outside), then gently pull the cable through the housing with clips into the open locked position. Repeat the procedure on the clip on the other side and remove the module.

**4. Using the Uplink Port**

   - This port can be used to connect to another switch (and thus to the network) or to a router. If this port is not used, you can connect a network cable or LAN computer to configure the network devices powered by the MxSwitch. For this purpose, you need to provide the configuration options for operation in Ethernet networks in compliance with data protection laws. The operator is responsible for the correct configuration of the network devices powered by the MxSwitch.

**5. Notes on Using the MxSwitch**

   - Push a suitable screwdriver into the red clip on one side of the module to release the wire ends, if required.

   - After connecting these wires, always run a functional test to make sure that disabling the theft protection actually works (please see the pertinent product documentation on page 2).

**Notes on Deactivating the Theft Protection**

   - The theft protection is powered (see the following section “Deactivating the Theft Protection”).

   - Make sure the computer is connected to the network so that the MxSwitch can be used to disable the theft protection (see also section “Example Scenarios”).

   - Make sure the computer is connected to the network so that the MxSwitch can be used to disable the theft protection (see also section “Example Scenarios”).
Technical Specifications

- **Power Supply**: 48 V DC, min. 2 A
- **Controls**: Push-button switch inside puts 12 V DC
- **Wire Pair**: 4/5 connected to MxBus plug of the T25.
- ** Theft Protection**: Wire pair 7/8 connected to theft protection.

**Example Scenarios**

1. **Two Door Stations, One M15, One MxDisplay**
   - **Connections**
     - Uplink A B C D
     - Door lock contact
     - Door opener
     - Power Supply
     - Cross-sectional area
     - Dimensions

2. **Two Door Stations, One M15, One MxDisplay, Two MX-DoorMaster**
   - **Connections**
     - Uplink A B C D
     - Door lock contact
     - Door opener
     - Power Supply
     - Cross-sectional area
     - Dimensions

3. **Four Cameras**
   - **Connections**
     - Uplink A B C D
     - Door lock contact
     - Door opener
     - Power Supply
     - Cross-sectional area
     - Dimensions

**Connection Example in SmartAccessSet Without MX-DoorMaster**

- **Connections**
  - Uplink A B C D
  - Door lock contact
  - Door opener
  - Power Supply
  - Cross-sectional area
  - Dimensions

**Connection Example in SmartAccessSet With MX-DoorMaster**

- **Connections**
  - Uplink A B C D
  - Door lock contact
  - Door opener
  - Power Supply
  - Cross-sectional area
  - Dimensions

**Differences to Scenario 2:**

- Wire pair 4/5 is used instead of the MxSwitch.
- Bridge #2 at the MxSwitch connects 12 V DC to wire pair 4/5 of the MxBus plug of the T25.
- Connect the signal outputs at the BellRFID and the KeypadRFID to the door opener of the corresponding door.
- Connect the door openers of the respective doors to the corresponding MX-DoorMaster.
- The spare wire pairs of ports A and D are not used.
- The spare wire pairs of the network installation cable are not used.
- The spare wire pairs of the network cables are looped through wire pairs 4/5 of the T25, respectively.
- Connect the signal outputs at the BellRFID and the KeypadRFID to the door opener of the corresponding door.
- Connect each wire pair 4/5 of the network installation cable to the BellRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the KeypadRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the MX-DoorMaster with the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the MX-DoorMaster with the corresponding MX-DoorMaster.
- The spare wire pairs of the network cables are looped through wire pairs 4/5 of the T25, respectively.
- Connect each wire pair 4/5 of the network installation cable to the BellRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the KeypadRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the MX-DoorMaster with the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the MX-DoorMaster with the corresponding MX-DoorMaster.
- The spare wire pairs of the network cables are looped through wire pairs 4/5 of the T25, respectively.
- Connect each wire pair 4/5 of the network installation cable to the BellRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the KeypadRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the MX-DoorMaster with the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the MX-DoorMaster with the corresponding MX-DoorMaster.
- The spare wire pairs of the network cables are looped through wire pairs 4/5 of the T25, respectively.
- Connect each wire pair 4/5 of the network installation cable to the BellRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the KeypadRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the MX-DoorMaster with the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the MX-DoorMaster with the corresponding MX-DoorMaster.
- The spare wire pairs of the network cables are looped through wire pairs 4/5 of the T25, respectively.
- Connect each wire pair 4/5 of the network installation cable to the BellRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the KeypadRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the MX-DoorMaster with the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the MX-DoorMaster with the corresponding MX-DoorMaster.
- The spare wire pairs of the network cables are looped through wire pairs 4/5 of the T25, respectively.
- Connect each wire pair 4/5 of the network installation cable to the BellRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the KeypadRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the MX-DoorMaster with the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the MX-DoorMaster with the corresponding MX-DoorMaster.
- The spare wire pairs of the network cables are looped through wire pairs 4/5 of the T25, respectively.
- Connect each wire pair 4/5 of the network installation cable to the BellRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the KeypadRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the MX-DoorMaster with the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the MX-DoorMaster with the corresponding MX-DoorMaster.
- The spare wire pairs of the network cables are looped through wire pairs 4/5 of the T25, respectively.
- Connect each wire pair 4/5 of the network installation cable to the BellRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the KeypadRFID connection of the corresponding door station.
- Connect each wire pair 4/5 of the network installation cable to the MX-DoorMaster with the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the corresponding MX-DoorMaster.
- Connect the door openers of the respective doors to the MX-DoorMaster with the corresponding MX-DoorMaster.
- The spare wire pairs of the network cables are looped through wire pairs 4/5 of the T25, respectively.