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VXS-10 User Guide

1. Introduction

Thank you for choosing the VisAccess VXS-10. We are confident that this product will serve your needs for years to come.

The VisAccess VXS-10 is an electronic access control solution for a single access point, such as a main door in an apartment building or individual office doors. The controller relay activates a lock or electromagnetic strike (EMS), when a valid proximity key (tag) is presented to the reader located outside the protected area.

The use of a proximity (non-contact) key makes the installation of the VXS-10 system an attractive possibility in harsh environments and in places with poor lighting conditions. The proximity keys are totally sealed and wear resistant. The lock reads the key's ID, whenever the key is presented close to the reader.

The VXS-10 proximity controller is composed of a three-digit display, three visual indicators (LED) and four buttons. An internal proximity reader located in the upper right corner of the panel allows fast and easy programming of access keys. The buttons are used for entering the password and for programming the unit.

The VXS-10 has a memory capacity of 300 keys. Adding keys simply involves presenting new keys to the proximity reader while in the ADD mode.

The user can delete keys in the DELETE mode by presenting them to the reader or, if a key is unavailable, by typing in its number (the same one that appears when adding the key).

Additional special features are also programmable from the control panel.



2. User Programming

Note: While in any one of the programming modes, the VXS-10 will not operate the EMS.

2.1. Entering The Programming Menu

Note: Inactivity for more than 10 seconds will cause VXS-10 to exit the programming menu.

The VXS-10 recognizes one master key and one password. The master key will NOT open the lock. To use the master key for entering the programming menu, press the "MODE" button and then present the master key next to the external or internal reader for 2 seconds. The reason for the 2 seconds delay is to prevent inadvertent activation of the programming menu.

The master key will enable the user to select the programming menu and add or delete keys. For setup functions such as "password", "master key", "unlock time" or "erase all keys" an additional four-step password is needed. Each step may involve pressing any one of the four keys or a combination of two keys. Altogether, there are 10,000 passwords possible (see "2.8. Setting Password"). The master key is also used to confirm changes made to parameters.

The VXS-10 is shipped from the factory with the following default password:



2.2. Selecting The Programming Mode

The VXS-10 recognizes 6 programming modes:

- Adding User Keys
- Deleting User Keys
- Erasing All User Keys
- Setting Unlock Time
- Setting Password
- Setting Master Key

To select the programming mode, press the “MODE” button and present the master key to the reader until the green light (ADD light) starts flashing for at least 2 seconds.

Press the “MODE” button to choose between Add, Delete and Special Operations.

Adding User Keys is possible when the ADD light is ON.

Deleting User Keys is possible when the DELETE light is ON.

Set-up functions are changed when the SPECIAL light is ON.

For set-up functions, enter the user’s password and select the desired option with the “MODE” button.

Erase All User Keys - “Er” will be displayed.

Set Unlock Time - “UL” will be displayed.

Set Master Key - “S0” will be displayed.

Set Password - “PP” will be displayed.

2.3. Adding User Keys

Note: It is recommended to keep a list of key-holder names and keys serial numbers, in order to be able to delete stolen or lost keys.

- To select the ADD mode press the “MODE” button and present the master key to the reader until the ADD LED starts flashing, indicating that the VXS-10 is ready to add a key.
- Once you present a key to the internal reader, the key will be added and its number will be displayed for a few seconds.
- Write down the number and the key holder’s name for future reference.
- After a few seconds the green LED will flash indicating that the system is ready for adding the next key.
- Press the “MODE” button for the next programming mode or simply wait 5 seconds for the system to time out and revert to normal operation.

2.4. Deleting User Keys

To select the DELETE mode press the “MODE” button and present the master key to the reader until the “ADD” LED starts flashing, then press “MODE” again. The DELETE light will start flashing to indicate that the system is ready to delete a key.

Deleting keys can be accomplished in two ways:

- If you have the key to be deleted, present it to the reader. The key number will be displayed for a few seconds and then the numeric display will blank to indicate readiness for the next operation.
- To delete a missing key, press the “100”, “10” and “1” buttons until you reach the key number you wish to delete.

For example, to indicate the number 143, press the “100” button once, then press the “10” button four times then press the “1” button 3 times.

Once the number is set, present the master key or press the “MODE” button to acknowledge the operation. Hold the master key until the key number disappears from the numeric display and

the red LED is ON. The red LED will start blinking again to indicate that the system is ready for deleting the next key.

Press the “MODE” button for the next programming mode or simply wait 5 seconds for the system to time out and revert to normal operation.

2.5. Erasing ALL User Keys

- To select the ERASE ALL mode press the “MODE” button and present the master key to the reader until the ADD light starts blinking.
- Press “MODE” twice until the “SPECIAL” LED goes ON.
- Type the 4 level password and verify that the display shows “Er”.
- To make sure that this function is not easily executed, you will have to present the master key again until the yellow and green LEDs are ON. This function does NOT erase the master key.
- Press the “MODE” button for the next programming mode or simply wait 5 seconds for the system to time out and revert to normal operation.

2.6. Setting the Unlock Time

- To select the unlock time setting mode, press the “MODE” button and present the master key to the reader until the ADD LED starts flashing.
- Press “MODE” twice until the “SPECIAL” LED lights. Type the 4 level password and verify that the display shows “Er”.
- Press “MODE” a few times until the display shows “UL”.
- Press the F2 (10) and F3 (1) keys to set unlock time in seconds, between 1-99 seconds.
For example: to select 35 seconds press the “10” button three times then press the “1” button 5 times.
- The display will show the number of seconds.
- Present master key until the green and yellow LEDs light or press the “MODE” button to conclude the operation.
- Press “MODE” again for the next programming modes or simply wait 5 seconds for the system to time out and revert to normal operation.

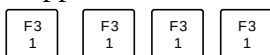
2.7. Changing The Master Key

Note: The VXS-10 can have only one master key.

- To change the master key, press the “MODE” button and present the master key to the reader until the “ADD” LED starts flashing.
- Press “MODE” twice until the “SPECIAL” LED lights. Type the 4 level password and verify that the display shows “Er”.
- Press “MODE” a few times until the display shows “S0”.
- At this stage the system will try to read a key for up to ten seconds.
- Hold the new master key until the green and yellow LED go ON.
- Press the “MODE” button for the next programming mode or simply wait 5 seconds for the system to time out and revert to normal operation.

2.8. Setting The Password

The VXS-10 is shipped from the factory with the following default password:



It is recommended to change the password during installation!

A password consists of four steps. Each step involves either pressing a single key or a combination of two keys. **Note: The MODE key by itself cannot be used as the first step of the password.**

The following table shows the possible combinations:

MODE	F2 10	F1 100	F2 10	MODE	F3 1	MODE	F1 100
F1 100	F3 1	F1 100	F3 1	F2 10	F3 1	MODE	F2 10

A sample password:



To select the CHANGE PASSWORD mode:

- Press the “MODE” button and present the master key to the reader until the “ADD” LED starts blinking
- Press the “MODE” key twice until the “SPECIAL” LED lights
- Enter the current 4-step password - the display should show “Er”.
- Press the “MODE” key a few times until the display shows “ PP”.
- Enter in the new password.
- Present the master key until the green and yellow LEDs light to confirm acceptance of the password.
- Press “MODE” for the next programming modes or simply wait 5 seconds for the system to time out and revert to normal operation.

3. Normal Operation

3.1. Valid Key Detection

If a key is presented to the external reader, the VXS-10 will search the list of valid keys in its memory. If the key is found, the VXS-10 will light the green LED and activate the output relay to open the lock for the pre-programmed unlock time.

3.2. Invalid Key Detection

If the key presented to the reader is not found in the VXS-10 memory, the red LED will light for two seconds.

3.3. Internal Request To Exit

The VXS-10 has a request-to-exit feature. To use it connect a proper Normally Open switch to the Request-to-exit terminal in the VXS-10. Each time the button is pressed, the relay output of the VXS-10 will be activated for the pre-programmed unlock time period.

This device complies with Part 15 of the FCC Rules. Operation is 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 device 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 residential installations. 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 and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one which supplies power to the receiver.

Consult the dealer or an experienced radio/TV technician.

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

VXS-10 - Installation Guide

1. Hardware Installation

1.1 System Components:

The VXS-10 kit includes:

- VXS-10 controller
- RDR-3 proximity reader with 1m cable
- These installation instructions
- User Guide
- Wall installation template

1.2 Additional tools and equipment may be needed:

- Proximity tags or cards – ordered separately
- Power supply for the controller - 12V AC/DC
- Electromagnetic strike (EMS) unit
- Request-to-exit push button - if you wish to use the request to exit option

The installation must comply with any local fire, health and safety regulations.

1.3 Controller installation

- Place the provided mounting template on wall at the desired mounting position.
- Drill holes where shown on the template.
- Remove the controller's cover by pressing the cover release button at the center bottom of the plastic case.
- Gently remove the printed circuit board with panel by slight pressure on the left side of the inner unit.
- Mount the base of the controller unit on the wall at the pre-determined position.
- Attach request-to-exit button wiring (if this option is utilized) to the controller (see Fig. 1).
- Connect all wiring to the appropriate terminals and then remount the PCB (see Fig. 1).
- Remount top cover.

1.4 EMS (Electromagnetic Strike) installation

The locking device may be connected to the VXS-10 in several ways:

- EMS – powered by the VXS-10 – connect the EMS as shown in Fig. 2.
- EMS powered by its own power supply - connect via the VXS-10 Dry contact, normally open terminals as shown in Fig. 3.
- Magnetic lock – connect via Dry contact (Normally Closed) with its own power supply, as shown in Fig. 4.

1.5 Reader Installation

- Insert a screwdriver into the recess at the bottom or top of the case, and separate the cover from the reader.
- Drill a hole on the wall for the cable.
- Place the base on the installation surface while placing cable through the hole, mark two screw holes, drill the holes, and insert the enclosed plastic anchors, if necessary.
- Fasten the base to the mounting surface, using the enclosed screws.
- Connect the cable between the reader and the controller as shown in Fig. 1
Connect each wire to the corresponding terminal according to the following list:

<u>Wire color</u>	<u>Function</u>	<u>Terminal No.</u>
White/Purple	N.C.	1
Yellow	Data	2
Orange	Red LED	3
Green	Green LED	4
Red	12V Power	5

Black Ground 6

- Replace the reader's cover, ensuring that the cover is aligned with the reader. This enables the LED to be visible.

1.6 Power source

Connect the 12V AC/DC power supply as shown in Fig. 1.

2. Programming

Note: While in any one of the programming modes, the VXS-10 will not operate the relay output.

2.1 Entering Programming Menu

The VXS-10 recognizes an installer password, which consists of six steps. Each step requires either pressing a single key or a combination of two keys.

Note: The "MODE" key by itself cannot be used as the first key of the password.

To enter the programming menu, press the "MODE" button and then key the installer password.

**The VXS-10 is factory set to the default password: "F1", "F2", "F3", "F1", "F2", "F3".
It is recommended to change the password during installation!**

Inactivity for more than 10 seconds will cause VXS-10 to exit the programming menu and revert to normal operation.

2.2 Setting The Master Key

The VXS-10 has one master key. The installer needs to assign one of the proximity keys as a master key and program it into the controller memory. To assign a master key:

- Press the "Mode" button.
- Key the installer password (6 steps). The "ADD" light will start flashing.
- Press "MODE" a few times until the display shows: "S0". The system is ready to read the key.
- Once a key is presented, it will replace the current master key. Hold the new key until the display blanks out.
- Press "F1" or wait 5 seconds for the system to revert to normal operation.

2.3 Erasing ALL User Keys

IMPORTANT: A user master key should be assigned before erasing user keys.

To select the ERASE ALL mode press the “MODE” button.

Key the installer password (6 steps). The “ADD” light will start flashing.

Press the “MODE” button a few times until the “SPECIAL” LED lights and the display shows “Er”.

Present the master key until the display blanks out.

Note: the ERASE ALL function does NOT erase the master key.

To cancel the erase function before presenting the master key press “F1” or wait 5 seconds for the system to time out and revert to normal operation.

2.4 Setting The Unlock Time

The VXS-10 has a programmable unlock period, from 1 to 99 seconds.

- Press the “MODE” button.
- Key the installer password (6 steps). The “ADD” light will start flashing.
- Press the “MODE” button a few times until the “SPECIAL” LED lights and the display shows “UL”.
- Press F2 (10) and F3 (1) to set the unlock time in seconds. For example, for 35 seconds press “10” three times and “1” five times.
- The display will show the number of seconds.
- Press “MODE” to save the unlock time and return to normal operation.
- You may press “F1” at any time to exit without saving the new unlock time.

2.5 Wiring connections

Figures 2, 3, and 4 show the wiring connections of the VXS-10 to the power supply and the locking devices (Electro Magnetic Strike or Magnetic Lock). It is recommended to connect an Earth ground wire to the EMS case or to actual earth ground if available. Current consumption of external devices connected through the dry contact delay of the VXS-10 should not exceed 1 Amp.

The Request-to-Exit inputs require a normally open momentary switch.

VXS-10 Specifications:

Power input	9V-12V AC/DC
Max current	100 mA
Operating temperature	0°C - 50°C (32°F - 122°F) indoor use
Dry contact relay	Max 1A continuous
Controller	
Dimensions	(LWH) 150 x 105 x 35 mm (5.9 x 4.1 x 1.4 in)
Display	3 x 7-segment + 3 LEDs
Buttons	4
Key memory	300
Reader	
Dimensions	(LWH) 116 x 70 x 16.8 mm (4 1/2 x 2 3/4 x 5/8 in)
Indicators	Tricolor LED (green, red, amber)
Operating temperature	-20°C - 50°C (-4°F - 122°F)
Weight	121.5 g (4.3 oz)
RF frequency	125 KHz
Distance of reader from controller	30 meters

This device 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 residential installations. 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 and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one which supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician.

WARRANTY

VisAccess Ltd. And/or its subsidiaries and its affiliates ("the Manufacturer") warrants its products hereinafter referred to as "the Product" or "Products" to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.

This warranty does not apply in the following cases: improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the Manufacturer.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.

This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer does not represent that its Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. User understands that a properly installed and maintained alarm may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function. However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, the Manufacturer's maximum liability shall not in any case exceed the purchase price of the Product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.

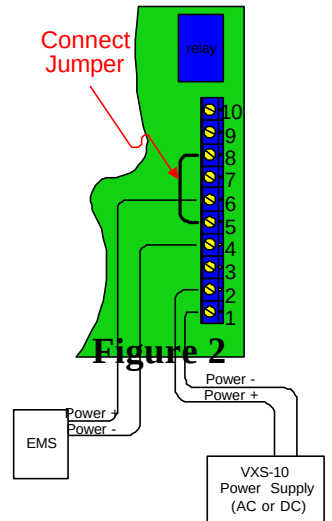
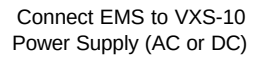
Warning: The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his/her safety and the protection of his/her property.

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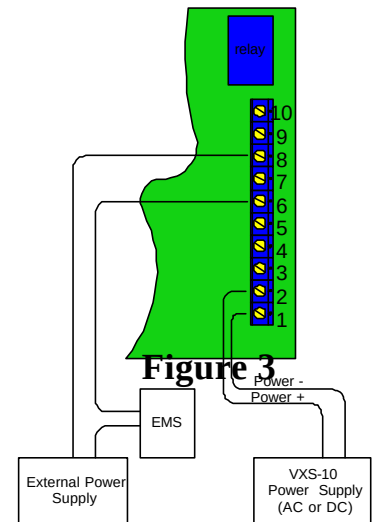


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**MADE IN
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Use Separate power supplies for VXS-10
and EMS (normally open relay)



VXS-10 Controller Mounting Template

