VXS-5

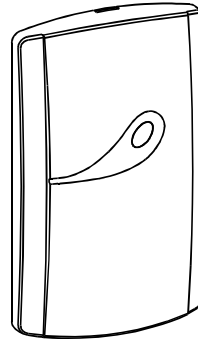**Single-Door Stand Alone Proximity Access Control System**
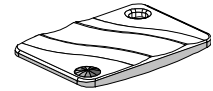
Installation Instructions

1. INTRODUCTION

Thank you for selecting the VXS-5, the most economical, proximity access control system on the market designed for small installations. It is a stand alone, self contained access control system built into a proximity reader housing. The VXS-5 meets the need of many users for an electronic door strike control system with a memory capacity of 10 keys or less. A small office, private home or apartment would be the ideal application for the VXS-5.

The VXS-5 memorizes a master key plus 10 keys and comes with five free proximity tags.

The system is powered from a 12 VDC external power supply. The EMS (Electromagnetic Door Strike) is energized with 12 VDC when a valid key is presented. System wiring requires 4 leads only - 2 for power and 2 for the EMS.

VXS-5 Reader and Controller   **Proximity Key Tag**

2. SPECIFICATIONS

VXS-5 CONTROLLER
  Frequency: 125 kHz
  Power Input: 12 - 14 VDC
  Power Output to EMS: 12 VDC
  Maximum Current: 150 mA (Idle), 650 mA (EMS open)
  Indicators: Tricolor LED - Green, Red, Amber
  Tag Reading Range: 50 - 100 mm (2-4 in.)
  Tag Codes Possibilities: 10^{12} possible combinations
  Key Memory: 10 keys

Size (H x W x D): 116 x 70 x 16.8 mm (4-1/2 x 2-3/4 x 5/8 in.)
Weight: 121.5 g (4.3 oz)
Operating Temperature: -20°C to 50°C (-4° to 122°F)
Color: Dark gray

TAG-1 PROXIMITY TAG
  Size: (H x W x D): 53 x 35 x 7 mm (2-1/8 x 1-3/8 x 9/32 in.)
  Weight: 5.5 g (0.2 oz)
  Color: Dark gray

3. 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 in the wall for the cable.
- Place the base on the installation surface while passing the cable through the hole, mark two points for drilling, drill the holes, and insert the enclosed plastic anchors, if necessary.
- Fasten the base to the mounting surface, using the enclosed screws.

- Connect each wire to the corresponding terminal according to the following list:

Wire color	Function
Black	12V Power [+]
Black/White	12V Power [-]
White	EMS [+]
White/Orange	EMS [-]

- Replace the reader's cover, ensuring that the cover is aligned correctly. This will make the LED visible.

4. PROGRAMMING

Note: The VXS-5 exits programming automatically and reverts to normal operation if no activity is detected for 10 seconds.

4.1. Initial Non-programmed State
When first connected to power, the LED blinks amber and red alternately to indicate that there is no master key.
- Present one of the keys supplied with the unit. This key will become the master key.
- The VXS-5 accepts the master key and the LED turns amber to indicate the idle state.

Note: It is recommended to keep the master key in a safe place. The master key is used for programming only and cannot be used for access control.

4.2. Add Keys
Hold the master key next to the unit for 10 seconds. The LED will start blinking green at the rate of 2 Hz (twice a second) to indicate the ADD mode.

While in ADD mode:
- Present a key to be added.
- The green LED lights up steadily for 2 seconds to indicate acceptance of the new key.
- To add more keys, wait until the unit resumes blinking green and present a new key.

- When the memory is full with 10 user keys, the VXS-5 will not accept any more keys and continue blinking green at 2 Hz even when a new key is presented.

4.3. Delete Keys

While in the ADD mode, hold the master key near the unit for 10 seconds.

- The LED starts blinking red, thus indicating the DELETE mode.
- If the key to be deleted is available, simply present it to the unit for deletion. The red LED lights up steadily for 2 seconds to indicate that the key has been deleted.

If the key is lost or stolen, all keys must be deleted and the available keys have to be added back in.

- While in the DELETE mode, present the master key to the VXS-5 for about 10 seconds.
- The red LED will light up steadily for 2 seconds to indicate that all keys have been deleted.
- Exit DELETE mode by waiting 10 seconds with no activity.
- Enter the ADD mode (see 4.2) and add all available keys.

4.4. Set Unlock Time

The default unlock duration is 5 seconds. To change it, you need to be in the DELETE mode (see 4.3).

- To exit the ADD mode wait 10 seconds with no activity.

- While in the DELETE mode present the master tag for about one second.
- The LED blinks amber at 2 Hz rate.
- Present a valid (non-master) key for the required unlock duration and remove it promptly.
- The VXS-5 will define the new unlock duration as the length of time the key was presented.

4.5. Reset Master Tag

Resetting the master is performed by connecting the EMS- to the Power- in the following order:

- While the unit is connected to power, touch the EMS- wire to the -12V Power for about 1/2 second
- Wait about 2 seconds (count 1.. 2.. 3..)
- Touch the EMS- wire to the -12V Power again, for 1 second

It may take some practice to get it right. Eventually the master is erased, and the LED blinks red / amber alternately indicating that a new master is needed (see 4.1).

> Note: When deleting the master tag, all other keys are not affected.

5. OPERATION

During normal operation, the LED lights amber to indicate the idle state. When presenting a valid key, the LED lights green and opens the lock for 5 seconds (default unlock duration).
If a key is invalid, the LED lights red for 2 seconds.

If more than 5 consecutive invalid keys are presented with less than 5 seconds between every two keys, the VXS-5 increases the time of the red LED to 5 seconds and reverts to 2 seconds when a valid key is presented or if more than 60 seconds have passed with no activity.

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

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