VAX Two-Door Controller
Quick Start Guide

Package Contents

VAX Two-Door Controller - x1

2P Connector x 4  3P Connector x 2  6P Connector x 2

Supervisor Input
Resistor(1KΩ) x 8  Cover screw x 2  Wall screw x 4

Networking Examples

1 Controller - PoE Injector - PC (Direct)

2 Controller - PoE Injector - Router - PC

3 Controllers - PoE Router - PC

UL 294/S319/Safety EN 60950-1, A2 Compliance Notices

This product complies with the following UL294 Access Control Performance Levels when installed as part of the Listed VAX system:

- Endurance Level IV (100,000c)
- Line Security Level I
- Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, Part I, local codes, and the authorities having jurisdiction. All interconnecting devices must be UL Listed, low-voltage Class 2 power limited. The minimum permissible wire size to be used shall not be less than 26 AWG (0.24 mm²).

- Products have been evaluated for "Indoor Use" only, and to be installed within the "protected" or "restricted" area. This product is not intended for outside wiring as covered by Article 800 in the National Electrical Code, NFPA 70. Products are not intended to be installed or mounted in air-handling spaces. Products are intended to be installed by manufacturer trained service installers only.

- All recommended connected peripherals such as power supplies, UPS/battery backups, PoE switches, electrified strikes, readers require to be UL Listed.

- Please refer to the VAX UL Reference document for more comprehensive information available downloadable from our website. Hard copy of the VAX UL Reference Manual document is available; please call

VICON INDUSTRIES INC. WWW.VICON-SECURITY.COM

Quick Start Guide

Vicon part number: 8009-8274-20-03  Rev. 618
Networking Examples

Controllers - PoE Switch - Router - PC

Controllers - PoE Switch (at doors) - Router - PC

Outputs & Usage Example

Specification
P1 (Relay1, Lock power)  
Lock power relay, GND, 12V DC 500mA
P8 (12V DC out)  
12V DC output, GND, 12V DC 200mA
P6 (Relay2)  
24V DC 500mA limit
P7 (Relay3)  
24V DC 500mA limit

* All the relay outputs are configurable.
For example, Relay2 can be configured to a door strike.

Inputs & Usage Example

Specification
P2 1-2 Pin (Input1)  
Input, Common (GND)
P2 2-3 Pin (Input2)  
Common (GND), Input
P3 1-2 Pin (Input3)  
Input, Common (GND)
P3 2-3 Pin (Input4)  
Common (GND), Input

* All the inputs are configurable.
For example, Input1 can be configured to a doorbell or a door contact of Door_2

Readers & Usage Example

Wiring Specification

Ground  
Black and shield wire
Power (12V DC)  
Red wire
LED  
Brown wire
Buzzer  
Blue wire
Data 1  
White wire
Data 0  
Green wire

Note: Reader Test
Get in Setup Menu Edit Mode by pressing Enter key and hold.
Select Reader Test menu.
Scan a card or press numbers and # (keypad reader only). LCD shows the data information.

Note: Input Test
Get in Setup Menu Edit Mode by pressing Enter key and hold.
Select Input Test menu.
LCD displays current input states.

Note: Output Test
Get in Setup Menu Edit Mode by pressing Enter key and hold.
Select Output Test menu.
Toggle selected relay by pressing Enter.
( Select change: Enter keys. 0 = Off, 1 = On )
### Motion Sensor

<table>
<thead>
<tr>
<th>Specification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor Type</td>
<td>PIR</td>
</tr>
<tr>
<td>Detection Range</td>
<td>5 m</td>
</tr>
<tr>
<td>Detection Angle</td>
<td>H: 94°, V: 82°</td>
</tr>
<tr>
<td>Detection Zone</td>
<td>64 zones</td>
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</tbody>
</table>

### Cable Requirements

<table>
<thead>
<tr>
<th>Name</th>
<th>Maximum Distance</th>
<th>Cable Type</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>PoE Cable**</td>
<td>100 m (328')</td>
<td>Twisted pair, 4 pairs</td>
<td>Cat5 100BASE-T or better</td>
</tr>
<tr>
<td>Reader Cable</td>
<td>152 m (500')</td>
<td>6 conductor stranded not twisted, 24 AWG or thicker, 100% overall shielded</td>
<td>Belden 9537 or equivalent*</td>
</tr>
<tr>
<td>Door Strike Cable</td>
<td>152 m (500')</td>
<td>2 conductor stranded 18 AWG</td>
<td>Belden 9740 or equivalent*</td>
</tr>
<tr>
<td>Output Cable</td>
<td>152 m (500')</td>
<td>2 conductor stranded 22 AWG</td>
<td>Belden 8740 or equivalent*</td>
</tr>
<tr>
<td>Input Cable</td>
<td>152 m (500')</td>
<td>2 conductor stranded 22 AWG, shielded</td>
<td>Belden 8723 or equivalent*</td>
</tr>
</tbody>
</table>

* Unless otherwise specified by manufacturer.
** Recommended the following T568B wiring for both ends.

### FCC Compliance Notices

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.
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 A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmless interference to radio communications. Operation of this equipment in a residential area is likely to cause harmless interference, in which case you will be required to correct the interference at your own expense.

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Two Door Typical
(with motion, two readers, two door contacts, auto door opener)

A round cable snap (ferrite) needs to be connected around the network cable.

### Outputs

- A1,A2: Wet Lock Power (12V DC 500mA)
- C: Auto Door Opener (dry)

### Inputs

- F1,F2: Door Contact (dry)
- G: Handicap Button (dry)
- H: Request to Exit (dry)
- R1,R2: Readers

*All inputs are configurable and interchangeable*