Vicon Access Control
I/O Controller

Overview

Product at a Glance

The Vicon Access Control (VAX) system consists of a dedicated Vicon Access Control Server and the edge Controller(s). The Server contains the operating system, database engine, web server, application software and configuration data. The Controller communicates back to the Server over the network and provides an interface to readers, relay outputs, door locks, etc.

Vicon offers an input/output (I/O) controller that is used to expand the number of input and output relays into the VAX system. It provides control of up to 8 inputs/outputs. The controller is housed in a metal enclosure that can accept up to 7 VAX-IO-EXP8PCB expansion boards, for a total of up to a total of 64 I/Os. Additionally, expanders are available in their own enclosure if they need to be installed elsewhere. LED indicators provide system status.

The firmware on the board supports inputs and outputs. Based on rules defined in the VAX system setup, solid-state relay outputs are used to react to schedules or pre-defined actions based on dry contacts.

▶ Input/output master controller and I/O expander board

▶ Controls up to 8 inputs/outputs

▶ Expander boards available to provide elevator access up to 64 inputs/outputs

▶ Communicates using RS-485

▶ Housed in metal enclosure

▶ Customizable holiday user groups and holiday setup

▶ Powered by 12 VDC

Specifications

Controller Hardware	
Processor:	32-bit microprocessor based
Power:	12 VDC powered with external power supply Auxiliary Output: 12 VDC, 300 mA (for expander boards) 1x battery backup terminal
Network:	Speed: 1x RJ-45 10/100 Mbps ethernet port Wire spec: 328 ft (100 m) max distance, Cat5 or better Modes: Static or DHCP MAC: Unique Encryction (panel-server): 256 bit AES option
I/O on Expander:	Inputs: 8x fully configurable digital inputs; supports supervised state with 12x 1K Ohm resistors Outputs: 8x solid state relays; up to 30V @500mA NO (additional relay options such as normally closed available upon request) Wire Spec: 500 ft (152 m) max distance; 2 conductors, stranded 22 AWG, shielded
User Interface:	LEDs: 2x power indicator; 2x Ethernet status indicator LCD Display: 1x 16 channel; 2-line LCD with backlight Push Buttons: 4x tactile switch (keyboard for data entry) Sound: 1x 90 db Piezo
Support:	Up to 64 I/Os per master controller (with I/O expander boards) 16 input time zones; 16 holiday time zone groups, 50 holidays each 64 output time zones; 8 holiday time zone groups, 50 holidays each
Protection:	Configurable photo tamper sensor
Communications:	RS-485 protocol between Master controller and expander boards
Time Keeping:	Date/Time: 1x on-board real-time clock (no battery required, maintains up to 1 month)

Mechanical and Environmental	
Dimensions:	W: 11.625 in. (295 mm); H: 17.25 in. (438 mm); D: 3.625 in. (92 m)
Weight:	4.1 lb (1.9 kg)
Construction:	Metal enclosure
Operating Temperature:	32 - 122° F (0 - 50° C)
Operating Humidity:	10% to 90% relative humidity, non-condensing
Approvals:	UL; ETL listed (conforms to UL 294); certified to CSA-22.2 no. 205; CE

Advanced Features

Input Functions:
Aux Input; Request to Exit; Door Contact; Motion Sensor; Monitored Door Contact
Configure Time Zone (schedule); Detection Time; Holiday Group: Supervised; Normally Closed, Associated Door

Input Actions:
Supports up to two actions:
Output Activate; Deactivate; Toggle, Pulse High; Pulse Low/High/Opposite
Override Unmanaged Door Unlock/Lock/Resume; Auto Resume

Output Functions:
Door Strike; Secondary Door Strike; Door Unlocked or Open; External buzzer; Global Buzzer; Aux Output

Custom Scripts/Actions:
Input, output and door events can trigger server side scripts to easily meet regulatory requirements or other special circumstances/functions such as Forced/Held Open alerts

Unmanaged Door Options (16 Doors):
Use Global Buzzer; Keep Door Unlocked When Input Active; Unlock Delay; Unlock Time; Allowed Held Open Time; REX Timeout
Disable/Enable: Forced Open; Forced Open Buzzer; Stop Forced Open on Door Close; Held Open; Held Open Buzzer;
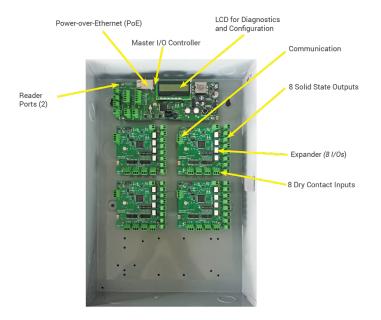Stop Held Open on Door Close; Lock After Door Open; Unlock by Motion

Ordering Information

Model Number	Description
VAX-IO-STR-2	INPUT/OUTPUT (I/O) CONTROLLER; includes 8 input/output expansion module; 12 VDC input; built-in RS-485 ports; complete in metal enclosure; accepts up to 7 expanders to control 64 I/Os
VAX-ENCL-ST	EMPTY METAL ENCLOSURE; for use with expander boards
VAX-IO-EXP8PCB	8 FLOOR/IO EXPANDER; for elevator and I/O controller; no enclosure
Options	
VEVA-MC00N0-00	Vicon Access Control Server; for customized preinstallation of selected VAX software license; desktop model
VEAA-1U00N0-00	Vicon Access Control Server; for customized preinstallation of selected VAX software license; rack-mount model
VAX-PRS-STRIP	Interconnect strip; connects the Master Control Panel to door expansion board or I/O expansion board

VAX-IO-STR-2 Controller Diagram

Unit may look slightly different but connections will be similar.

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