**PoE+**
Power Over Ethernet

# A22POE

**Web-Based PoE+ 2-Door Hybrid Controller**

*The installer's choice*
**cdvigroup.com**

# Thank you for buying our products and for the confidence you placed in CDVI.

# 1] PRODUCT PRESENTATION

The A22POE is ATRIUM's powerful Web-Based PoE+ hybrid module. The flexibility of the A22POE module allows it to be set either as a 2-door controller or expander (2 in 1). The A22POE includes an embedded web server that combines performance and simplicity enabling you to manage Users/Cards, lock or unlock doors, view system events and display controller information from any place in the world! Industry-unique and effortless card enrollment mode minimizes system start up and simplifies your life. A pre-assembled PoE+ splitter is included with every A22POE making this unit an industry leader in efficiency and simplicity.

**PoE+**
Power Over Ethernet

- **Control 2 doors / 2 readers**
- **Embedded Web Server**
- **Pre-assembled PoE+ Splitter**
- **On-board Ethernet Port with AES 256-bit encryption**
- **Auto-detect hardware modules (No DIP Switches)**
- **Quick and easy card enrollment procedure**
- **6 Multi-purpose inputs (12 using zone doubling)**
- **Totally fuseless system**
- **Up to 10,000 users**
- **Up to 10,000 cards**
- **Up to 25,000 Event Buffer**
- **Up to 100 holidays**
- **Up to 1000 Access Levels**
- **Up to 250 Schedules each supporting up to 100 time periods (dd, hh:mm) and recurrence**
- **Full calendar with leap year support (yyyy-mm-dd)**
- **Time zone definition (full D.S.T. support)**
- **10 Areas per controller**
- **Ultra fast firmware update (less than 10 seconds)**
- **FREE Management Software**
- **Wiegand & ABA Track II magnetic stripe compatible**
- **Maintenance-friendly snap on terminal connectors**
- **Comprehensive LED status indicators**

## 2] NOTES AND RECOMMENDATIONS

### FCC & IC COMPLIANCE

This device complies with Part 15 of the FCC rules Class A. 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 class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. The ATRIUM A22POE is also compliant with EN55022:1998, amendment 1:1995, Class A.

### UL COMPLIANCE

To comply with UL listings, the following requirements must be met:

- Use of UL listed readers (Wiegand: 26-bit, 30-bit and 40-bit; mag stripe: up to 32 digits)
- Use of a UL recognized tamper switch on every housing cabinet for the A22POE
- Use only UL listed cables
- Use only UL listed adaptors

Note: All circuits are power limited.

### UL 294 COMPLIANCE NOTICE

- Use only UL listed power supply
- Connect CDVI LED status indicator, part number 7020-0001-0000, to the DC Input gray terminals of the A22POE.

Note: Backup battery provides operation of up to 12 hours but has been tested for 4 hours per Section 33 of UL 294, fifth edition.

The system's location and wiring methods shall be in accordance with the National Electrical Code, ANSI/NFPA 70.

### FREE TECHNICAL SUPPORT

For technical support in Canada or the U.S., call 1-866-610-0102, Monday to Friday from 8:00 a.m. to 8:00 p.m. EST. For technical support in your area, refer to the last page of this document or visit our website: www. cdvigroup.com.

# RECOMMENDED WIRING

| Equipment | Wire Type | Size | Maximum Length |
|---|---|---|---|
| Card reader and Wiegand keypad | 4 to 8 conductors, stranded, shielded (foil), drain conductor. For example: Alpha 5196, 5198, 5386, 5388, Belden 9553 | 22AWG (0.64mm) to 18AWG (1.02mm) | 150m (500ft.) |
| Zone input | 2 conductors, copper 22AWG (0.64mm) | 22AWG (0.64mm) | 600m (2000ft.) |
| Door strike | 2 conductors, solid copper 18AWG (1.02mm) | 18AWG (1.02mm) | 150m (500ft.) |
| PoE+ (RJ-45) | CAT 5e 4 pairs UTP | | 100m (300ft) |
| Ethernet | CAT 5/5e | - | 100m (300ft) |
| RS485 bus, Star or Daisy Chain (no BIAS/ EOL required) | CAT 5/5e or 4 pairs | 24AWG (0.51mm) | 1220m (4000ft.) |
| | 4 conductors, copper | 26AWG (0.40mm) to 18AWG (1.02 mm) | |

# SPECIFICATIONS

| System Resources | |
|---|---|
| Doors | 2 (expandable to 10 doors) |
| Cards and users | Up to 10,000 cards and users |
| Schedules | Up to 250 Schedules each supporting up to 100 time periods (dd, hh:mm) |
| Buffered Events | Up to 25,000 events |
| Holidays | Up to 100 holidays (yyyy-mm-dd, hh:mm) |
| Access Levels | Up to 1000 access levels |
| Operating Temperature | -20°C to +70°C (-4°F to +158°F) |
| Humidity | 0% to 85% (non condensing) |
| System Autonomy | Full Distributed Architecture (100% Off-line Operation) |
| Firmware | Online Upgradeable |
| PCB Dimensions | 19.9cm (7.83") x 12.38 cm (4.875") |
| Cabinet Dimensions | 29 cm (11.4") high, 28 cm (11") wide, 8 cm (3.15") deep |

| Inputs | |
|---|---|
| Readers | 2 x Wiegand Readers with Multiple Protocol Support (Wiegand 26-bit, 30-bit & 44-bit), Magnetic Stripe ABA Track 2 |
| Keypads | 2 x Wiegand Keypad with Multiple Protocol Support (Wiegand 8-bit & 26-bit) |
| Multi-Purpose Inputs | 6 zone inputs (up to 12 using ZONE DOUBLER) with optional individual WIRE CUT & WIRE SHORT supervision. |
| Box Tamper | Normally Closed (N.C.) contact |

## Communication

| | |
|---|---|
| LOCAL BUS | RS485 @ 57600Baud supporting star and/or daisy chain topologies up to 4000ft (1220 meters) |
| ETHERNET | 10/100 Base-T, Auto Sensing, 100m(300ft) |

## PoE+ (50 Watts)

| | |
|---|---|
| Inout Port | RJ-45 (Data + Power) |
| Output Port | RJ-45 (Data) |
| DC Output | 24Vdc |
| Data Rate | 10/100/1000 Mbps |
| Power Loss Indicator | Yes (DC IN) |

## On-Board Protection (All fuseless, auto-resume)

| | |
|---|---|
| VLK | 12Vdc @ 750mA |
| AUX | 12Vdc @ 1A |
| Battery | Against reversal, short, current limited/monitored |

## Power output specifications

**Battery Backup**

| | |
|---|---|
| Battery Capacity | 12Vdc 7Ah rechargeable acid/lead or gel cell backup battery (UL/ULC: YUASA #NP7-12 recommended, Europe: CDVI B7AH recommended). Ensure proper polarity. |
| Charging Current | 250mA (default), 320mA, 500mA, or 1A. Refer to the ATRIUM user interface instruction manual for more information on how to modify the battery charging current. |
| Low Battery @ | 11.8Vdc |
| Low Battery Restore @ | 12.2Vdc |
| Low Battery Cut-Off @ | 10.5Vdc |

**Power Outputs (+12Vdc)**

| | |
|---|---|
| Lock Output 1 | Maximum Current 750mA each |
| Lock Output 2 | |
| Reader 1 | Maximum Current 1000mA |
| Reader 2 | |
| Zone Inputs | |
| LOCAL BUS | |

**Outputs**

| | |
|---|---|
| LK1, LK2, RLY1, RLY2 | Form C Relay, 5A @ 250Vac, 7A @ 125Vac, 7A @ 30Vdc |
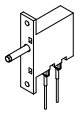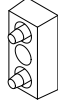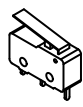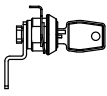
# 3] PACKAGE CONTENTS

This chapter details how to install and setup the ATRIUM A22POE .

The A22POE contains:

- One A22POE module in its cabinet with connection diagram label
- Metal Box kit (See below)
- Installation kit (See below)

| **Metal Box Kit** | Wall Switch and a white wire (115mm) | 3 wires for tamper switch (2 x 360mm and 1 x 165mm) | Bolts and Nuts | Wall Switch Spacer | Door Switch and 2 white wires (350mm) | Door Switch Support | Metal box screw for door enclosure | Metal box lock and key |
|---|---|---|---|---|---|---|---|---|
| | 1 | 3 | 2 each | 1 | 1 | 1 | 4 | 1 |

| **Installation Kit** | Red and black wires, for backup battery (400mm) | 1K Resistor | 2.2K Resistor | Diode 1N4007 for DC door strikes or maglocks | Varistor for AC door strikes or maglocks | Fastener (PCB Holder) |
|---|---|---|---|---|---|---|
| | 1 pair | 22 | 10 | 2 | 2 | 7 |

If any item is missing, please notify your distributor immediately.

# LOCATION AND MOUNTING

The cabinet is designed to be installed indoors, in a safe and secure location. Suggested locations include electrical rooms, communication equipment rooms, closets or in the ceiling. To save time, wiring and facilitate testing, install the cabinets at an equal distance between its controlled doors. Normal temperature and humidity levels should be maintained.

> Please note that other approved cabinets with approved tamper switch on the front cover and rear surface can be used.

## Cabinet Dimensions:

29 cm (11.4") high, 28 cm (11") wide, 8 cm (3.15") deep

## The Cabinet Can Accommodate:

One 12Vdc @ 4.5AH or 7AH, gel cell type batteries and wiring connections (15cm (6") high, 6cm (2.5") wide, 9 cm (3.54") deep)

| Battery Model | Voltage | Capacity | Length | Width | Height |
|---|---|---|---|---|---|
| YUASA #NP7-12 | 12 Volt | 7 Ah | 151mm (5.94") | 65mm (2.56") | 97.5mm (3.84") |
| YUASA #NP4-12 | 12 Volt | 4.5 Ah | 90mm(3.54") | 70mm (2.76") | 106mm (4.17") |

## Multiple Conduit Knock-outs:

Two 19.05mm (0.75") on each side and one 12.7mm (0.5") on top

## Minimum Clearance For Cabinet:

25cm (10") clear space around all sides

38cm (15") clear space in front of cabinet

## Minimum Clearance From Electrical Interference:

2.4m (8ft.) from high voltage equipment or wiring and from electrical equipment likely to generate interference

1.2m (4ft.) from telephone equipment or lines and 8m (25ft.) from transmitting equipment

> The system's location and wiring methods shall be in accordance with the National Electrical Code, ANSI/NFPA 70.

# 4] MOUNTING INSTRUCTIONS

The box needs to be prepared before fixing it to its location.

## INSTALLING THE TAMPER SWITCHES

Installing tamper switches allows the A22POE to detect when the cabinet door is opened and/or when the cabinet is removed from the wall. If needed install the tamper switch(es) as follows:

Metal box holes where to fix the wall tamper switch

Install the wall tamper switch using the supplied bolts and nuts as shown in the following picture.

Install the tamper switch plastic spacer on the back at bottom left side of the box as show in the following picture.

**Cabinet Side View**

Spacer

**Cabinet** Door

Nut

Spacer

Screw

Spacer

Install the door tamper switch by aligning the switch holes to the pre-installed plastic bracket pins. Press firmly to secure the tamper switch in position, then fix the bracket to is mounting flange.

Refer to page 16 for wiring diagram.

Fix the tamper switch to the bracket then mount the bracket on the mounting flange

Bracket

Door Tamper Switch

Door Tamper Switch Mounting Flange
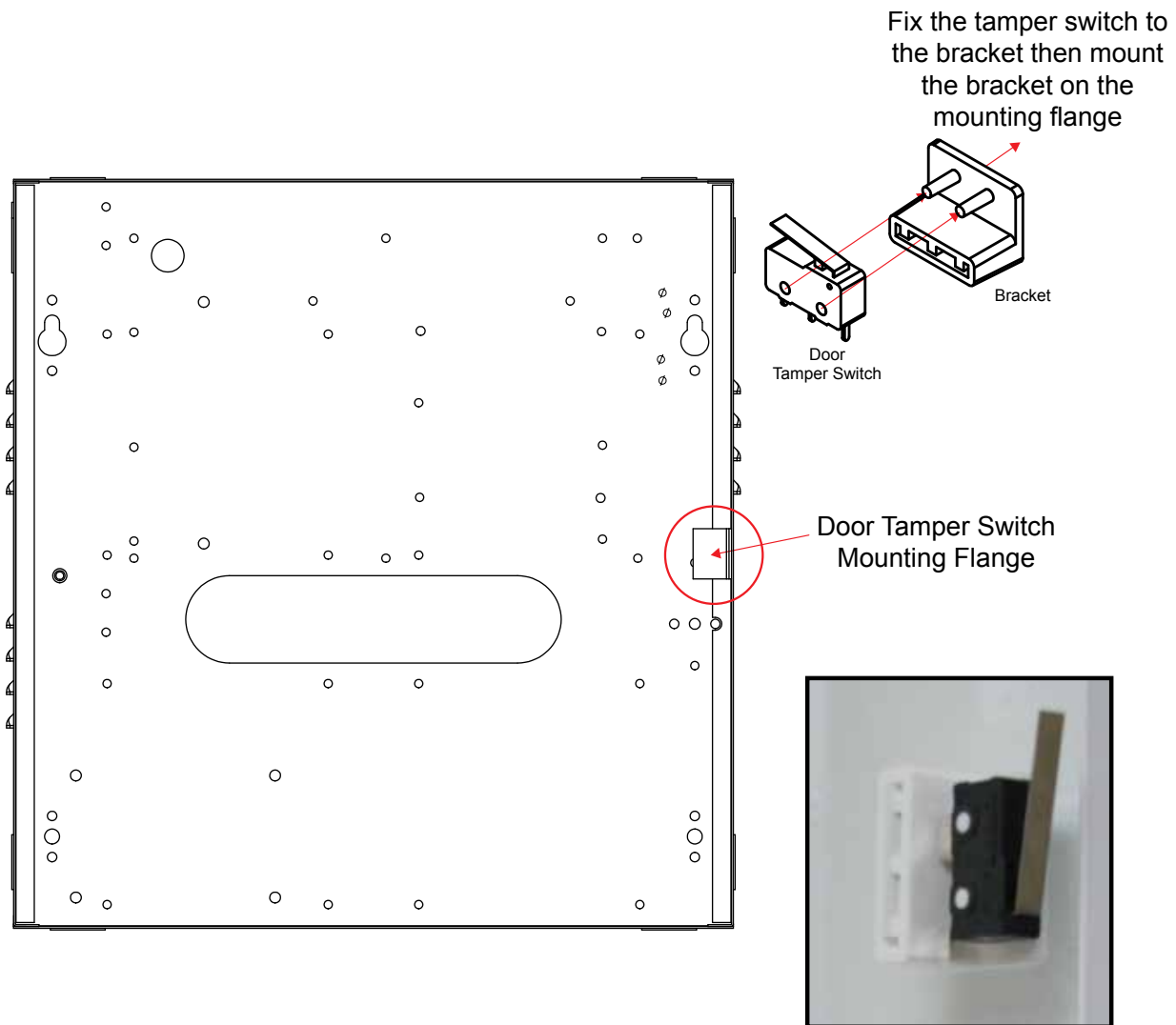
**ATRIUM A22POEPOE**
2-Door Controller

# INSTALLING THE BOX LOCK

Installing the box lock allows to secure the box from unauthorized access. Installation procedure:

1. Remove the box door knock-out.
2. Insert the lock in the hole.
3. Slide the "U" metal part into the lock groove to secure the lock in place.

Alternatively or complementary to the box lock, the box may be secured by fixing the cover to its base using screws.
However this should be done only once the installation is completed.

1. Use the 4 screws supplied to secure the box cover to its base as shown in the following picture.

# FIXING THE BOX TO ITS LOCATION

Install the box to its location using 4 screws (not supplied) as shown in the following picture.

If the wall tamper switch is used, make sure that the tamper switch arm moves freely and is completely pushed in when the enclosure is installed on the wall.

# INSTALLING THE A22POE  PC BOARD

Install the 5 fasteners (PCB holder) supplied respectively to the box holes identified in red in the following picture. Install the A22POE PCB by aligning the fasteners with the corresponding PCB holes and pressing firmly to secure the PCB in place.
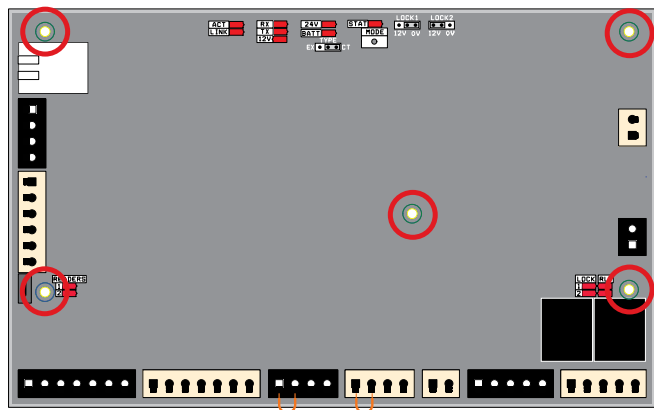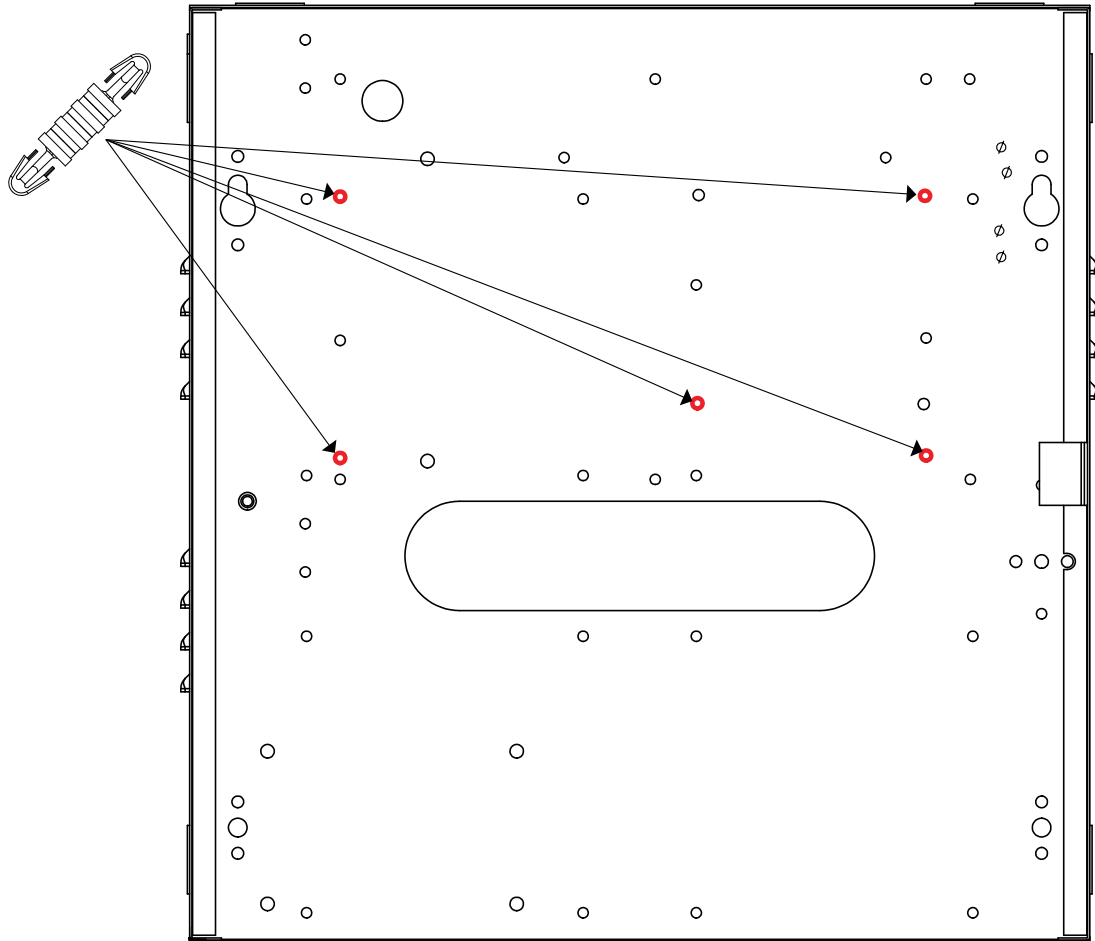
# 5] WIRING DIAGRAM

## MODULE TYPE CONFIGURATION (CONTROLLER OR EXPANDER)

The flexibility of the A22POE module allows it to be set either as a 2-door controller or 2-door expander. Simply adjust the "TYPE" jumper to the required position (see the diagram below).

By default, each A22POE is set as a 2-door controller.

- One A22POE set as a controller can manage (be connected to) up to four A22POE modules set as expanders for a total of 10 doors.

- To communicate with an A22POE set as a controller, use the RJ45 Ethernet connection.

- Communication between an A22POE controller and A22POE expansion modules is achieved using the RS485 Local Bus.

### Module Type Jumper Setting
(Controller or Expander)



Module is set as a "2-Door Controller" (Default Setting)

or

Module is set as a "2-Door Expander"

Ethernet connection when the module type is set as a "2-Door Controller"

RS485 Local Bus connection when the module type is set as a "2-Door Expander"
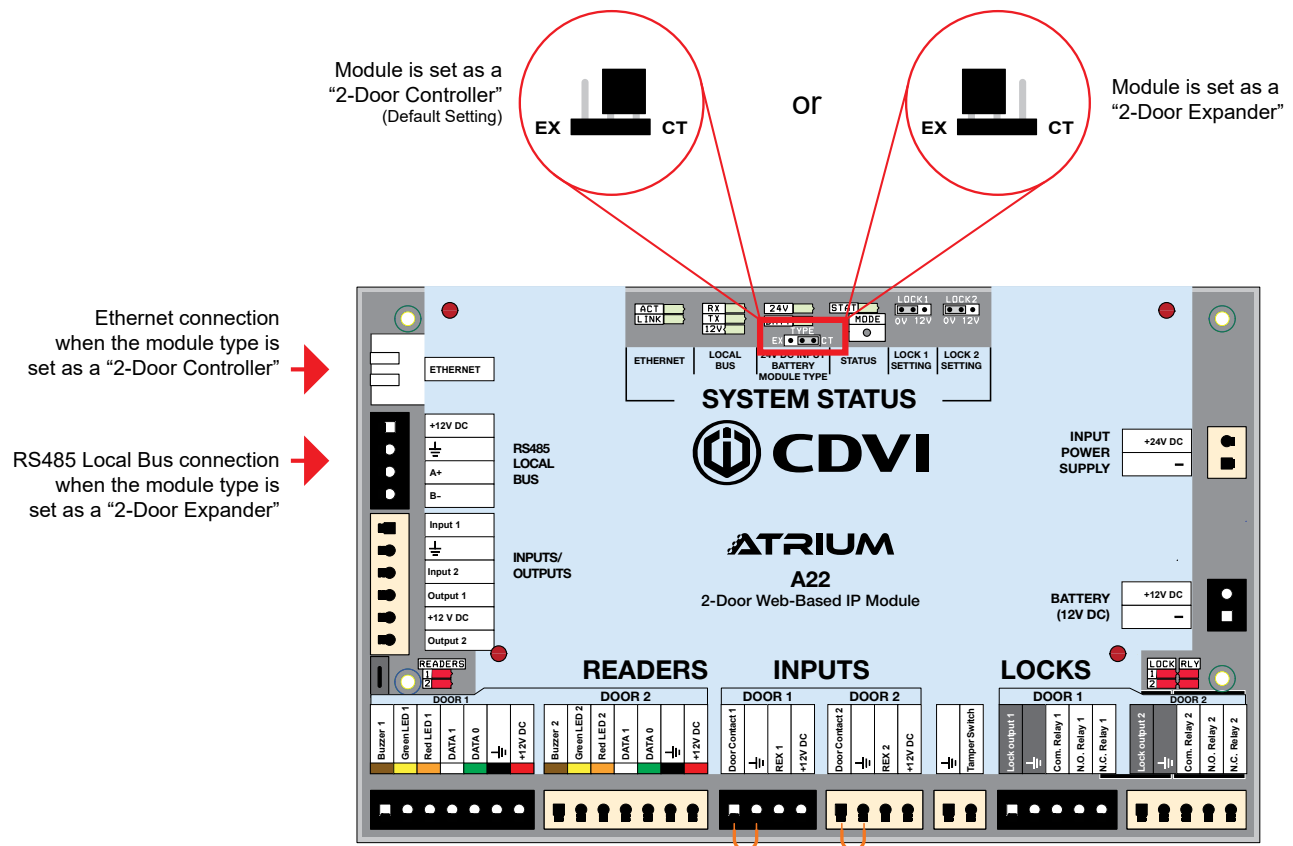
**ATRIUM A22POE**
2-Door Controller

# BOX TAMPER SWITCHES

Connecting the tamper switches allows the A22POE to detect when the cabinet door is opened and/or when the cabinet is removed from the wall. To install the tamper switches, see "Installing the Tamper Switches".

To use both switches:

1.  Connect one end of the supplied wire to the door tamper switch terminal and the other end to the wall tamper switch terminal.

2.  Connect the other terminal of the door tamper switch to the "TMP" terminals using the supplied wire.

3.  Connect the other terminal of the wall tamper switch to the "GND" terminals using the supplied wire.
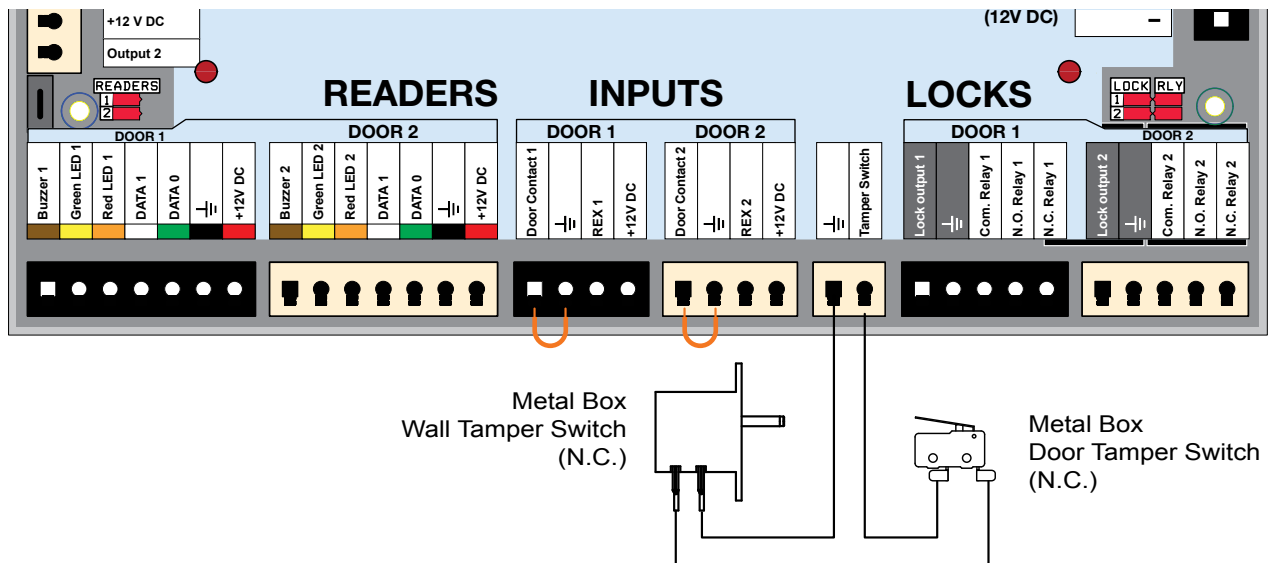


To use only one switch:

1.  Connect one terminal of the tamper switch to the "TMP" terminals using the supplied wire.

2.  Connect the other terminal of the same tamper switch to the "GND" terminals using the supplied wire.

If you do not use the tamper switch, connect a wire between the "TMP" and "GND" terminals.

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## ATRIUM A22POE
2-Door Controller

# READERS AND KEYPADS

The A22POE allows automatic format detection and decoding of the connected reader/keypad. When installing a keypad with a Wiegand output, the keypad's "D0" and "D1" wires should be connected to the same terminals as the reader (the reader or keypad LED and buzzer outputs must be open collector).

The ATRIUM system is configured by default for the NANO, STAR and SOLAR reader models which display a bright blue backlight in standby mode. A list of other CDVI readers and keypads is shown below. Other popular wiegand readers and keypads are also supported. Contact us to confirm compatibility. Most readers and keypads have built-in buzzers and LEDs. These should be connected to module's programmable outputs (B1, G1, R1 for READER 1 and B2, G2, R2 for READER 2). These are open collector outputs capable of sinking 100mA. Please note that the B, G and R outputs are programmed for a 7-wire reader by default. Typically, a blue/red/green indicator on the reader will inform the card user that access has been granted (changes from blue to green), access has been denied (changes from blue to flashing red), door is locked (from blue to brief red) or door is unlocked by a schedule (changes from blue to brief green). Typically, the reader buzzer or an external sounding device will inform the card user that the door has been left open after a valid access or the door has been forced open. The functions of all these outputs are programmable through the ATRIUM software.



**NANOPB**
Mini Proximity Reader

**GALEO/W**
Wiegand Keypad
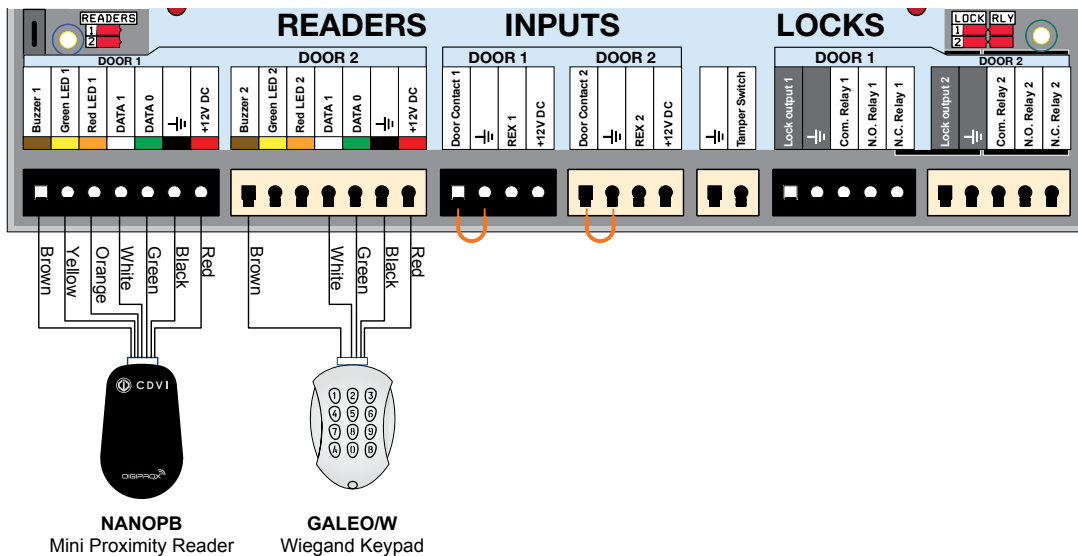
See chapter 2 "Recommended Wiring" for more information on wiring type, size, and maximum length.

Compatible readers and keypads:

- NANOPW (White) and NANOPB (Black)
- STARPW (White) and STARPB (Black)
- SOLARPW (White) and SOLARPB (Black)
- DGLP FN WLC26

- DGLP WLC26
- DGLI F WLC26
- DGLI WLC26
- DGLP60WLC

- KCPROXWLC (Reader & Keypad)
- DGLM (Magstripe)

And most popular Wiegand readers & keypad

> ⚠️ For an up-to-date list of which keypads and readers are supported, refer to the ATRIUM Software Manual or visit our web site at www.cdvigroup.com.

> ⚠️ Please note that the A22POE provides 12Vdc output. Connecting a device (keypad or reader) requiring a different voltage may damage the reader or keypad and invalidate the A22POE warranty.

## INPUTS

The A22POE can monitor the state of up to 6 devices (12 using zone doubling) such as magnetic contacts, motion detectors, temperature sensors, or other devices. The following are examples of the type of inputs that can be monitored:

### Magnetic Door Contact:

Permits supervision of door "status" (opened, closed, opened too long, forced open). Inputs "Door Contact 1" and "Door Contact 2" are assigned by default as the door contact for Door 1 and Door 2 respectively. When using the default system settings, you can easily swap terminals to troubleshoot the installation.

### Request to Exit (REX):

The device used can be a push button, vertical-view motion detector or floor mat sensor. The door can then be programmed to unlock on a REX detection. When a magnetic door contact is installed, the system can differentiate between a door forced open and an authorized exit. Inputs "REX 1" and "REX 2" are assigned by default for Door 1 and Door 2 REX inputs respectively.
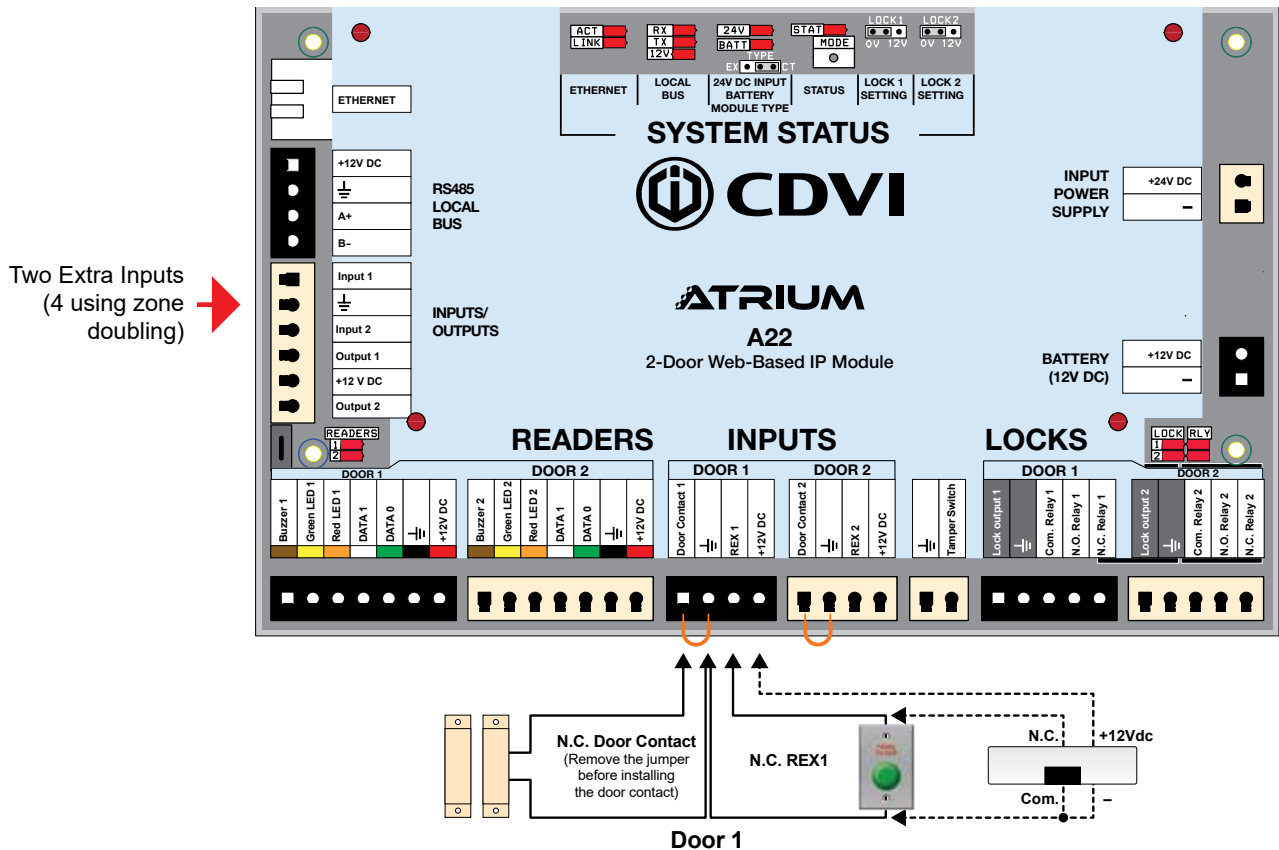


See "Recommended Wiring" section for more information on wiring type, size, and maximum length.

## Input Connection Methods

### Single without EOL and without TAMPER Supervision
### (Limit of 1 Detection Device on the Input)

When using this method, only one device can be connected to the input. The input must be connected using only one Contact (NO or NC: programmable per INPUT in Software) as described in the following figure. This setup will not support WIRE CUT or WIRE SHORT supervision, but will generate an alarm condition when the state of the input is breached.

WIRE SHORT supervision: NO
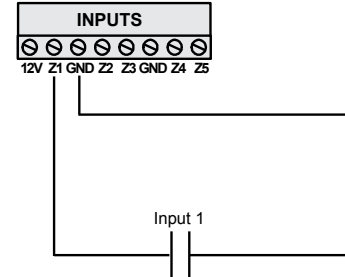
WIRE CUT supervision: NO

**INPUTS**
12V  Z1  GND  Z2  Z3  GND  Z4  Z5

Input 1

### Single with WIRE SHORT Supervision
### (Limit of 1 Detection Device on the Input)

When using this method, only one device can be connected to the input. The input must be connected using only one Contact (NO or NC: programmable per INPUT in Software) as described in the following figure. This setup will not support WIRE CUT supervision but offers WIRE SHORT supervision and will generate an alarm condition when the state of the input is breached.

WIRE SHORT supervision: YES (Detected as INPUT SHORT)

WIRE CUT supervision: NO

**INPUTS**
12V  Z1  GND  Z2  Z3  GND  Z4  Z5

EOL
1K

Input 1

**INPUTS**
12V  Z1  GND  Z2  Z3  GND  Z4  Z5

Input 1

1K

### Single with WIRE CUT Supervision
### (Limit of 1 Detection Device on the Input)

When using this method, only one device can be connected to the input. The input must be connected using only one Contact (NO or NC: programmable per INPUT in Software) as described in the following figure. This setup will support WIRE CUT supervision but will not offer WIRE SHORT supervision and will generate an alarm condition when the state of the input is breached.

WIRE SHORT supervision: NO

WIRE CUT supervision: YES (Detected as INPUT CUT)

**INPUTS**
12V  Z1  GND  Z2  Z3  GND  Z4  Z5

Input 1

1K        Tamper Input 1

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## Single with WIRE SHORT and WIRE CUT Supervision
## (Limit of 1 Detection Device on the Input)

When using this method, only one device can be connected to the input. The input must be connected using only one Contact (NO or NC: programmable per INPUT in Software) as described in the following figure. This setup will support both WIRE CUT and WIRE SHORT supervision and will generate an alarm condition when the state of the input is breached.
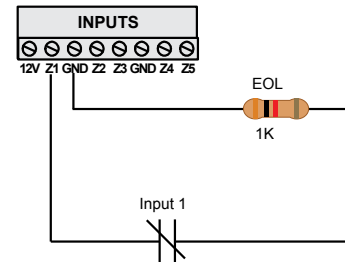
WIRE SHORT supervision: YES (Detected as INPUT SHORT)

WIRE CUT supervision: YES (Detected as INPUT CUT)

## Doubled with WIRE CUT Supervision
## (2 Detection Device on the Input)

When using this method, two device can be connected to the input. The input must be connected using two Contacts (NO or NC: programmable per INPUT in Software) as described in the following figure. This setup will support WIRE CUT supervision but not WIRE SHORT supervision and will generate an alarm condition when the state of one of the input is breached.
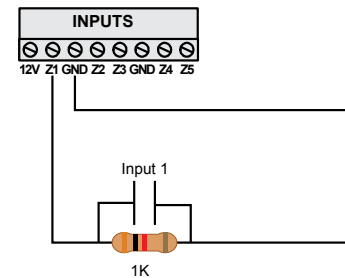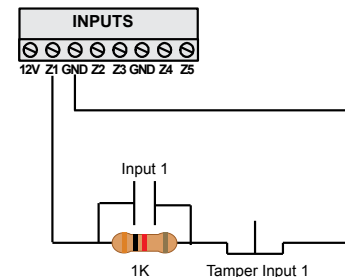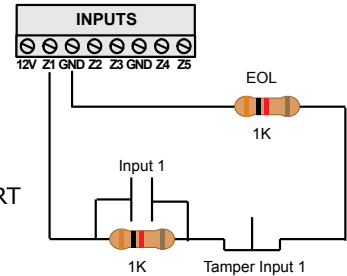
WIRE SHORT supervision: NO

WIRE CUT supervision: YES (Detected as INPUTS CUT)

## Doubled with WIRE SHORT and WIRE CUT Supervision
## (2 Detection Device on the Input)

When using this method, two device can be connected to the input. The input must be connected using two Contacts (NO or NC: programmable per INPUT in Software) as described in the following figure. This setup will support WIRE CUT and WIRE SHORT supervision and will generate an alarm condition when the state of one of the input is breached.
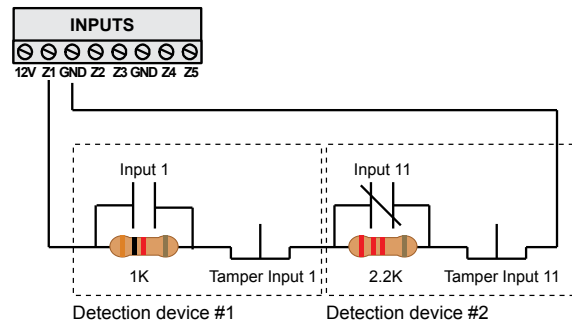
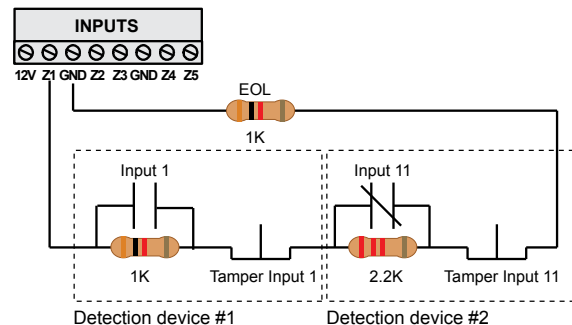WIRE SHORT supervision: YES (Detected as INPUTS SHORT)

WIRE CUT supervision: YES (Detected as INPUTS CUT)

# DOOR LOCK DEVICES

Each controller has two lock outputs. The LOCK OUTPUT can be configured to provide power (750mA @ 12Vdc), see "Jumper Settings" on this page, the LOCK OUTPUT is protected by a fuseless protection algorithm and will shutdown if the current exceeds 750mA @ 12Vdc. When a different voltage or more current is required, we recommend to use the RELAY OUTPUT configuration (see "Wiring Diagram of Locking Device", page 22).

- If you have one door with a reader on each side of the door, you can use either lock output.
- You can program the lock outputs to function in "fail-safe" (remove power to unlock a door) or "fail-secure" mode (power required to unlock a door).
- When using electromagnetic door locks or similar devices ensure that the current specifications are not exceeded.

⚠️ Always consult the regulatory agency in your area for existing regulations regarding doors designated as emergency exits.

## Jumper Settings

The jumpers LOCK1 and LOCK2 must be set according to the door devices used (see "Wiring Diagram of Locking Device", page 22).

If the lock (or electromagnetic) requires 24Vdc, you m  ia gram", page 22. The same applies if the Locking Device requires an alternating current supply (Vac).

## Lock Output Jumper Settings

There are two jumpers, one for each lock output, LK1 and LK2.
Each output provides 750mA at 12VDC



Jumper Side View | **Default setting:** The lock output will be at 0Vdc in normal state and toggles to 12Vdc during the unlock time. (De-energize lock output) | **or** | The lock output will be at 12Vdc in normal state and toggles to 0Vdc during the unlock time. This is the typical setting for electromagnetic door lock. (Energize lock output) | Jumper Side View
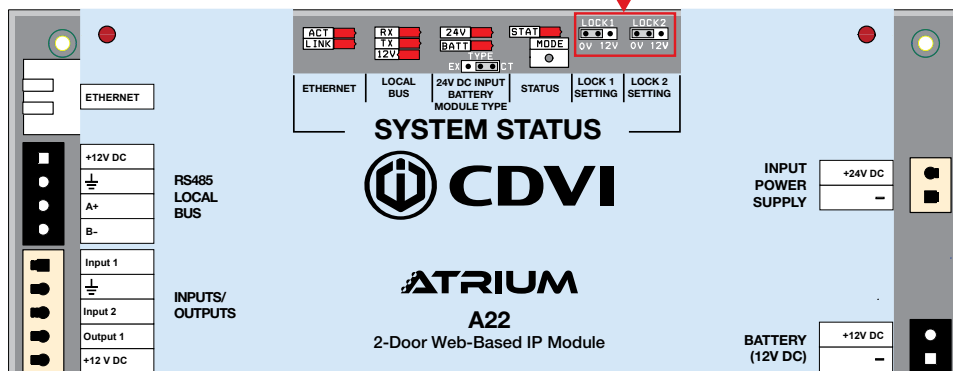
## Lock Device Wiring Diagram

### Using On-Board Power Supply



Door Strike
(Door 1)

Electromagnetic Door Lock
(Door 2)

### Using External Power Supply
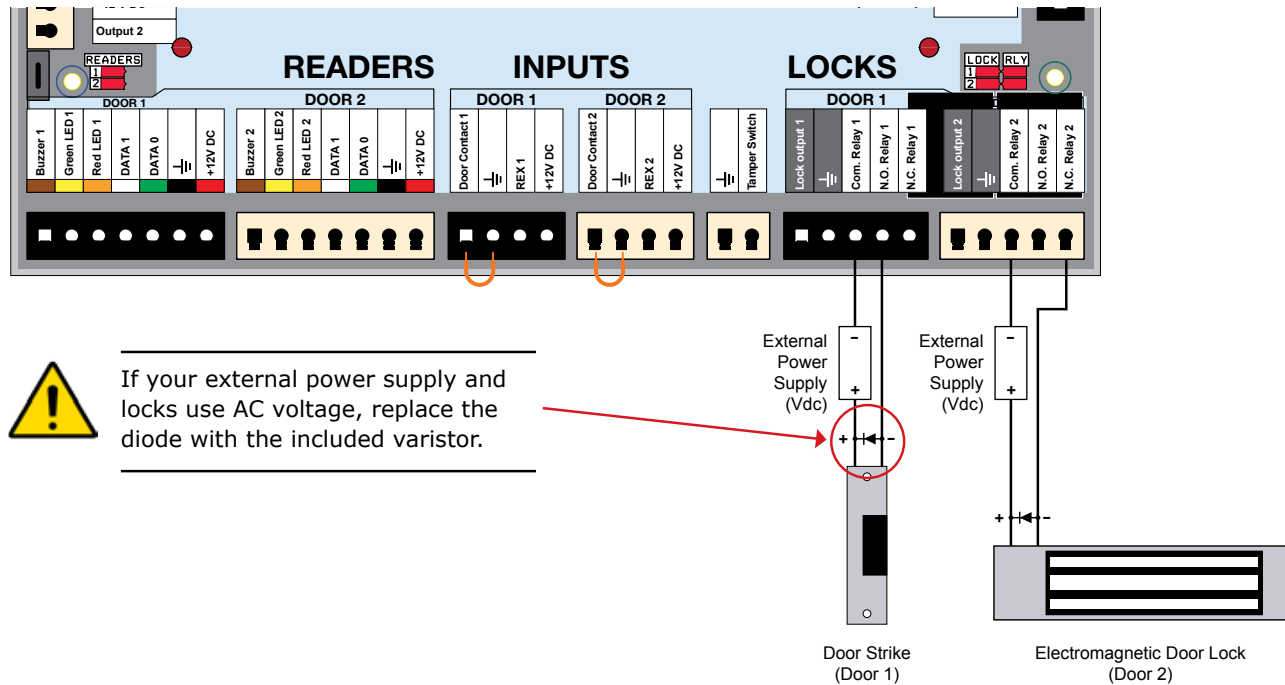


If your external power supply and locks use AC voltage, replace the diode with the included varistor.

External Power Supply (Vdc)

External Power Supply (Vdc)

Door Strike
(Door 1)

Electromagnetic Door Lock
(Door 2)

See "Recommended Wiring" section for more information on wiring type, size, and maximum length.

# POWER SUPPLY

⚠️ Do not power up the A22POE until all connections are completed.

The module operates from PoE+ sources using the DC output of the pre-assembled PoE+ splitter and provides fully monitored power solutions using:

- Smart Battery Deep discharge prevention with automatic electronic cut-off.
- Programmable & Adaptive battery charging algorithm (250mA (default), 320mA, 500mA, or 1A).
- Intelligent battery monitoring & charging algorithms allowing optimum performance using standard lead acid or gel cell type batteries.
- Real Time Monitoring algorithm for 'Battery Low/Disconnect/Reversal' and 'Insufficient Main Power'.

## PoE+ Source

The PoE+ splitter to DC power supply is pre-installed in the A22POE box but needs to be connected to the PCB. Simply plug the two pin terminal to the input power supply.
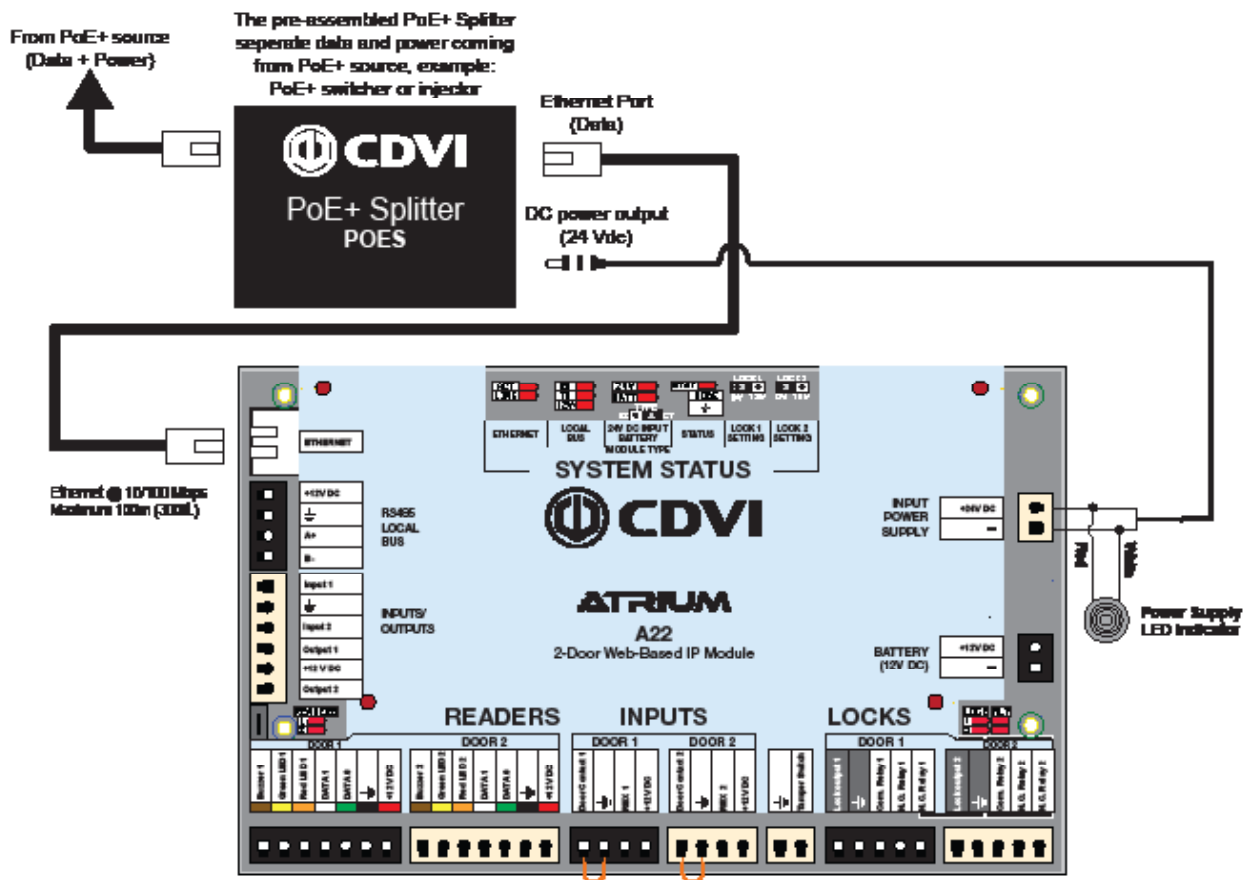


See "Recommended Wiring" section for more information on wiring type, size, and maximum length.

# BATTERY BACKUP

The A22POE cannot be started on battery power only. Battery backup time varies with each system. Typical backup time is between 2 and 20 hours using standard equipment and settings.

Wire a 12Vdc (either 4.5Ah or 7Ah) gel type battery and then connect it to the BATT "+" and "-" terminals with the battery leads supplied.
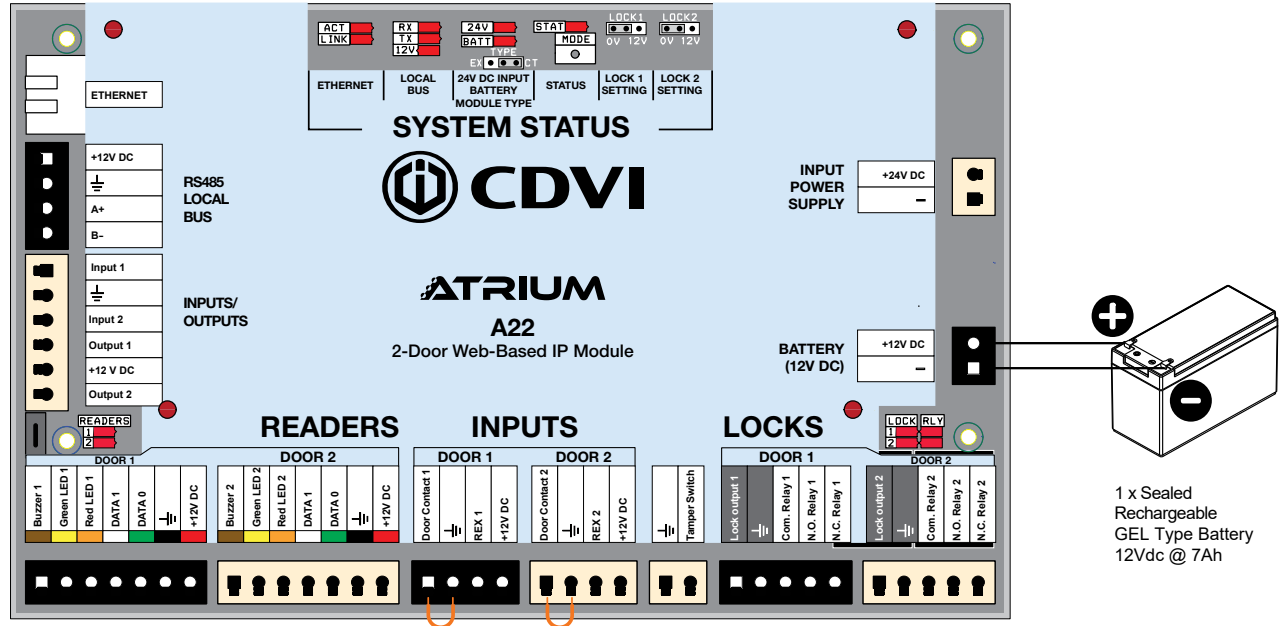


1 x Sealed Rechargeable GEL Type Battery 12Vdc @ 7Ah

12Vdc 7Ah rechargeable acid/lead or gel cell backup battery (UL/ULC: YUASA #NP7-12 recommended, Europe: CDVI B7AH recommended). Ensure proper polarity. Various (means any type, from any manufacturer that complies with the "Technical Data and securement means" and meets the "Mark of conformity" can be used).

The battery charge current can be set to either 250mA (default), 320mA, 500mA, or 1A. Refer to the ATRIUM user interface instruction manual for more information on how to modify the battery charging current.

# LED INDICATORS

The ATRIUM A22POE has several status LEDs that are very useful to diagnose problems when using or installing the ATRIUM system. Refer to the following picture to locate the LEDs on the ATRIUM A22POE. All LEDs are explained in the following pages.



| 1 | ETHERNET | ACT | Green LED flashing: Data transmitted/received. |
|---|---|---|---|
| | | LNK | Green LED: Ethernet network detected. |
| 2 | LOCAL BUS | RX | Green LED flashing: Data received on local bus. |
| | | TX | Green LED flashing: Data transmitted on local bus. |
| | | 12V | Green LED: 12V on local bus. |
| 3 | 24Vdc Input / Battery | 24V | DC IN Green LED: A22POE is powered properly. |
| | | | Red LED: No primary power. |
| | | BATT | BATT Green LED: Primary power present and battery charging. |
| | | | Off LED: Primary power present and battery full. |
| | | | Red LED: No battery or battery not properly connected. |
| | | | Red LED flashing: Battery power is below 11.8Vdc. |
| 4 | STATUS | STAT | Flash once per second: Firmware is operating normally. |
| | | | Flash rapidly: Firmware is upgrading. |
| | | | Blink once per 3 seconds: Card enrollment mode. |
| 5 | READERS | #1 | Green LED flashing: Data received from Reader #1. |
| | | #2 | Green LED flashing: Data received from Reader #2. |
| 6 | LOCK & RELAY | LOCK 1 | Green LED: Door 1 Lock Relay is active/triggered. |
| | | LOCK 2 | Green LED: Door 2 Lock Relay is active/triggered. |
| | | RLY1 | Green LED: Auxiliary Relay 1 is active/triggered. |
| | | RLY2 | Green LED: Auxiliary Relay 2 is active/triggered. |

# ETHERNET NETWORK CONNECTION & RS485 BUS

Connect the Ethernet 10/100 Mbps port of the ATRIUM A22POE to a LAN or WAN network using an UTP cable (maximum 100m (300ft)). Connect expansion modules on a 3 conductor RS485 communication loop in daisy chain or star configuration up to 1220m (4000 ft) from the ATRIUM controller.
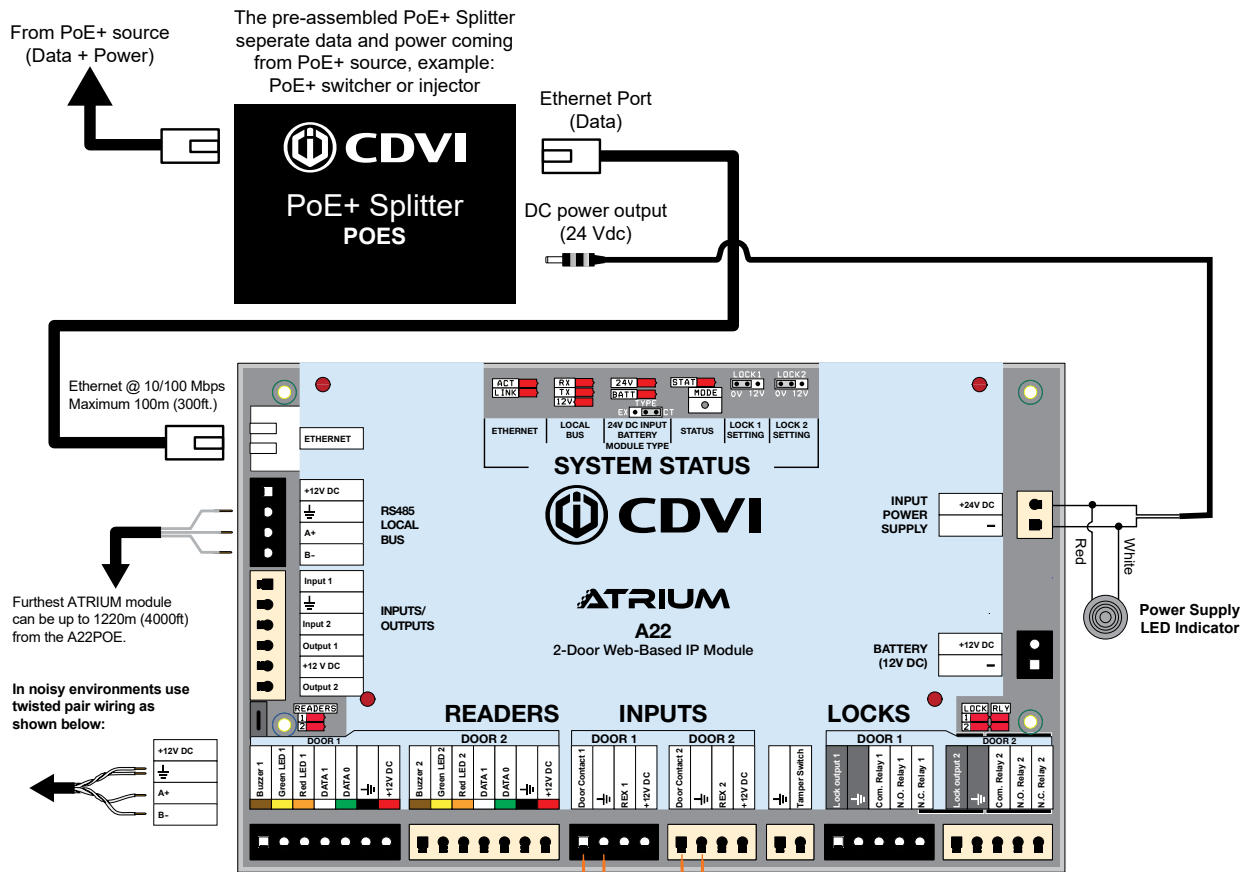
# EXPANDER MODULES TO THE CONTROLLER

The A22POE has a RS485 LOCAL BUS terminal allowing the connection with the ATRIUM expander module. The RS485 LOCAL BUS communication is up to 1220 m (4000 ft) maximum distance. One A22POE can support up to four A22POE expansion modules. Refer to "Module type configuration (controller or expander)" on page 15 to set an A22POE as an expander.

Connect the expander modules using these topologies:

## DAISY CHAIN

**A22POE**

**A22POE**        **A22POE**        **A22POE**        **A22POE**

## BUS

**A22POE**

**A22POE**        **A22POE**        **A22POE**        **A22POE**

## STAR

**A22POE**                    **A22POE**
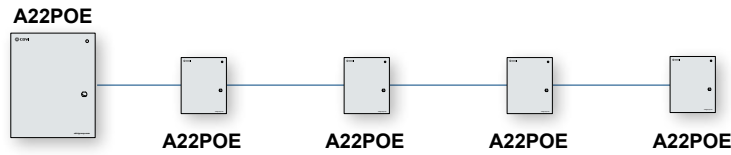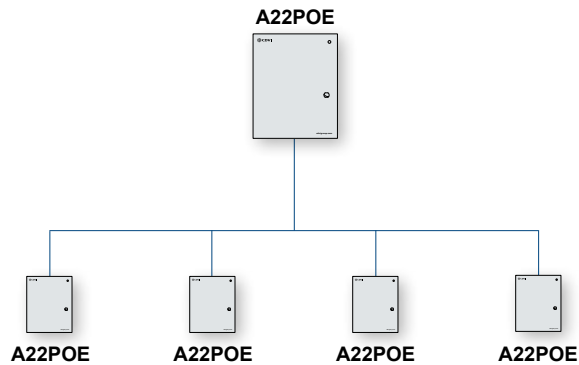
**A22POE**
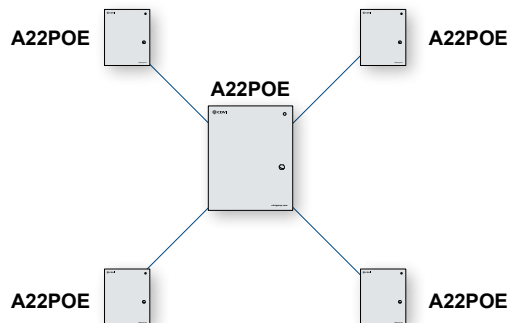
**A22POE**                    **A22POE**

## MIXED
### DAISY CHAIN/BUS/STAR
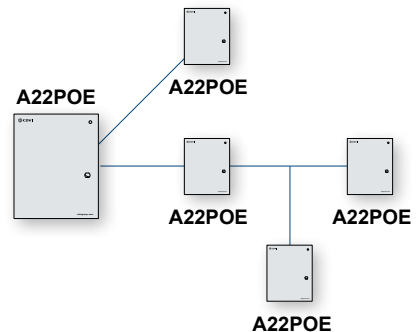
**A22POE**        **A22POE**

**A22POE**

**A22POE**        **A22POE**

**A22POE**

# 6] PROGRAMMING

The stand-alone card enrollment allows you to add or delete user cards without the need of a PC.

## CARD ENROLLMENT PROCEDURE
## (ADD OR DELETE CARDS WITHOUT A COMPUTER).

1.  Present the MASTER card to a reader.

    The door will unlock, keep it open.

    (The door must be equipped with a door contact)

Master Card

2.  Within 5 seconds, present the PROGRAMMING card to the reader.

    Reader LEDs will begin flashing in sequence

    (2 Red flashes + 2 Green).

    Enrollment mode is active.

3.  Present cards, one by one, to the reader.

    **NEW** cards will be ADDED.

    Green LED will flash and a quick beep will be emitted.

    Each new card will create a user and attribute the card to the user

    **EXISTING** cards will be DELETED.

    Red LED will flash and a long beep will be emitted.

Programming card

4.  Present the PROGRAMMING card again to stop enrollment mode.

    The flashing sequence (2 Red flashes + 2 Green) will stop.

The card enrollment learning mode ends when no new card is presented for 5 minutes.

For other card enrollment methods, refer to the "ATRIUM Software" user guide.

# 7] Warranty  -  Terms & Conditions

The "5 Year Warranty" is offered by CDVI exclusively for CDVI products featuring the logo "5 Year Warranty", and supplied by authorized CDVI dealers participating in the offer. You can obtain the address of the local authorized dealer participating in the offer by contacting CDVI or a local CDVI subsidiary. The "5 Year Warranty" is only applicable to hidden defects detected during the lifetime of the product, as defined by the CDVI Group (5 years or 200 000 operations - whichever of the two expires first).

The "5 Year Warranty" conditions shall not modify the sales conditions between CDVI and its customers.

## DURATION OF THE OFFER:

- This offer is valid from July 1st 2010; CDVI reserves the right to terminate this offer without prior notice.
- However, any product already registered up to the date of withdrawal of the offer will remain eligible for the "5 Year Warranty".
- The warranty applies only to the available products mentioned in the above statement.

## CONDITIONS :

- Hidden defects are guaranteed for an unlimited shelf life (period of time before use).
- To be eligible for the "5 Year Warranty", the product must be registered at CDVI within one month of its delivery to the end user, by completing in and returning back the "warranty" form by fax, email or post to the local CDVI subsidiary. This information may also be registered on line at www.cdvigroup.com.
- Only the issue of the "5 Year Warranty" certificate by CDVI can confirm product registration; CDVI may not be held responsible in the event of loss or non-presentation of the form.
- The "5 Year Warranty" only applies to products installed by a skilled and experienced personal with the necessary trade qualifications to install according to the highest standards, respecting the standards, instructions and guidelines defined by CDVI and according to the maximum recommended specifications.
- To enable CDVI to determine whether a product is eligible to claim for the "5 Year Warranty", after prior issue of a return of materials authorization number (RMA) by CDVI, the customer must return the product and all of its accessories in the original packaging with a copy of its invoice. The transport fees shall be paid by the customer and the package must be returned to CDVI or to a CDVI authorized repair centre.
- Eligibility for the "5 Year Warranty" cover must be confirmed by CDVI.
- The "5 Year Warranty" only covers the replacement or repair of the parts acknowledged as faulty by CDVI.
- CDVI reserves the right to respect its obligation by replacing the product or the parts acknowledged as faulty by a standard part replacement or by a product or new parts, or by an updated or improved version of the product with identical or similar functionalities.
- In respect of the applicable law, CDVI cannot be held responsible for material or immaterial damages caused to goods or to third parties and as a direct or indirect result of the installation, utilization, product faults or poor functioning of a device.
- The "5 Year Warranty" is non-assignable and non-transferrable; only the person who registered the aforementioned warranty may benefit from the warranty.
- The "5 Year Warranty" is limited to the eligible product and is strictly limited to the conditions in effect on the date of purchase by the customer.

# NOT COVERED BY THE "5 YEAR WARRANTY":

- Any product which has undergone even the slightest modification or change;
- Any product which has been installed and/or used with any auxiliary device not supplied by CDVI;
- Any product which has been used for demonstrations or display;
- Any product or its elements considered as "consumables" such as fuses, lights and batteries for example;
- Failure or malfunctioning as a result of an accident, poor storage conditions, unsuitable assembly, bad utilization or handling, poor maintenance, unsuitable repair or intervention.
- Any call-out and installation fees (for assembly and dismantling) as well as transport costs (to and from the repair centre) and maintenance fees.

# THE INSTALLER'S RESPONSIBILITIES:

When registering the 5 Year Warranty on line, the installer is responsible for the information supplied. In case of errors, the 5 Year Warranty will not be applicable.

# NOTES:

**NOTES:**

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All the information contained within this document (pictures, drawing, features, specifications and dimensions) could be perceptibly different and can be changed without prior notice.

*The installer's choice*

**cdvigroup.com**