



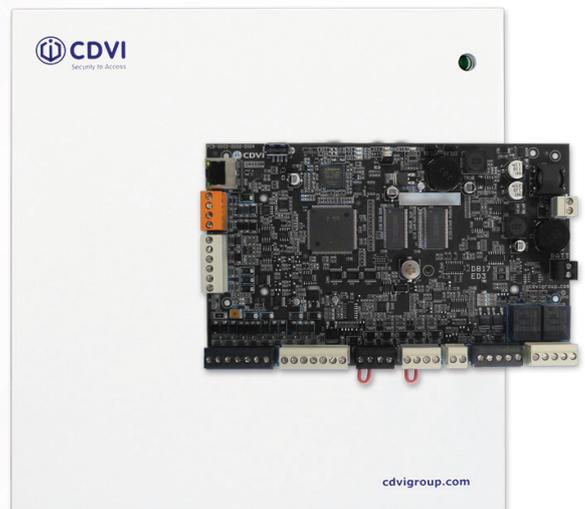
# CDVI

Security to Access

*Centaur*<sup>®</sup>  
INTEGRATED ACCESS CONTROL



Americas Version



European Version

# C900IP

## 2-Door IP Controller



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

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## 1] PRODUCT PRESENTATION

The C900IP is the newest, most powerful and flexible controller in the CENTAUR system. It includes an integrated IP port and a pre-assembled universal power supply, making this device an industry leader in efficiency and simplicity.

New and improved features such as 50 000 card management, on-board web page for controller address setting and IP address management make this a major addition to the powerful CENTAUR system.

- **Control 2 doors / 2 readers**
- **Embedded Web Page for address setting, IP management, firmware update & others**
- **Pre-assembled universal power supply with AC wall plug**
- **On-board IP Port**
- **Lock outputs: 2 (750mA @ 12VDC/each)**
- **Relay Outputs: 2 Form C relays (Dry Contact)  
5A @ 250VAC, 7A @ 125VAC, 7A @ 30VDC**
- **6 Multi-purpose inputs (12 using zone doubling)**
- **Totally fuseless system**
- **50,000 cards**
- **50,000 keypad user codes**
- **25,000 event buffer**
- **128 holidays**
- **256 access levels**
- **128 floor groups**
- **256 schedules each supporting 8 time periods**
- **Firmware upgradable**
- **Maintenance-friendly snap on terminal connectors**
- **Comprehensive LED status indicators**



Americas Version



European Version

## 2] NOTES AND RECOMMENDATIONS

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### 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 CENTAUR C900IP 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
- Use of a UL recognized tamper switch on every housing cabinet for the C900IP
- Use only UL listed cables
- Use only UL listed adaptors

Note: All circuits are power limited.

### UL 294 COMPLIANCE NOTICE

CDVI declared the following levels: Destructive Attack Level I, Line Security Level IV, Endurance Level IV, Standby Power Level IV.

- Use only UL listed power supply
- Connect CDVI LED status indicator, part number 7020-0001-0000, to the DC Input gray terminals of the C900IP.



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

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

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### FREE TECHNICAL SUPPORT

For technical support in Canada or the U.S., call 1-866-610-0102, Monday to Friday from 8:30 a.m. to 8:00 p.m. EST. For technical support outside these regions, refer to the back cover of this document or visit our website: [www.cdvi.com](http://www.cdvi.com).

## RECOMMENDED WIRING

Equipment	Wire Type	Size	Maximum Length
Wiegand card reader and keypad	4 to 8 conductors, stranded, shielded (foil), drain conductor. For example: Alpha 5196, 5198, 5386, 5388, Belden 9553	22AWG (0.64 mm) to 18AWG (1.02 mm)	150 m (500 ft.)
Zone input	2 conductors, copper 22AWG (0.64 mm)	22AWG (0.64 mm)	600 m (2000 ft.)
Door strike	2 conductors, solid copper 18AWG (1.02 mm)	18AWG (1.02 mm)	150 m (500 ft.)
Power Supply*	3 conductors, solid copper 18AWG (1.02 mm)	14AWG (1.63 mm)*	8 m (25 ft.)
Ethernet	CAT 5/5e	-	100 m (300 ft)
RS485 bus, Star or Daisy Chain (no BIAS/EOL required)	CAT 5/5e or 4 pairs	24AWG (0.51 mm)	1220 m (4000 ft.)
	4 conductors, copper	26AWG (0.40 mm) to 18AWG (1.02 mm)	

\* The Minimum Size Equipment Conductors for the AC mains required are 14 AWG if made of Copper or 12 AWG if made of Aluminum or Copper-Clad Aluminum. Do not use any switch-controlled outlets to power the system.

## SPECIFICATIONS

System Resources	
Doors	2 (expandable to 8 doors)
Cards	50,000 cards
Schedules	256 Schedules each supporting up to 8 time periods
Buffered Events	25,000 events
Holidays	128 holidays
Access Levels	256 access levels
Power Rating	250 mA @ 24 Vdc
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)
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 DOUBLING) supporting 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)

## Power Supply

AC Power	120-240Vac
Frequency	50Hz/60Hz
Output	24Vdc, 2.5A
AC Terminal Fuse	250Vac, 2.5A, Time Lag, Slow Blow, Operating Temperature: -55°C to +125°C
Power Loss Indicator	Yes (DC IN)



Do Not Connect to a Receptacle Controlled by a Switch.  
Other 24Vdc, 2.5A output UL/ULC certified transformer can be used.

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

LK1, LK2	12Vdc @ 750mA
AUX	12Vdc @ 1A
Battery	Against reversal, short, current limited/monitored

## Power output specifications

### Battery Backup

Battery Capacity	One 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), 500mA, or 1A.
Low Battery @	11.8Vdc
Low Battery Restore @	12.2Vdc
Low Battery Cut-Off @	10.5Vdc

### Power Outputs (+12Vdc)

Lock Output LK1	Maximum Current 750mA each
Lock Output LK2	
Reader 1	Maximum Current 1000mA
Reader 2	
Zone Inputs	
LOCAL BUS	

### Outputs

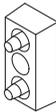
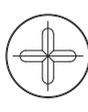
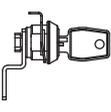
RLY1, RLY2	Form C Relay, 5A @ 250Vac, 7A @ 125Vac, 7A @ 30Vdc
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### 3] PACKAGE CONTENTS

This chapter details how to install and setup the CENTAUR C900IP.

The C900IP contains:

- One C900IP module in its cabinet with connection diagram label
- Pre-assembled universal power supply with AC power cord plug
- Metal Box kit (see below)
- Installation kit (see below)

								
<b>Metal Box Kit</b>	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

						
<b>Installation Kit</b>	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.




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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




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

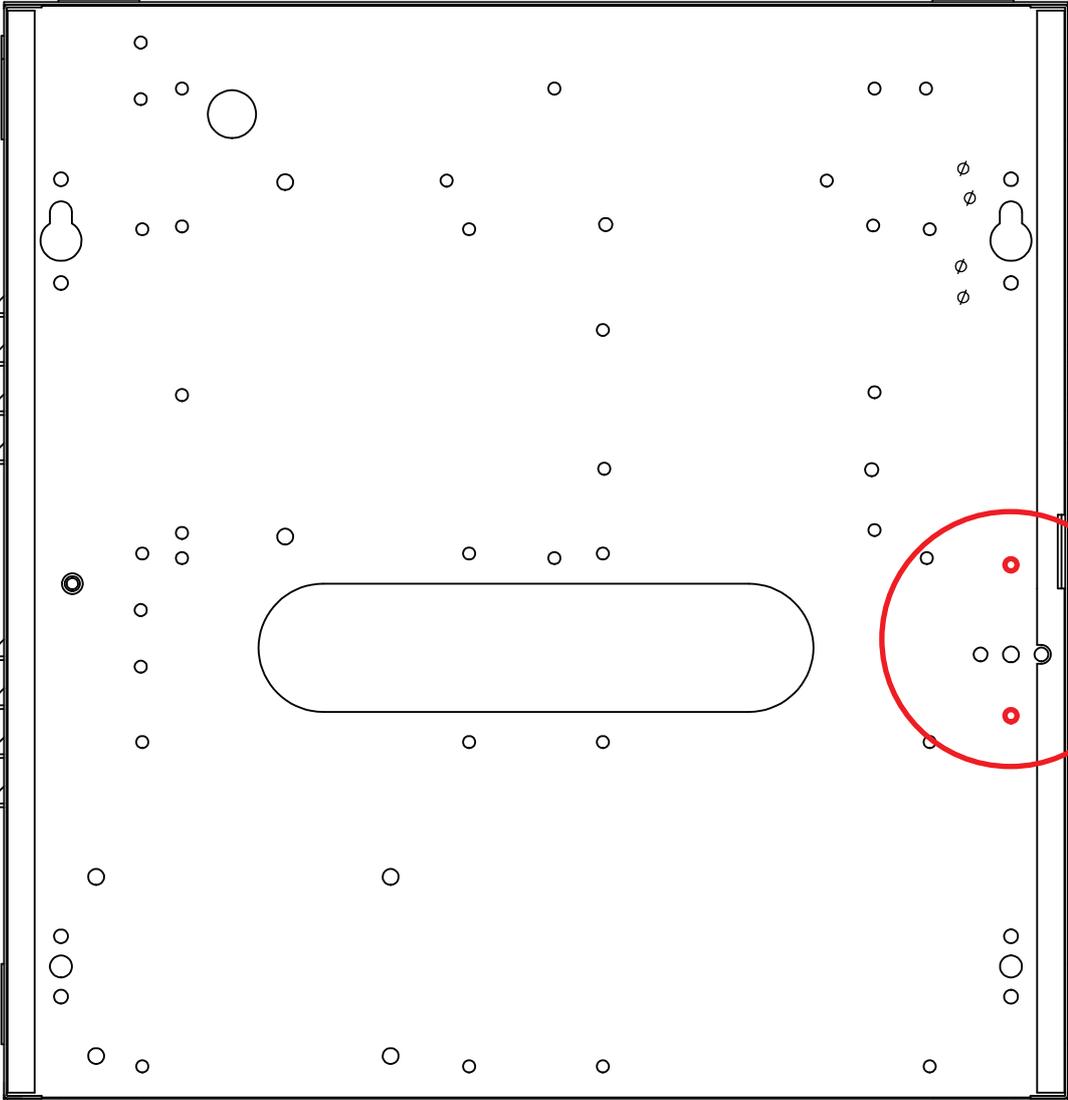
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### 4] MOUNTING INSTRUCTIONS

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

### INSTALLING THE TAMPER SWITCHES

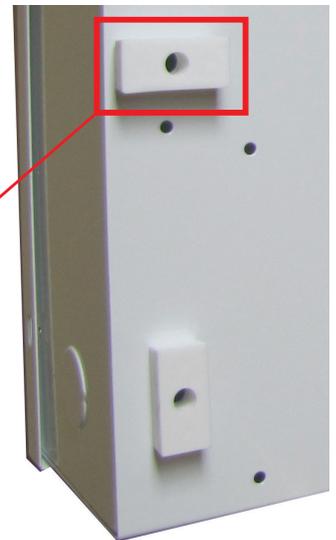
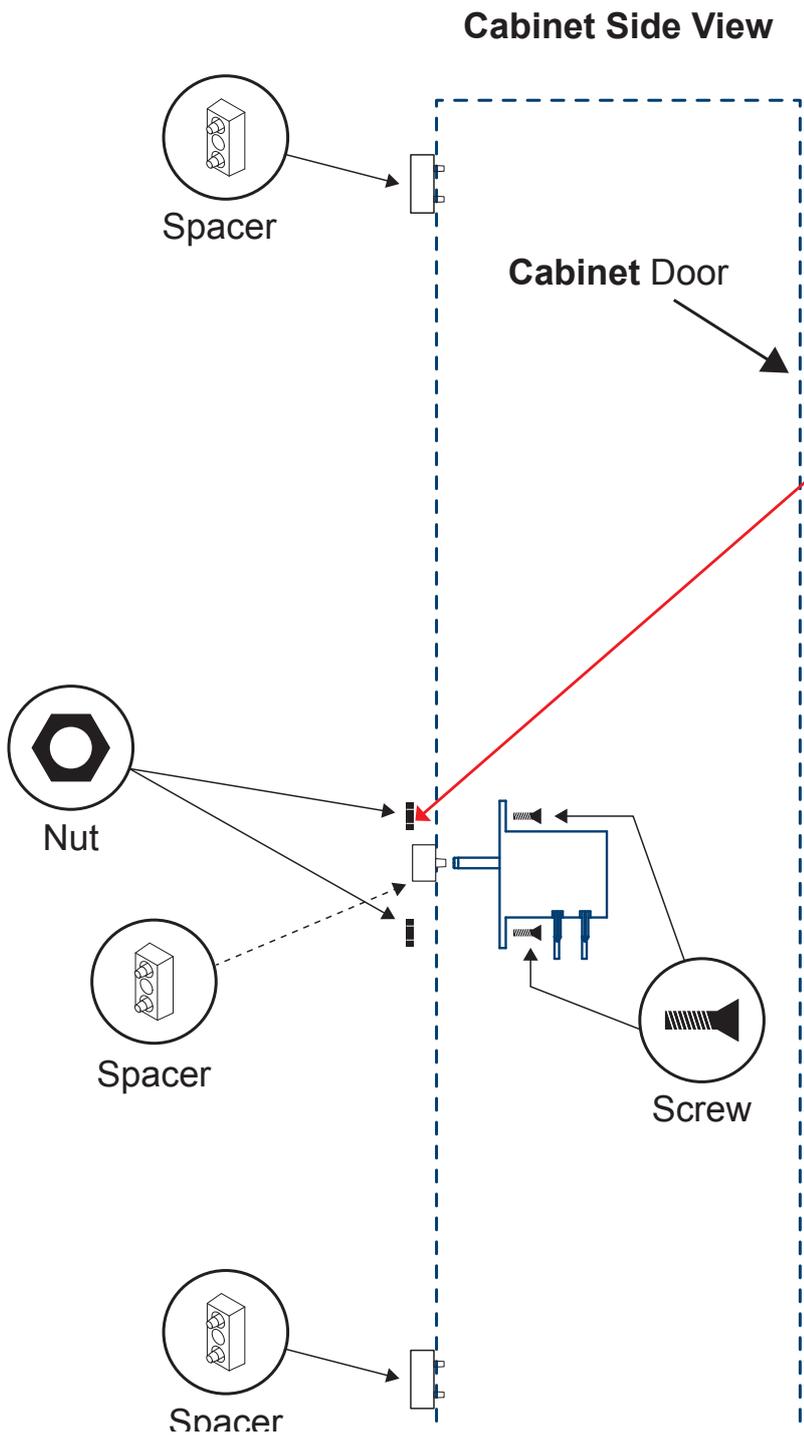
Installing tamper switches allows the C900IP to detect when the cabinet door is opened and/or when the cabinet is removed from the wall. If needed install the tamper switch(es) as follows:



Metal box holes where to fix the wall tamper switch

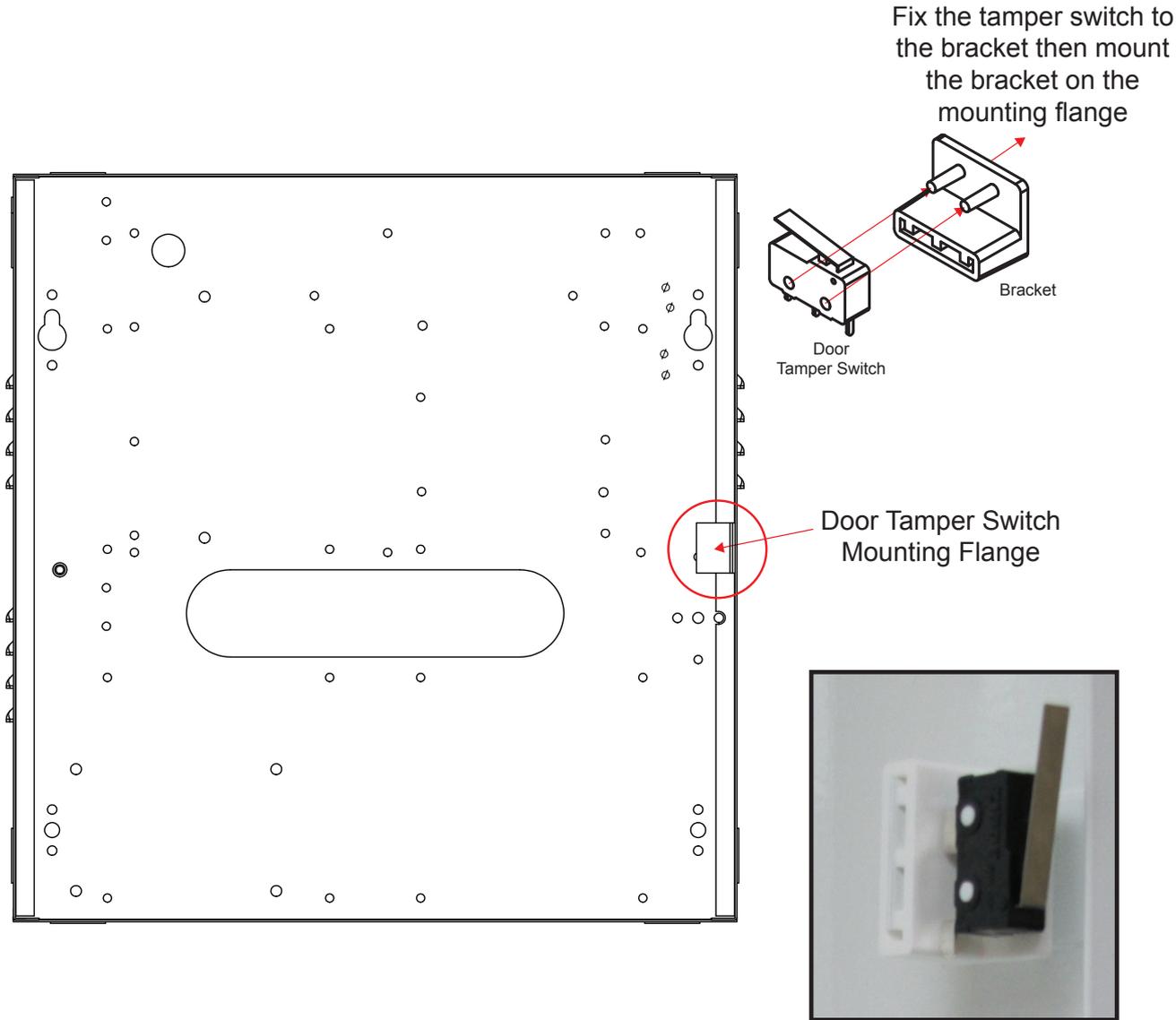
Install the wall tamper switch using the supplied bolts and nuts as shown in the following picture.

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



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 its mounting flange.

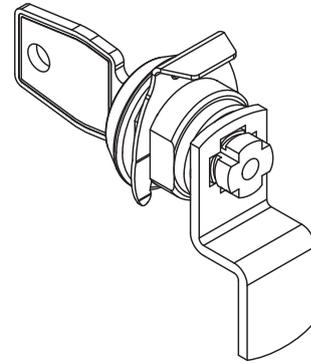
Refer to page 16 for wiring diagram.



## INSTALLING THE BOX LOCK

Installing the box lock secures the box from unauthorized access. Installation procedure:

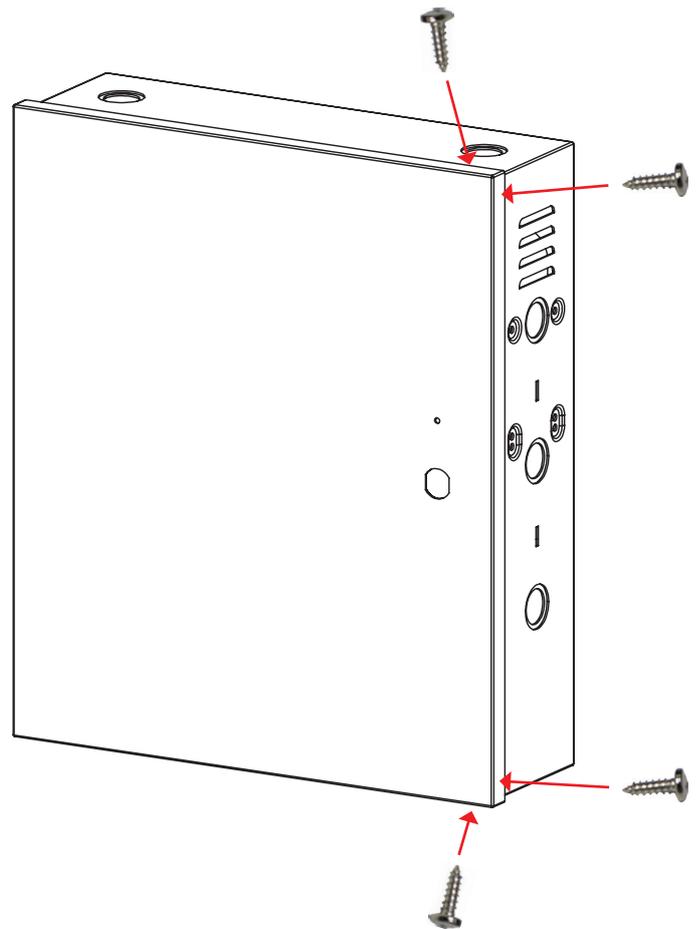
1. Remove the box door knock-out.
2. Insert the lock in the hole.
3. Slide the "U" metal part into the lock groove to secure the lock in place.



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 complete.

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

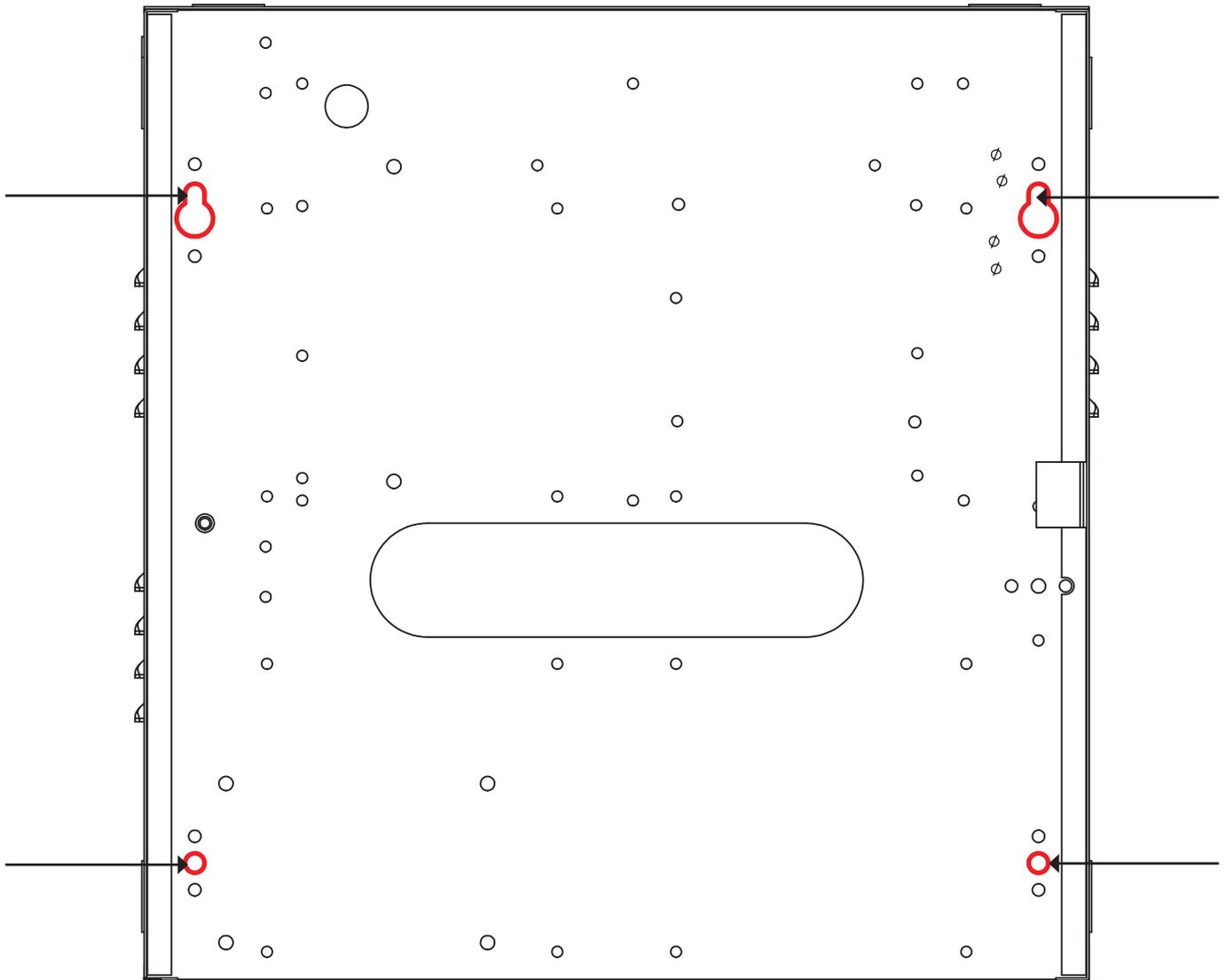


## FIXING THE BOX TO ITS LOCATION

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

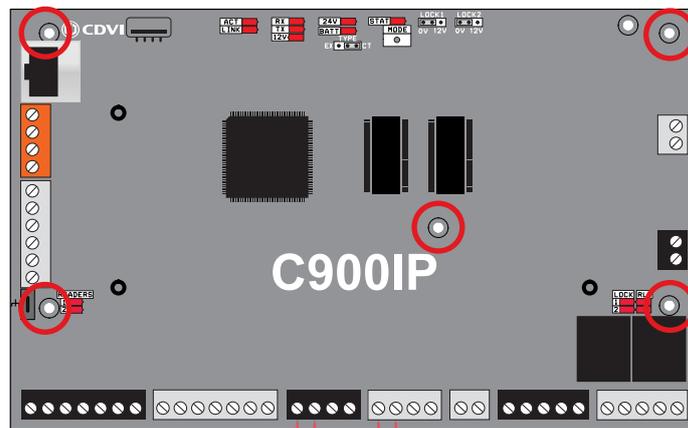
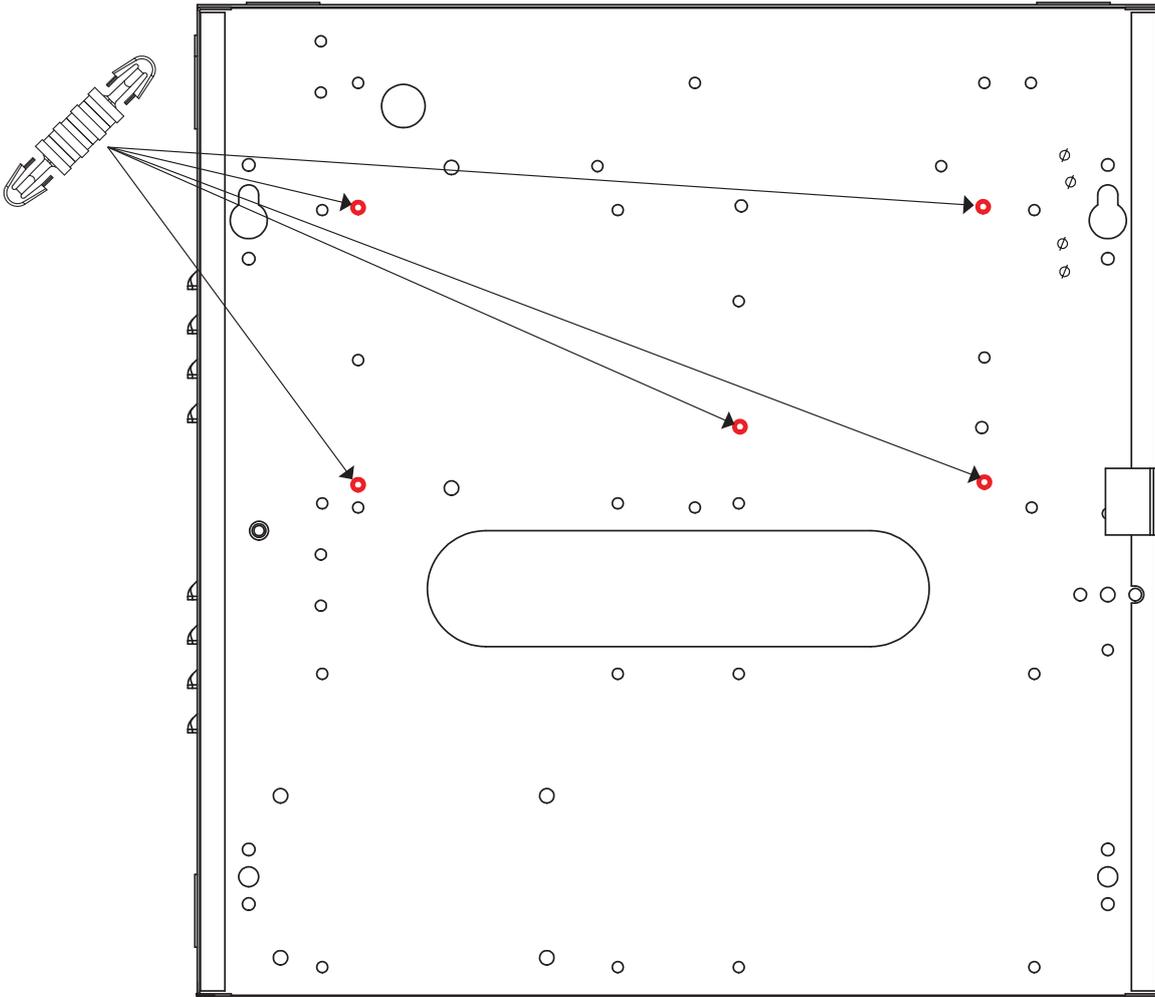


If the wall tamper switch is used, make sure that the tamper switch arm moves freely and is completely pushed in when the enclosure is installed on the wall.

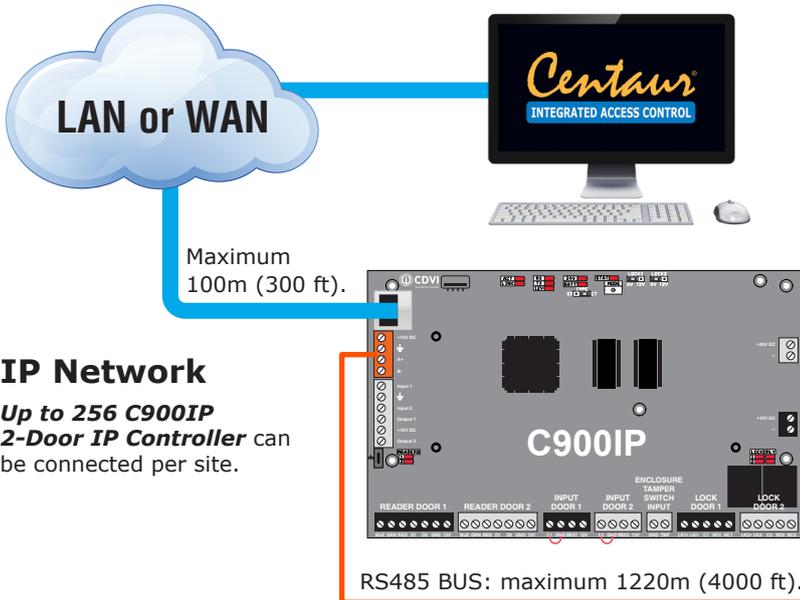


## INSTALLING THE C900IP PC BOARD

Install the 5 fasteners (PCB holder) supplied respectively to the box holes identified in red in the following picture. Install the C900IP PCB by aligning the fasteners with the corresponding PCB holes and pressing firmly to secure the PCB in place.



## 5] WIRING DIAGRAM



### IP Network

Up to 256 C900IP 2-Door IP Controller can be connected per site.

### RS485 BUS

Up to 3 CA-A470-A 2-door expander can be connected on the C900IP RS485 port, for a maximum of 2048 doors per site.

### EOL Jumper

The module EOL jumper located at the end of the RS485 network loop must be set to "ON". All modules in between EOL must be set at OFF.

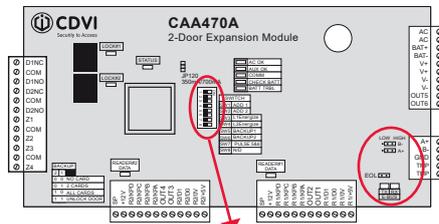
### HIGH/LOW Bias jumpers

The Bias jumpers (A+, B-) of all modules in the RS485 network loop must be set to "High".

These jumper settings apply to any CENTAUR module connected to the C900IP RS485 network.

Here is the list of modules that can be connected to the C900IP and the maximum capacity per RS485 loop:

- CA-A470-A** 2-Door Expander: 3
- CA-A480-A** Elevator Controller: 8
- CA-A460-A** Relay Module: 2
- CK-TRAK-L** LCD Display Module: 8

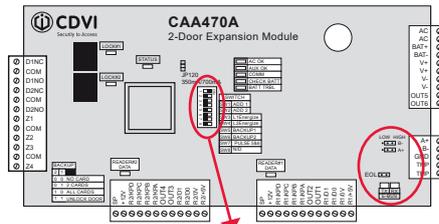


### Jumper settings

EOL= OFF

### Bias Jumpers (High/Low)

A+= High B-= High

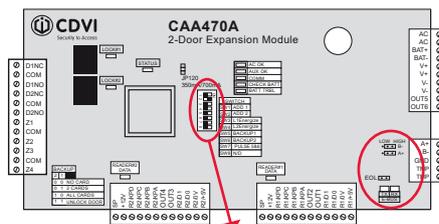


### Jumper settings

EOL= OFF

### Bias Jumpers (High/Low)

A+= High B-= High



### Jumper settings

EOL= ON

### Bias Jumpers (High/Low)

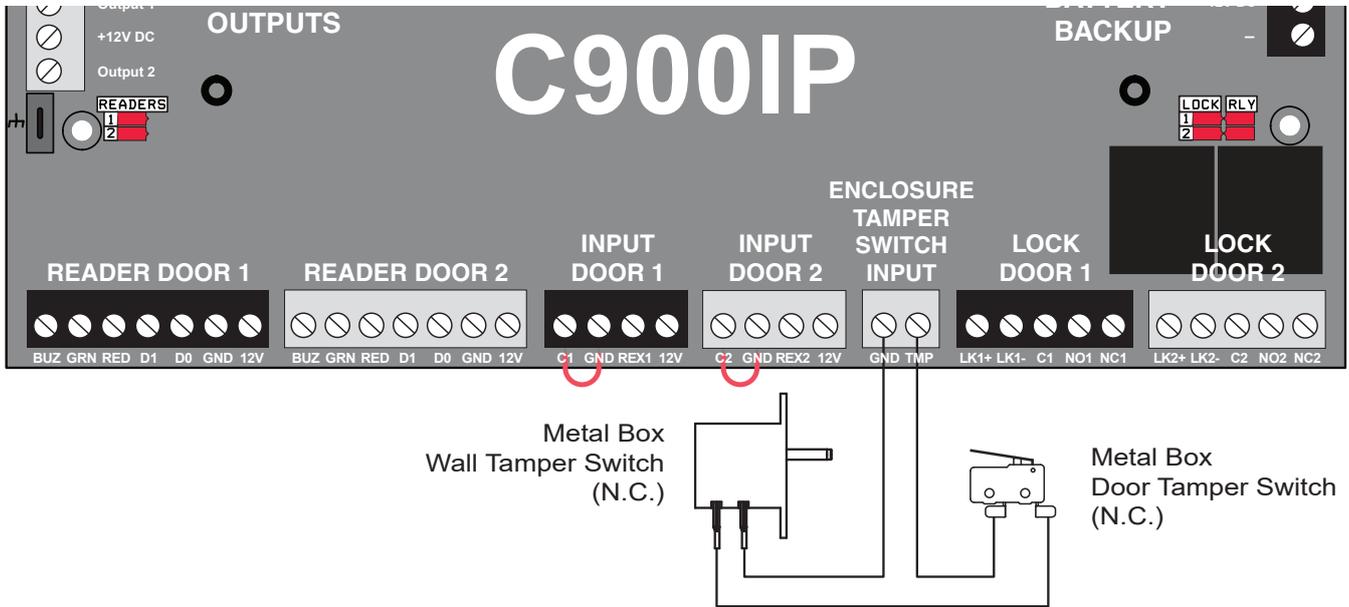
A+= High B-= High

## BOX TAMPER SWITCHES

Connecting the tamper switches allows the C900IP 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.

## READERS AND KEYPADS

The CENTAUR system is compatible with the following models of 26-bit Wiegand readers or keypads: GALEOW, KCPROXWLC, DGLPFNWLC26, NANO, STAR, SOLAR and SOLARK. Other popular Wiegand readers and keypads are also supported. Readers and keypads built-in buzzers and LEDs must be connected to the programmable outputs of the module (B1, G1, R1 for READER 1 and B2, G2, R2 for READER 2). These are open collector outputs capable of sinking 100 mA. Note that outputs B, G and R are programmed by default for a 7-wire reader.

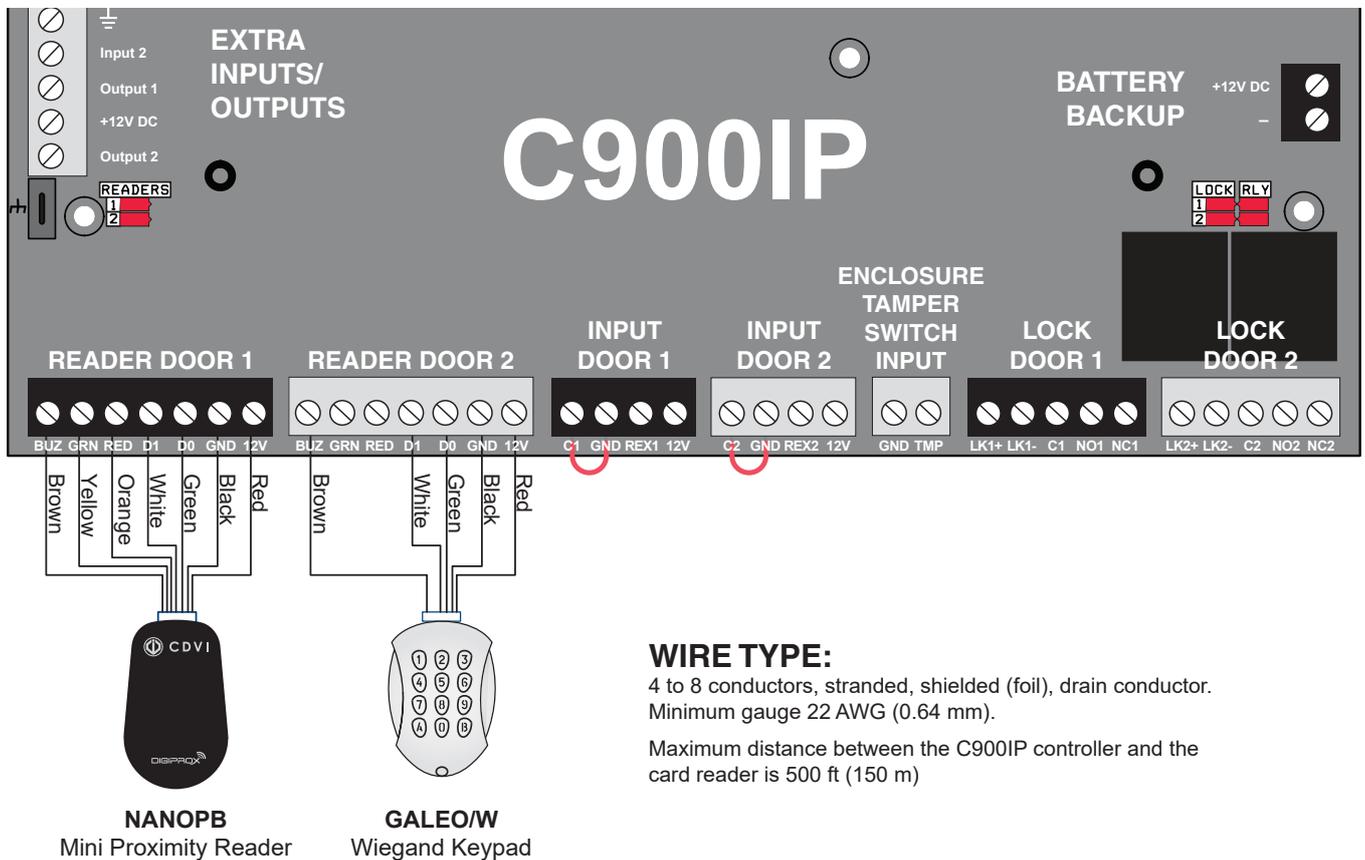
### Reader LED status:

**Standby:** LED indicator is steady red

**Access granted:** LED indicator changes from amber to green

**Access denied:** LED indicator changes from amber to flashing red

**Door unlocked by a schedule:** LED indicator changes from amber to brief green



Please note that the C900IP provides 12V DC output. Connecting a device (keypad or reader) requiring a different voltage may damage the reader or keypad and void the C900IP warranty.

## INPUTS

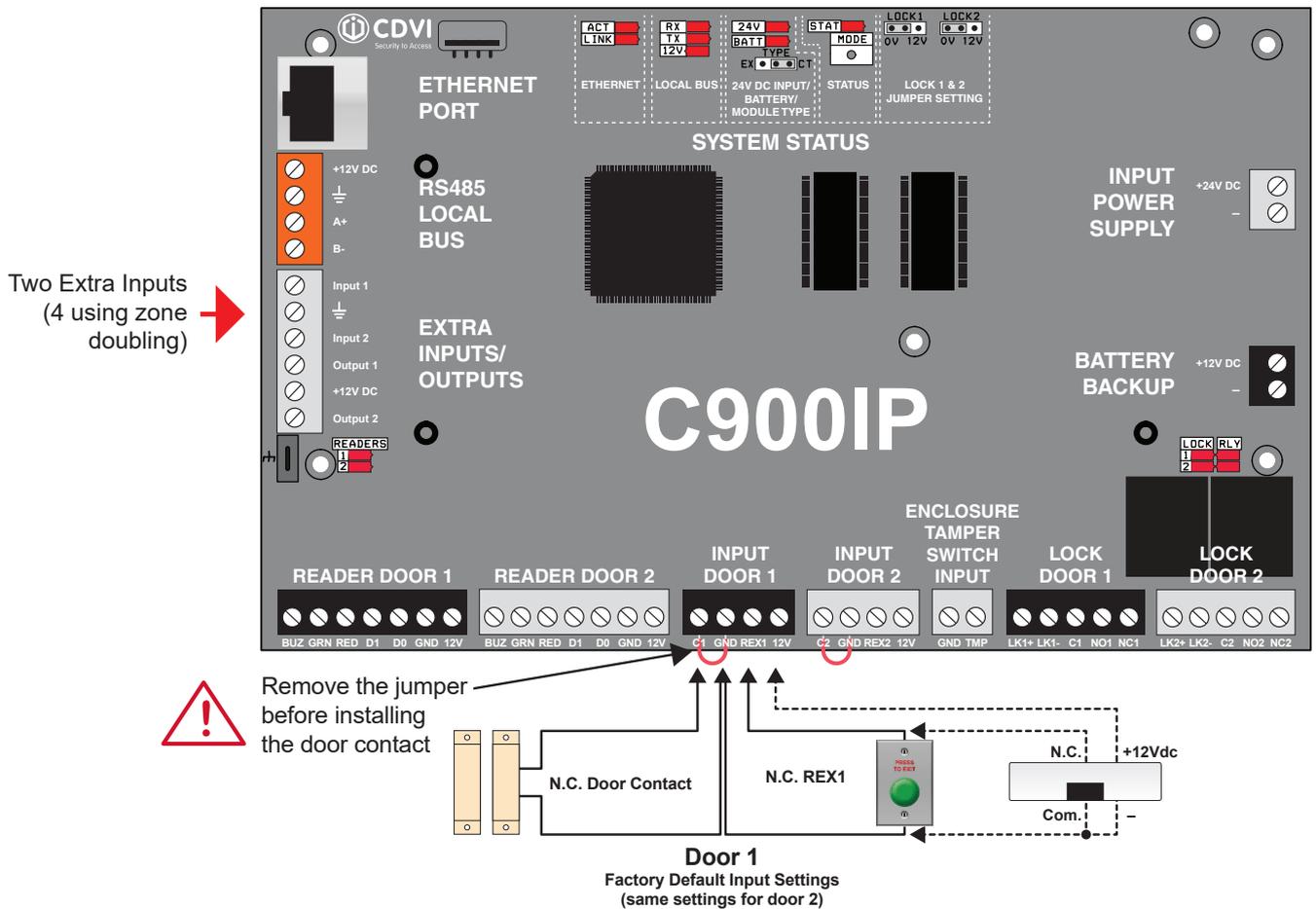
The C900IP can monitor the state of up to 6 devices (12 using zone doubling) such as magnetic contacts, motion detectors, temperature sensors, or other devices. The following are examples of the type of inputs that can be monitored:

### 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. When a magnetic door contact is installed, the system can differentiate between a door forced open and an authorized exit.

### Request to Exit (REX):

The device used can be a push button, vertical-view motion detector or floor mat sensor. 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.

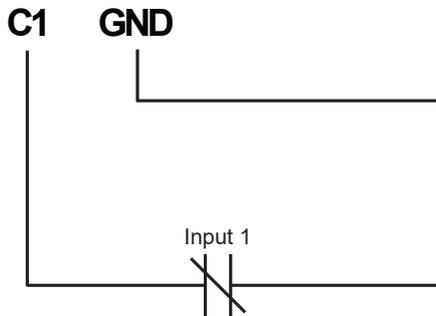
## Examples of Input Connection Methods

### Single (1 Detection Device per Input)

When using this method, only one device is detected by the input. Normally open or normally closed devices can be used. Normally closed circuit shown below.

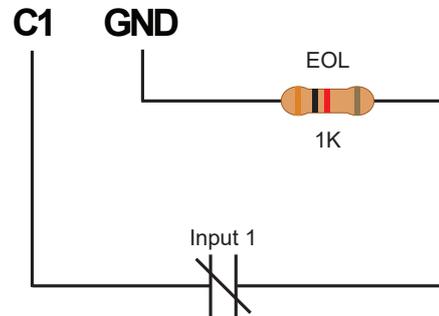
Here are the different options for a single input configuration:

#### Single



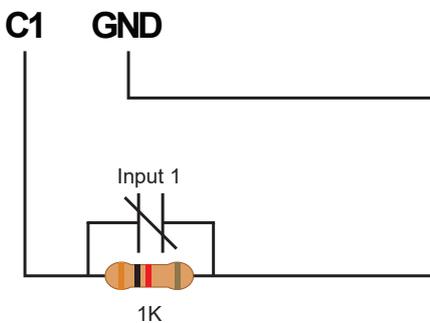
SHORT CIRCUIT supervision: No  
WIRE CUT supervision: No  
**(Factory Default)**

#### Single with short circuit (EOL) supervision



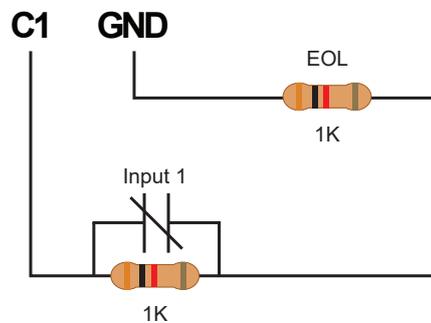
SHORT CIRCUIT supervision: Yes  
WIRE CUT supervision: No

#### Single with wire cut supervision



SHORT CIRCUIT supervision: No  
WIRE CUT supervision: Yes

#### Single with wire cut and short circuit (EOL) supervision



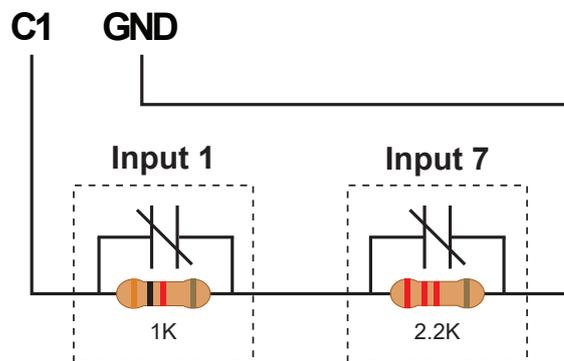
SHORT CIRCUIT supervision: Yes  
WIRE CUT supervision: Yes

### Doubled (2 Detection Devices per Input)

When using this method, two devices are detected by the input. Normally open or normally closed devices can be used. Normally closed circuit shown below.

Here are the different options for a double input configuration:

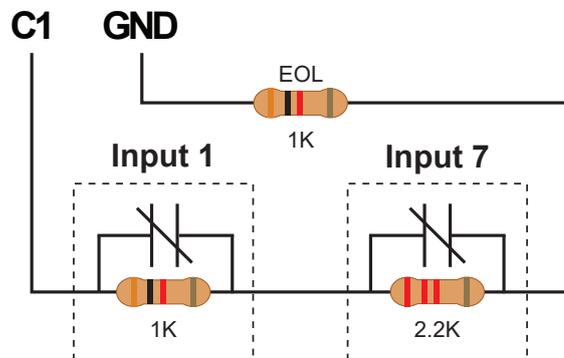
#### Doubled with wire cut supervision



SHORT CIRCUIT supervision: No

WIRE CUT supervision: Yes

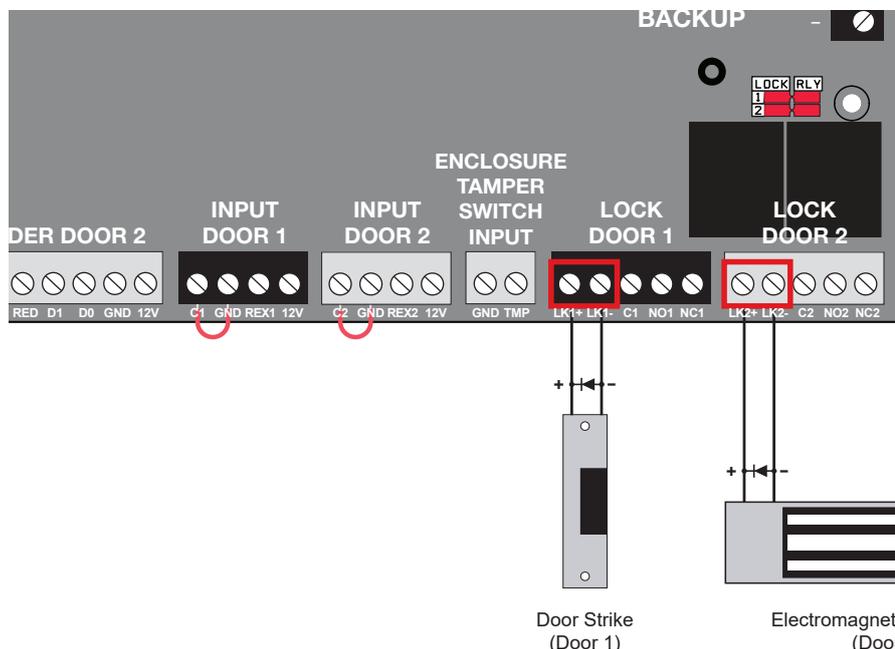
#### Doubled with wire cut and short circuit (EOL) supervision



SHORT CIRCUIT supervision: Yes

WIRE CUT supervision: Yes

## Lock Device Wiring Diagram Using On-Board Power Supply



### Lock output (LK1 & LK2):

By default, the lock output are set for **"De-energize"** (Fail Secure) lock.

To change the setting of the lock output, start the CENTAUR software, go to the C900IP door properties and select the **"General"** tab. Then, change the lock control as needed:

- **"De-energize"** for fail secure lock (default).
- **"Energize"** for fail safe lock.

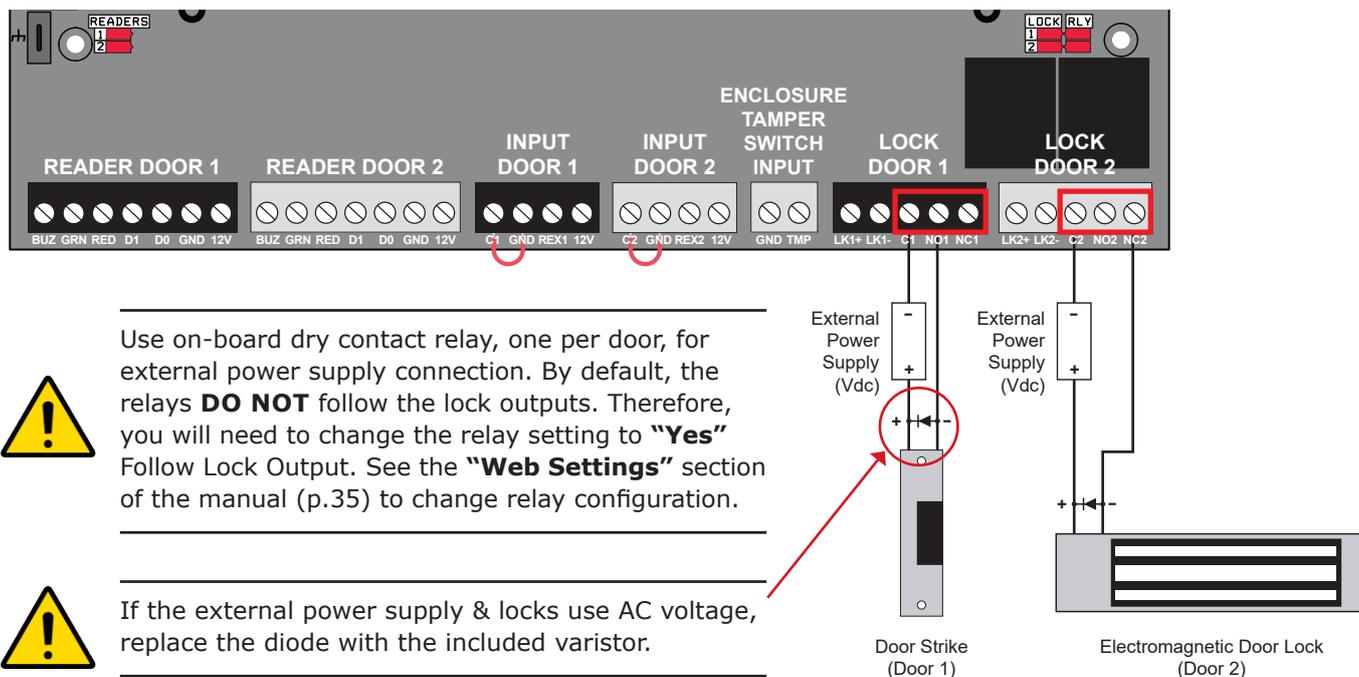
### Electromagnetic lock:

The lock control should be set to **"Energize"**



Each lock output provides 750mA at 12VDC. When a different voltage or more current is required, refer to the diagram below on how to connect an external power supply.

## Lock Device Wiring Diagram Using External Power Supply



Use on-board dry contact relay, one per door, for external power supply connection. By default, the relays **DO NOT** follow the lock outputs. Therefore, you will need to change the relay setting to **"Yes"** Follow Lock Output. See the **"Web Settings"** section of the manual (p.35) to change relay configuration.



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

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

## POWER SUPPLY



Do not power up the C900IP until all connections are completed.

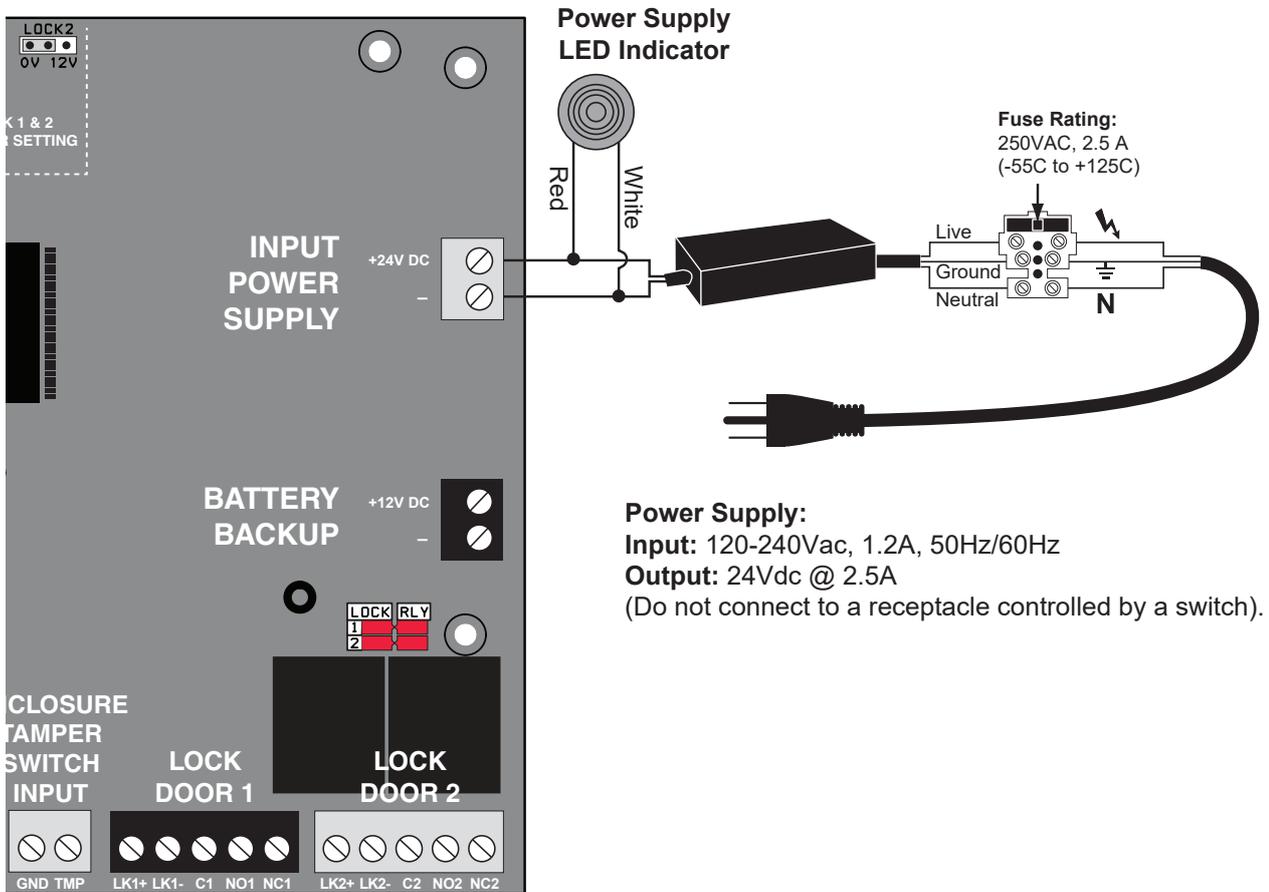
The module operates from any 120/240VAC source using the supplied AC/DC power supply and provides fully monitored power solutions using:

- Smart Battery Deep discharge prevention with automatic electronic cut-off.
- Programmable & Adaptive battery charging algorithm (250mA (default), 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'.

### AC Source

The AC to DC power supply is pre-installed in the C900IP enclosure but needs to be connected to the PCB. Simply plug the two pin terminal to the input power supply.

### Universal Power Supply Diagram (C900IP)



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



---

The Minimum Size Equipment Conductors for the AC mains required are 14 AWG if made of Copper or 12 AWG if made of Aluminum or Copper-Clad Aluminum. Do not use any switch-controlled outlets to power the system. The system is to be connected to a 15A receptacle or circuit.

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For PERMANENTLY CONNECTED EQUIPMENT, a readily accessible disconnect device shall be incorporated external to the equipment.

---



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For PLUGGABLE EQUIPMENT, the socket-outlet shall be installed near the equipment and shall be easily accessible.

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## AC Terminal Fuse

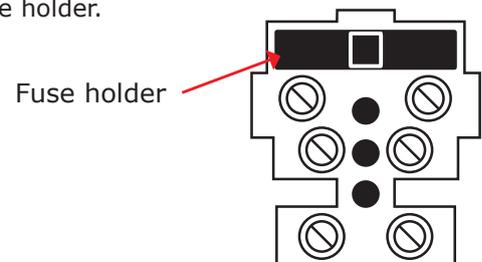


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The following steps are only presented in case you need to replace the AC terminal fuse.

---

1. Disconnect the AC power cord from the power source or for permanent installation, turn off the power breaker<sup>1</sup>.
2. Open the AC compartment at the top left to access the fuse holder.
3. Pull out the fuse holder.
4. Replace the fuse using the same fuse type:  
250VAC, 2.5 A, Time Lag, Slow Blow,  
Operating Temperature: -55°C to +125°C.



Permitted replacements:

- a) Littelfuse P/N 021802.5MXP
- b) Schurter P/N 0034.3121
- c) 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).

5. Replace the fuse holder in its location.
6. Close the AC compartment.
7. Connect the AC power cord to the power source or for permanent installation, turn on the power breaker<sup>1</sup>.



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<sup>1</sup> For permanent installation, this step must be done by a qualified technician in accordance with your local safety regulations.

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## PoE+ Power Supply Diagram (C900IPPOE)

The PoE+ splitter to DC power supply is pre-installed in the C900IPPOE box but needs to be connected to the PCB. Simply plug the two pin terminal to the input power supply.

### PoE+S Splitter Features:

#### Interface

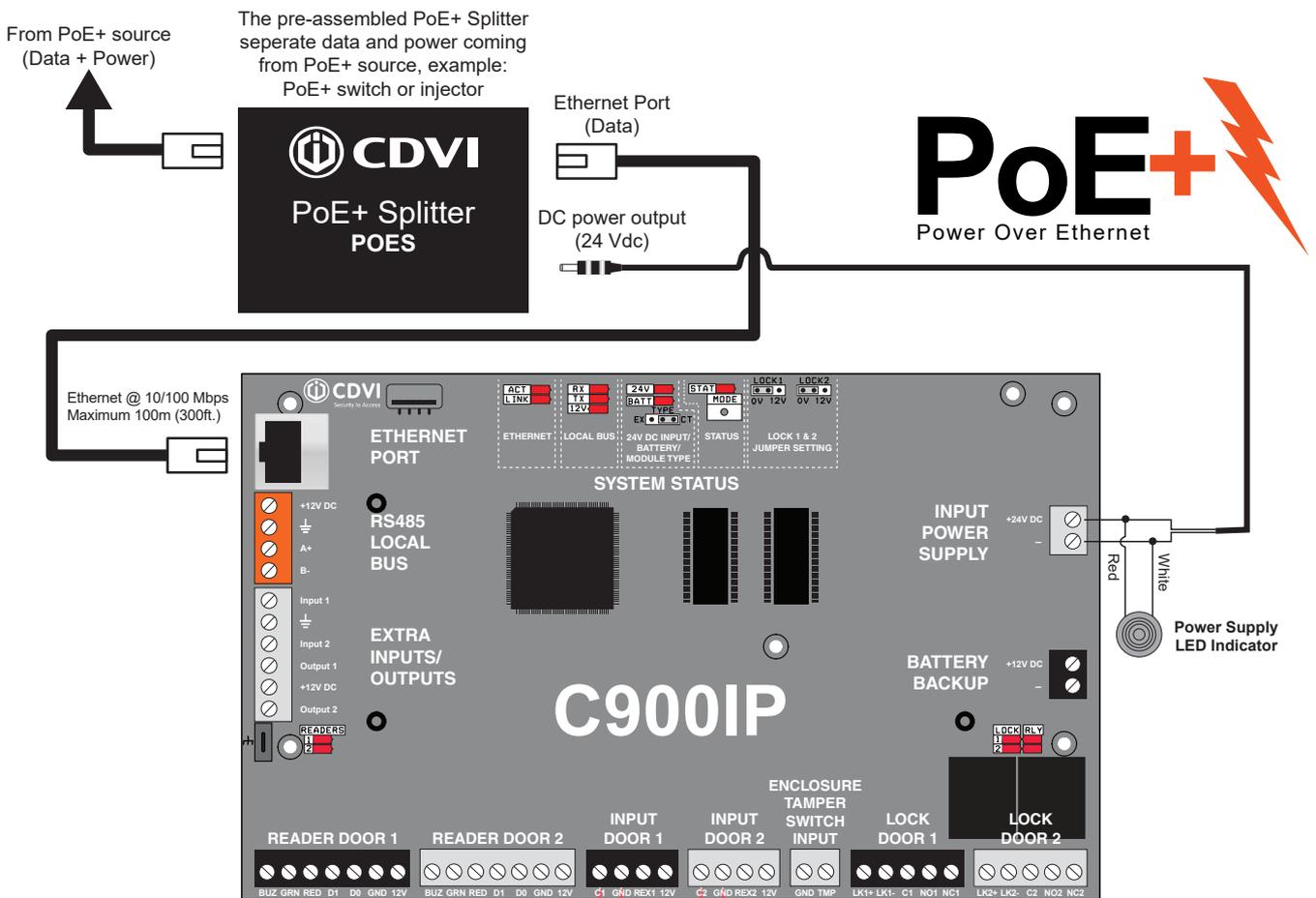
- 2-Port RJ-45 interfaces
  - 1-Port Data + Power input
  - 1-Port Data output
- 1-Port DC output power socket
- Output set to 24V DC (DIP switch)

#### Power over Ethernet

- Ultra Power over Ethernet End-Span / Mid-Span PSE (60W)
- IEEE 802.3at/af PoE standard compliant
- Supports 56VDC, 50p watt PoE power output
- Splits the 56V DC power over RJ-45 Ethernet cable into 24V DC output
- Remote power feeding up to 100 meters



Do not power up the C900IPPOE until all connections are completed.

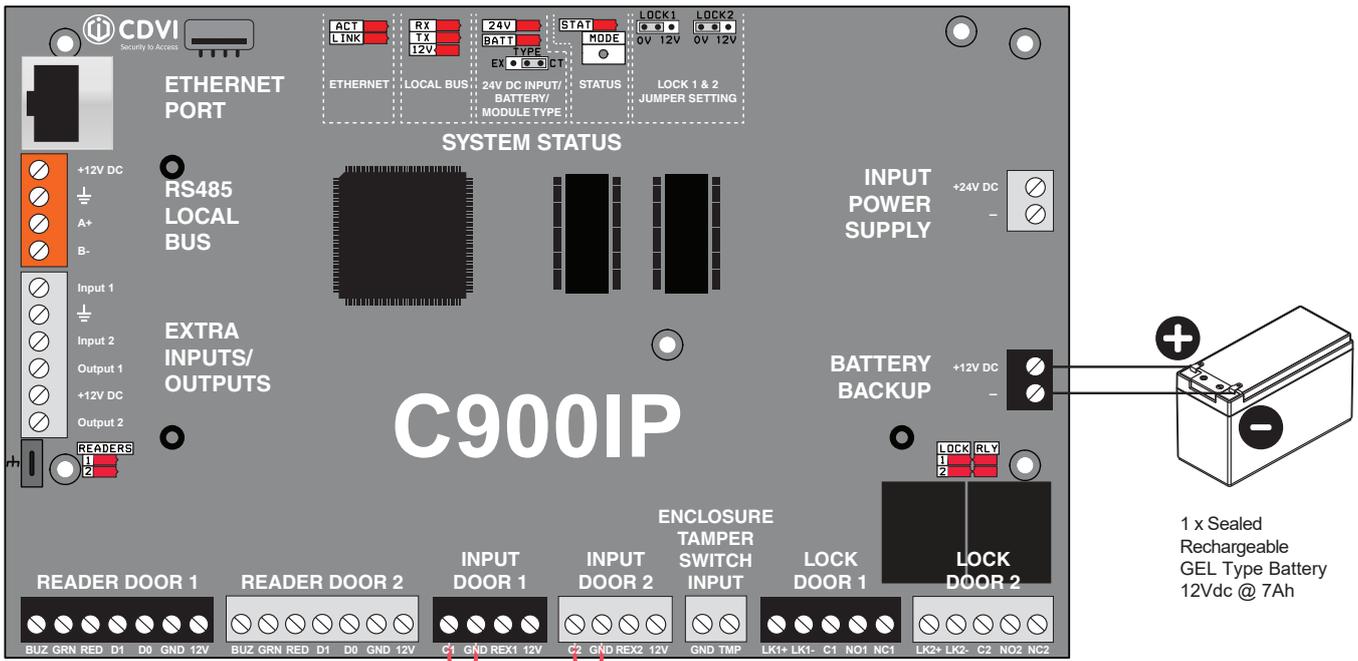


See "Recommended Wiring" section for more information on wiring type, size, and maximum length.

## BATTERY BACKUP

The C900IP cannot be started on battery power only. Battery backup time varies with each system. Typical backup time is between 4 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.



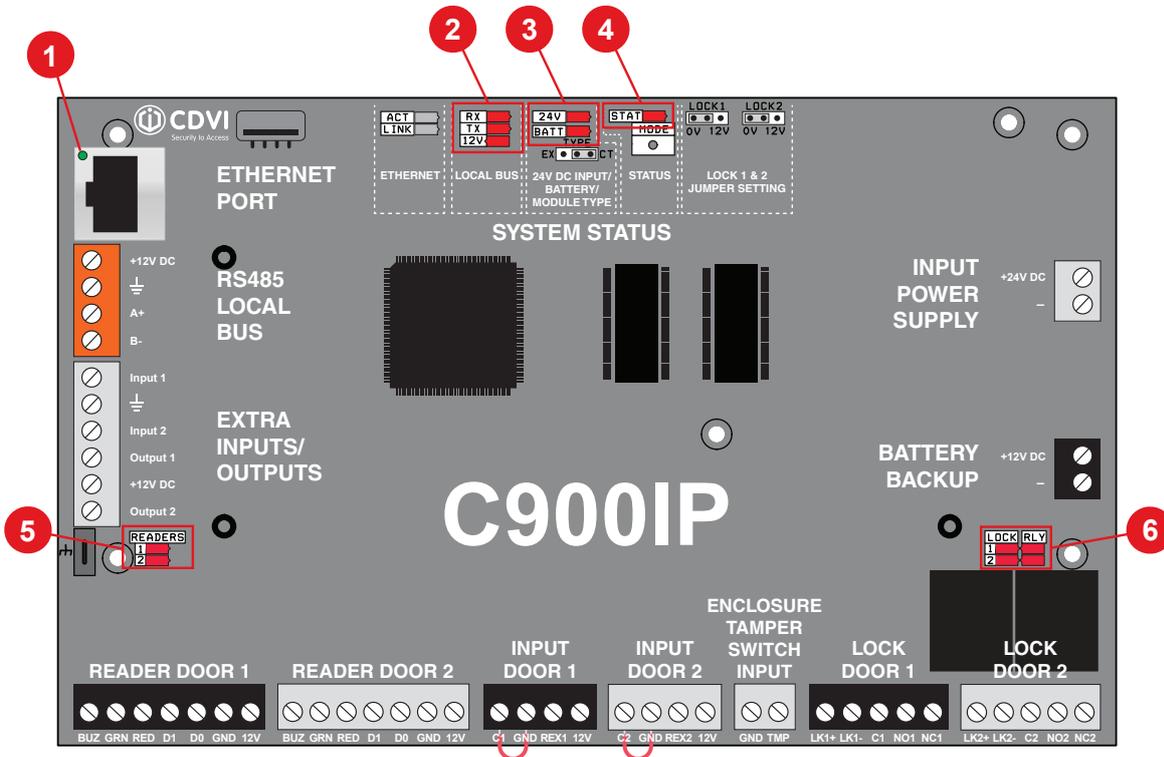
12V DC 7Ah rechargeable acid/lead or gel cell backup battery (UL/ULC: YUASA #NP7-12 recommended, Europe: CDVI B7AH recommended). Ensure proper polarity. Various (means any type, from any manufacturer that complies with the "Technical Data and securement means" and meets the "Mark of conformity" can be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



The battery charge current can be set to either 250 mA (default), 500 mA, or 1 A. Refer to the CENTAUR software to modify the battery charging current.

## LED INDICATORS

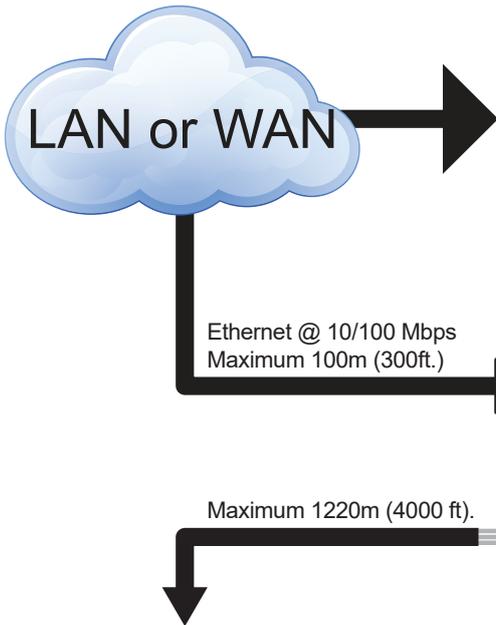
The CENTAUR C900IP has several status LEDs that are very useful to diagnose the CENTAUR system. Refer to the following picture to locate the LEDs on the CENTAUR C900IP.



1	ETHERNET		Yellow LED blinking: Ethernet network detected and data transmitted/received.
2	LOCAL BUS	RX	Green LED flashing: Data received on local bus.
		TX	Green LED flashing: Data transmitted on local bus.
		12V	Steady Green LED: 12V on local bus.
3	24VDC INPUT / BATTERY	24V	Steady DC IN Green LED: C900IP is powered properly. Red LED: No primary power.
		BATT	Green LED: On primary power present and battery charging.
			Green LED Off Steady: 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

The CENTAUR C900IP provides a 10/100Mbps Ethernet port to allow direct connection to a PC or to a LAN/WAN. Connect the Ethernet 10/100 Mbps port of the CENTAUR C900IP to a LAN or WAN network using a UTP cable (maximum 100m (300ft)). Connect CA-A470-A expansion modules on a 3 conductor RS485 communication loop in daisy chain configuration up to 1220m (4000 ft) from the C900IP controller.



### IP Port

The IP port is used to connect the C900K to a network (LAN or WAN). By default, the C900K is configured in DHCP and an IP address will be assigned to it automatically. System administrators will be able to manually manage the C900K's IP address using its on-board web page (see "Web Settings" on pages 33-36).

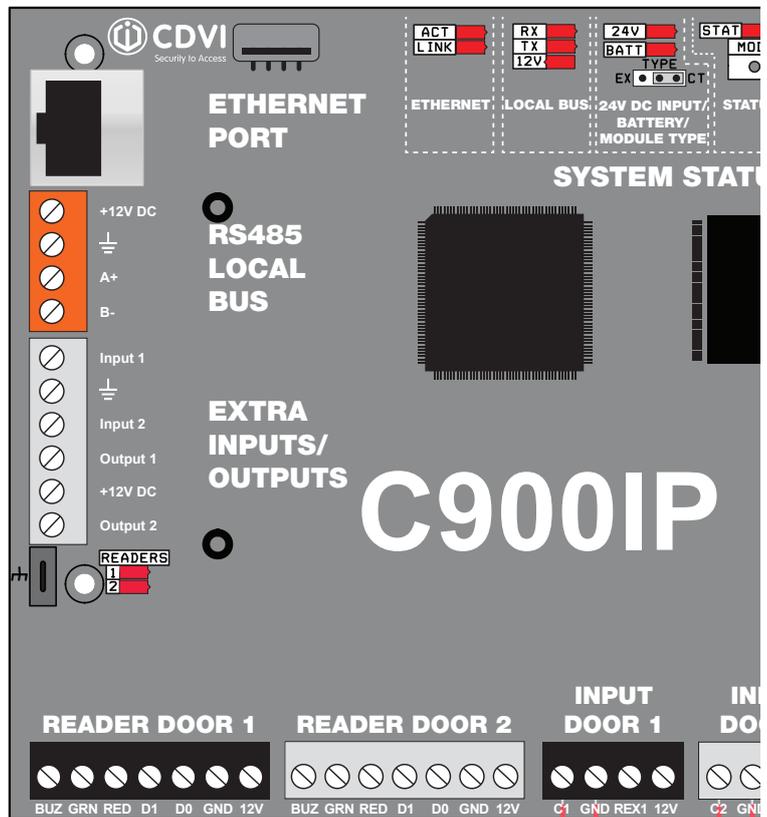
### RS485 Port

Here is the list of modules that can be connected to the RS485 loop of the C900K and their maximum capacity:

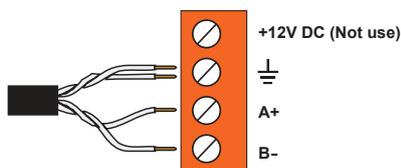
- CA-A470-A 2-Door Expander: **3**
- CA-A480-A elevator controller: **8**
- CA-A460-A relay module: **2**
- CK-TRAK-L LCD Display Module: **8**

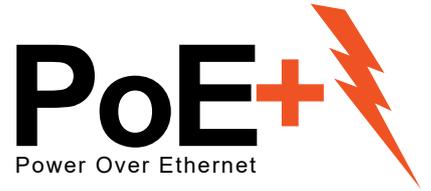
We highly recommended to use a twisted pair wiring as shown below.

It will avoid any communication problem that may occur in noisy environments.

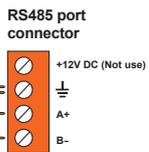
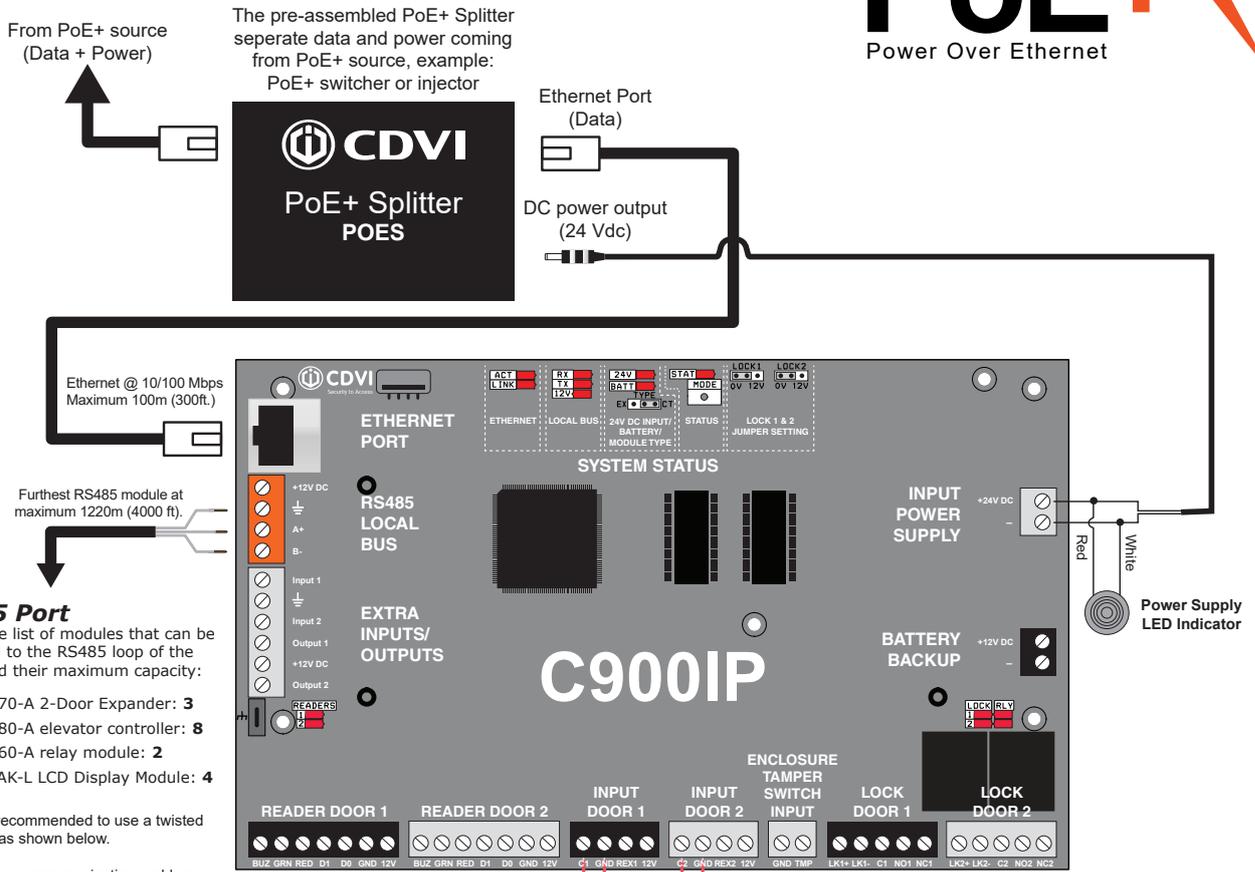


### RS485 port connector





**C900IPPOE Wiring Diagram**

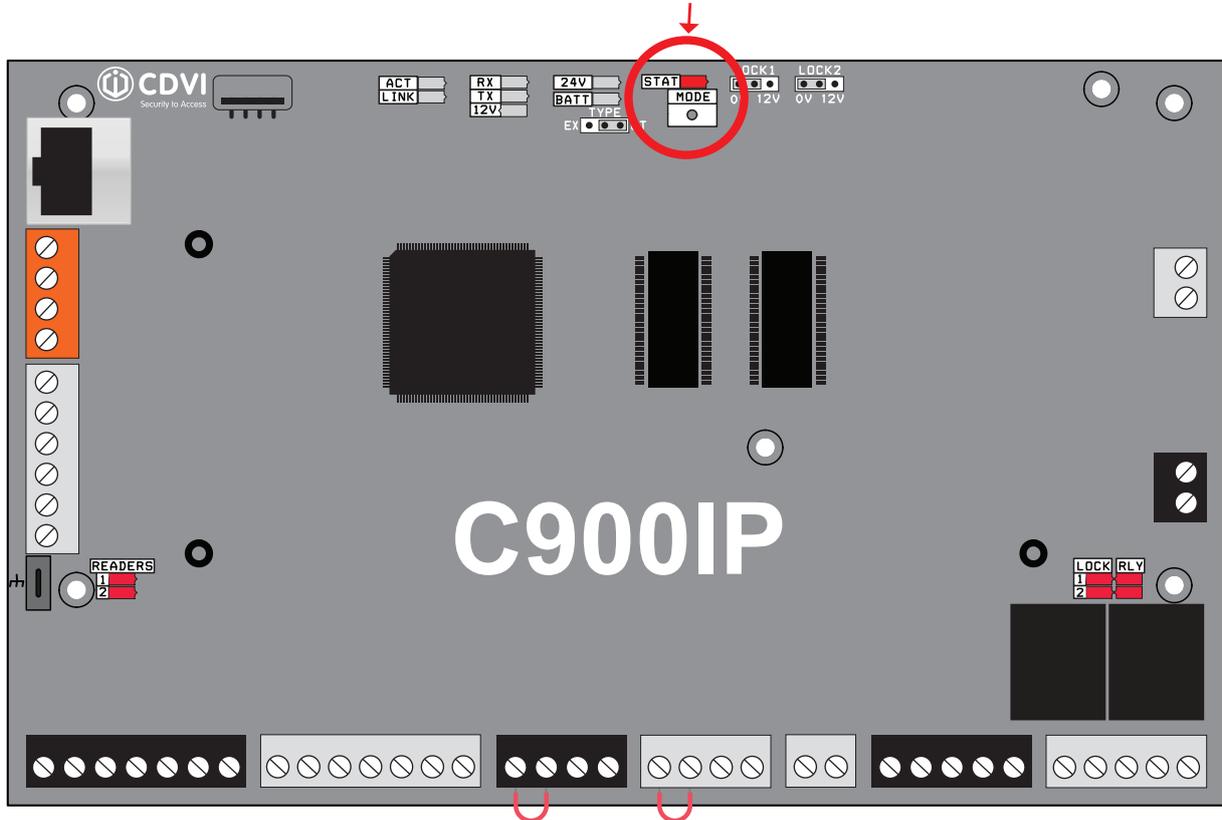


## RESET TO FACTORY DEFAULT

Here are the steps to reset the C900IP to the factory default settings:

- Press & hold the "MODE" button for ten "STAT" LED flash sequences (+/- 10 seconds), then release the "MODE" button.
- Approximately 2-3 seconds later, the "STAT" LED will blink twice
- Immediately press and hold the "MODE" button until the "STAT" LED blinks rapidly (+/- 5 seconds), then release the "MODE" button
- The controller will reboot and will be restored to factory default settings (+/- 30 seconds)

"STAT" LED & "MODE" button



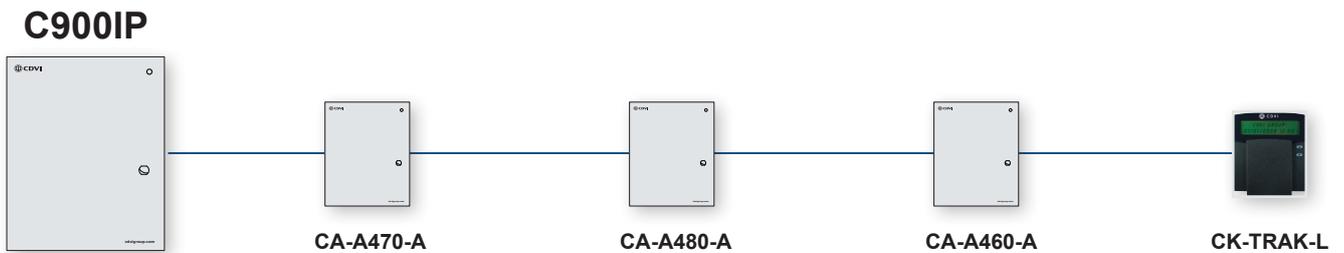
Events won't be deleted on a reset factory default of the C900IP controller

## RS485 BUS TOPOLOGIES

The C900IP has an RS485 LOCAL BUS terminal allowing the connection with an CENTAUR expander module. The RS485 LOCAL BUS communication is up to 1220 m (4000 ft) maximum distance. One C900IP can support up to four C900IP expansion modules.

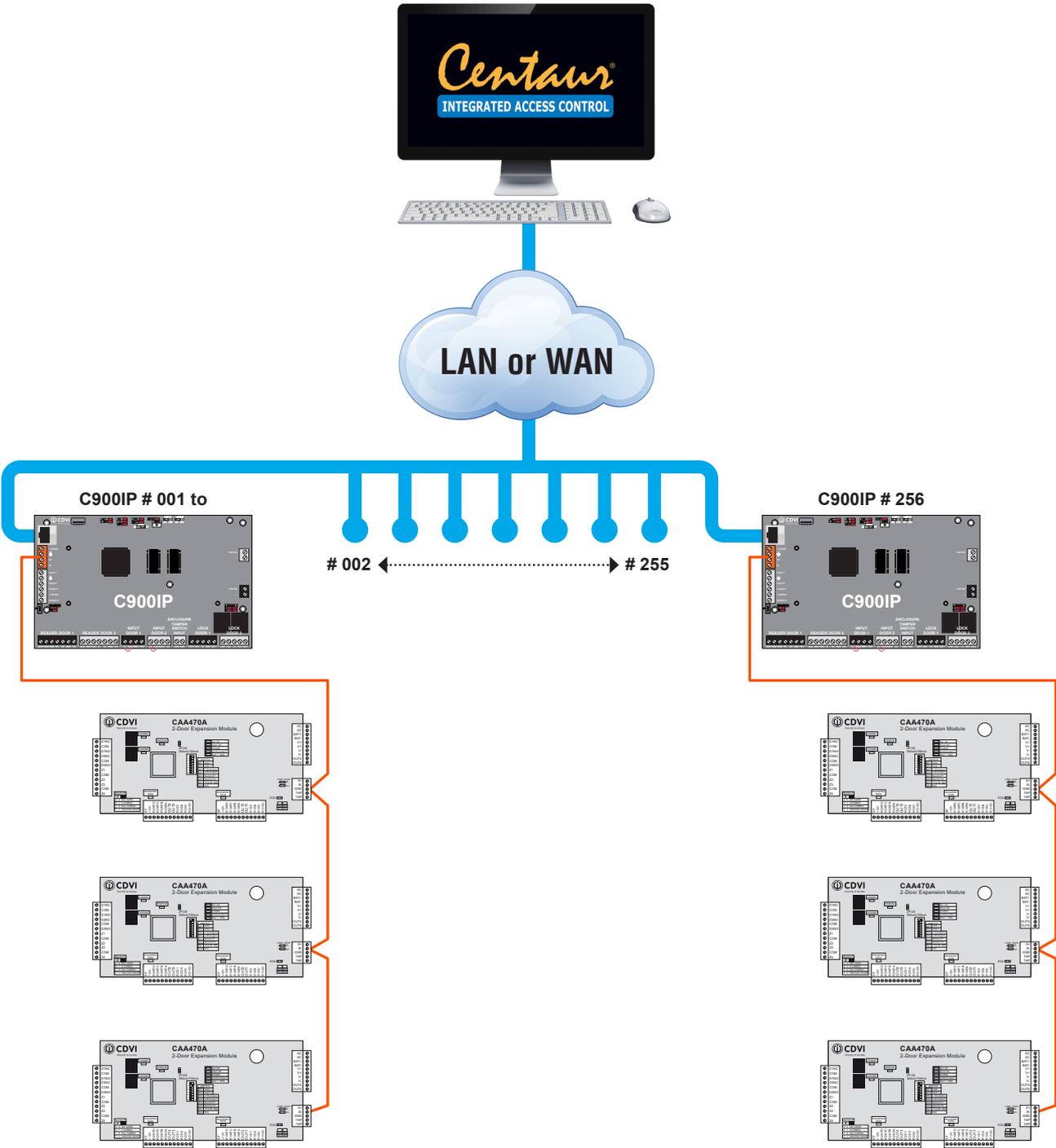
Connect the expander modules using these topologies:

### DAISY CHAIN



### SYSTEM OVERVIEW

Supports 256 C900IP 2-Door IP Controllers and 768 CA-A470-A 2-door expander for a maximum of 2048 doors per site.



## 6] WEB SETTINGS

### CDVI Module Finder

1. Install the "**CDVI Module Finder**" application (Windows only).

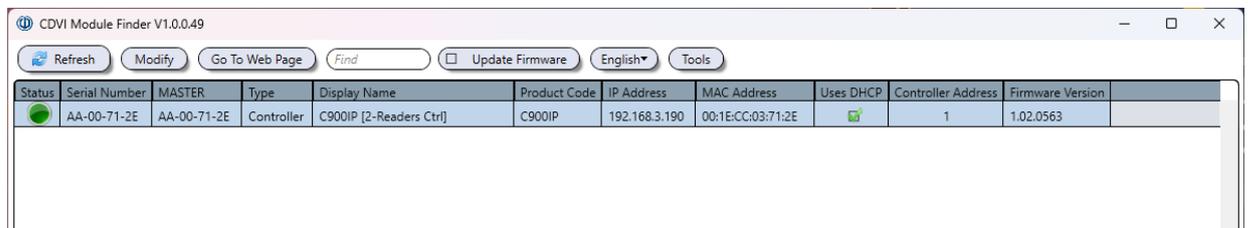


Install the "**CDVI Module Finder**" desktop application (Windows only) which is provided for FREE from CDVI website, [www.cdvi.ca](http://www.cdvi.ca). Make sure your computer is connected to the same network as the CENTAUR C900IP controller.



For Apple computers, use the "**CDVI Module Finder**" app available free of charge from the Apple Store. You can then find the IP address of the C900IP controller and type it into your favorite browser or configure directly from your smartphone.

2. From your computer desktop, double-click on the "**CDVI Module Finder**" icon.
3. From the list, select the C900IP controller you wish to configure and click on "**Go to Web Page**".



4. Your web browser will open automatically and go directly to the C900IP Login Screen. Type the Login ID (default: "**admin**") and Password (default: "**admin**"). The Login ID & Password are case-sensitive. Click "**Enter**" to log in.



**User Login**

**Login ID:** Default "admin".

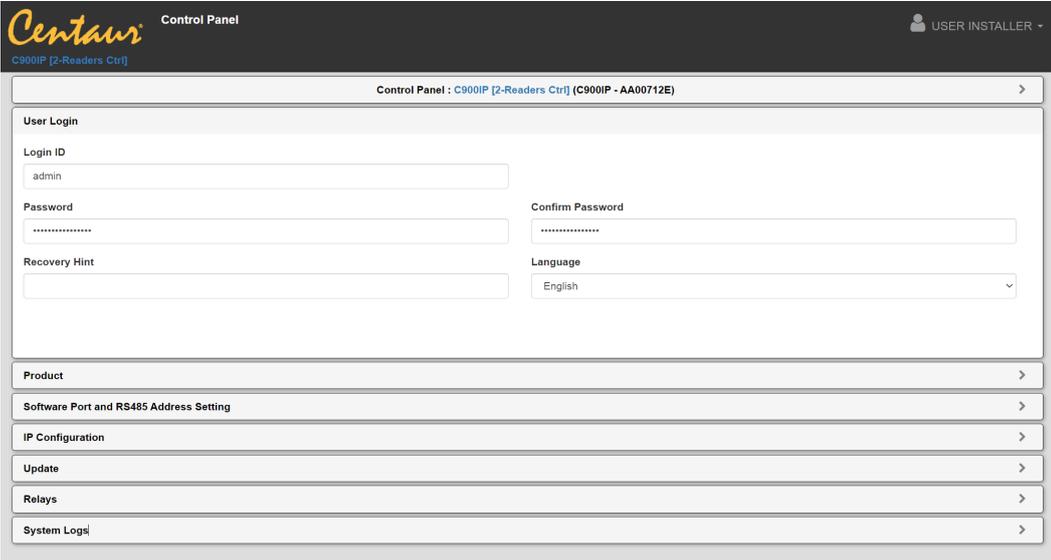
**Password:** Default "admin".

**Confirm Password:** Retype the same as the password to confirm and validate your choice.

**Recovery Hint:** Required in case the password is forgotten.

**Language:** Set the web page display language (English by default).

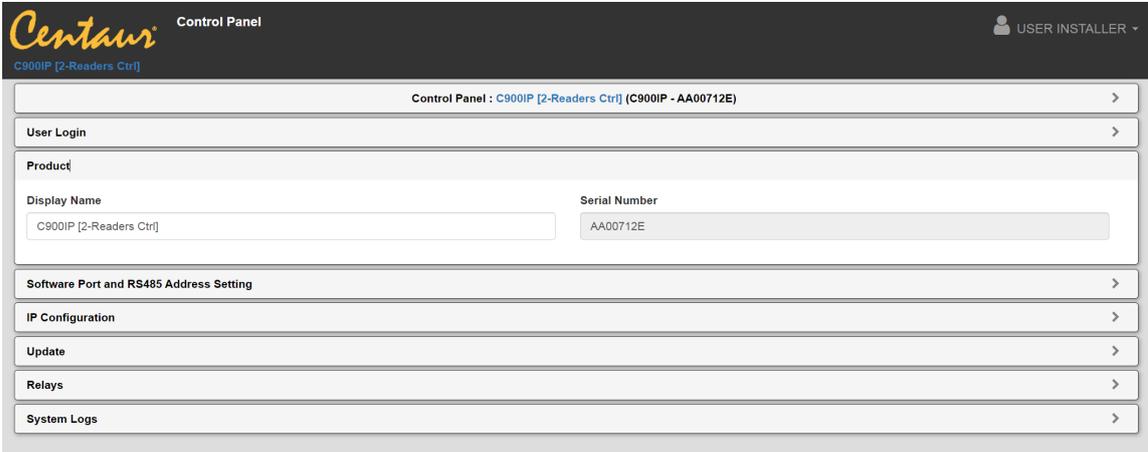
 It is strongly recommended to change the default Login ID and password for security reasons.



**Product**

**Display Name:** It will be displayed in the web page menu bar and in CENTAUR Finder.

**Serial Number:** Unique hardware number (cannot be changed).



### Software Port and Address Setting

**Centaur software port:** Set to 10001 by default, can be changed as needed.

**Address:** Set between 1 to 256.

Each CENTAUR controller of a site must have a unique address to operate properly.

The screenshot shows the Centaur Control Panel interface. At the top, it says 'Control Panel' and 'C900IP [2-Readers Ctrl]'. The user is logged in as 'USER INSTALLER'. The main menu includes 'Control Panel : C900IP [2-Readers Ctrl] (C900IP - AA00712E)', 'User Login', 'Product', 'Software Port and RS485 Address Setting', 'IP Configuration', 'Update', 'Relays', and 'System Logs'. The 'Software Port and RS485 Address Setting' section is expanded, showing two input fields: 'Centaur software port' with the value '10001' and 'RS485 Address' with the value '1'.

### IP Configuration

**DHCP:** Set to "Yes" by default. IP address will be assigned automatically by the network. Set it to "No" to manually manage the IP address (static IP address).

**MAC Address:** Unique hardware address (cannot be changed).

The screenshot shows the Centaur Control Panel interface with the 'IP Configuration' section expanded. The settings are as follows:
 

- IP Address:** 192.168.1.104
- MAC Address:** 001ECC03712E
- DHCP:** Yes
- Web port:** 80
- Gateway:** 192.168.1.254
- Subnet Mask:** 255.255.255.0
- DNS IP Address:** 192.168.1.93
- HTTPS:** Active
- HTTP to HTTPS redirection:** No
- HTTPS Web port:** 443
- Module Connection Key:** Password field with a checkmark next to it.
- Confirm Password:** Password field with a checkmark next to it.

## Update

**Current Firmware:** Firmware version currently installed.

**File to upload:** Click "**Choose File**" to select the firmware to be installed.

The screenshot shows the 'Update' section of the Centaur Control Panel. At the top, it displays 'Control Panel : C900IP [2-Readers Ctrl] (C900IP - AA00712E)'. Below this, there are several menu items: 'User Login', 'Product', 'Software Port and RS485 Address Setting', 'IP Configuration', 'Update', 'Relays', and 'System Logs'. The 'Update' section is expanded, showing 'Current Firmware' as '1.02.0567'. Under 'File to upload', there is a 'Choose File' button and the text 'No file chosen'.

## Relays

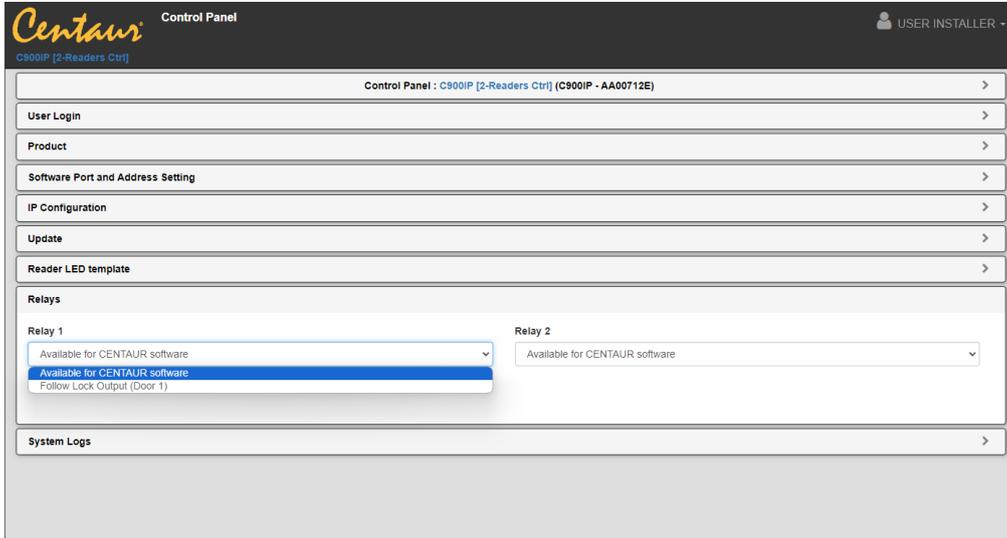
**Relay 1 follows door lock of door 1:** Set to "**No**" by default. This way the relay 1 can be used for other things. Set to "**Yes**" if you want the relay 1 to follow the lock output.

**Relay 2 follows door lock of door 2:** Set to "**No**" by default. This way the relay 2 can be used for other things. Set to "**Yes**" if you want the relay 2 to follow the lock output.

The screenshot shows the 'Relays' section of the Centaur Control Panel. At the top, it displays 'Control Panel : C900IP [2-Readers Ctrl] (C900IP - AA00712E)'. Below this, there are several menu items: 'User Login', 'Product', 'Software Port and RS485 Address Setting', 'IP Configuration', 'Update', 'Relays', and 'System Logs'. The 'Relays' section is expanded, showing two dropdown menus. The first is labeled 'Relay 1' and the second is labeled 'Relay 2'. Both dropdown menus are currently set to 'Available for CENTAUR software'.

### System Logs

Displays the latest system logs in order to debug as needed. Mainly made for CDVI internal use.



## 7] Warranty - Terms & Conditions

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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).
- 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.
- 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.



**C900IP**  
2-Door IP Controller



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*All the information contained within this document (pictures, drawings, features, specifications and dimensions) could be perceptibly different and can be changed without prior notice. - Aug 2024*