ins-20603
Net2 Plus and Power supplies
Note: This mounting process applies to all types of cabinet and housing regardless of size, material or power supply included.

1. Screws and wall plugs are provided in a parts kit. With reference to the diagram, mark up the hole positions as required and drill the holes suitable for No 8 wall plugs.

2. Tap in all three wall plugs and insert a long screw into the top, central mounting hole, leaving a suitable gap to the wall surface in order to slot the cabinet over it.

3. Hang the cabinet over the inserted screw as directed and tighten until secure. If the cabinet is not sufficiently secure, be wary of the unit falling.

4. Secure the cabinet with the two lower screws.

This housing should be fixed to the surface with suitable fasteners; screws and wall plugs are provided for this in the fitting kit. Also provided are cable ties to secure the cabling and a smaller securing screw for the lid.
Wiring

The use of a Fail closed/Secure configuration shall be determined by the local building codes and the local AHJ.
### LED indications

- **12/24V (Green)**: Power LED.
- **Relay 1 (Orange)**: The relay is energised - (NO/COM contacts are closed).
- **Relay 2 (Orange)**: The relay is energised - (NO/COM contacts are closed).
- **Alarm (Red)**: 12V Alarm output is active.
- **Exit (Orange)**: The exit button contacts are closed.
- **Contact (Orange)**: The door contacts are closed.
- **Tamper (Orange)**: The tamper contacts are closed.
- **PSU (Orange)**: The PSU contacts are closed.
- **OK (Green flash)**: The internal software is running.
- **Termination (Red)**: The on-board resistors are in place across the RS485 data pairs.
- **Rx (Red)**: The ACU is receiving data (TCP/IP or RS485) - See also FAQ section.
- **Tx (Green)**: The ACU is responding to data - (TCP/IP or RS485).
- **Server Connected (Green)**: The TCP/IP interface is communicating with the PC Net2 server.
  - Green = 100 Mbit/s : Orange = 10 Mbit/s (TCP/IP speed).

### Overview

A Net2 plus can connect to the Net2 PC using either an un-shielded RJ45 patch cable or an RS485 data line. This greatly increases the number of installation options available to the installer.

Two typical site layouts are:

1. The Net2 plus ACU’s can be individually connected to the Net2 PC via the site LAN network.
2. Using a RS485 ‘daisy chain’ dataline, a Net2 plus ACU can be used as a TCP/IP converter for a line of Net2 plus ACU’s.

When used with an RS485 data line, on-board termination resistors can be put in circuit with a simple slide switch. Ensure that units installed in the middle of the data line have this switch turned OFF.

The Net2 plus shall be installed within the protected premises as both the power and lock wiring is present at the PCB. A Tamper alarm input is provided on the PCB - See the Input/Output Wiring section.

The Net2 plus‘ will continue to operate in a ‘standalone’ mode if the PC is shut down or the dataline is disconnected. Any Events that occur during this period are stored in the Net2 plus and the PC is updated when it comes back on line.

The PC must be running for any ‘server based’ functions to operate. (Antipassback, Time and Attendance, etc)

To see the installation options available and important information relating to the installation and configuration of the Net2 plus, please refer to the Application notes section on the website: [paxton.info/2028](http://paxton.info/2028)
Input/Output wiring

Exit button

When the Exit terminal is shorted to 0V, the Exit LED will illuminate and the ACU will operate Relay 1. The reader/exit button Green LED will flash during this period. More than one exit button can be wired in parallel. Relay 1 will remain transfered while the short to 0V remains.

Door contact

A NO switch may be fitted so that it is held closed while the door is shut.

When connected, Net2 will check the door position during access activity and will raise an Alarm in the event of a ‘Door Forced’ or ‘Door left open’ condition.

Tamper switch

The ACU supplied in a plastic housing has a ‘NO’ tamper switch fitted and pre-wired into the circuit board.

The Tamper LED will be ON when the switch is closed. Net2 will monitor the switch position and will raise an Alarm in the event of a ‘Tamper’ condition.

Connect to a UL listed burglar alarm unit for supervision.

PSU monitoring

The ACU supplied in a plastic housing has a ‘NO’ tamper switch fitted and pre-wired into the circuit board.

The Tamper LED will be ON when the switch is closed. Net2 will monitor the switch position and will raise an Alarm in the event of a ‘Tamper’ condition.

Connect to a UL listed burglar alarm unit for supervision.

Door Bell - Relay 2

Pressing the bell button on the keypad will result in Relay 2 being energized for 1 second. A bell sounder can be controlled by wiring one of the bell feeds across COM / NO on the relay.

See Specification table for Output Ratings
**Alarm sounder**

This local alarm has a transistor ‘open drain’ output, (not a dry contact relay) and will switch 1A at 12V DC for a bell, light etc.

This local output can be turned on or off for each type of alarm and can be configured to sound continuously or intermittently to distinguish between different alarm types.

**Lock Wiring - Relay output**

This is a ONE door controller using a dry contact relay

The lock is wired across 12V and COM. A link (0V to NO or NC) is required, depending on lock type (Fail Closed / Open). Fit the supplied diode across 12V and COM (Silver end to 12V ) to protect the relay contacts.

The dry relay contacts can be used to switch the power from an independent lock power supply. Wire the 0V to NC or NO and the lock to COM; the +VCC supply is wired directly to the lock

**Panic hardware/ Fire Door Interface**

The ACU supplied in a plastic housing has a ‘NO’ tamper switch fitted and pre-wired into the circuit board.

The Tamper LED will be ON when the switch is closed. Net2 will monitor the switch position and will raise an Alarm in the event of a ‘Tamper’ condition.

Connect to a UL listed burglar alarm unit for supervision.

A fire alarm system must be used to release all fire doors. External relay contacts are held closed by the fire alarm’s interface and will be dropped during an alarm condition. The system is fail safe as the door will release even if the cable burns through.

**Intruder alarm integration**

A dedicated port for input and output signals is provided when integrating a Net2 plus ACU with an alarm system.

Please see: AN1035 - Integrating Net2 with an intruder alarm system  www.paxton.info/91  or call Technical Support for further information.

Arm - Arm confirmation Push Button - Wire across 0V and Arm.
Sense - Wire a voltage free loop across 0V and Sense to monitor the alarms current status.
Set - Wire a voltage free loop across COM and N.O. or N.C. to provide a set signal for the alarm
Wiring installation and test

1. Wire the components to the Net2 Plus Access Control Unit (ACU) as shown on the third page.
2. Press the exit button or in the absence of an exit button short the 0V and exit terminals to test the relay function. The lock Relay LED will come on and the lock should release.
3. If there are any Readers or keypads wired to the Net2 plus, ensure that all the LED’s are lit on each reader/keypad. Test each reader/keypad by presenting a token to the unit. It should beep and display a single flashing red or green LED. The reader or keypads default indication has all the LED’s on. Access granted is denoted with a single flashing Green LED. Access Denied is a single flashing Red LED.

**Note:** Each time the Net2 Plus is powered on, it will run an internal health check. During this phase (about 5 secs) the OK LED will flash quickly before changing to a slower heartbeat.

Cable type

<table>
<thead>
<tr>
<th>Use</th>
<th>Max length</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS485 data line</td>
<td>1000 yds</td>
<td>2 x twisted pairs - Belden 8723 or Cat5 equivalent</td>
</tr>
<tr>
<td>Input/Output</td>
<td>100 yds</td>
<td>2 conductor - Alpha 1172C (22AWG) or equivalent</td>
</tr>
<tr>
<td>Reader/Keypad</td>
<td>82 feet</td>
<td>8 core, shielded - Belden 9538, Alpha 1298C (22AWG) or equivalent</td>
</tr>
<tr>
<td>Reader/Keypad</td>
<td>328 feet</td>
<td>8 core shielded cable - Belden 9540/ Belden 5306FE (18 AWG) or equivalent</td>
</tr>
</tbody>
</table>

An RS485 data line has a 1000 yds maximum. This distance can be increased with the use of Paxton high speed repeaters or by using shorter independant data lines using multiple LAN connections controlled from the same PC.

The RS485 communications port is used for uploading firmware and user information as well as providing Event information to the PC.

Connecting to the PC or other ACU’s via the RS485 data connection

90% of installation faults are caused by wiring errors on the RS485 data line. Special attention to this area can save time and effort.

**End of line termination** - 120 ohm resistors must be linked across each data pair at the beginning AND end of the line. This can be done on many units with a switch or jumpers. If not, resistors are provided with the converter.

**Reader & Data Cable Screens**
- Data cable screens and spare cores MUST be connected throughout.
- Reader and keypad screens where provided, should be connected to the Black 0V terminal.

The data line must be wired in a single daisy chain. The data connection to the PC may be located at any position along the data line.
RS485 data line resistance check

Power down all TCP/IP, USB and RS232 converters (individual and Net2 plus).

1. Check the resistance across each data pair is 60-80 ohms.
2. Check that there are no data line to screen shorts.
3. Check the screen of the data cable is continuous - this provides the 0V DC system reference

TCP/IP and RS485 LED indication

The Net2 plus performs two functions. It is an access control unit and also a TCP/IP RS485 converter. Information can pass across the PCB between the TCP/IP and RS485 data port but is not relevant to this ACU.

- **Server Connected LED (Steady Green)**
  This LED shows that the TCP/IP interface is active and receiving data from the Net2 PC server. This includes all data for other ACU’s that may be linked via the RS485 data port.

- **Rx and Tx LED’s**
  These LED’s show the activity for this ACU only. This is same indication as seen on a Net2 classic ACU. It is not dependant on the source (TCP/IP or RS485). The Rx LED will flash for all data being received and the Tx LED will only flash when this unit responds to its own address.

Maintenance

It is advisable to ensure that any third party backup power supplies or recovery procedures are checked regularly to ensure that the operation of the Paxton system is not compromised.

1. Short circuiting, mutilation or incineration of the cells must be avoided to prevent one or more of the following occurrences; Release of toxic materials, release of hydrogen and/or oxygen gas, rise in surface temperature.

2. If a cell has leaked or vented the control unit must be replaced. The battery is not to be replaced
12V DC PoE+ power supply in cabinet with Net2 plus

- **+12V DC Outputs**
- **PoE 802.3at**
- **PoE 802.3af**
- **Combined data and power from a PSE (Power source equipment)**
- **Ethernet data**
Overview

The PoE (Power over Ethernet) supply is designed to draw power from a network cable that is provided with a remote PSE. (Power source equipment).

This unit splits Ethernet data from the DC voltage. The voltage is available at two power connectors as 12V DC and the data is passed unaltered to the Ethernet Out port.

This allows a Net2 plus to receive its power and data over a single cable connection without the need for an additional power supply.

High power mode

The PoE+ power supply can be used in the high power mode (see specification table) if the power source equipment can detect this request for additional power.

This is achieved by the Paxton supply through a hardware indication (capacitance). It is not able to provide this confirmation through software (DLL classification).

Installation

1. Mount the cabinet as instructed on the first page.
2. Connect the network cable to PoE In.
3. The Power LED will illuminate if power is available on this data line.
4. The PoE+ LED will illuminate if the high power rating is available.
5. 12V DC power is available at the two output connectors.
6. Network data is available at ‘Ethernet Out’

Maintenance

Following the completed installation of this equipment, no further maintenance or testing is required. It is advisable to ensure that any third party backup power supplies or recovery procedures are checked regularly to ensure that the operation of the Paxton system is not compromised. This product is not suitable for retail sale. All warranties are invalid if this product is not installed by a trained technician.
24V AC/DC power supply with Net2 plus

Note: Input power must be supplied via a separately listed, class 2, plug-in transformer or access control power supply (not provided as part of this product). The power supply must be listed to UL 294 or must be installed with a listed surge protection device if listed to another standard. This unit has provision for a standby battery (not included).
Input Connection

Anchor points are supplied inside the case to secure the incoming supply cable. There are also ‘knock-outs’ in the case to allow convenient access for the cable.

Ensure that the supplied gland or grommet is used when passing the input power cable through any holes in the cabinet.

The battery backup function will not work until this unit has first been connected to the input supply. It is the loss of this supply that switches the unit to battery power.

The input cable must be passed around the supplied Ferrite core. This should be fitted within 2 inches of the connection with the power supply.

Installation

1. Mount the cabinet as instructed on the first page.
2. Connect the Ac input power.
3. The Power LED will illuminate when the input supply is healthy
4. 12V DC power is available at the two output connectors.
5. 24V DC power is available at the two output connectors.

Maintenance

Following the completed installation of this equipment, no further maintenance or testing is required. It is advisable to ensure that any third party backup power supplies or recovery procedures are checked regularly to ensure that the operation of the Paxton system is not compromised.
### Status Lights

<table>
<thead>
<tr>
<th>Green</th>
<th>This LED is on when the input supply is healthy.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>This LED is on when the input supply has failed - Power is being supplied by the battery.</td>
</tr>
</tbody>
</table>
SAFETY WARNING

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

A Net2 nano ACU or a Hands free interface cannot be installed in the Metal cabinet as this would block the RF signal used for the Net2Air wireless technology.
## Specifications

<table>
<thead>
<tr>
<th></th>
<th>Input supply voltage</th>
<th>Carrier frequency</th>
<th>Load output current/power (PoE+)</th>
<th>Load output current/power (PoE+ High power)</th>
<th>Operating Temperature</th>
<th>Moisture Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>682-493</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0°C - +55°C</td>
<td>x</td>
</tr>
<tr>
<td>682-528</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0°C - +55°C</td>
<td>x</td>
</tr>
<tr>
<td>682-810</td>
<td>24V AC</td>
<td>50/60HZ</td>
<td>N/A</td>
<td>N/A</td>
<td>0°C - +55°C</td>
<td>x</td>
</tr>
<tr>
<td>682-721</td>
<td>N/A</td>
<td>N/A</td>
<td>≤0.8A / ≤10.36W</td>
<td>≤1.5A / ≤20.4W</td>
<td>0°C - +49°C</td>
<td>x</td>
</tr>
<tr>
<td>857-381</td>
<td>24V AC</td>
<td>50/60HZ</td>
<td>N/A</td>
<td>N/A</td>
<td>0°C - +49°C</td>
<td>x</td>
</tr>
<tr>
<td>857-593</td>
<td>24V AC</td>
<td>50/60Hz</td>
<td>N/A</td>
<td>N/A</td>
<td>32°F - +120°F</td>
<td>x</td>
</tr>
<tr>
<td>857-387</td>
<td>N/A</td>
<td>N/A</td>
<td>≤0.8A / ≤10.36W</td>
<td>≤1.5A / ≤20.4W</td>
<td>0°C - +49°C</td>
<td>x</td>
</tr>
<tr>
<td>857-346</td>
<td>N/A</td>
<td>N/A</td>
<td>≤0.8A / ≤10.36W</td>
<td>≤1.5A / ≥20.4W</td>
<td>0°C - +49°C</td>
<td>x</td>
</tr>
</tbody>
</table>
1 - RS485 Data line resistance check - ACU not responding or fails to be detected.
First power down any data line converters and disconnect any ACU’s that do not have a flashing OK LED. Using a Multimeter, measure the resistance across the White/Green and Green pair at one end of the network. A resistance of between 60 and 80 ohms is required. Repeat the test for the White/Orange and Orange pair. This is vital for a stable and trouble free installation.

2 - ACU Reset - No OK LED flashing.
The ACU has no factory reset condition as it does not contain any fixed settings. The unit does have an operating program (firmware) that controls its functions and can be confirmed as running by means of the flashing OK LED.
• If the OK LED is flashing steadily, then there should be no reason to reset the unit.
• If the OK LED is not flashing, you need to clear the unit so that it can receive a firmware download from the PC. Any other ACU’s without OK LED’s must be taken off the line or powered down.

1. Stop Net2 Server (Net2 server icon - Bottom right of screen - Right mouse click, Select Stop the Net2 Server).
2. Power down the Net2 ACU.
3. Insert a link wire between the ‘Amber LED’ and ‘Media Detect’ terminals on reader 2 port.
4. Power up the ACU. - The OK LED flashes very quickly.
5. With the unit still powered, remove the link.
6. Go to the PC and Start the Net2 Server and go into the Doors screen. Click on the Detect button. This should look for the ACU and then download its firmware (This may take up to 5 minutes). - The OK LED should now be flashing with a steady heartbeat. This procedure must only be done for one ACU at a time.

NOTE: If this unit is using the TCP/IP interface, any fixed IP settings will be retained. If the unit is in DHCP mode it will need to be detected at each stage using the Server Config Utility as a new address may be issued by the IP server, each time the PCB resets.

3 - Can we use a DHCP IP address?
The Ethernet interface does support DHCP, but for more reliable communication, a static IP address must be reserved for the unit. This is because some servers issue different DHCP addresses each time they are restarted and this requires the Net2 interface to be manually set up again - a time consuming process.

4 - TCP/IP - Direct PC connection.
Connect the network interface directly to the LAN port of the PC. Without the presence of a DHCP server the unit will default to an IP address in the range 169.254.X.X.

Check the IP address of the network card of your PC by typing IPCONFIG at the command prompt. Detect theTCP/IP interface through the Net2 Configuration Utility and change the IP address of the interface to an address similar to that of your machine. For example, if the IP address of the PC is 192.168.10.7, change the IP address of the TCP/IP interface to 192.168.10.8. Once the IP address of the interface has been changed into the range of the PC then Net2 will be able to communicate with it.

NOTE: Do not change the IP address of your PC to 169.254.x.x, this will not allow the IP address of the TCP/IP interface to be fixed correctly.
5 - Cannot detect ACU via a TCP/IP interface.
1. Ensure the TCP/IP interface has been detected in the Net2 Configuration Utility, and responds when PINGed from the utility. A static IP address must be used for the interface.
2. If the interface is responding, try a loopback test. (see Loopback section)
3. The Net2 data line should be checked for resistance readings.

6 - Readers/Keypads not working.
• Software settings - Confirm that the settings of the reader or keypad are correct.
• Connections - Check the wiring and integrity of the connectors. If possible, test this reader on the other port.
• Cable - Belden 9540 or 9538 should be used to extend the reader cable. Twisted pair alarm cable should not be used. To confirm that a cable extension is not at fault, wire the reader direct into the reader port.
• Supply voltage - Confirm that the voltage is within specification. (see table)
• User token - Confirm that the user token used for testing is OK by presenting it to a known working reader.
• Interference - Confirm whether the reader works when tested ‘in hand’ and not mounted on the wall. Ensure that readers are not mounted back to back or there is no interference from other local RF devices.
Paxton Access Ltd hereby declares that this product is in conformity with all the essential requirements of the Directive 2014/53/EU.

http://paxton.info/3685

The full declaration of conformity is available on request. Contact details are provided at:

http://paxton.info/596

These products are not suitable for retail sale. All warranties are invalid if these products are not installed by a competent person.

The product is compliant with the following directives:

- The Low Voltage (LVD) Directive - 2006/108/EC
- The Restriction of Hazardous Substances (RoHS) Directive - 2011/65/EU

The following warnings and instructions MUST be adhered to. Read the instructions before installing and powering the equipment. Keep the instructions in a safe place for future reference.

**INSTALLATION** - Only qualified and trained personnel, familiar with this type of product and who fully understand these instructions should install, connect or test this equipment. There are no user serviceable parts within the PSU unit.

- The equipment is intended for indoor use only in dry locations. This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
- The installation must meet National Wiring Regulations and IEC60950-1 standards.
- Disconnect Devices: A readily accessible disconnect device shall be incorporated in the building wiring to include an appropriately rated circuit breaker to disconnect both poles with at least a 3.0 mm contact gap. After switch off, all internal capacitors will discharge to safe levels within 60 seconds under normal conditions. Under fault conditions, charge may be held for much longer and suitable precautions should be taken before handling the unit.
- Protection device: The fusing characteristics of the protection device to be used are T3.15AH250V

**SAFETY WARNING**

**RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.**

**DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.**

**North America:-**

**Product Complainace and limitations**

To comply as a UL listed installation, the following conditions must apply:-

The power must be provided via a separate DC supply, a UL Listed Access Control (or Burglar Alarm) Class 2, Power-Limited, power source capable of 4 hours standby must be employed. This is wired into the 0V and 12/24V terminals and the cable secured with the cable ties provided.

Software features and functions have not been evaluated by UL.

Server based functions  (Antipassback, Time and Attendance, etc) have not been evaluated by UL and cannot be used for UL 294 installations.

The use of Wiegand readers and the configuration software has not been evaluated by 'UL'

Wiring: - Where an equivalent cable / wire is used it must be ' UL Listed '

All interconnecting devices must be UL Listed.

Exit buttons - A UL listed 'push to make' button must be used.
Door contact - A UL listed 'Normaly Open' (N.O.) switch must be used.
Tamper alarm - Connect to a UL listed burglar alarm unit for supervision.
Alarm sounder - Connections to this alarm output have not been evaluated by UL for burglar alarm use.
Break glass - A UL listed break glass must be used.
Fire door interface - This feature has not been evaluated by 'UL' and must not be used in UL-294 installations.
Intruder alarm integration - This feature has not been evaluated by 'UL' and must not be used in UL-294 installations.
Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), local codes, and the authorities having jurisdiction.

For CAN/ULC-S319 installations, terminals, leads and wiring methods must comply with CSA, C22.1, Canadian electrical code, Part 1, safety standards for electrical installations.

The use of any add-on, expansion, memory or other module manufactured or supplied by the manufacturer’s representative will invalidate the CAN/ULC-S319 certification.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

**FCC Compliance**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Class B digital devices.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

Class A digital devices.

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 energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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**The following warnings and instructions MUST be adhered to. Read the instructions before installing and powering the equipment. Keep the instructions in a safe place for future reference.**

**INSTALLATION** - Only qualified and trained personnel, familiar with this type of product and who fully understand these instructions should install, connect or test this equipment. There are no user serviceable parts within the PSU unit.

- The equipment is intended for indoor use only in dry locations. This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
- This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
- The installation must meet National Wiring Regulations and IEC60950-1 standards.
- Disconnect Devices: A readily accessible disconnect device shall be incorporated in the building wiring to include an appropriately rated circuit breaker to disconnect both poles with at least a 3.0 mm contact gap. After switch off, all internal capacitors will discharge to safe levels within 60 seconds under normal conditions. Under fault conditions, charge may be held for much longer and suitable precautions should be taken before handling the unit.
- Protection device: The fusing characteristics of the protection device to be used are T3.15AH250V

**SAFETY WARNING**

**RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.**

**DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.**

**Conformité et limitations du produit**

Pour que l'installation répond aux normes UL, les conditions suivantes sont applicables.

Le pouvot doit être fourni par une alimentation DC séparée. Un contrôleur d’accès UL (ou alarme) classe 2, puissance limitée, source d'énergie capable de 4 heures en veille doit être utilisé. Ceci est branché sur les bornes 0V et 12/24V et le câble fixé avec des attaches de câble fournis.

Fonctions logicielles n'ont pas été évaluées par UL.
Les fonctions serveur (Antipassback, Pointage, etc.) n'ont pas été évalué par l'UL et ne peuvent pas être utilisé pour les installations UL294.

L'utilisation des lecteurs Wiegand et le logiciel de configuration n'ont pas été évalués par 'UL'

Câblage: - Quand un cable équivalent est utilisé, il doit être 'listé UL'
Tout appareil d’interconnexion doit être listé UL

Les boutons de sortie - A UL ‘pousser à faire’ bouton doit être utilisé.
Contact de porte - A UL 'Normalement ouvert »(NO) commutateur doit être utilisé.
Autoprotection - Connectez-vous à une unité d’alarme antivol UL pour la supervision.
Alarme sonore - Connexions à cette sortie d’alarme n'ont pas été évalués par l'UL pour l'utilisation de système d'alarme.
Brise-glace - Un UL verre de rupture doit être utilisé.
Interface Porte coupe-feu - Cette fonction n’a pas été évaluée par 'UL et ne doit pas être utilisé dans les installations UL-294.
L'intégration d'alarme anti-intrusion - Cette fonction n'a pas été évaluée par 'UL et ne doit pas être utilisé dans les installations UL-294.

Les méthodes de câblage doivent être en accord avec le code nation électrique (ANSI/NFPA70), codes locaux et les autorités ayant la juridiction.

Pour les installation CAN/ULC-S319, les terminaux, câbles et méthodes de câblage doivent être en accord avec CSA, C22.1, code électrique canadien, Partie 1, standards de sécurité pour les installations électriques.

L'utilisation de tout rajout, extension, mémoire ou module fabriqué ou fourni par le représentant du fabricant invalidera la certification CAN/ULC-S319

Ce dispositif est conforme au(x) standards RSS de l'industrie Canadienne sans-licence. Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne doit pas créer d'interférences nuisibles et (2) ce dispositif doit accepter toute interférence reçue, y compris des interférences qui peuvent causer un fonctionnement non souhaité.

Conformité FCC

Ce dispositif est conforme à la section 15 du règlement de la FCC. Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne doit pas créer d'interférences nuisibles et (2) ce dispositif doit accepter toute interférence reçue, y compris des interférences qui peuvent causer un fonctionnement non souhaité. Tout changement ou modification non agréé par la partie responsable de la mise en conformité peut entraîner une interdiction d'utilisation de l'équipement.

Cet appareil a été testé et a été trouvé conforme avec les limites pour un appareil numérique de Classe B, en vertu de la Partie 15 des règles FCC. Ces limites sont conçues pour fournir une protection raisonnable contre des interférences nuisibles dans une installation résidentielle. L'appareil génère, utilise et peut émettre une énergie de fréquence radio et, s'il n'est pas installé et utilisé en accord avec les instructions, peut causer des interférences nuisibles aux communications radio. Néanmoins, il n'y a pas de garantie que l'interférence ne sera présentera pas sur une installation particulière. Si l'équipement n'émet pas une interférence nuisible à la réception radio ou télévisuelle, qui peut être déterminé en éteignant et rallumant l'appareil, l'utilisateur est conseillé d'essayer de corriger l'interférence avec une ou plusieurs des mesures ci-dessous:
-- Réorienter ou repositionné l'antenne de réception
-- Augmenter la séparation entre l'équipement et le récepteur.
-- Connecter l'appareil sur une sortie ou un circuit différent que celui sur lequel le récepteur est connecté.
-- Consulter le fournisseur ou un technicien radio/TV expérimenté pour une aide.

Appareils numériques de classe A.
Cet appareil a été testé et a été trouvé conforme avec les limites pour un appareil numérique de Classe B, en vertu de la Partie 15 des règles FCC. Ces limites sont conçues pour fournir une protection raisonnable contre des interférences nuisibles dans une installation résidentielle. L'appareil génère, utilise et peut émettre une énergie de fréquence radio et, s'il n'est pas installé et utilisé en accord avec les instructions, peut causer des interférences nuisibles aux communications radio. L'opération de cet équipement dans une zone résidentielle créera probablement des interférences nuisibles dans quel cas l'utilisateur sera requis pour corriger l'interférence à ses frais.

Les avertissements et instructions suivantes DOIVENT être suivies. Lisez les instructions avant l'installation et la mise sous tension de l'équipement. Garder les instructions dans un endroit protégé pour une référence future.

INSTALLATION - Seulement des personnes formées et qualifiées, familiers avec ce genre de produit et qui comprennent ces instructions doivent installer, connecter ou tester cet équipement. Il n'y a pas de pièce dans ce produit qui puisse être entretenue par l'utilisateur.

- L'équipement est pour une utilisation interne uniquement, dans des endroits secs.
- L'installation doit adhérer aux demandes des régulations de câblage en vigueur (EN60950-1 entre autres). Un appareil de déconnexion facile d'accès doit être installé dans l'installation électrique du bâtiment.
- DECONNEXION- Un appareil de déconnexion facile d'accès sera incorporé dans le câblage du bâtiment pour y inclure une coupe circuit afin de déconnecter les deux pôles avec au moins une distance de contact de 3.0mm. Après avoir éteint l'alimentation, tous les condensateurs internes se déchargeront à un niveau sain après 60 secondes dans des conditions normales. Néanmoins, dans le cas d'une défaillance, les charges peuvent être maintenus beaucoup plus longtemps et des précautions adéquates doivent être prises avant de manipuler l’unité.
- Appareil de protection. Les caractéristiques de fusible de l'appareil de protection à utiliser sont T3.15AH250V

ATTENTION !

NE REMPLACEZ PAS LA PILE AVEC UN TYPE DE PILE DIFFÉRENT, SOUS RISQUE D'EXPLOSION.

DISPOSEZ LES PILES USÉES SELON LES INSTRUCTIONS