B**P52** 32–Zone Alarm Panel

Verkada B**P52**

Install Guide
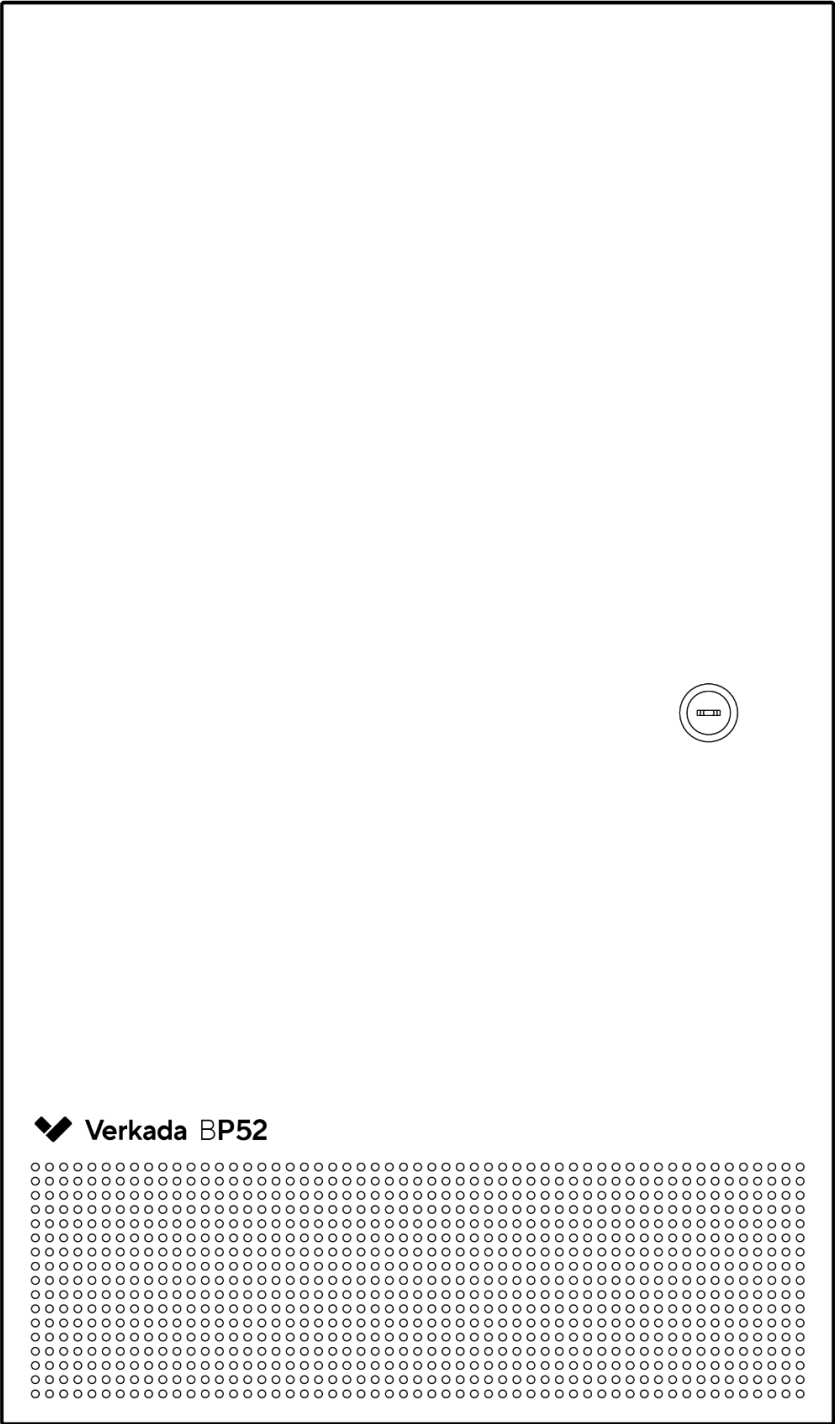
Document Details

Version
V1.1 20241107
(V1.0 published 20241107)

Firmware
Firmware version can be verified on Verkada
Command command.verkada.com.

Product Models
This install guide pertains to models BP52-HW-NA,
BP52-HW-UK, BP52-HW-EU, BP42-HW-AU.

Caution ⚠️

Installation and/or maintenance of this
product shall be performed by trained
professionals only.

What's in the box

BP52 Alarm Panel
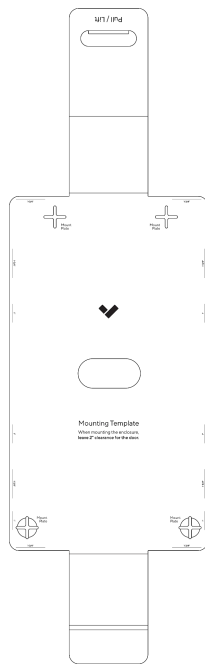
Mounting Template

Wall Mount
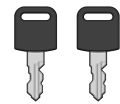
Keys (2 pcs)

1kΩ EOL resistors (32 pcs)

Plywood Screws (4 pcs)
For materials other than plywood, ensure
proper load-bearing fasteners are used.

Flathead Screwdriver

AC Cable

VLink Antenna (1 pc)

What you'll need

- A working internet connection
- A smartphone or laptop
- A #2 Phillips head and power drill
- A level
- 1/4 inch (6.5mm) drill bit for wall anchors
- 1/8 inch (3mm) drill bit for pilot holes
- A Cat5 or Cat6 Ethernet cable

Connect

Connect the BP52 to your network using the ethernet port (WAN) located on the panel.

Connect the BP52 to AC power using either of the methods described in the wiring diagram guide.

For easy registration and setup, scan the QR code on the product.

If you prefer to manually register your product, please proceed to: verkada.com/start

Overview 1/2

Backup Cellular Device Mounting Location

Controller Diagram

Lock

Status LED

AC Power LED

Relay Status LED

AC inlet

VBX Battery Receptacle
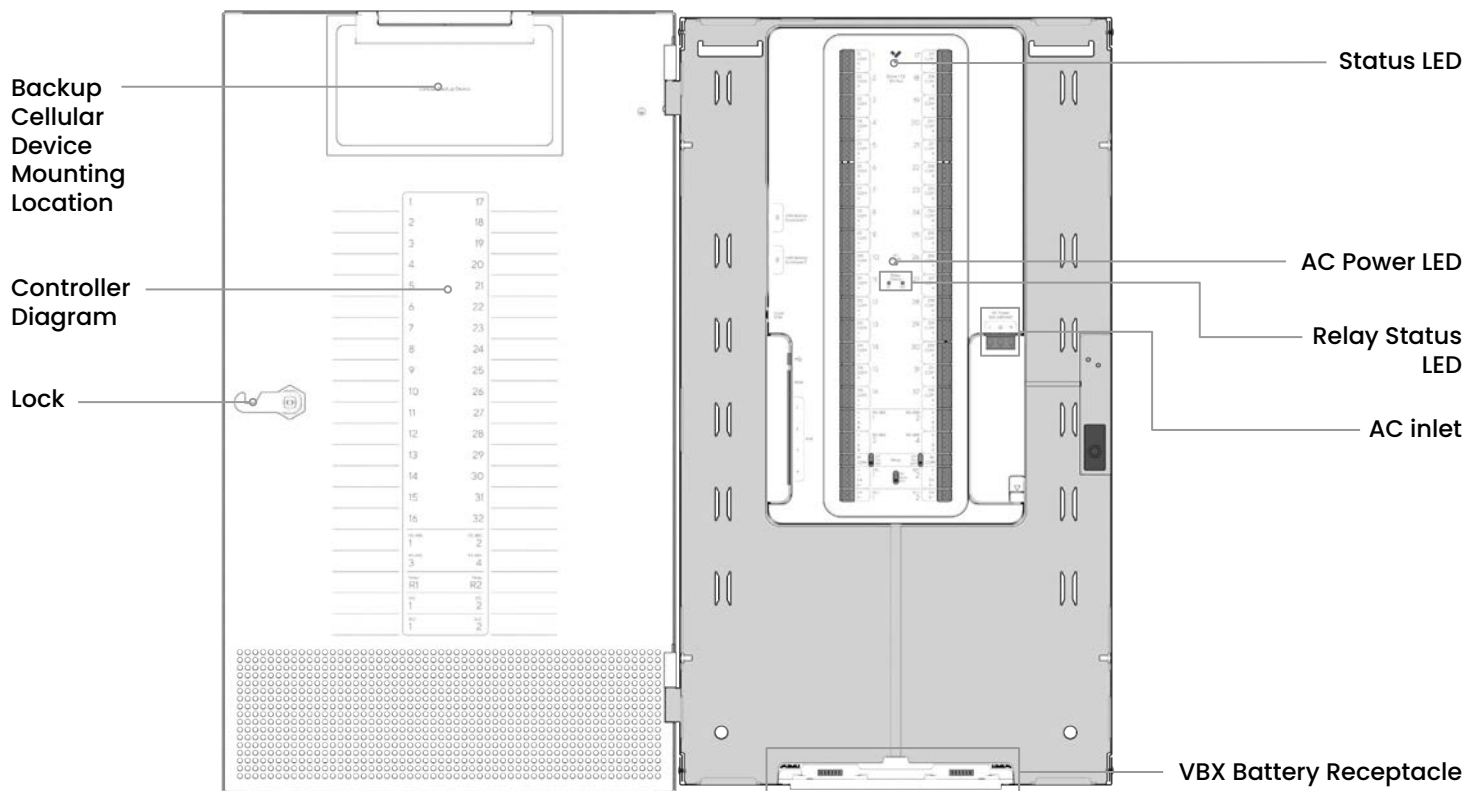
Note: This equipment is for use in an indoor and a restricted access area.

Status LED Behavior

Solid Orange
Panel is on and booting up

Flashing Orange
Panel is updating firmware

Flashing Blue
Panel is managing sensors, but cannot reach the server

Solid Blue
Panel is managing sensors and connected to the server

Relay LEDs Behavior

Solid White
Relay in triggered state

AC LED Behavior

Solid White
System On AC Power

Blinking White
System On Battery Backup Power

LED Off
No System Power

Introduction

Overview 2/2

1 Alarm Zones 1-32.
All zones have the same utility and can be configured in Command.

2 RS-485 Zones 1-4
   Relay Outputs 1-2

3 VBX battery pack Inputs 1-2
   VLink SMA antenna connection

4 USB-A, WAN Port, Ethernet Ports 1-4

5 AC Power Input

Note: Ports labeled SLC and IDC are disabled on BP52 product number 60-95001-A, 60-95002-A, 60-95003-A, 60-95004-A.

Introduction
Technical Specifications

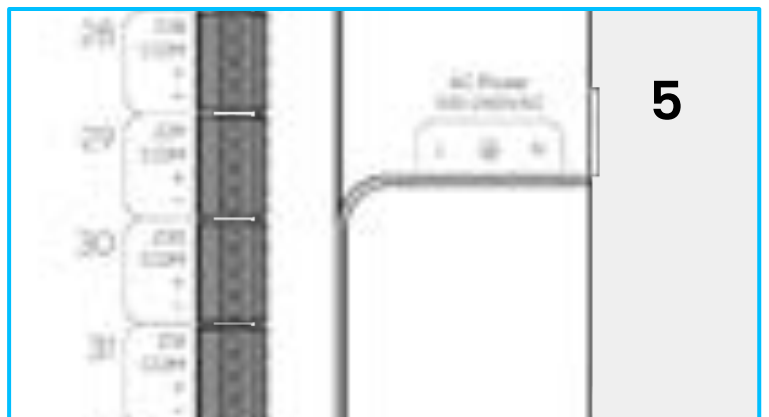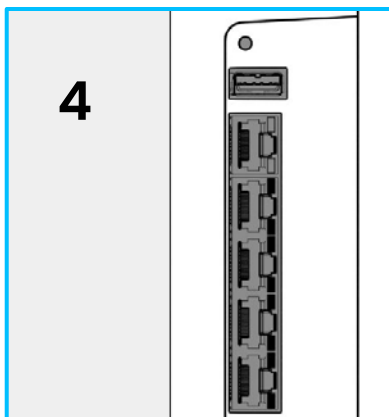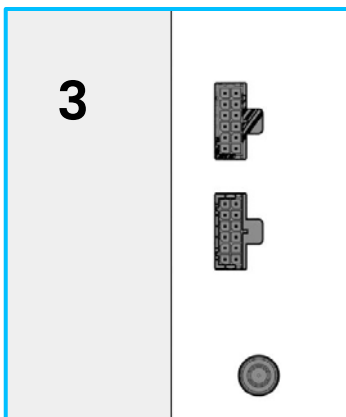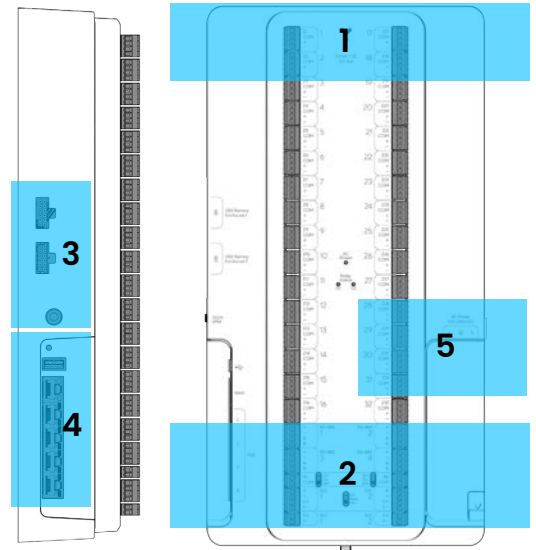|	
Power	100-240VAC, 0.2 - 1.75A, 50 -60Hz 175W maximum AC input 150W maximum DC output; Note: See Output Specifications Table for load limits.
Alarm Inputs & Aux Power	32x alarm inputs with 32x 12VDC power connections. Compatible with variable EOL resistors (1kΩ - 4.7kΩ),
Relay Output	2x relays for siren/strobe with switch-selectable voltage & optional dry config: • 12VDC operation (wet operation) • 24VDC operation (wet operation) • Dry operation, max pass-through current 1A @ 24VDC
RS485 Output	4x RS485 outputs with 4x 36VDC connection.
USB-A Output	1x USB-A 2.0 High Speed connection.
PoE Output	4x PoE ports with 40W total power budget. 30W maximum on any port until total power budget is reached.
Connectivity	Ethernet: 100/1000Mbps RJ45 for network connection. VLink sub-GHz transceiver with SMA-connected Antenna: FCC: 915~915.7MHz, ISED: 915~915.7MHz, CE: 865.5~867.5MHz, AU: 916.8~918.2MHz
Tamper Detection	Yes
Dimensions	557.0mm (L) x 323.0mm (W) x 116.3 (H) / 21.93in (L) x 12.72in (W) x 4.58in (H)
Weight	7.3kg / 16.2lb
Operating Temp. & Humidity	0°C-50°C / 32°F-122°, 0-90% RH non-condensing
Included Accessories	Mounting hardware kit
Mounting Option	Wall Mount Bracket
Compliance	FCC Part 15B Class A, ICES-003 Class A, CE, UKCA, RCM, CEC BC, UL/IEC 62368-1, CSA NO22.2 62368-1

Output Specifications

| Output / Voltage Rail	5V	12V	24V	36V	54V
Aux Outputs	–	✓ 1A max across Zone 1–16. 1A max across Zone 17–32.	–	–	–
Relay Outputs	–	✓ Switch selectable, 1.7A max each	✓ Switch selectable, 1A max each	–	–
RS485 Outputs	–	–	–	✓ 2A max each	–
USB-A Output	✓ 1A max	–	–	–	–
PoE Outputs	–	–	–	–	✓ 30W per port, 40W total
Max Allowable Load Per Voltage Rail	**1A max (5W total)**	**4.4A max (52.8W total)**	**2.7A max (64.8W total)**	**2.5A max (90W total)**	**0.7A max (40W total)**
	Max simultaneous loading across all outputs = 130W				

Unboxing

Pull the handle to lift and remove BP52 from the box.

Please note: Two (2) person installation recommended

Lay BP52 on a flat surface, unlock and open the door using the supplied key and remove the cardboard.
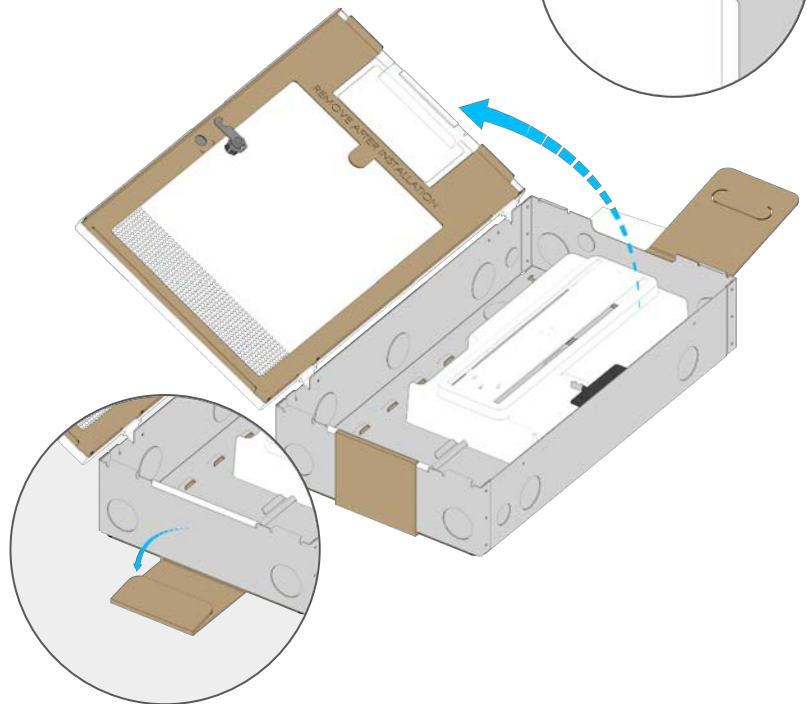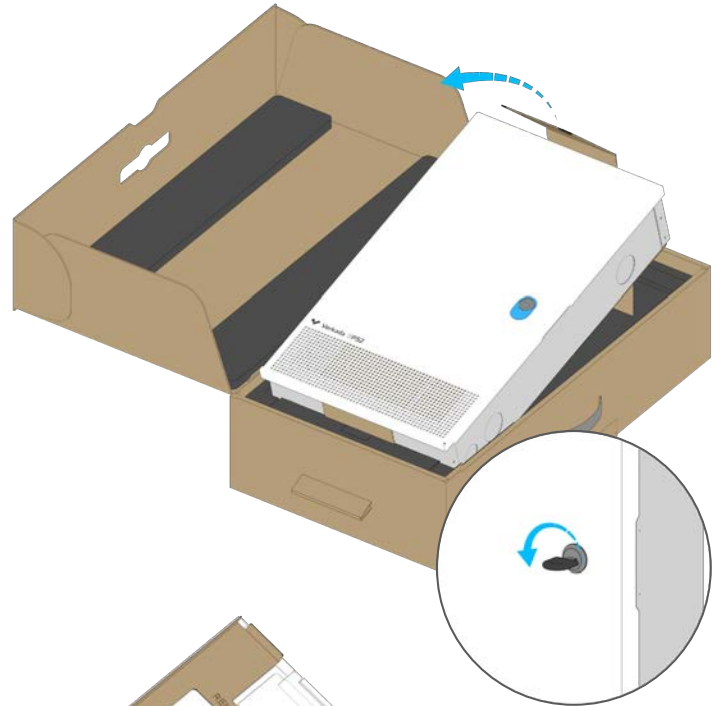
Keep cardboard intact for next step.
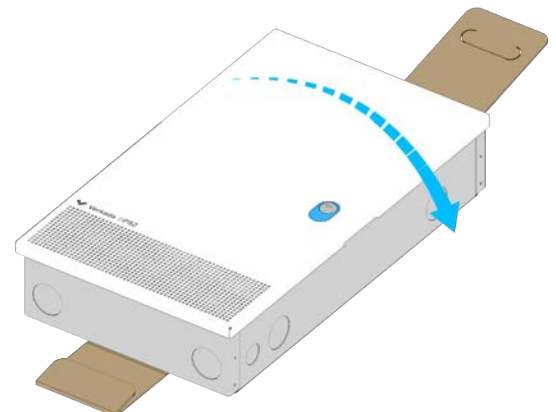
Mounting 1/4

Use cardboard mounting template from the previous step to get a sense of the wall space BP52 will occupy.

Use mounting template to drill pilot holes for the mount plate and mounting screw holes..

Please note: Leave at minimum 2" clearance on the left side of the enclosure in order for the door to open and close without hindrance. Leave 8" clearance on the top side for the antennas.
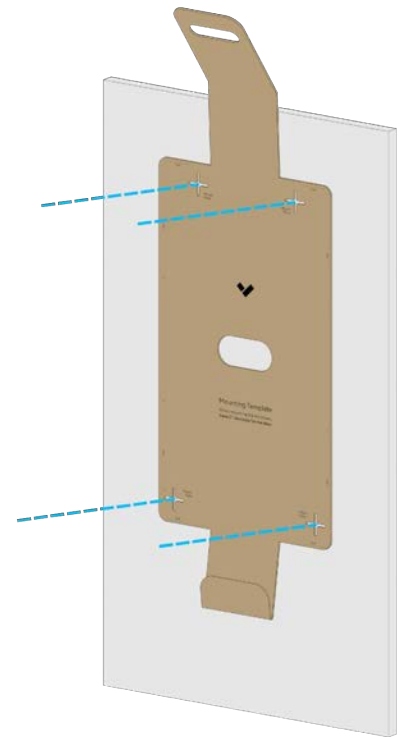
Use the supplied screws to install the mount plate onto the wall. Ensure that the hook features are pointing upward when mounting on the wall.

The enclosure will extend down roughly 22" (~56cm), from the top of the mount plate.
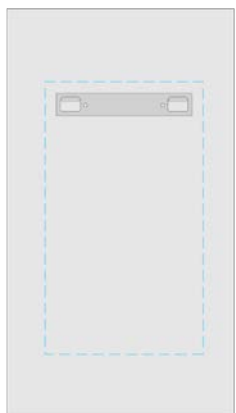
Please note The supplied screws are intended for plywood installations. For other wall materials, ensure proper load-bearing fasteners are used.

The size of the enclosure is:
22" x 13" (56 x 33 cm)
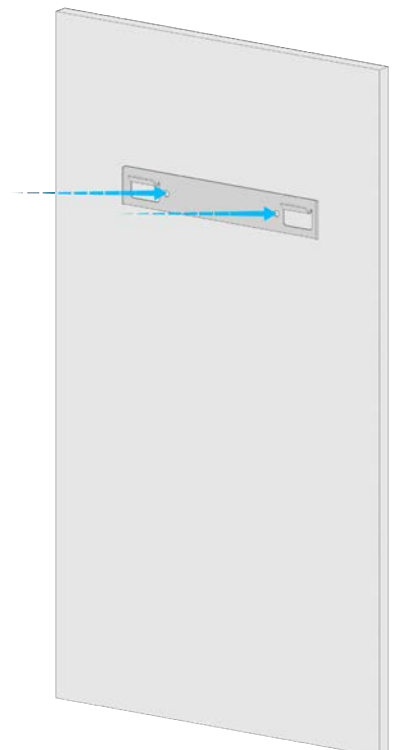
Mounting 2/4

Unlock and open the
enclosure door with the
supplied key.
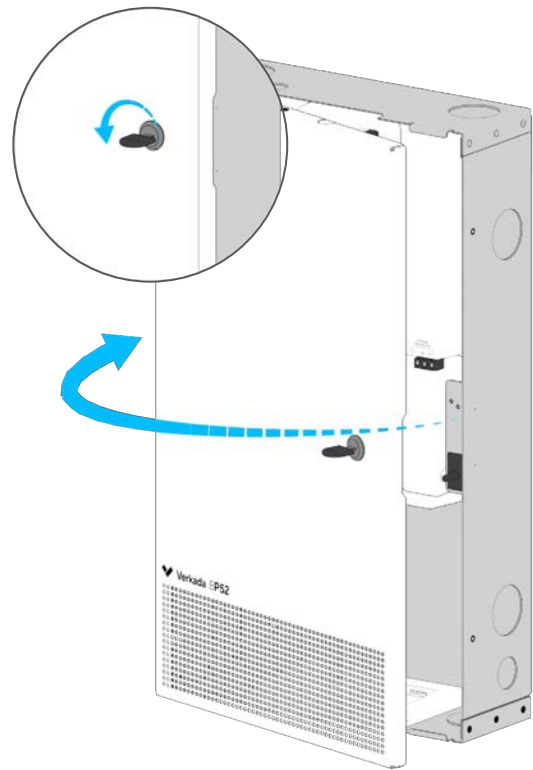
Remove the door by
sliding it upwards.
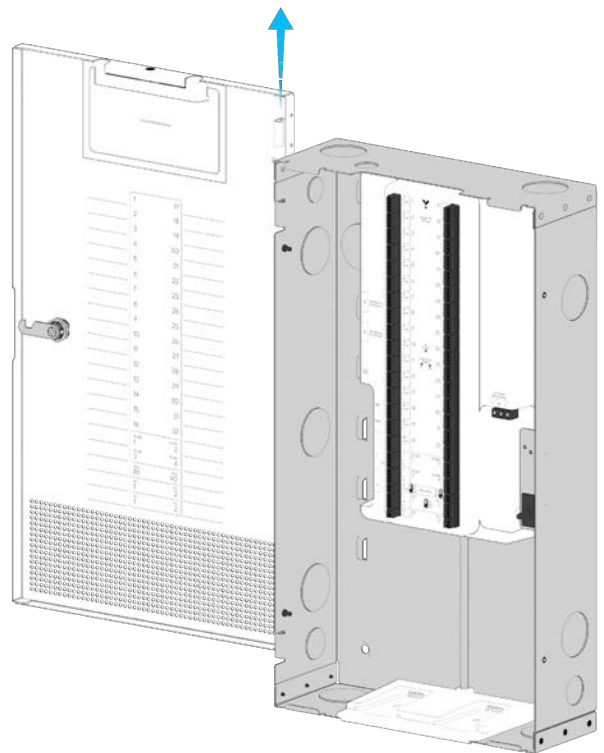
Mounting 3/4

Carefully slot the enclosure onto the mount plate.
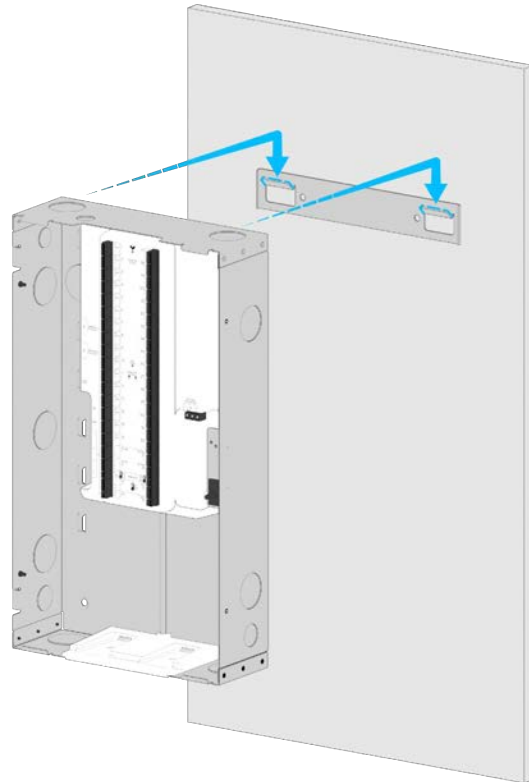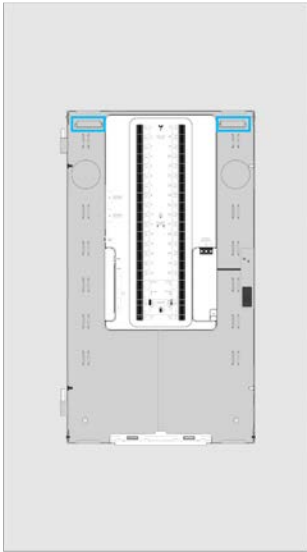
Secure the enclosure onto the wall using the through-holes on the enclosure.
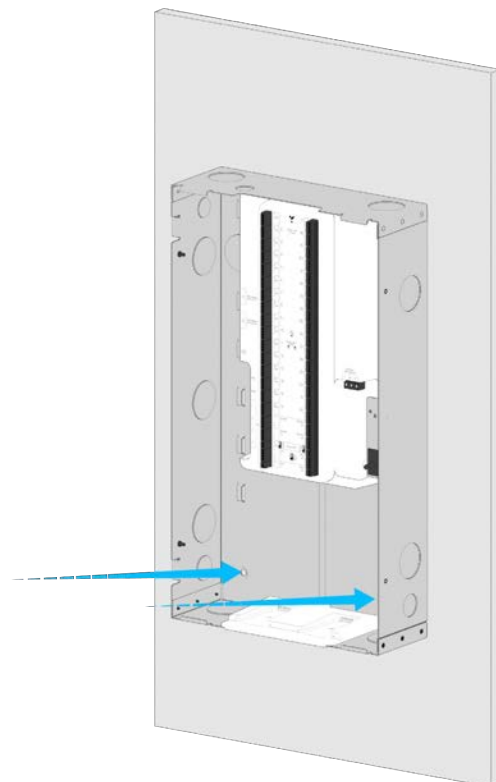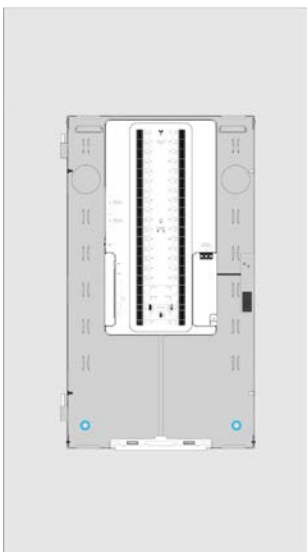
Mounting 4/4

Reattach the door to the enclosure.
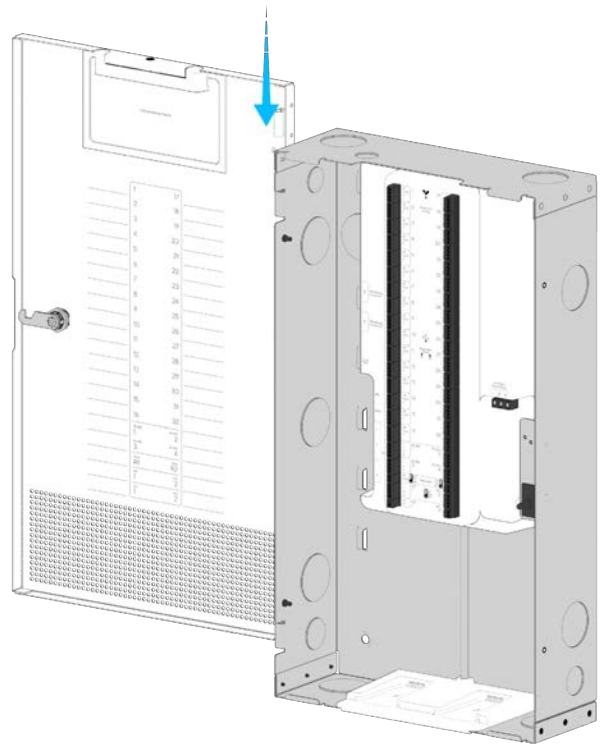
Connect the grounding cable from the enclosure to the door.

Installation
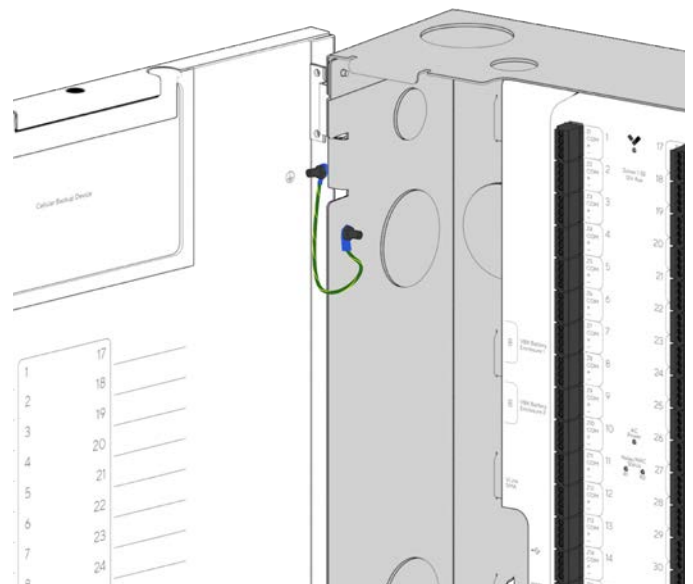
Conduit Connections

Knockout Sizing

BP52 conduit connection points have different sizes for different purposes.

Reference diagrams below for knockout sizing & usage information.
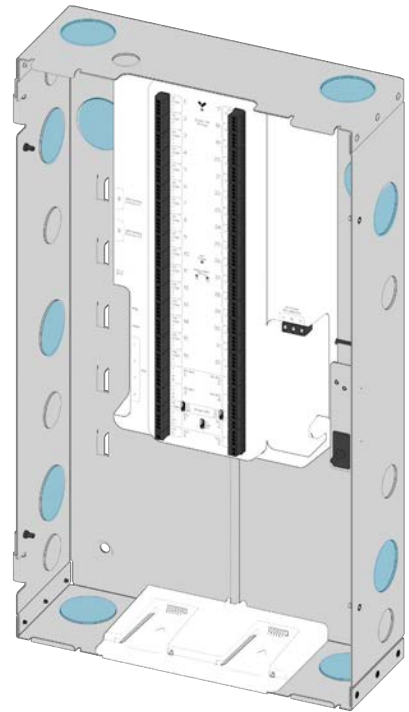
Ø44.4mm = 1-¼" trade size
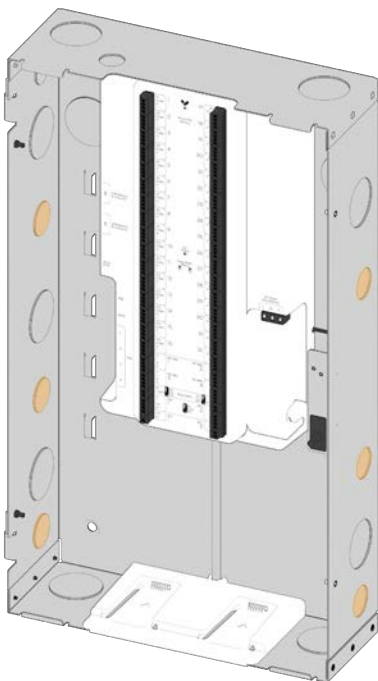
Ø28.5mm = ¾" trade size
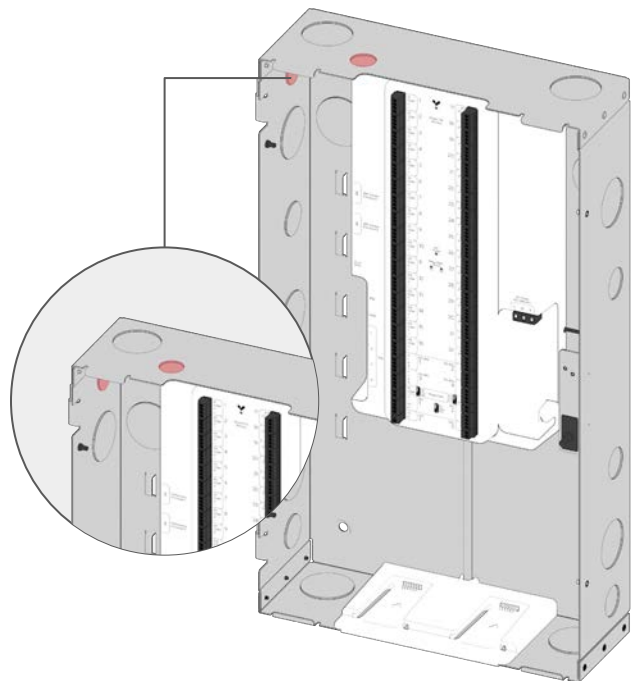
Ø22.5mm = ½" trade size,
For use with provided panel mount Antenna.

Wiring diagram

Connecting to AC Power

For Supplied Power Cord

Use the cable shipped with the BP52 with a standard three wire grounded power outlet.

With the AC cable disconnected, plug the terminal plug end into the mating AC Power terminal block on the Panel. Once the product is closed and secured, connect the AC plug into a power outlet.

To connect directly to AC mains

With the AC cable disconnected, unscrew the existing cable terminations from the terminal plug end. Line, GND and neutral wires can then be inserted into the marked connection points on the plug. Use a phillips head screwdriver to tighten each cable connection on the terminal plug. Plug the terminal plug into the AC Power terminal block on the Panel.

Note: Only connect the power cable after all other setup and servicing is complete.
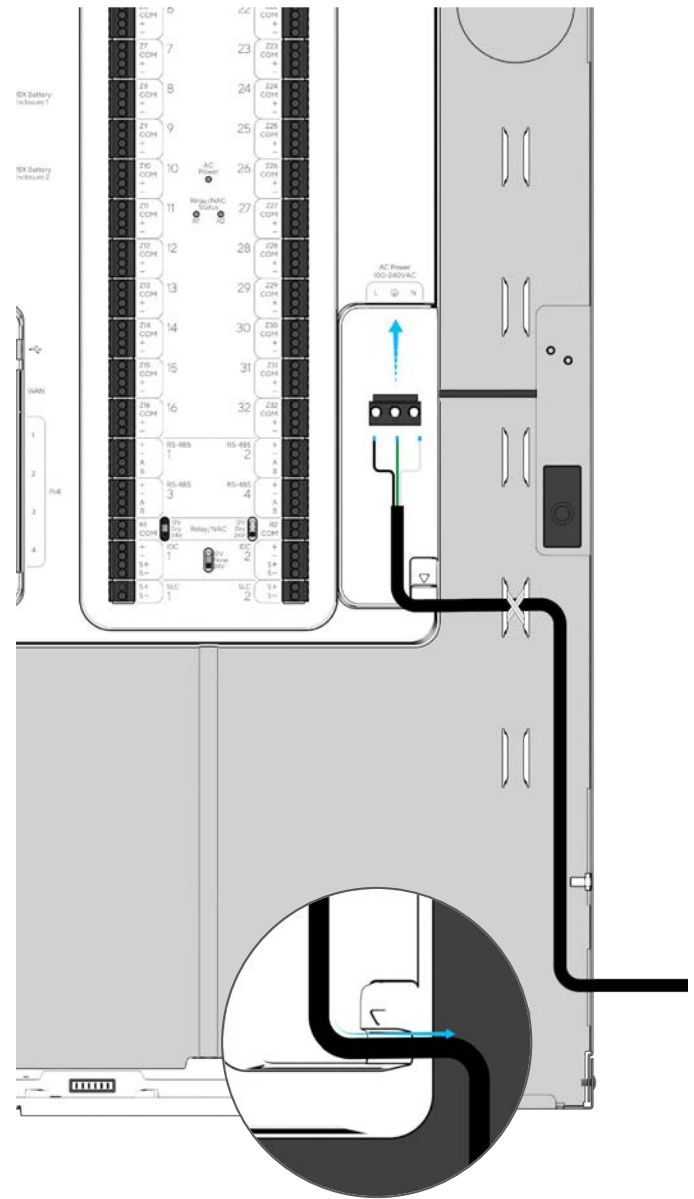
Wiring diagram

Alarm Inputs (Zones 1-32)

- Wire Gauge Range: 16 - 24 AWG
- Max Line Impedance: 100Ω (excluding EOL resistance)
- Supervision: Configurable via 1kΩ -4.7kΩ EOL resistors (single EOL) or 1kΩ -2.2kΩ EOL resistors (double EOL)
- Max Current Draw:
    - 1A for Zones 1-16
    - 1A for Zones 17-32
- Notes:
    - All Inputs can be configured as Normally Open or Normally Closed in Command
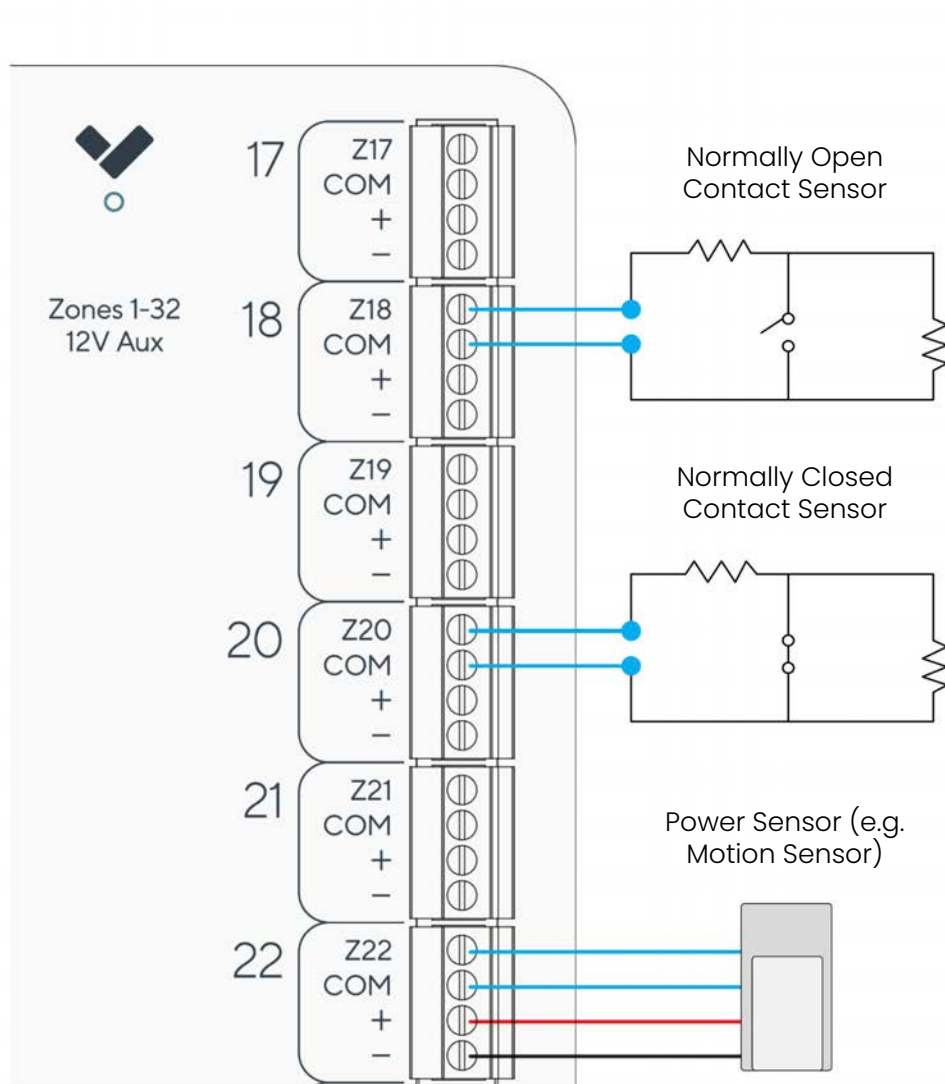
Wiring diagram

RS485 Outputs (RS485 1-4)

- Wire Gauge Range: 16 - 20 AWG
- Max Current Draw:
  - Up to 2A per port but no more than 2A combined
- Notes:
  - BP52 RS485 terminal blocks provide 36VDC power; please check device compatibility for allowable input voltage range.

RS485-Connected BK22

RS485-Connected BE32
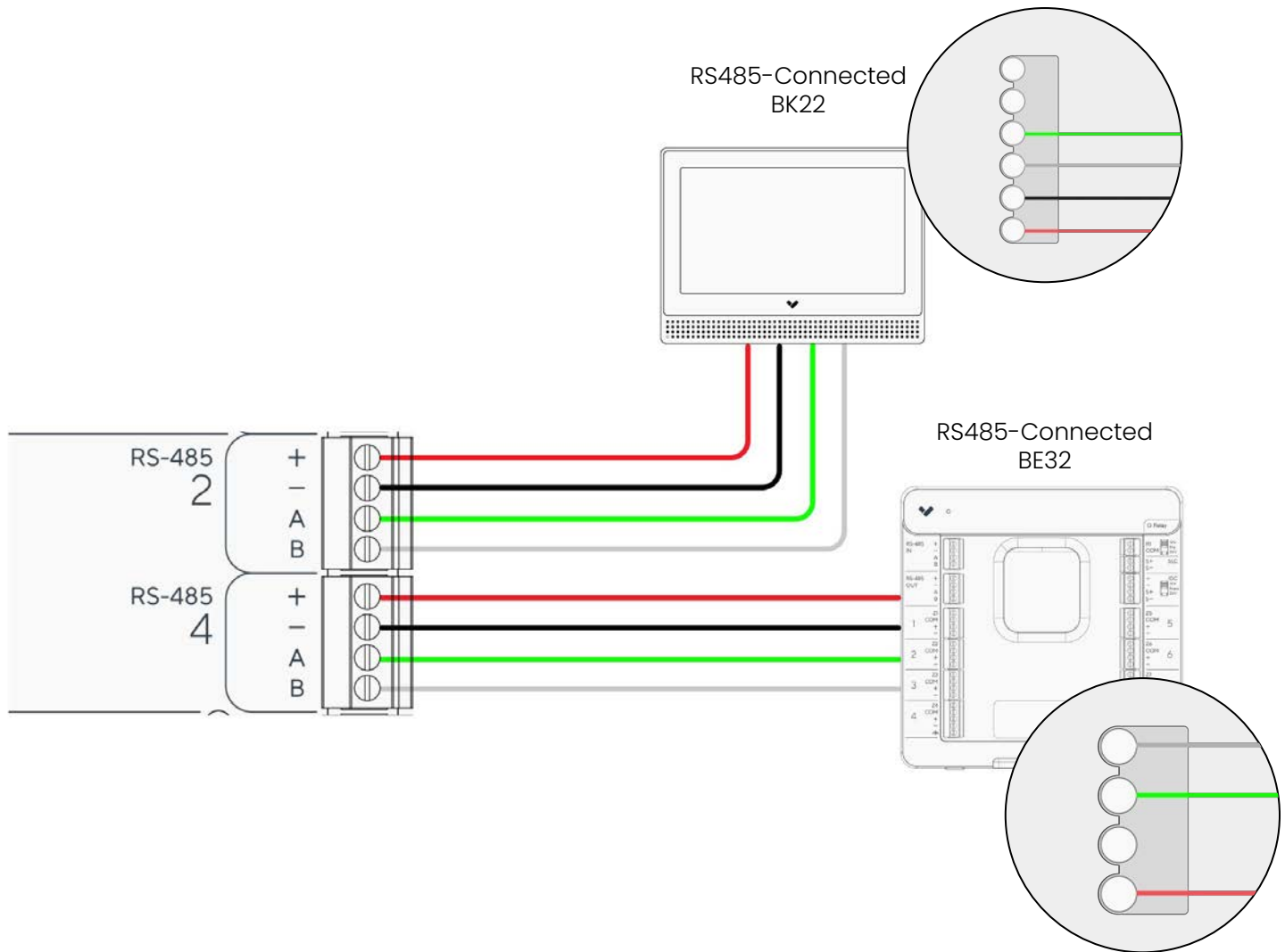
Wiring diagram

PoE Outputs (PoE 1-4)

- Total PoE Power Budget: 40W total
- Per Port Wattage: 25.5W at end device per IEEE802.3at until total Total PoE Power Budget has been reached.
- Max Cable Length: 100m

Ex: BC82 connected via PoE
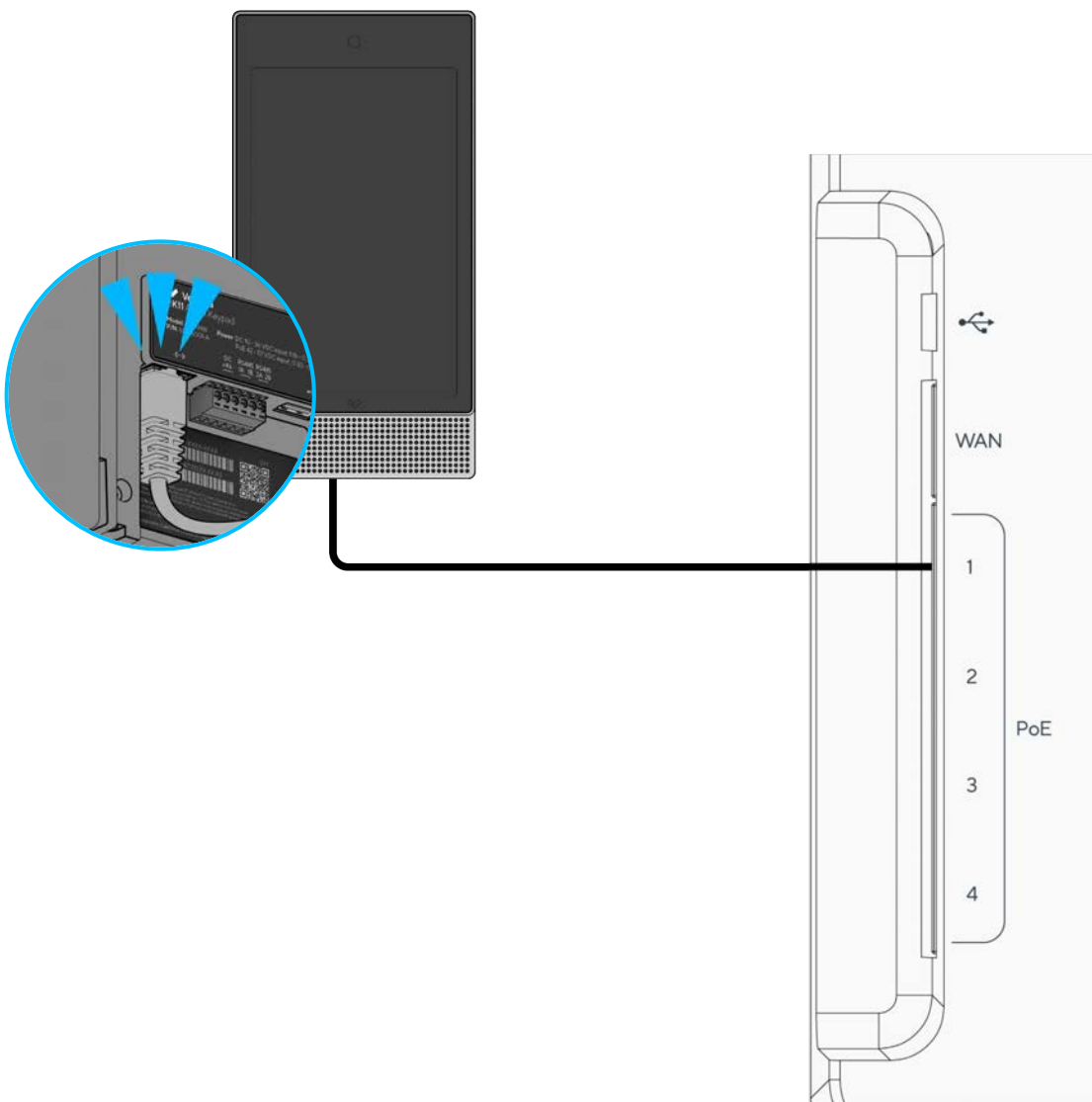
Wiring diagram

Relay Outputs

- Wire Gauge Range: 16 - 20 AWG wires
- Max current: 1.7A for 12V switch position, 1A for 24V switch position, 1A at 24V for dry output switch position
- Notes:
  - Relay outputs can be configured in Command to trigger during a triggering event
  - When "24V" is selected, relay voltage output will measure 28V

Wet Config
(e.g. Siren)

Dry Config
(e.g. Siren)

External Power Supply
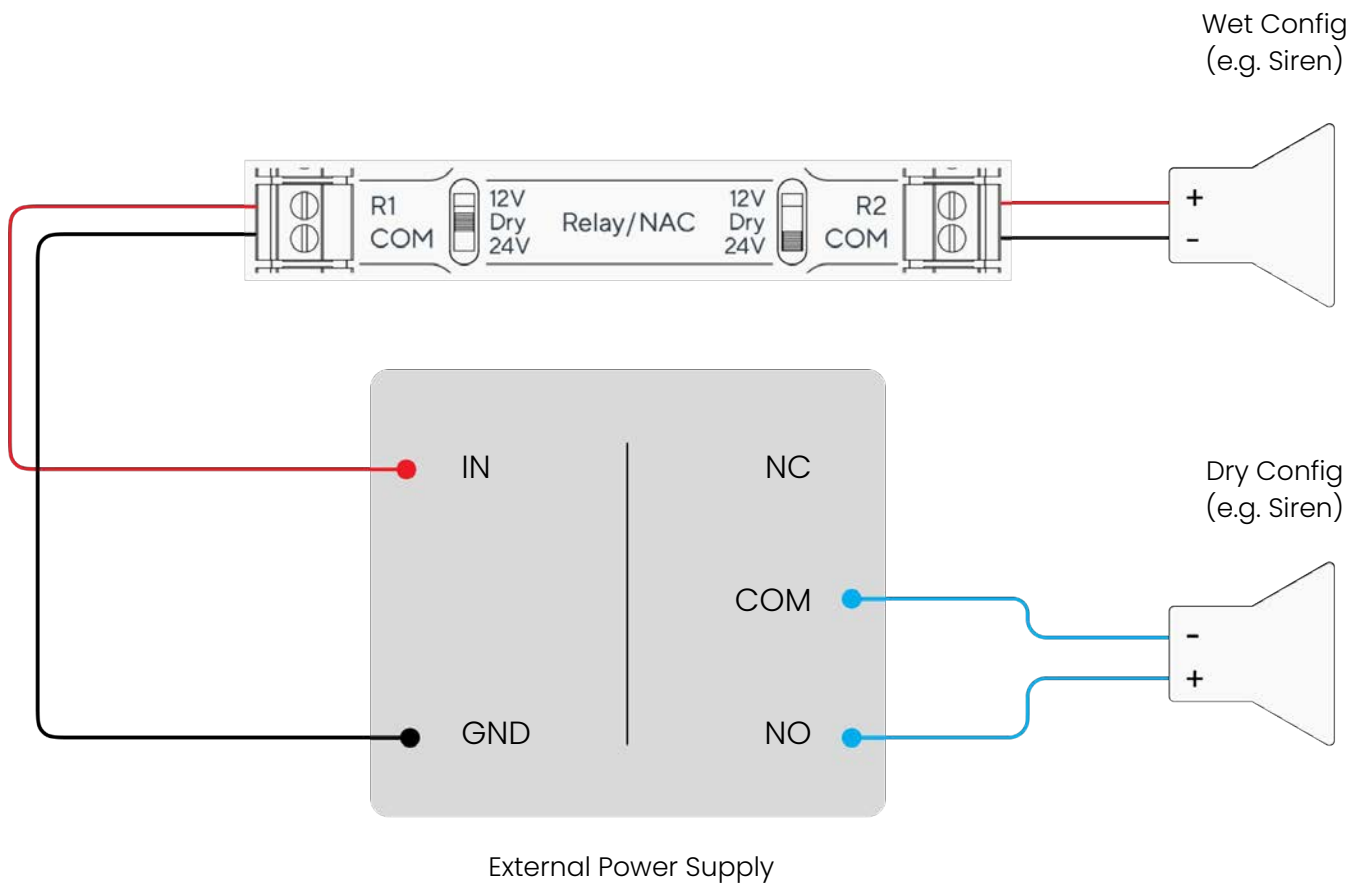
Wiring diagram

Sub-GHz External Antenna

- Remove the small knockout from the top of the panel.
- Unscrew the attachment nut from the antenna assembly.
- Insert the antenna assembly into the knockout hole.
- Re-thread the attachment nut to the antenna assembly (only finger tight, no wrench…)
- Attach the SMA connector to the main panel (using a small wrench).
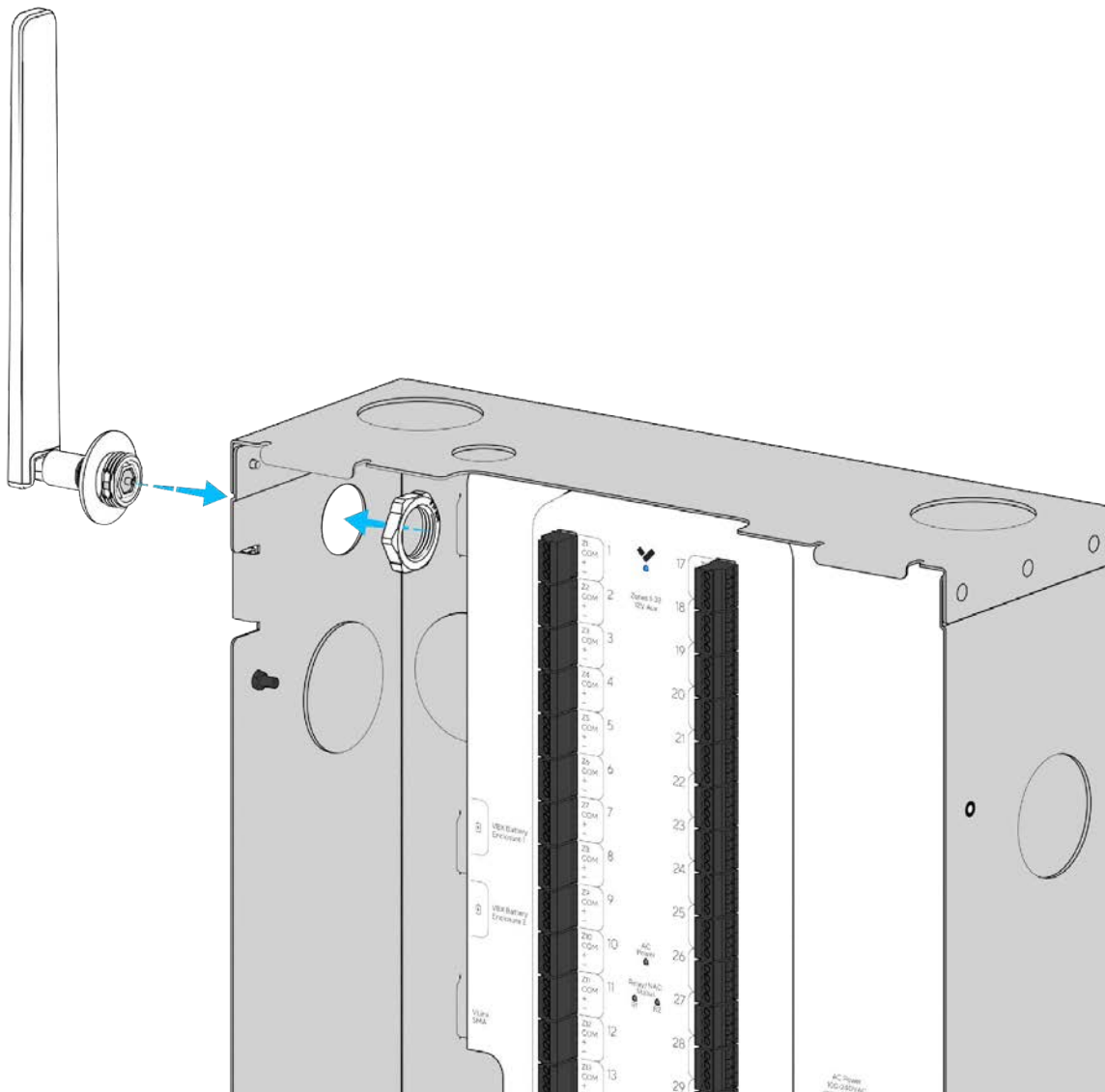
Wiring diagram

Backup Cellular Communicator

- Using the T10 screwdriver that came with Piranha, remove the plastic insert from the door..
- Remove the Piranha mount plate.
- Insert the USB cable that came with Piranha into the USB port on Piranha.
- Install Piranha into the Colossus door. Magnets will temporarily hold the unit in place until the security screw has been tightened.
- Install the USB cable into the main panel.
- Zip tie the USB cable to the cable management features inside Colossus
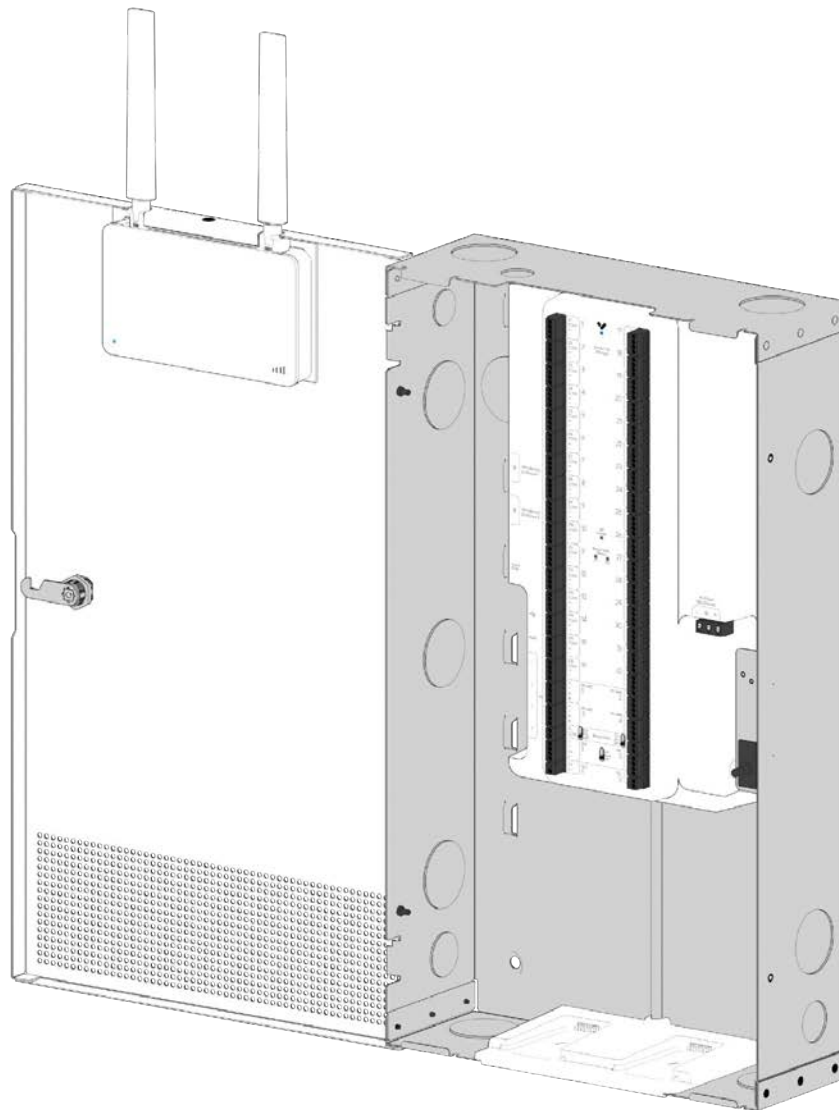
Battery Installation (Optional)

** Warning - do not install batteries until all wiring and servicing complete

Batteries Installed Inside BP52

1. Remove all packaging material from the battery ACC-VBX-200WH.
2. Slide battery into BP52 until audible "click" is heard.
3. Confirm correct installation via Charging Battery LED activity as described in the Battery LED Behavior section
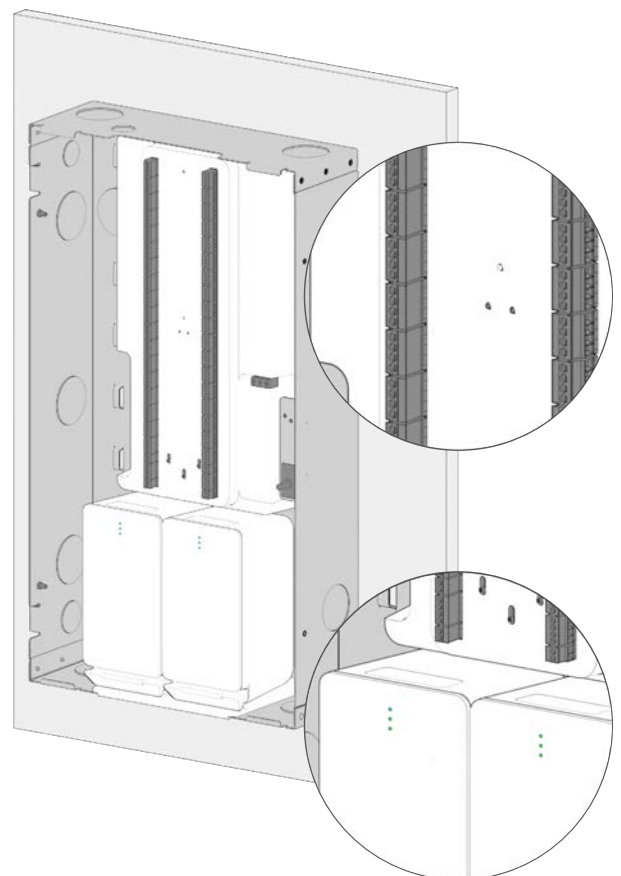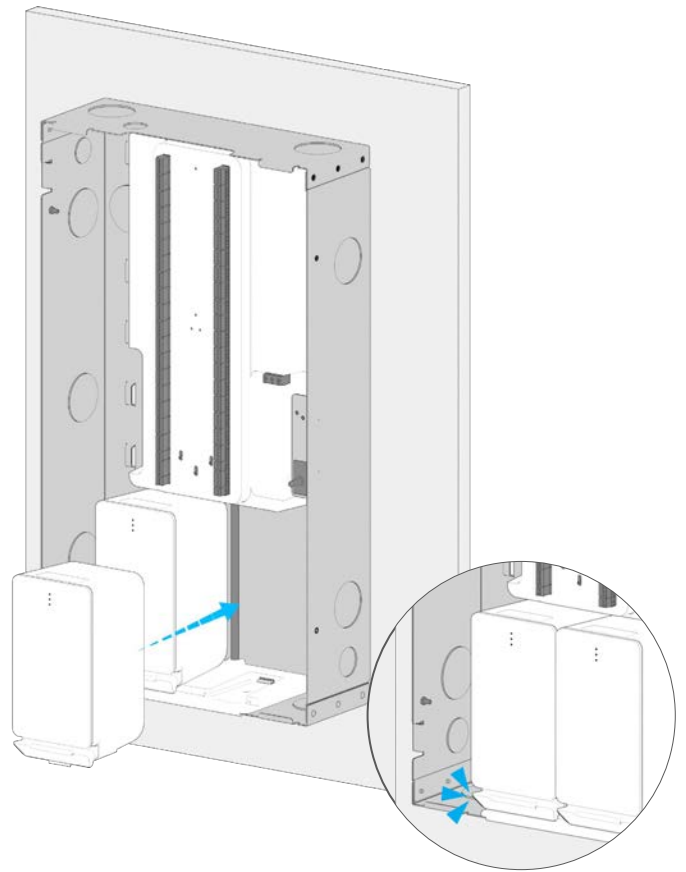
Installation
Battery Installation (Optional)

Batteries Installed Via External Chassis

1. Mount ACC-VBX-ENC according to installation instructions
2. Connect battery wire to BP52 "Battery Expander" port
3. Slide battery into chassis until audible "click" is heard.
4. Confirm correct installation via Charging Battery LED activity as described in the Battery LED Behavior section

Note: Up to 4 additional batteries in two external chassis can be connected to BP52
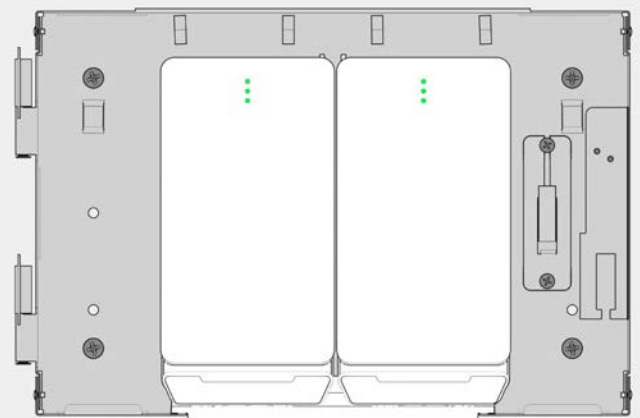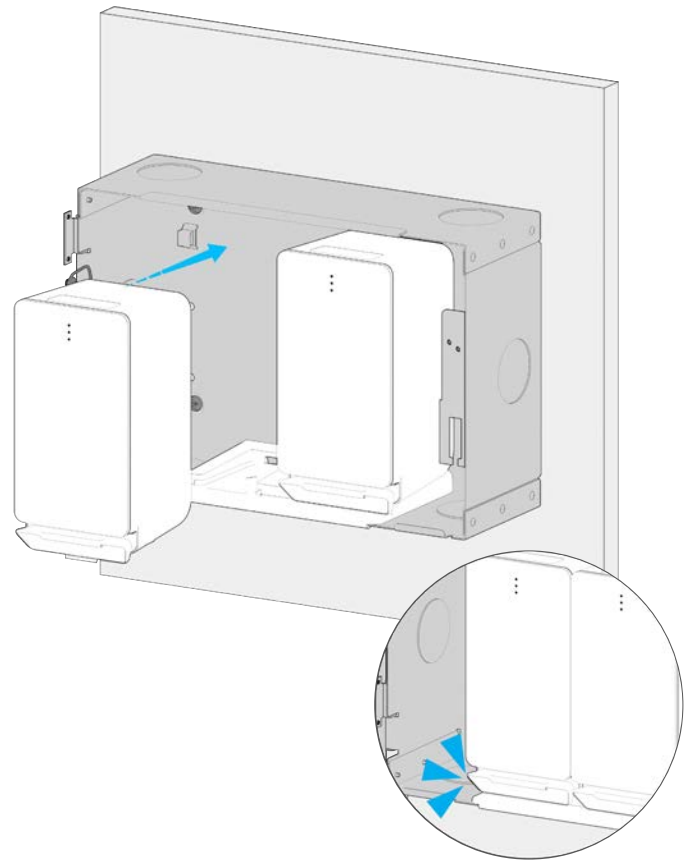
Battery LED Behaviour

On AC Power	Battery LED
Battery Level (67–100%)	🟢🟢🟢
Battery Level (34–66%)	⚪🟢🟢
Battery Level (1–33%)	⚪⚪🟢
Charging Battery	0–33% ⚪⚪🔆 / 34–66% ⚪🔆🟢 / 67–99% 🔆🟢🟢
Battery error	⚪⚪🔴
Battery not connected	OFF

FCC Statement	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
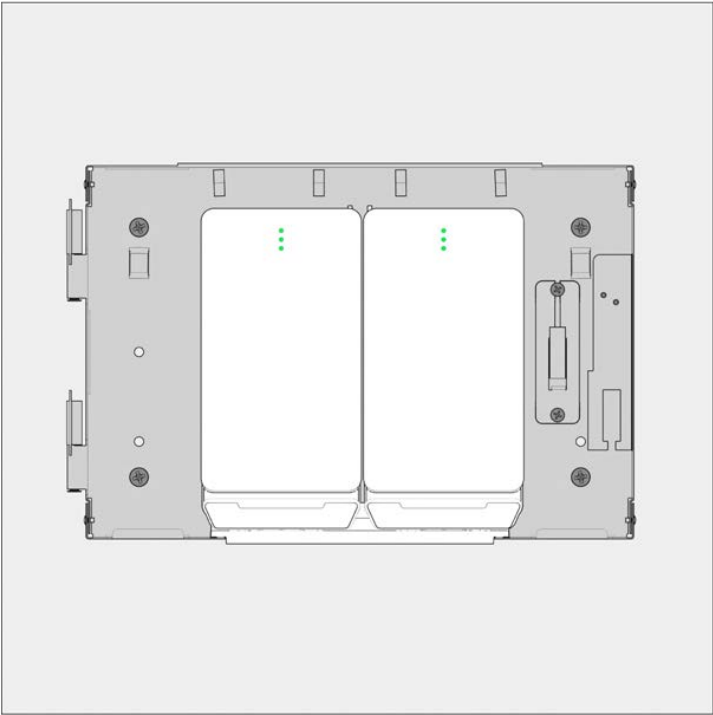
Professional Installation Instruction:
1. Installation personnel: This product is designed for specific application and needs to be installed by qualified personnel with RF and related rule knowledge. A general user shall not attempt to install or change the settings.
2. Installation location: This product shall be installed at a location where the radiating antenna can be kept 20cm from nearby person in normal operation to meet regulatory RF exposure requirements.
3. External antenna: Use only the antennas which have been approved by the applicant. Non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC limits and is prohibited.
4. Installation procedure: Please refer to user's Install Guide for detail.
5. Warning: Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.

IC Statement	This device complies with ISED's licence-exempt RSSs. 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.

Radiation Exposure Statement: This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20cm between the radiator & your body.

Le présent appareil est conforme aux CNR d' ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Déclaration d'exposition aux radiations: Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20cm entre le radiateur et votre corps.

Professional Installation Instruction:
1. Installation personnel: This product is designed for specific application and needs to be installed by qualified personnel with RF and related rule knowledge. A general user shall not attempt to install or change the settings.
2. Installation location: This product shall be installed at a location where the radiating antenna can be kept 20cm from nearby person in normal operation to meet regulatory RF exposure requirements.
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4. Installation procedure: Please refer to user Install Guide for details.
5. Warning: Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.

Instructions d'installation professionnelle:
1. Installation: Ce produit est destiné à un usage spécifique et doit être installé par un personnel qualifié maîtrisant les radiofréquences et les règles s'y rapportant. L'installation et les réglages ne doivent pas être modifiés par l'utilisateur final.
2. Emplacement d'installation: En usage normal, afin de respecter les exigences réglementaires concernant l'exposition aux radiofréquences, ce produit doit être installé de façon à respecter une distance de 20 cm entre l'antenne émettrice et les personnes.
3. Antenne externe: Utiliser uniquement les antennes approuvées par le fabricant. L'utilisation d'autres antennes peut conduire à un niveau de rayonnement essentiel ou non essentiel dépassant les niveaux limites définis par ISED, ce qui est interdit.
4. Procédure d'installation: Consulter le manuel d'utilisation.
5. Avertissement: Choisir avec soin la position d'installation et s'assurer que la puissance de sortie ne dépasse pas les limites en vigueur. La violation de cette règle peut conduire à de sérieuses pénalités fédérales.

Detachable Antenna Usage: This radio transmitter [IC: 26271-6095001] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio [IC: 26271-6095001] a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Antenna Manufacturer: INPAQ
Antenna Model: RFDPA161500SMUB802
Antenna Type: Dipole
Max Gain (dBi): 1.88
Impedance (Ω): 50 Ω

Support

Thank you for purchasing this Verkada product. If for any reason you're experiencing issues or need assistance, please contact our 24/7 Technical Support Team immediately.

Sincerely,
The Verkada Team
verkada.com/support