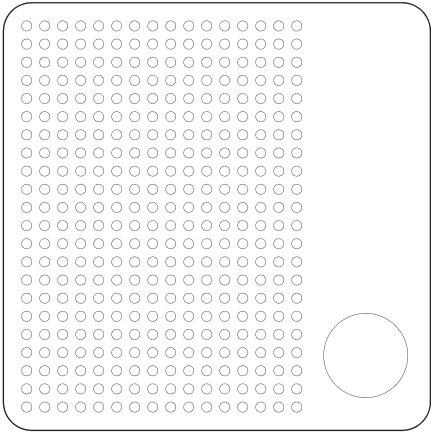
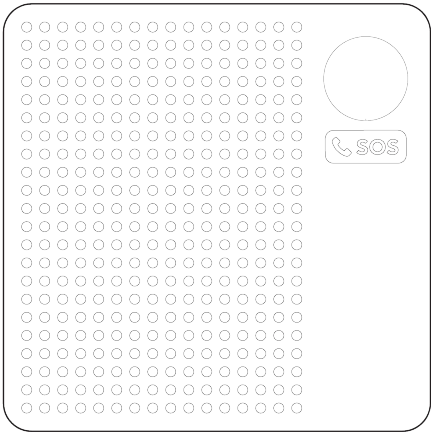


TS12

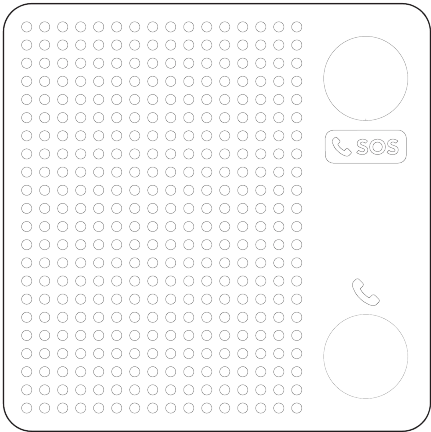
Square Audio Intercom



TS12-N



TS12-N-RB



TS12-N-R2B

Document Details

Version

v1.1 (20260923)

(V1.0 published 20260108)

Firmware

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

Product Models

This install guide pertains to models:

TS12-N-HW

TS12-N-RB-HW

TS12-N-R2B-HW

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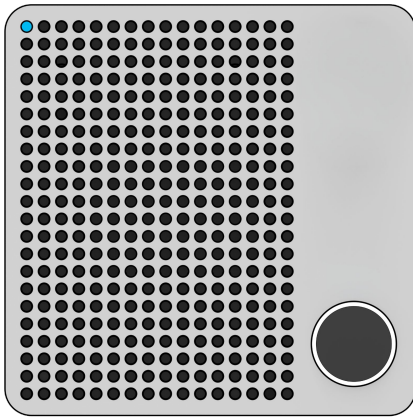


Technical Specifications

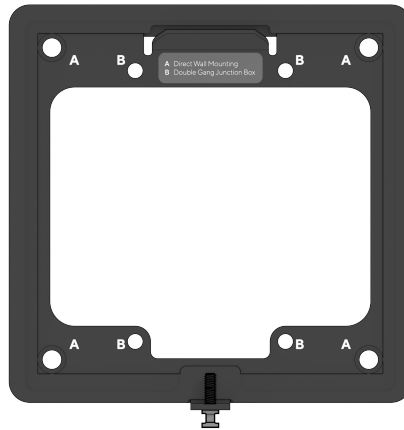
Audio Streaming	Two-way, full duplex with echo cancellation and noise suppression
Audio Output	8W speaker ; 95dB SPL at 1m / 3.3ft
Audio Input	4 omnidirectional digital MEMs microphones
Onboard Storage	32GB
Inputs / Outputs	2x dry inputs 1x dry relay, 30VDC @ 1A (resistive load) 1x RS-485 interface 1x power output, 12V @ 250mA 1x audio line output(1Vrms) or amp output (16W into 4Ω or 8W into 8Ω)
Dimensions	128mm (L) x 128mm (W) x 61mm (H) 5in (L) x 5in(W) x 2.4in (H)
Weight	800g/1.8lb
Tamper Detection	Accelerometer
Resistance Rating	IK10, IP69
Operating Specs	IEEE 802.3af (PoE): Operating Temperature: -20°C – 50°C / -4°F – 122°F IEEE 802.3at or 802.3bt (PoE+ or PoE++): Operating Temperature: -40°C – 50°C / -40°F – 122°F Humidity: 90%
Compliance	<i>Pending:</i> FCC Part 15B Class B, ICES-003 Class B, CE, UKCA, RCM, UL/IEC 62368-1, CSA NO 22.2 62368-1, UL 294 and ULC 60839-11-1 Listed Outdoor
Connectivity	Ethernet: 10/100/1000Mbps RJ-45 cable connector for Network/PoE connection
Included Accessories	T10 screwdriver, mounting hardware kit
Additional Accessories (Optional)	Surface mount box, emergency adapter plate, PoE over 2-wire converter

Introduction

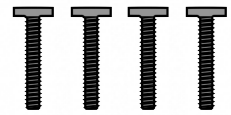
What's in the Box



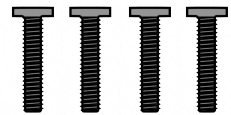
Audio Intercom



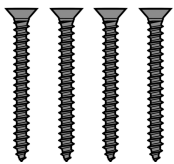
Mount Plate
(Attached to device)



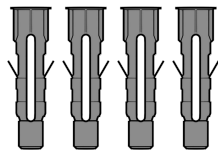
Junction Box Screws
#6-32 (4 pcs)
Length: 0.5" Drive: #2 Phillips



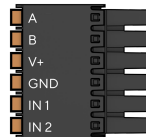
Junction Box Screws
#8-32 (4 pcs)
Length: 0.5" Drive: #2 Phillips



Wall Screws (4 pcs)
Length: 1.5" Drive: #2 Phillips



Wall Anchors (4 pcs)
Length: 25mm



Terminal Block
(Attached to device)



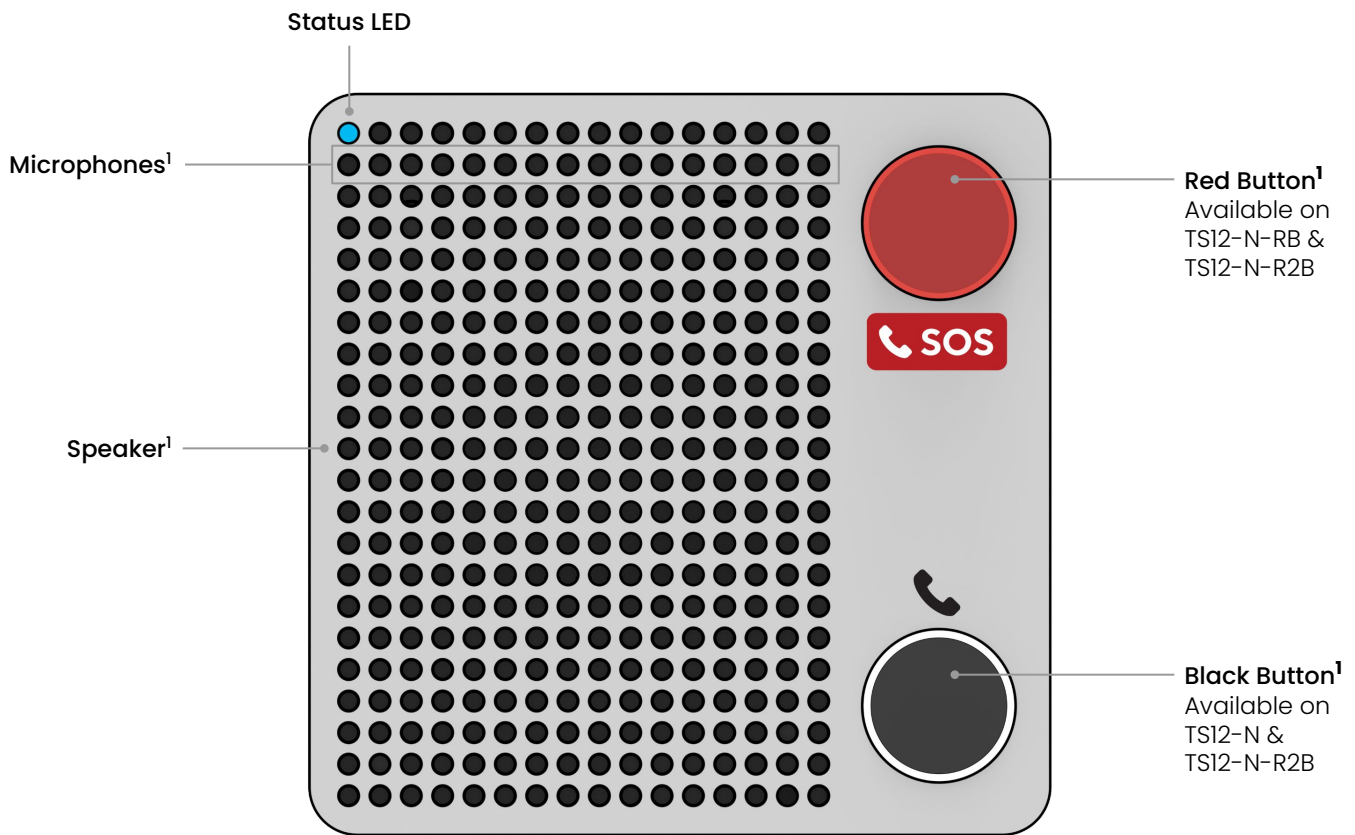
T10 Torx Security Screwdriver

What you'll need

- A smartphone or laptop
- 1/4 inch (6.5mm) drill bit for wall anchors (if using mount plate)
- 1/8 inch (3mm) drill bit for pilot holes (if using mount plate)
- A Cat5 or Cat6 Ethernet cable with a 0.2-0.25 inch diameter (5-6.5mm)



Overview: Front



Status LED Behaviors

-  **Solid Orange**
Intercom is on and booting up.
-  **Flashing Orange**
Intercom is updating firmware.
-  **Solid Blue**
Intercom is running and online.
-  **Flashing Blue**
Intercom is running and offline.

Black Button LED Behaviors

-  **Pulsing White**
Booting
-  **Solid White**
Ready for call
-  **Spinning Blue**
Calling
-  **Solid Blue**
Call connected
-  **Solid Green**
Unlocked

Red Button LED Behaviors

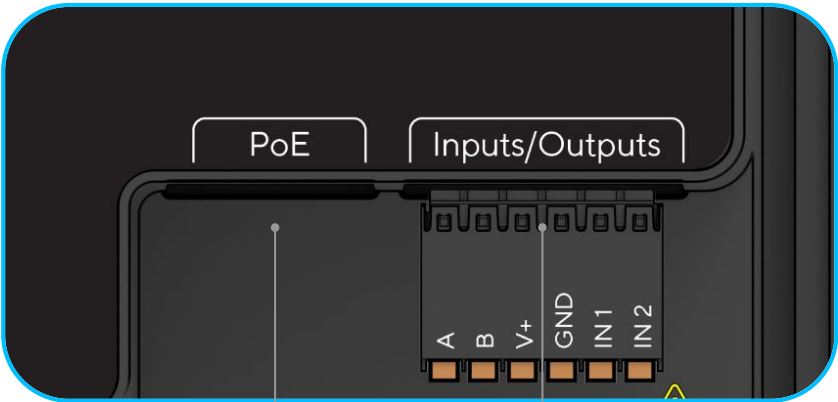
-  **Pulsing White**
Booting
-  **Solid Red**
Ready for Call
-  **Pulsing Red**
Calling
-  **Solid Blue**
Call connected
-  **Solid Green**
Unlocked

Note 1: Call feature is not evaluated for compliance to UL 294 or ULC 60839-11-1



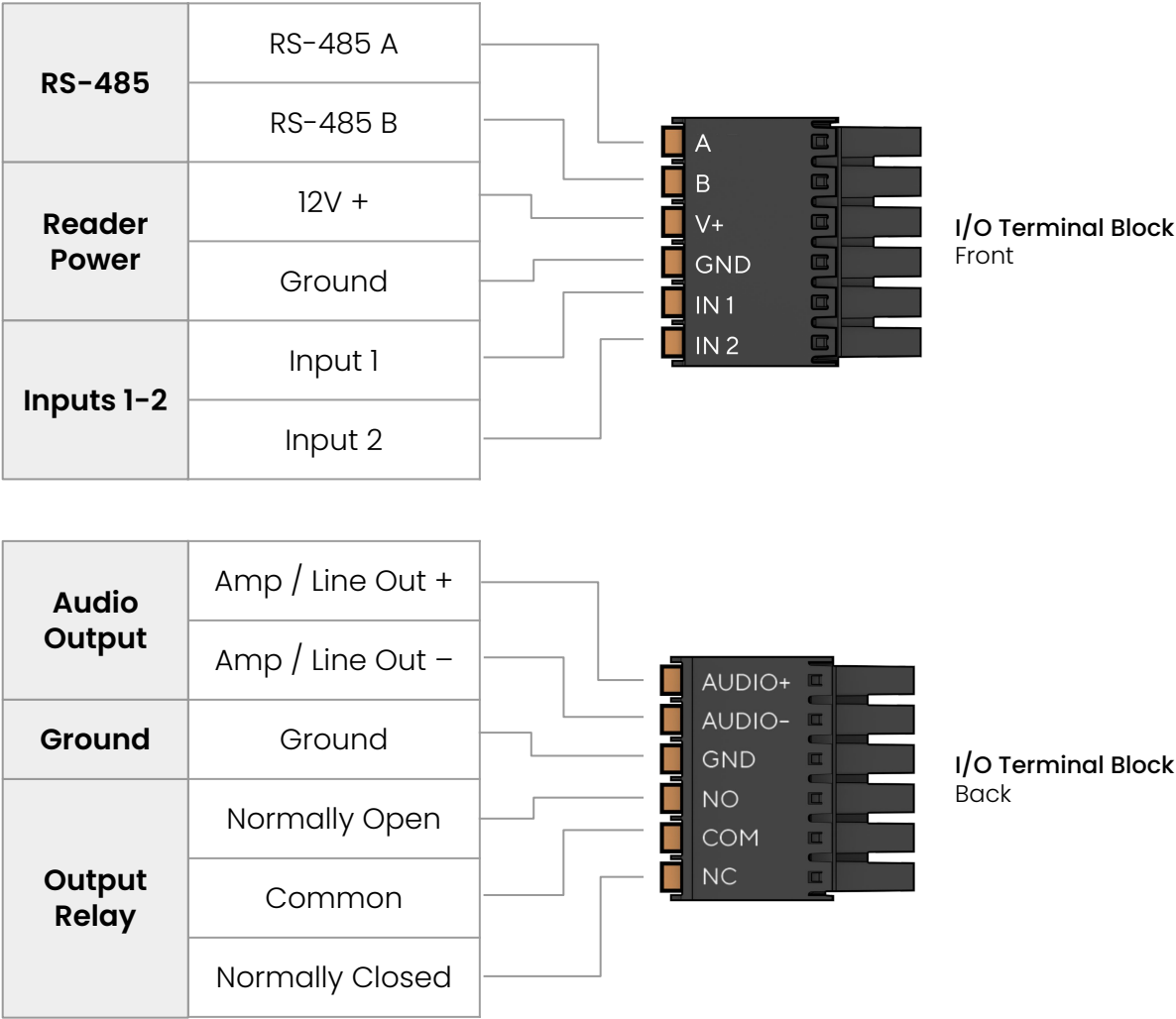
Introduction

Overview: Back



PoE In
Ethernet (RJ45)

I/O Connector
Input / Output



Preparation

Connect Device

Note: This step can be done after mounting, although registering the product first will ensure it is in working order prior to mounting.

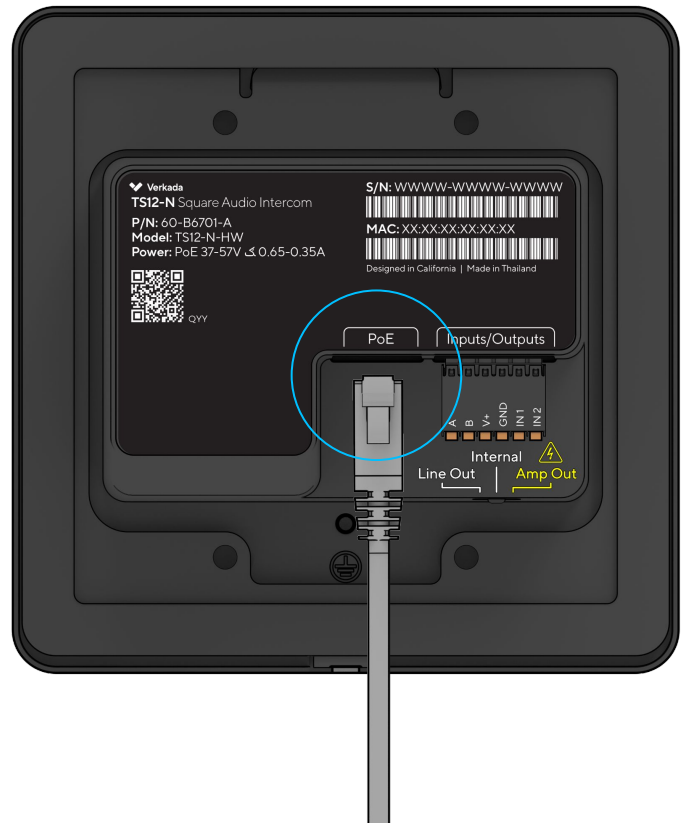
Connect the TS12 to your network using the Ethernet port located behind the cable door on the device.

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

Enter the serial number printed on the back of the device, the packaging, or the order number.



Preparation

Mounting Options

The Square Audio Intercom requires a double gang sized cutout in the mounting surface. It can be fastened directly to a double gang box or directly to the wall surface using the included mount plate.. The following pages outline both installation options.

Direct Wall Mounting



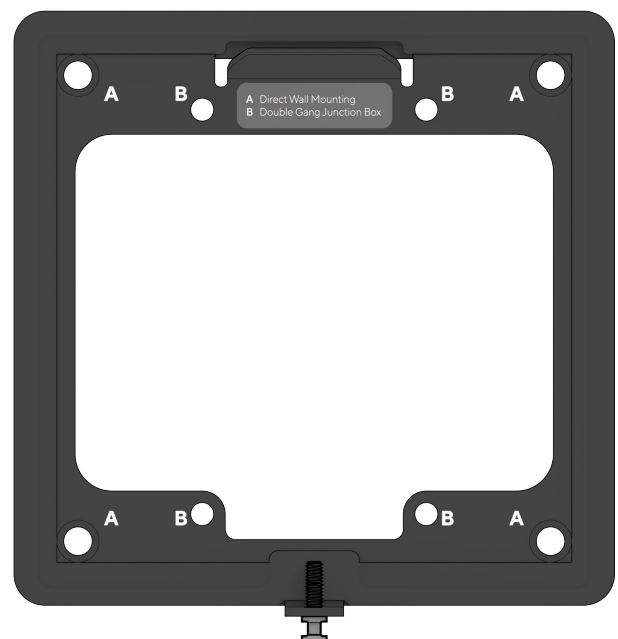
Double Gang Junction Box Mounting



Mount Plate

The mount plate has hole patterns for the following mounting conditions:

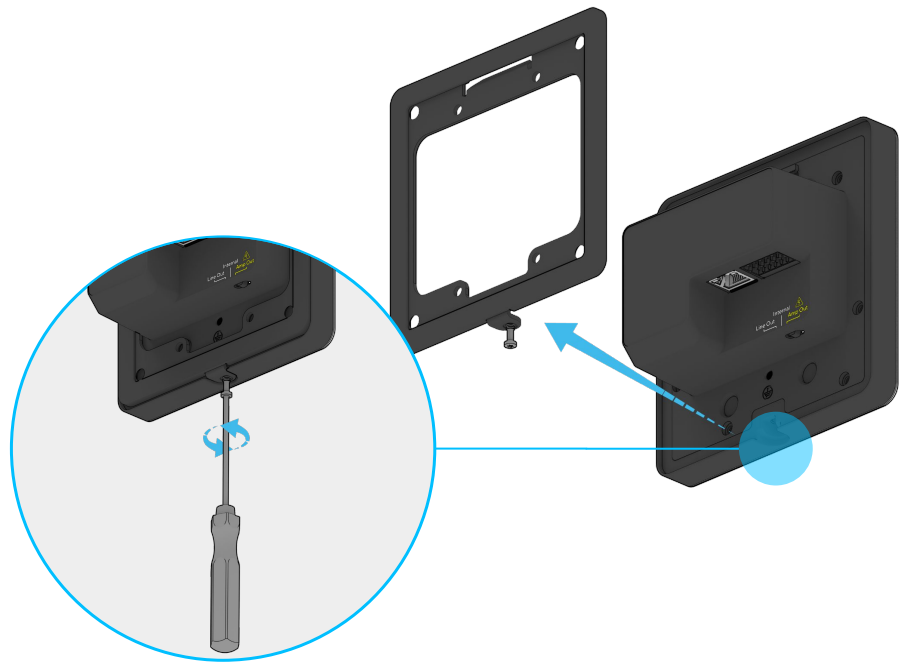
- A** Direct Wall Mounting
- B** Double Gang Junction Box Mounting



Installation

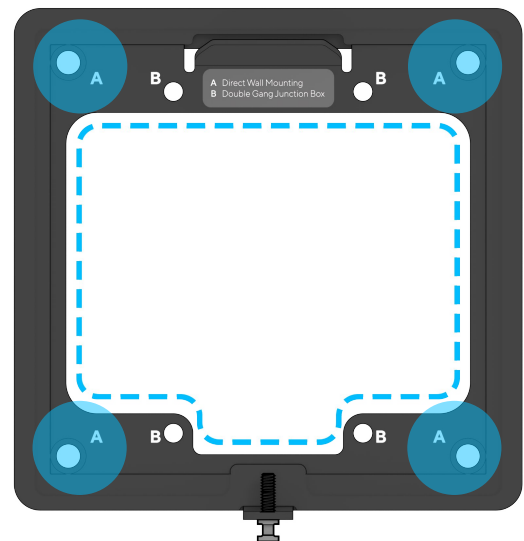
Direct Wall Mounting ^{1/2}

Loosen the security screw and remove the mount plate from device.

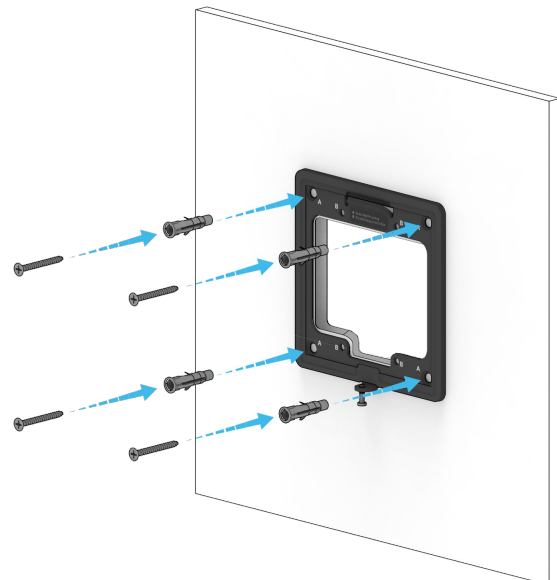


Use the mount plate as a template to mark mounting holes (A) and the center cutout.

Drill 5/64 inch (2mm) pilot holes.
If using wall anchors, drill 1/4" (6mm) pilot holes.



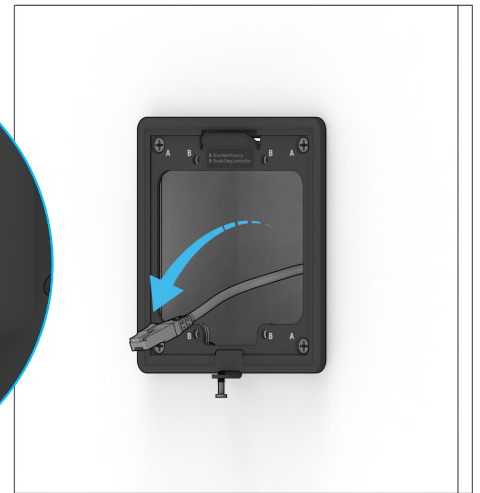
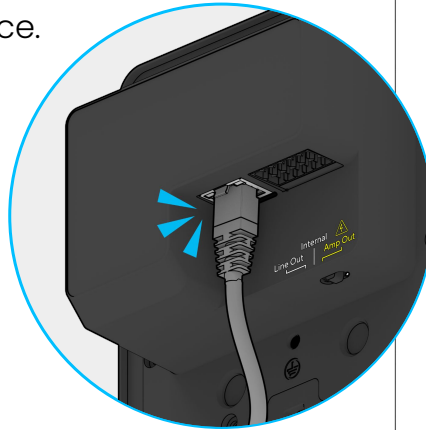
Use the wall screws to secure the mount plate onto the wall.



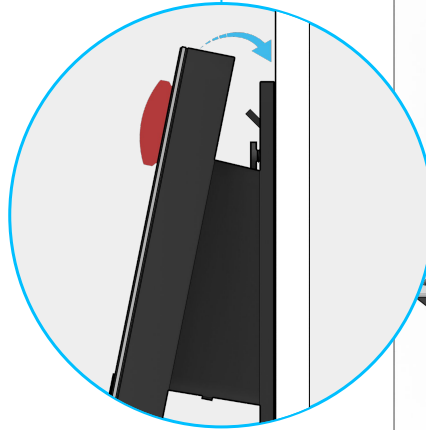
Installation

Direct Wall Mounting 2/2

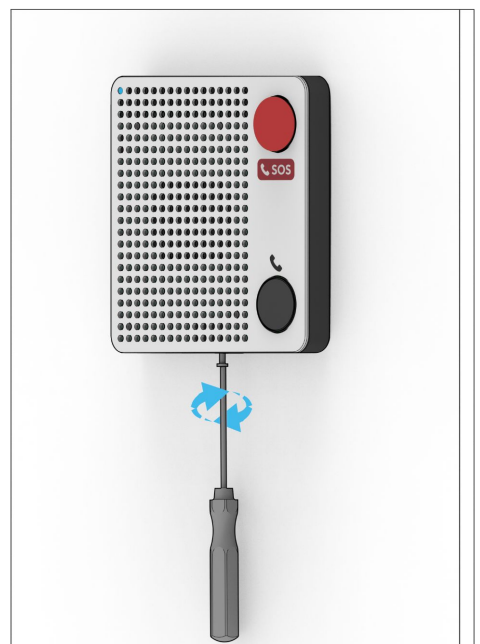
Route the ethernet cable through the mount plate and plug it into the device.



Hook the device onto the mount plate.



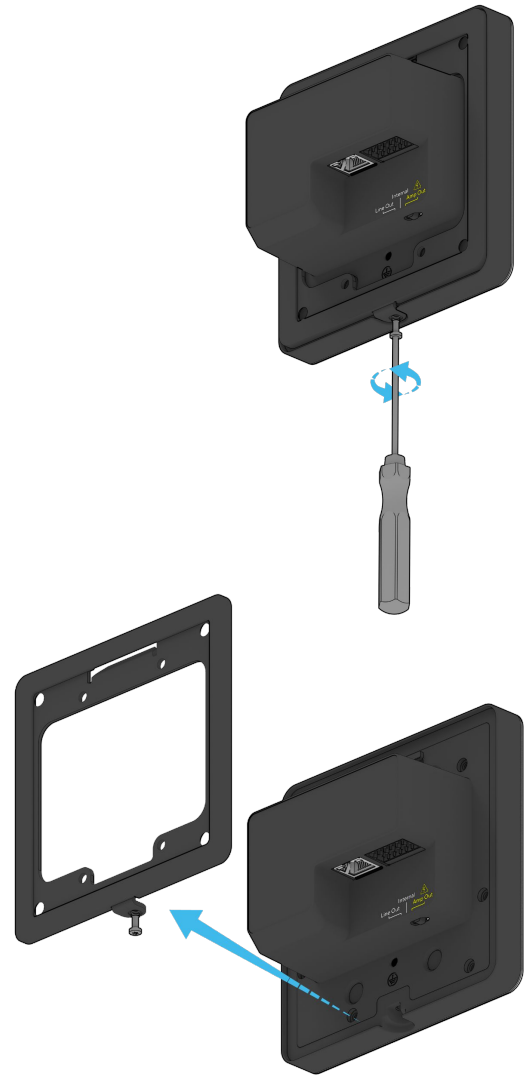
Tighten the security screw with the T10 Torx Security Screwdriver.



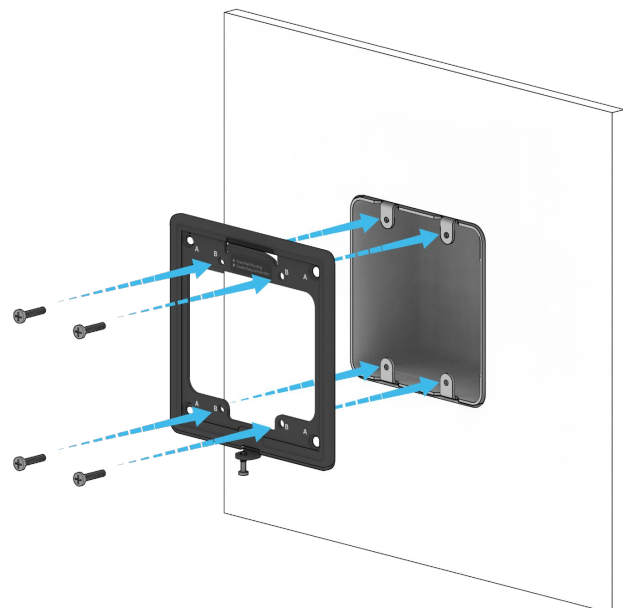
Installation

Double gang junction box mounting ^{1/2}

Loosen the security screw and remove mount plate from device.



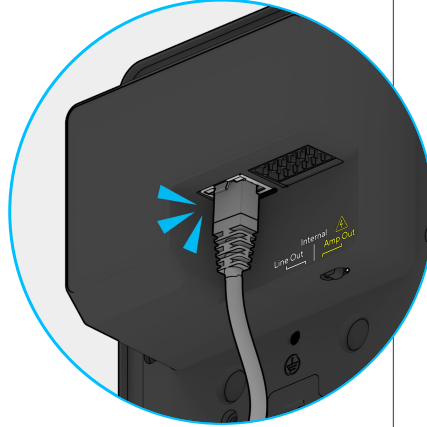
Install mount plate on junction box using #6 or #8 junction box screws.



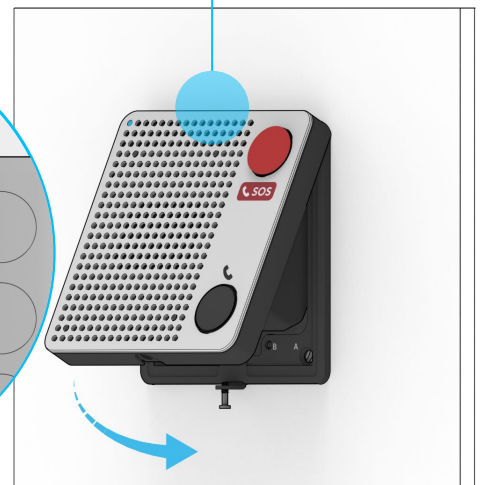
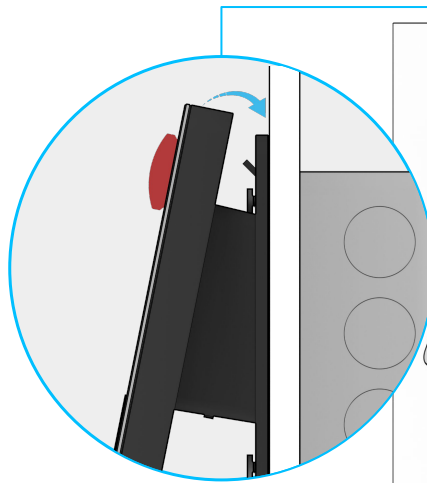
Installation

Double gang junction box mounting 2/2

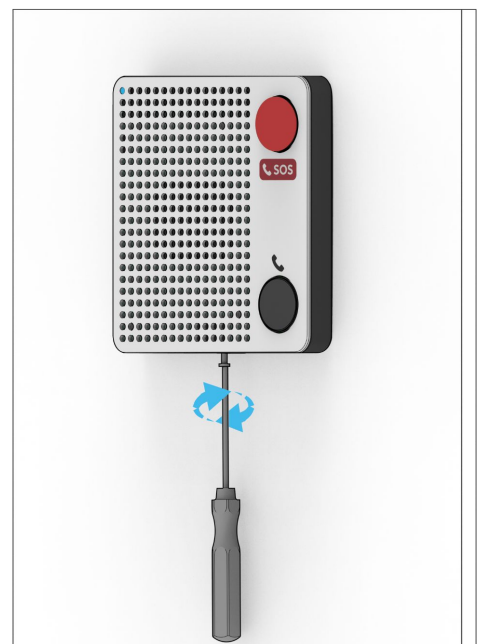
Route the ethernet cable through the mount plate and plug it into the device



Hook the device onto the mount plate.



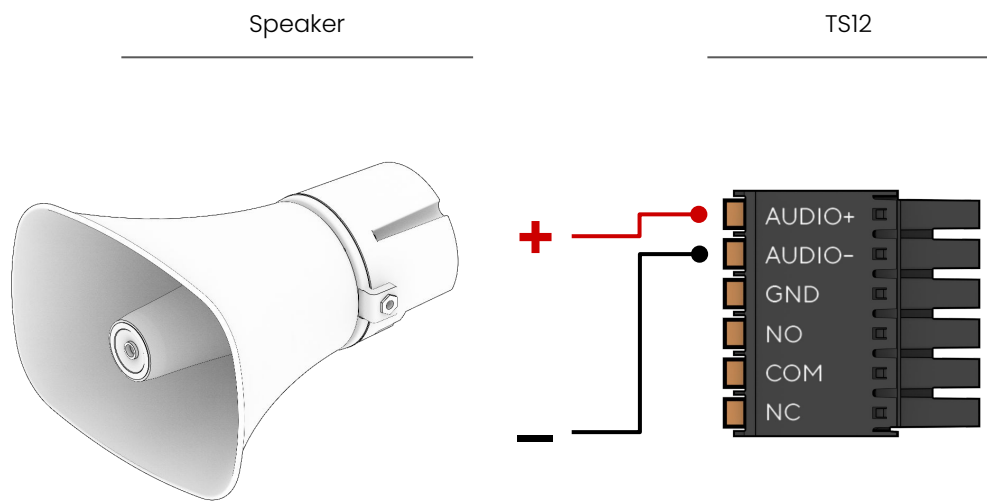
Tighten the security screw with the T10 Torx Security Screwdriver.



Installation

External Speaker Connection¹

Wiring diagram



Power selection

The main image shows the back of the device with a callout circle highlighting the power selection switch. The switch has two positions: 'Line Out' and 'Amp Out'.

Internal Line Out | Amp Out

Intercom provides line level audio to the external speaker. Requires external audio amplifier.

Internal Line Out | Amp Out

Intercom provides amplified audio to the external speaker.

Warning

High voltage can damage the speaker if it has its own onboard amplifier. Recommended speaker impedance is 4Ω or 8Ω.

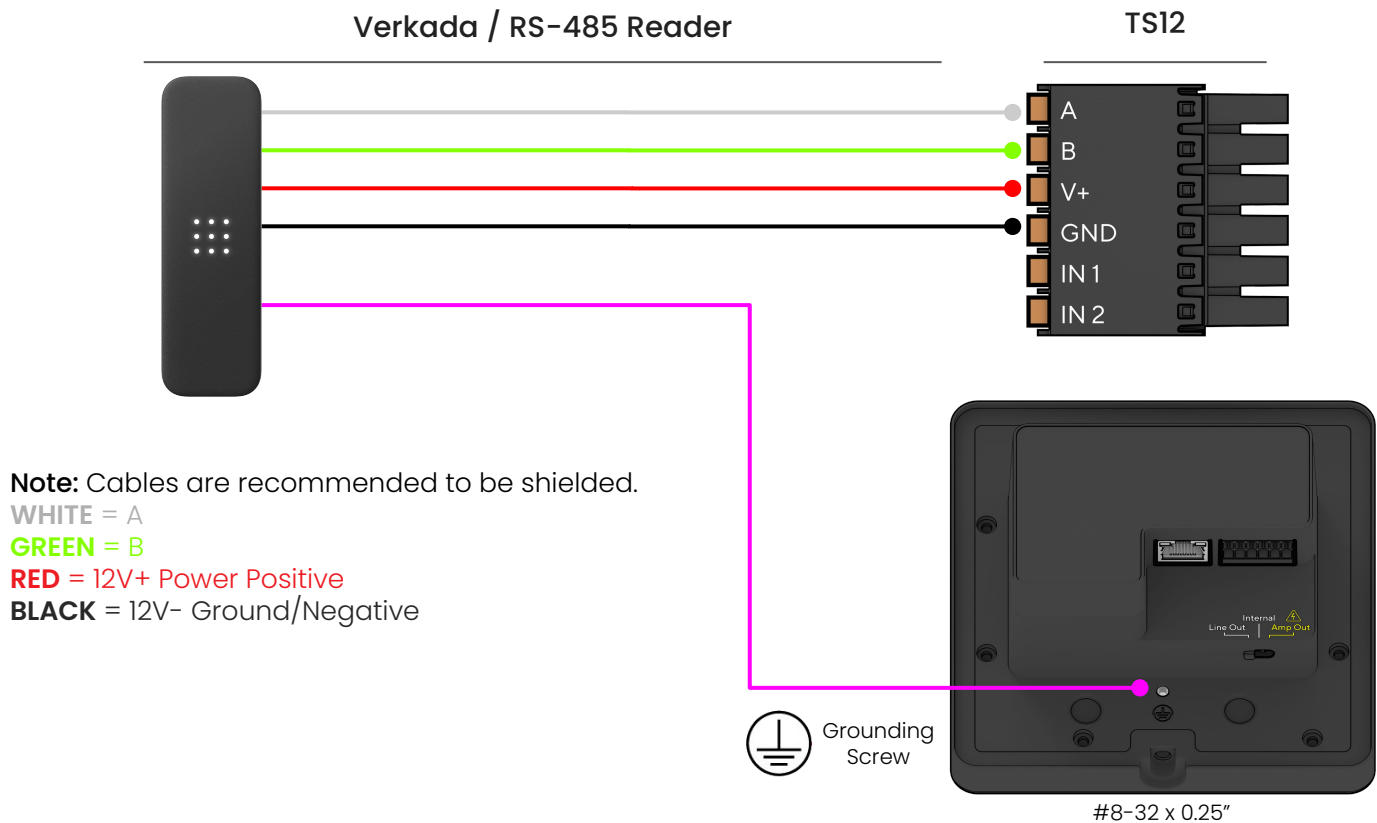
Note 1: Feature is not evaluated for compliance to UL 294 or ULC 60839-11-1



Wiring Instruction

Reader

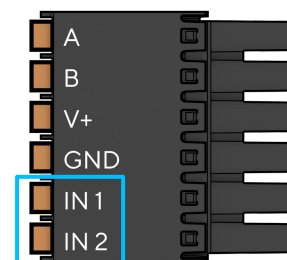
The TS12 is rated to power UL Listed readers at 12V and 250mA via the (+) and (-) connection. It is recommended that the drain wire be connected to earth ground at the reader side. Note: 12V power should not be used to power other peripheral devices, as it has latch-off current limiting.



Inputs

The TS12 has two general purpose dry inputs. Devices commonly connected to these dry contacts include Door Position Indicator (DPI), Request to Exit (REX), and external call triggers. Both inputs are expected to be **NORMALLY OPEN** (NO). For each input, one wire should be connected to the associated IN pin, and the other to the GND pin. All associated events will be logged in Command.

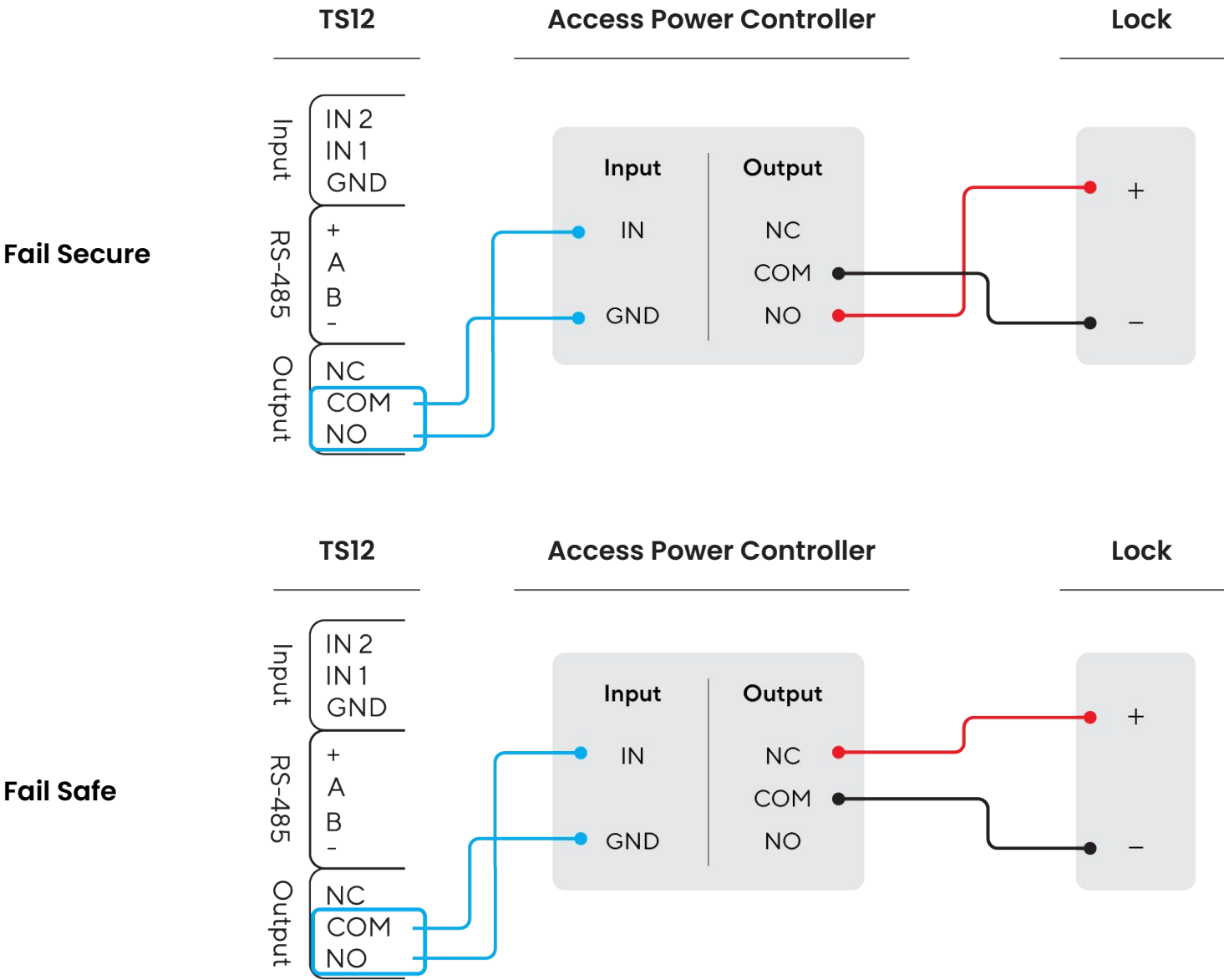
Note: When configuring the TS12 as an single door controller, the DPI should be connected to IN 1, while the REX should be connected to IN 2. Call Trigger can be connected to either IN 1 or IN 2.



Wiring Instruction

Output

The TS12 has one dry form C relay output, which can be used to trigger a door lock by connecting an access power controller to the output terminal as detailed below. The output relay can also be used as a general purpose output. For fail safe locks, + should be connected to NC to be locked by default. For fail secure locks, + should be connected to NO to be locked by default.



Note: To maintain UL 294 compliance, all devices connected to TS12 should be UL 294 and ULC 60839-II-1 Listed



Appendix

Compliance 1/2

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. 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 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. 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. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
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. 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.



Appendix

Compliance 2/2

Caution	1. The device is only to be connected to PoE networks without routing to outside plants. 2. Please contact authorized dealers for power adapters. 3. This device is intended to be supplied by an UL Listed PoE (Power over Ethernet) power source. 4. If powered by a power adapter, the adapter should be properly grounded. 5. This device shall connect to the ground with a green-yellow striped grounding wire and the part connecting the conductor must be minimum 18AWG.
UL 294	Troubleshooting: If connected accessories are not operating properly there may be a problem with the accessory wiring. Refer to the Wiring sections of this document for guidance. Attack Level: Level I Endurance Level: Level I Line Security Level: Level I Standby Power Level: Level I The following functions were not subject to the requirements of UL 294 Listed: - Video, audio, and intercom performance - PoE functionality - IK07 and IP65 ratings - Compliance to IEEE 802.3 This device accepts PoE. Use only UL listed class 2 power supply. Certification testing completed using PHIHONG TECHNOLOGY CO LTD Model POE60U-BTB (Verkada ACC-POE-60WHS) File E127643. PoE supply is for indoor use only. Power source for dry relay contacts shall be UL listed and having class 2 power limited output. Locations and wiring methods shall be in accordance with the National Electrical Code, ANSI/NFPA 70 Article 725.121, Power Sources for Class 2 and Class 3 Circuits. Category 5e cabling is the minimum performance category recommended. The performance category utilized should match the transmission speed required at the installation site. Minimum conductor gauge permitted between the PSE or power injector and the PD shall be AWG 26 (0.13mm²) for patch cords; 24 AWG (0.21mm²) for horizontal or riser cable. PoE Injector for use with this device is to be installed in compliance with the Standards for Balanced Twisted-Pair Telecommunications Cabling and Components, ANSI/TIA-568-C.2, between the network switch and the powered device. Electronic authorization details - Mobile device operating system requirements: Apple iOS 16.0 or later, Google Android 3.1.6 or later - Mobile app requirements: Verkada Pass App 4.7.13 or later - User verification method: User ID and password - Credential details: authentication/digital signature keys received from wireless electronic credential Tested for compliance using Verkada AD34-HW reader. Audio outputs were not evaluated for UL 294 compliance.
CAN/ULC 60839-11-1	Environmental Level: Outdoor Grade assignment: Grade I

Appendix

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