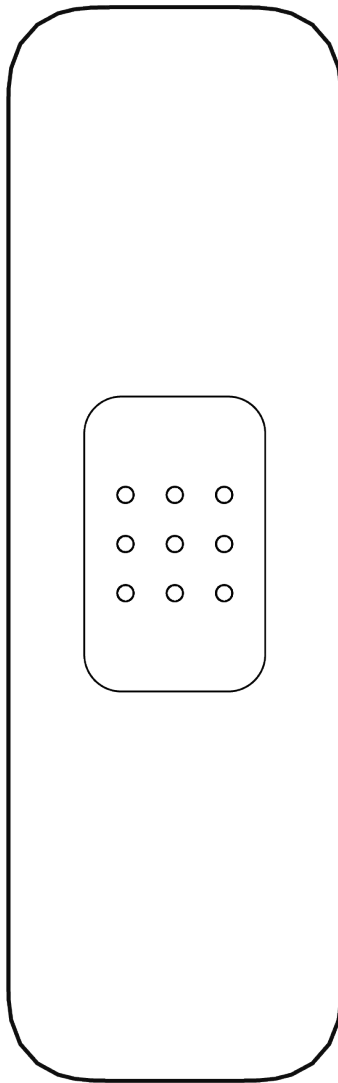


AD34 Door Reader



Document Details

v0.1 (20240221)

(v0.1 first published 20240221)

Firmware

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

Caution



Only use with Verkada Access
Controllers certified under UL62368
(compliant with LPS) and UL294

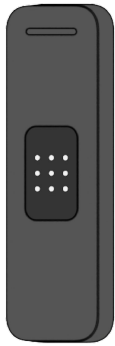


AD34 Technical Specifications

Mullion Dimensions	131.2 x 40.7 x 17.6mm	
Single Gang Dimensions	145.0 x 80.0 x 20.1mm	
Supported Credential Technologies	Low Frequency (125 kHz) High Frequency (13.56 MHz) Mobile NFC (13.56MHz) Bluetooth Low Energy (2.4GHz)	
Ratings	IP65, IK08	
Operating Temperature	-40° to 65°C (-40° to 149°F) 5-90% RH non-condensing	
Controller Compatibility	Requires an RS-485 connection to a Verkada access controller	
Power Consumption	12V, 250mA max	
Included Accessories	Single gang mounting plate, mullion mounting plate, T10 screwdriver, 2 wall mount screws, 2 M3 machine screws	
Mounting Options	Unit ships with both standard single gang mounting plate and mullion mounting plate	



What's in the box



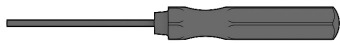
AD34 Door reader



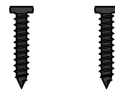
Single gang mount



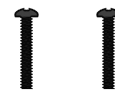
Mullion mount



T10 Security torx screwdriver



Wall mount screws (2pcs)



M3 Machine screws (2pcs)

What you'll need

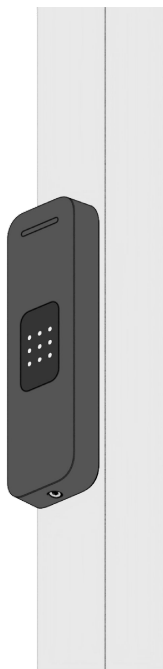
- A working internet connection
- A smartphone or laptop
- A #2 Phillips driver (screwdriver or power drill)
- 1/8 inch (3mm) drill bit for pilot holes
- 1/2 inch (12.7mm) drill bit, or larger, for routing cable through wall



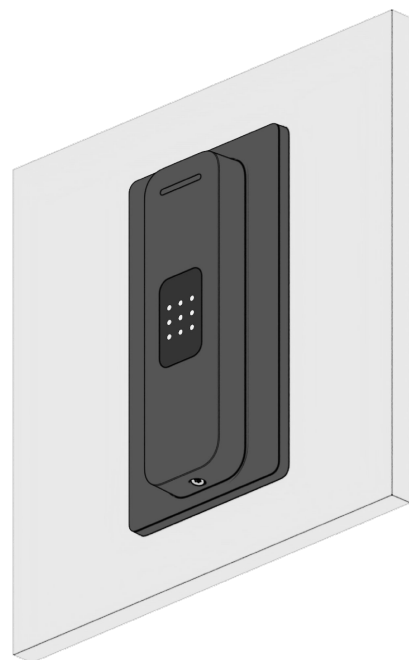
Door Reader overview



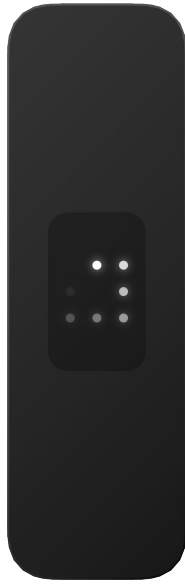
Mullion Configuration



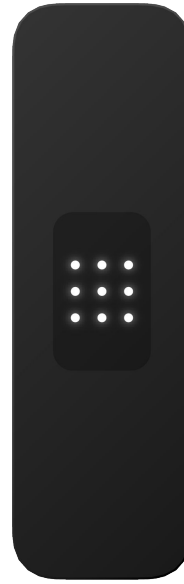
Single Gang Configuration



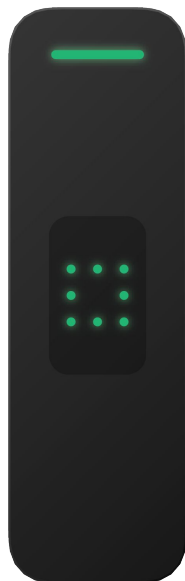
LED Behaviour



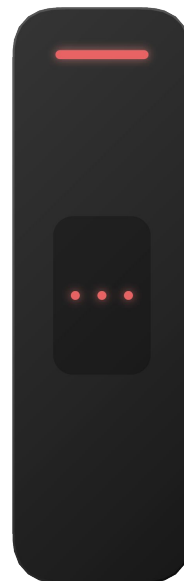
Cycling LEDs
Receiving power and
booting up.



Static Matrix
Powered on and
connected to the ACU.



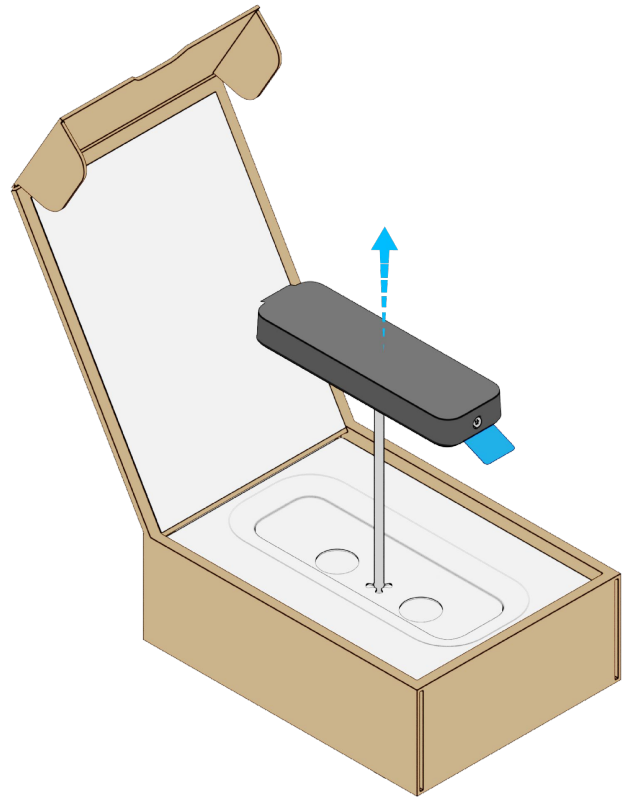
Solid Green (Temporary)
Successfully processed a user
scan and granted access.



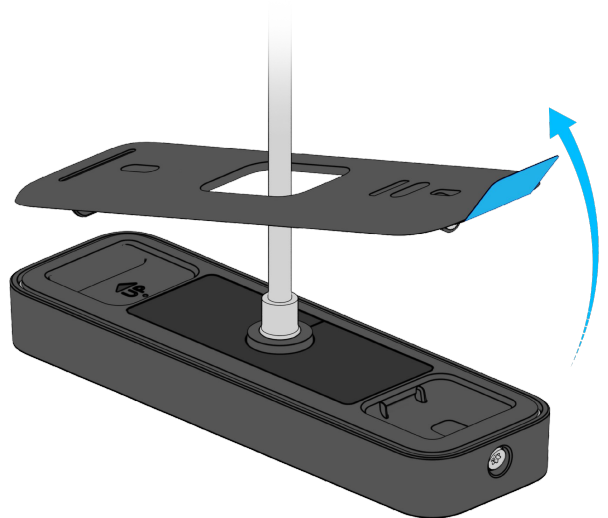
Solid Red (Temporary)
Successfully processed a user
scan and denied access.

Preparation

Pull device out of packaging, keep protective film on reader throughout installation process to ensure device is not damaged during installation.



Use pull tab to remove mullion mount from reader in preparation for mounting.



Installation

Required Wires

The following diagram shows the wire types that are recommended for use with the Verkada AD34.

Signal	AWG	Twisted Pair	Shielded	Max Length
Reader Option 1 (22 AWG)	22	Yes	Yes	250 ft
Reader Option 2 (20 AWG)	20	Yes	Yes	300 ft
Reader Option 3 (18 AWG)	18	Yes	Yes	500 ft

We recommend using one twisted pair for GND and VIN (power) and one twisted pair for the data (D0/D1 or A/B).

Wiring methods shall be in accordance with National Electrical Code, ANSI/NFPA 70.

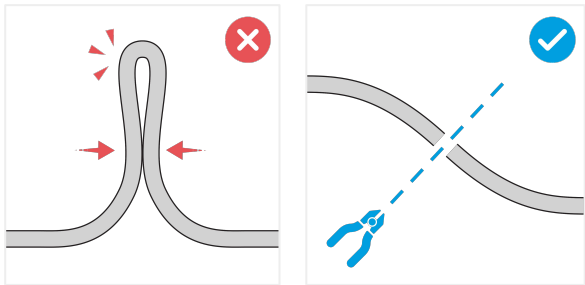
Drain Wire Connection

- You must use shield wiring with the AD34:
- Connect the drain wire (bare metal) from the reader cable bundle to the drain wire in the shielded cabling. Then, connect the drain wire at the other end of the shielded cabling to Earth ground.
 - Improper grounding and shielding may result in unintended product behavior.

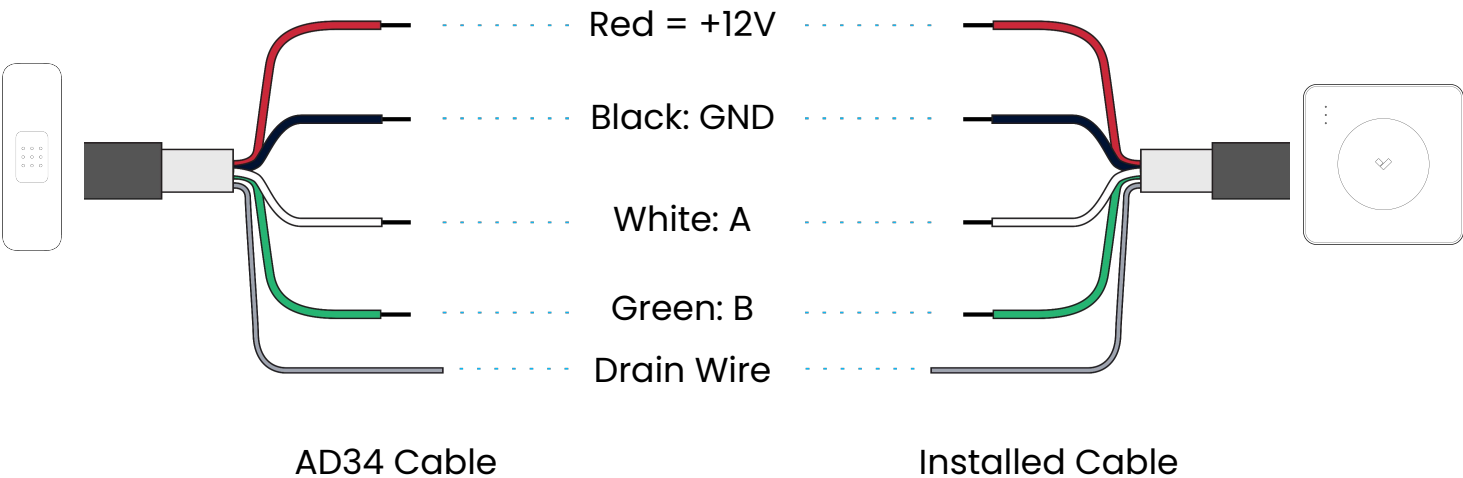
It is recommend to connect one of the chassis grounding screws to the building ground at the installation site.

Excess Wire Trimming

Avoid pinching cables during installation as that may affect performance. If excess cables, trim to reduce slack.



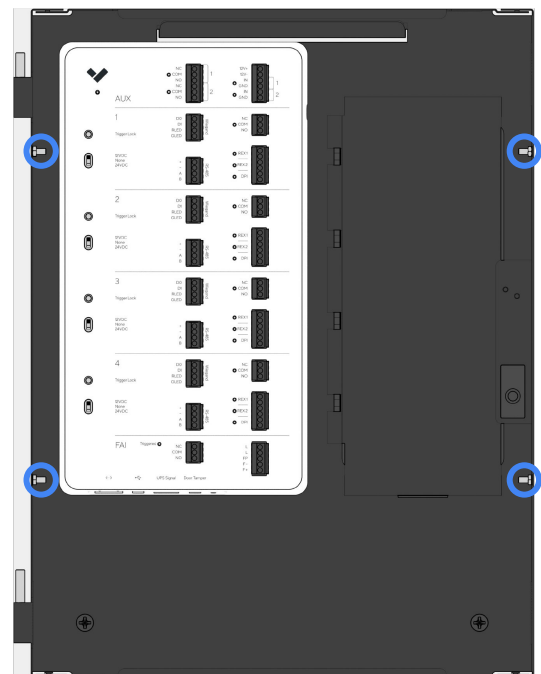
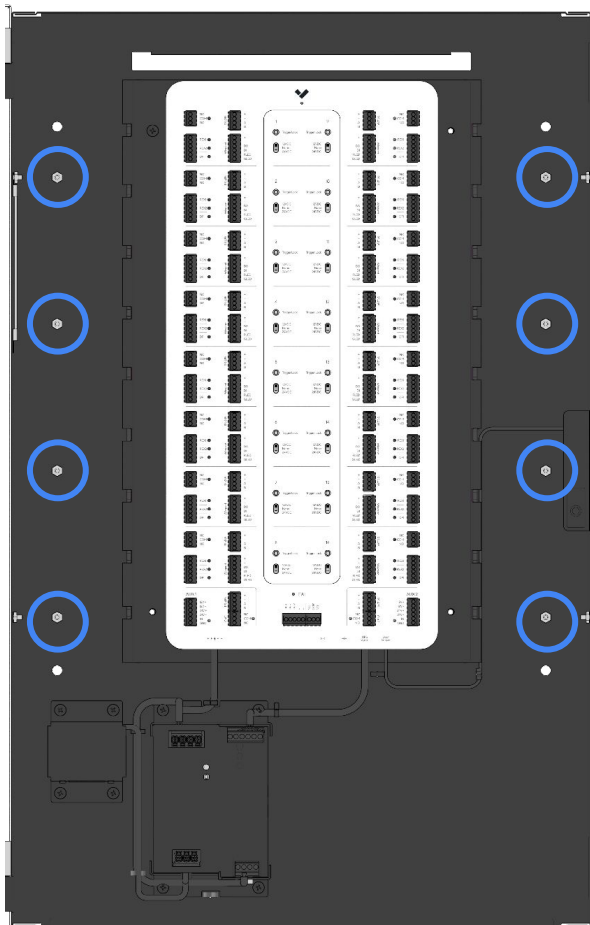
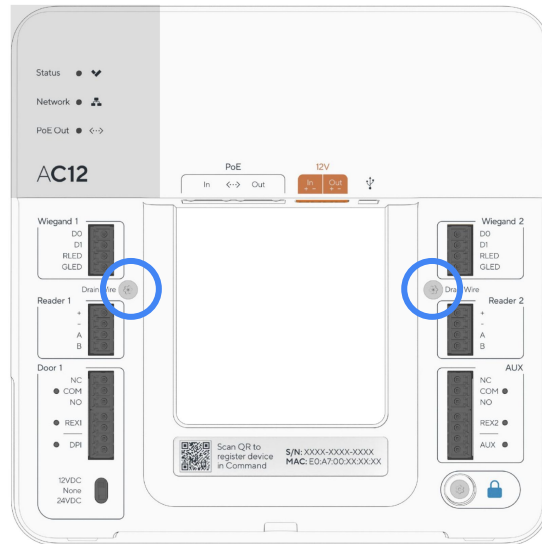
Shield Wiring and Grounding



Installation

Critical Wiring Requirements (cont.)

The drain wires from the shielded cabling can be connected to Earth ground on the following locations on the Verkada access controllers.

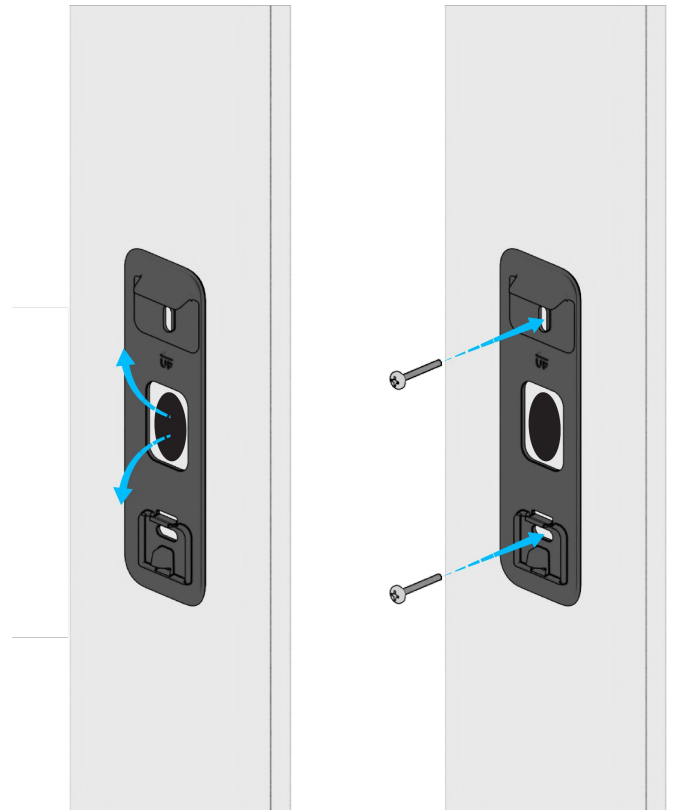


Installation

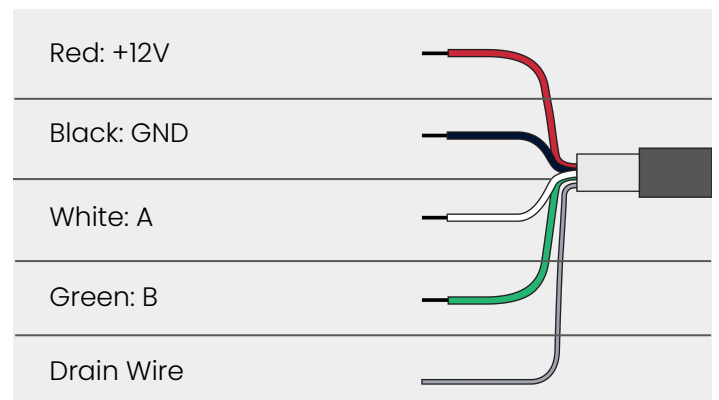
Mounting option 1: Mullion Mount

Using the mullion mount as your template, mark and drill two $\frac{1}{8}$ inch (3mm) pilot holes at the top and bottom. Drill a $\frac{1}{2}$ inch (12.7mm) center hole for cable routing.

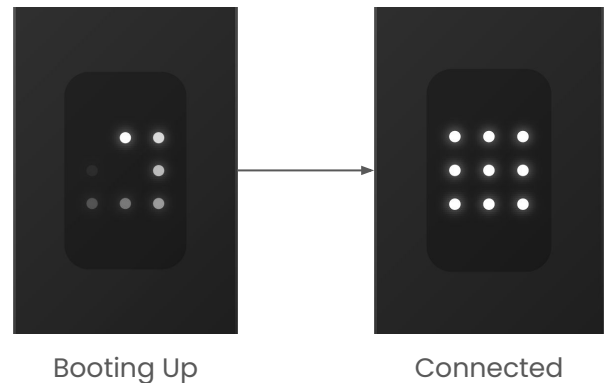
Secure the mullion mount to the wall using the 2 M3 machine screws. If you are installing on a wall, use the 2 provided wall mount screws instead.



Connect the wires using the diagram above or the table on the back of the AD34 Door Reader as reference.

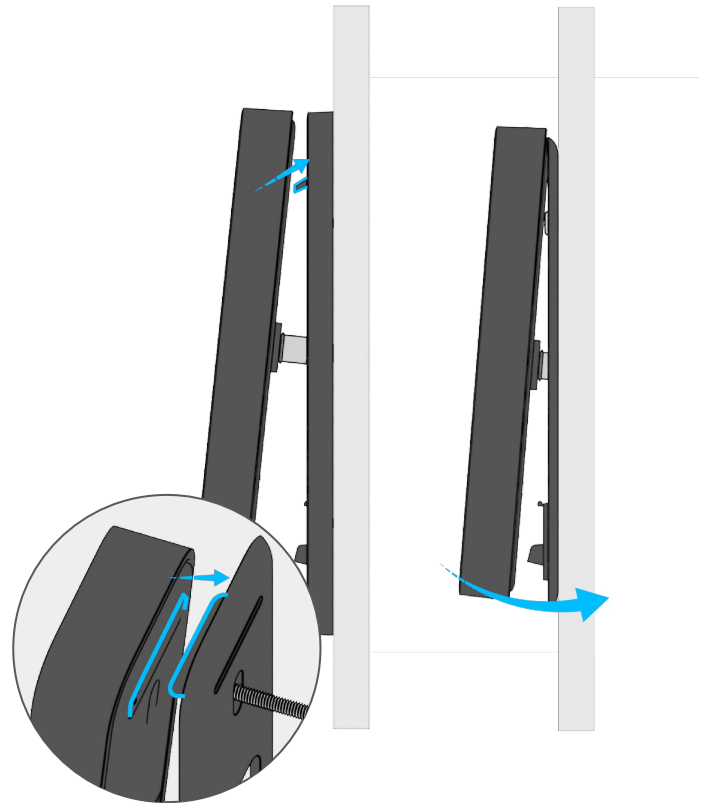


To ensure that the device is connected and operating, make sure that the LED animation is in the static matrix.

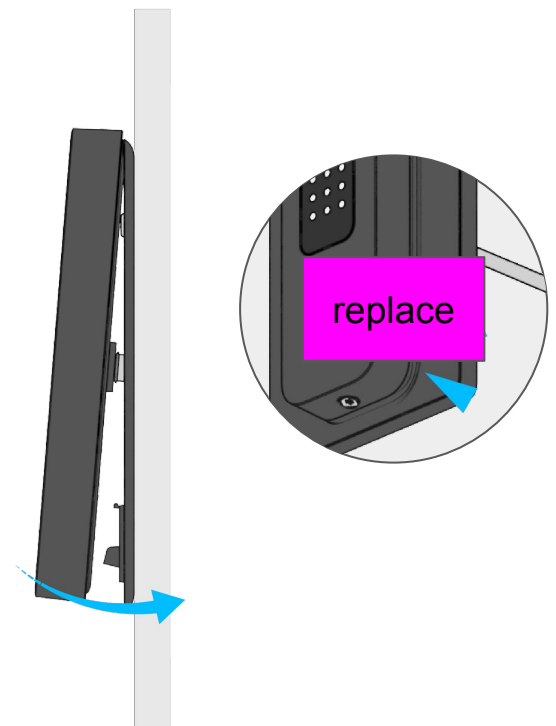


Mounting option 1: Mullion Mount

Tow in the AD34 reader into mullion mount plate, and rotate device down.



Once in position, press the AD34 reader into the mullion mount until an audible click is heard. Then secure the security screw on the bottom of the device using the provided T10 Security Torx hand tool.

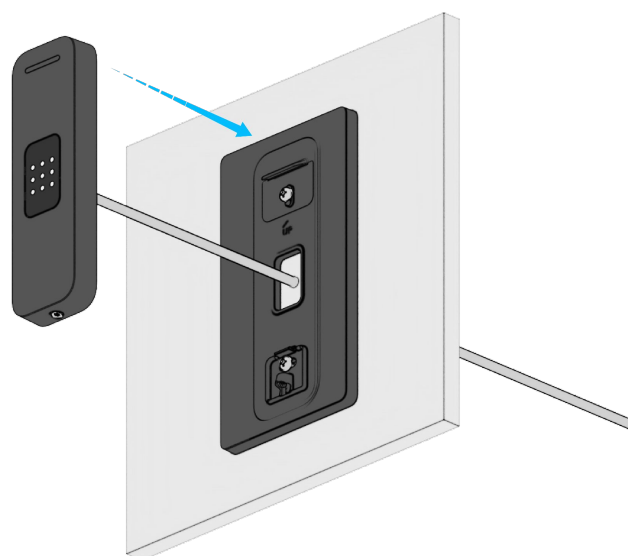
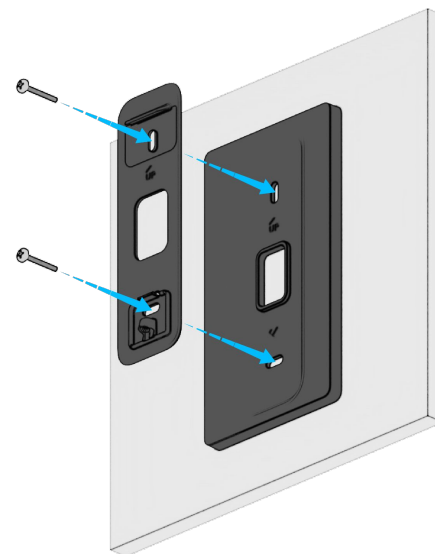


Mounting option 2: Single Gang

Using the single gang mount as your template, mark and drill two 1/8 inch (3mm) pilot holes at the top and bottom. Drill a 1/2 inch (12.7mm) center hole for cable routing.

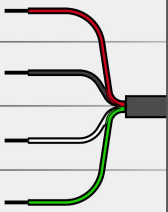
Place the mullion mount over the single gang mount. Route building-side cable through the center hole and the circular opening through both the single gang and mullion mount.

Secure both the mullion and single gang mounts onto the wall using the 2 M3 machine screws provided. If you are installing on a wall, use the 2 provided wall mount screws instead.

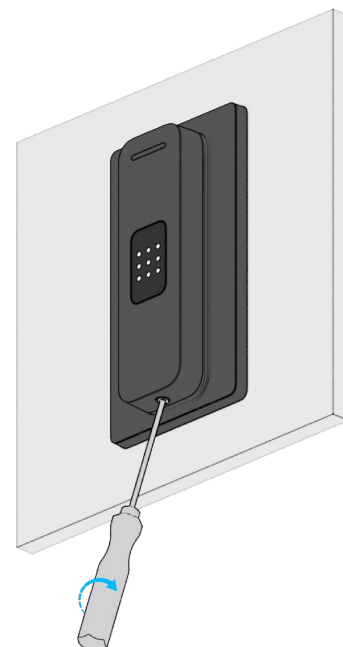
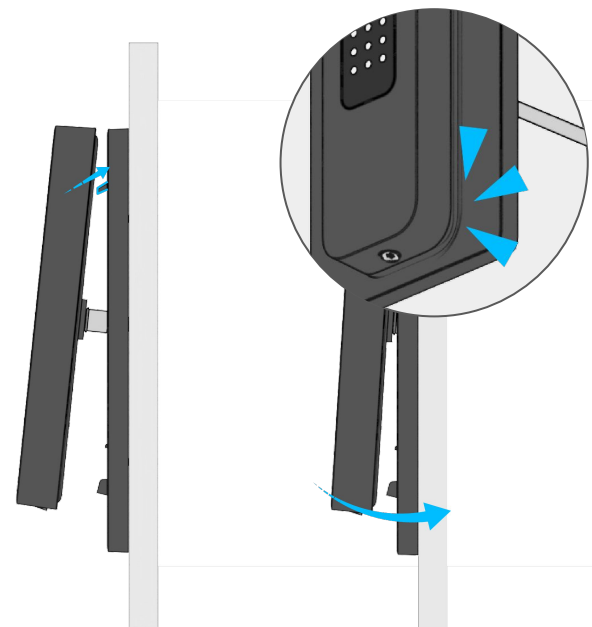


Mounting option 2: Single gang cont.

Connect the wires using the diagram or the table on the back of the AD34 Door Reader as reference.

Wiring (RS-485)	
Red: +12V	
Black: GND	
White: A	
Green: B	

Once in position, press the AD34 reader into the mount until an audible click is heard. Then secure the security screw on the bottom of the device using the provided T10 Security Torx hand tool



AD34 Compliance

FCC Statement	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. Radiation Exposure Statement: The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.
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. Radiation Exposure Statement: The product comply with the Canada portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available. Déclaration d'exposition aux radiations: Le produit est conforme aux limites d'exposition pour les appareils portables RF pour les Etats-Unis et le Canada établies pour un environnement non contrôlé. Le produit est sûr pour un fonctionnement tel que décrit dans ce manuel. La réduction aux expositions RF peut être augmentée si l'appareil peut être conservé aussi loin que possible du corps de l'utilisateur ou que le dispositif est réglé sur la puissance de sortie la plus faible si une telle fonction est disponible.



AD34 Compliance

UL 294	Attack Level/Grade: Level 1 Endurance Level/Grade: Level 1 Line Security Level/Grade: Level 1 Standby Power Level/Grade: Level 1
CAN-ULC 60839-11-1	Environmental Level: Outdoor Grade Assignment: Grade 1



Appendix

Support

Thank you for purchasing this Verkada product. If for any reason things don't work right, or you need assistance, please contact us immediately.

verkada.com/support

Sincerely, The Verkada Team

