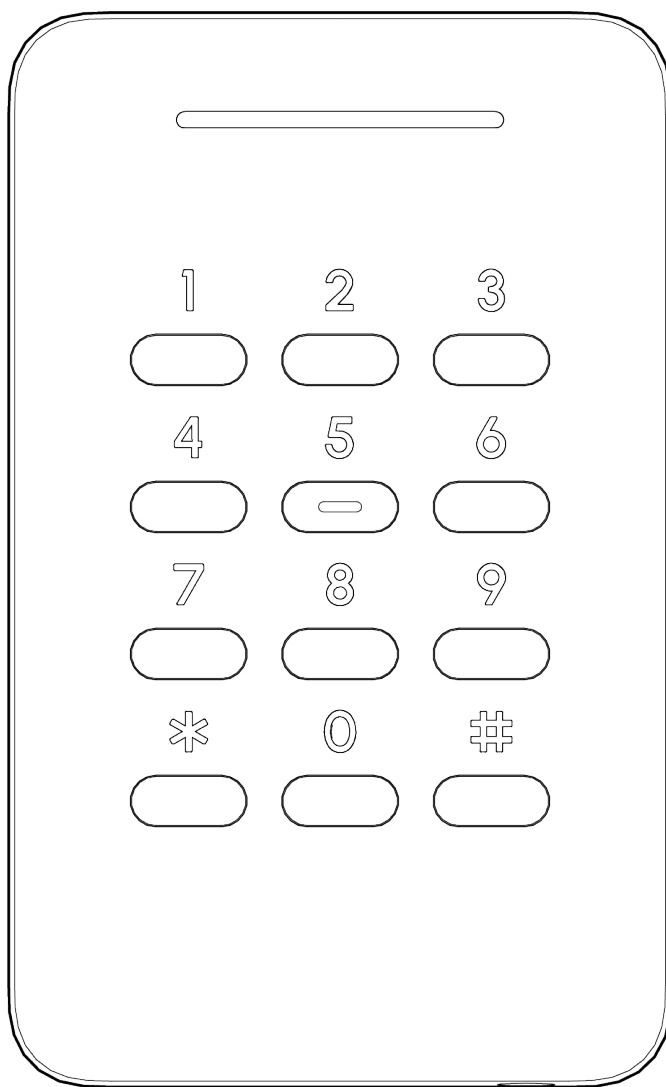


AD64 Keypad Door Reader



Document Details

Version

V0.1
(V0.1 published 7/29/2024)

Firmware

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

Product Models

This install guide pertains to model AD64

Caution



Only use with Verkada Access
Controllers certified under UL62368-1
(compliant with LPS) and UL294

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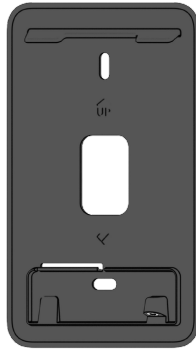
AD64 Technical Specifications

Dimensions	81 x 106.3 x 21mm	
Weight	215g	
Supported Credential Technologies	Keypad for PIN and 2FA 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	Mount Plate, T10 screwdriver, 2 wall mount screws, 2 M3 machine screws	
Mounting Options	Unit ships with standard single gang mounting plate	

What's in the box



AD64 Keypad Door Reader



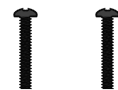
Mount Plate



T10 Security Torx Screwdriver



Wall Mount Screws (2pcs)



M3 Machine Screws (2pcs)

What you'll need

[EDIT]

- 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

Placement

Mount product on wall with RS485 cable routed and plugged into Verkada Access Controller

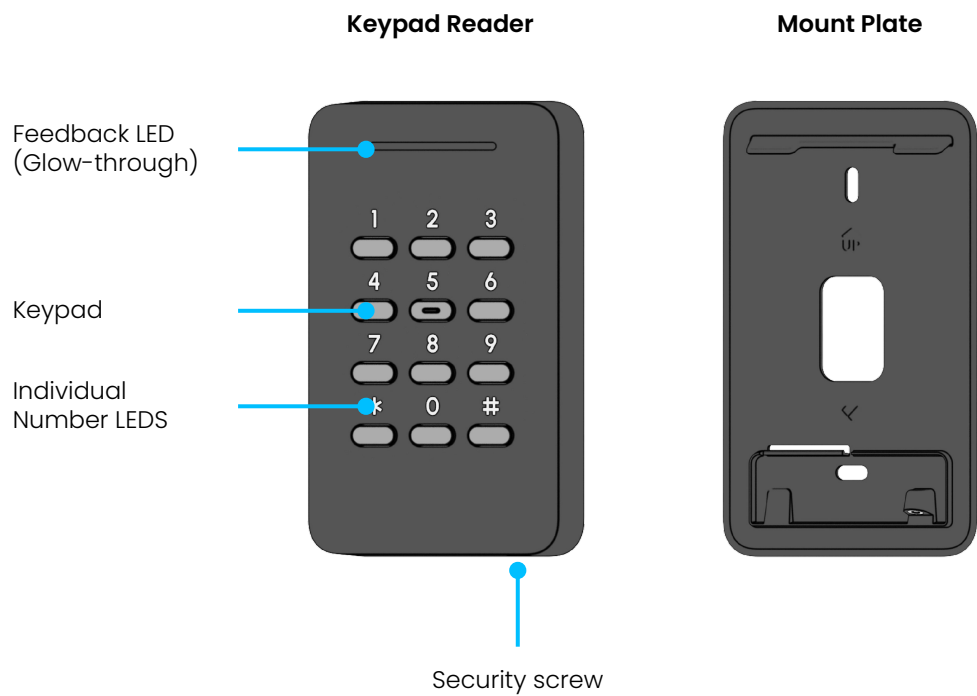
Connect

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

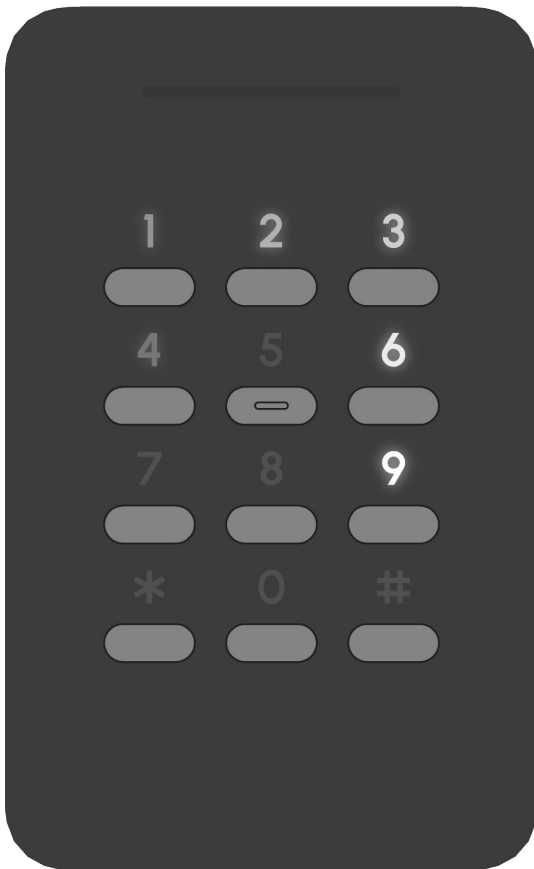
Keypad Door Reader Overview



Single Gang Configuration

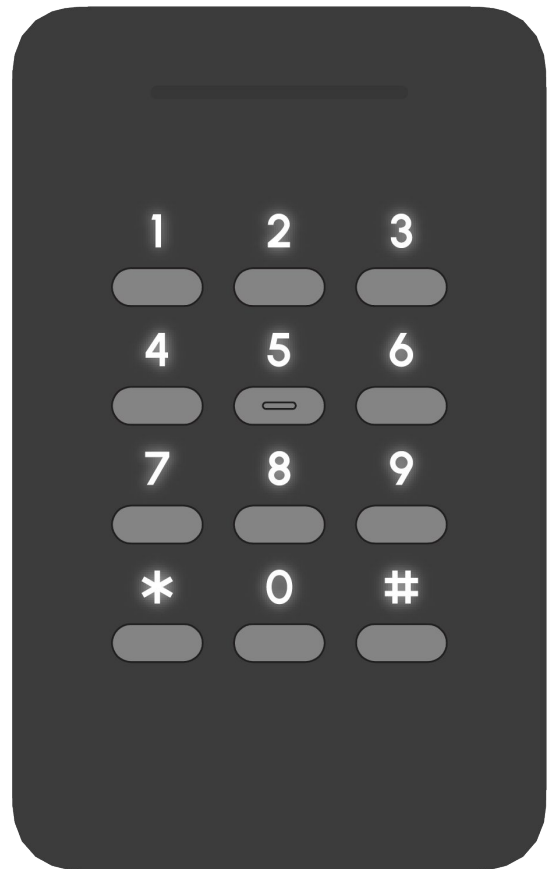


LED Behaviors (1/2)



Cycling White LEDs

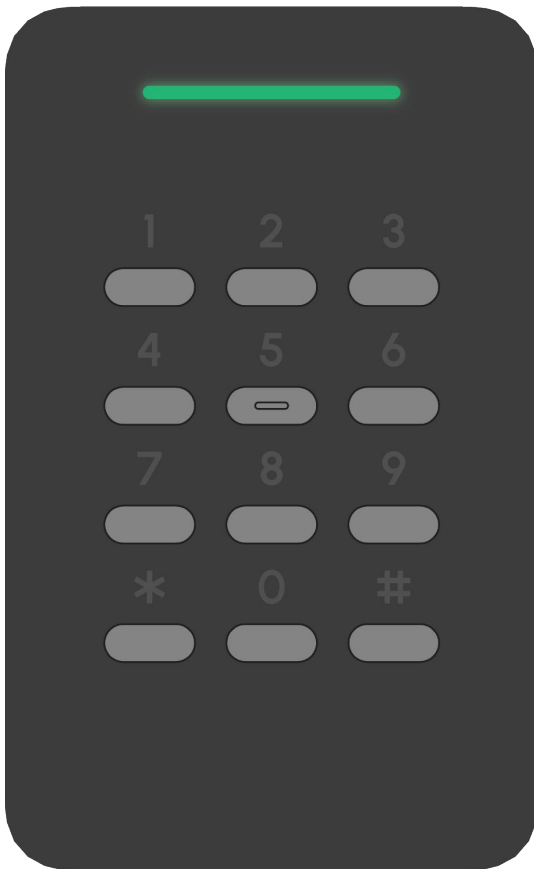
Receiving power and booting up.



Static White LEDs

Powered on and connected to the ACU.

LED Behaviors (2/2)



Green LEDs

Temporary

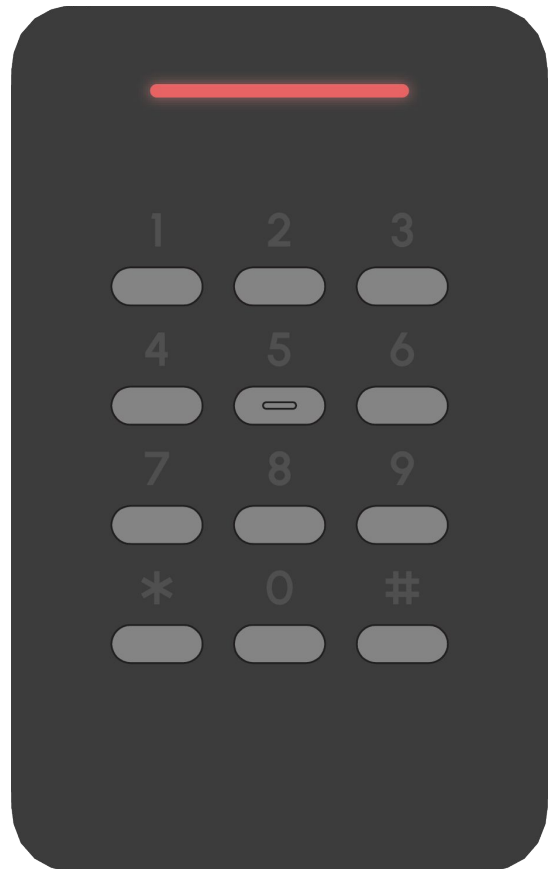
Successfully processed a user scan and granted access

Permanent

Unlock hold placed on door

Pulsing Rapidly

Emergency Release



Red LEDs

Temporary

Successfully processed a user scan and denied access

Permanent

Lock hold placed on door

Pulsing Rapidly

Emergency Lockdown

Required Wires

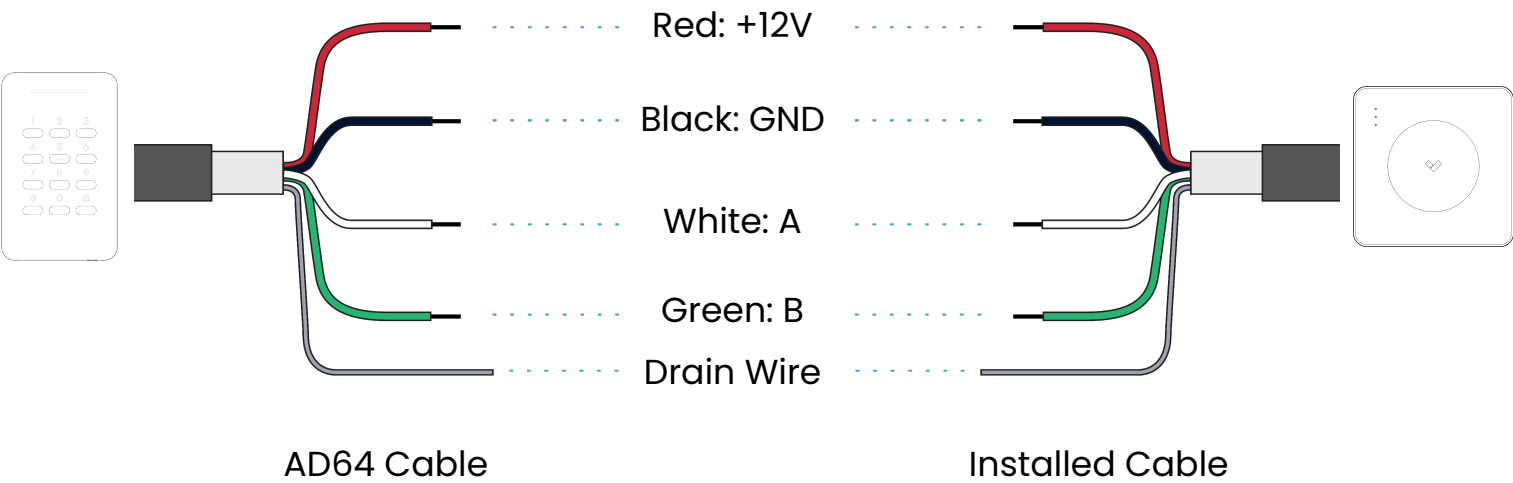
The following diagram shows the wire types that are recommended for use with the Verkada AD64.

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.

Shield Wiring and Grounding



Drain Wire Connection

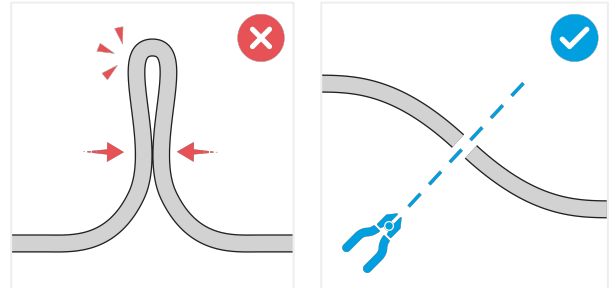
You must use shield wiring with the AD64:

- 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

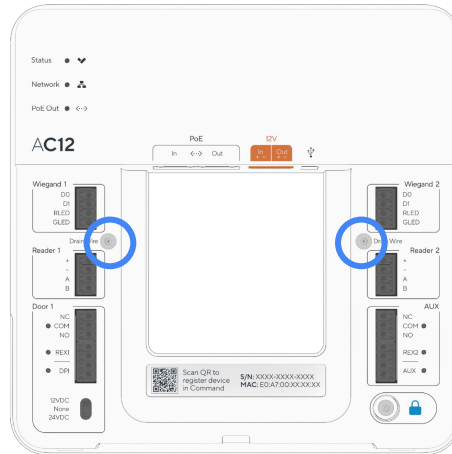
Avoid pinching cables during installation as that may affect performance. If excess cables, trim to reduce slack.



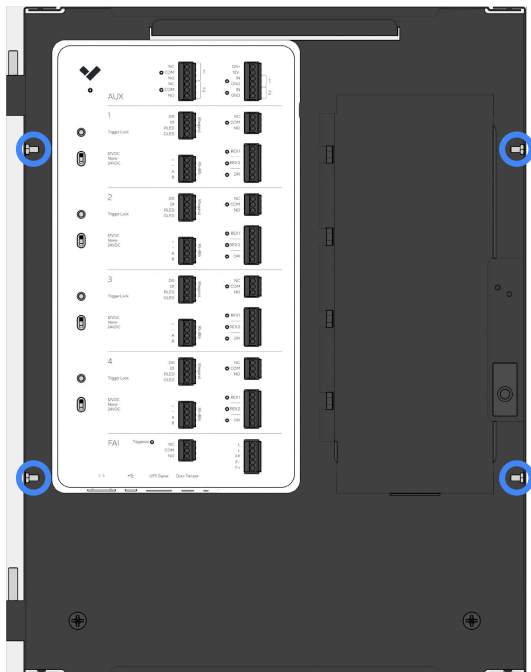
Installation

Critical Wiring Requirements (cont.)

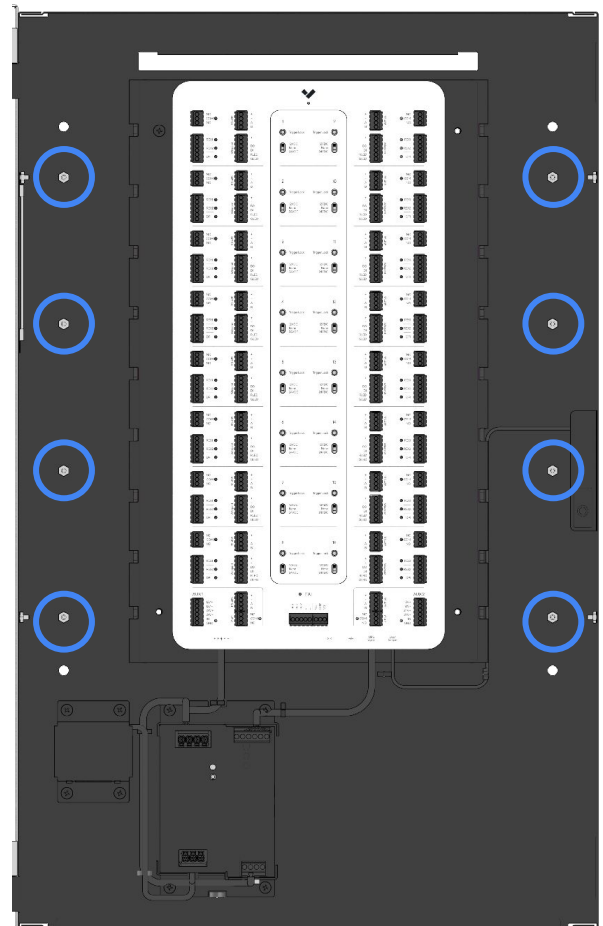
The drain wires from the shielded cabling can be connected to Earth ground on the following locations on the Verkada access controllers.



AC12



AC42

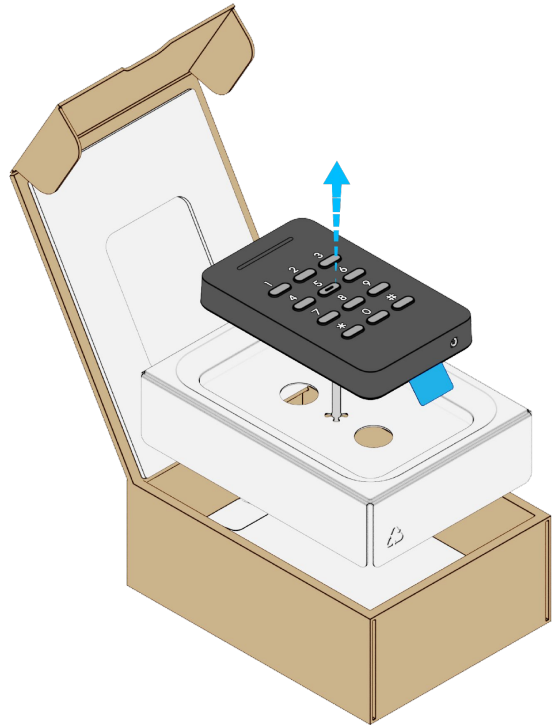


AC62

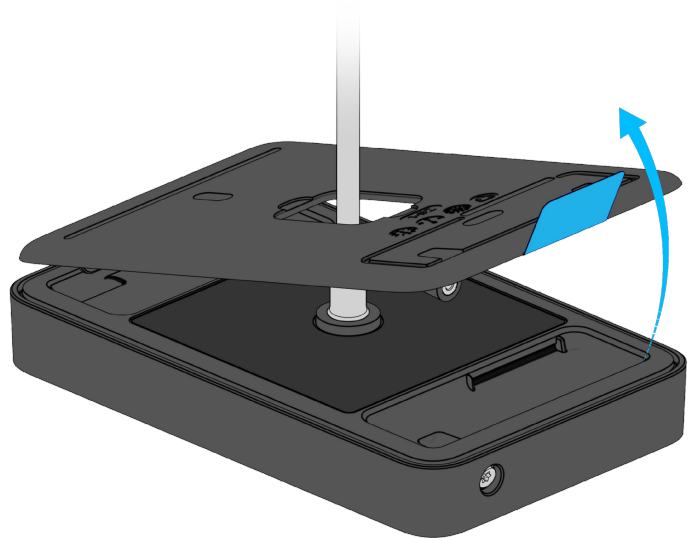
Installation

Preparation

Pull keypad reader and pulp tray out of packaging. Mounting hardware can be found under info card.



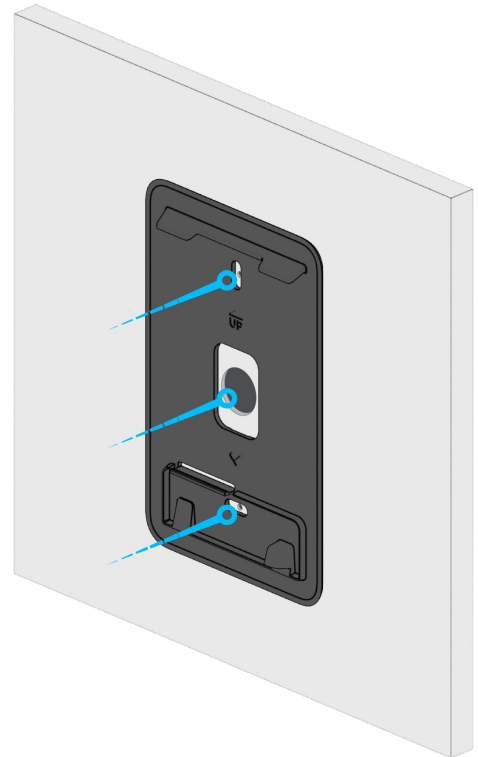
Use pull tab to remove mount from keypad reader in preparation for mounting.



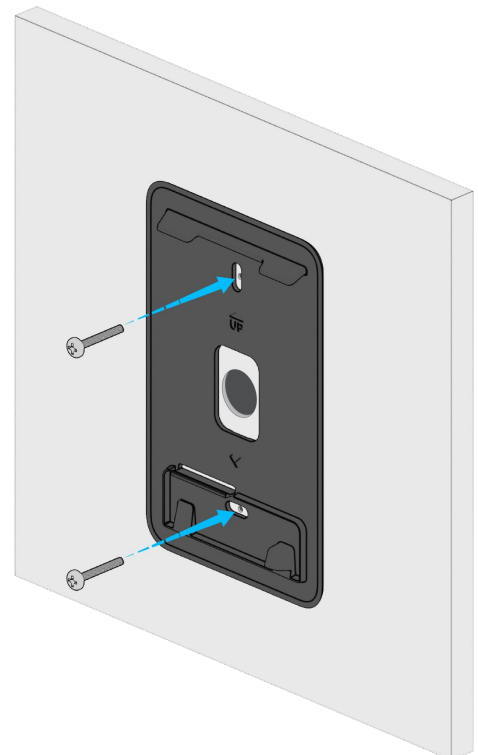
Installation

Mounting (1/4)

Using the mount plate 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 mount plate to a single gang junction box using the 2 provided M3 machine screws. If you are installing on a wall, use the 2 provided wall mount screws instead.



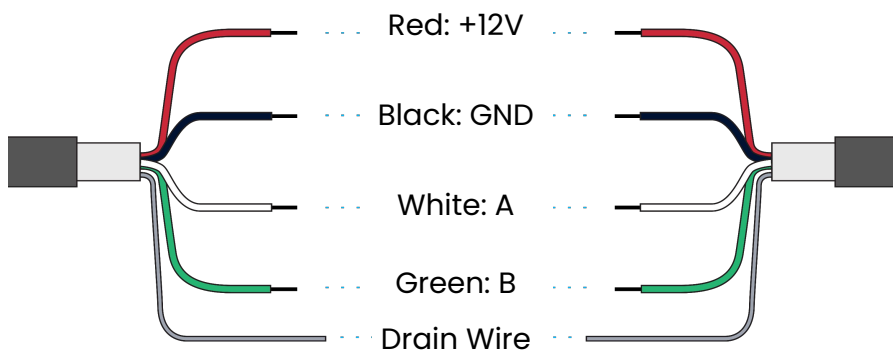
Installation

Mounting (2/4)

Route the installed cable through center opening on mount plate.

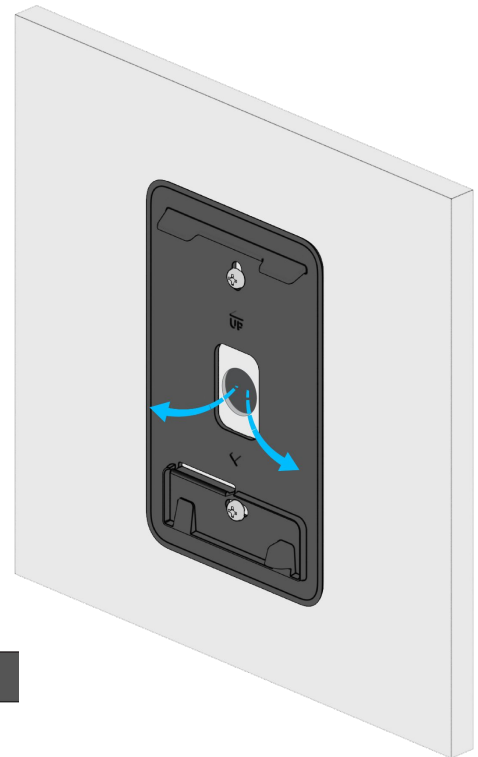
Connect the wires using the diagram below or the table on the back of the AD64 Keypad Door Reader as reference.

Wiring (RS-485 & Drain Wire)

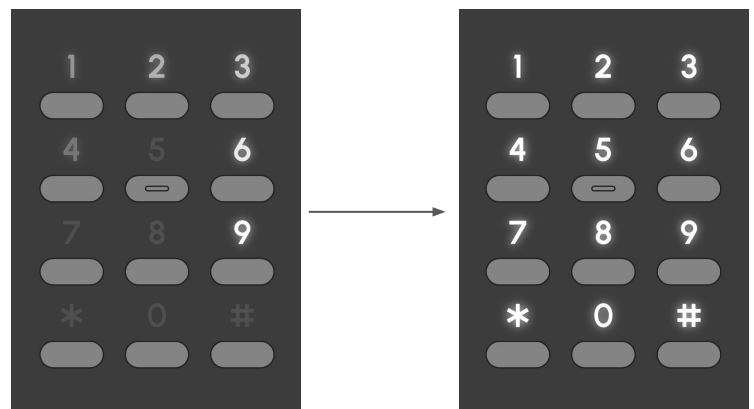


AD64 Cable

Installed Cable



To ensure that the reader is receiving power, make sure that the number LEDs are cycling. The reader successfully connected to the ACU when all numbers are illuminated and static.



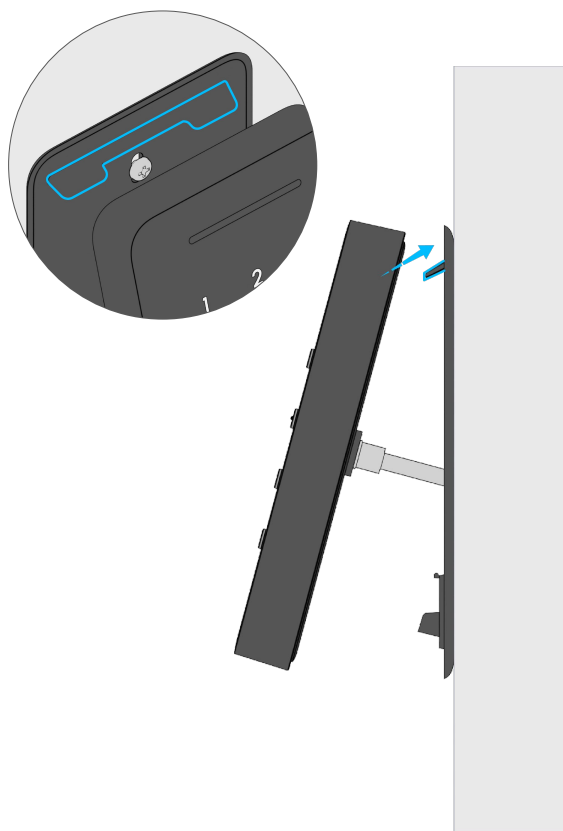
Booting Up

Connected

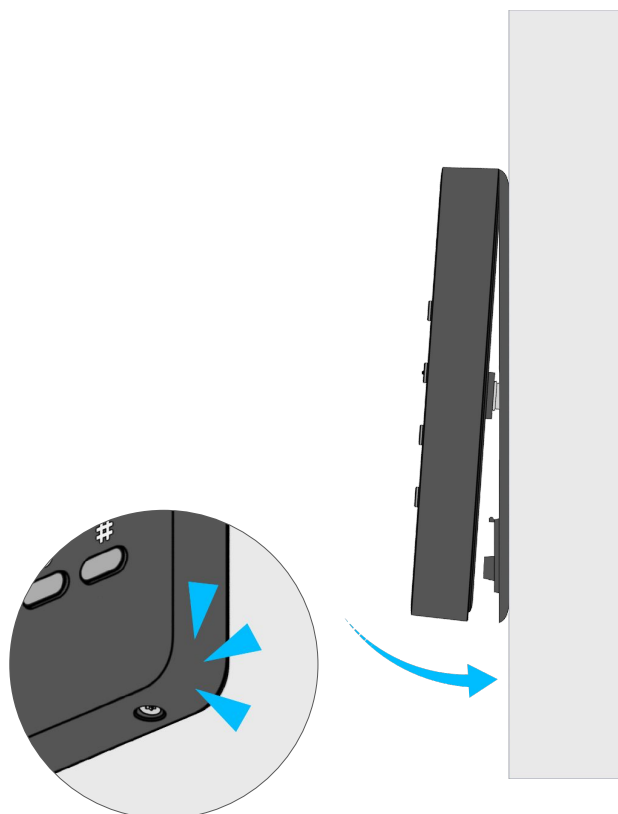
Installation

Mounting (3/4)

Tow in the AD64 keypad reader into mount plate, and rotate device down.



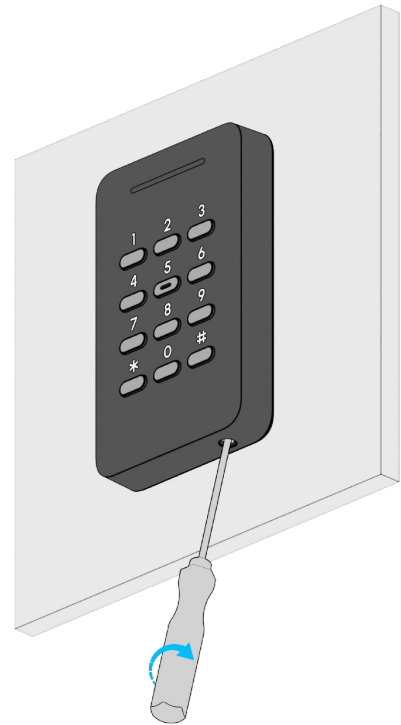
Once in position, press the AD64 keypad reader into the mount until an audible snap is heard.



Installation

Mounting (4/4)

Secure the security screw on the bottom of the reader using the provided T10 Security Torx hand tool. The screw is positioned at an angle for ease of install against a mullion frame or wall.



Appendix

[EDIT] 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.



Appendix

[EDIT] Compliance

Caution 

Only use with Verkada Access Controllers certified under UL62368-1 (compliant with LPS) and UL294

À utiliser uniquement avec les contrôleurs d'accès Verkada certifiés sous UL 62368-1 (conforme à LPS) et UL294.

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 you're experiencing issues or need assistance, please contact our 24/7 Technical Support Team immediately.

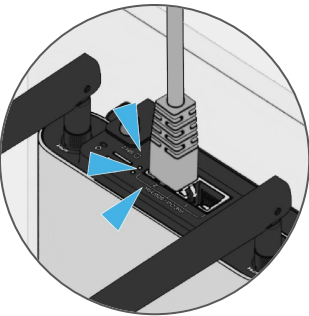
Sincerely,
The Verkada Team
verkada.com/support



Signal	AWG	Conductor	Shielded	Max Length
Power (22 Gauge)	22	Yes	Yes	600 ft
Power (18 Gauge)	18	Yes	Yes	1500 ft

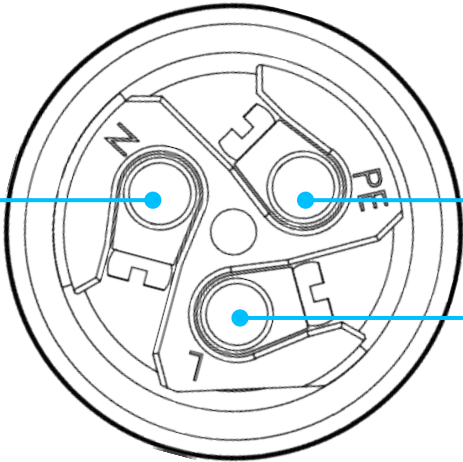
[EDIT] Warning

Text that customer needs to see



M4 x 25mm PH2 wall screws
(4 pcs)

N - Neutral
Typically a white wire



PE - Ground
Typically a green/yellow wire

L - Line / Hot
Typically a black wire