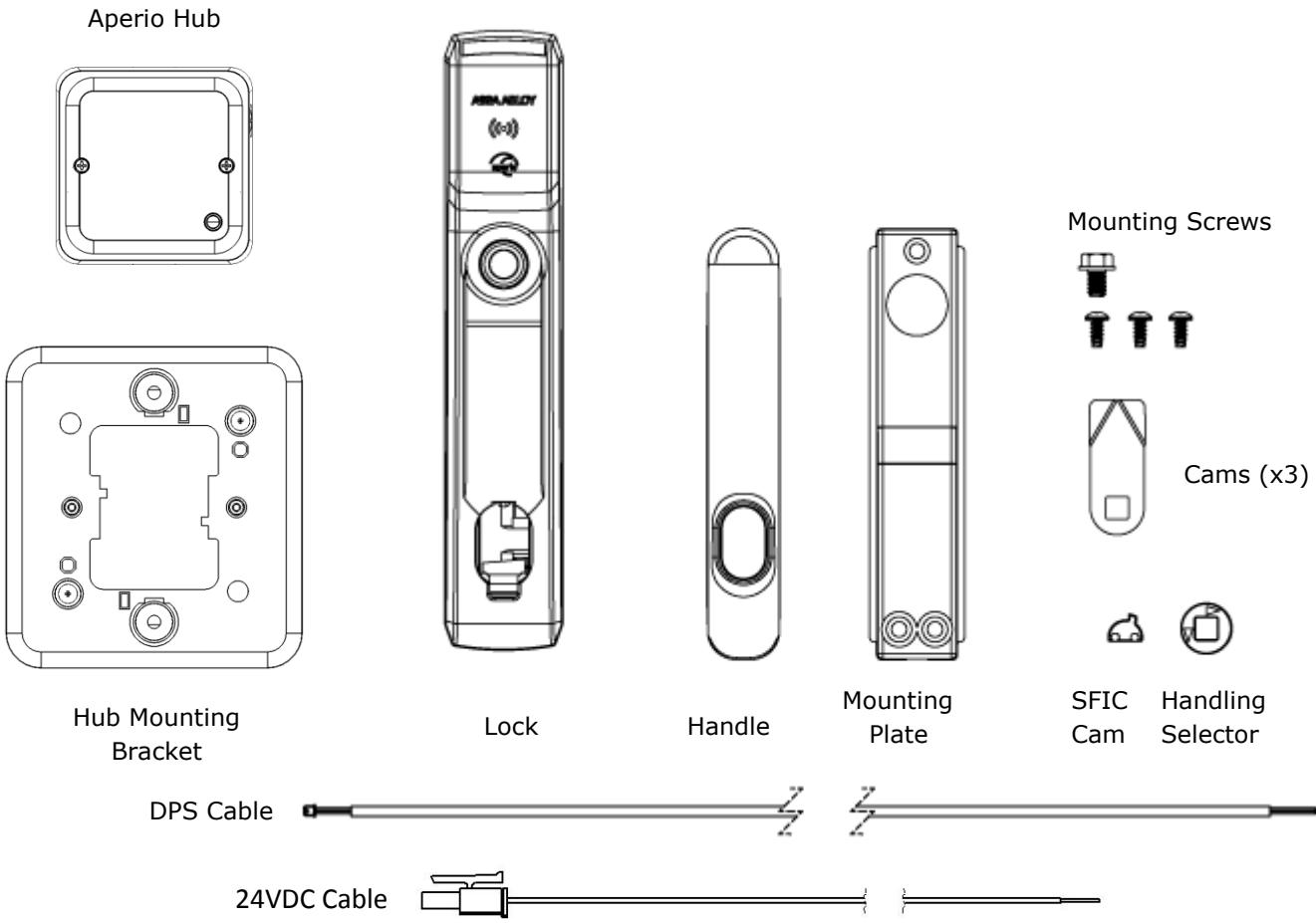
KS100-640H Aperio Cabinet Lock Series Installation Instructions

HES, Inc.
Phoenix, AZ
1.800.626.7590
www.hesinnovations.com

Package Contents



Recommended Tools

Approved RFID Credential Phillips P2 driver, RJ45 cable PoE power injector (48VDC)	Optional Additional Tools: Gang box to mount hub SFIC Core for key override	Optional Additional Tools: Normally Open DPS switches

Product Specifications

Wireless Frequency: 2.4 GHz, IEEE 802.15.4, using AES 128bit encryption

Hub Power Requirement: 8-24VDC, 250mA

Lock Power: 48VDC Power over Ethernet (PoE) 802.3af compliant <OR> 24VDC Power Supply (Supply not provided)

Power Consumption: Less than 1W

Operating Temperature: -10C to 50C

Holding Force: 250 lbs

FCC Part 15, Compliant, Industry Canada Compliant

BHMA: A156.3, A156.36, A156.25 Compliant

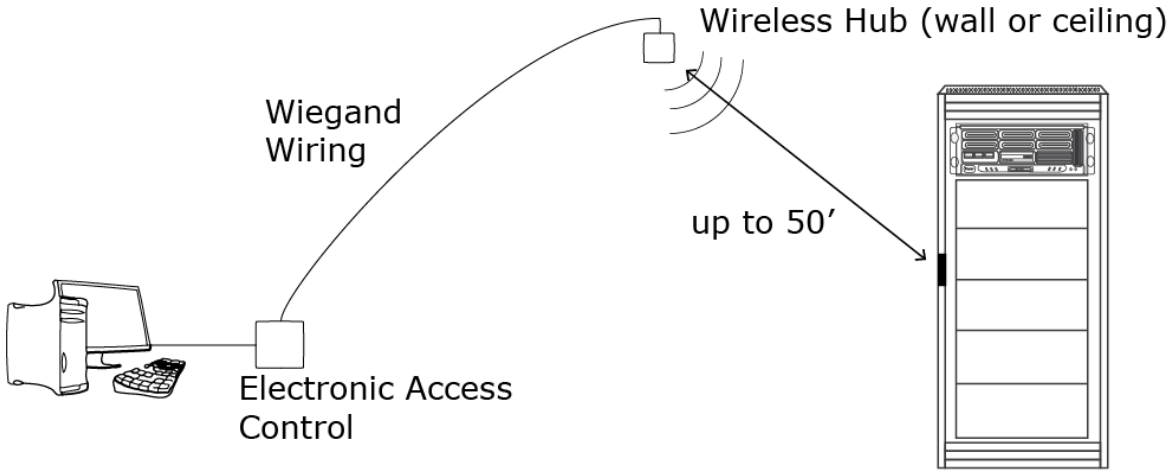
Credentials Supported: 125kHz Proximity or 13.56MHz iCLASS, iCLASS SEOS, iCLASS SE, ISO1443B UID, Mifare, Mifare Plus, Desfire SE, Desfire EV1, and NFC credentials are supported depending on lock model.

For technical support please call 1-800-626-7590

System Overview

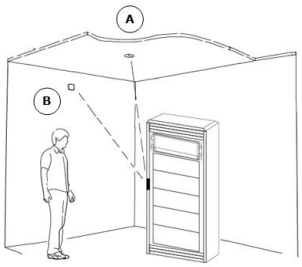
The KS100-640 wireless server cabinet lock extends access control to a server cabinet without the complexity and expense of running wires. The KS100-640 cabinet lock connects to an access control system through the included communication hub. The communication hub connects to the access control system with Wiegand wiring typical of a Wiegand reader.

When a credential card is presented to the reader on the lock, the request for access is sent wirelessly to the communication hub. The communication hub then communicates through Wiegand wiring to the access control system where the decision is made to grant or deny access.

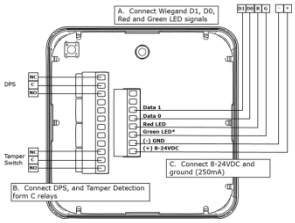


Installation Steps

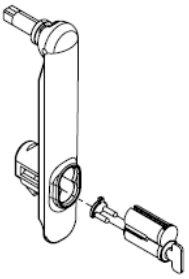
A. Locate and Mount the Hub



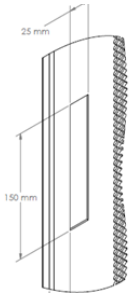
B. Connect the Hub



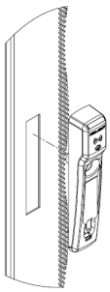
C. Install an SFIC Core



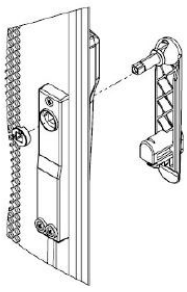
D. Prepare the Cabinet



E. Install the Lock



F. Install Handing Selector



1. Choose the hub location

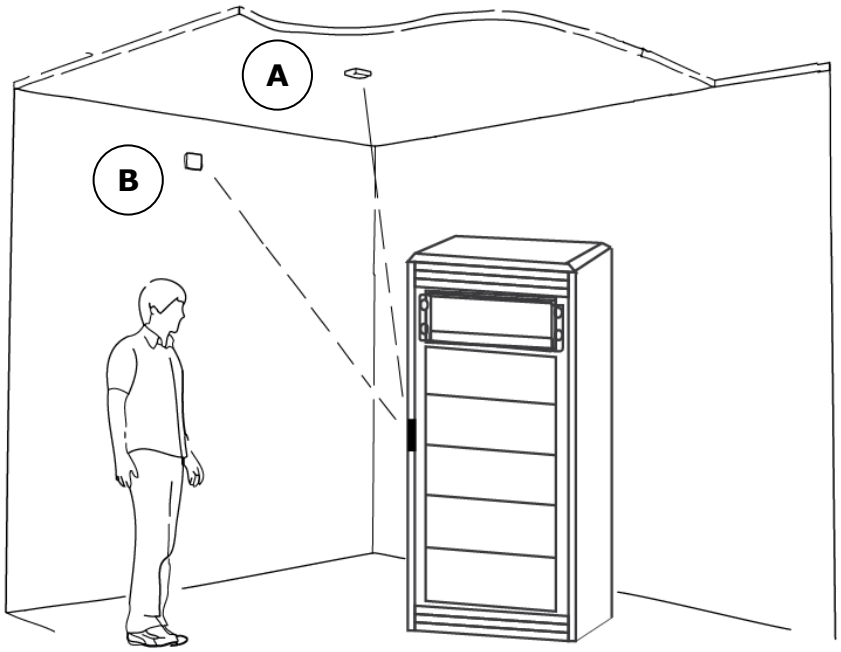
It is recommended that the hub be mounted on the ceiling or near the top of a wall to reduce potential for interference. Note, the hub is not rated for use in plenum air spaces.

For a stable and reliable radio link, it is recommended that the hub be located within fifty (50) feet of the lock. A maximum of two interior walls between the hub and lock is recommended

Recommended locations:

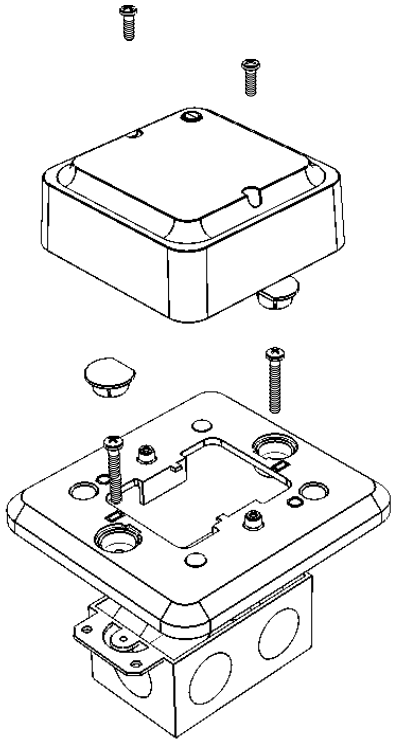
A: Ceiling Mount

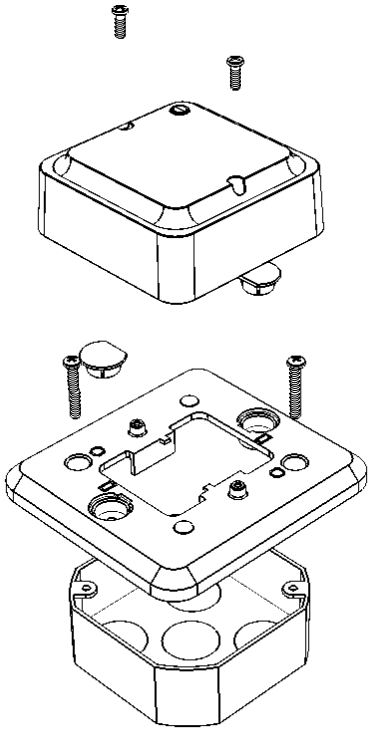
B: Wall Mount



2. Mounting the Hub.

The included adapter plate can be used to mount the hub on a single or double gang box.

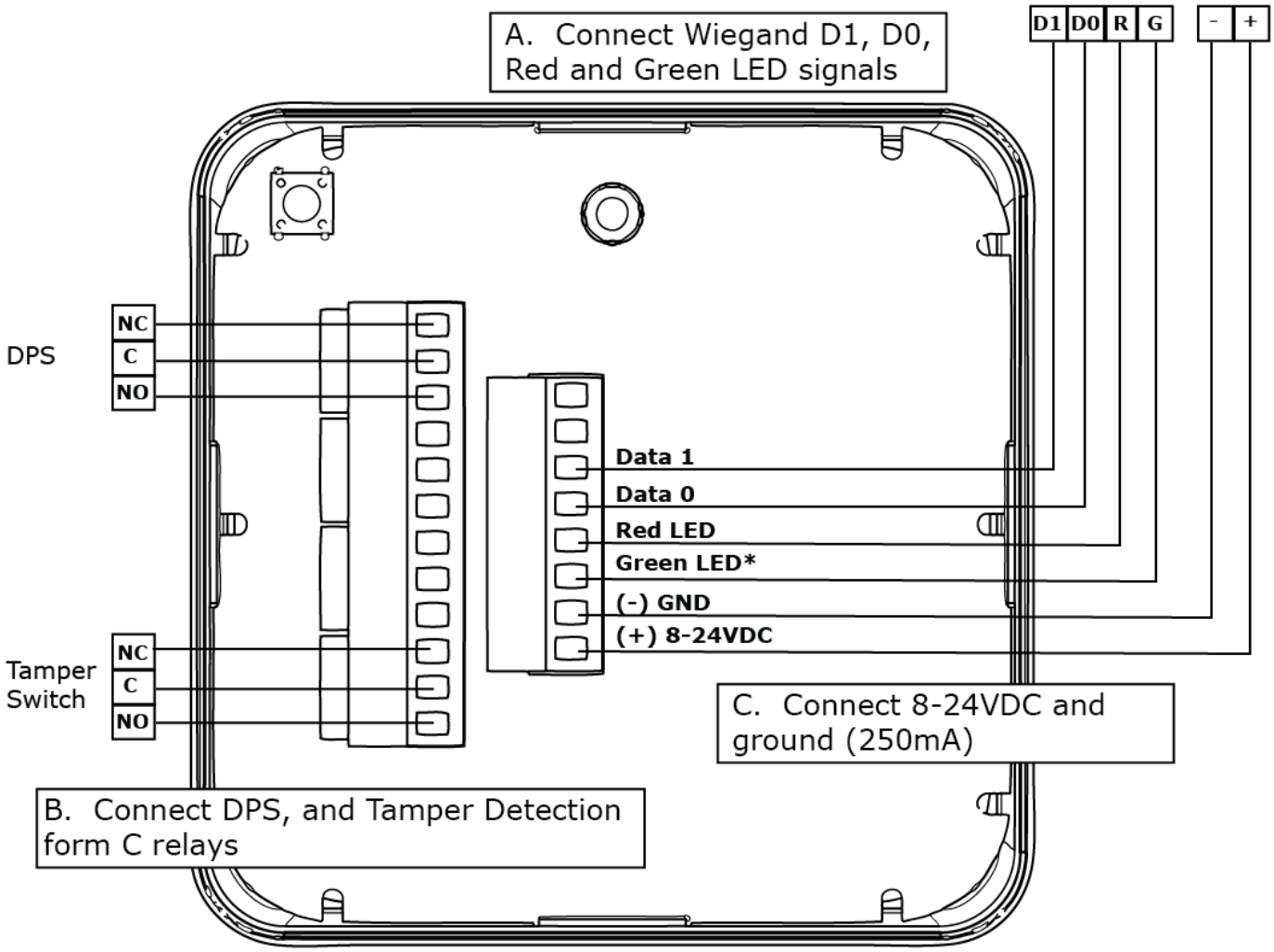




Online Video
Mounting the Hub

3. Wiring the Hub.

The Aperio Hub connects to the Access Control system via Wiegand wiring. The hub requires 8-24VDC power (250mA). The hub includes two form C relays that can be used to transmit door position and tamper detection signals. The hub connects to the cabinet lock wirelessly.



***Note:** the **DPS** signal will trigger when either the latch handle or the door is out of position. Both the latch handle and door must be in position for a secure DPS signal.

***Note:** the **Green LED** input is used to grant access to the cabinet lock. If the Green LED signal is not available to indicate approved access, the approval input can be activated by a relay with NO attached to Green LED and COMMON to GND.

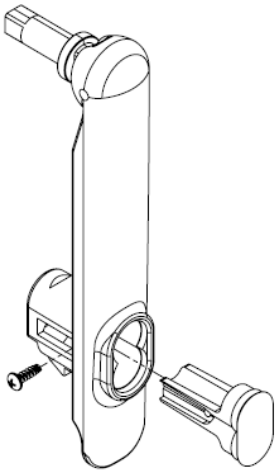
Online Video
Wiring the hub

***Note:** the **Red LED** input is used to indicate access denied. If the RED LED signal is not connected, the lock will flash RED 3 times when a non-approved card is presented indicating loss of connection to the hub rather than access denied. Refer to the LED reference card for any other codes.

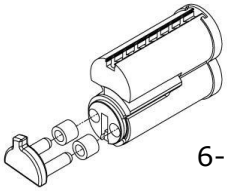
4. Installing an SFIC Core

A key override (SFIC) provides a backup entry method in the rare case the KS100 or access control system is inactive. We recommend this option.

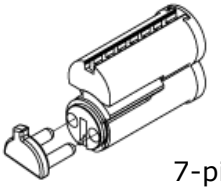
The included SFIC cam has been tested with Medeco and Sargent 6- or 7-pin SFIC cores.



1. Remove plug from handle

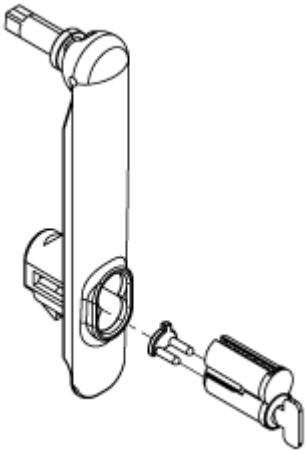


6-pin



7-pin

2. Insert cam into SFIC
   Use the included spacers with 6-pin SFICs.



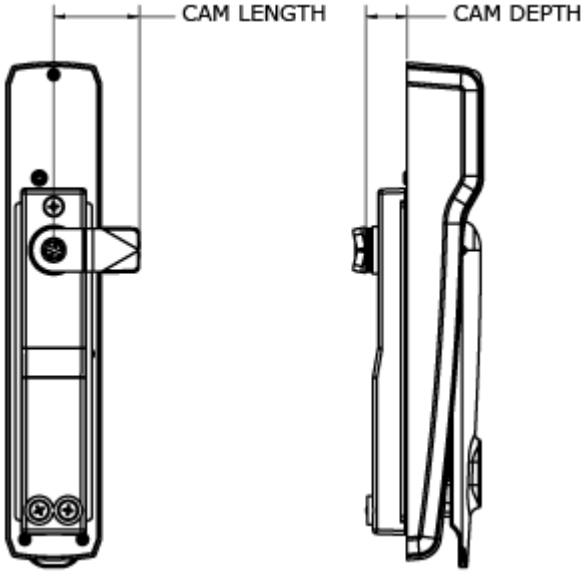
3. Insert SFIC into lock

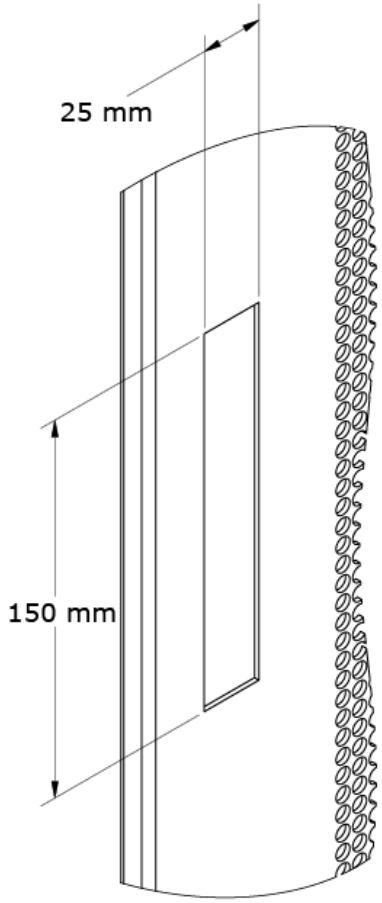
5. Prepare the Rack

Locate the 25mm x 150mm lock cutout on the door, some doors may require modification.

1. Verify 48V POE power is available at the rack.
2. Re-use the existing cam if possible.
3. Three cams are supplied.

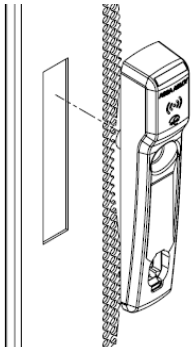
CAM	CAM LENGTH	CAM DEPTH
CAM 1	38mm [1-1/2"]	16mm [5/8"]
CAM 2	38mm [1-1/2"]	24mm [15/16"]
CAM 3	45mm [1-3/4"]	22.5mm [7/8"]





6. Installing the lock on the door

1. Slide lock into cutout.

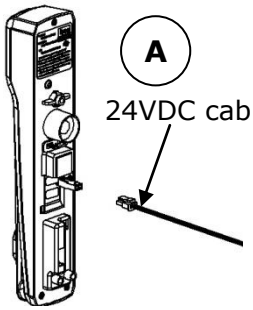


Connect 24VDC cable to lock. Connect 24VDC power supply (not provided) to 24VDC cable.

Red wire (24VDC), black wire (Ground)

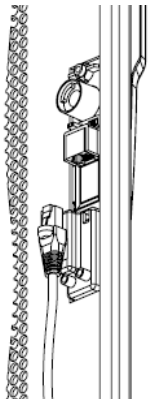
2. Select Power source:

(A. 24VDC Supply <OR> B. 48V PoE)

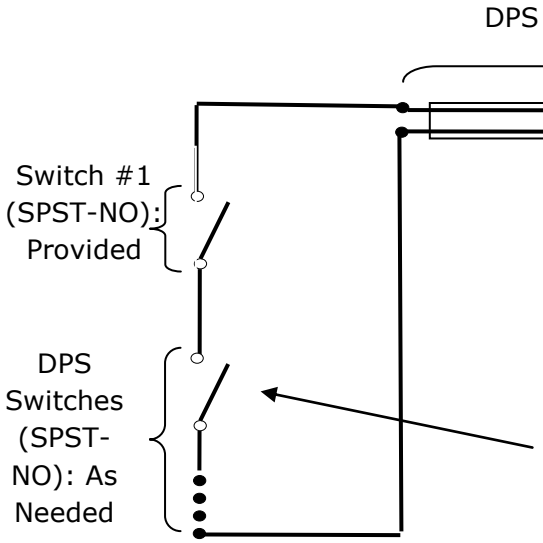


B

Plug 48V PoE RJ-45 cable into lock. Lock will beep once and perform self test.



3. Optional: The DPS signal is closed when the handle is resting in its locked position. The DPS circuit can be extended to include normally open DPS switches arranged in a series to monitor additional doors and panels.

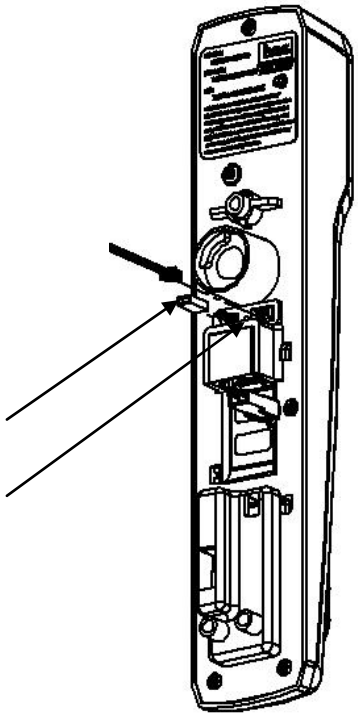


Extending the DPS Circuit:

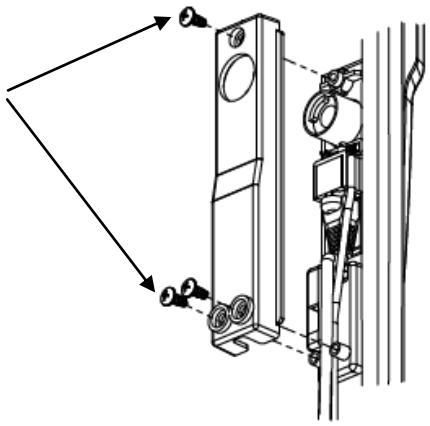
A: Remove the DPS jumper

B: Connect the included DPS extension cable

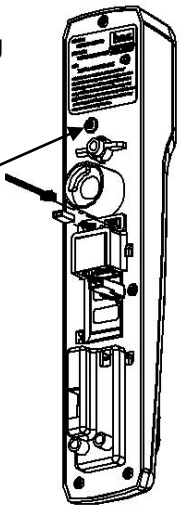
C: Connect additional normally open DPS switches as shown to monitor additional panels.



4. Attach rear bracket with screws.



5. Ensure that the lock is fully secured and flush to the mounting surface in order to depress tamper switch on back of device for correct operation.

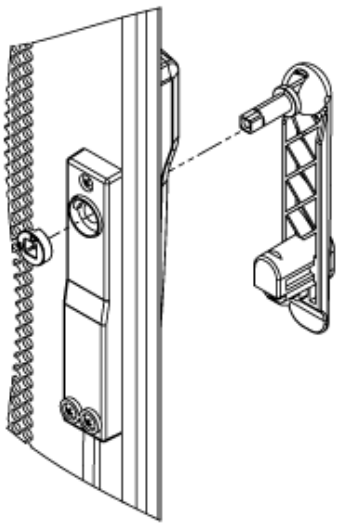


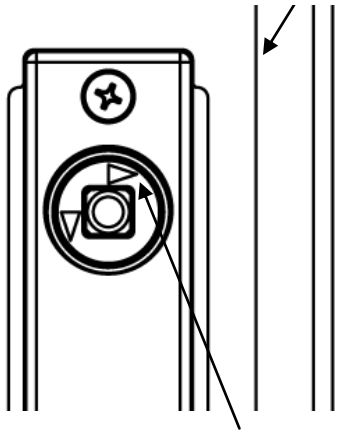
NOTE: If the tamper switch is not fully depressed, you will see a flashing red light and the device will not read cards.

7. Installing the Handing Selector

Note: Be careful not to insert/snap the handle all the way in as the lever will lock.

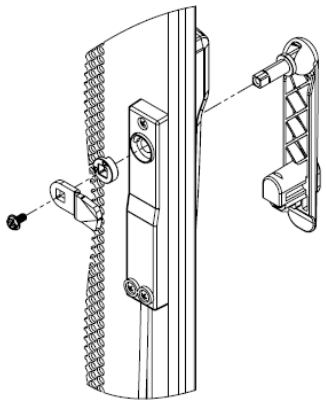
1. Insert handing selector into lock.





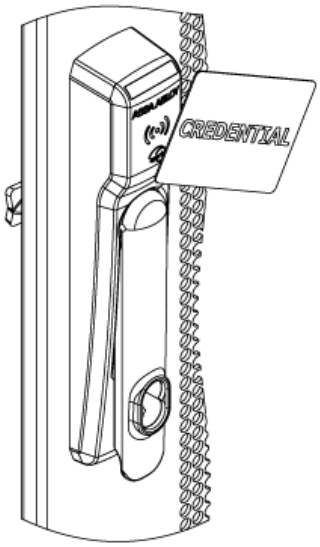
2. Position the arrows to point toward the door edge as shown above.

3. Secure cam with screw.



8. Testing the Lock with the Access Control System

Test the lock with a known good credential to confirm it will open as desired when installed.



1. Present a credential known to the access control system.

2. A green LED indicates access is granted; lift lever and turn to open the cabinet. Refer to the LED reference card for any other codes.

WARNING

FCC Statement

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.

Operation with non-approved equipment is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

IC Statement

This device complies with Industry Canada license-exempt RSS standards(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.

Conformité aux normes FCC

Cet équipement a été testé et trouvé conforme aux limites pour un dispositif numérique de classe B, conformément à la Partie 15 des règlements de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre des fréquences radio et, s'il n'est pas installé et utilisé conformément ment aux instructions du fabricant, peut causer des interferences nuisibles aux communications radio. Rien ne garantit cependant que l'interférence ne se produira pas dans une installation particulière. Si cet équipement provoque des interférences nuisibles à la réception radio ou de télévision, qui peut être déterminé en comparant et en l'éteignant, l'utilisateur est encouragé à essayer de corriger les interférence par une ou plusieurs des mesures suivantes:

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Branchez l'appareil dans une prise sur un circuit différent de celui auquel le récepteur est connecté.
- Consultez votre revendeur ou un technicien radio / TV pour assistance.Avertissement

Les changements ou modifications à cet appareil sans expressément approuvée par la partie responsable de conformité pourraient annuler l'autorité de l'utilisateur de faire fonctionner cet équipement.

Conformité aux normes IC

Cet appareil est confrome avec Industrie Canada exempt de license RSS standard(s).
Son fonctionnement est souimes aux deux conditions suivantes:

(1) cet appareil ne peut causer d'interférences, et

(2) cet appareil doit accepter toute interference, y compris des interférences qui peuvent provoquer un fonctionnement indésirable du périphérique.