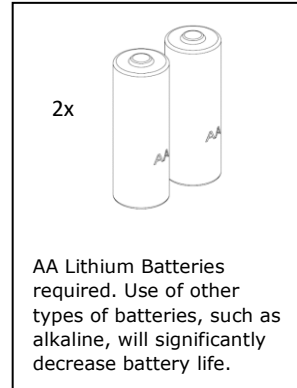


# HES KS100 Aperio<sup>®</sup> Wireless Cabinet Lock

ASSA ABLOY

## Installation and Operating Instructions

The global leader in  
door opening solutions



*\*All battery life claims are approximate and based on a set configuration profile. Battery performance is based on pre-defined system settings such as battery chemistry and battery model used, credential presentation settings (LED/buzzer), UHF polling period, UHF status intervals, and operations per day. Actual battery performance will vary and depends on the factors above.*

## Product Specifications

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

**Lock Battery Type:** AA Lithium, 1.5 Volts (V)

**Battery Life:** 50,000 cycles\*

**Holding Force:** 400 lbs

**FCC Part 15 Compliant, Industry Canada Compliant**

**Operating Temperature:** 32 to 122 F (0 to 50 C)

**HID<sup>®</sup> multiCLASS SE<sup>®</sup> technology Credentials Supported:** High Frequency (13.56 MHz) – HID iCLASS, HID iClass SE (SIO-enabled), HID iCLASS Seos, HID MIFARE SE, HID DESfire EV1 SE, MIFARE CLASSIC DESfire EV1. Low Frequency (125KHz) – HID Prox, AWID, EM4102, ioProx. NFC Enabled Mobile Phones.

# Recommended tools

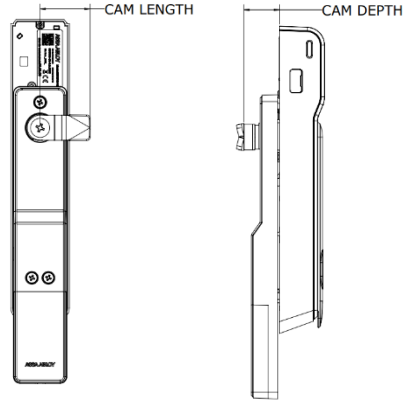
Cutting Wheel

Phillips #2 Screwdriver

# Hardware Specifications

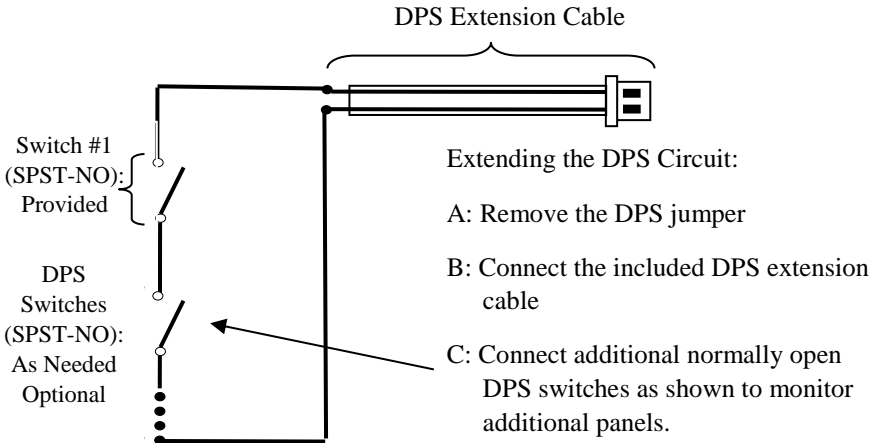
**Table 1 – Cam**

CAM	CAM LENGTH	CAM DEPTH
38mm - 4 (Standard)	38mm [1-1/2"]	26mm [1"]
38mm - 5 (Optional)	38mm [1-1/2"]	28mm [1-1/10"]
45 mm - 1 (Optional)	45mm [1-3/4"]	18mm [7/10"]



## DPS Cable Extension

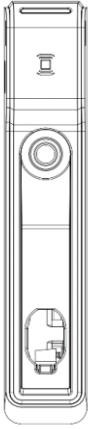
Optional – The DPS signal is closed when the handle is resting in its locked position. The DPS circuit can be extended to include normally open DPS switches arranged in a series to monitor additional doors and panels



**For Technical Support Please call 1-800-810-WIRE**

# Package Contents

**Lock Body**



**Battery Bracket**

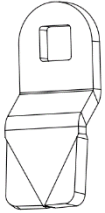


**Handle Assembly**

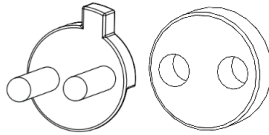


Note: SFIC mechanical key override/SFIC blank sold separately.

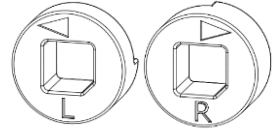
**Cam**



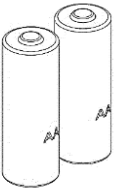
**SFIC Cam and Spacer**



**Handing Selectors**



**2x AA Lithium Batteries**



**3x Dolphin Connector**



**Screw A**  
#1/4-20 x .50  
Truss Head  
Phillips



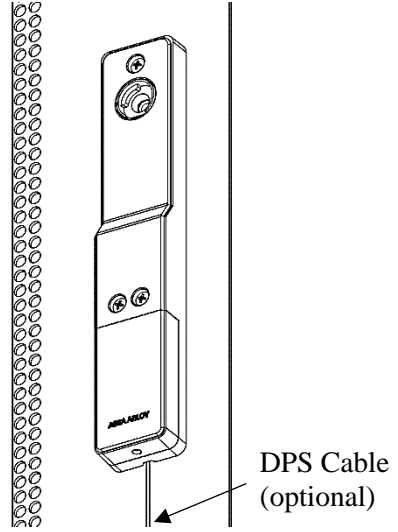
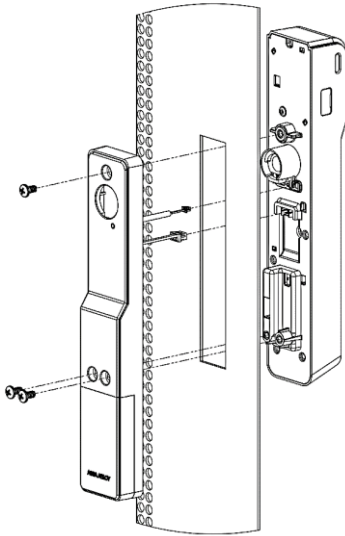
**3x Screw B**  
8/32 x 5/16"  
Pan Head  
Phillips



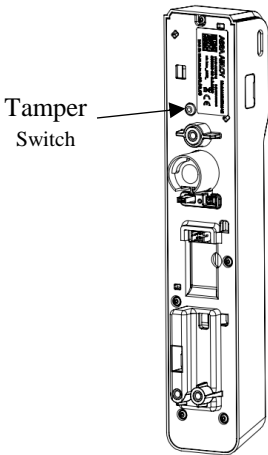
**Optional External DPS Cable  
Harness**

# Installing the Lock

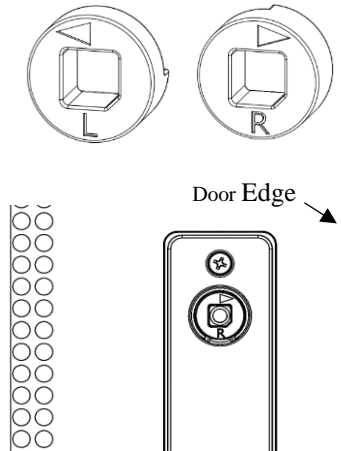
1. Locate the 150mm x 25mm lock cutout on the door. Connect battery cable and optional DPS cable to lock body. Secure battery bracket to lockbody using 3x screw B.



2. Ensure lock body is flush against the mounting surface to depress tamper switch.

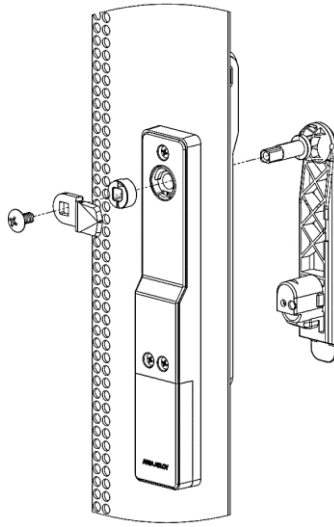


3. Select appropriate handing selector.



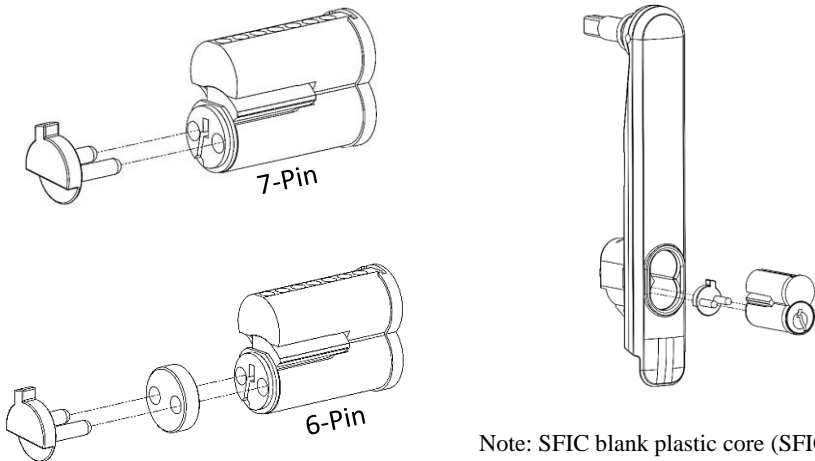
Note: ensure that the arrow on the handing selector is pointing towards the edge of the door.

4. Install handle, handing selector, and cam. Secure with screw A.



## Installing the SFIC Core (Optional)

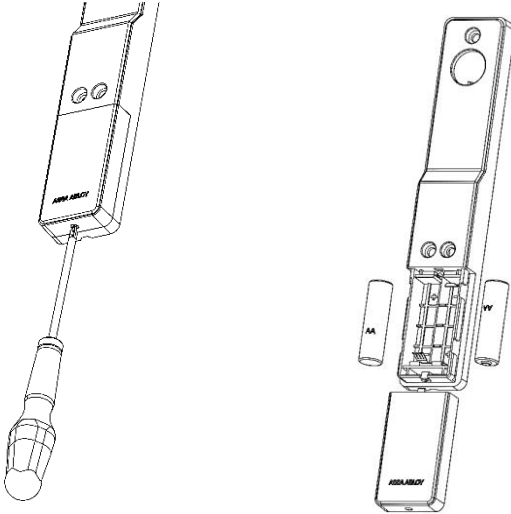
1. Insert SFIC core and cam into handle. Use spacer for 6 pin SFIC core.



Note: SFIC blank plastic core (SFIC-BC) sold separately. SFIC Blank is required if no cylinder is used.

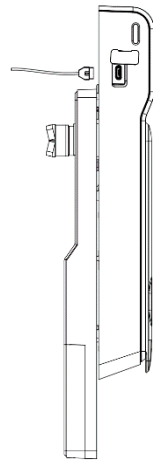
# Installing the Batteries

1. Loosen screw on battery cover, slide cover down, and install batteries in the appropriate orientation.



# Micro USB Port












For emergency power & local (hard wired) firmware updates, use micro USB port located on the side of the KS100 reader.









# Optional Accessories

<b>Part Number</b>	<b>Description</b>
SFIC	MEDECO X4 7-pin SFIC cylinder & 2 keys (1 Control,1 User)
SFIC-BC	KS SFIC blank, black plastic core
KS-DPS	Surface mount DPS (external)
KS-CAM38	CAM: 38MM - 5 (28mm Depth)
KS-CAM45	CAM: 45MM - 1 (18mm Depth)
AH20W14	ASSA ABLOY Aperio™ AH20 1:1 Wiegand Hub
EXT-10-ANT	ASSA ABLOY Aperio™ Hub External Antenna - 3,9 dBi Omnidirectional
APA-10-PC	ASSA ABLOY Aperio™ Programming Kit
APD-10-USB	ASSA ABLOY Aperio™ USB Radio Dongle

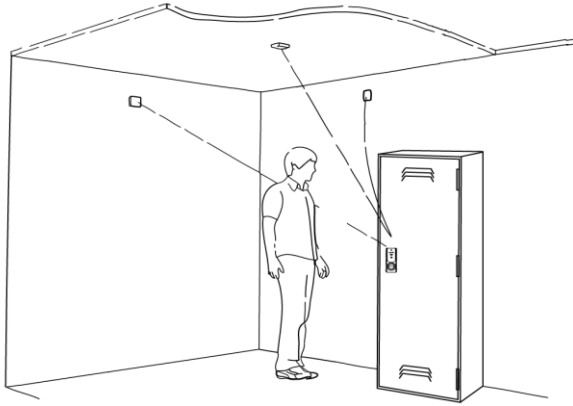
# LED Codes

<b>ASSA ABLOY</b>		Aperio LED LOCK Codes:		
One yellow flash		Card read		
One green flash		Access granted		
Five yellow, one red flash		Force closed (in open mode)		
Continous yellow flashes (.25 sec every second)		Comhub busy		
One red flash		Access denied (AC online)		
Three red flashes		Access denied (AC offline)		
Continous red flashes (.125 sec every second)		Lock is blocked (when closing)		
Ten red flashes		Error in Lock		
Continous yellow flashes (.25 sec every 5 seconds)		Low Battery		
Continous red flashes (.25 sec every 5 seconds)		Dead Battery		

<b>ASSA ABLOY</b>		Aperio LED HUB Codes:		
Steady Green		Online		
Green, 1 red flash		Lock offline		
Green, 2 red flashes		Access control offline		
Green, 3 red flashes		Access control offline and Lock offline		
		UHF communication		



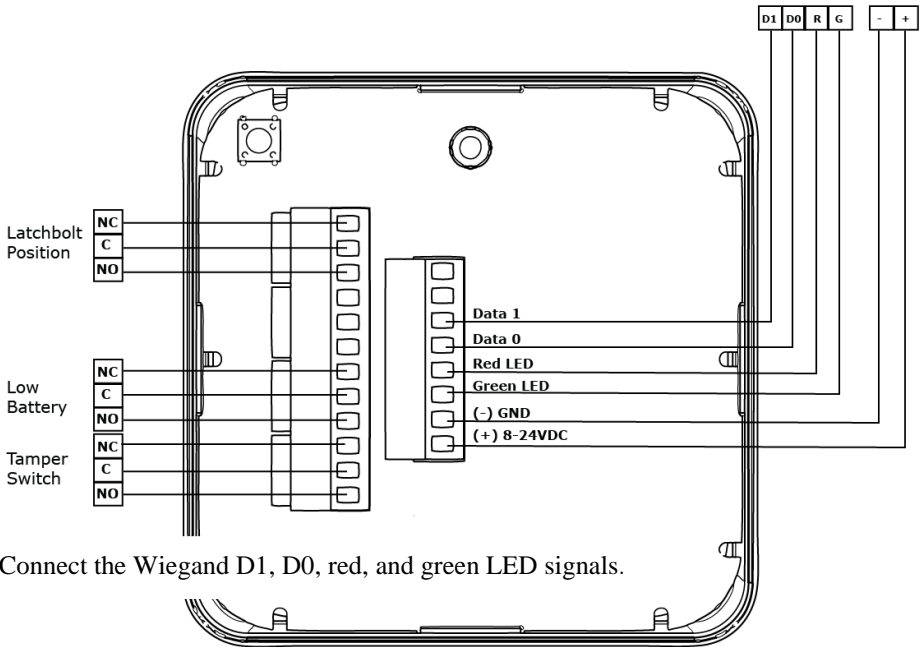
# Aperio Hub



Approvals	CE, ETL, FCC, IC, C-Tick
Safety and emissions	FCC 47CFR Part 15 subpart B and subpart C; IC RSS-210 EN ETSI 301 489-17 v2.1.1; EN ETSI 300 328 v1.7.1; EN 60950-1 ed.2 2007
Dimensions (mm)	82x82x37
Power Supply	8-24 VDC
Current	250 mA minimum
Internal Antenna	2cross polarized dipoles
External Antenna (Part No. EXT-10-ANT)	One reverse polarity SMA external antenna connector. Optional antenna type dipole with max antenna gain of 3.9dBi
Radio Standard	IEEE 802.15.4(2.4GHz) - 15 channels (11-25)
Encryption (Radio Communications)	AES 128 bits
Wireless Operating Range	Up to 50 ft
Receiver Sensitivity	100dBm 20%PER
Wireless Transmit Power	10 dBm/MHz
Class of Protection	IP 20
Operating temperature	5°C to 35°C
Humidity	< 95% non-condensing
Status	LED (red/green/orange)

# Connecting the Hub

The following applies only to Aperio factory paired kits with AH20 Hubs.



**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 “C” to GND.

The **Red LED** input is used to indicate access denied. If the RED LED signal is not connected, the lock will flash RED three times when a non-approved card is presented indicating loss of connection to the hub rather than access denied. Any other codes may be reference on the LED reference card.

# **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:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. 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 aux instructions du fabricant, peut causer des interférences 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 interférences par une ou plusieurs des mesures suivantes:

1. Réorienter ou déplacer l'antenne de réception.
2. Augmenter la distance entre l'équipement et le récepteur.
3. Branchez l'appareil dans une prise sur un circuit différent de celui auquel le récepteur est connecté.
4. 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 conforme avec Industrie Canada exempt de licence RSS standard(s).

Son fonctionnement est soumise aux deux conditions suivantes:

- (1) cet appareil ne peut causer d'interférences, et
- (2) cet appareil doit accepter toute interférence, y compris des interférences qui peuvent provoquer un fonctionnement indésirable du périphérique.

ELECTRONIC SECURITY HARDWARE

HES | Securitron

[techsupport.esh@assaabloy.com](mailto:techsupport.esh@assaabloy.com) | [assaabloyesh.com](http://assaabloyesh.com)

800.626.7590 | 10027 S. 51<sup>st</sup> Street, Ste. 102 Phoenix, AZ 85044 USA

Patent pending and/or patent [www.assaabloydss.com/patents](http://www.assaabloydss.com/patents)

Copyright © 2019, Hanchett Entry Systems, Inc., an ASSA ABLOY Group company. All rights reserved. Reproduction in whole or in part without the express written permission of Hanchett Entry Systems, Inc. is prohibited.