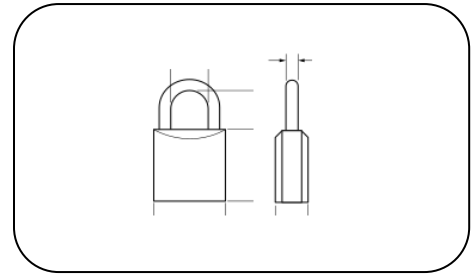
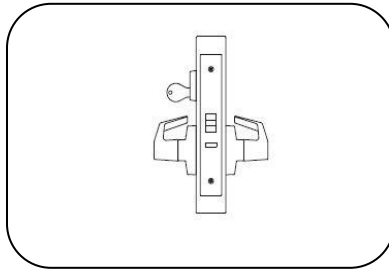
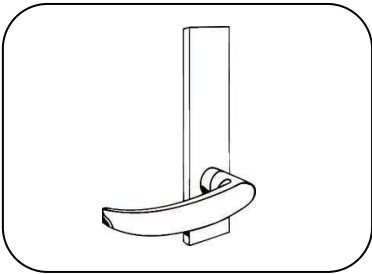


By Digital Keys Pty Ltd



5G IoT Smart Access Control Systems



5G IoT Smart Doorlock Latch 1 Hardware Manual



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About This Manual

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This issue replaces all previous issues. All previous issues are invalid. The information in this manual can be changed without prior notice.

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Safety and warning instructions

- This manual outlines the commissioning, installation and operation of a 5G IoT Smart Doorlock Latch 1
- This equipment may only be used for the purpose specified by the manufacturer.
- This manual should be kept accessible.
- Illegal changes and the use of spare parts as well as accessories that have not been sold or recommended by the manufacturer of this unit can cause fires, electric shocks and injuries. Such measures lead to an exclusion of liability, and the manufacturer accepts no responsibility.
- Repairs may only be carried out by the manufacturer or accredited distributor/re-seller.
- Basis for the guarantee of the manufacturer is the version of the warranty policy for the unit at the time of purchase. No liability is accepted for inappropriate, incorrect manual or automatic setting of the parameters for the device, or its improper use.
- The distributor/re-seller in conjunction with the lock purchaser (if required), is responsible for ensuring that the device is assembled and mounted according to the recognised technical guidelines as well as other valid regulations in the country of use

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Introduction Summary

This manual outlines the functions of the 5G IoT Smart Doorlock Latch 1, how to install and use the product.

The technology

The 5G IoT Smart Doorlock Latch is operated completely independent of any external cable connections (product is battery powered with 2 ER14505H lithium thionyl chloride batteries (+SPC1550 super capacitor) and can be installed and operated where appropriate including outdoors under most weather conditions.

The operation of the 5G IoT Smart Doorlock occurs via 5G IoT technology, combined with NFC technology, and with cloud-based software and smartphone apps.

In order to unlock the lock, any smartphone which can connect to the internet, which has also been authorized, can be used. Smartphones which have NFC in built (most Android phones) which have also been authorized, can be held in front of the lock to gain access (within 2-4 centimeters of numberpad). NFC tokens/keycards, which have been authorised can also be used for unlocking. With these authorized devices/tokens, a mechanical coupling is activated for a few seconds that allows the 5G IoT smart padlock to be opened and closed by pulling the shackle up.

Operation

After the 5G-IoT Smart Doorlock has recognised a valid digital key, a mechanical coupling is produced for a few seconds between the CPU and the motor and the unlocking mechanism inside the lock.

Flexibility

The 5G-IoT Smart doorlock is an autonomous door locking system that can manage an unlimited number of users, on any time-limitable digital keys, and an unlimited number of locks per account. With this, individual time-limited access rights can be assigned to every user. The fact that every digital key can be authorised for every lock, means a high degree of flexibility is reached. Various access profiles can be set within the locking system.

If a digital key on a NFC card/token or smartphone is lost, the digital key can be deleted without making it necessary to physically attend to the smart doorlock.

The system concept

The 5G IoT Smart Doorlock is complemented by;
Access Management Cloud Based Software
Digital Keys Apps (Android and iOS available for unlimited downloads from online app stores)
Digital Keys NFC keycards and tokens (3 cards provided). Please check with your local distributor to purchase more.

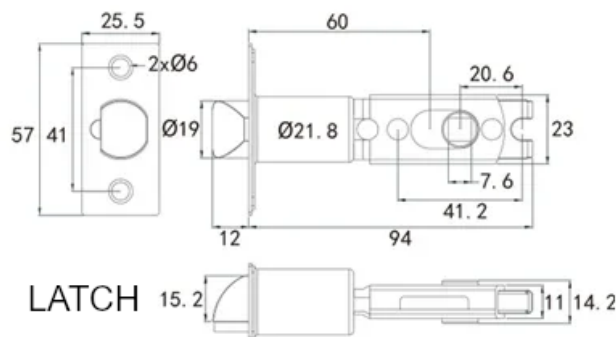
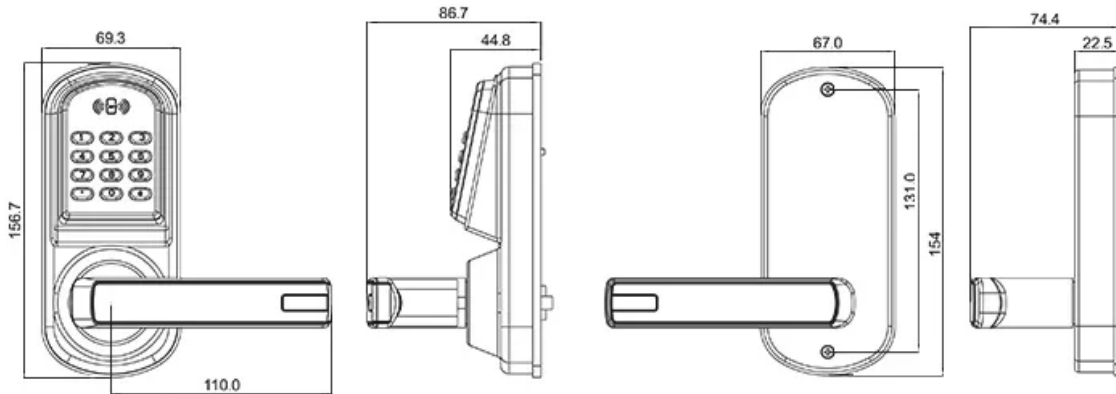
The security

5G IoT is part of local mobile networks (part of the 5G standards), fully managed with standardized security to guarantee the credential and integrity of all data running through it. 5G IoT has passed security protocols as outlined by 3GPP/GSMA, the organizations responsible for managing global mobile networks.

The 5G IoT module chipset included in our 5G IoT smart locks applies 2048 bit RSA encryption. All communications are running on HTTPS 128 bit military grade encryption between all the vertical applications including software and hardware. Between the telco's mobile network, and the IoT device management platform a layer of Internet Protocol Security (IPSEC) is provided. The Telecommunication company on some occasions, also provides a dedicated VPN for further security and reliability.

Technical Data

Display elements:	1 x LED blue light (numberpad)
Acoustic signal:	Signal transmitter
Battery:	2AA lithium thionyl chloride batteries + SPC 1550 supercapacitor
Battery life:	approx. 2 years or approx. 20.000 operations
Temperature range;	-50°C to 60°C
Relative humidity:	20 to 95% RH
Dimensions:	L 156.7mm x W 69.3mm x B 22.5mm (see below)
Surface housing	Zinc Alloy Casing with hardened plastic numberplate
5G IoT Module:	Telit 310gWW 5G-IoT/LTE-M module(CAT-M,3G/4G fallback)
SIM card	5G IoT nano SIM (global roaming or local)
Unlocking methods:	Digital Keys app, NFC keycards (programmed for time-sensitive use with Digital Keys app (and NFC HCE compatible phones), time-sensitive PIN, remote unlock button inside cloud based lock management software (access management software is provided).



What's included in the box



General information

Capacitive wake-up button

The 5G IoT Smart Doorlock Latch 1 uses a capacitive wake-up button which must be pressed to unlock the lock. The wake-up button wakes the lock up and prepares it to receive unlock commands over the 5G IoT network, from digital keys app unlocking, and from the access management software unlocking. The wake-up button exists to conserve battery energy so the lock is not always on (it remains mostly in deep sleep mode), waiting to receive commands.

The capacitive wake-up button is the * (star) button on the numberpad. see below where green arrow is pointing. The capacitive wake-up button does not need to be pressed for NFC phone unlocking and NFC card unlocking (the NFC in the card and phone wakes up the device when within NFC range 1-5 cm).



Programming

The programming for the 5G IoT Smart Doorlock Latch 1, can be carried out with our Access Management Software, and the Digital Keys apps (Digital Keys apps are FREE to download from the online app stores Android and iOS). The programming is described in the accompanying software manual. When using NFC phones and NFC tokens/cards, programming of the lock is carried out over the 5G IoT network on the first time the phone or token/card is presented to the door for unlocking. For all future unlocks with NFC, this will be done locally, and commands do not need to be sent over the 5G IoT network everytime. When NFC is used to unlock, the 5G IoT is still used for live audits, live battery status, and live notifications.

Operator guidance

Operation is supported by the blue LED display, as well as by acoustic signals - a buzz sound occurs when the lock has successfully received its command, and the lever handle can then be pulled down to unlock the door.

LED light display

The 5G IoT Smart Doorlock has a blue LED light built in.

There are only 2 different status offered by the LED lights as follow;

1. Flashing blue - lock is awake (after wake-up button is pressed or new batteries inserted) and is connecting to the network (new batteries) or awaiting a command such as an unlock command.
2. Solid blue light - lock has successfully received an authorized unlock command, and is now unlocked, so you can pull shackle up to unlock.

Information on remote unlocking in access management software

To unlock the lock, please follow the instructions below;

1. Hit unlock button in the access management software (the padlock icon) next to the smartlock name in the smartlock list in the smartlock menu.
2. Touch the STAR button '*' on the lock numberpad to wake up the lock to unlock it and so it can receive it's unlock command over the network.
3. Blue light flashes whilst unlock command is finalized
4. A buzz noise occurs, blue lights stop flashing and stays on.
5. Pull handle down.
6. Within 10 seconds the lock automatically locks again

There is a pause of a few seconds between pressing the wake-up * button button and the lock making the buzz noise/flashing blue light indicating the shackle is ready to be pulled up and opened.

When unlocking with NFC (NFC phones and tokens) there should not be any delay in the lock being ready to be opened by pulling the shackle up. NFC phones and tokens must be held within 2-5 centimeters from the numberpad on the lock.

Time Zones

The 5G IoT smart locks use local internet time, which can be set when the locks are first set-up and commissioned by our local distributors. Locks can be programmed to work for a minimal 30 minute timeslot. When the programmed time for the digital keys expires, the digital key in the digital keys app will move to expired.

NFC Tokens/cards

The 5G IoT smart locks only work with special Digital Keys NFC cards/tokens. The product will not work with any NFC cards bought online from third parties, or from non-certified 5G IoT smart lock re-sellers. 2 NFC tokens are provided in every pack. Please contact Digital Keys or your local distributor/re-seller if you need to buy more keycards/tokens.

Battery replacement

Note: No digital keys are deleted during the battery changeover.

1. Unscrew the screws at the top and bottom of the lock (as shown below)



2. Remove the back cover of the lock including the handle, and replace the batteries (as shown below)



3. Screw the cover back on (as shown below).



Battery Notifications/monitoring

A live battery status is shown in the access management software (please see section 2 of Access Management Software User guide for more information). Account administrators can set up email notifications for when battery status gets below 10%.

Care and maintenance

The 5G IoT Smart Doorlock latch 1 is maintenance-free. At no time may they be oiled or greased with lubricants containing mineral oil. Cleaning may only be carried out with non-stick, residue-free cleaning and disinfection agents. No abrasive cleaning agents, or acids may be used for care and maintenance. Equally, pressure washers may not be used. Although the 5G IoT Smart Doorlock latch 1 is weatherproof we don't suggest the use of a high pressure hose to spray product, as it can lead to damage and liability exclusion.

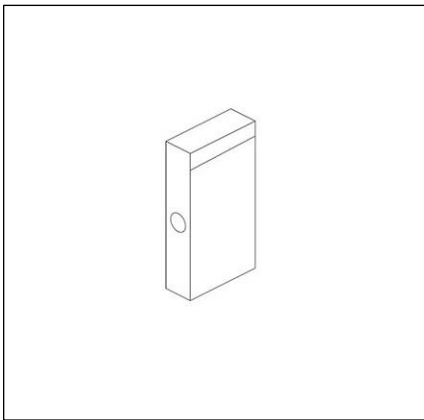
Installation Part 1 – New door

Please follow the installation instructions below.

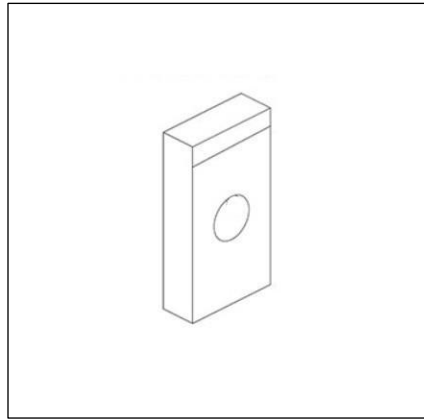
PART 1 INSTALLATION INSTRUCTIONS FOR A NEW DOOR WITH NO PRE-EXISTING LOCK INSTALLED

(also see hole template at the end of this document for new door install)

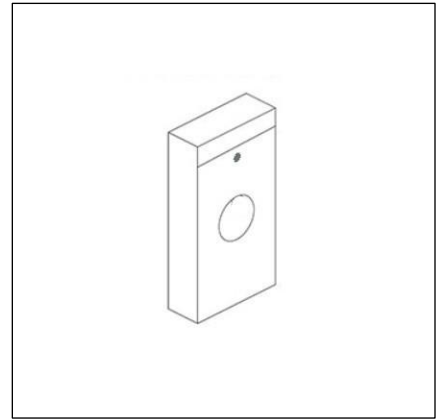
if the installation is on a new door, please follow installation instructions below. If the installation is on a door with an existing latch lock that is being replaced, please proceed to PART 2 – INSTALLATION ON A DOOR WITH AN EXISTING LATCH LOCK TO BE REPLACED.



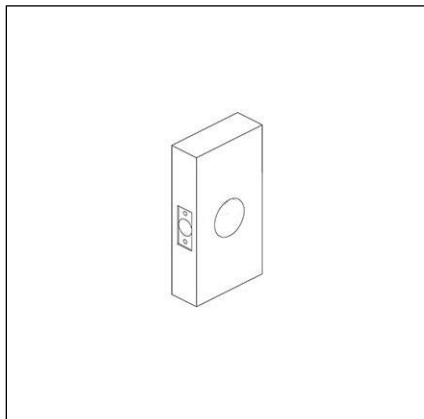
1. Drill 25mm hole into the side of the door for the latch.



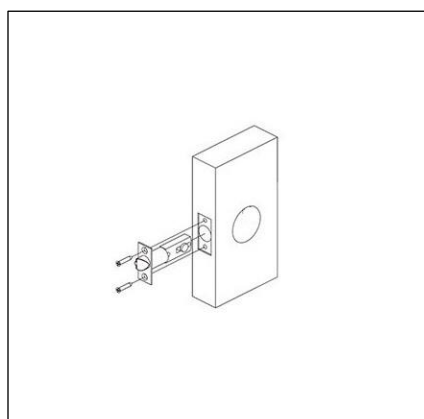
2. Drill 54mm hole into the face of the door for the door handle (see template).



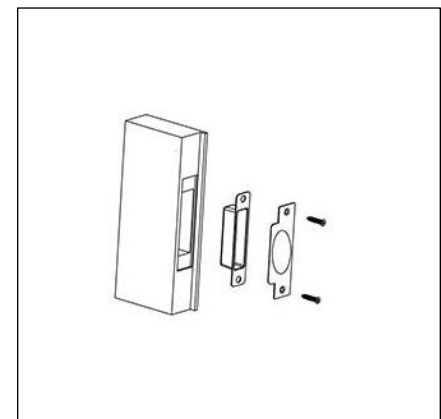
3. Drill a 9.5 mm hole into the face of the door 73.5mm above centre of handle hole (see template)



4. Slide metal latch into the latch hole in side of door. Mark with a pen around the rectangular latch plate. Remove latch and chisel 3mm deep rectangle so latch faceplate sits flush.



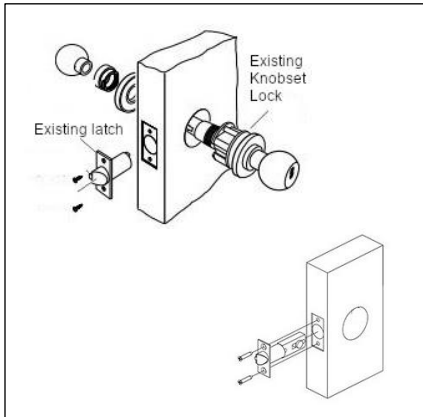
5. Insert metal latch into the door, making sure the rectangular faceplate sits flush, and screw two 2.5mm holes (as indicated by metal faceplate) and screw into door



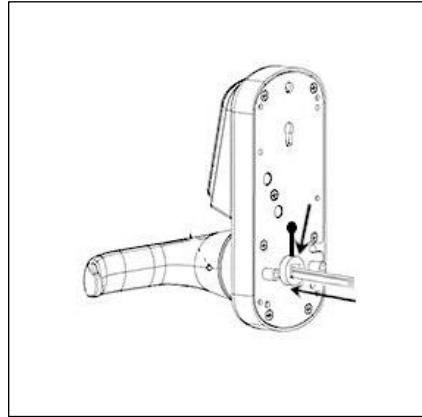
5. Cut hole into door frame for the striker plate (provided in box), make sure it sits flush, and screw in striker plate and striker box.

Installation – Part 2 Existing latch lock on door

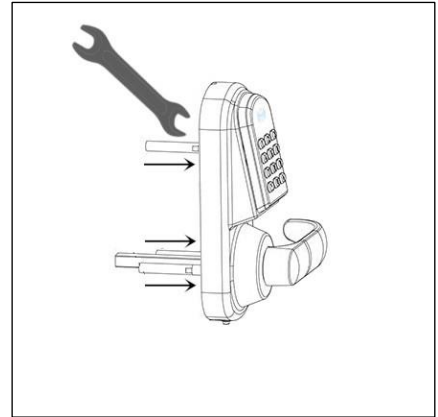
PART 2 – INSTALLATION ON A DOOR WITH AN EXISTING LATCH LOCK TO BE REPLACED.



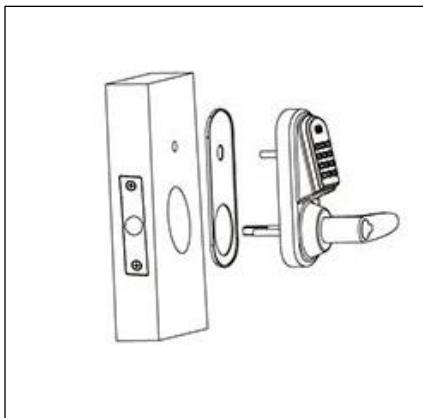
1. Remove existing lock (e.g knobset) and remove the existing latch. Insert the 5G IoT smart doorlock latch (included in box).



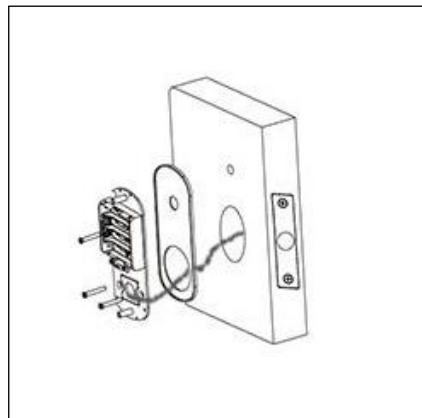
2. Insert the handle spindle bar into the handle hole, and insert the small metal pin through the hole at the top to hold in place.



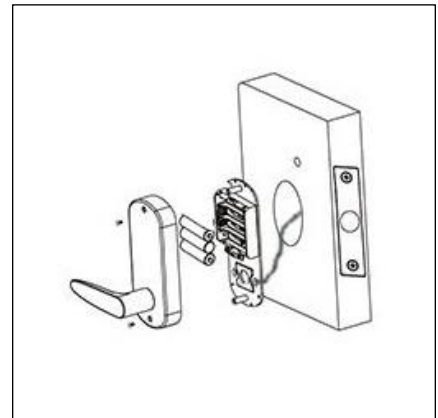
3. Insert the 3 screw holder connectors into the back of the lock, and tighten with provided wrench.



4. Place the rubber weatherproof pad up against the door. Align the holes with the protruding pieces and insert the lock into the door.



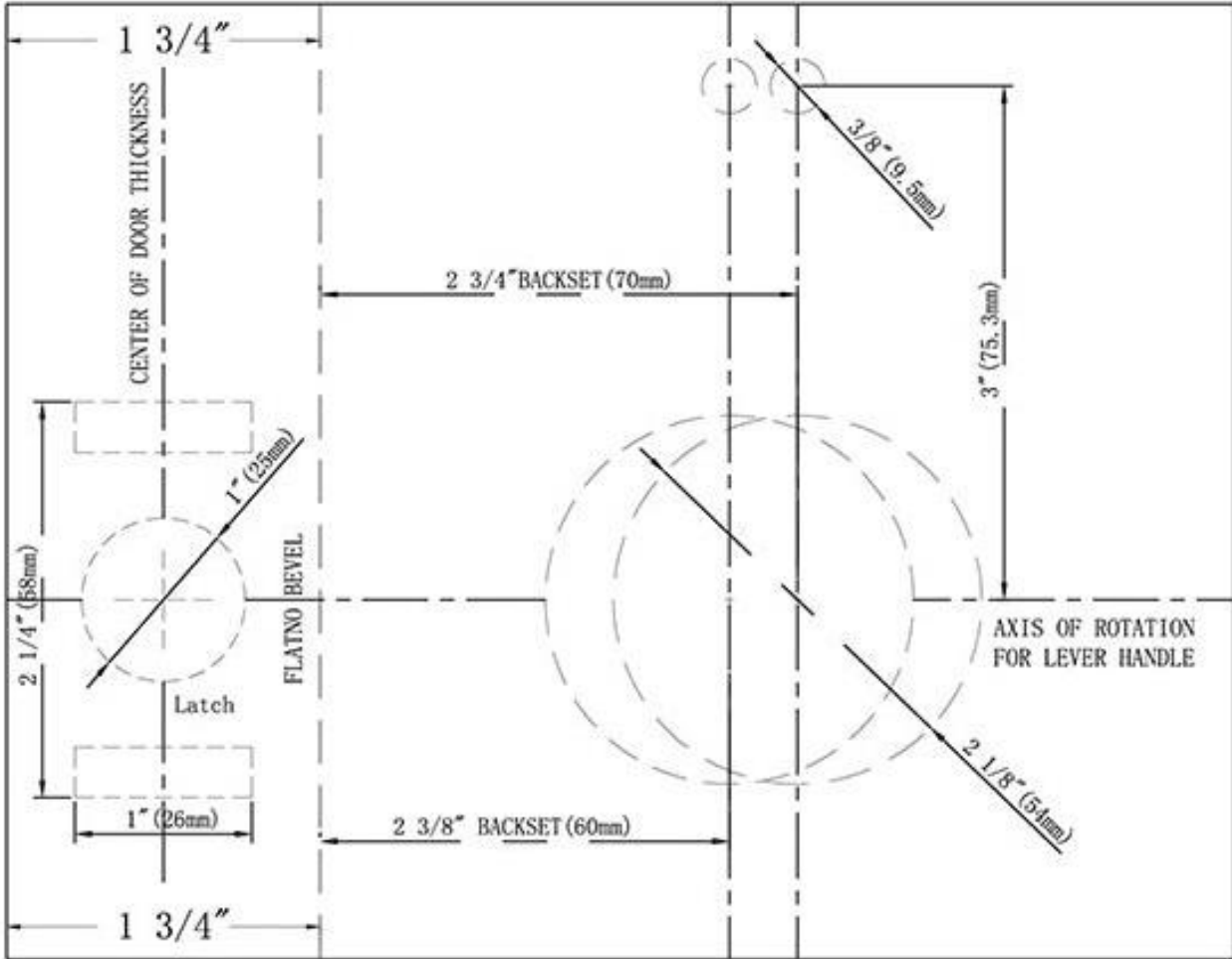
5. Place the rubber weatherproof pad up against the back of the door and pull the battery connector cable through the hole and plug in to back of the lock. Screw the back of the lock into the screw holders from the front of the lock.



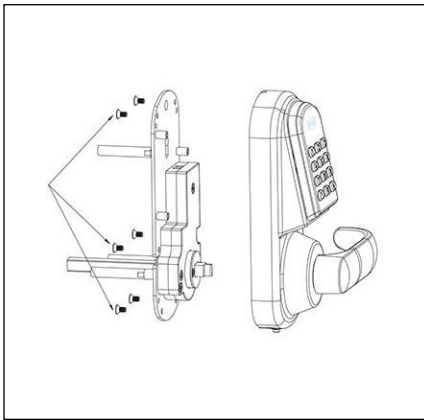
5. Place the batteries into the battery holder, and screw the back cover on. The latch should fit into your existing strike plate (if it doesn't fit, replace with provided strike plate).

Installation template

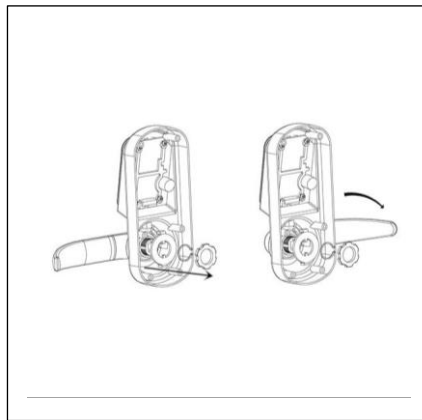
See template below for details of hole positioning and sizes.



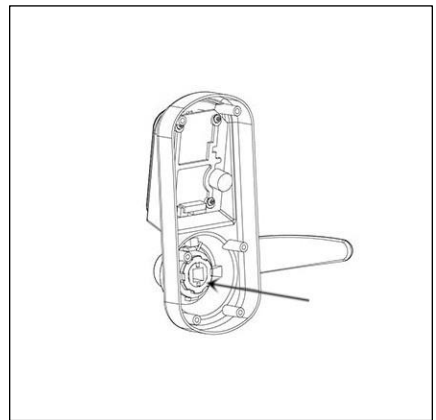
Change handle direction (from left to right or right to left)



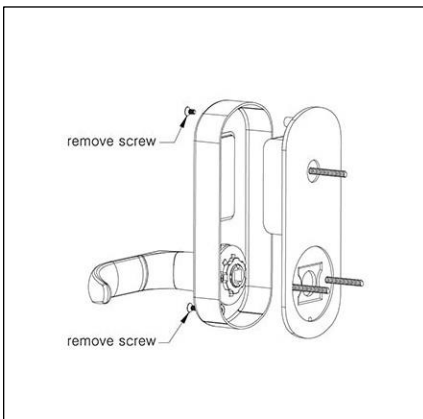
1.Remove the screws at the top and bottom of the back of the front piece of the lock, and remove the plate.



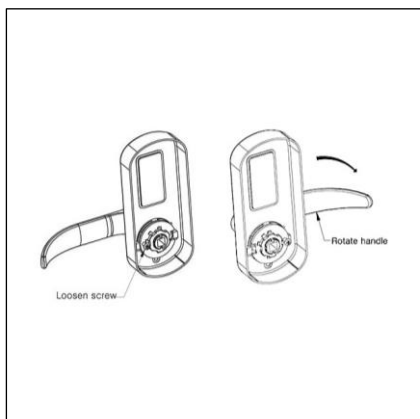
2.Remove the nuts and springs from around the handle – this will enable you to turn the handle 180 degrees into the new position.



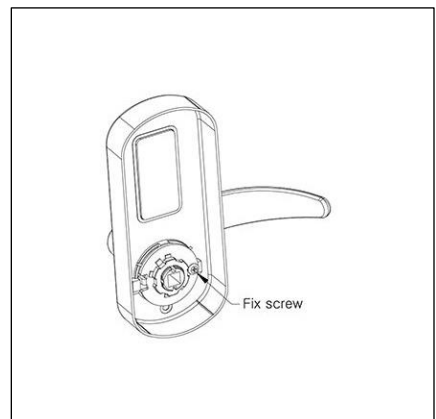
3.Screw the nuts and springs back on.



4.To change the direction of the back handle, remove the screws at the top and bottom of the lock, which enables you to get to the springs and nuts on the inside.



5.Loosen the screw as show.This will enable you to turn the handle 180 degrees into the new position.



6.Tighten the screw in the new position and screw cover back on.

FOR MORE INFORMATION PLEASE CONTACT DIGITAL KEYS

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