

# Saflok QuantumIV RFID (Quantum Series)

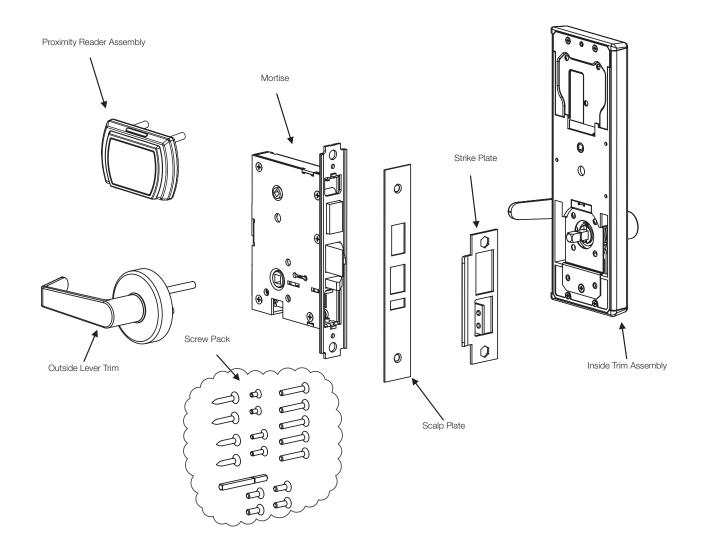
## **Installation instructions**

PK3692-T - 2018 - 10 - **DRAFT** 



## Saflok QuantumIV Installation Instructions

All parts needed to install the Saflok QuantumIV lock are included with each unit. Please check to make sure all parts are accounted for before beginning installation. Do not substitute any of the parts. The use of substitute parts will result in poor performance of the lock.



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# Preparing the door and door frame

1. Prepare the door using the QuantumIV reader installation template or drill fixture. The door edge prep is a standard, full-mortise prep for a 1-1/4" x 8" front plate (1" x 8" and 1" x 7-3/4" custom front plates are optional). The door surface holes and mortise are customized for the QuantumIV trim.

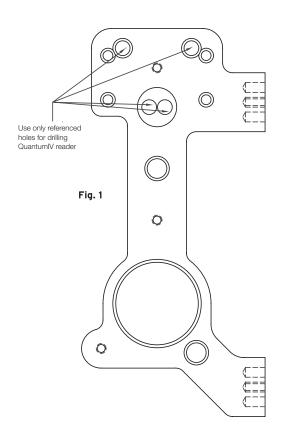
## **IMPORTANT**

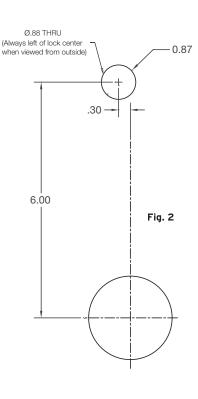
Some holes are only on the inside surface of the door. See the door prep template.

- For new construction installations, the door manufacturer may prepare the door using the installation template.
- For retrofit installations, remove the existing hardware and confirm that the existing door edge prep is appropriate for the QuantumIV mortise lock.

Drill fixture: If you are using a drill fixture, position and clamp the fixture on the door. The fixture has two positioning posts that rest inside the mortise, establishing the proper backset for the trim. When the fixture is clamped, its surfaces should be parallel with the door surfaces and door edges. Not all holes go through the door (refer to the template). Notch the material on the inside surface for easier routing of the motor wire. After machining, remove any debris from the mortise and cutouts.

2. Prepare the door frame using the template and install the strike plate using the screws provided  $(12 \times 1-\frac{1}{2} \text{ screws for wood frames, } 12-24 \times \frac{3}{8} \text{ screws for metal frames)}$ .





Note: The hole shown above is not located on the drill fixture. Use these measurements to locate the hole.

# Preparing the door and door frame (continued)

3. The mortise plate has an adjustable bevel. Align the mortise front plate with the bevel of the door edge and tighten the two bevel adjustment screws at the top and bottom of the mortise case. Position the mortise case in the door edge with the motor wire routed through the notch (see Fig. 3).

## **△** CAUTION

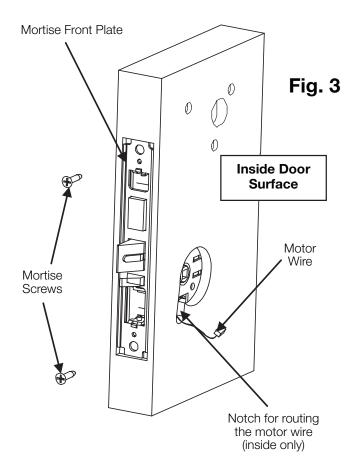
Use care to ensure that the wires do not get pinched or pulled as the mortise is inserted into the pocket.

4. Attach the mortise front plate to the door using the two mortise screws (12 x 1- $\frac{1}{4}$  screws for wood doors, 12-24 x  $\frac{3}{8}$  screws for metal doors). Be sure that the screws are fully tightened.

#### **IMPORTANT**

DO NOT leave the screws loose. The screws must be fully tightened before the trim is installed. If you must leave the mortise loose to install the trim, the door preparation is incorrect.

5. Install the scalp plates with the  $8-32 \times 1/4$  screws provided and test for proper mechanical latch engagement into the strike plate.



CE	dormakaba Austria GmbH Ulrich-Bremi-Straße 2 3130 Herzogenburg Österreich
0432-CPR-00072-03	19
EN 14846: 2008	3/S/5/D/0/G/3/0/3
ESM MORTISE	DOP_0175

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EN 14846: 2008	3/S/5/D/0/G/3/0/3	
ASM MORTISE	DOP_0175	

# Installing the lock trim

The outside lever trim has two carriage bolts that fit into the diagonal holes in the mortise case. These carriage bolts establish an accurate trim position with respect to the mortise case assembly, allowing the levers and bolt mechanism to operate without binding. The holes machined in the door surfaces should not influence the position of the trim or the card reader assembly.

Do not tap or bend the carriage bolts to manipulate the fit of either trim piece during installation. The door prep holes should accommodate the outside lever trim and the card reader assembly. If the carriage bolts or card reader enclosure fit too tightly in the door prep holes, remove the mortise and enlarge the holes to achieve a free fit.

- 1. Remove the battery pack from the inside trim.
- Position the outside proximity card reader assembly on the outside of the door (see Fig. 4). Route the ribbon cable and power cable through the <sup>13</sup>/<sub>16</sub>" hole in the door. Do not pull on the ribbon cable. DO NOT CREASE THE RIBBON CONNECTOR
- 3. Position the inside trim on the inside of the door.
- 4. Secure inside trim to the proximity card reader assembly to the inside trim using three 8-32 x 1-1/4" screws.

#### **IMPORTANT**

Do not fully tighten the screws at this point.

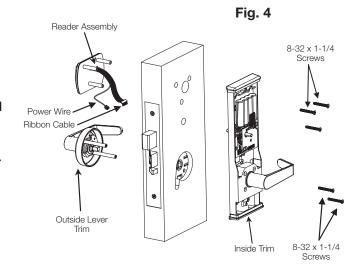
5. Align the outside lever trim with the diagonal holes located on either side of the mortise hub and secure it using the remaining two  $8-32 \times 1-\frac{1}{4}$  screws (see Fig. 4).

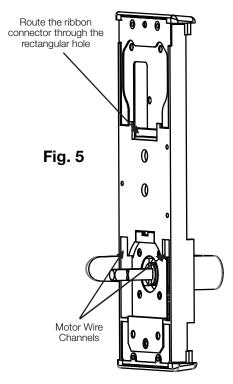
#### **IMPORTANT**

Do not over tighten screws. If using a screw gun, use a low torque setting.

- 6. Once the outside lever trim is fully secured, check the alignment of the inside trim and be sure that the both levers rotate without binding. Once the trim is properly aligned, fully tighten the screws that secure the proximity reader assembly to the door and check for proper rotation.
- 7. Place the battery pack in position above the PCB. Be sure that the battery wire is routed through the lower left corner of the battery compartment.

**Note:** Do not plug in the battery until the other connections have been made at the circuit board.





# Installing the lock trim (continued)

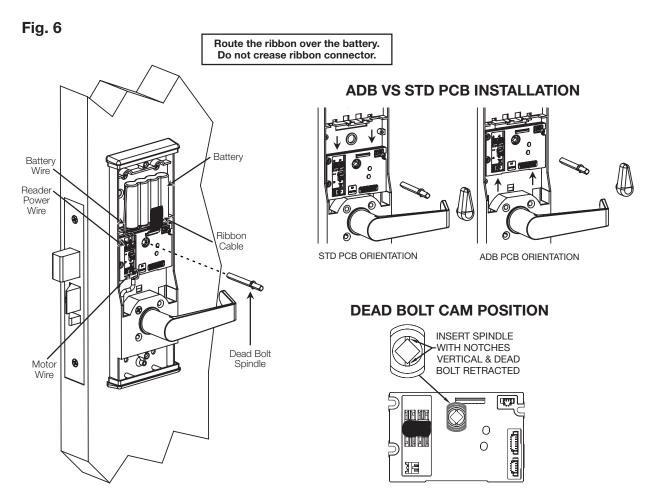
- 8. Connect reader ribbon cable, reader power cable, and motor cable, to the PCB. See Fig. 6. Be sure not to crease the ribbon.
- 9. Connect the battery wire to the PCB: watch for the green LED on the card reader to flash once, and for the clutch motor to reset when you connect the battery wire to the PCB. This is an indication that the PCB has reset and the door is locked.

## The battery wire should be the last connection made to the PCB.

10. With the dead bolt retracted, insert the long end of the dead bolt spindle assembly through the PCB switch cam hole and into the mortise dead bolt hub. The indicator marks on the switch cam should be at the top/bottom (12:00 and 6:00 position) when the mortise dead bolt is retracted (see Fig. 6). The retaining ring should rest on the switch cam when fully inserted (the proper positioning of the cam will allow the door to be opened when the dead bolt is retracted and block entry when the dead bolt is thrown for privacy, except when emergency keycards are used.)

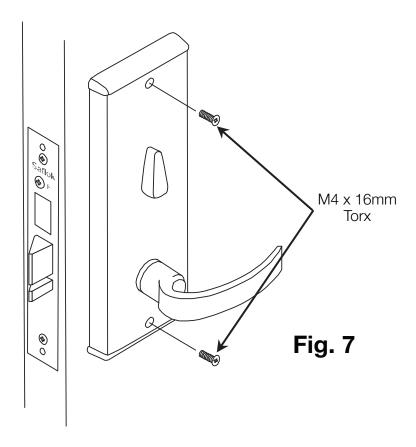
As illustrated in figure 6 ensure the deadbolt cam position is orientated correctly.

11. Install the inside escutcheon with the thumb turn pointed upward.



# Installing the lock trim (continued)

- 12. Secure the inside trim cover to the inside trim using two M4 x 16mm Torx screws (see Fig. 7).
- 13. Program the lock using the Lock Programmer and Interrogator (LPI) probe with the LPI-R device cable. Test the functioning of the lock as discussed in the following section and in the programming manual before closing the door. When the construction key is used, the green and red LEDs will blink together, indicating that the lock's time and date are not set.
- 14. For humid outdoor environments, apply dielectric grease inside the USB connector after programming to guard against corrosion from persistent moisture.



# **Testing Lock Functionality**

Pass a construction key over the QuantumIV RFID reader. The green light will flash for five seconds. Be sure that the green light flashes for five seconds while the exterior lever remains operable. If the green lights do not flash, refer to the table below.

Lock Communication	Electronic Function Description	
Red and green LEDs flash 9 times simultaneously	Time and date not set, use the Quantum MT RFID LPI probe to reset	
Yellow LED flashes 12 times	Dead bolt is thrown or switch cam is not properly aligned	
Yellow LED flashes 2 times	Keycard not allowed OR keycard cancelled by new keycard	
Red and green LEDs flash alternately 9 times	Low battery (contact the SAFLOK service department)	
Yellow and red LEDs flash 2 times simultaneously	Bad keycard read or corrupted data (may require new keycard)	

## **Door Unit Inspection Criteria**

## **Appearance**

- Finish is free of blemishes or scratches that would distract from lock appearance
- · Lock body and under plate (if used) are mounted straight on the door
- · Door scalp is mounted straight and flush with the door edge
- Jamb strike is mounted straight and is flush with the jamb face
- Correction of minor blemishes on the door jamb are the responsibility of the property's maintenance department

#### **Lock Function**

- Knob or lever rotates and moves freely
- · Lever is horizontal to floor when at rest position
- · Dead bolt extends fully and retracts without binding (door open)
- · Lock latch and dead bolt engage jamb strike plate freely
- Anti-pick latch when depressed (door open)
- · Anti-pick latch is depressed when contact is made with the strike plate (door closed)

## **Electronics/Keycards**

- Present keycard in front of reader, and the yellow light flashes twice when incorrect keycard is used
- · Green light flashes when the proper keycard is used
- · Green light is flashing when the lever is operated
- Green light continues to flash for a five-second cycle
- · Yellow light flashes 12 times when the dead bolt is extended and a guest/hotel keycard is used
- · All keycards function to the specifications of the properties key design

#### **Door function**

- · Door closes and latches with little or no interference
- Dead bolt extends fully through the strike plate without interference (door closed)
- Spacing between door edge and inside door jamb does not exceed 3/16" (door closed)

**Note:** If bumpers or other seals are added after strike plate installation and causes alignment and latch problems, it is the property's responsibility to correct this condition. This note generally applies to new construction or new door installation.

#### **FCC and ISED Information**

**ISED non-interference disclaimer** This device complies with Industry Canada license-exempt RSS standard(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 of the device. This equipment complies with ISED RSS-102 radiation exposure limits set forth far an uncontrolled environment. This transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement." Cet équipement est conforme avec ISED RSS-102 des limites d'exposition aux rayonnements définies pour un environnement non contrôlé. Cet émetteur doit être installé à au moins 20 cm de toute personne et ne doit pas être colocalisé ou fonctionner en association avec une autre antenne ou émetteur.

**FCC Compliance 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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.

RF Exposure Statement This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. To avoid the possibility of exceeding the FCC radio frequency exposure limits, this equipment should be installed and operated with minimum distance 20 cm between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

## **Quantum IV Electromechanical lock series**

Product's Description	Product ID	FCC/ISED Information
Quantum IV: Electromechanical lock with RFID and BLE	QIV6	Model No: MT6 Quantum IV FCC ID: SAPQUANTUMIV IC: 4652A-QUANTUMIV
Quantum IV Adese: Electromechanical lock with RFID and BLE with ADESE internal escutcheon	QIV6-AD	Model No: MT6 Quantum IV FCC ID: SAPQUANTUMIV IC: 4652A-QUANTUMIV
Quantum IV with Messenger: Electromechanical lock with RFID and BLE with Messenger module.	QIV6-M	Model No: MT6 Quantum IV FCC ID: SAPQUANTUMIV IC: 4652A-QUANTUMIV
		Contains: FCC ID: Q8S515123 IC: 4652A-515123
Quantum IV Adese with Messenger: Electromechanical lock with RFID and BLE with ADESE internal escutcheon and Messenger module.	QIV6-ADM	Model No: MT6 Quantum IV FCC ID: SAPQUANTUMIV IC: 4652A-QUANTUMIV
		Contains: FCC ID: Q8S515123 IC: 4652A-515123

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