



CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

The 5100 series lock is a stand-alone, microprocessor controlled, electro-mechanical locking system. The 5100 employs a heavy-duty mechanical design which is easy to install and highly reliable. The FSE and FSA solenoid-driven models are hard-wired to a 12 or 24 volt (AC or DC) power supply. They offer fail secure and fail safe operation, respectively. Operationally, the outside lever is normally locked and the inside lever is always free to allow egress. Electronic access control is achieved by entering an "Access Credential" (magnetic stripe card, code, iButton Key, or HID Prox fob or card). Electronic access control capabilities are listed below by model. All models are designed to accommodate an emergency mechanical key override. Standard features of the CM models include up to 1000 user memory, real time features including time zones and holidays, and audit trail of up to 1000 events. Optional ATK (audit trail - key override) will note any use of the mechanical key on the audit trail report. Manual and computer programming is supported by all models which have a keypad. The PRO models are manually programmed to accept up to 100 codes.

Functions:

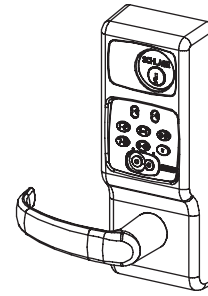
- 5190:** Office Function - has "Lock" and "Unlock" buttons on inside escutcheon - function not available on PRO
- 5195:** Dormitory/Privacy Function - Pushing the "PRIVACY ON" button on the inside escutcheon places lock in the "Privacy" mode: a "Lockout" credential or mechanical key is required to enter. Condition is cleared when the door is opened. Function not available on PRO
- 5196:** Storeroom/Classroom Function - can be unlocked by "toggle" credential and relocked again by same. See programming guide for more information.

Models:

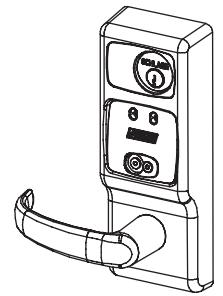
- FSA:** Solenoid operated clutch - fail safe
- FSE:** Solenoid operated clutch - fail secure
- KPI:** iButton reader and keypad
- IBO:** iButton reader only
- MGK:** Magnetic stripe card reader, iButton reader and keypad
- MGI:** Magnetic stripe card reader and iButton reader
- PXK:** Prox card reader, iButton reader, and keypad
- PXI:** Prox card reader and iButton reader
- PRO:** Keypad only - no computer programming, 100 code memory

Options:

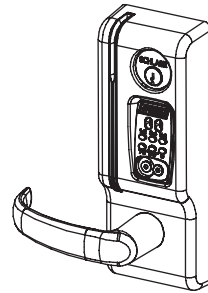
- ATK:** Audit trail of mechanical key use (not available on PRO)
- HSS:** High security screws on inside escutcheon
- SLB:** 2-3/4" backset, 1/2" latch bolt
- OLB:** 2-3/8" backset, 1/2" latch bolt
- ELB:** 2-3/4" backset, 3/4" latch bolt
- T3:** Track 3 card reader (data on track 3 must be ABA track 2 format) - MGI/MGK only
- KD:** Keyed Different, includes Schlage Everest cylinder
- LC:** Less Cylinder



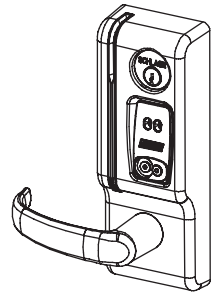
CM5100-FSA-KPI
CM5100-FSE-KPI



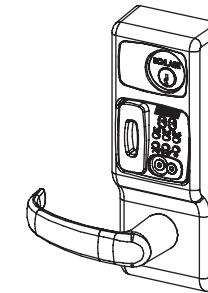
CM5100-FSA-IBO
CM5100-FSE-IBO



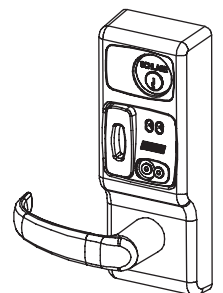
CM5100-FSA-MGK
CM5100-FSE-MGK



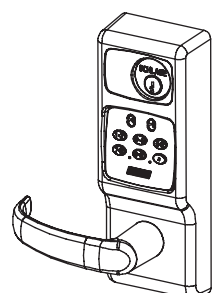
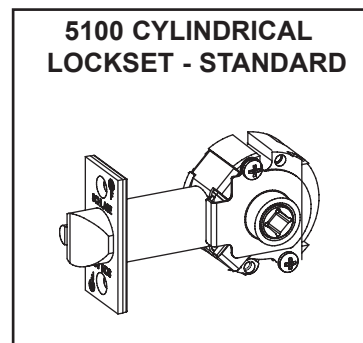
CM5100-FSA-MGI
CM5100-FSE-MGI



CM5100-FSA-PXK
CM5100-FSE-PXK



CM5100-FSA-PXI
CM5100-FSE-PXI



PRO5100-FSA
PRO5100-FSE



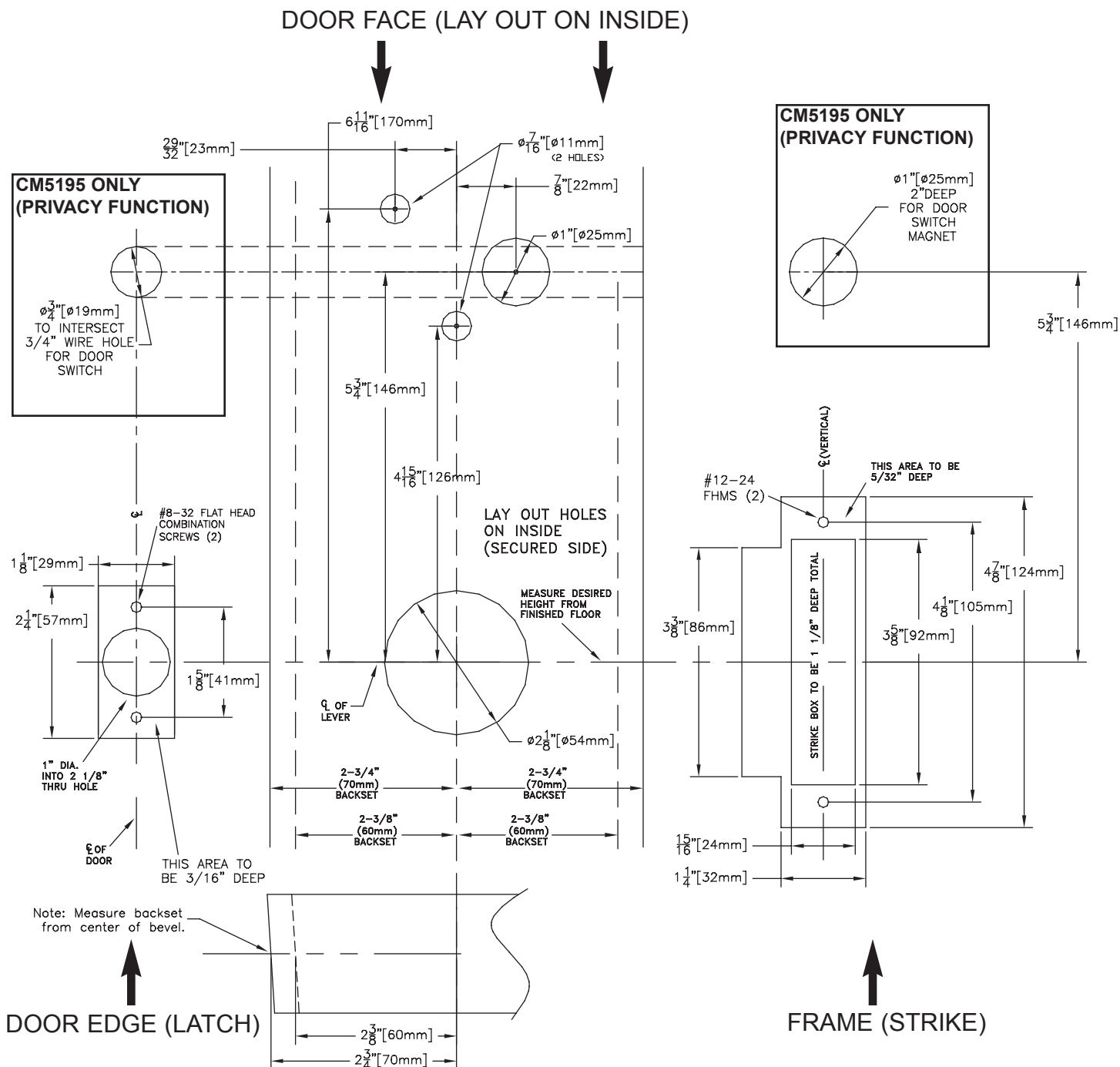
CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

BEFORE YOU BEGIN:

Standard units are shipped from the factory to fit 1-3/4" doors. Verify the door thickness. If the door is not 1-3/4" thick, verify that the door thickness option was ordered or consult factory. Hard-wired units (FSE & FSA models) will require that wiring is brought to the door prep. In step 1, "PREP DOOR AND FRAME", there are some suggested ways of doing this. A door cord, electric hinge or some other form of wire transfer device will be required.

1. PREP DOOR AND FRAME:

- A. Determine door hand and correct backset.
- B. Mark the horizontal and vertical centerlines for the lockset, latch and strike.
- C. Place template on inside of door (opposite the side that the keypad/reader will be on). Line up the correct reference lines on the template with the edge of the door. The centerline on the door should line up with the vertical centerline of the template.
- D. Drill holes as described by template.



CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

FSE & FSA MODELS:

It is best to have the wire race way prepared at the door and frame manufacturer. If this has not been done there are two suggested preparation methods for making wire paths for the FSE and FSA models in the field. Depending on the door and frame circumstances, one may be better than the other. *Consult door manufacturer with any questions regarding agency listings with respect to fire integrity.*

METHOD A:

1. Prep door and frame according to standard template.
2. Determine location of standard 1 inch wire harness through hole and mark centerline of hole on hinge side of door.
3. Using appropriate drilling jig and drill bits, drill 3/8" or 1/2" wire race from edge of hinge side into standard wire harness through hole.
4. Install electric hinge or door cord and run wires.

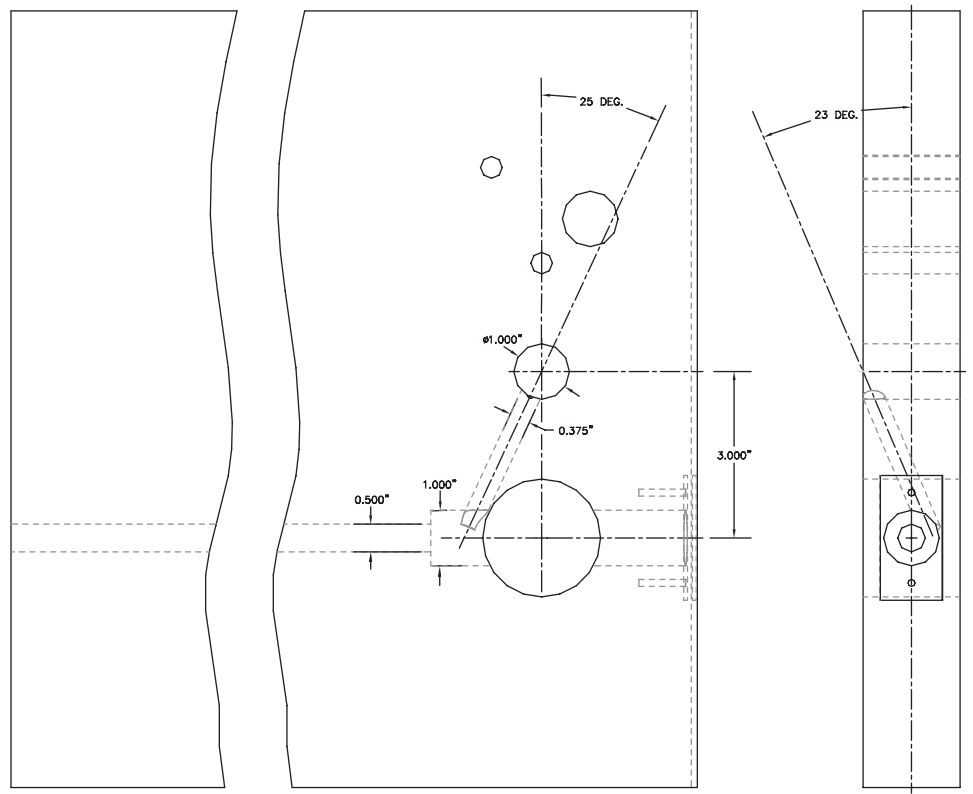
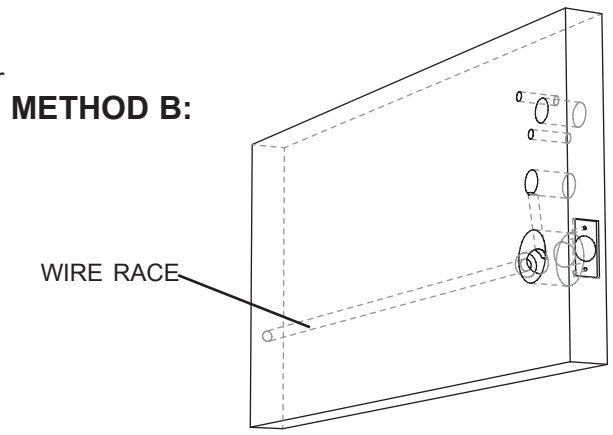
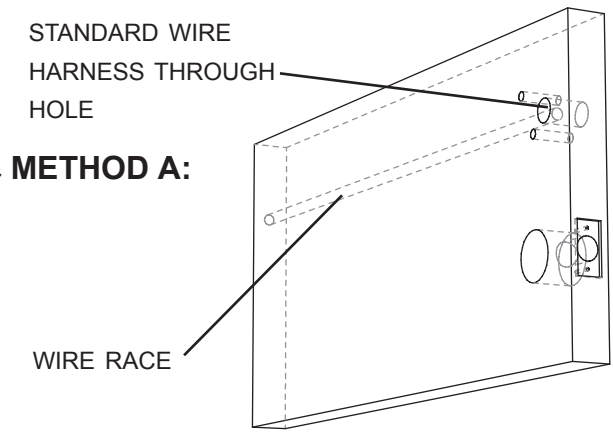
METHOD B:

1. Prep door and frame according to standard template.
2. Using a 1" drill bit, continue the 1" latch hole through retractor hole to a depth of 5". This will allow room for the wiring to pass around the retractor.
3. Using appropriate drilling jig and drill bits, drill 3/8" or 1/2" wire race from the latch hole through the door toward the hinge side. It is not necessary to continue the hole through the hinge side.
4. Measure up 3 inches from the center of the 2 1/8" retractor hole and drill a 1 inch through hole on center as shown below.
5. Using a 3/8 inch drill bit, place the tip of the drill into the 1" wire hole drilled in step 3 and aim at the angles shown. Drill down and toward the hinge side to intersect the 1" latch hole (where it was continued in step 2).
4. Install electric hinge or door cord and run wires.

Note: this method offers the advantage of not having holes exiting the door edges. If a door cord is used the door cord wire hole can be cross drilled into the long wire race.

HARD WIRED LOCKS RATED AT:

- 0.5 AMPS @ 12 VDC
- 0.5 AMPS @ 12 VAC
- 0.5 AMPS @ 24 VDC
- 0.5 AMPS @ 24 VAC



CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

2. INSTALL CYLINDER, GASKET AND STANDOFFS:

- A. Install cam onto cylinder (if not already done.) Cam must be a straight, 11/16" design. See below for recommended cams.
- B. Insert standard, 1-1/8" mortise cylinder into outside escutcheon from front (keypad/reader) side with keyway down.
- C. Slide lock washer onto cylinder (tab on top facing out, as shown below.)
- D. Using nut tool (provided) tighten nut onto cylinder.
- E. Line up nearest notch on nut with tab on lock washer and bend tab using nut tool so nut is secure.
- F. Install exterior gasket (if used).
- G. Install standoffs.

TEST KEY OPERATION NOW: Turning key clockwise until it stops (about 1/2 turn) should allow the lever to turn retractor.

RECOMMENDED CAMS:

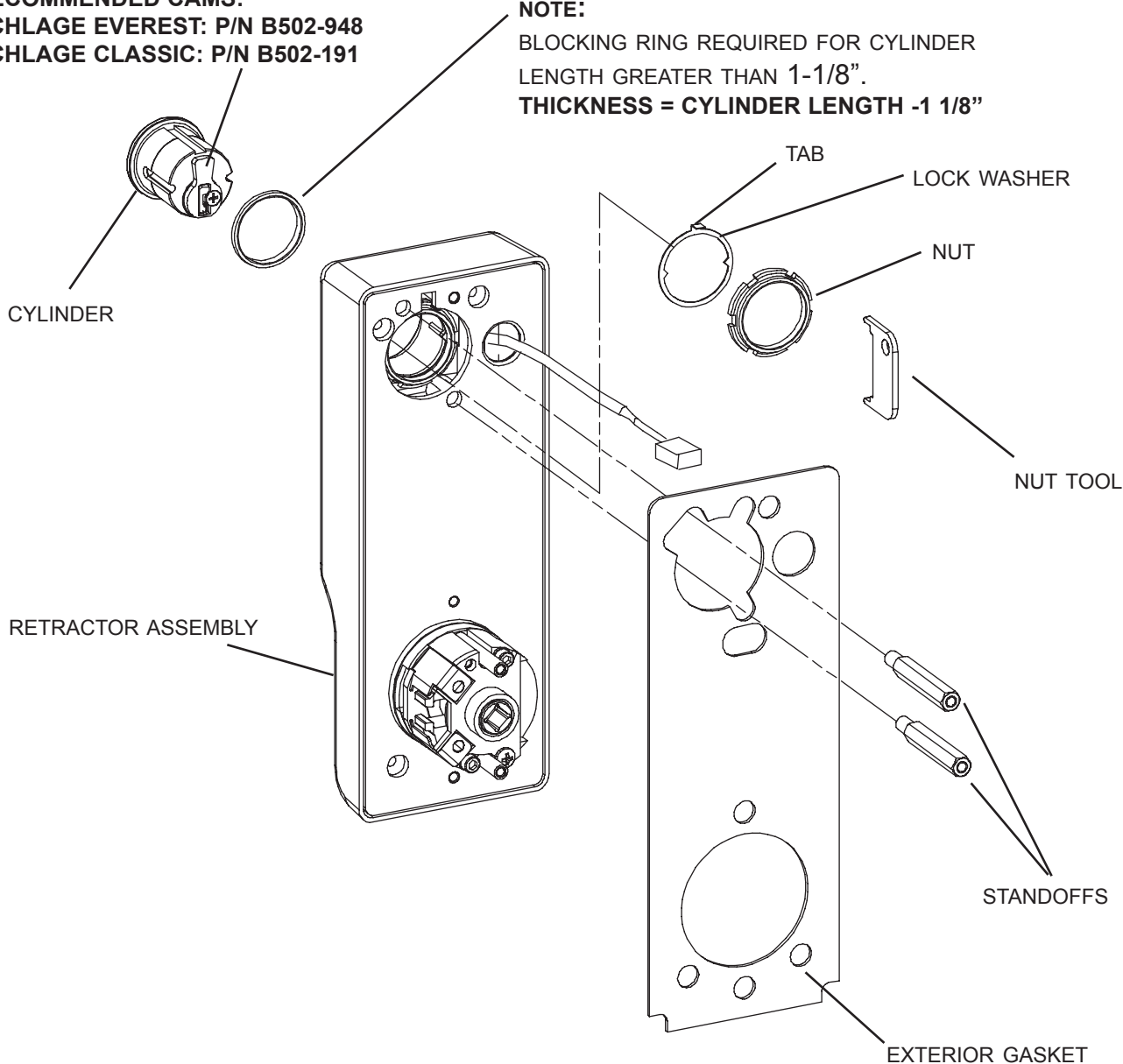
SCHLAGE EVEREST: P/N B502-948

SCHLAGE CLASSIC: P/N B502-191

NOTE:

BLOCKING RING REQUIRED FOR CYLINDER
LENGTH GREATER THAN 1-1/8".

THICKNESS = CYLINDER LENGTH - 1 1/8"

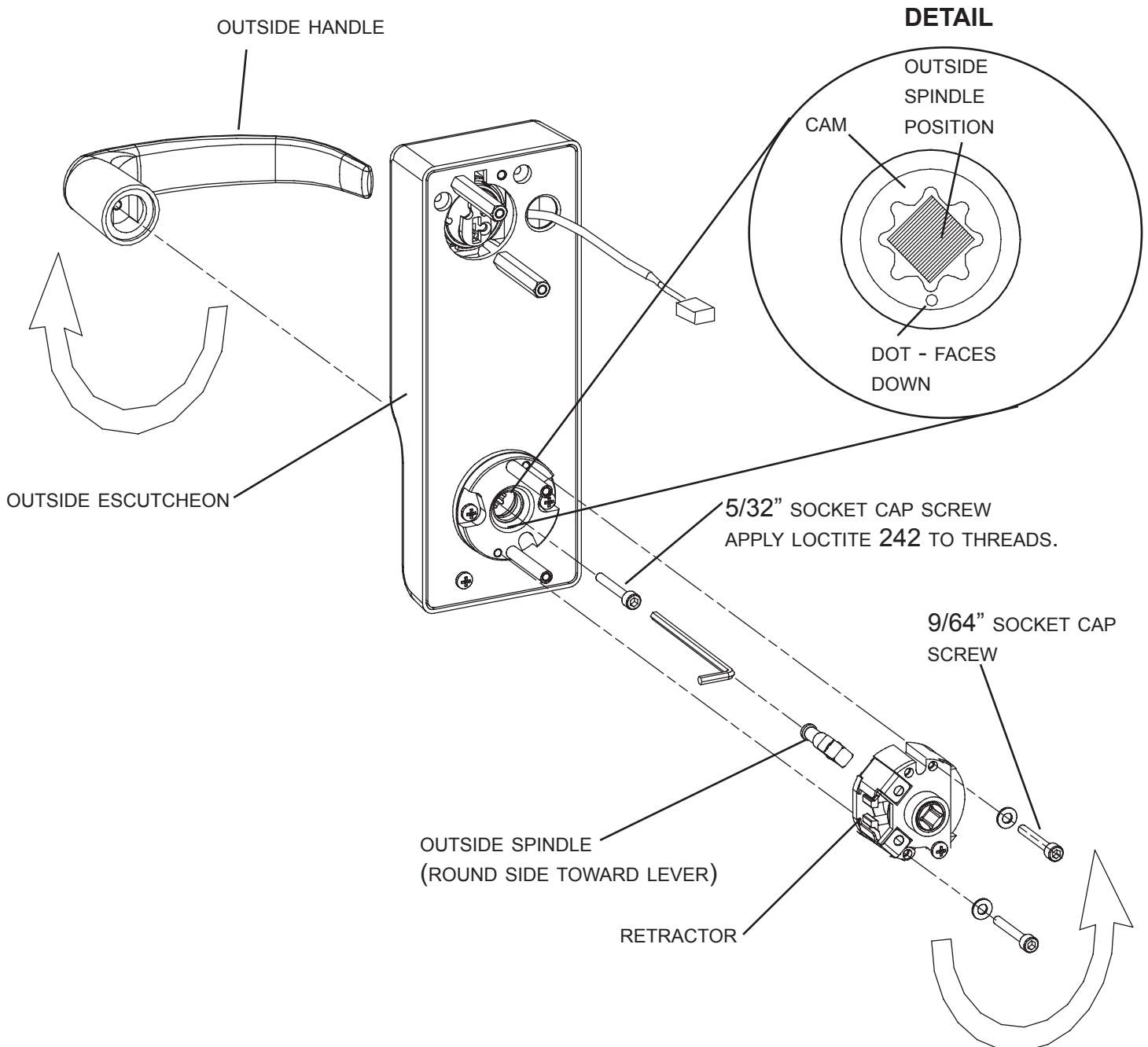


CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

3. CHANGE HAND (IF NECESSARY):

NOTE: The locks are shipped handed as ordered from factory. If it is necessary to change the hand of the lock, follow the steps below:

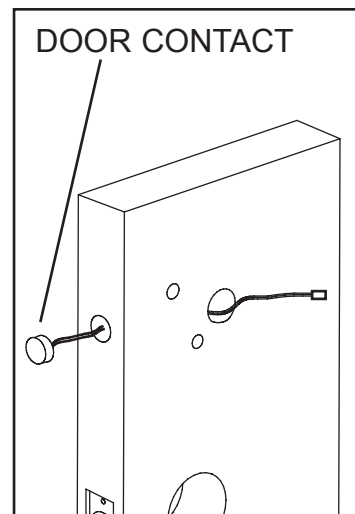
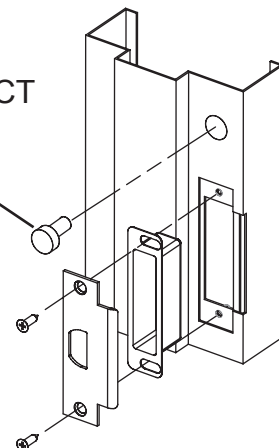
- A. Remove retractor by loosening two 9/64" socket cap screws which attach it to the outside escutcheon.
- B. Remove outside spindle.
- C. Loosen 5/32" socket cap screw which secures handle to escutcheon.
- D. Remove, rotate and re-install handle (NOTE: some handle designs have an adapter.). Apply thread locker on threads. (Loctite 242 is recommended.)
- E. Re-install outside spindle, making sure that the round end faces the handle, and the spindle is positioned with its edges vertical and horizontal as shown in detail below. Note that the cam (inside the escutcheon assembly) must be positioned such that the dot on it faces the 6 O'Clock position (see detail below).
- F. Rotate retractor and re-install it.
- G. Change the hand of the handle on the inside escutcheon (not show) the same way. Note that the inside escutcheon has no retractor.



CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

4. INSTALL STRIKE BOX AND STRIKE (INSTALL DOOR CONTACT/MAGNET - CM5195 ONLY - PRIVACY OPTION):

DOOR CONTACT
MAGNET



5. INSTALL LATCH AND OUTSIDE ESCUTCHEON:

- A. Install latch into edge of door. Be sure to install it with the beveled edge facing door jamb.
- B. If the door is less than 1-3/4 thick, slide spacer over standoffs and retractor on outside escutcheon.
- C. Carefully install the outside escutcheon onto the door, passing the wiring harness through the 1" hole. Be sure that the prongs on the latch engage with the retractor as shown in detail below.
- D. Install latch guard from inside of door. (Do not install latch guard first or retractor will not clear the latch.)

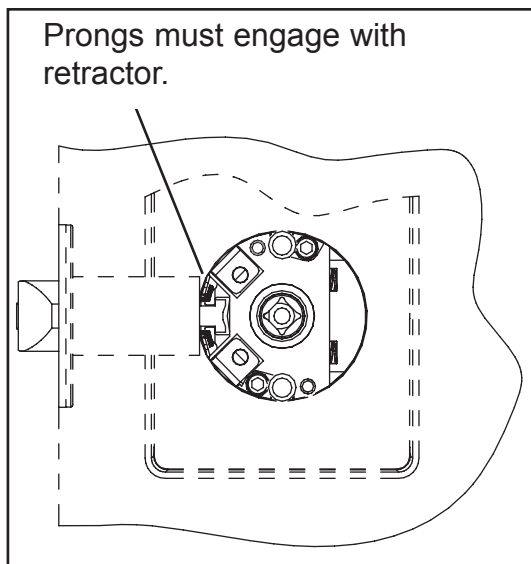
OUTSIDE ESCUTCHEON

WIRING HARNESS

SPACER (FOR DOORS LESS THAN 1-3/4")

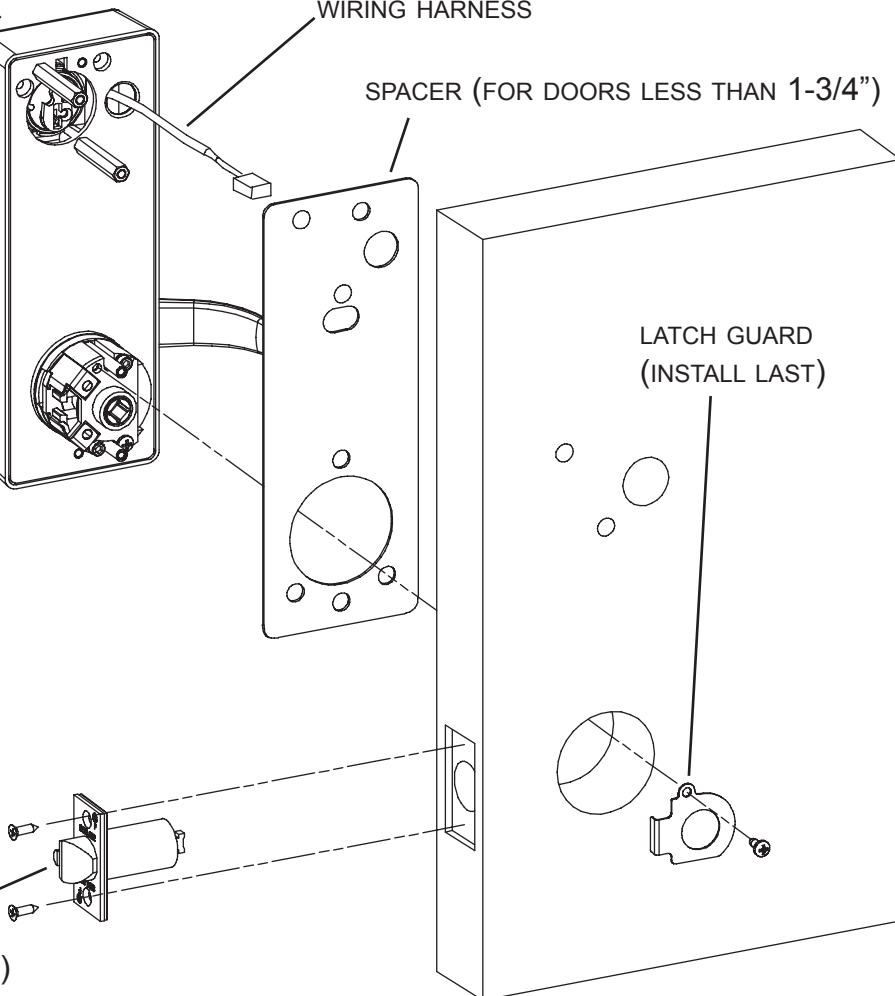
DETAIL

Prongs must engage with retractor.



LATCH
(INSTALL FIRST)

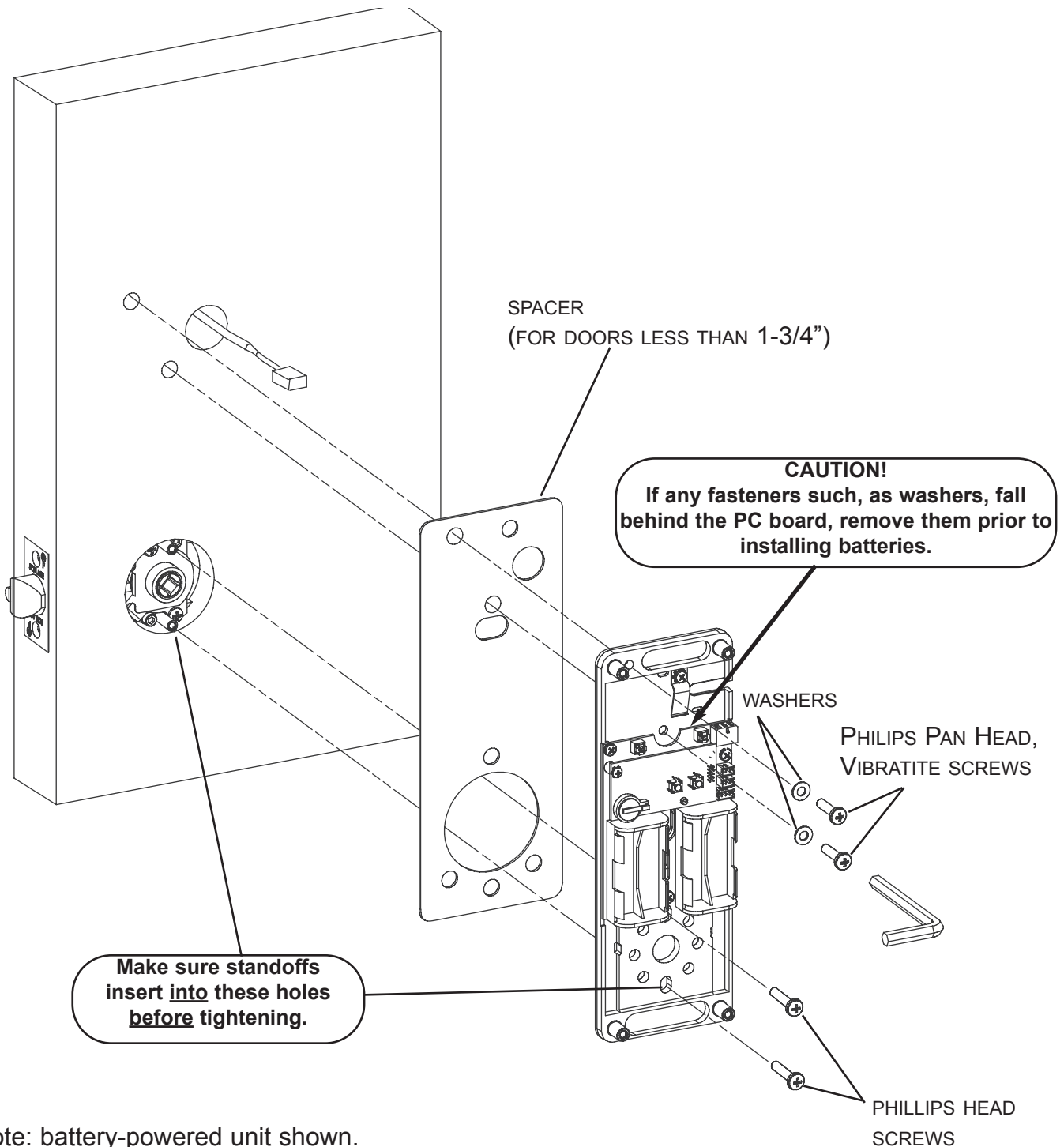
LATCH GUARD
(INSTALL LAST)



CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

6. INSTALL BASE PLATE ASSEMBLY:

Install base plate assembly onto inside of door. (If the door is less than 1-3/4" thick, install spacer between the base plate and the door.) Use socket cap screws with washers on upper standoffs and phillips head screws on lower (retractor assembly) standoffs.

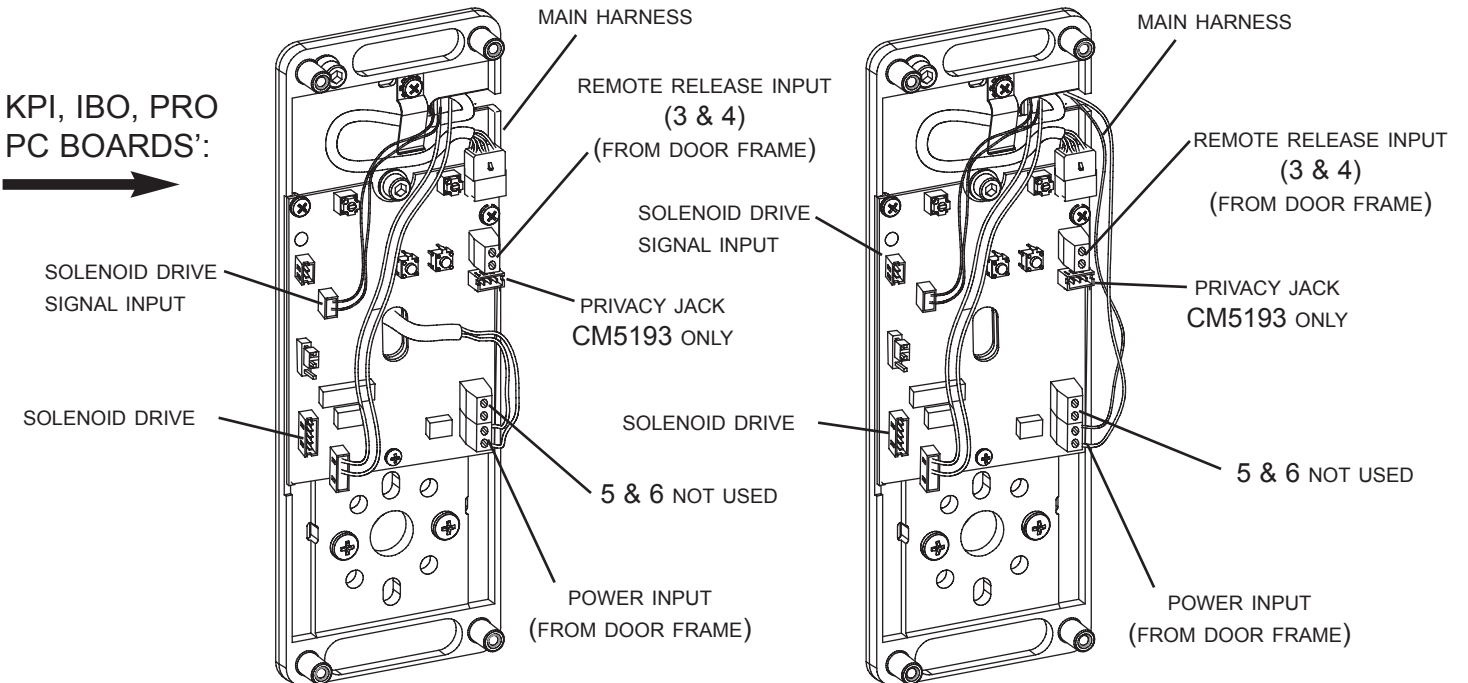
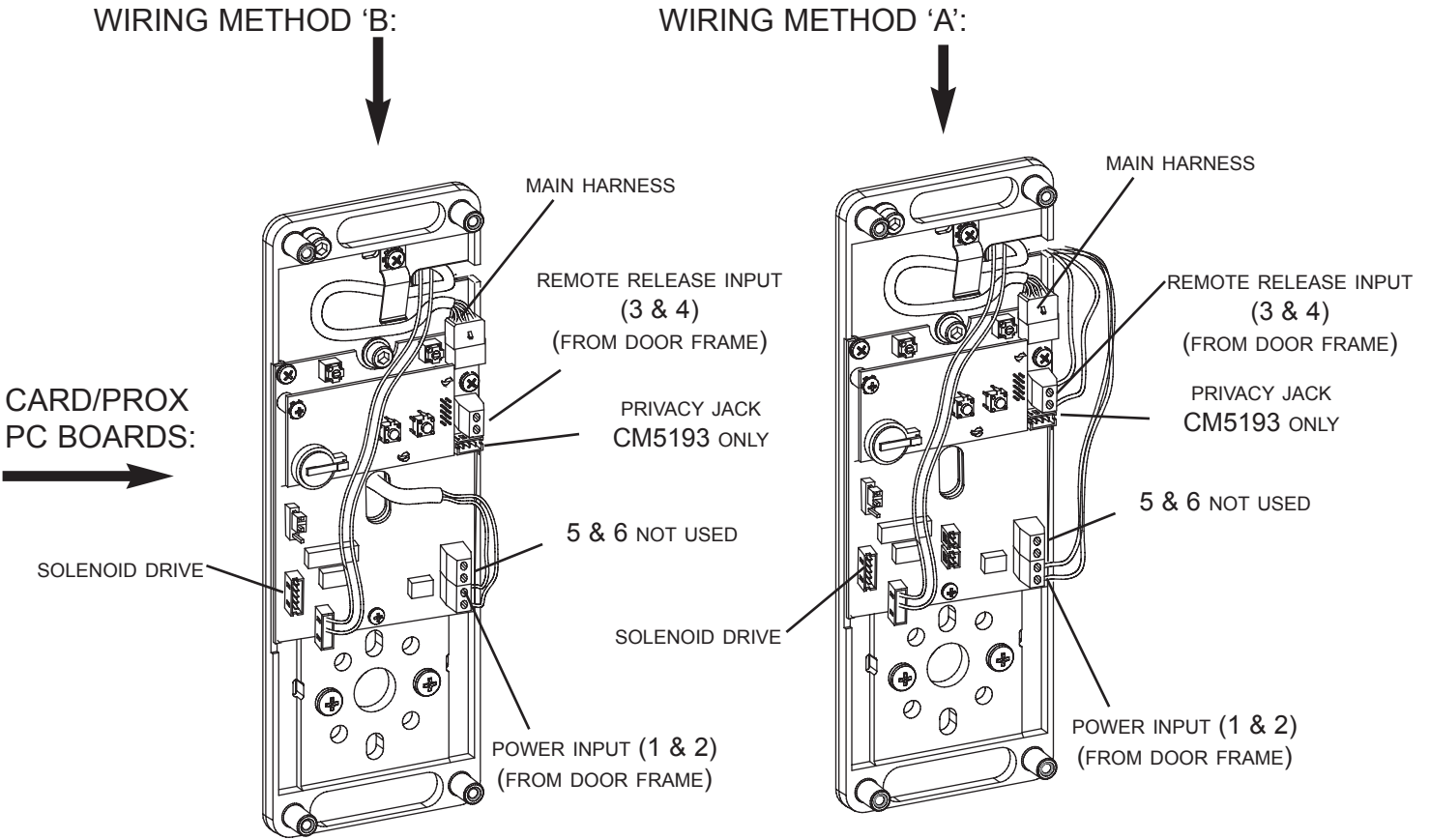


Note: battery-powered unit shown.

CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

7. CONNECT WIRE HARNESS COMPONENTS (IF ANY):

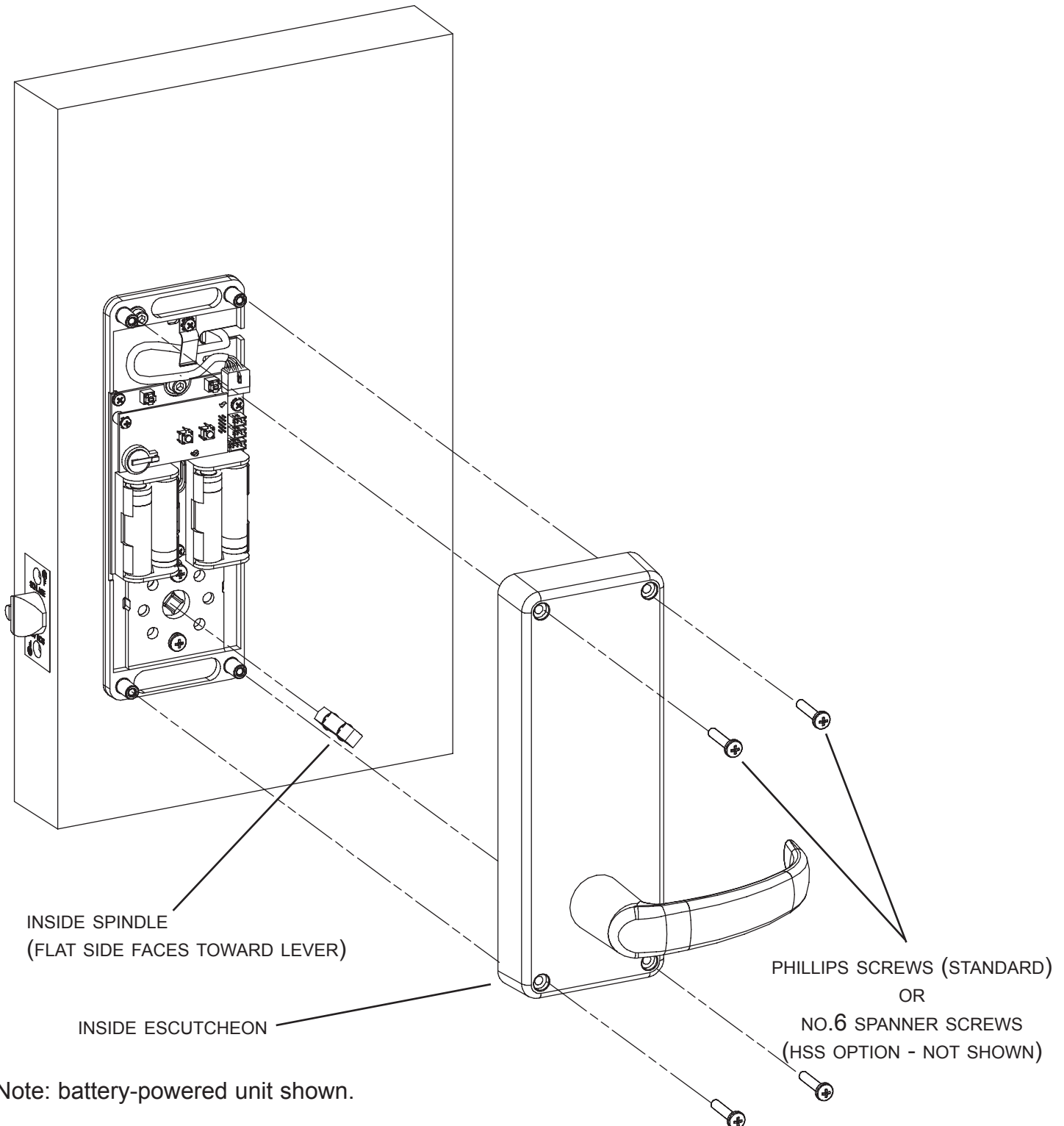
Hard-wired units (FSE and FSA) will have additional wire harness components. If remote release is to be used, connect the RRK harness at this time - refer to instructions included with the kit.



CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

8. INSTALL INSIDE SPINDLE AND INSIDE ESCUTCHEON:

- A. Tuck main wiring harness (and other wires coming from outside escutcheon) under retaining clip as shown in detail.
- B. Insert inside spindle with flat side showing.
- C. Install inside escutcheon with four screws, making sure that the inside spindle engages the lever cam.
- D. Test operation of inside lever to make sure that latch retracts fully.



CM5100 COMPUTER MANAGED CYLINDRICAL LOCK HARD-WIRED (FSE/FSA) INSTALLATION MANUAL

OPERATIONAL TEST:

1. Push down and up on inside lever: latch should retract.
2. Push down and up on outside lever. Lever should be disengaged from retractor and door should not unlock.
3. Insert mechanical key into cylinder and turn counterclockwise until it stops. Push down and up on the outside lever. The door should unlock. (On units with ATK option you should see the green LED flash on the keypad/reader when the key is turned.)
4. If the unit has a keypad, enter the factory default access code:

1 - 3 - 5 - 7 - 9

as soon as "9" is pressed you should hear a quiet "click" and the green LED should flash green for about 10 seconds. During this time, push the handle down - the lock should unlock. After the green LED stops flashing you should hear another quiet "click" and the lock should relock. Test the handle again to verify that it is locked.

Note: Refer to the Programming Guide for information on entering iButton keys or cards to test them. Note that some literature may refer to iButtons as "TEKS" or "TouchEntry Keys".

TROUBLE SHOOTING:

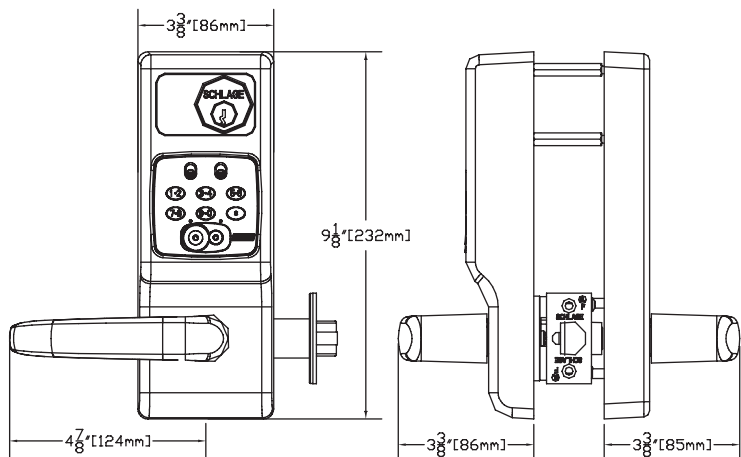
PROBLEM:	POSSIBLE CAUSE:
Inside lever doesn't retract latch:	Inside spindle not installed
No response from keypad/reader:	Wiring harness not plugged in/external wiring problem. Electronics problem (consult tech. support)
Mechanical key not working:	Wrong cylinder cam installed or cam installed in wrong position. Outside spindle not installed properly. Cylinder upside down.

PROGRAMMING:

Please refer to the programming guide, shipped with the product, for instructions on manual programming and creating master programming credentials. If computer programming is required, please refer to the documentation and help files included with the software for more information.

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 any interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

OVERALL DIMENSIONS:



Customer Service

1-877-671-7011

www.allegion.com/us



ALLEGION

© Allegion 2015
Printed in U.S.A.
51116 Rev. 05/15-c