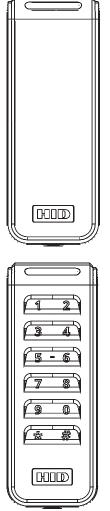
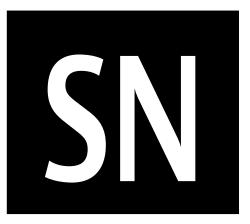
Installation Instructions Cylindrical Lock







Series SN200 Wiegand SN210 OSDP CLX33600

Attention Installer:

Please read these instructions carefully to prevent missing important steps.

Improper installations may result in damage to the lock and void the factory warranty.

The accuracy of the door preparation is critical for proper functioning and security of this lock.

Misalignment can cause premature wear and a lessening of security.

For specific security information, please contact your local ASSA ABLOY Door Security Solutions sales consultant or call 800-810-WIRE.

For Technical Assistance call Corbin Russwin at 1-800-810-WIRE (9473)

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FM636 02/23

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1) Regulatory Compliance

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

FCC:

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.

INDUSTRY CANADA:

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. 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.

Cet appareillage numérique de la classe B répond à toutes les exigences de l'interférence canadienne causant des règlements d'équipement. L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence nocive, et (2) ce dispositif doit accepter n'importe quelle interférence reçue, y compris l'interférence qui peut causer l'opération peu désirée.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiations de la FCC définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps. Cet émetteur ne doit pas être co-localisé ou fonctionner en conjonction avec une autre antenne ou un autre émetteur.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.





This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to: www.P65warnings.ca.gov.

Ce produit peut vous exposer au plomb qui, dans l'état de la Californie, est reconnu pour causer le cancer, des anomalies congénitales ou d'autres problèmes de reproduction.

Pour plus d'informations, visitez: www.P65warnings.ca.gov.



Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and Corbin Russwin makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.



- To avoid possible damage from electrostatic discharge (ESD), some basic precautions should be used when handling electronic components:
 Minimize build-up of static by touching and/or maintaining contact with unpainted metal surfaces such as door hinges, latches, and mounting plates especially when mounting electronic components such as readers and controllers onto the door.
 - Leave components (reader and controller) protected in their respective anti-static bags until ready for installation
- Do not touch pins, leads or solder connections on the circuit boards

*WARNING: The system shall not be installed in the fail-secure mode unless permitted by the local authority having jurisdiction and shall not interfere with the operation of Listed panic hardware.



3) Specifications

- UL Listed* UL 294 Indoor Use
- CUL Listed S319: Class 1
- ANSI/BHMA A156.25 Listed Grade 1 Compliant *UL294, S319, & BHMA A156.25 not applicable to SN200 with Non-UL294 Configuration option
- Wire from EAC Panel to door must be shielded with a drain terminated at EAC Panel controller.

Electrical Specifications

12/24VDC System

	12V	,	24V	
	Average	Peak	Average	Peak
Reader**	75mA	250mA	n/a	n/a
Actuator	500mA	500mA	250mA	250mA

**Maximum AVG - RMS current draw during continuous card reads Not evaluated by UL.

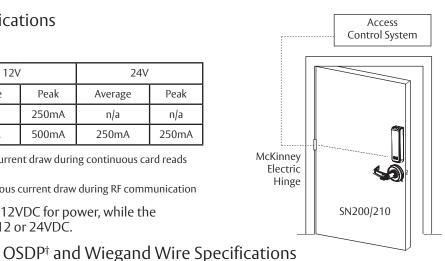
Peak - highest instantaneous current draw during RF communication

The reader requires 12VDC for power, while the lock accepts either 12 or 24VDC.

•	UL 294 Access Control Ra	tings:
---	--------------------------	--------

Destructive Attack	Level 1
Line Security	Level 1
Endurance	Level 4
Standby Power	Level 1

UL testing was conducted on product powered by UL Listed model 9001GR/AC injector; manufactured by Microsemi Corp.



Total One-Way	Wir	Wire Gauge Chart 12VDC Load Current @ 12VDC						
Length of Wire Run (ft)	1/4A	1/2A	3/4A	1A	1-1/4A	1-1/2A	2A	3A
100	20	18	16	14	14	12	12	10
150	18	16	14	12	12	12	10	_
200	16	14	12	12	10	10	_	_
250	16	14	12	10	10	10	_	_
300	16	12	12	10	10	-	-	-
400	14	12	10	_	—	—	-	-
500	14	10	10	_	_	_	_	_
750	12	10	_	_	_	_	_	_
1,000	10	_	_	_	_	_	_	_
1,500	10	_	_	-	_	—	_	_

Total One-Way	Wir	Wire Gauge Chart 24VDC Load Current @ 24VDC							
Length of Wire Run (ft)	1/4A	1/2A	3/4A	1A	1-1/4A	1-1/2A	2A	3A	
100	24	20	18	18	16	16	14	12	
150	22	18	16	16	14	14	12	10	
200	20	18	16	14	14	12	12	10	
250	18	16	14	14	12	12	12	10	
300	18	16	14	12	12	12	10	-	
400	18	14	12	12	10	10	—	_	
500	16	14	12	10	10	_	_	_	
750	14	12	10	10	_	_	_	_	
1,000	14	10	10	_	_	_	_	_	
1,500	12	10	_	_	-	_	_	_	

†Recommended wire specifications for OSDP: Four (4) conductor twisted pair overall shield such as UL approved, Belden 3107A or equivalent is recommended to remain fully TIA-485 compliant at maximum supported baud rates and cable distances. Belden 82842, Liberty Wire & Cable 24-29_P485-WHT, West Penn Wire D254852, and CAT6 cable have been found to be suitable in typical applications and installations, including lower baud rates and cabling distances.

This product is not intended for outside wiring as covered by Article 800 in the National Electrical Code, NFPA 70.

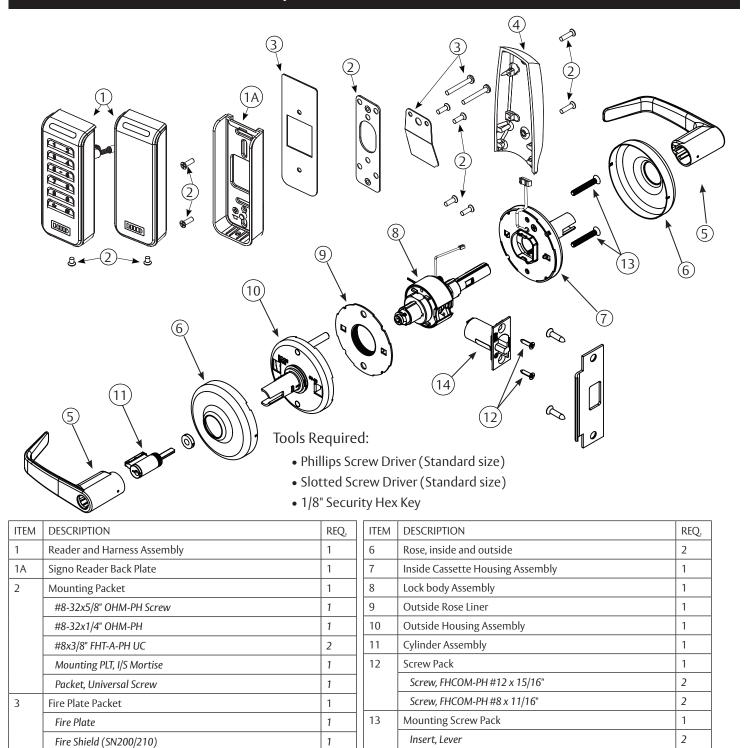
Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), CSA 22.1, Canadian Electrical Code (CEC), Part I, Safety Standard for Electrical Installations, local codes and the authorities having jurisdiction.

Both reader and actuator current must be taken into account when determining wire length and gauge. OSDP installations may be more limited due to fewer cable options.

For OSDP cable lengths greater than 200 ft (61 m) or EMF interference, install $120\Omega + 2\Omega$ resistor across RS-485 termination ends.



4) Product Illustrations



#8x1 1/4" Phillips Pan Head Drilling Screw

Solder Sleeve

Inside Escutcheon

Lever, inside and outside

4

5

1

2

1

14

2

1

1

2

Tool, Knob Release

Latch Assembly

Screw, FHM-PH #12-24 x 1 1/2" (for doors 1 3/4"-2")

Screw, FHM-PH #12-24 x 2" (for doors more than 2")



5) Wiring Diagrams

Product	8 PIN COI	NNECTOR							4 PIN CON	NECTOR		
	1-Black	2-Red	3-White	4-Green	5-Orange	6-Blue	7-Brown	8-Yellow	1-Violet	2-Gray	3-Pink	4-Tan
ACCESS CONTROL DEVICES: SN200/210 Lockset, Electrolynx wire Color / Function assignments												
	12VDC (Reader)		Communicatio Type	n	RX	RX	EGND	Function*	12/24 VDC (LOCK REL		DPS	DPS
SN200 (UL294)			WIEGAND	WIEGAND				TAMPER				
SN200	NEG	POS	DATA_1	DATA_0	NO	СОМ	EGND	GREEN LED	NEG	POS	NC	СОМ
SN210	1		OSDP RS-485B	OSDP RS-485A	1			n/a	1			

*Diagrams on following pages

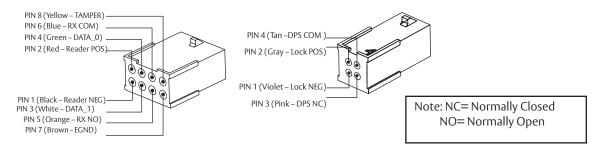
If your lock is configured with End of Line Resistors, reference instruction sheet FM406 for the wiring of RX & DPS outputs.

Wiegand Operation Mode:

- Red LED 'ON' when powered.
- Presenting a compatible credential causes LED to briefly turn green and then return to red state.

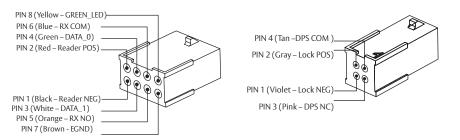
UL294 / TAMPER Configuration:

- Connect Yellow TAMPER wire from ElectroLynx cable to desired EAC panel control line. Reference Diagram #1.
- As appropriate, use the configuration card to activate desired mode on reader.



Non-UL294 Configuration:

• Connect GREEN_LED input to switch controlled by panel. Shorting GREEN_LED to READER_NEG (Black) with panel switch will override reader LED to keep it green.





5) Wiring Diagrams (Continued)

SN200 Wiegand UL294/TAMPER Configuration Application Diagram #1

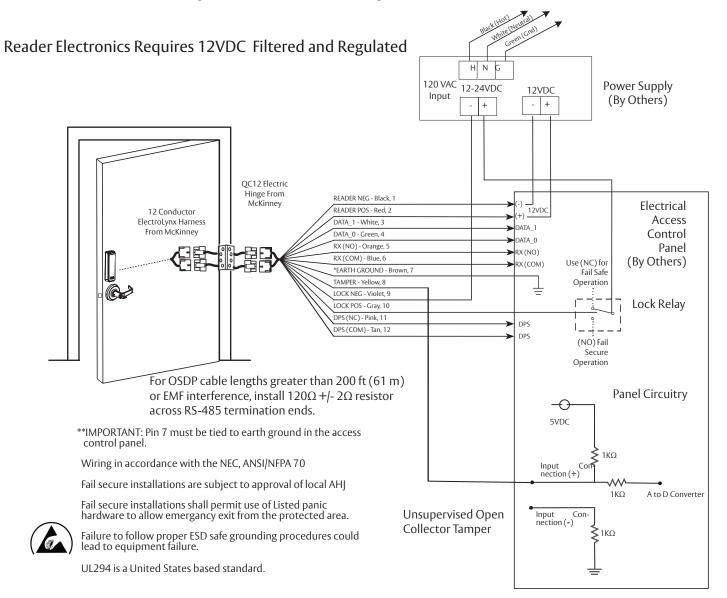
Tamper will trigger when reader is removed from door and tamper wiring is connected at the panel.

	12V		24V	
	Average	Peak	Average	Peak
Reader*	75mA	250mA	n/a	n/a
Actuator	500mA	500mA	250mA	250mA

12/24VDC System

*Maximum AVG - RMS current draw during continuous card reads Not evaluated by UL.

Peak - highest instantaneous current draw during RF communication







5) Wiring Diagrams (Continued)

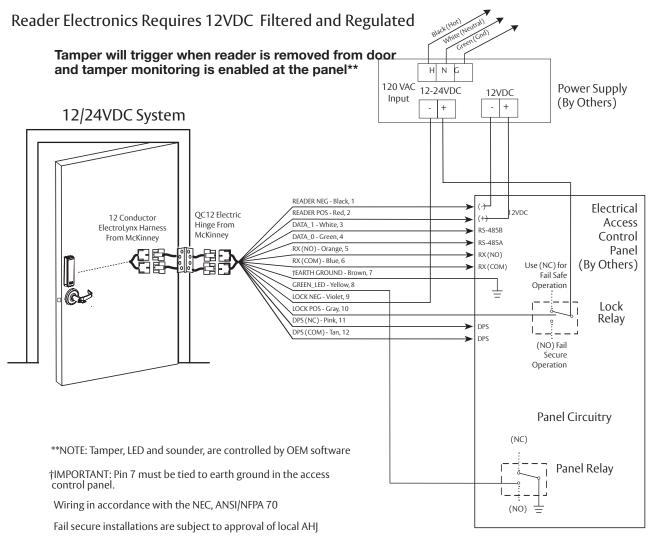
SN200 Wiegand Non-UL294 Configuration Application Diagram #2

Connect GREEN_LED input to switch controlled by panel. Shorting GREEN_LED to READER_ NEG (Black) with panel switch will override reader LED to keep it green

	12V	,	24V	
	Average	Peak	Average	Peak
Reader*	75mA	250mA	n/a	n/a
Actuator	500mA	500mA	250mA	250mA

*Maximum AVG - RMS current draw during continuous card reads Not evaluated by UL.

Peak - highest instantaneous current draw during RF communication



Fail secure installations shall permit use of Listed panic hardware to allow emergancy exit from the protected area.

Failure to follow proper ESD safe grounding procedures could lead to equipment failure.

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PIN 4 (Tan –DPS COM)

PIN 2 (Gray - Lock POS)

PIN 1 (Violet – Lock NEG)

PIN 3 (Pink – DPS NC)

À.

5) Wiring Diagrams (Continued)

SN210 OSDP Application Diagram #3 (12/24VDC System)

OSDP Operation Mode*:

*LED/Sounder control and Tamper status communicated over OSDP serial protocol

PIN 8 (Yellow – n/a) PIN 6 (Blue – RX COM) PIN 4 (Green - RS-485A)

PIN 2 (Red – Reader POS)

PIN 1 (Black – Reader NEG)

PIN 3 (White – RS-485B)

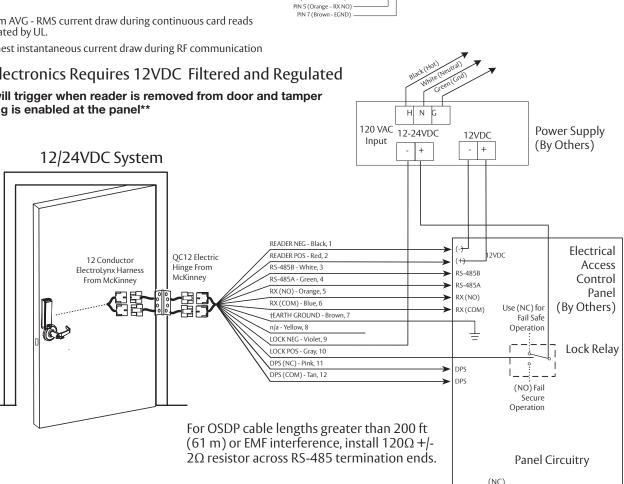
	12V	1	24V	
	Average	Peak	Average	Peak
Reader*	75mA	250mA	n/a	n/a
Actuator	500mA	500mA	250mA	250mA

**Maximum AVG - RMS current draw during continuous card reads Not evaluated by UL.

Peak - highest instantaneous current draw during RF communication

Reader Electronics Requires 12VDC Filtered and Regulated

Tamper will trigger when reader is removed from door and tamper monitoring is enabled at the panel**



**NOTE: Tamper, LED and sounder, are controlled by OEM software

†IMPORTANT: Pin 7 must be tied to earth ground in the access control panel.

Wiring in accordance with the NEC, ANSI/NFPA 70

Fail secure installations are subject to approval of local AHJ

Fail secure installations shall permit use of Listed panic hardware to allow emergancy exit from the protected area.

Failure to follow proper ESD safe grounding procedures could lead to equipment failure.

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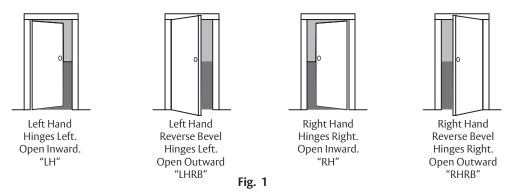
Panel Relay

(NO)

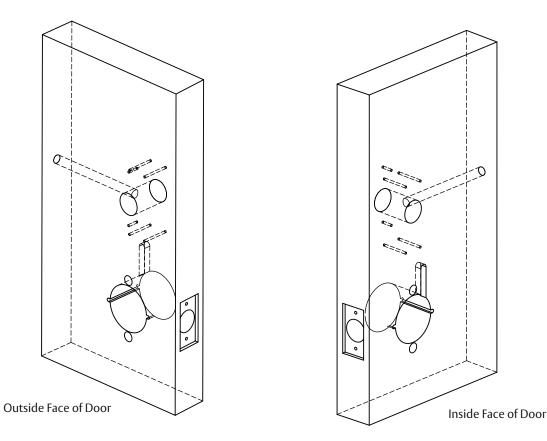


6) Installation Instructions

1. Verify Hand and Bevel of door. Illustrations shown are as viewed from the outside or secure side of opening.

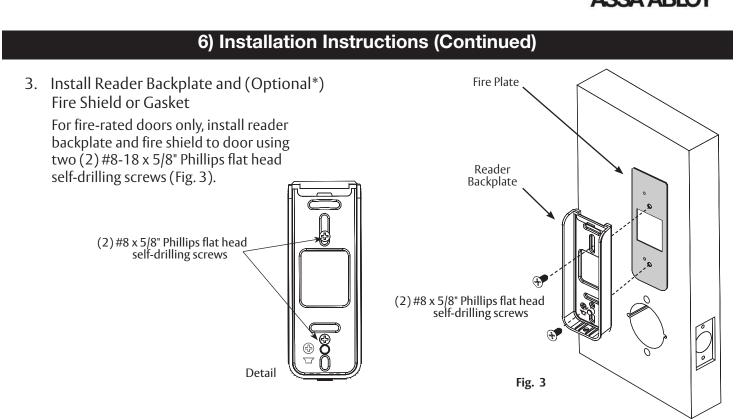


2. Prep door according to supplied door marker (FM650). For door manufacture templates visit www.corbinrusswin.com and reference template # T31253.



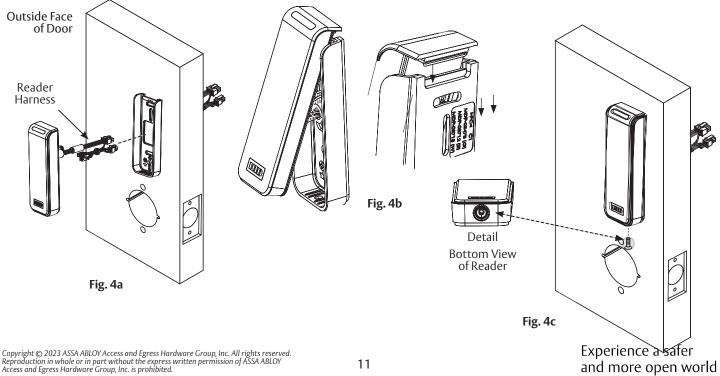






4. Install SN200/210 Reader Assembly

- 1. Feed reader harness through door (Fig. 4a, c)
- 2. Hook the top of the reader on the top of the mounting plate (Fig. 4b).
- 3. Align the bottom of the reader with the bottom of the mounting plate.
- 4. Secure the reader to the mounting plate using the supplied #6-32 x 3/8" T10 security Torx flat head machine screw (Fig. 4b).

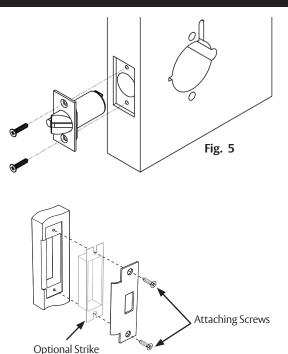




6) Installation Instructions (Continued)

5. **Install Latch Bolt** with beveled bolt facing the strike using two #8 x 3/4" combination screws (Fig. 5):

6. **Install Strike Plate** using two #12 x 1" combination screws (Fig. 6):



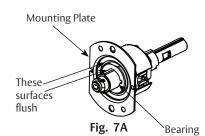
7. Installing Lock -

Lock is preset to door thickness of 1-3/4" thick - see below for other door conditions. Adjustment for different door thickness:

Lock is factory preset for 1-3/4" (44mm) doors unless specified. To adjust lock to door thickness if other than 1-3/4" (44mm):

Box

- A. Remove trim assembly from the lockbody. (See Figure 7).
- B. Rotate mounting plate to adjust for proper door thickness.
- For 2" thick door the inside face of the mounting plate should be flush with the face of the bearing. (See 7A).
- Verify correct position from the markings on the throughbolt stud, or by measuring from inside surface of the mounting plate to the centerline of the retractor (See 7B)
- C. Reassemble the outside trim assembly to the lockbody.



Door Thickness	Dimension A
1-3/4" (44 mm)	7/8" (22 mm)
2" (50 mm)	1" (25 mm)
2-1/4" (57 mm)	1-1/8" (29 mm)

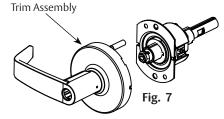
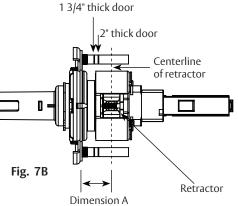


Fig. 6



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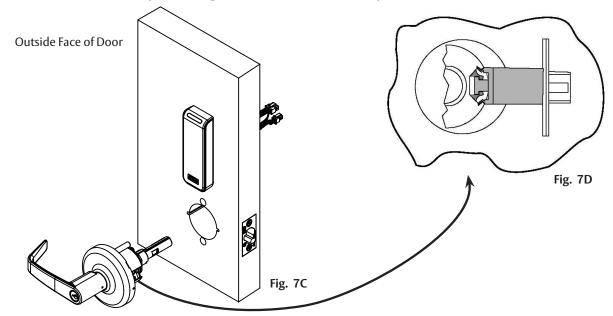
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6) Installation Instructions (Continued)

Feed lock body and harness through 2-1/8" diameter hole from outside of door (Fig. 7C). Be sure latch engages lock body as shown (Fig. 7D).

Important: Door must remain open during installation. Use door stop.

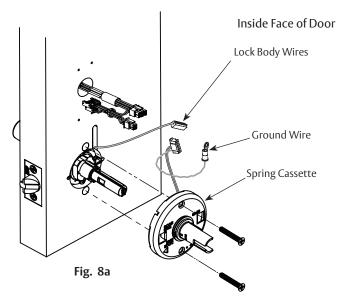


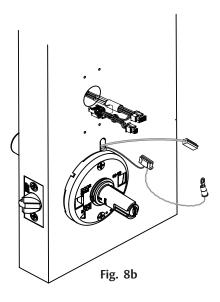
8. Install Inside Spring Cassette:

a. Feed lock body wires and cassette (REX) wires in slot on face of door (Fig. 8a) Note: Be careful to keep wires in slot cut into door.

b. Tighten using two #12-24 screws.

Note: DO NOT PINCH wires when tightening.





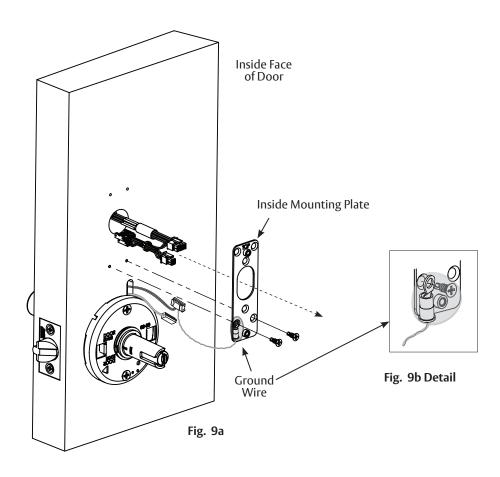
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6) Installation Instructions (Continued)

9. Install Inside Mounting Plate:

- a. Feed reader harness through largest hole of inside mounting plate (Fig. 9a).
- b. Place ground wire eyelet between lower left mounting plate hole and flat head machine screw when securing mounting plate to door (Fig. 9a, b).
- c. Continue to secure plate by fastening second flat head machine screw to lower right hole on mounting plate (Fig. 9b).





6) Installation Instructions (Continued)

10. Connector Attachments:

Do not offset connectors and ensure that they are completely seated.

a. Connect 6-pin connector from lock body to 6-pin connector on reader harness (Fig. 10a, b).

b. Connect 2-pin connector from lock body to 2-pin connector on reader harness (Fig. 10a, b).

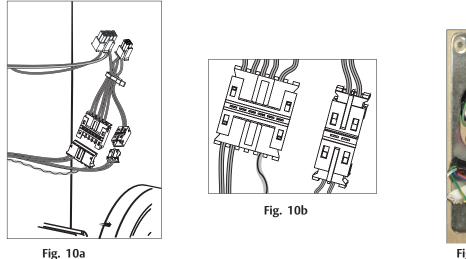


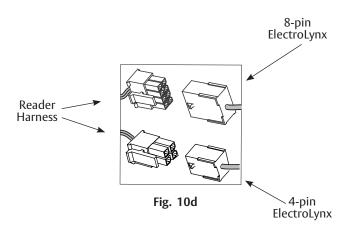


Fig. 10c

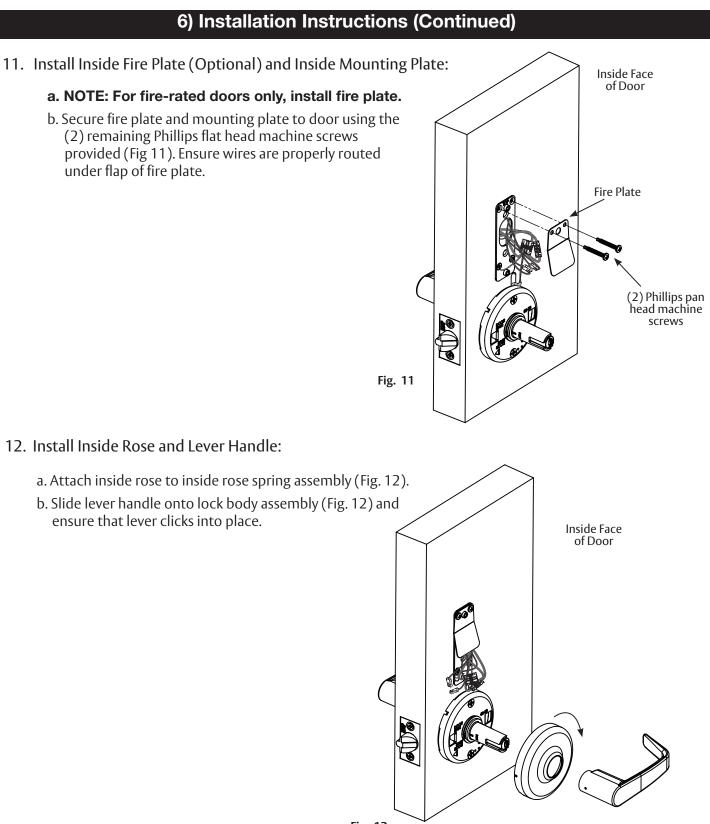
c. Carefully tuck connected harnesses into one-inch hole in door (Fig. 10c).

d. Connect ElectroLynx 4- and 8-pin connectors from the door harness to (black) 4- and 8-pin connectors of the SN200/210 harness (Fig. 10d).

NOTE: Neatly fold excess wires into remaining space to prevent pinching wires when mounting inside escutcheon (Fig. 10c).









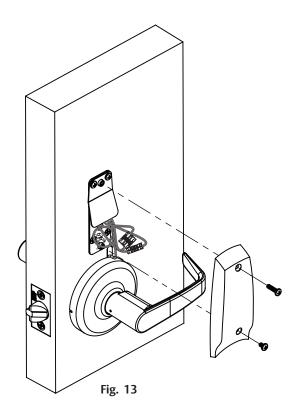
6) Installation Instructions (Continued)

13. Install Inside Escutcheon Assembly:

Note: Neatly fold wires into the remaining space to prevent pinching wires when mounting escutcheon.

a. Tighten the inside escutcheon securely to the mounting plate with the Phillips flat head machine screws provided (Fig. 13).

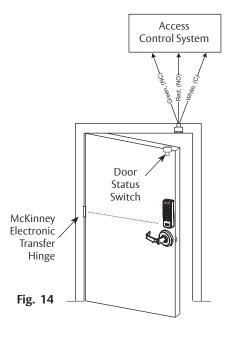
Use the $8-32 \times 5/8$ " for the top of the escutcheon and the $8-32 \times 1/4$ " screw for the bottom of the escutcheon.



14. Install Door Position Switch:

(Part number 708F989 supplied with product)

- a. Drill 1" hole in door for magnet.
- b. Drill 1" hole in frame for switch.
- c. Wire to ElectroLynx frame harness as shown in wiring diagrams on following pages.





7) Operational Check

Before closing door test for cylinder function of lock cylinder and inside lever:

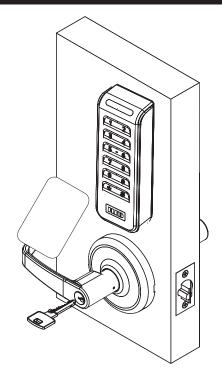
- a. Insert key into cylinder and rotate.
- b. The key will retract the latch. Key should rotate freely.
- c. Inside lever retracts latch.
- d. Close door, ensure latch fully extends into strike and does not bind.

Note: Once electrical wiring has been successfully completed according to proper application, perform the following:

- a. Turn power ON.
- b. Verify LED located on reader is ON (Red <u>or</u> Green) depending on reader configuration*
- *NOTE: Ensure LED operates <u>as configured</u>: LED (if normally RED) goes GREEN when panel issues GREEN_LED signal or issues OSDP command
- c. Present valid credential and verify LED and sounder activity
- d. Verify valid card read at EAC Panel.
- e. Verify system operation functions; i.e., when valid credential is presented to reader the door unlocks.

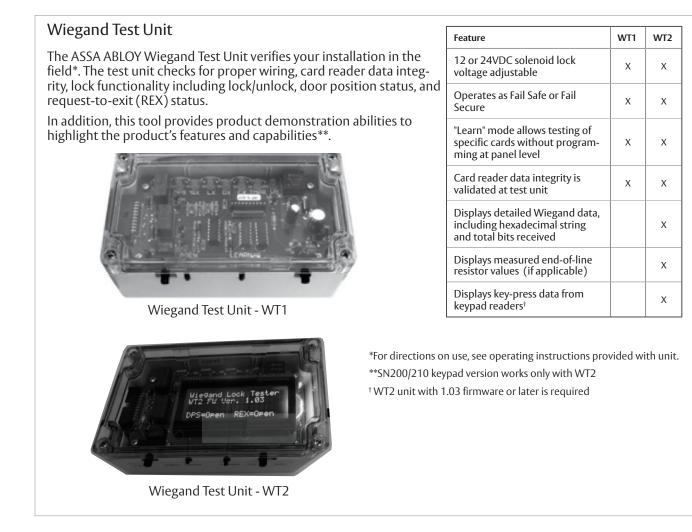
If the lock fails to operate when DC voltage is applied:

- a. Remove power.
- b. Confirm the polarity of the supply (i.e., '+' is positive).
- If the lock is functioning opposite to the desired fail-safe or fail-secure operation:
- a. Remove power and check the "Fail" condition by attempting to rotate the outside lever (e.g. if fail-secure, the outside lever should be rigid with power removed).
- b. If the function is incorrect, remove the lock and verify wiring is correct per Section 5.





7) Operational Check (Continued)



The SNT1 is an adapter harness that connects and converts OSDP lock signaling to work with a Wiegand Test Box (WTB).

If using the OSDP adapter, the WT1 will unlock on credential read or any key press, regardless of what credential is learned (OSDP reader only).

When connected to a Wiegand reader or using OSDP adapter: the WT2 will unlock on credential read and display credential value. Credentials can be learned, as usual. Individual key press will be displayed for any key press, but they cannot be learned.



(SNT1) WTB OSDP adapter wiring harness

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