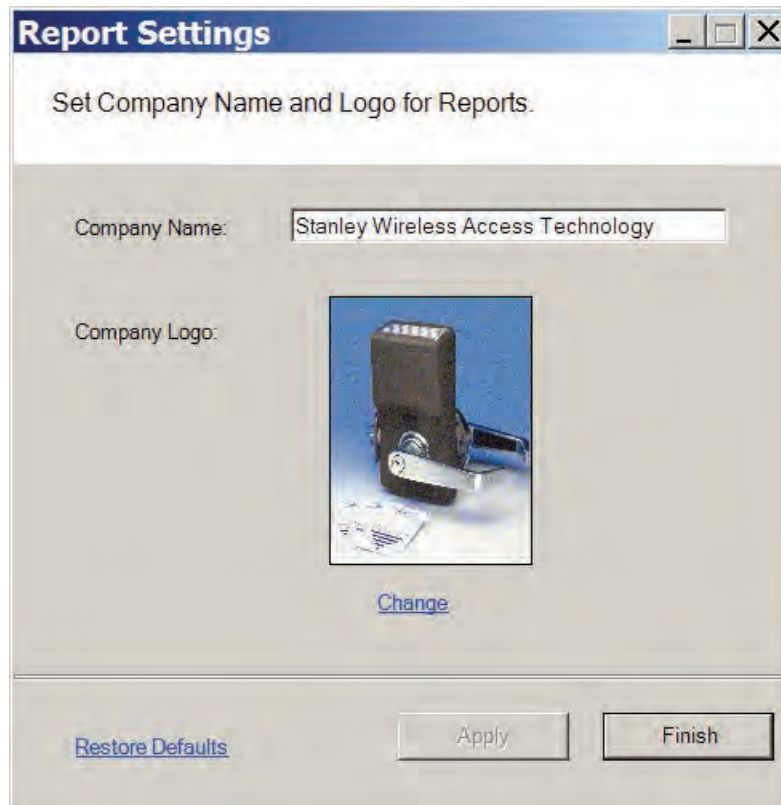


Configure Report Settings

You can include your company or organization name and logo with any report. AMS supports both .bmp and .jpg image formats. Perform the following steps:

- 1 In the Segment box, select the Segment for which you wish to create the setting.
- 2 Select Options>Report Settings. The Set Company Name and Logo for Reports dialog box opens.

Figure 147 Setting up a company name for a report



- 3 In the Company Name field, type in the company name you wish to appear on your reports.
- 4 Under Company logo, click the Change link. Use the Select Logo browser to navigate to the file you wish to include.
- 5 Click Open. The file is now uploaded to the Reports settings.
- 6 Click Finish to save your settings and begin working with Reports.

Generating a Report

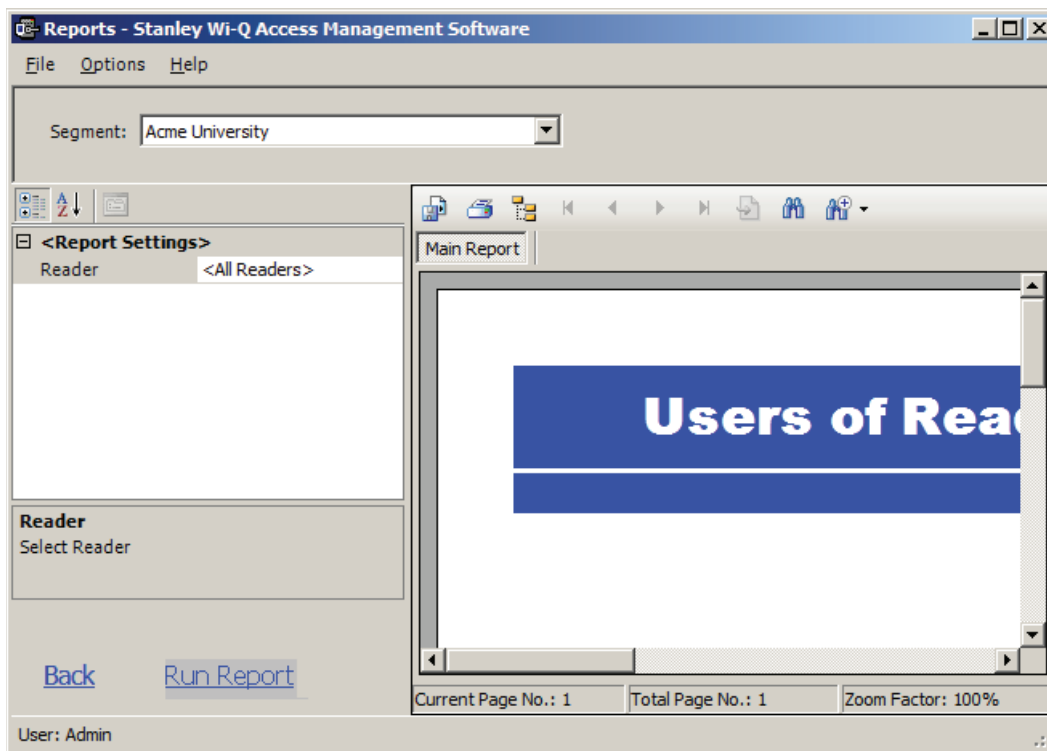
This section presents steps to create some example reports. Once you are familiar with the basic operations, you will be able to create your own reports using the selections available in Reports. First we'll look at a Users of Readers report with All Users selected. Then we'll look at a filtered report using the options under the Report Settings categories.

Note The Reports application won't show much data until you have configured your system added Users and User Groups, and begun collecting transactions. Once this occurs, you can experiment with the options to get the reports that will be most significant for your operation.

To Generate a Report

- 1 In the Reports main screen, under the User Reports box, click on Users of Readers. Reports opens at the basic users of Readers Reports generator.
- 2 In the Segment box, select the Segment you wish to report on.
- 3 Available report settings are listed on the left, and the results are shown on the right. For this particular report, the default will be <All Readers>.

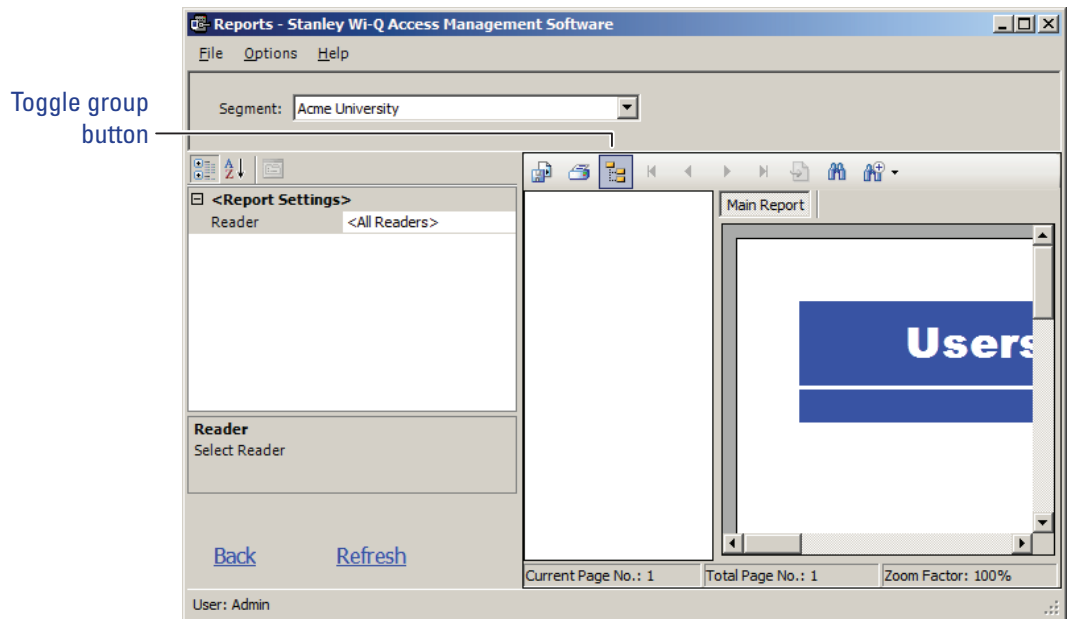
Figure 148 Viewing System Reports



- 4 Use the scroll bars to view the data, use menu icons to export, print, scroll through multi-paged reports, or use the Zoom tools to get a closer look.
- 5 If you have a large number of readers, Click the Toggle Group Tree icon and

highlight a specific reader to jump to its section in the report.

Figure 149 Toggle Group



- 6 Click Run Report (bottom left of screen) to return to the Report Generator screen.

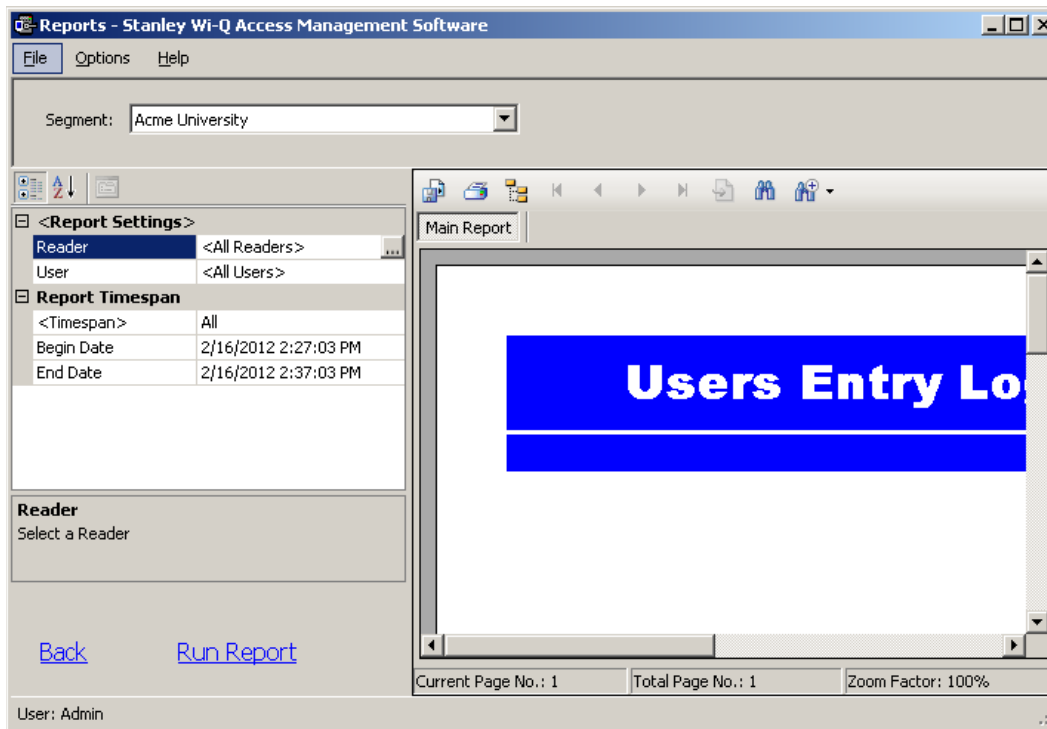
Generating Filtered Reports

The report generator defaults to print all records. For example, when you select the Users of Readers report, report content displays users of all readers in the system. You can filter the report to display the users of only one specific reader, as in the following example.

To create filtered report

- 1 In the Reports main screen, select the Segment you wish to report on.
- 2 Under the User Reports box, click on Users Entry Log. The report opens (Figure 155). In this report set up, more selections are available for this report than for the Users of Readers report, including Reader, User, and Report Timespans. You can use any or all of these selections to filter your report. Each report type will have different selections available depending on the data available for the report. The defaults are always All.

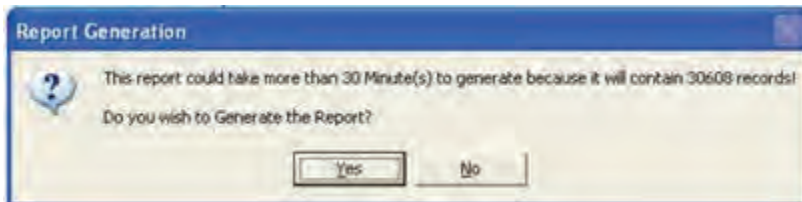
Figure 150 Users of Readers Report



- 3 To select a specific reader for this report, click on the Reader field's ellipsis button. The Select Reader dialog box opens.
- 4 Clear the All Readers box just below the drop-down list box.
- 5 Select the reader to filter from the drop-down list.
- 6 Click Finish. The report results will display data for only the reader you selected.

Generating Larger Reports

The more records you include in your report, the longer the report will take to generate. During report generation, you can use other AMS applications; however, you can generate only one report at a time in the Reports application. If you define a report that will take more than 30 minutes to generate based on the records included, the software will present the following message:



In the example, AMS detected that the defined report contains over 30,000 records and will take more than 30 minutes to generate. If this is acceptable, simply select Yes and the report will be generated. Select No if this is an inconvenient time to generate the report, or review your report definitions to see if you can further filter the report and still get the information you need. When you select Yes, the report begins to generate and AMS displays the Elapsed Time as the report runs.

Printing and Exporting Reports

Once you are satisfied with your report, you can print to a local or networked printer, or export the report in several formats. Your results will be determined by the options you select and how you wish to use the data. For example if you export to a Microsoft Excel file, you may get a different formatting result than if you export to an Adobe Acrobat file or print directly from AMS. However, you may wish to export to an Excel file and use the data in another format. The following example was printed from an Adobe Acrobat .pdf file exported from Reports. It retains all the formatting as displayed in Reports.

Figure 151 Sample report file

Users of Readers			June 22, 2008
Reader: ALL		Facility: Security, Inc.	
Reader (0014f5000121)			
Ross, Carl			
Smith, Daniel			
Furia, Alfredo			
Lopez, Vivian			
Reader (456)			
Ross, Carl			
Furia, Alfredo			
Lopez, Vivian			
Reader (457)			
Smith, Robert			
Reader (458)			
Denver, Fred	Ross, Carl	Smith, Robert	
Carlson, Betty	Furia, Alfredo	Lopez, Vivian	

Wireless Access Management System

Page 1

To print a report

- 1 Create the report using the features described in the previous sections.
- 2 Click the Printer icon in the menu bar.
- 3 Navigate to the printer you wish to use.
- 4 Print using the appropriate actions for the chosen printer.

To export a report

- 1 Create the report using the features described in the previous sections.
- 2 In the menu bar, click the Export Report option.
- 3 In the Export Report dialog box, select a format type from the drop-down list.
The available types are:
 - Crystal Reports (*.rpt)
 - Adobe Acrobat (*.pdf)
 - Microsoft Excel (*.xls)
 - Microsoft Excel Data Only (*.xls)
 - Microsoft Word (*.doc)
 - Rich Text Format (*.rtf)
- 4 Navigate to the location you wish to export to.
- 5 Enter a filename for the file.
- 6 Click Save.

Now you can use the report in any manner you wish, depending on the format exported.

7 Advanced Troubleshooting

This section provides an overview on the Portal Gateway status webpage. You can access the status webpage for a specific Portal Gateway in one of two ways:

- Inside the Portal Configuration Module, select Scan. Locate the desired Portal in the list and click on its hyperlink. See Figure 43 on page 68.
- Type your desired Portal's IP address directly into your internet browser.

Your browser will display the status of your Portal Gateway and associated devices. See Figure 157.

Figure 157 Portal Gateway Status Webpage

Status Page Generated 03/06/2012-16:18:39

1 Last System Boot 03/05/2012-17:02:45

Portal MAC 0014f5201731

2 Radio 1 at channel 20 PAN_id 6401

Radio 4 at channel 15 PAN_id 6402

Associated Devices 15 Maximum allowed 64

	MAC ADDRESS	Stat	Associate Time	Beacon	%	F/W	Rev	R	PG	RSS	RDR	RSS	FLAGS	PEND
01	0014f5404e9e	0000	03/05/12-17:04:10	16:18:26	none	003.000.038	1			-28	-19	-	000300043	- ----- -
02	0014f5403854	0000	03/05/12-11:41:38	16:18:30	none	003.000.038	1			-28	-19	-	000300043	- ----- -
03	0014f54010d9	0000	03/05/12-17:04:19	16:17:07	none	003.000.038	4			-19	-19	-	000300043	- ----- -
04	0014f5401241	0000	03/05/12-17:04:19	16:18:10	none	003.000.038	4			-19	-27	-	000300043	- ----- -
05	0014f5201abc	0000	03/06/12-11:26:31	16:17:56	none	003.000.038	1			-28	-28	-	000300043	- ----- -
06	0014f540127e	0000	03/05/12-17:04:24	16:18:08	none	003.000.038	1			-23	-28	-	000300043	- ----- -
07	0014f5404ee1	0000	03/05/12-17:04:27	16:17:39	none	003.000.038	1			-28	-19	-	000300043	- ----- -
08	0014f52001d0	0000	03/05/12-17:04:38	16:18:15	none	003.000.038	1			-22	-26	-	000300043	- ----- -
09	0014f54012c1	0000	03/05/12-17:04:44	16:18:27	none	003.000.038	4			-49	-26	-	000300043	- ----- -
10	0014f5400003	0000	03/05/12-17:04:48	16:17:40	none	003.000.038	1			-27	-38	-	000300043	- ----- -
11	0014f5400002	0000	03/05/12-17:04:53	16:18:32	none	003.000.038	1			-28	-28	-	000300043	- ----- S
12	0014f54010ca	0002	03/06/12-11:28:04	16:16:46	45	003.000.038	1			-28	-19	-	000300043	U ----- -
13	0014f520173d	0000	03/05/12-18:11:32	16:18:29	none	003.000.038	1			-19	-36	-	000300043	- ----- -
14	0014f5401301	0000	03/05/12-17:05:09	16:17:31	none	003.000.038	1			-28	-19	-	000300043	- ----- -
15	0014f540126d	0000	03/05/12-17:05:26	16:18:31	none	003.000.038	1			-29	-25	-	000300043	- ----- -

The Portal Gateway Status webpage provides the following information:

- 1 **Last System Boot**
Last time Portal Gateway was reset or rebooted.
- 2 **Radio and Channel**
Shows the channel associated with each radio in the Portal.
- 3 **Associated Devices List**
Shows which devices are associated with the Portal.
- 4 **MAC Address**
Column shows the MAC Address of each associated device.
- 5 **Associate Time**
Column shows the time that the Controller last associated with the Portal.
- 6 **Beacon**
Column shows the time of the last Controller beacon.
- 7 **%**
Column shows progress percentage of pending operations.

8 F/W Rev

Column shows the firmware version number of associated Controller.

9 R

Column shows which radio the Controller is connecting to in the Portal Gateway. Radio 1 is on the right side of the Portal. Radio 4 is on the left side of the Portal.

10 PG_RSS

Column shows the signal strength of the Controller as received at the Portal. This signal strength ranges from -18 (highest) to -91 (lowest).

11 RDR_RSS

Column shows the signal strength of the Portal as received at the Controller. This signal strength ranges from -18 (highest) to -91 (lowest).

12 FLAGS

Column shows the current operational status of the associated device.

13 PEND

Column shows the abbreviation of the message currently in operation.

Status Flags in the FLAGS Column

The following is a list of the bits in the FLAGS column and their corresponding Portal Gateway status flags and definitions (Figure 157, item 12).

Note The typical Wi-Q and Omnilock device status code is 00030043. This is the example used in the chart below.

Bit		Portal Gateway Status Flag	Definition	
Right END	3 Bit 0	CONTROLLER_IS_ASSOCIATED	Set when the Controller is first associated with the Portal.	
	Bit 1	CONTROLLER_IS_VALID	Set during association, after the Portal receives a beacon from the Controller.	
	Bit 2	CONTROLLER_CONFIG_REQUIRED	Set during association, cleared by Portal Communication Service after Controller configuration.	
	Bit 3	CONTROLLER_ASSOC_PENDING_LIF	Set during association to indicate that Portal requires LIF (Lock Information Frame) data.	
	4 Bit 4	CONTROLLER_BEGIN_TRANSMISSION	Set when Portal first transmits data to the Controller.	
	Bit 5	CONTROLLER_DEEP_RESET_PENDING	Portal must disassociate Controller when it receives the next beacon.	
	Bit 6	CONTROLLER_VALID_INTERVALS	Set when Controller interval assignment has been received from the PC Communication Service.	
	Bit 7	<i>NOT USED</i>		
0	Bit 8	CONTROLLER_RETRY_LIMIT_EXCEEDED	Set when the retry limit on any command has been hit; used to limit downloads to firmware only.	
	Bit 9	<i>NOT USED</i>		
	Bit 10	<i>NOT USED</i>		
	Bit 11	<i>NOT USED</i>		
	0 Bit 12	<i>NOT USED</i>		
	Bit 13	CONTROLLER_PREFERRED_PG_ENABLED	Set when Controller is locked to the Portal.	
	Bit 14	CONTROLLER_FIRMWARE_PENDING_DN	Set when the firmware commit has been sent to indicate that the disassociation is pending.	
	Bit 15	CONTROLLER_FIRMWARE_PENDING	Set when firmware update is scheduled for the Controller, cleared when firmware commit is sent.	
	3	Bit 16	CONTROLLER_REPORT_TIME_UPDATED	Set during association and when report time is updated
		Bit 17	CONTROLLER_LIF_IS_VALID	Set when a LIF beacon is received
Left END	Bit 18-31	<i>NOT USED</i>		

Update Flags in the PEND Column

Figure 158 is a section of the Associated Devices listed in Figure 157. Notice that items 11 and 12 have letters U and S in the PEND column. These letters are update flags, and they stand for controller information that is being updated. The placement of the update flags within the column denotes update status.

Figure 158 PEND Column Codes

```
Associated Devices 15 Maximum allowed 64
MAC ADDRESS Stat Associate Time Beacon % F/W Rev R PG_RSS RDR_RSS - FLAGS PEND
01 0014f5404e9e 0000 03/05/12-17:04:10 16:18:26 none 003.000.038 1 -28 -19 - 000300043 -|-----|

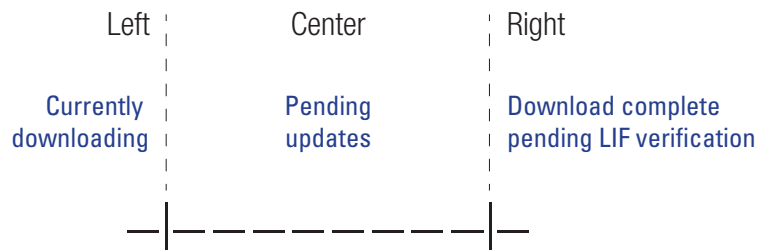
11 0014f5400002 0000 03/05/12-17:04:53 16:18:32 none 003.000.038 1 -28 -28 - 000300043 -|-----|S
12 0014f54010ca 0002 03/06/12-11:28:04 16:16:46 45 003.000.038 1 -28 -19 - 000300043 U|S-----|
13 0014f520173d 0000 03/05/12-18:11:32 16:18:29 none 003.000.038 1 -19 -36 - 000300043 -|-----|
14 0014f5401301 0000 03/05/12-17:05:09 16:17:31 none 003.000.038 1 -28 -19 - 000300043 -|-----|
15 0014f540126d 0000 03/05/12-17:05:26 16:18:31 none 003.000.038 1 -29 -25 - 000300043 -|-----|
```

The following is a list of the Update Flags that may be visible in PEND column.

S	Segment (PIN length, DST times)
C	Card Formats
L	Controller configuration (beacon time, channels, transaction masks, etc.)
U	Users
T	Timezone Intervals
I	WAC I/O
F	Firmware
P	Ping (missing LIF data after association or update)

Figure 159 shows the significance of update flag placement between the dividing lines in each entry of the PEND column.

Figure 159 Update Flag Placement in PEND Column



Item 11 in Figure 158 shows that the Controller's Segment download is complete pending LIF verification.

Item 12 in Figure 158 shows that the Controller's Users are currently downloading, with 45% complete, and the Controller's segment update is pending.

Note Only one update flag will be positioned at the left or right, but it is possible for more than one flag at a time to be in the center of an entry in the PEND column.

A Glossary

10Base-T	The most common Ethernet wiring standard.
access level	An access control relationship made between a controller or controllers and a time zone or time zones. An access level is assigned to a badge ID for the purpose of granting access through a controller or controllers during a specified time.
access panel	A circuit board with on-board memory that is responsible for making most of the decisions in an access control system.
activation/deactivation date	The date that a credential becomes active or expires.
antipassback	A configuration limiting the ability of consecutive uses for a credential at a reader. Usually, configured with readers installed on both the secure and non-secure side of an opening. Once a credential has been used in a reader to gain access on one side of the opening, the credential cannot be used in the same reader until the credential is used to gain access to a reader from

	the opposite side of the opening.
APB exempt	Antipassback exempt. The cardholder with this privilege is exempt from antipassback rules.
badge	The credential or token that carries a cardholder's data.
badge ID	Part of the access control information that is encoded to a token. This information, usually numerical, is unique to a particular credential holder.
card format	The way that data is arranged and ordered on the card.
cardholder	An individual who is issued a particular credential.
chassis type	The designation that defines the physical lock type. Three types exist: cylindrical, mortise, or exit hardware. See those terms for more information.
common door	A configuration setting that allows for the allocation of duplicate badge ID ranges in separate offline locks.
communication port	The connector on the bottom of a Lock that allows the lock to be connected to a reader.
communication server	The server application designed to provide network services to access panels, controllers, PCs and PDAs.
credential	A physical token, usually a card or fob, encoded with access control information.
cylindrical	Lock chassis that installs into a circular bore in the door.
deadbolt override	The ability for an authorized credential to retract both the spring latch and the deadbolt when the deadbolt is engaged
directional antenna	An antenna type optimized to focus signal from point-to-point over longer distances and through obstacles.

dual access	The requirement for the presentation of two separate, authorized credentials in order to gain entry through an access controlled opening.
ethernet	The most common networking standard in the world, formally known as IEEE 802.3.
exit hardware	Lock chassis type that supports exit hardware trim lock.
extended unlock	The extra period of time the lock will unlock when an authorized credential with extended unlock privileges is presented.
guest	A feature that enables you to add and delete cardholders to and from a lock without having to go out to a lock to reprogram it.
Host	The computer on which Wi-Q AMS software is installed and set up to manage Portal Gateways and readers on the network.
IP address	The numeric address (like 192.168.1.1) that identifies each device in a TCP/IP network.
input	A hardware connection point used for status reporting of a particular sensor.
intelligent system controller (ISC)	See access panel.
I/O device	A device, such as an alarm or parking gate that can be configured to operate on the network using a Wireless Access Controller.
issue code	Part of the access control information contained on a credential that allows reuse of the badge ID when a credential is lost, damaged, or stolen. Usually one or two digits in length, this code increments forward when creating a new credential. Access is granted only when the badge ID and the issue code match the current database information.
MAC address	The Media Access Control number (MAC). A unique, 12-digit number assigned by the

	manufacturer of a network device.
mortise	A lock chassis that installs into a mortised cavity in the edge of a door.
omni-directional antenna	An antenna type optimized to provide signal coverage in all directions.
packet	A discrete chunk of data, being transferred on a TCP/IP or other addressable network.
passage mode	The ability to double present an authorized credential within the strike time to unlock an opening. The lock is returned to its original status by a second, double presentation of an authorized credential.
portal gateway	The Portal Gateway is a wireless device connected to the Host computer through a secure connection to transfer data signals from Wireless Controller locks to and from the Host computer.
request to exit	A sensor usually installed on the non-secure side of the door that will mask the door position switch upon activation.
segment code	Part of the access control information that can be encoded to a credential. This information, usually numerical, is unique to a group of credentials. Usually this feature is used to authenticate a credential to a particular organization.
sign-on key	Number generated within AMS to establish the connection between the readers and the Portals, and ultimately to a segment in the software.
site survey kit	The Wi-Q Technology Site Survey Kit tool used to determine optimum Portal Gateway location to verify signal strength before permanently installing the hardware.
time interval	A specific range of time, which corresponds to a particular day or days of the week. A time zone can be comprised of several, individual intervals.

time zone	A defined range of time for assignment to various access control activities. A time zone may be applied to a reader or readers when creating an access level, to a reader to change the mode of operation, to a relay to activate and deactivate, to an input to mask and unmask, and a host of other operations.
unlock duration	The time that the lock momentarily unlocks.
use limit	A configuration limiting a credential to a defined number of uses.
Web Interface	The software program that allows setup and communication between the Portal Gateway and the Host Computer.
Wi-Q Technology	Provides efficient, online access control decisions at the door.
Wireless Access Controller	Wireless Access Controller provides additional capability to connect stand-alone controllers and locks.

wireless reader lock

The wireless reader lock controls user access at the door and grants user requests according to how they are configured in the software.

B Lock installation



Installation Instructions for Wi-Q™ Technology 9KQ Cylindrical Locks

Planning the installation

Contents

These installation instructions describe how to install your 93KQ Cylindrical Lock. Topics covered include:

Planning the installation..... 1
Preparing the door and door jamb..... 2
Installing the lock..... 7
Completing the installation..... 13

Patents

Products covered by one or more of the following patents:
 5,590,555 5,794,472 5,083,122 6,720,861

Site survey

Use the following survey to record information about the installation site. You need this information to determine how to prepare the door for the lock.

Door information

Door handing and bevel:

- Left hand (LH)
- Left hand, reverse bevel (LHRB)
- Right hand (RH)
- Right hand, reverse bevel (RHRB)

Door thickness: _____ inches (1 3/4" to 2 1/4")

Environment information

Ambient temperature:

- Is within specifications. See the tables below.

This product meets the following Locked Door Outdoor test requirements for ANSI/BHMA 156.25:

Side of door	Range
Outside	-31°F to +151°F (-35°C to +66°C)

This product meets the following Full Indoor test requirements for ANSI/BHMA 156.25:

Side of door	Range
Inside and outside	+32°F to +120°F (0°C to +49°C)

Components checklist

Use the following checklist to make sure that you have the items necessary to install your Electronic Wireless Cylindrical Lock.

Components provided in the box:

- Chassis with outside lever and outside rose liner assembly
- Top and bottom inside covers
- Fire plate
- Battery holder with batteries
- Inside rose liner
- Outside escutcheon assembly
- Inside lever
- Throw member package
- Latch
- Hub washers
- Trim hole insert package
- Plastic bushing package
- Escutcheon screw package
- Door status switch assembly
- Strike package
- Bar code ID sticker (for your records)
- Installation template and instructions

Other components:

- Core and control key
- Temporary operator card

Special tools checklist

Use the following checklist to make sure that you have the special tools necessary to install your Electronic Wireless Cylindrical Lock.

- KD303 Drill jig
- T20 TORX® bit driver
- KD325 Strike plate locating pin
- KD315 Faceplate marking chisel

Preparing the door and door jamb

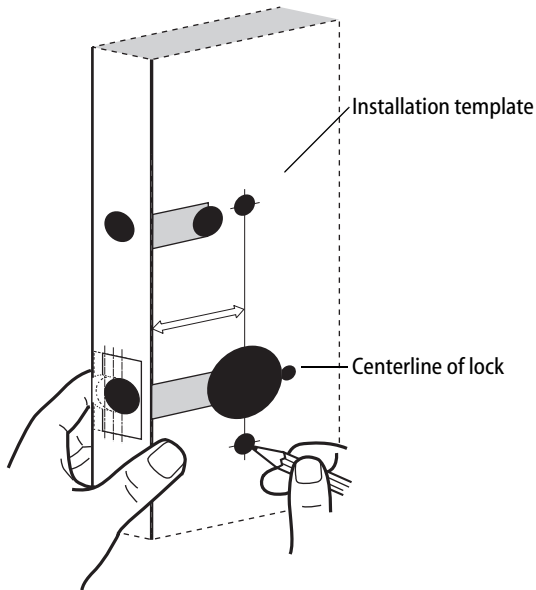


Figure 1 Positioning the template

1 Position template and mark drill points

Note: If the door is a fabricated hollow metal door, determine whether it is properly reinforced to support the lock. If door reinforcement is not adequate, consult the door manufacturer for information on proper reinforcement. For dimensions for preparing metal doors, see the Q01 and G02 Templates—Installation Specifications for 93KQ Cylindrical Locks.

Note: If the door is a LH or RH door, mark the inside of the door. If the door is a LHRB or RHRB door, mark the outside of the door.

For uncut doors and frames

- 1 Measure and mark the horizontal centerline of the lever (the centerline for the chassis hole) on the door and door jamb. Mark the vertical centerline of the door edge.

Note: The recommended height from the floor to the centerline of the crossbore or chassis hole is 38".

- 2 Fold the *Q05 Template—Installation Template for 93KQ Cylindrical Locks* on the dashed line and carefully place it in position on the high side of the door bevel.

Note: For steel frame applications, align the template's horizontal centerline for the latch with the horizontal centerline of the frame's strike preparation.

- 3 Tape the template to the door.
- 4 Center punch the necessary drill points. Refer to the instructions on the template.

For doors with standard cylindrical preparation

- 1 Fold the *Q05 Template—Installation Template for 93KQ Cylindrical Locks* on the dashed line. Looking through the hole from the opposite side of the door, align the template so that you see the template outline of the 2 1/8" diameter chassis hole.
- 2 Tape the template to the door.
- 3 Center punch the necessary drill points. Refer to the instructions on the template.

Preparing the door and door jamb

2 Drill holes and mortise for latch face

- 1 Drill the holes listed below:
 - upper and lower trim holes
 - ◆ 5/8" diameter
 - ◆ through door
 - harness hole
 - ◆ 3/4" diameter
 - ◆ through door
 - motor wire hole
 - ◆ 7/16" diameter
 - ◆ through door
 - ◆ before drilling chassis hole
 - chassis hole
 - ◆ 2 1/8" diameter
 - ◆ through door
 - ◆ after drilling motor wire hole
 - latch hole
 - ◆ 1" diameter
 - ◆ meets chassis hole
 - door status switch hole
 - ◆ 1" diameter
 - ◆ meets harness hole
 - anti-rotational hole, see "Use drill jig to drill through-bolt holes" on page 5.
 - ◆ 5/16" diameter
 - ◆ through door

Note 1: To locate the center of a hole on the opposite side of the door, drill a pilot hole completely through the door.

Note 2: For holes through the door, it is best to drill halfway from each side of the door to prevent the door from splintering.

- 2 Mortise the edge of the door to fit the latch face.
- 3 Drill the holes for the screws used to install the latch.

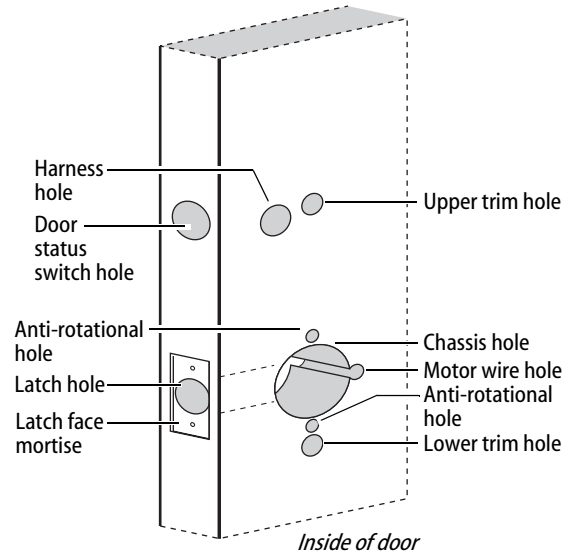


Figure 2 Drilling holes and mortising for the latch face

Preparing the door and door jamb

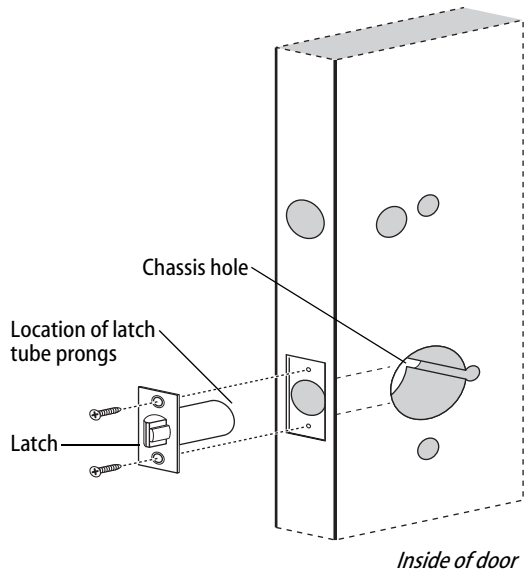


Figure 3 Installing the latch in the door

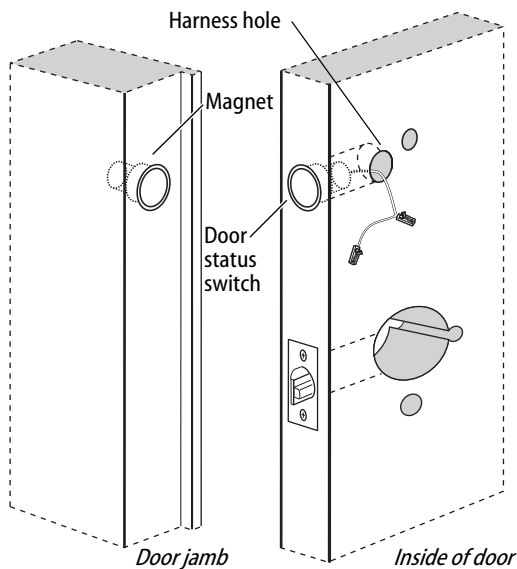


Figure 4 Installing the door status switch and magnet

3 Install latch

- 1 Install the latch in the door.
Note: The latch tube prongs should be centered and should project into the chassis hole.
- 2 Check that the door swings freely.

4 Install door status switch and magnet

- 1 On the door jamb, mark the drill point for the 1" diameter magnet hole. This hole should be directly opposite the door status switch reader harness hole when the door is closed.
- 2 Drill a 1" diameter hole for the magnet, at least 1 3/4" deep.
- 3 Insert the magnet in the hole.
- 4 Insert the door status switch assembly into the door status switch hole in the edge of the door, feeding the connectors out the harness hole to the inside of the door, as shown in Figure 4.

Preparing the door and door jamb

5 Use drill jig to drill through-bolt holes

- 1 Press the drill jig (KD303) onto the door, engaging it with the latch tube prongs (see the close-up in Figure 5). Make sure the front edge of the jig is parallel with the door edge.
- 2 Drill the through-bolt holes (5/16" diameter) halfway into the door.
- 3 Turn over the drill jig and repeat steps 1 and 2 from the opposite side of the door.

Note: Replace the drill jig after 10 door preparations.

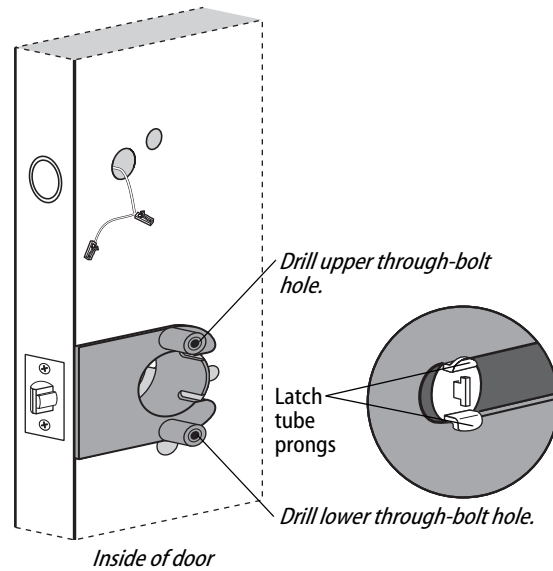


Figure 5 Installing the drill jig and drilling the through-bolt holes

Preparing the door and door jamb

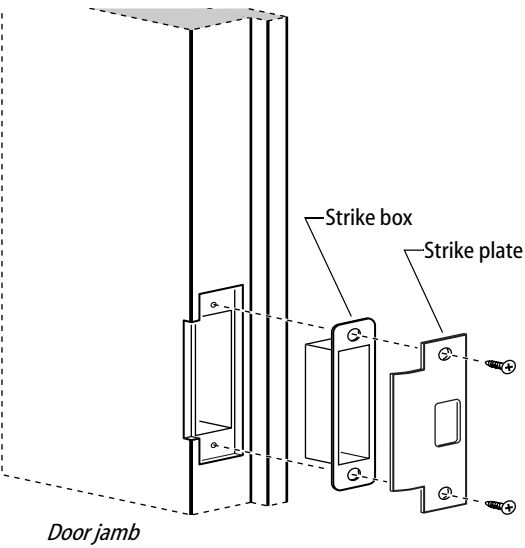


Figure 6a Installing the strike box and strike plate

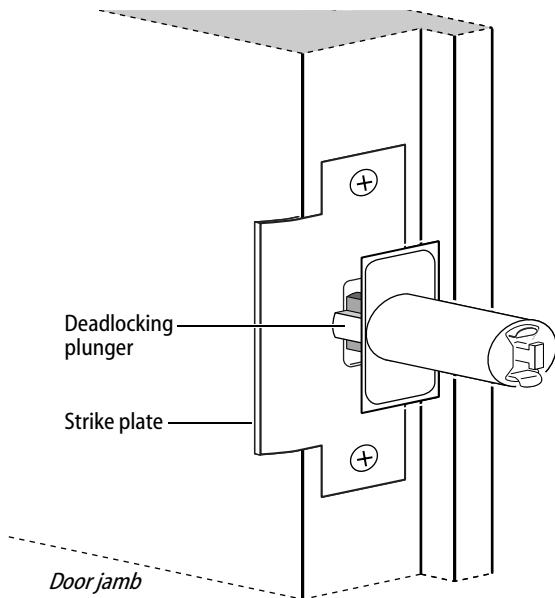


Figure 6b Aligning the deadlocking plunger with the strike plate

6 Install strike box and strike plate

- 1 In alignment with the center of the latchbolt, mortise the door jamb to fit the strike box and strike plate.
- 2 Drill the holes for the screws used to install the strike box and strike plate.
- 3 Insert the strike box and secure the strike with the two screws provided.
- 4 Check the position of the deadlocking plunger against the strike plate.

Caution: The deadlocking plunger of the latchbolt must make contact with the strike plate, as shown in Figure 6b. The plunger deadlocks the latchbolt and helps prevent someone from forcing the latch open when the door is closed.

Installing the lock

7 Remove outside lever or knob

- 1 Insert the control key into the core and rotate the key 15 degrees to the right.
- 2 Insert a flat blade screwdriver into the figure-8 core hole and into the lever.
- 3 Press the screwdriver blade in the direction of the arrow in Figure 7.

Note: You cannot remove the lever if the screwdriver blade is inserted too far past the keeper.

- 4 Slide the lever or knob off of the sleeve.

Caution: Be careful that you do not disconnect the lever keeper spring.

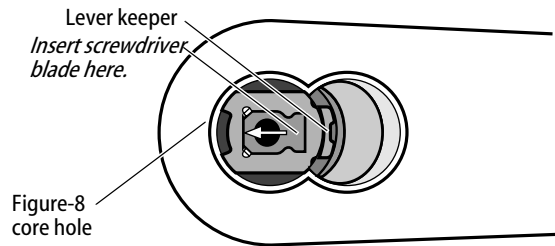


Figure 7 Removing the outside lever

8 Adjust for door thickness

- 1 Determine the door's thickness.
- 2 Pull the rose locking pin and rotate the outside rose liner until the proper groove on the through-bolt stud lines up with the hub face.

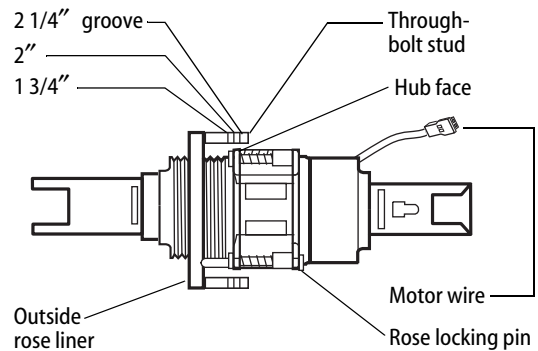


Figure 8 Adjusting the rose liner for the door thickness

Installing the lock

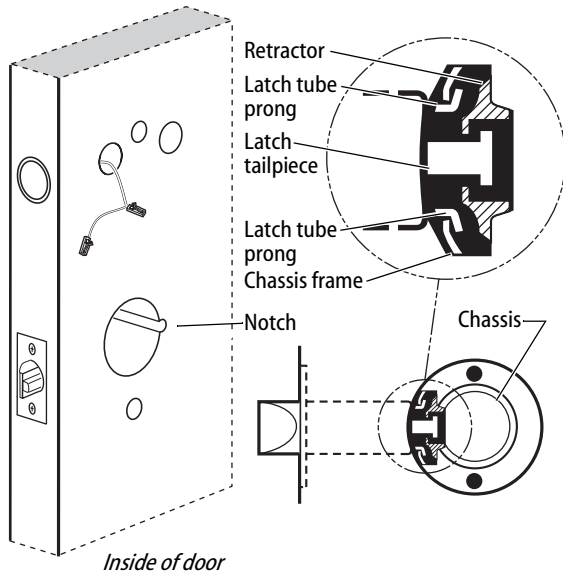


Figure 9 Installing the lock chassis and engaging the retractor in the latch

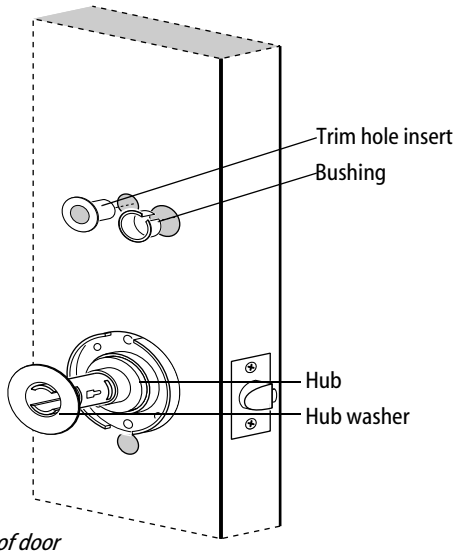


Figure 10 Installing the outside trim hole insert, bushing, and hub washer

9 Install lock chassis and engage retractor in latch

From the outside of the door, insert the lock chassis into the 2 1/8" chassis hole, routing the motor wire through the notch.

Caution: Make sure that the latch tube prongs engage the chassis frame and that the latch tailpiece engages the retractor.

10 Install the trim hole insert, bushing, and hub washer on outside of door

- 1 On the outside of the door, insert the trim hole insert into the upper trim hole, as shown in Figure 10.
- 2 Insert the bushing into the harness hole.
- 3 Slide a hub washer over the chassis sleeve so it rests on the hub.

Installing the lock

11 Install fire plate

Position the fire plate on the inside of the door so that the chassis fits through the square opening in the fire plate, as shown in Figure 11.

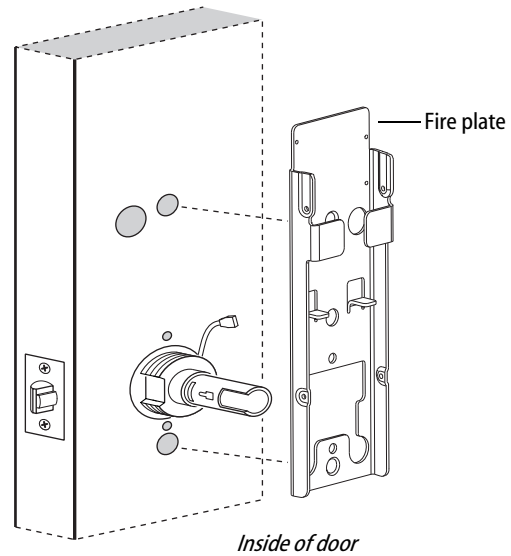


Figure 11 Installing the fire plate

12 Install through-bolts and inside rose liner

- 1 Place the inside rose liner on the chassis, aligning the holes in the rose liner with the holes prepared in the door, as shown in Figure 12.

Caution: Make sure that the motor wire is pulled toward the top of the fire plate and avoid routing it over any surface that could damage the sleeving or wire insulation.

- 2 Install the through-bolts through the rose liner and door in the top and bottom holes.

Caution: Make sure that there is clearance for the motor wire between the rose liner and the door.

- 3 Tighten the rose liner to the door and fire plate with the through-bolts.
- 4 Install the hub washer over the rose liner.

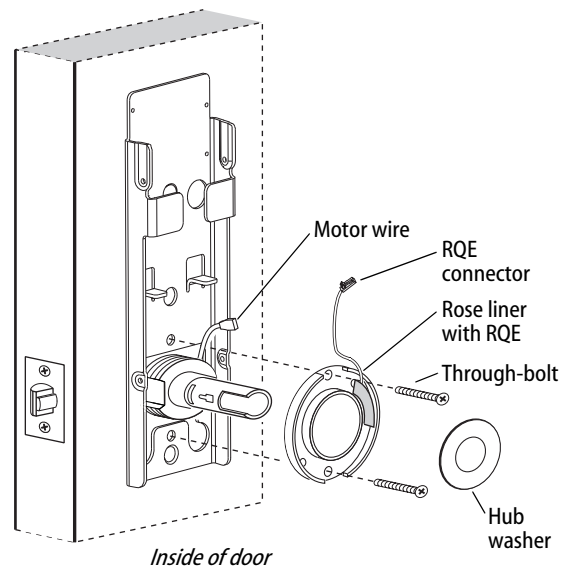


Figure 12 Installing the through-bolts and rose liner (9K shown)

Installing the lock

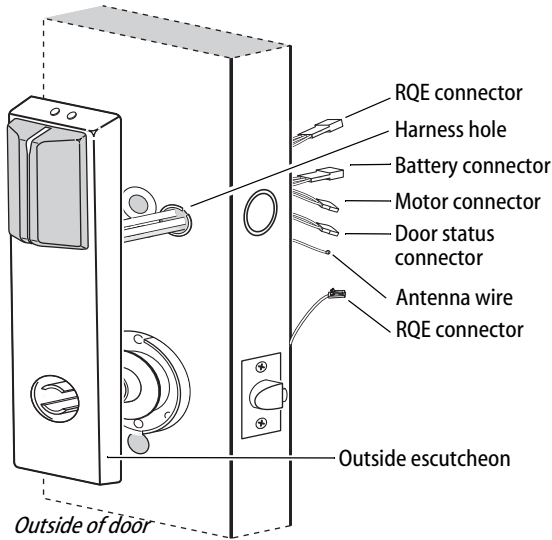


Figure 13 Feeding the wire harness connectors through the harness hole

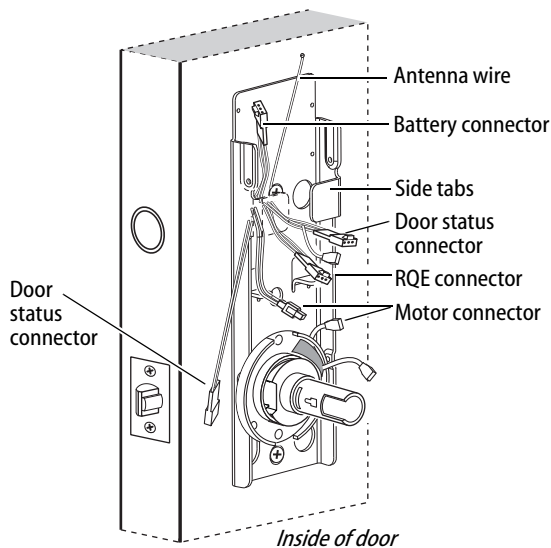


Figure 14 Routing the wires on the fire plate

13 Route wire harness and position outside escutcheon

- 1 From the outside of the door, feed the motor connector, battery connector, door status switch, and antenna wire, through the harness hole.

Caution: When routing the connectors, make sure the wire harness is not routed across any sharp edges or over any surface that could damage its sleeving or wire insulation.

- 2 On the inside of the door, insert the two countersunk mounting screws into the holes at the top and bottom of the fire plate.
- 3 Tighten the mounting screws until the fire plate is securely mounted to the door.

14 Route wires on fire plate

- 1 Route the motor connector wire, RQE connector, and door status connector underneath the side tabs as shown in Figure 14.
- 2 Route the battery connector and antenna wire above the side tabs. See Figure 15 for additional detail.

Installing the lock

15 Connect motor wires, RQE, and door status switch

- From the inside of the door, make the following connections:

- ◆ Motor
- ◆ RQE
- ◆ Door status switch

Wire connection	Color	No. of wires	No. of pins
Motor	Yellow-Gray	2	2
RQE	Orange-Brown	2	3
Door status	White	2	2

- Insert the plastic wire tie through the mounting clip and secure the wires as shown in Figure 15. See Figure 15 for additional detail.

Caution: When making the motor connection, make sure:

- ◆ there are no loose wire connections where the wires are inserted into the connectors
- ◆ the connectors are firmly mated.

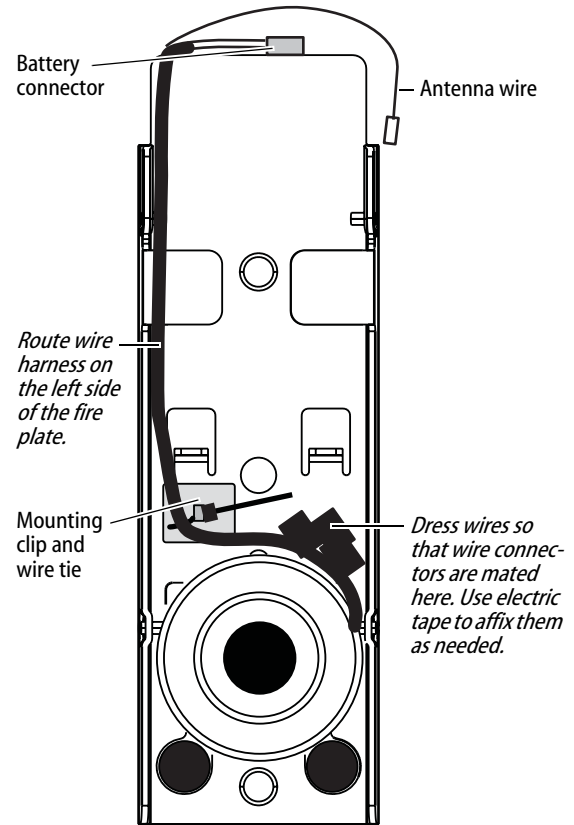


Figure 15 Routing the wires (view of the inside escutcheon)

Installing the lock

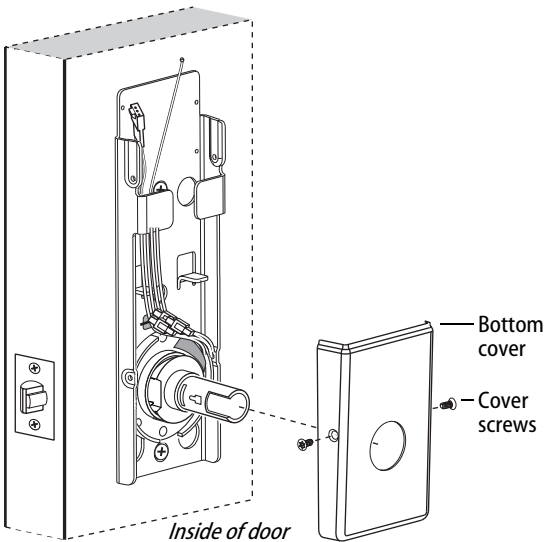


Figure 16 Installing the bottom cover

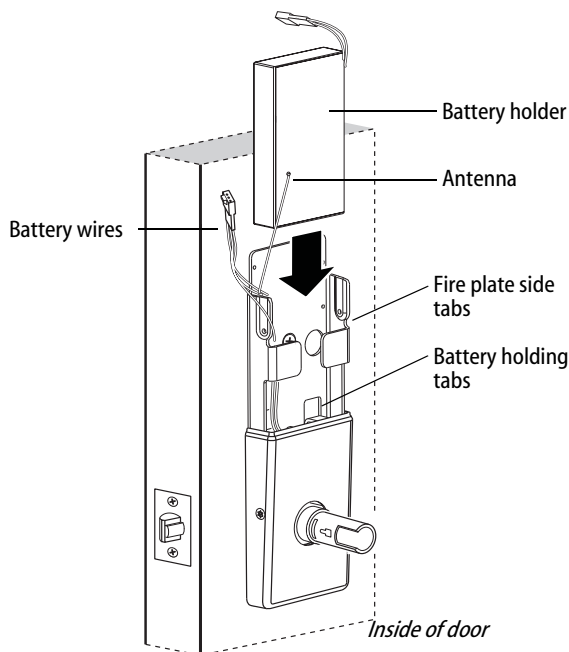


Figure 17 Installing the battery holder, eight-cell

16 Install bottom cover (inside escutcheon)

- 1 **Making sure that the cover does not pinch the wires**, guide the bottom cover over the chassis onto the fire plate.
- 2 Use two cover screws to secure the cover to the side of the fire plate, as shown in Figure 16.

Note: Phillips Type 2 and T20 Torx options are available for the cover mounting screws.

Caution: Dress all wires away from possible pinch points before putting the bottom cover in place.

17 Install battery holder

- 1 Position the battery wires against the fire plate side wall, as shown in Figure 17.
- 2 Slide the battery holder behind the fire plate side tabs until it rests on the bent battery holding tabs.

Caution: When routing the battery wires, make sure the wires are not routed across any sharp edges or over any surface that could damage their sleeving or wire insulation.

- 3 Connect the battery holder to the battery connector on the wire harness.

Caution: When connecting the battery holder, make sure:

- ◆ there are no loose wire connections where the wires are inserted into the connectors.
- ◆ the connectors are firmly mated.

Completing the installation

18 Install inside and outside levers

Note: To use a core and throw member from a manufacturer other than BEST with a Electronic Stand-alone Lock, see the Installation Instructions for 9K Non-interchangeable Cores & Throw Members (T56093) and skip task 19.

- With the handle pointing toward the door hinges, position a lever on the outside sleeve and push firmly on the lever until it is seated. Repeat, placing the other lever on the inside sleeve.

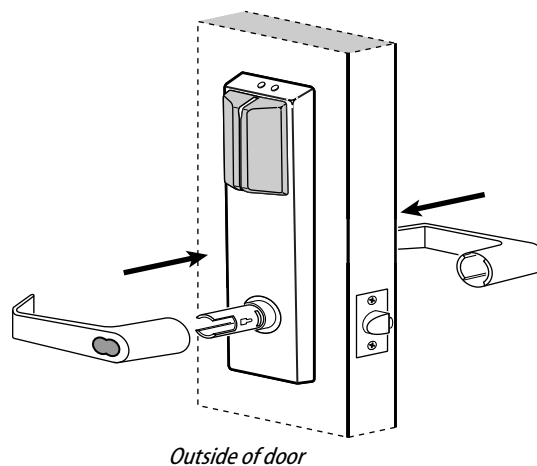


Figure 18 Installing the levers

19 Install core and throw member

- 1 Install the blocking plate onto the throw member.

Caution: You must use the blocking plate to prevent unauthorized access.

For 6-pin core users only: Install the plastic spacer (not shown, supplied with permanent cores) instead of the blocking plate, on the throw member.

- 2 Insert the control key into the core and rotate the key 15 degrees to the right.
- 3 Insert the throw member into the core.
- 4 Insert the core and throw member into the lever with the control key.
- 5 Rotate the control key 15 degrees to the left and withdraw the key.

Caution: The control key can be used to remove cores and to access doors. Provide adequate security for the control key.

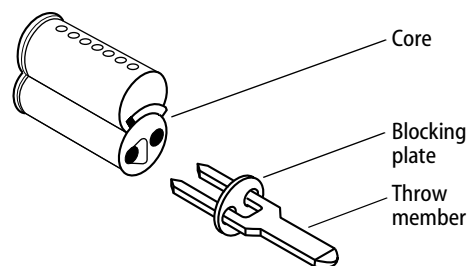


Figure 19a Installing the blocking plate and throw member

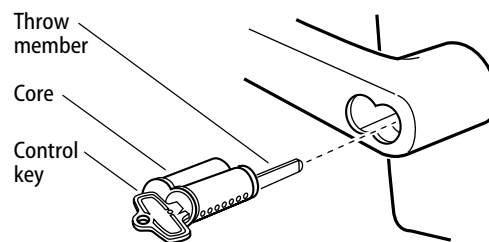


Figure 19b Installing the core

Completing the installation

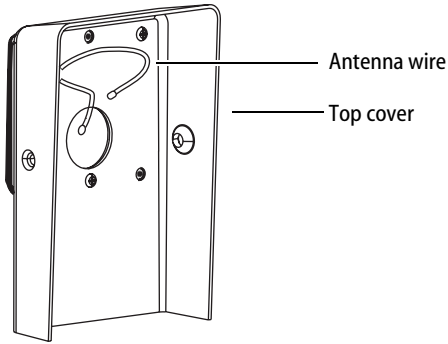


Figure 20a Inside view of top cover

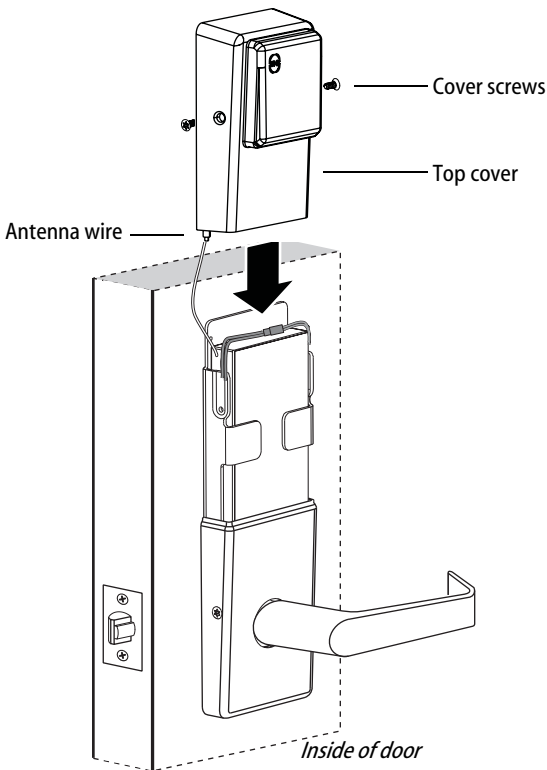


Figure 20b Installing the top cover

20 Install top cover (inside escutcheon)

- 1 Connect the antenna to its mating connector.
- 2 Place the top cover against the door and above the fire plate. Slide the top cover down toward the bottom cover as shown in Figure 20b.

Caution: As you slide the top cover onto the fire plate, feed the antenna wire down into the bottom cover. Be sure not to pinch the antenna wire on the bottom cover as you slide the top cover into place.

- 3 Use two cover screws to secure the cover to the side of the fire plate, as shown in Figure 20b.

Note: Phillips Type 2 and T20 Torx options are available for the cover mounting screws.

Completing the installation

21 Test lock

For 9KQ Locks with keypad:

To test the lock for proper operation before the lock is programmed, follow these instructions:

- 1 Press **1234**.
- 2 Press #.
The green light flashes and the locking mechanism unlocks.
- 3 Turn the lever and open the door.

For all other locks:

To test the lock for proper operation before the lock is programmed, use the temporary operator card that came with the lock. This card is for temporary use only. After permanent cards have been programmed for the lock, the temporary card should be deleted.

- 1 Use the temporary operator card to activate the lock.
Note: If the lock has a proximity card reader, it may have already been activated by the presence of an object near the card reader.
- 2 Use the temporary operator card to access the lock.
- 3 The green light flashes and the locking mechanism unlocks.
- 4 Turn the lever or knob and open the door.
- 5 With the door closed, insert and turn the key to unlatch the door.

If the mechanism doesn't unlock, refer to the following table. For additional troubleshooting instructions, see the Service Manual.

LEDs	Sounder	You should
Single red flash	—	Use the card at a moderate speed.
Red flashes	3 short tones	Use the temporary operator card provided with the lock.
Green flashes	—	Check the motor connection.
—	—	Check the battery connection.

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Installation Instructions for Wi-Q™ Technology 45HQ Mortise Locks

Contents

These installation instructions describe how to install your 45HQ Mortise Lock. Topics covered include:

Preparing the door 1
Configuring and installing the mortise case..... 3
Installing the trim 4
Completing the installation..... 9

Patents

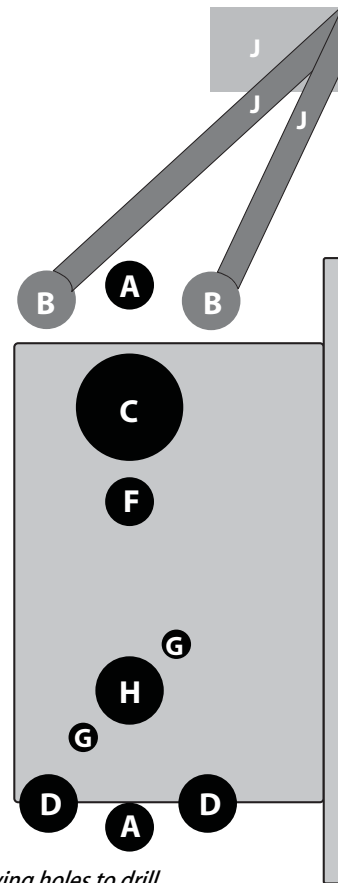
Products covered by one or more of the following patents:
 6,720,861

1 Identify holes to drill

- 1 Determine the lock function to be installed.
 Caution: Determine the inside and outside, hand, and bevel of the door.
- 2 See the *Holes by Function* table and Figure 1 to determine the holes to be drilled for the lock function.

<i>Holes by Function</i>	Functions			
	DV		TV	
Holes to drill	I/S	O/S	I/S	O/S
A Forged trim (2 holes) [†]	Through door		Through door	
B Harness [†]	Through door		Through door	
C Standard cylinder		■		■
D Sensor & motor wire (2 holes)	■		■	
F Thumb turn			■	
G Trim mounting (2 holes) [‡]	Through door		Through door	
H Lever ^{††}	Through door		Through door	
J Door sensing channel (2 holes)	DO NOT DRILL		See Figure 1	

[†] Determine trim holes based on trim type.
[‡] Because these holes pass through the mortise pocket, it is recommended that each hole be drilled separately rather than straight through.



For hole sizes, see the Q06 Template (T82606).

Figure 1 Identifying holes to drill

Preparing the door

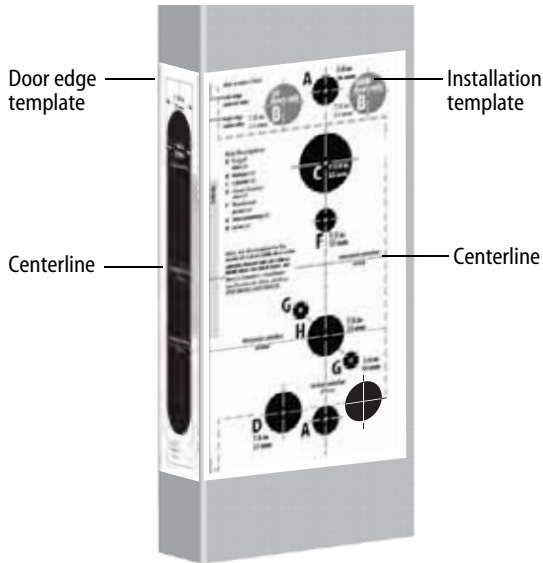


Figure 2 Aligning the templates

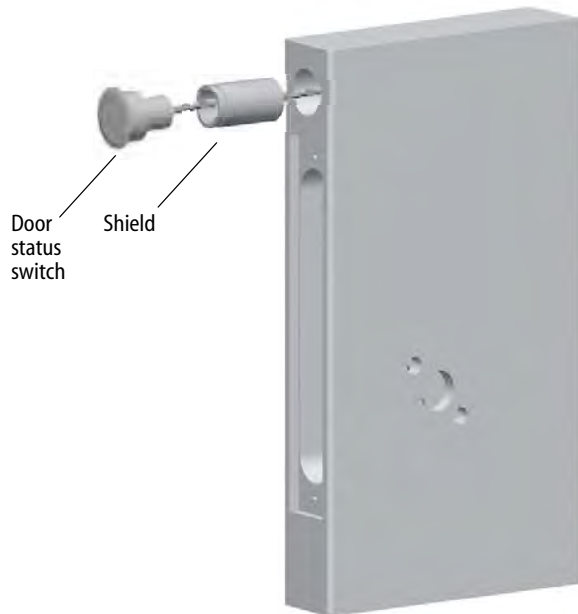


Figure 3 Installing the door status switch

2 Align templates

Note: If the door is a fabricated hollow metal door, determine whether it is properly reinforced to support the lock. If door reinforcement is not adequate, consult the door manufacturer for information on proper reinforcement. For dimensions for preparing metal doors, see the Q03 Template—Installation Specifications for 45HQ Mortise Locks (T82603).

- 1 Separate the four templates provided on the Q06 Template—Installation Template for 45HQ Mortise Locks (T82606).
- 2 Position one of the door edge templates on the door, making sure that the lock case mortise shown on the template aligns with the mortise pocket prepared in the door.
- 3 Using the centerlines on the door edge template as a guide, position the appropriate door template on each side of the door. You need to take the bevel into account. Tape the templates to the door.

3 Center punch and drill holes

- 1 Center punch the necessary drill points. See the instructions on the template.
- 2 Drill the holes.

Note 1: To locate the center of a hole on the opposite side of the door, drill a pilot hole completely through the door.

Note 2: For holes through the door, it is best to drill halfway from each side of the door to prevent the door from splintering.

4 Install door status switch

(optional for deadbolt TV function locks only)

- 1 Position the shield on the door status switch with the notch facing downwards (towards the mortise pocket).

Caution: Make sure the wires are not routed across any sharp edges or over any surface that could damage its sleeving.

Configuring & installing the mortise case

- 2 Feed the wires for the door status switch into the door status switch hole and through the channel into the mortise cavity and out through one of the sensor and motor wire holes.
- 3 Press fit the door status switch assembly into the door status switch hole.

5 Rotate latchbolt (if necessary)

Note: If a function specific mortise case was ordered, some steps for configuring the case have already been performed at the factory.

- 1 Determine whether you need to rotate the latchbolt to match the handing of the door.

Note: The angled surface of the latchbolt must contact the strike when the door closes.

- 2 If you need to rotate the latchbolt, insert a flat blade screwdriver into the latch access point approximately 1/2" into the case and press to extend the latch out of the case. See Figure 4.
- 3 Rotate the latchbolt 190 degrees (slightly past 180 degrees) and allow it to retract into the case.

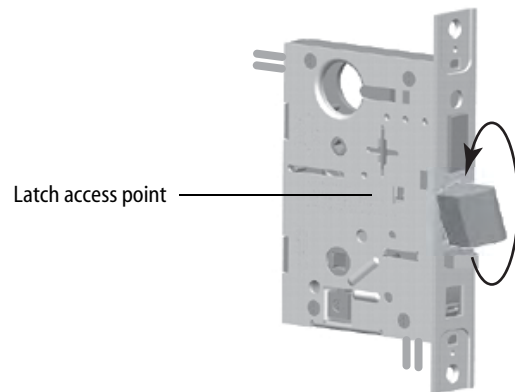


Figure 4 Rotating the latchbolt

6 Position hub toggles (if necessary)

- 1 Check whether the hub toggles are in the proper position for the lock. See the table below and Figure 5.

Hub toggle positions

Function	Hub toggle positions
DV, TV	Inside down (always unlocked) & outside up (lockable)

Note: For LH & LHRB doors, the inside is the back side of the case and the outside is the cover side of the case.

For RH & RHRB doors, the inside is the cover side of the case and the outside is the back side of the case. The cover is mounted to the case with four screws.

- 2 To change the position of a hub toggle, remove the toggle screw, move the toggle into the desired position, and re-tighten the screw.

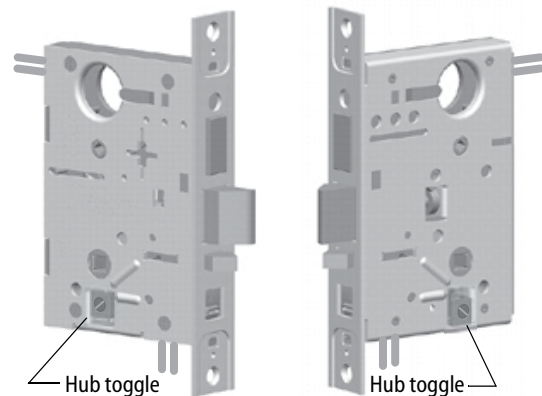


Figure 5 Positioning hub toggles

Installing the trim

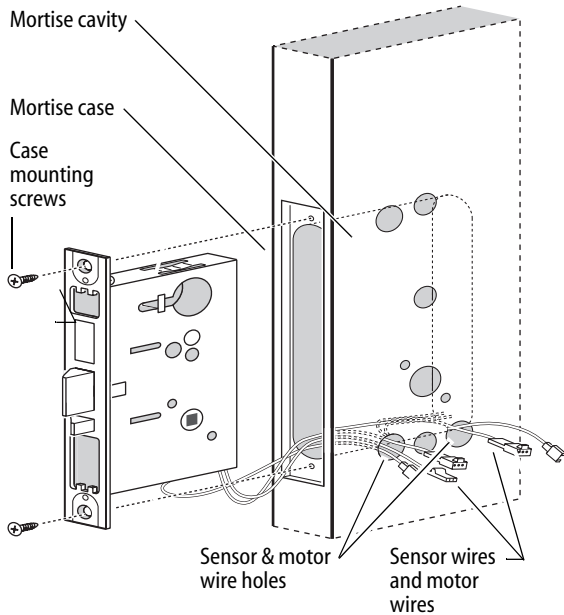


Figure 6 Installing the mortise case (inside of door)

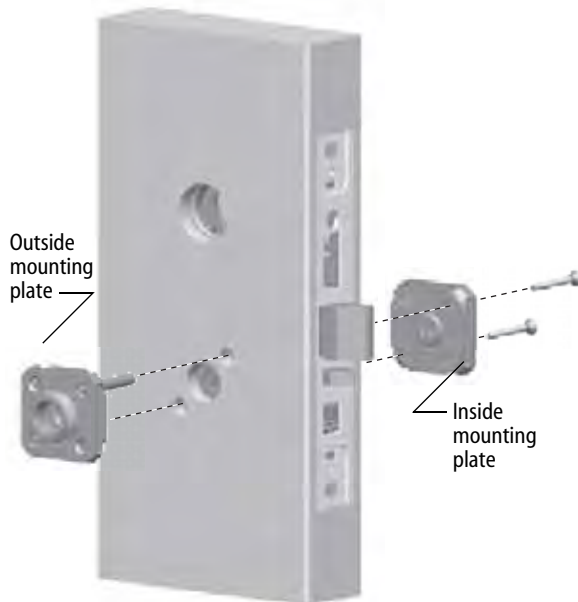


Figure 7 Installing the trim mounting plates

7 Install mortise case

- 1 Drill the holes for the case mounting screws.
- 2 Insert the mortise case into the mortise cavity, while feeding the sensor and motor wires into the mortise cavity and out the two sensor & motor wire holes to the inside of the door as shown in Figure 6.

Note: The armored front of the mortise case self-adjusts to the door level.

- 3 Secure the mortise case with the case mounting screws.

8 Install trim mounting plates

- 1 Insert the outside trim mounting plate through the door and mortise case.
- 2 Position the inside trim mounting plate opposite the outside trim mounting plate and screw them securely in place.

Caution: Do not overtighten the trim mounting plate screws. Overtightening may damage the locking mechanism.

- 3 By temporarily installing a lever, test the lock to make sure that it doesn't bind.

Installing the trim

9 Install concealed cylinder & core

- 1 Use a cylinder wrench to thread the cylinder into the mortise case so that the groove around the cylinder is even with the door surface as shown in Figure 8.
Caution: A malfunction can occur if the cylinder is threaded in too far.
- 2 Secure the cylinder in the mortise case with the cylinder retainer screw.
- 3 Insert the control key into the core and rotate the key 15 degrees to the right.
- 4 With the control key in the core, insert the core into the cylinder.
- 5 Rotate the control key 15 degrees to the left and withdraw the key.
Caution: The control key can be used to remove cores and to access doors. Provide adequate security for the control key.

10 Install trim hole insert and bushing

- 1 Insert the trim hole insert into the upper trim hole on the outside of the door, as shown in Figure 9.
- 2 Insert the bushing into the harness hole on the outside of the door, as shown in Figure 9.

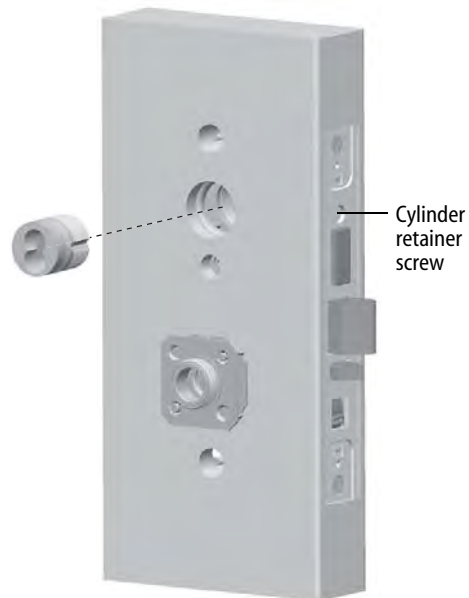


Figure 8 Installing the concealed cylinder

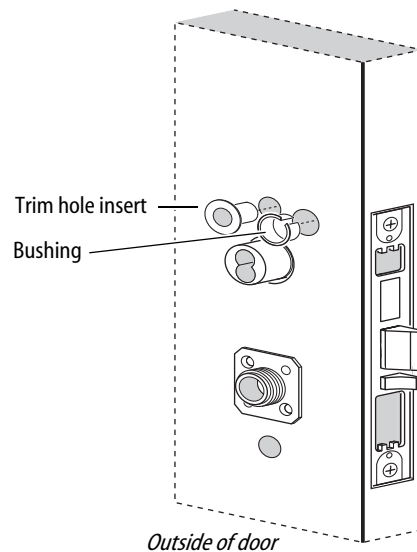


Figure 9 Installing the trim hole insert and bushing

Installing the trim

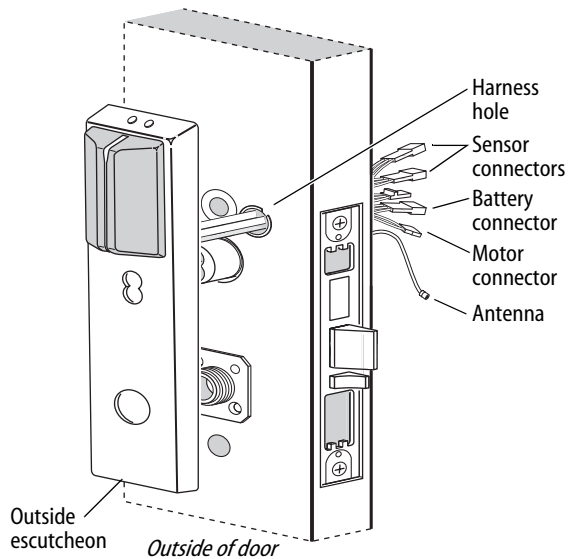


Figure 10 Feeding the wire harness connectors through the harness hole

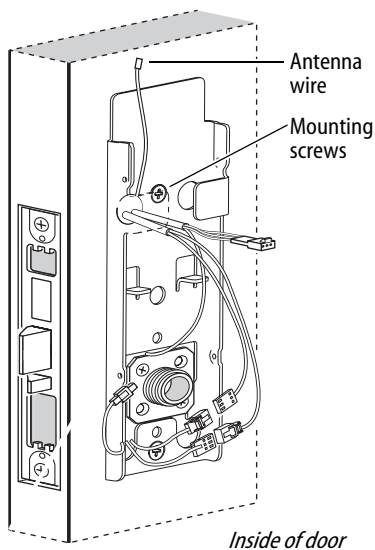


Figure 11 Installing the fire plate

11 Route wire harnesses and position outside escutcheon

- 1 From the outside of the door, feed the motor connector, battery connector, and sensor connectors through the harness hole.

Caution: When routing the connectors, make sure the harnesses are not routed across any sharp edges or over any surface that could damage their sleeving or wire insulation.

- 2 Perform these steps:
 - a Firmly press the outside escutcheon in position on the door. The core should be flush with the outer surface of the escutcheon.
 - b If necessary, adjust the cylinder depth plus or minus one turn so that the core is flush with the outer surface of the escutcheon.
 - c Secure the cylinder in the mortise case with the cylinder clamp screw.
- 3 Rest the outside escutcheon on the door by inserting the trim studs into the trim holes.

12 Install fire plate

- 1 From the inside of the door, feed the wiring through the fire plate harness hole.
- 2 Position the fire plate on the door so that the inside mounting plate fits through the square opening in the fire plate.
- 3 Insert the two counter sunk mounting screws into the holes at the top and bottom of the fire plate.
- 4 Tighten the mounting screws until the fire plate is securely mounted to the door.

Installing the trim

13 Connect wire harnesses

- From the inside of the door, make the following connections:

Wire connection	Colors	No. of wires	No. of pins
Motor	Yellow-gray	2	2
Key override sensor	Gray	2	3
Deadbolt sensor	Blue	2	3
RQE	Orange-brown	2	3
Door sensing	White	2	2
Latchbolt sensing	Purple	2	2

- Insert the plastic wire tie through the mounting clip and secure the wires as shown in Figure 12.

Note: It is physically possible to connect the key override sensor connector from the mortise case to the battery connector from the wire harness. To avoid this mistake, connect only the connectors with matching wire colors.

Caution: When making the motor connection and sensor connections, make sure:

- ◆ there are no loose wire connections where the wires are inserted into the connectors
- ◆ the connectors are firmly mated

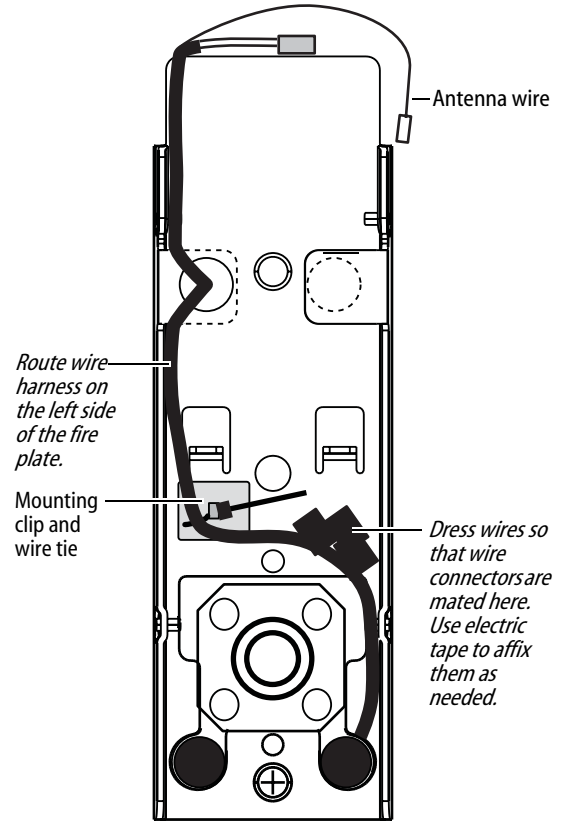


Figure 12 Routing the wires

Installing the trim

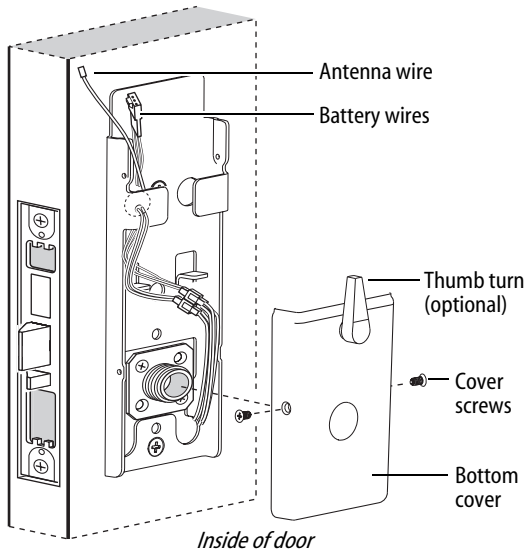


Figure 13 Installing the bottom cover

14 Install bottom cover (inside escutcheon)

- 1 Position the battery wires above the side tabs and against the side of the fire plate, as shown in Figure 13.
- 2 **Optional for Thumb Turn option only:** Make sure that the Thumb Turn is in the upright position, as shown in Figure 13.
- 3 **Making sure that the cover does not pinch the wires,** guide the bottom cover over the chassis onto the fire plate.

Note: Phillips Type 2 and T20 Torx options are available for the cover mounting screws.

Completing the installation

15 Install battery holder

- 1 Position the battery wires against the fire plate side wall, as shown in Figure 14.
- 2 Slide the battery holder behind the fire plate side tabs until it rests on the bent battery holding tabs.

Caution: When routing the battery wires, make sure the wires are not routed across any sharp edges or over any surface that could damage their sleeving or wire insulation.

- 3 Connect the battery pack to the battery connector on the wire harness.

Caution: When connecting the battery pack, make sure:

- ◆ there are no loose wire connections where the wires are inserted into the connectors.
- ◆ the connectors are firmly mated.

16 Install inside and outside levers

- 1 Unscrew the inside spindle one full turn to allow the spindles to turn freely.
 - 2 With the handle pointing toward the door hinges, insert the outside lever and spindles assembly into the lock from the outside of the door.
 - 3 Slide the inside lever onto the inside spindle and secure it with the set screw.
 - 4 Making sure that the core is positioned properly in the outside escutcheon (DV and TV function Locks only) and the escutcheons are aligned properly on the door, tighten the escutcheon mounting screws.
- Note: If a core is not available, you can use the cylinder wrench to help you align the core opening in the escutcheon.
- 5 Turn the levers to check that they operate smoothly.

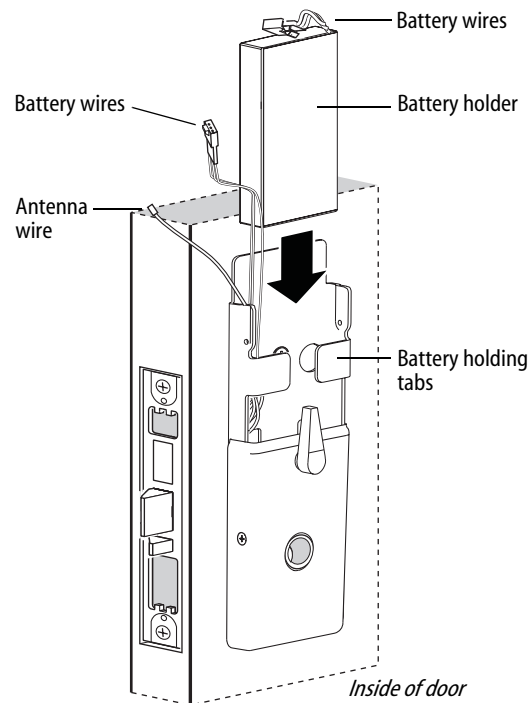


Figure 14 Installing the battery holder

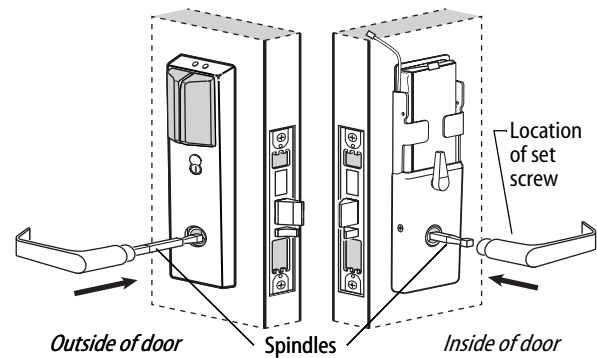


Figure 15 Installing the levers

Completing the installation

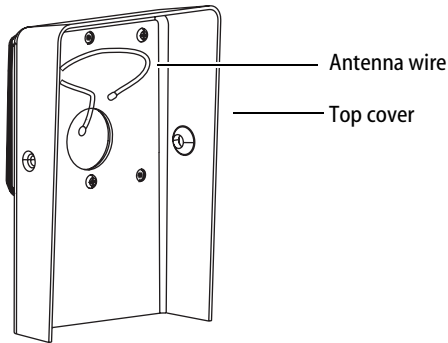


Figure 16 Inside view of top cover

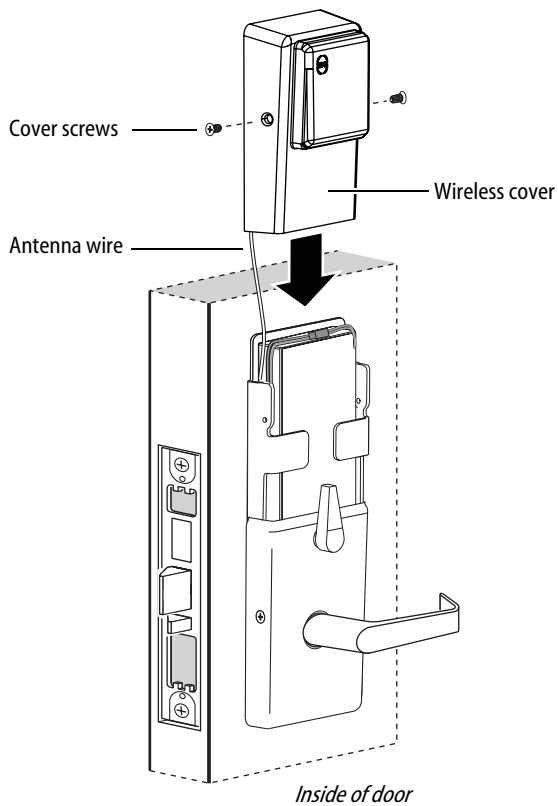


Figure 17 Installing the top cover

17 Install top cover (inside escutcheon)

- 1 Connect the antenna to its mating connector.
- 2 Place the top cover against the door and above the fire plate. Slide the top cover down toward the bottom cover as shown in Figure 17.

Caution: As you slide the top cover onto the fire plate, feed the antenna wire down into the bottom cover. Be sure not to pinch the antenna wire on the bottom cover as you slide the top cover into place.

- 3 Use two cover screws to secure the cover to the side of the fire plate, as shown in Figure 17.

Note: Phillips Type 2 and T20 Torx options are available for the cover mounting screws.

18 Install mortise case faceplate

- 1 Secure the mortise case faceplate to the mortise case with the faceplate mounting screws.
- 2 Check the lock for proper operation.

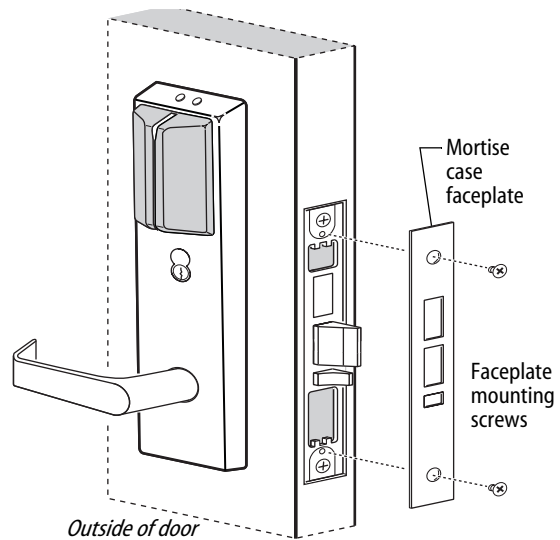


Figure 18 Installing the mortise case faceplate

Completing the installation

19 Install strike box and strike plate

- 1 Insert the strike box into the mortise in the door jamb. Place the strike plate over the strike box and secure the strike with the screws provided.
- 2 Check the position of the auxiliary bolt against the strike plate.

Caution: The auxiliary bolt must make contact with the strike plate. The auxiliary bolt deadlocks the latchbolt and prevents someone from forcing the latch open when the door is closed. If the incorrect strike is installed, a lock-in can occur.

Note: The recommended gap between the door and jamb is 1/8" .

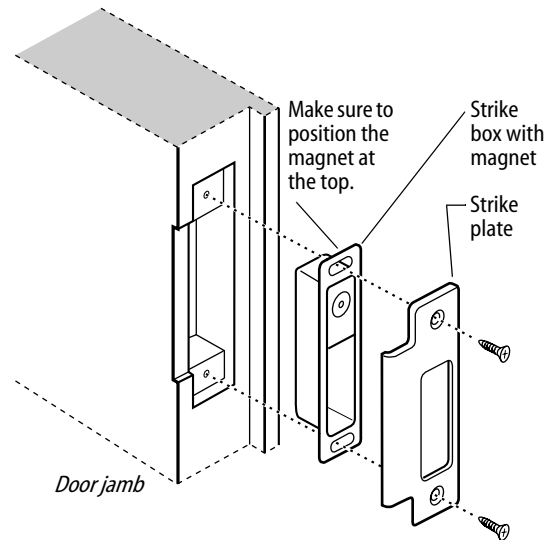


Figure 19a Installing the strike box and strike plate

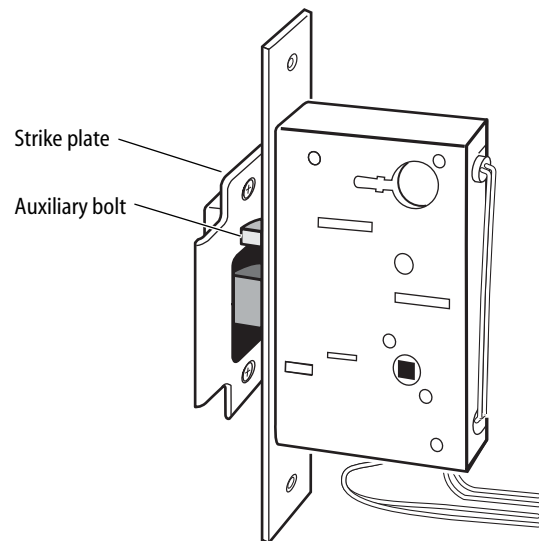


Figure 19b Positioning the strike

Testing the lock

20 Test lock

For 45HQ Locks with keypad

To test the lock for proper operation before the lock is programmed, follow these instructions:

- 1 Press **1234**.
- 2 Press #.

The green light flashes and the locking mechanism unlocks.

- 3 Turn the lever and open the door.

For all other locks:

To test the lock for proper operation before the lock is programmed, use the temporary operator card that came with the lock. This card is for temporary use only. After permanent cards have been programmed for the lock, the temporary card should be deleted.

- 1 Use the temporary operator card to activate the lock.
Note: If the lock has a proximity card reader, it may have already been activated by the presence of an object near the card reader.
- 2 Use the temporary operator card to access the lock.
The green light flashes and the locking mechanism unlocks.
- 3 Turn the lever and open the door.

If the mechanism doesn't unlock, refer to the following table. For additional troubleshooting instructions, see the Service Manual.

LEDs	Sounder	You should
Single red flash	—	Use the card at a moderate speed.
Red flashes	3 short tones	Use the temporary operator card provided with the lock.
Green flashes	—	Check the motor connection.
—	—	Check the battery connection.

For all locks

- 1 Insert and turn the key to unlatch the door.

For all TV function locks

- 2 From the inside of the door, turn the turn knob and make sure that the deadbolt operates properly.



Installation Instructions for Wi-Q Technology™ EXQ Exit Hardware Trim



Introduction

These installation instructions describe how to install your BEST® Wi-Q Technology™ EXQ Series Exit Hardware Trim. Electronic Stand-Alone Exit Hardware Trim is available for use with the following types of wide stile exit devices: Precision® brand manufactured by Stanley (2000 Series), Von Duprin® (98/99 Series), and Sargent® (8800 Series).

Not all features are available for all exit device configurations. The table below details what sensors are available for which exit device configurations:

Device	DS ^a	TS ^b	LS ^c
Precision			
Rim (2100)	■	■	■
Surface Vertical (2200)	■	■	■
Mortise (2300)	■		
Wood Door Concealed (2700)	■	■	■
Concealed Vertical (2800)	■	■	■
Von Duprin^d			
Rim	■	■	
Surface Vertical	■		
Concealed Vertical	■		
Sargent^e			
Rim ^f	■		

- a. Door position sensing
- b. Request-to-exit (PHI touchbar monitoring)
- c. Latch sensing
- d. Von Duprin is a registered trademark of Von Duprin, Inc.
- e. Sargent is a registered trademark of Sargent Mfg. Co.
- f. Latch must have lift-type trim input (8863)

Contents

These instructions cover the following topics:

<i>Planning the installation</i>	1
<i>Preparing the door</i>	3
<i>Installing the exit hardware and trim</i>	7
<i>Completing the installation</i>	16

Site survey

Use the following survey to record information about the installation site and hardware application.

Exit hardware type:

- rim
- mortise
- surface vertical rod
- concealed vertical rod

Door handing and bevel:

- Left-hand reverse bevel (LHRB)
- Right-hand reverse bevel (RHRB)

Door type:

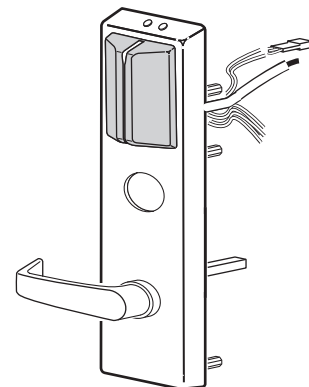
- Wood
- Metal

Door thickness: _____ inches (1-3/4" to 2-1/4")

Components checklist

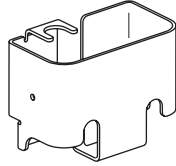
Use the following checklist to make sure that you have the items necessary to install your EXQ Exit Hardware Trim.

- Escutcheon and lever assembly

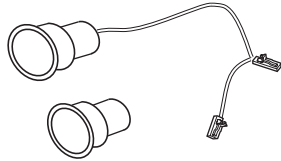


Installation Instructions for Wi-Q Technology™ EXQ Exit Hardware Trim

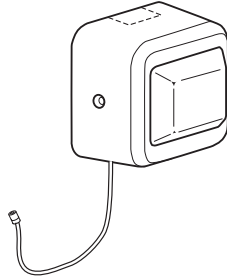
- Battery bracket



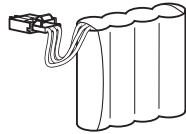
- Door position switch with magnet



- Battery cover with antenna



- Battery pack



- Battery cover screw package

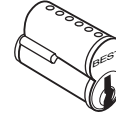
- Bar code ID sticker (for your records)

- Cable ties, butt-splices, and tape

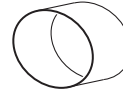
- Installation templates and instructions



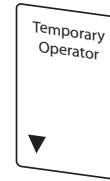
- 7-pin core (only included if ordered with trim)



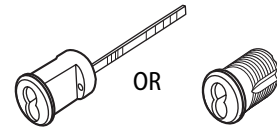
- Cylinder mounting sleeve (for Von Duprin functions only)



- Temporary operator card



- Key cylinder and keys (only included if ordered with trim).



Rim cylinder OR Mortise cylinder

Tools required

Use the following checklist to make sure that you have the tools necessary to install your EXQ Exit Hardware Trim.

- Electric drill (preferably corded)
- Jigsaw
- Wire snips
- Wire strippers
- Phillips screwdriver
- Measuring tape
- Straight edge
- Square
- Pencil/marker
- 7/16" dia drill bit
- 7/8" dia drill bit
- 1" dia hole saw

For Precision® Hardware and Sargent installations

- 1-3/8" dia hole saw (EV function only)
- 1-1/8" dia hole saw

For Von Duprin® installations

- 2" dia hole saw
- 3/4" dia hole saw

For BEST® cylinders

- BEST ED211 cylinder wrench

For surface vertical exit devices

- Razor blade

Preparing the door

1 Mark centerlines

Note 1: If retrofitting to an existing exit hardware installation, skip this task. Instead, remove the exit hardware from the door.

Note 2: If the door is a fabricated hollow metal door, determine whether it is properly reinforced to support the lock. If door reinforcement is not adequate, consult the door manufacturer for information on proper reinforcement.

- 1 Prepare the push side of the door according to the exit device manufacturer's installation instructions.

Note: The tape-on template supplied with the EXQ trim will supersede the exit device template in the trim area.

- 2 Transfer horizontal and vertical centerlines to the outside of the door face.

Note: When measuring from the edge of the door, take into account the door bevel (if any).

2 Determine required door prep

- 1 Determine which template is applicable (Q08 for Precision and Sargent, Q07 for Von Duprin) and discard the other one.
- 2 Based on the kind of exit device you have, use the table below to locate the appropriate door preparation.
- 3 On the template, circle the holes needed for your installation and cross out those that are not applicable.

	Device	Figure
Precision	Rim (2100)	Figure 2
	Surface Vertical (2200)	Figure 3
	Mortise (2300)	Figure 4
	Wood Door Concealed (2700)	Figure 3
	Concealed Vertical (2800)	Figure 3
Von Duprin	Rim (with RQE)	Figure 5
	Rim (without RQE)	Figure 7
	Surface Vertical	Figure 7
	Concealed Vertical	Figure 7
	Sargent Rim	Figure 6

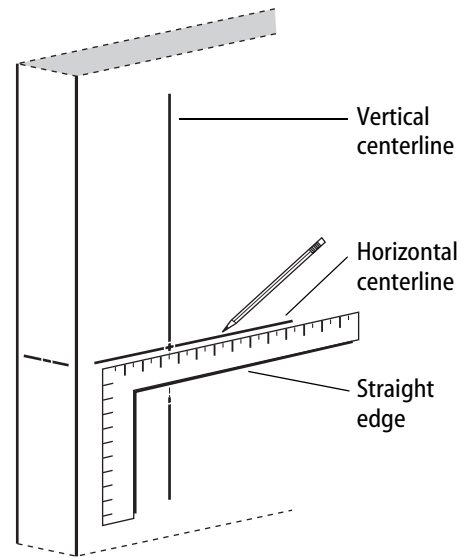


Figure 1 Marking centerlines on outside door face

Note: Follow the Precision 2300 door preparation for Sargent, ignoring any steps directly pertaining to the mortise lock or key cylinder.

Preparing the door

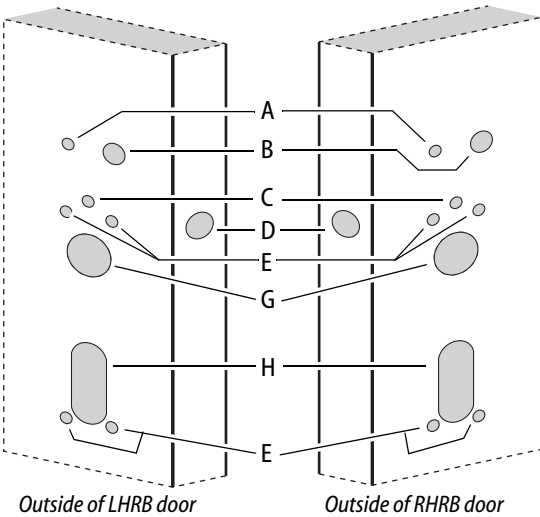


Figure 2 Outside door prep for use with Precision exit hardware, 2100 Series

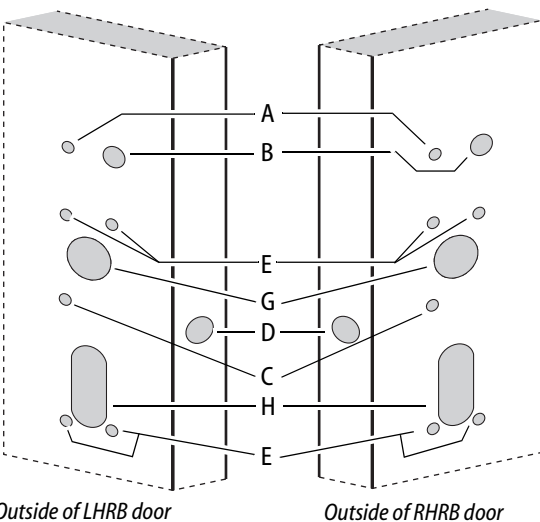


Figure 3 Outside door prep for use with Precision exit hardware, 2200, 2700, and 2800 Series

Hole	Description	Instructions
A	Battery bracket hole	7/16" diameter, thru door
B	Battery bracket/harness hole	7/8" diameter, thru door
C	Sensor harness routing hole	7/16" diameter, thru door
D	Door sensing switch mounting hole and channel	1" diameter hole, drilled 1-3/4" deep, then 7/16" channel to intersect door sensing wire routing hole.
E	Escutcheon mounting holes	7/16" diameter, thru door
F	Door sensing switch magnet hole (in door frame or opposing door leaf)	1" diameter hole, drilled 1-3/4" deep (NOT SHOWN).
G	Cylinder hole	Precision: 1-3/8" diameter, thru door (for 2300, only into mortise cavity) Von Duprin: 2" diameter thru door
H	Lift finger slot	Precision/Sargent: 1-1/8" diameter slot, thru door Von Duprin: 3/4" diameter slot, thru door

Preparing the door

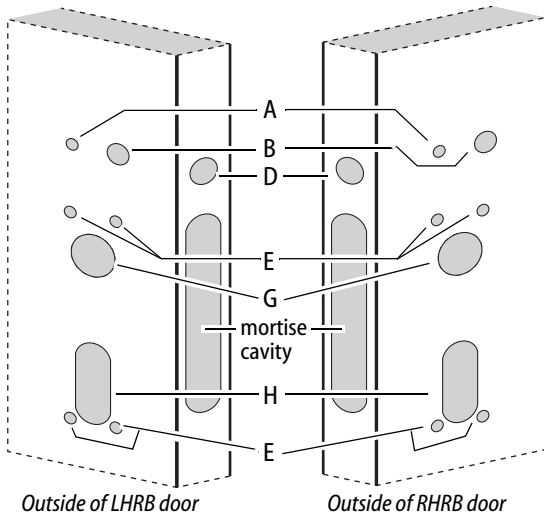


Figure 4 Outside door prep for use with Precision exit hardware, 2300 Series

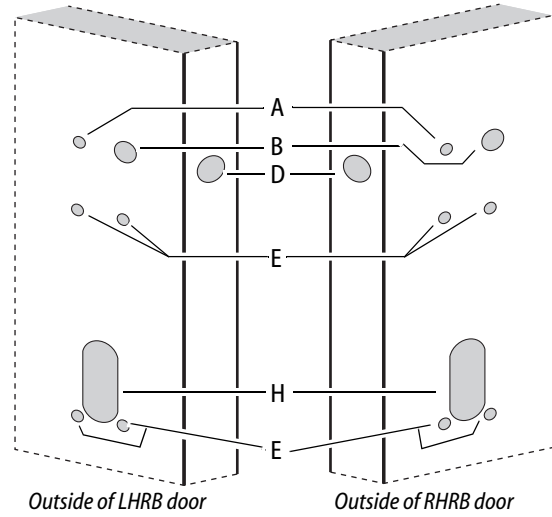


Figure 6 Outside door prep for use with Sargent 8863 exit hardware

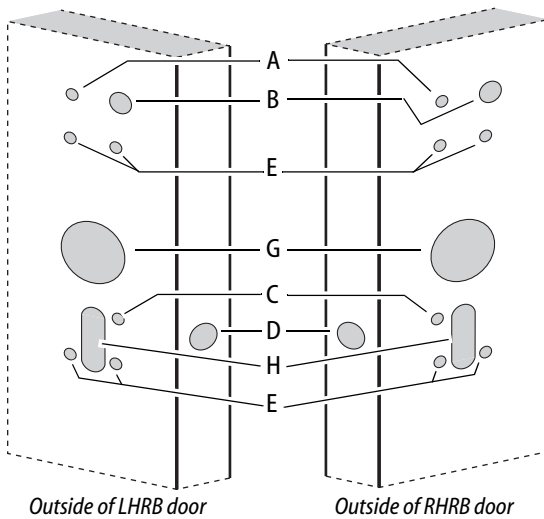


Figure 5 Outside door prep for use with Von Duprin exit hardware, Rim **with** RQE only

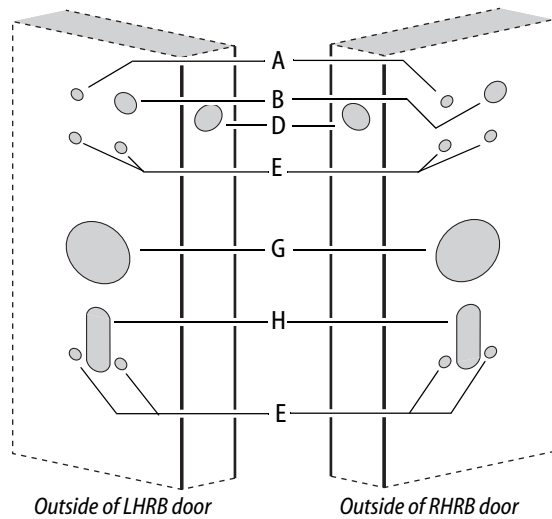


Figure 7 Outside door prep for use with Von Duprin exit hardware. Use for all Von Duprin vertical rods and rim **without** RQE

Preparing the door

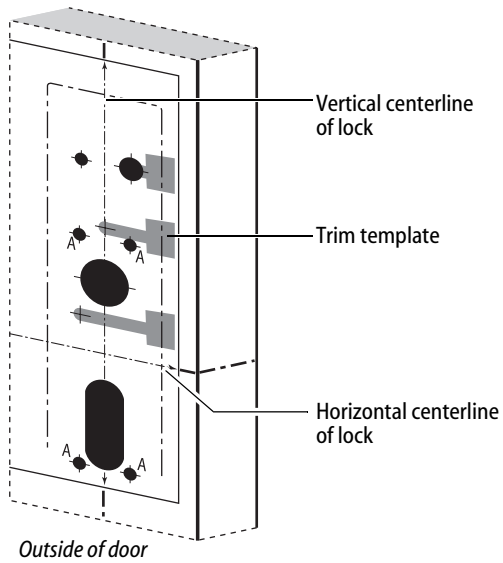


Figure 8 Positioning the trim template, Q08 LHRB shown

3 Position trim template and mark drill points

1 For new installations

- Cut the applicable template along the dashed lines.
- Align the horizontal and vertical centerlines marked on the template with the centerlines marked on the **OUTSIDE** of the door (from step 1). See Figure 8.

For retrofit installations

Align the mounting holes for the escutcheon and lock stile case shown on the template with the mounting holes already present in the door.

Note: The outside escutcheon is mounted using the four lock stile case mounting holes ('A' holes); these holes must be 7/16" in diameter and drilled completely through the door.

- Tape the template to the **OUTSIDE** of the door in the properly aligned position.
- Center punch the necessary drill points. Refer to the instructions on the template and the figures of the previous step.

4 Mortise for mortise case and faceplate (mortise exit devices only)

Note: If retrofitting the EXQ Exit Hardware Trim to an existing exit hardware installation, skip this task.

Mortise the edge of the door for the mortise case and faceplate; follow the instructions provided by the exit hardware manufacturer.

Installing the exit hardware and trim

5 Drill holes

Caution: Double-check for the correct lock function, hand, and bevel before drilling.

- 1 Drill the trim holes that are required for your application; follow the instructions on the trim template and refer to the figures in step 2.

Note 1: To locate the center of a hole on the opposite side of the door, drill a small pilot hole through the door.

Note 2: For holes through a wood door, drill halfway from each side of the door to keep the door from splintering.

6 Install mortise case (mortise exit devices only)

Install the mortise case in the door; follow the instructions provided by the exit hardware manufacturer.

7 Install door sensing switch

- 1 Clip off the purple wires and connector and remove.
- 2 Clip off the connector from the white door sensing harness (with black sleeving) and leave as much wire as possible. See Figure 9. These wires will be butt-spliced to the sensing harness from the trim. See "Route sensor wires" on page 14.
- 3 Route the door sensing switch wires through the channel and out through the wire routing hole to the exit device side. See Figure 9.
- 4 Press-fit the door sensing switch into the 1" diameter hole in the door.
- 5 Mark and drill 1" diameter hole in the frame, aligned with the door position switch (for the magnet).

Note: For double-door applications, this hole will be into the edge of the opposing door leaf (not the frame).
- 6 Press-fit the door sensing magnet into the 1" diameter hole in the frame.

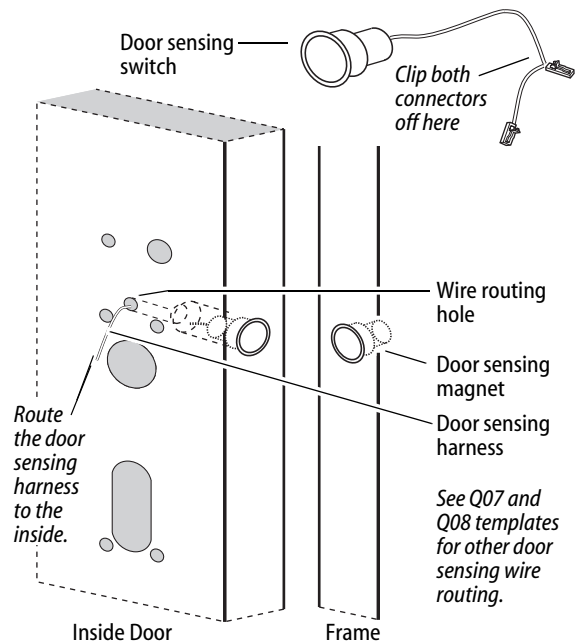


Figure 9 Installing the door sensing switch and magnet, Precision 2100 shown

Installing the exit hardware and trim

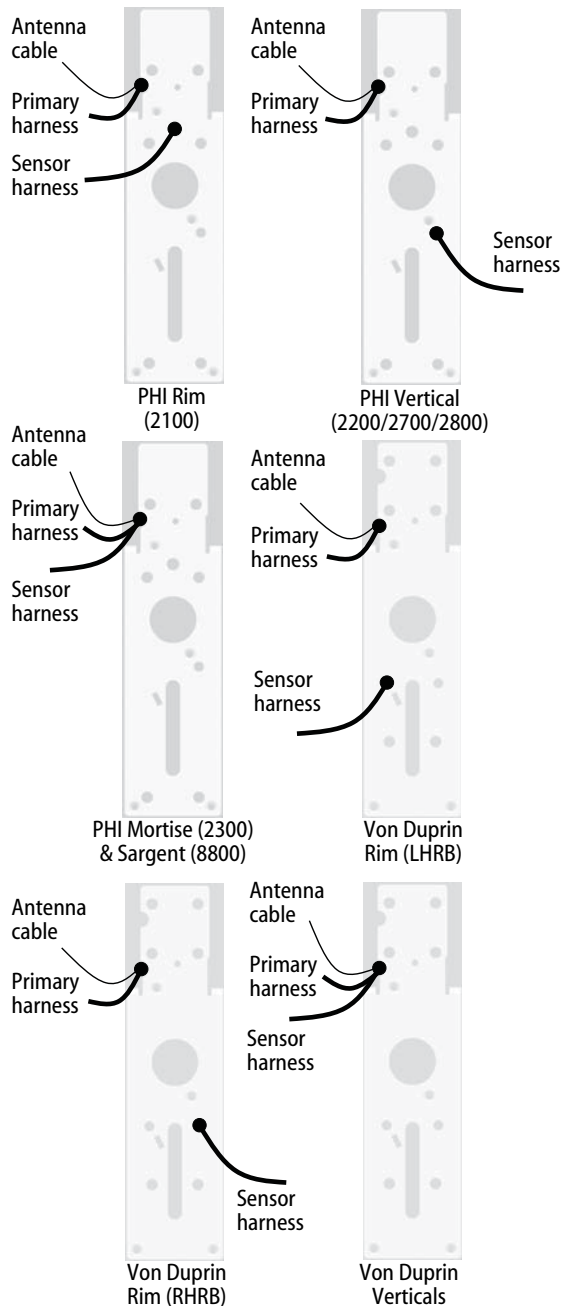


Figure 10 Variations of EXQ Trim rear view

8 Re-route sensor harness (if applicable)

Looking at the back of the trim, compare it to the pictures in Figure 10. If your trim does not match the proper picture, then follow the applicable steps below to re-route the sensor harness.

Installing the exit hardware and trim

- 1 Carefully peel the black gasket off of the back of the trim. Set it aside to be re-applied later.
- 2 Remove the backplate from the trim by removing the four screws that attach it.
- 3 While the gasket and backplate are removed, change the handing of the trim if necessary.
Do so by removing the four threaded guide pins and retaining ring as shown in Figure 11, pulling out and flipping the lever 180 degrees, and then reassembling.

For Precision 2100 devices

- 4 Re-route the sensor harness out through the alternate wire-routing hole as shown in Figure 12.
- 5 Reattach the backplate ensuring that the springs are properly seated and wires are not pinched.
- 6 Reapply the gasket.

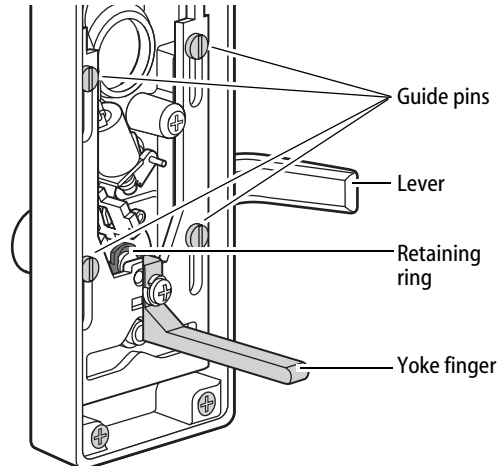


Figure 11 Changing the hand of the trim (if needed)

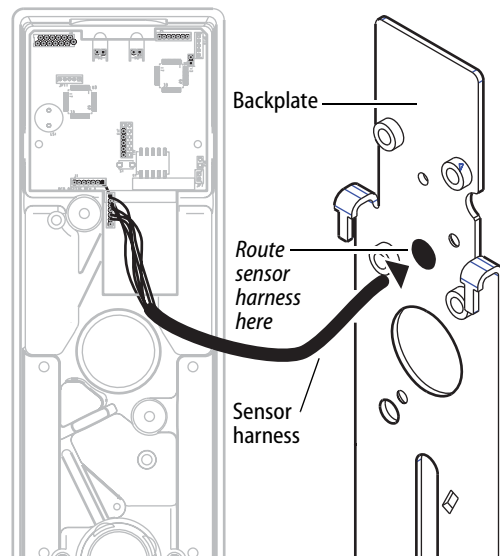


Figure 12 Re-routing the sensor harness for Precision 2100 exit devices

Installing the exit hardware and trim

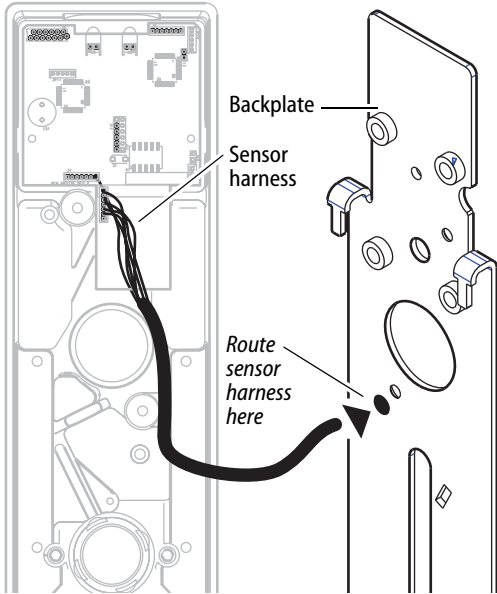


Figure 13 Re-routing the sensor harness for Precision 2200, 2700 and 2800 exit devices

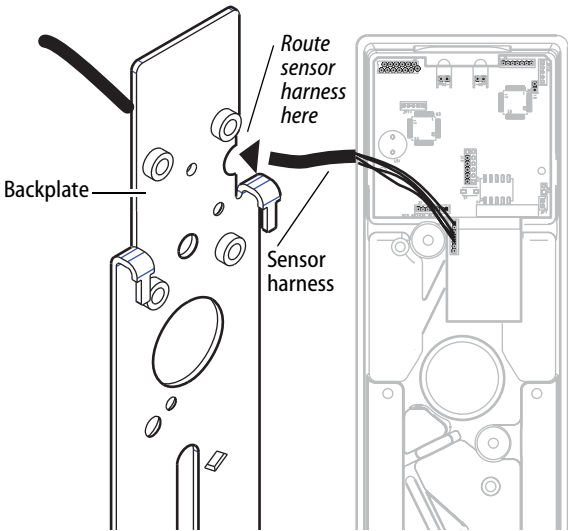


Figure 14 Re-routing the sensor harness for Precision 2300 and Sargent 8800 exit devices

For Precision 2200, 2700 and 2800 devices

- 4 Re-route the sensor harness around the cylinder hole and around the escutcheon boss, then out through the alternate wire-routing hole as shown in Figure 13.
- 5 Reattach the backplate ensuring that the springs are properly seated and wires are not pinched.
- 6 Reapply the gasket.

For Precision 2300 and Sargent 8800 devices

- 4 Re-route the sensor harness toward the top of the escutcheon to the same area as the battery cable, antenna cable and relay shunts. See Figure 14.
- 5 Reattach the backplate ensuring that the springs are properly seated and wires are not pinched.
- 6 Reapply the gasket.

For Von Duprin Rim devices with RQE

- 4 Re-route the sensor harness around the cylinder hole and around the escutcheon boss, then out through one of the alternate wire-routing holes (based on handing) as shown in Figure 15.
- 5 Reattach the backplate ensuring that the springs are properly seated and wires are not pinched.
- 6 Reapply the gasket.

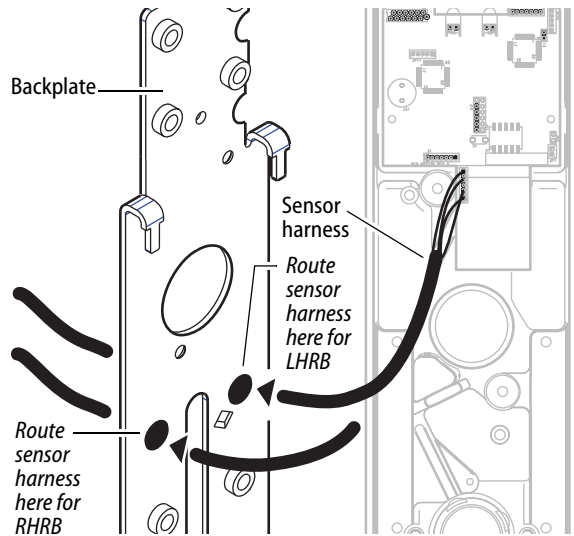


Figure 15 Re-routing the sensor harness for Von Duprin with RQE

Installing the exit hardware and trim

For Von Duprin vertical rod devices and rim without RQE

- 4 Re-route the sensor harness as shown in Figure 16.
- 5 Reattach the backplate ensuring that the springs are properly seated and wires are not pinched.
- 6 Reapply the gasket.

9 Install cylinder (Von Duprin only)

- 1 To determine the correct spindle length, try the cylinder in the door while holding the escutcheon and lock stile case in place.
Then break off the spindle at the groove where it will engage correctly with the latching mechanism.
If necessary break off the mounting screws as shown in Figure 17.
- 2 From the front of the escutcheon, insert the cylinder into the cylinder opening.
- 3 Holding the cylinder in position in the escutcheon, insert the cylinder mounting sleeve through the back of the escutcheon, over the cylinder.
- 4 Orient the cylinder and clamp plate as shown in Figure 17. From the back of the escutcheon, secure the cylinder and mounting sleeve using the clamp plate and mounting screws.

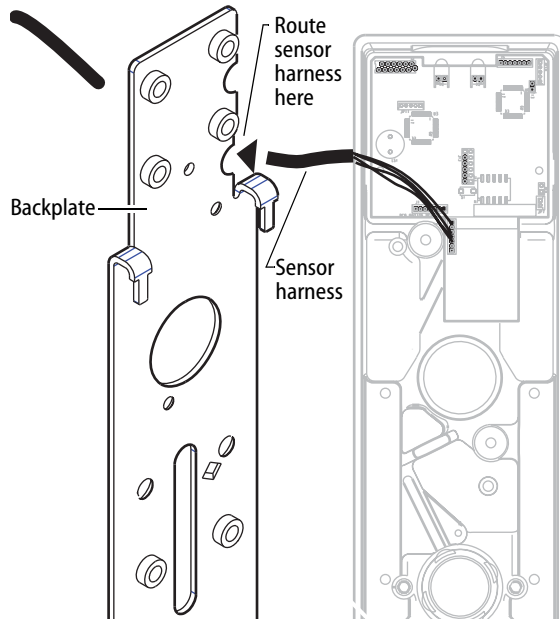


Figure 16 Re-routing the sensor harness for Von Duprin vertical rod and rim without RQE exit devices

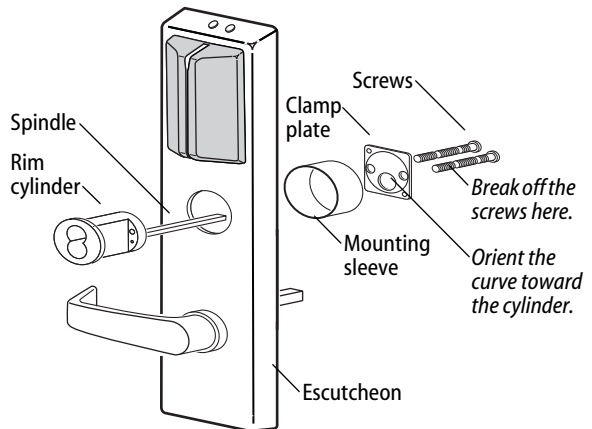


Figure 17 Installing the cylinder for Von Duprin rim and rod exit devices

Installing the exit hardware and trim

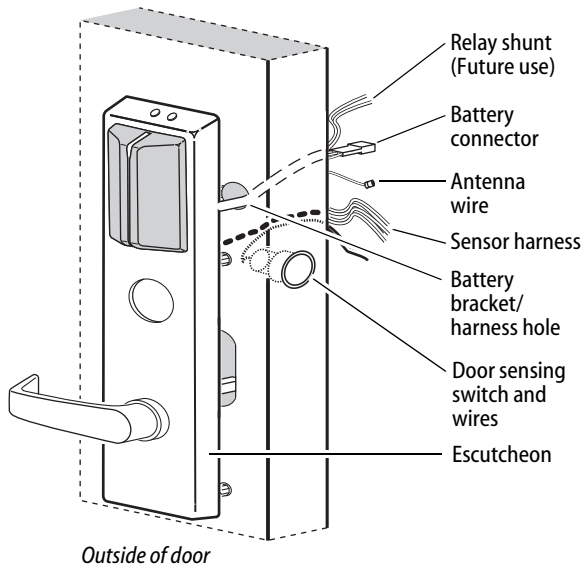


Figure 18 Feeding the wires through the door

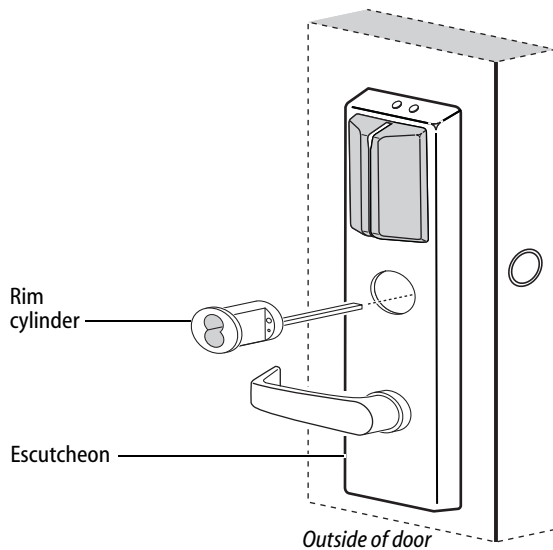


Figure 19 Installing the cylinder

10 Route wire harnesses and position escutcheon

- 1 From the outside of the door, feed the antenna wire and battery connector (with relay shunt) through the battery bracket/harness hole as shown in Figure 18.

Caution 1: When routing the connectors, make sure the harnesses are not routed across any sharp edges or over any surface that could damage their sleeving or wire insulation.

Caution 2: Do not strain the wire harness either by pulling too hard on it or by dangling the escutcheon from it.

- 2 Route the sensor harness through the door (same hole as the door sensing wires).
- 3 Rest the escutcheon on the door by inserting the trim studs into the mounting holes.

11 Install cylinder (Precision devices)

For rim and vertical rod exit device installations (rim cylinder)

- 1 To determine the correct spindle length, try the cylinder in the door while holding the escutcheon and lock stile case in place.

Then break off the spindle at the groove where it will engage correctly with the latching mechanism.

Break off the mounting screws at the groove where they will secure the clamp plate to the cylinder.

- 2 Insert the cylinder through the cylinder opening in the escutcheon and into the door as shown in Figure 19.
- 3 Orient the cylinder and clamp plate as shown in Figure 20. From the inside of the door, secure the cylinder using the clamp plate and mounting screws.

Installing the exit hardware and trim

For mortise exit device installations (mortise cylinder)

- 1 For doors less than 2" in thickness, place the cylinder ring provided on the cylinder.
- 2 Rotate the cylinder cam to the 12 o'clock position, as shown in Figure 21.
- 3 Using a cylinder wrench (ED211), insert the cylinder through the cylinder opening in the escutcheon and screw the cylinder into the mortise case. Make sure that the figure-8 hole is in the 12 o'clock position.

Caution: Do not screw the cylinder in too tightly. Doing so may cause users to be locked out.

12 Install exit hardware and secure escutcheon

For Precision 2200, 2700 and 2800 exit devices only

- Drill a 5/16" hole through the front part of the chassis as shown in Figure 22. (This hole is used to pass the sensor harness and door position switch wires into the chassis area.)

For all exit devices

- 1 Make any adjustments to the exit hardware necessary for compatibility with lever function outside trim.
- 2 Install the exit hardware (lock stile case, touch bar assembly, latches and rods [if applicable], and related hardware); follow the instructions provided by the exit hardware manufacturer.

Note: The escutcheon is secured on the outside of the door by the screws used to mount the lock stile case on the inside of the door.

Caution: When securing the escutcheon, make sure that it does not pinch any wires.

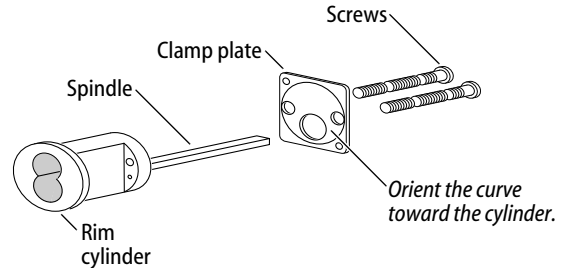


Figure 20 Rim cylinder components

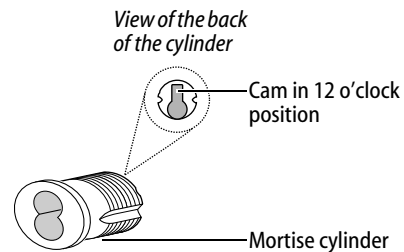


Figure 21 Mortise cylinder components

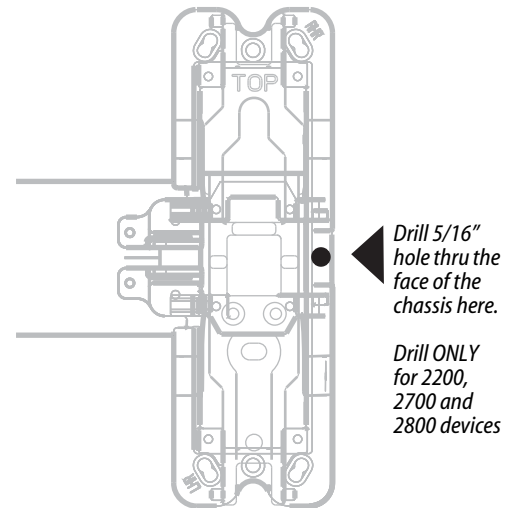


Figure 22 Drilling 5/16" hole for Precision 2200, 2700, and 2800 exit devices only

Installing the exit hardware and trim

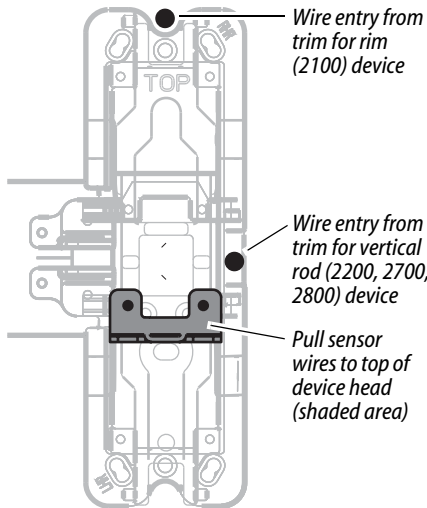


Figure 23 Pulling sensor harnesses to the top of the device head

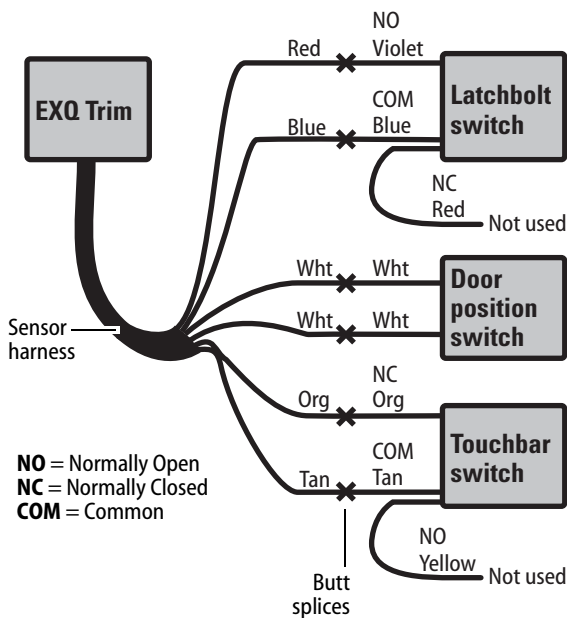


Figure 24 Schematic diagram for connecting Precision sensor harness wires

13 Route sensor wires

Use the following table to determine sensing wire functions:

Wire function	Colors	No. of wires
Touchbar monitoring (RQE)	Orange and tan	2
Door sensing	White	2
Latchbolt sensing	Red and blue	2

- 1 Pull wires from the sensor harness, door position switch, latchbolt switch, and touchbar switch to the top of the device head as shown in Figure 23.

Note: For Precision 2300, Sargent 8800, or any Von Duprin application without RQE, pull the door position switch and sensor harness wires into the battery bracket area rather than the device head.

Note: For Von Duprin applications with RQE, touchbar switch wires must be re-routed into the device head in such a way as to avoid any pinching or contact with moving parts. The sensor harness can be routed into the head area through any suitable hole in the chassis.

- 2 Cut the wires to the appropriate length (that is, remove the excess to leave minimal slack after the spliced connections).
- 3 Strip the wire ends for connection using the butt-splices.
- 4 Make wire connections as detailed in Figure 24 or Figure 25 using the butt-splices (provided).

Note: For Sargent devices, connect the door position switch to the two white sensor harness wires.

Note: In the case of unused wires, be sure to cover the ends with electrical tape.

Installing the exit hardware and trim

- 5 Make sure to route and dress the wires so that they do not interfere with any moving parts.
- 6 Tape the wires to the device head (some tape is provided).

Note: For Precision 2200, 2700, and 2800 exit devices, use cable ties in addition to the tape, to hold wires as shown in Figure 26.

- 7 Install the case cover.

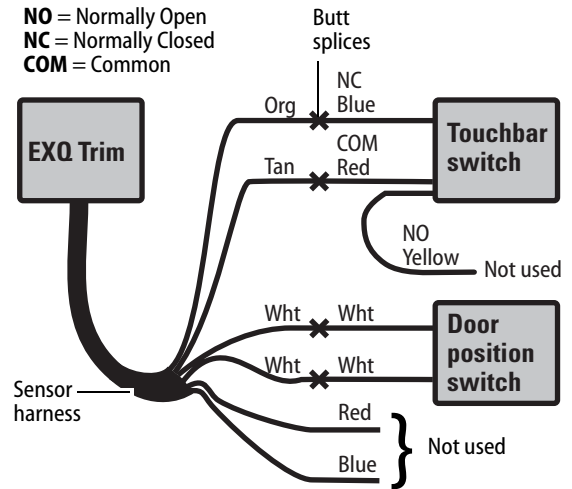


Figure 25 Schematic diagram for connecting Von Duprin sensor harness wires

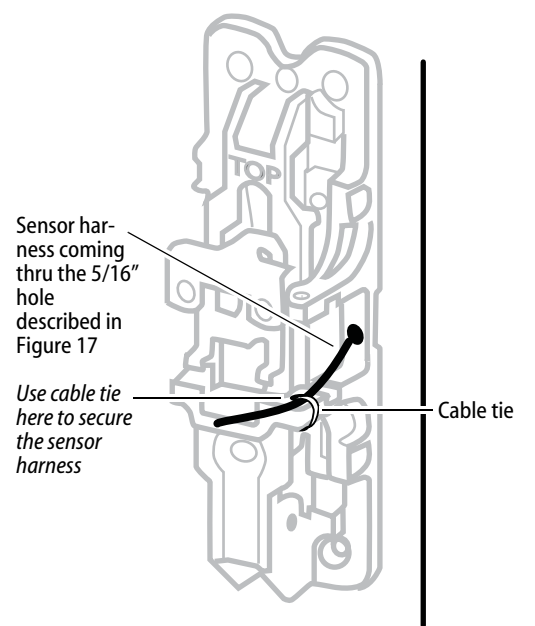


Figure 26 Using cable ties to hold wires for Precision 2200, 2700, and 2800 exit devices

Installing the exit hardware and trim

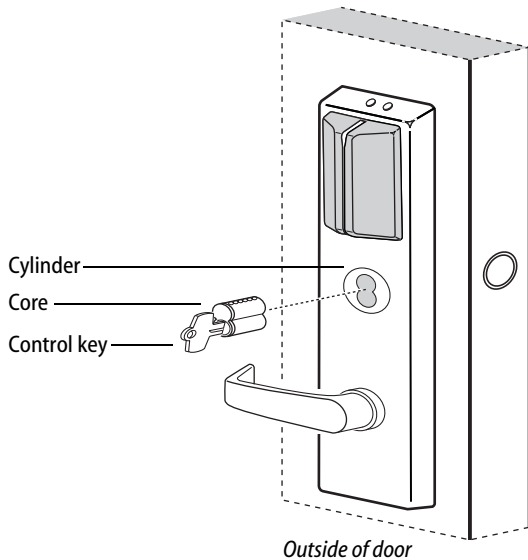


Figure 27 Installing the core

14 Install core

- 1 Insert the control key into the core and rotate the key 15 degrees to the right.
- 2 With the control key in the core, insert the core into the cylinder as shown in Figure 27.
- 3 Rotate the control key 15 degrees to the left and withdraw the key.

Caution: The control key can be used to remove cores and to access doors. Provide adequate security for the control key.

15 Install mortise case faceplate (mortise exit devices only)

- 1 Secure the mortise case faceplate to the mortise case; follow the instructions provided by the exit hardware manufacturer.
- 2 Check the lock for proper operation.

16 Install strike(s)

Note: If retrofitting the trim to an existing exit hardware installation, skip this task.

- 1 Install the strike(s) in the door frame or door stop; follow the instructions provided by the exit hardware manufacturer.
- 2 Check the lock for proper alignment between the strike(s) and latch(es).

Completing the installation

17 Install battery bracket on door

- 1 Position the battery bracket on the inside of the door as shown in Figure 28.

Note: If installing with a surface rod exit device, the battery bracket is mounted over the upper rod.

- 2 Secure the battery bracket to the door using two of the mounting screws provided.

Note: For doors less than 2" in thickness, use the 1 1/4" screws. For doors 2" or greater, use the 1 3/4" screws.

Caution: When routing the wire harness, make sure the wires are not routed across any sharp edges or over any surface that could damage their sleeving or wire insulation. Keep away from any moving parts.

- 3 Tape all wires to the bracket using the tape provided.

Note: For Precision 2300, Sargent 8800, or any Von Duprin exit device without RQE, sensor harness and door position switch wires will also be run into this area of the battery bracket.

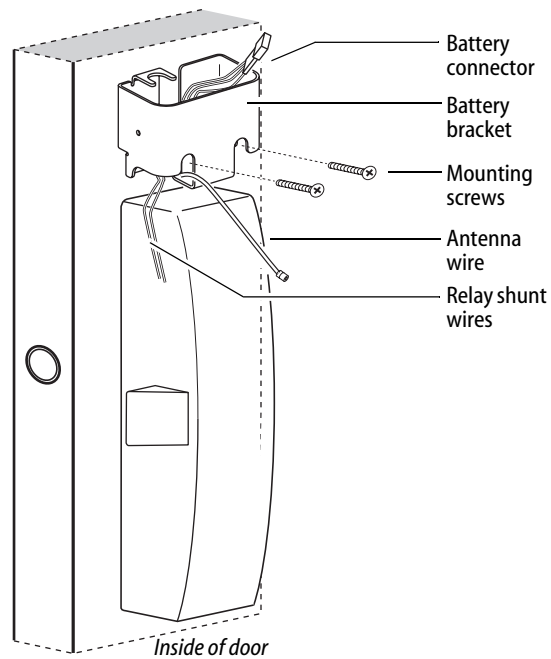


Figure 28 Installing the battery bracket on the door

Completing the installation

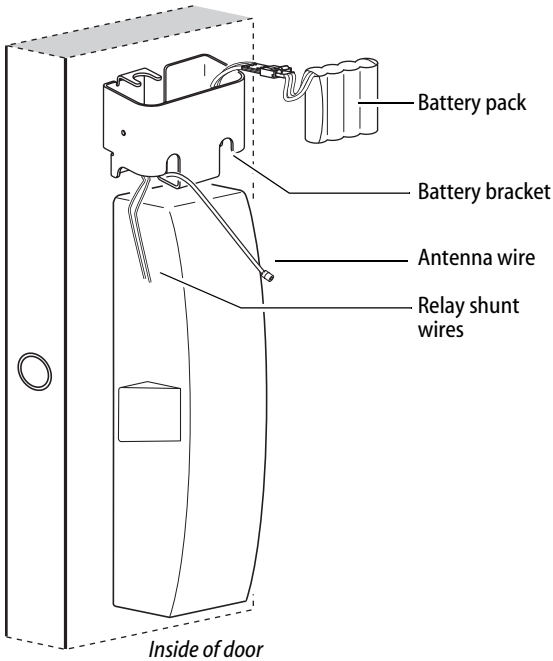


Figure 29 Connecting the battery pack

18 Install battery pack in bracket

- 1 Connect the battery pack to the battery connector on the wire harness as shown in Figure 29.

Caution: When connecting the battery pack, make sure:

- there are no loose wire connections where the wires are inserted into the connectors
- the connectors are firmly mated.

- 2 Place the battery pack in the holder inside the battery bracket and dress the wire harness inside the bracket.

Caution: The battery pack fit will be snug. Make sure you do not damage the sleeving on the battery pack. Doing so may cause the batteries to drain.

- 3 If installing with a surface vertical rod device, dress the wire harness inside the bracket to the left of the rod so that the harness will not interfere with the movement of the rods.

We recommend that you loosely coil the harness and use a cable tie to secure the coil. To avoid damaging the harness, do not put any sharp bends in it or flex it close to the connectors.

Caution: Failure to dress the wire harness away from the rod could damage the wire harness, causing the lock's electronics to not work properly.

Completing the installation

19 Install battery/antenna cover

- 1 **If installing with a surface vertical rod exit device,** carefully use a razor blade to remove the knockouts for the rod from the battery cover. See Figure 30.
- 2 Connect the antenna to its mating connector.
- 3 Coil the antenna wire carefully inside the battery cover.

Caution: Carefully bend, but do not twist or kink the antenna wire. Doing so may significantly reduce or completely interrupt signal transmission.

- 4 **Making sure that the battery/antenna cover does not pinch any wires,** place the battery/antenna cover over the bracket and battery.
- 5 Secure the battery cover with the provided self-tapping screws.

Caution: Tighten screws firmly but do not over-tighten. Over-tightening may strip screw holes or crack the cover.

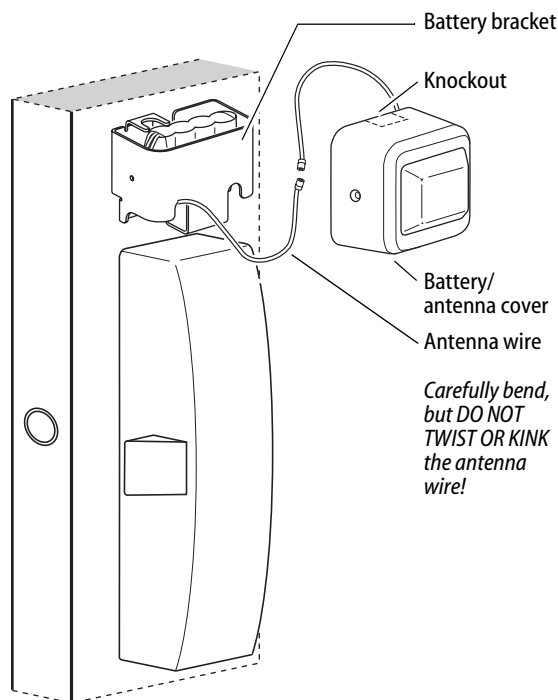


Figure 30 Installing the battery cover over the battery bracket and connecting the antenna

Completing the installation

20 Test lock

For EXQ Locks with keypad only:

To test the lock for proper operation before the lock is programmed, follow these instructions:

- 1 Press **1234**.
- 2 Press **#**.
The green light flashes and the locking mechanism unlocks.
- 3 Turn the lever and open the door.

For all other locks:

To test the lock for proper operation before the lock is programmed, use the temporary operator card that came with the lock. This card is for temporary use only. After permanent cards have been programmed for the lock, the temporary card should be deleted.

- 1 Use the temporary operator card to activate the lock.
- 2 Use the temporary operator card to access the lock.
The green light flashes and the locking mechanism unlocks.
- 3 Turn the lever or knob and open the door.
- 4 With the door closed, insert and turn the key to unlatch the door.

If the mechanism doesn't unlock, refer to the following table.

LEDs	Sounder	You should
Single red flash	1 short tone	Use the card at a moderate speed.
Single red flash	3 short tones	Use the temporary operator card provided with the lock. or Perform a door reset to restore to the factory default settings (the lock may already be associated/programmed)
Alternating red and green flashes	none	Check the motor connection.
none	none	Check the battery connection.

Important: When the trim and exit hardware installation is complete, perform all testing specified by the exit hardware manufacturer.

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Installation Instructions for Stanley Wi-Q™ Technology WQX-WAC Wireless Access Controllers

Introduction

The WQX Wireless Access Controller (WAC) controls access to one door or access point. It runs on four AA batteries, or can be externally powered with a DC power supply. The WAC can be purchased integrated in a box with power supply or can be purchased stand-alone. If purchased as a stand-alone unit the power supply powering the WAC (WQX alone with no other devices connected) must be able to deliver at least 500mA.^a

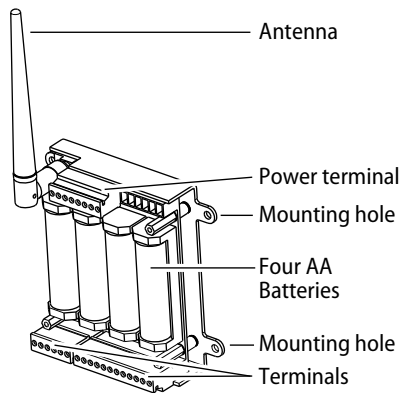


Figure 1 Wireless Access Controller, shown without cover

Site survey

If a site survey has not been completed, contact your Stanley Representative.

Components checklist

Use the following checklist to make sure that you have the items necessary to install your Wireless Access Controller.

Components provided in the box

- Wireless Access Controller with antenna
- Batteries
- Documentation

Optional components

- Indoor ceiling mount omni-directional antenna
- Indoor wall mount directional antenna
- Outdoor mount directional antenna
- Outdoor mount omni-directional antenna
- Enclosure

1 Mount Wireless Access Controller

The standard WAC comes with a small antenna, but you may need a supplemental antenna for your application. See the *Site Survey Tool Quick Reference Guide* for more antenna information.

- 1 Determine the appropriate location for the wireless single door controller, making sure that the antenna will have maximum exposure for signal transmission.
- 2 Mount the Wireless Access Controller box.
- 3 Screw on antenna as shown in Figure 1 so that it's vertical and upright.
- 4 Install batteries if needed.

2 Install other hardware as necessary

Make sure all other system components are mounted and installed. System components may include:

- Electronic or electric lock or strike
- Request-to-exit switch
- Power supply for lock or strike
- Reader: either magstripe, proximity, keypad or combination readers. The default reader is a Weigand, 26-bit, 8-bit word type.

a. Power for WAC device only. Calculate power requirements for attached readers separately.

Planning the installation

Manufacturer	Part number
Stanley	909028065
Indala	FP2511A
XceedID	XF-1050-B
HID	5355AGK00
Essex	KTP-163-SN

- Sensors: door, latch, deadbolt, key, and/or other.
Note: Some sensors may be included inside the lock. The BEST 45HW may include door, latch, deadbolt, and key sensors.

3 Pull wire and make connections to wireless access controller

- 1 Determine what connections you need to make based on your application.
- 2 Using Figure 2 and Table 1 make the connections.

Table 1 WAC Connections and descriptions

Terminal	Description
Strike NC	Normally-closed terminal where the locking mechanism connects
Strike COM	Common return path for current through the locking mechanism
Strike NO	Normally-open terminal where the locking mechanism connects
SHUNT NC	Normally-closed relay terminal that shunts door force alarm if access is granted or RQE is activated
SHUNT COM	Return path for the shunt relay
SHUNT NO	Normally-open terminal for the shunt relay
KEY	Detects and reports a key-over-ride event

Table 1 WAC Connections and descriptions

Terminal	Description
GND	Return path for the key-over-ride switch and RQE
RQE	Request-to-exit input
DS	Door status input
GND	Return path for door status and latch status
LS	Latch status input
WIEGAND 0	Wiegand D0 terminal
GND	Ground (the wiegand reader must be grounded at this point)
WIEGAND1	Wiegand D1 terminal
RED	Red LED control input
GND	LED ground point
GRN	Green LED control input
ANT	Antenna connection
Negative DC terminal	Power connection
Negative DC terminal	Power connection. Use the extra negative DC terminal to 'daisy-chain' power to another wireless access controller or reader. ^a
Positive DC 9–24V terminal	Power connection
Positive DC 9–24V terminal	Power connection. Use the extra positive DC terminal to 'daisy-chain' power to another wireless access controller or reader. ^a

- a. Make sure the power supply is of appropriate wattage to supply enough power.

Important note: When using the WAC to daisy-chain other devices, be sure that the other devices will accept the voltage supplied to the WAC.

Planning the installation

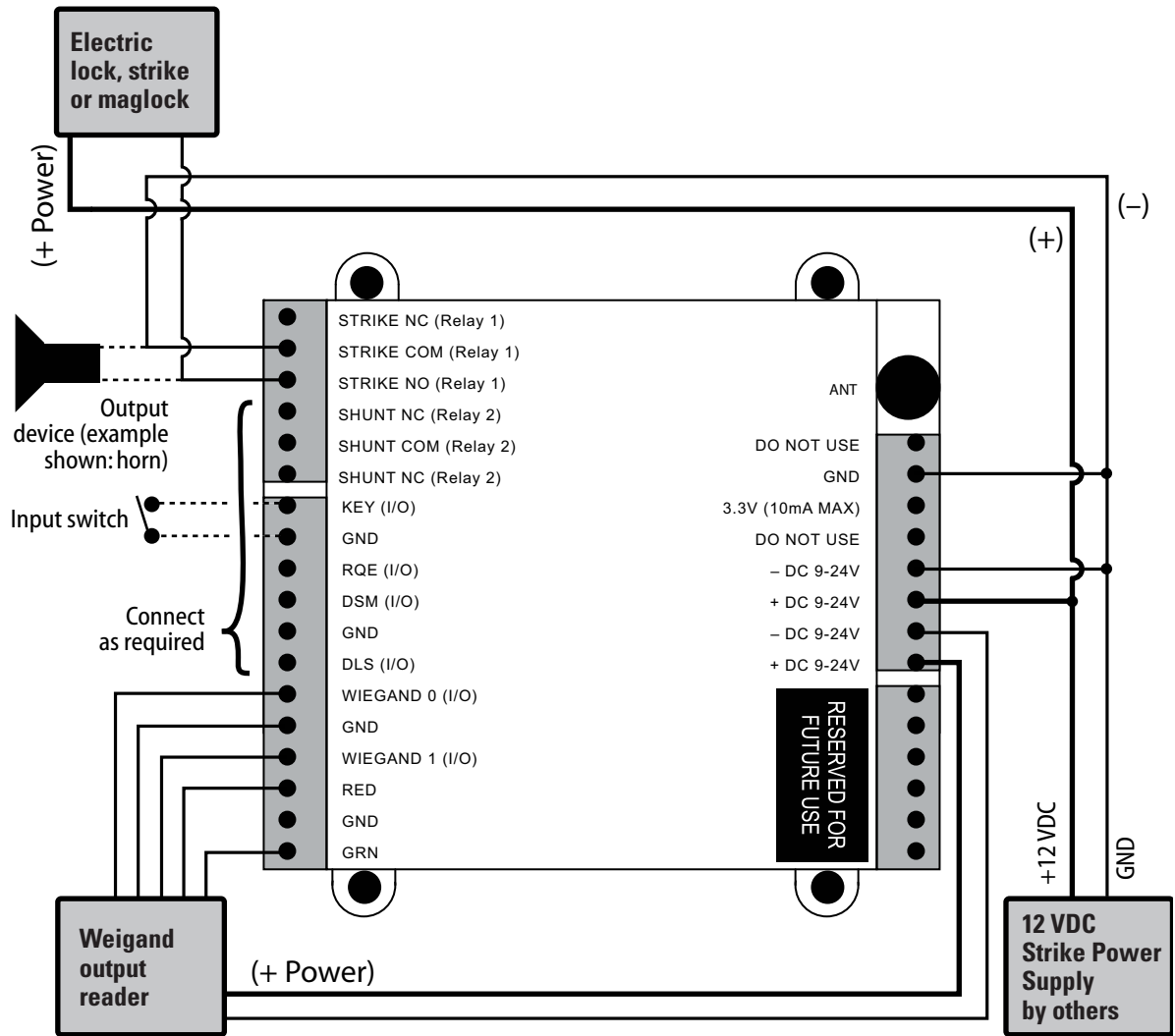


Figure 2 Wireless Access Controller, typical installation.
See Table 1 for a description of connections.

Planning the installation

4 Sign on WAC

The process of bringing a WAC into the Stanley Wi-Q™ Access Management System (AMS) is known as signing on.

If the connected reader doesn't have a keypad, a sign-on keypad is required. If no wired keypad is installed, a sign-on keypad is available as accessory WQD-WAC-PAD.

Connect the sign-on keypad to the WAC Wireless Access Controller

- 1 Once the WAC is wired, connect the sign-on keypad to the WAC reader terminal.

Signing on a WAC Wireless Access Controller

- 2 Enter **5678** on the keypad.

This will cause the green LED to blink the on the WAC three times.

- 3 Enter the sign-on key for the facility in the AMS database.

Note: *The sign-on key can be found under the facility sign-on credential field in the Wi-Q Technology™ Access Management System (AMS). Refer to the Stanley Wi-Q AMS User Guide.*

You should see the red and green LEDs blinking and the blue light turns ON to indicate that the radio on the board is active. Once the reader signs on to one of the portal gateways in your facility, the green LED on the WAC blinks three times. At this point the WAC should appear under the New Facility Item folder in AMS (it may take up to 2 minutes for this to occur).

5 Test WAC

For Wireless Access Controller with keypad only:

To test the WAC for proper operation before it's programmed, follow these instructions:

- 1 Press **1234**.
- 2 Press **#**.

The green light flashes and the locking mechanism unlocks or you should hear a relay click.

- 3 Operate the lock and open the door.

For Wireless Access Controllers wired to card readers:

To test the lock for proper operation before the lock is programmed, use the temporary operator card that came with the device. This card is for temporary use only. After permanent cards have been programmed into the device, the temporary card will no longer unlock the lock (once users are programmed into the WAC).

- 1 Using the installed reader to access the lock, present the temporary operator card to gain access.

The green light flashes and the locking mechanism unlocks.

If the mechanism doesn't unlock, use the on-board LEDs and refer to the following table.

WAC on-board LEDs	You should
Single red flash	Use the card at a moderate speed.
Three red flashes	Use the temporary operator card provided with the lock. or Perform a deep reset to restore to the factory default settings (the lock may already be associated/programmed)

Planning the installation

WAC on-board LEDs	You should
none	Check the battery connection.
no blue light	Reset. Sign-on the WAC using the sign-on procedure.

LEDs	You should
Single red flash	Use the card at a moderate speed.
Three red flashes	Use the temporary operator card provided with the lock.

Resetting the WAC

The WAC has two reset functions:

- **Soft reset** – restores previous functionality. Use this under normal operation. It will reset the WAC, but DOES NOT ERASE USERS.
- **Hard reset** – restores factory settings. Use this reset only when moving the WAC or after exhausting all other troubleshooting options.

Using the soft reset function

- Hold the reset button until the green LED flashes five times and then release. See Figure 3.
Lights will alternate red/green rapidly.
The WAC is restored to its previous functionality

Using the hard reset function

Caution: Use this procedure only to restore the factory default settings. Performing these steps will erase all user data that may have been programmed into the WAC.

- Hold the reset button for up to 30 seconds — until the green LED flashes and then the red LED flashes three times. Then release. See Figure 3.
All users are erased and the WAC is restored to its factory default settings.

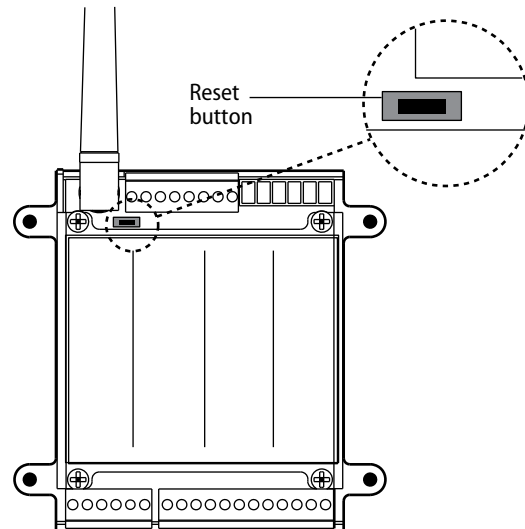


Figure 3 Using the reset button

Installation Instructions for Stanley Wi-Q™ Technology WQX-WAC Wireless Access Controllers

STANLEY

OMNILOCK® Installation Instructions for Stanley Omnilock 9KOM Cylindrical Locks

Planning the installation

Contents

These installation instructions describe how to install your 9KOM Cylindrical Lock. Topics covered include:

<i>Planning the installation</i>	1
<i>Preparing the door and door jamb</i>	2
<i>Installing the lock</i>	7
<i>Completing the installation</i>	9

Site survey

Use the following survey to record information about the installation site. You need this information to determine how to prepare the door for the lock.

Door information

Door handing and bevel:

- Left hand (LH)
- Left hand, reverse bevel (LHRB)
- Right hand (RH)
- Right hand, reverse bevel (RHRB)

Door thickness: 1-3/4 to 2 inches (44 to 50 mm). If other than 1 3/4" (44 mm), see "Optional: Adjust for door thickness" on page 6.

Environment information

Model	Side of door	Temperature Range	Exposure
Standard	Outside	+32°F to +129°F 0°C to +54°C	Drip proof. Inadvertent water splash accepted.
Weatherized	Outside	-4°F to +129°F -20°C to +54°C	Direct exposure to rain and snow
Extreme Weatherized ^a	Outside	-40°F to +129°F -40°C to +54°C	Direct exposure to rain and snow
	Inside	+32°F to +129°F 0°C to +54°C	N/A

a. See Stanley installation instruction *Addendum (T83317) Extreme Weatherized Installation* for the extreme weatherized model.

Components checklist

Use the following checklist to make sure that you have the items necessary to install your Electronic Stand-alone Cylindrical Lock.

Components provided in the box:

- Outside lever
- Inside lever
- Throw member package
- Latch
- Strike package
- Through-bolt screws
- Installation template and instructions
- Four AA size batteries (or 2 weatherized packs)

Other components:

- Programming Default ID Card (provided with software)

Special tools checklist

Use the following checklist to make sure that you have the special tools necessary to install your Electronic Stand-alone Cylindrical Lock.

- KD303 Drill jig
- KD325 Strike plate locating pin
- KD315 Faceplate marking chisel

Preparing the door and door jamb

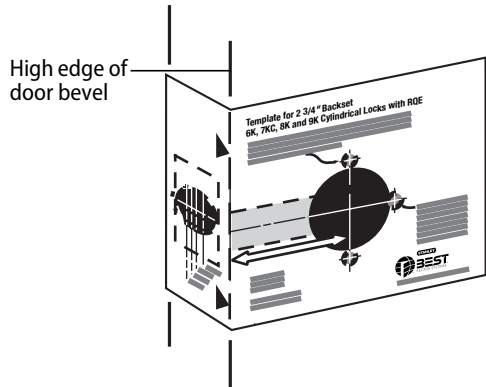


Figure 1 Positioning the template

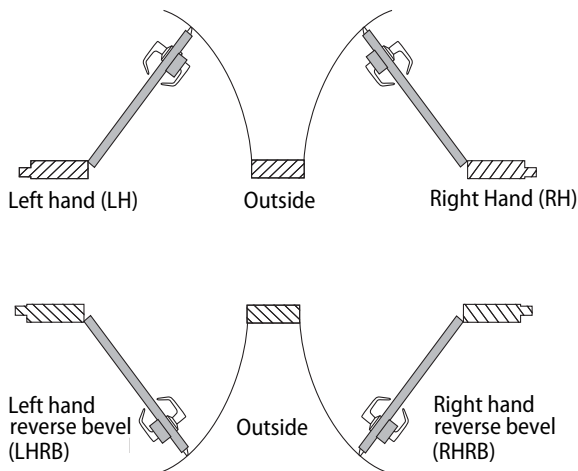


Figure 2 Door handing chart

1 Position template and mark drill points

Note: If the door is a fabricated hollow metal door, determine whether it is properly reinforced to support the lock. If door reinforcement is not adequate, consult the door manufacturer for information on proper reinforcement. For dimensions for preparing metal doors for locks with 2 3/4" (70 mm) backset, see Template T56052 or T56053 Door and Frame Preparation for 63K, 73KC, 83K, and 93K Cylindrical Locks.

Note 1: If the door is a LH or RH door, mark the inside of the door. If the door is a LHRB or RHRB door, mark the outside of the door. See Figure 2.

Note 2: For Extreme Weatherized model template, see Installation Addendum for Stanley Omnilock 9KOM Extreme Weatherized Locks (T83319).

For uncut doors and frames

- 1 Measure and mark the horizontal centerline of the lever (the centerline for the chassis hole) on the door and door jamb. Mark the vertical centerline of the door edge.

Note: The recommended height from the floor to the centerline of the lock (centerline of 2 1/8" (54 mm) hole) is 40 5/16" (1024 mm).

- 2 Fold the template on the dashed line and carefully place it in position on the high side of the door bevel as shown in Figure 1.

Note: For steel frame applications, align the template's horizontal centerline for the latch with the horizontal centerline of the frame's strike preparation.

- 3 Tape the template to the door.
- 4 Center punch the necessary drill points. Refer to the instructions on the template.

Installation Instructions for Stanley Omnilock 9KOM Cylindrical Locks

Preparing the door and door jamb

For doors with standard cylindrical preparation

- 1 Fold the template on the dashed line. Looking through the hole from the opposite side of the door, align the template so that you see the template outline of the 2 1/8" (54 mm) diameter chassis hole.
- 2 Tape the template to the door and enter punch the necessary drill points.

2 Drill holes and mortise for latch face

Note: To locate the center of a hole on the opposite side of the door, drill a pilot hole completely through the door.

- 1 Drill the holes in order listed below:
 - **motor wire hole**
 - ◆ 7/16" (11 mm) diameter through door
 - ◆ always drill before drilling chassis hole
 - **chassis hole**
 - ◆ 2 1/8" (54 mm) diameter through door
 - ◆ drill after drilling motor wire hole
 - **latch hole**
 - ◆ 1" (25 mm) diameter
 - ◆ meets chassis hole
 - (OPTIONAL) **Door Status Switch**
 - ◆ 1" (25 mm) diameter on door
 - ◆ 1" (25 mm) diameter on jamb
 - ◆ 1-3/4" (44mm) deep on door
 - ◆ 1" (25 mm) deep on jamb

Note: The latch tube prongs should be centered and should project into the chassis hole.

- 2 Mortise the edge of the door to fit the latch face.
- 3 Drill the holes for the latch screws.
- 4 Install the latch in the door as shown in Figure 4.
- 5 For optional door status switch: Position the bit inside the hole. Then drill a 3/8" (10mm) channel at an angle that will connect the door status switch hole to the chassis hole as shown in Figure 4.
- 6 Press fit both switch pieces as shown in Figure 4.
- 7 Check that the door swings freely.

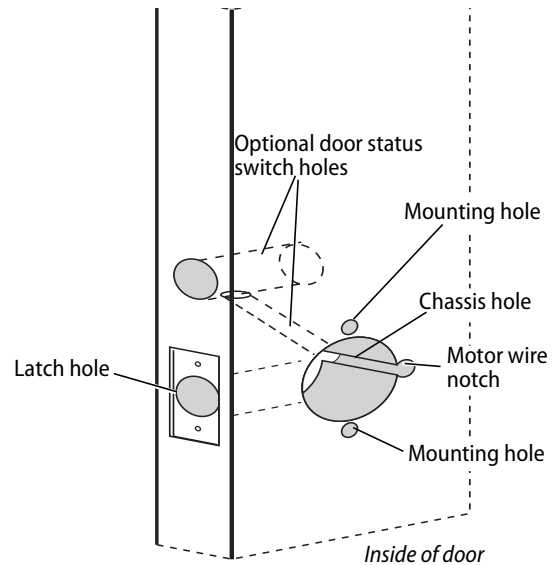


Figure 3 Drilling holes and mortising for the latch face

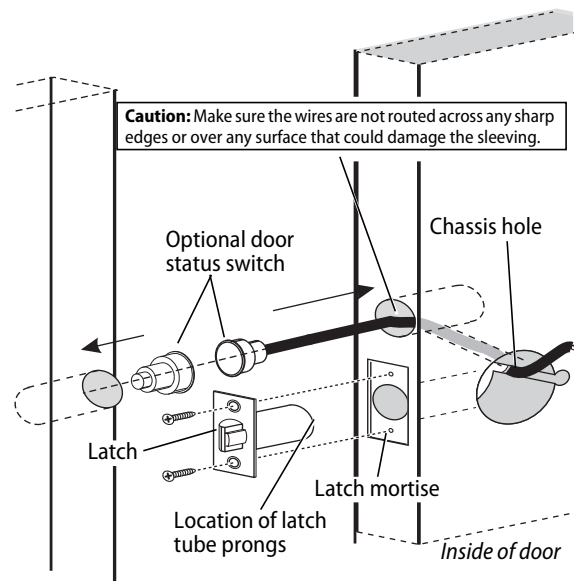


Figure 4 Installing the latch in the door

Preparing the door and door jamb

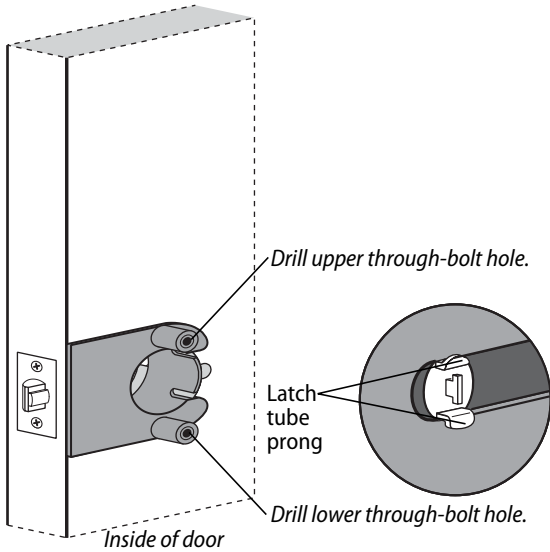


Figure 5 Installing the drill jig and drilling the through-bolt holes

Use drill jig to drill through-bolt holes

- 1 Press the drill jig (KD303) onto the door, engaging it with the latch tube prongs (see the close-up in Figure 5). Make sure the front edge of the jig is parallel with the door edge.
- 2 Drill the through-bolt holes (5/16" (8 mm) diameter) halfway into the door.
- 3 Turn over the drill jig and repeat steps 1 and 2 from the opposite side of the door.

Note 2: Replace the drill jig after 10 door preparations.

Preparing the door and door jamb

3 Install strike box and strike plate

- 1 Align with the center of the latchbolt, then mortise the door jamb to fit the strike box and strike plate. See Figure 6.
- 2 Drill the holes for the screws used to install the strike box and strike plate.
- 3 Insert the strike box and secure the strike with the two screws provided.
- 4 Check the position of the deadlocking plunger against the strike plate.

Caution: The deadlocking plunger of the latchbolt must make contact with the strike plate, as shown in Figure 7. The plunger deadlocks the latchbolt and helps prevent someone from forcing the latch open when the door is closed.

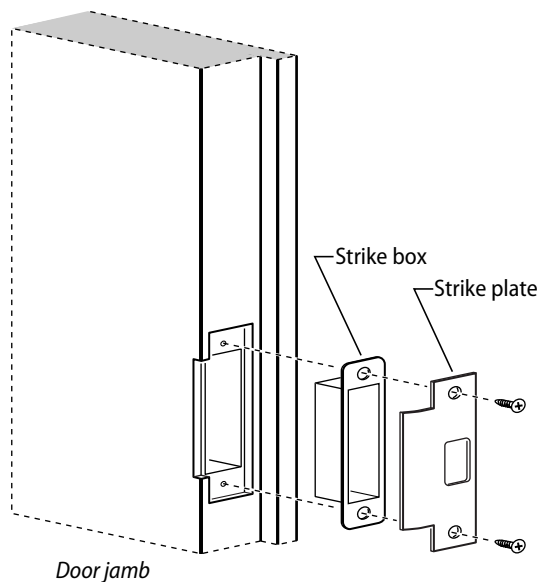


Figure 6 Installing the strike box and strike plate

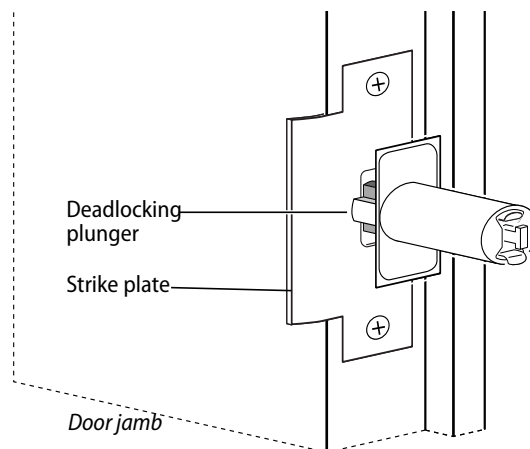


Figure 7 Aligning the deadlocking plunger with the strike plate

Installation Instructions for Stanley Omnilock 9KOM Cylindrical Locks

Preparing the door and door jamb

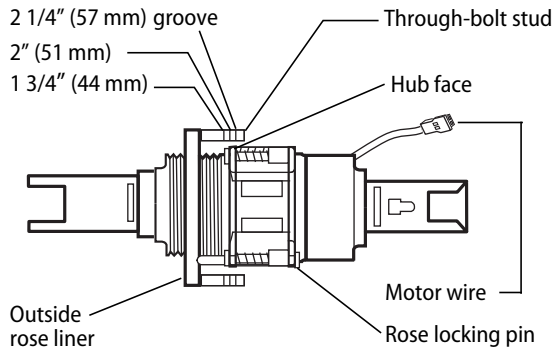


Figure 8 Adjusting the rose liner for the door

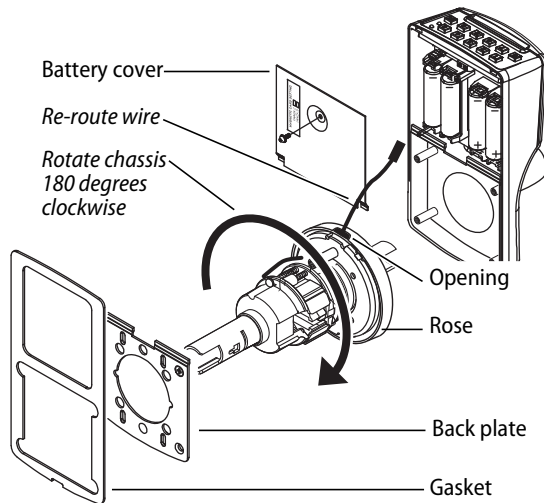


Figure 9 Adjusting the rose liner for the door

4 Optional: Adjust for door thickness

Note: The default door thickness is 1 3/4" (44 mm). If your door is thicker than 1 3/4" (44 mm), use the following instructions.

- 1 Determine the door's thickness.
- 2 Pull the rose locking pin and rotate the outside rose liner until the proper groove on the through-bolt stud lines up with the hub face. See Figure 8.

5 Optional: Adjust handing

Note: This is required only if the lock hand does not meet your application. The lockset is normally preset for a right-hand door. Verify the handing of the lock per Figure 2 and, if required, change the handing of the lock.

- 1 In order: remove the gasket, battery cover, and back plate. See Figure 9.
- 2 Remove the chassis.
- 3 Rotate the chassis 180 degrees clockwise (looking at the back or opposite the latch).

Note: Do not pull the wire.

- 4 Pry off the rose that holds the wire in place.
- 5 Re-route the wire back through the opening in the rose.
- 6 Press the rose back on.
- 7 Reinstall the chassis.

Installation Instructions for Stanley Omnilock 9KOM Cylindrical Locks

Installing the lock

6 Install batteries

Four alkaline AA batteries (or two weatherized packs, if installing a weatherized unit) are furnished with your Omnilock system and must be installed before proceeding.

Note: For the Extreme Weatherized model, see *Installation Addendum for Stanley Omnilock 9KOM Extreme Weatherized Locks (T83319) for battery and escutcheon installation.*

- 1 Remove the gasket from the rear of the housing assembly as shown in Figure 10.
- 2 Remove the screw from the battery cover and remove the cover.
- 3 Install batteries with proper polarity as shown in Figure 11. (For weatherized battery packs, simply connect the wires from the battery pack to the circuit board as shown in Figure 12.)

Note: Be sure red and black motor wires are connected before attempting step 4. Align the wires together so that the wire colors match.

- 4 Press and hold the reset button on the PC board (as shown in Figure 11) until the green light on the keypad flashes (about three seconds), then release the button. If the green light does not flash see "Troubleshooting" on page 10.
- 5 Replace the battery cover. See Figure 10. Make sure that the tabs on the lower edge of the battery cover are hooked over the edge of the back plate and secure the cover with the screw.
- 6 Replace the gasket. See Figure 10. Make sure that it is inside the edge of the housing.
- 7 A label on the housing assembly battery cover indicates the magnetic card track (track 2 or track 3) that the system is set to read. See Figure 10.

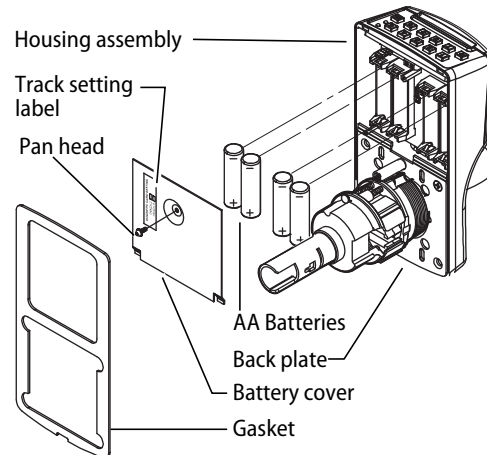


Figure 10 Installing batteries

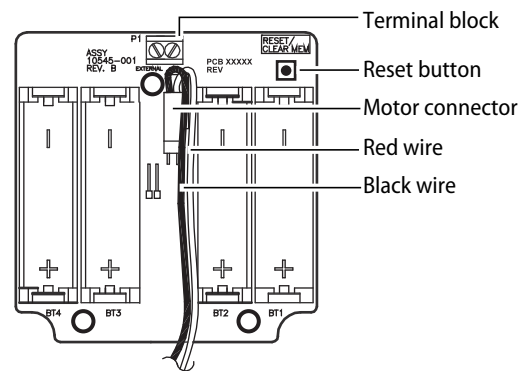


Figure 11 Using the reset button

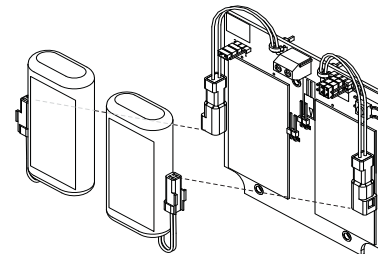


Figure 12 Weatherized battery packs

Stanley Omnilock

a Product Group of Stanley Security Solutions, Inc.

Installing the lock

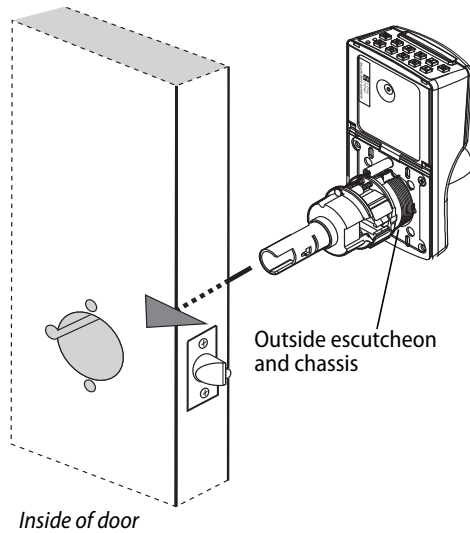


Figure 13 Installing the outside escutcheon and lock chassis

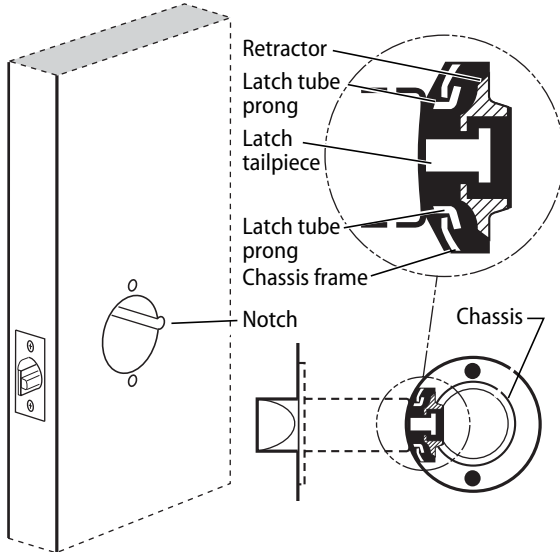


Figure 14 Installing the lock chassis and engaging the retractor in the latch

7 Install outside escutcheon and lock chassis and engage retractor in latch

- 1 From the outside of the door, insert the lock chassis and outside escutcheon into the 2 1/8" (54 mm) chassis hole. See Figure 13.
- 2 Make sure that the latch tube prongs engage the chassis frame and that the latch tailpiece engages the retractor. See Figure 14.

Installation Instructions for Stanley Omnilock 9KOM Cylindrical Locks

Installing the lock

8 Install through-bolts, inside rose and lever

- 1 Place the inside rose liner on the chassis, aligning the holes in the rose liner with the holes prepared in the door as shown in Figure 15.
- 2 Install the through-bolts through the rose liner and door in the top and bottom holes.
- 3 Tighten the rose liner on the door with the through-bolts.
- 4 Press the inside rose onto the rose liner.
- 5 Push the inside lever onto the chassis shaft until it clicks in place.

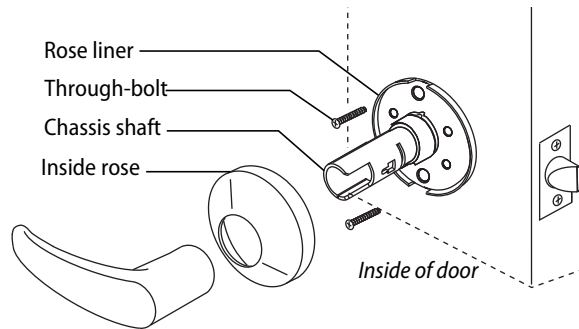


Figure 15 Installing the through-bolts and rose liner

9 Install outside lever, core and throw member

For a non-IC lever handle

- 1 Place the cylinder inside the outside lever. See Figure 16.
- 2 Install the retainer into the outside lever.
- 3 Insert the key into the cylinder and rotate the key 90 degrees clockwise. Slide the lever assembly onto the chassis shaft until the lever clicks as it engages against the lever catch.
- 4 Pull on the lever to test that the lever catch is engaged. Turn the key back to the original position and remove it from the cylinder.

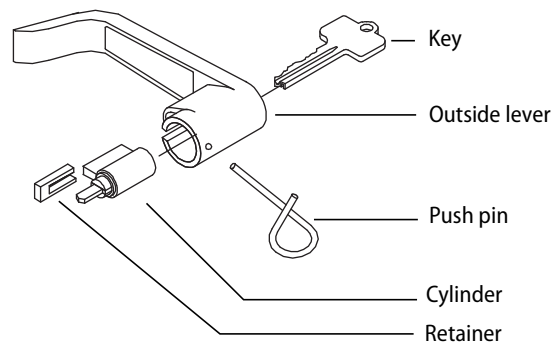


Figure 16 Installing outside lever (applies to both IC and non-IC levers)

For interchangeable core handles

- 1 Push the outside lever onto the chassis shaft until the lever clicks as it engages against the lever catch.
- 2 Install the blocking plate onto the throw member, then install the throw member in the core. See Figure 17.

Caution: You must use the blocking plate to prevent unauthorized access.

For 6-pin core only: Install the plastic spacer (not shown, supplied with permanent cores), instead of the blocking plate, on the throw member.

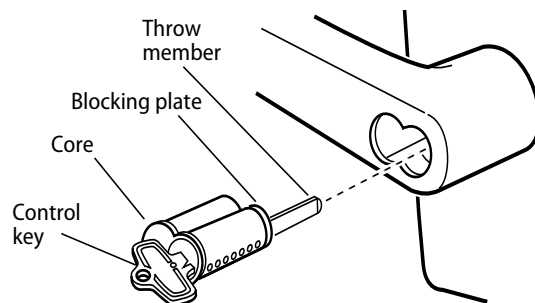


Figure 17 Installing the core

Stanley Omnilock

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Installing the lock

- 3 Insert the control key into the core and rotate the key 15 degrees to the right.
- 4 Insert the throw member into the core.
- 5 Insert the core and throw member into the lever with the control key
- 6 Return the control key to the original position and withdraw the key.

Caution: The control key can be used to remove cores and to access doors. Provide adequate security for the control key.

10 Test lock

To test the lock for proper operation before the lock is programmed:

For keypad locks

- 1 Press **1234 for the 2000 series, or 5011234 for the 500 series.**

The green light flashes and the latch unlocks.

- 2 Turn the lever and open the door.

During the unlock time, the green light flashes. Then the red light flashes and the latch relocks.

For magnetic stripe or proximity card only locks

Note: If the lock has a proximity card reader, it may have already been activated by the presence of an object near the card reader.

- 1 Align the magnetic stripe card with the V mark by the card slot.

- 2 Insert and then remove the card.

The green light flashes and the latch unlocks.

- 3 Turn the lever and open the door.

During the unlock time, if using the Programming Default ID Card, the green light flashes. Then the red light flashes and the latch relocks.

Troubleshooting

If the mechanism does not unlock, remove the battery cover and check for proper orientation and seating of the batteries and motor connector. Ensure that wires are not pinched. Reset the electronics by pressing and holding the reset button on the circuit board until the light flashes green (approx three seconds), then release. See Figure 12.

The system will go through a self-test and the green light will flash five times. You will hear the lock unlock, then relock three times. A red flash indicates a PC board or drive system problem. If a red flash or no flash is observed, check for proper orientation and seating of the batteries and motor connector, ensure that wires are not pinched, then repeat the reset process.

Installation Instructions for Stanley Omnilock 9KOM Cylindrical Locks

Installing the lock

Removing the levers (when needed)

Removing the IC outside lever

- 1 Insert the control key into the core and rotate the key 15 degrees to the right.
- 2 Remove the core and throw member from the lever.
- 3 Insert a flat blade screwdriver into the figure-8 core hole and against the trapezoid-shaped lever keeper.
- 4 Push the screwdriver blade in the direction of the arrow in Figure 18.

Caution: Use the flat of the screwdriver to push the lever keeper sideways. Using the screwdriver tip to pry the keeper at an angle may result in unseating the retaining spring. For assistance, contact your local Stanley Omnilock dealer.

Note: You will not be able to remove the lever if the screwdriver blade is inserted past the keeper into the center hole.

- 5 Slide the lever from the sleeve.

Removing the non-IC outside lever

- 1 Insert the key into the cylinder and turn it 45 degrees clockwise.
- 2 Depress the lever catch through the hole in the outside lever by using the push pin or other suitable tool. See Figure 19.
- 3 Slide the outside lever off.

Removing the inside lever

- 1 Depress the lever catch through the hole in the inside lever by using the push pin or other suitable tool as shown in Figure 20.
- 2 Slide the inside lever off.

Note: Reinstall lever(s) according to "Install through-bolts, inside rose and lever" on page 9, or "Install outside lever, core and throw member" on page 9

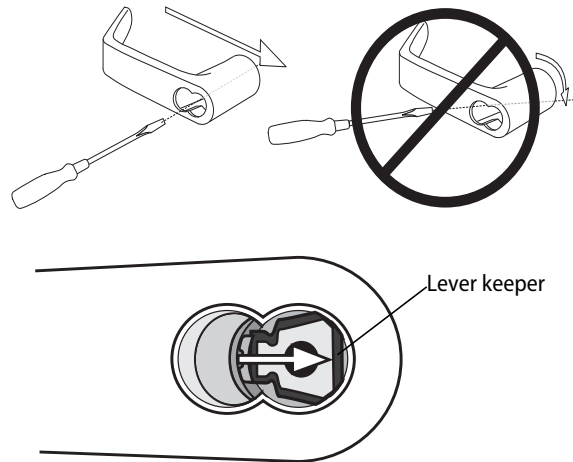


Figure 18 Push the lever keeper to remove the lever

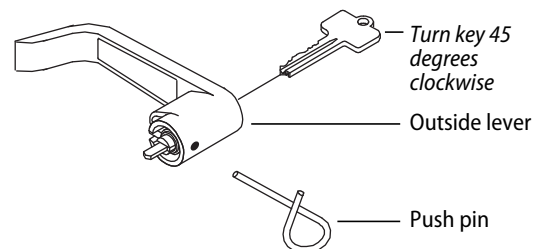


Figure 19 Removing the outside non-IC lever

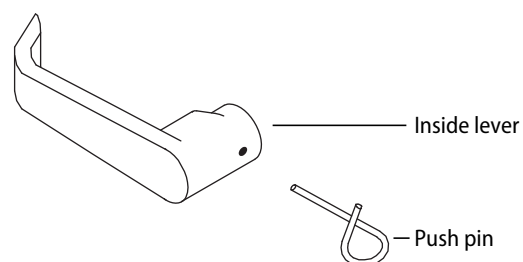


Figure 20 Removing the inside lever

STANLEY

OMNILOCK®

Installation Instructions for Stanley Omnilock 45HOM Mortise Locks

Planning the installation

Contents

These installation instructions describe how to install your 45HOM Mortise Lock. Topics covered include:

Planning the installation.....1
Preparing the door and door jamb.....4
Installing the lock.....7
Completing the installation.....9

Site survey

Use the following survey to record information about the installation site. You need this information to determine how to prepare the door for the lock.

Door information

Door handing and bevel:

If a handing change is required, see “Rotate latchbolt (if necessary)” on page 4.

- Left hand (LH)
- Left hand, reverse bevel (LHRB)
- Right hand (RH)
- Right hand, reverse bevel (RHRB)

Door thickness: 1-3/4 to 2 inches (44 to 50 mm).

Environment information

Model	Side of door	Temperature Range	Exposure
Standard	Outside	+32°F to +129°F 0°C to +54°C	Drip proof. Inadvertent splashing of water spray acceptable.
Weatherized	Outside	-4°F to +129°F -20°C to +54°C	Direct exposure to rain and snow
Extreme Weatherized ^a	Outside	-40°F to +129°F -40°C to +54°C	Direct exposure to rain and snow
	Inside	+32°F to +129°F 0°C to +54°C	N/A

- a. See Stanley installation instruction *Addendum (T83317) Extreme Weatherized Installation* for the extreme weatherized model installation.

Components checklist

Use the following checklist to make sure that you have the items necessary to install your Omnilock Mortise Lock.

Components provided in the box:

- Inside and outside trim cassettes
- Inside and outside rose and rose ring
- Outside escutcheon assembly
- Mortise case assembly
- Mortise cylinder and collar
- Outside lever and spindle assembly
- Inside lever
- Strike package
- Installation template and instructions
- Screw package
- Mortise case faceplate
- Batteries
- Torx T15 driver
- 1/8" hex wrench

Other components:

- Programming Default ID Card (provided with software)

Planning the installation

For hole sizes, see the OM1 Template T83316

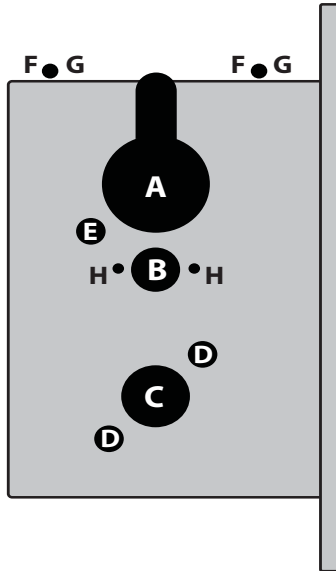


Figure 1 Identifying holes to drill

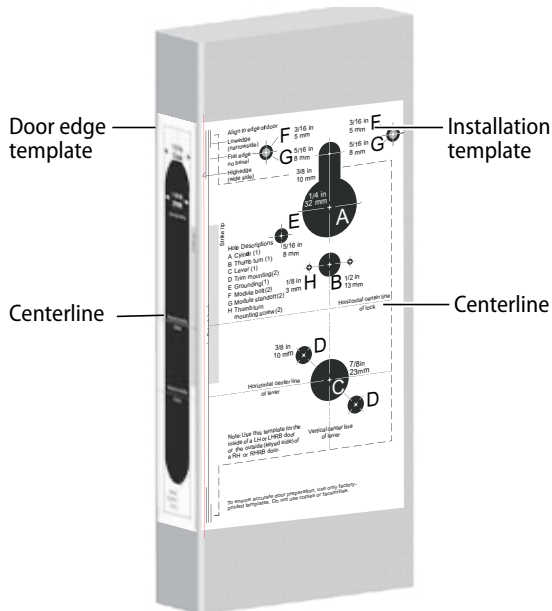


Figure 2 Aligning the templates

1 Identify holes to drill

- 1 Determine the lock function to be installed.
- 2 Determine the inside and outside, hand, and bevel of the door.
- 3 See the *Holes by Function* table and Figure 3 to determine the holes to be drilled for the lock function.

Holes by Function	Functions			
	DV		TV	
	In	Out	In	Out
A Cylinder		■		■
B Thumb turn			■	
C Lever ^a	Through door		Through door	
D Trim mounting (2 holes) ^a	Through door		Through door	
E Grounding hole		■		■
F Through bolt hole	Through door		Through door	
G Standoff hole		■		■
H Thumb turn mounting screw (2 holes)			■	
J Door Status Switch (Optional)			Door Edge	

- a. Because these holes pass through the mortise pocket, it is recommended that each hole be drilled separately rather than straight through.

2 Position template and mark drill points

Note: If the door is a fabricated hollow metal door, determine whether it is properly reinforced to support the lock. If door reinforcement is not adequate, consult the door manufacturer for information on proper reinforcement. For dimensions for preparing metal doors, see the OM2 Template — Installation Specifications for 45HOM Mortise Locks (T83318).

Installation Instructions for Stanley Omnilock 45HOM Mortise Locks

Planning the installation

- 1 Separate the templates provided on the *OM1 Template — Installation Template for 45H Mortise Locks (T83316)*.

Note: If installing an Extreme Weatherized model, see *Installation Addendum for Stanley Omnilock 45HOM Extreme Weatherized Locks (T83317)*. This includes the template for locating the extreme weatherized module mounting holes.

- 2 Position one of the door edge templates on the door, making sure that the lock case mortise shown on the template aligns with the mortise pocket prepared in the door.
- 3 Using the centerlines on the door edge templates as guides, position the appropriate door template on each side of the door. You need to take the bevel into account. Tape the templates to the door.

3 Center punch and drill holes

- 1 Center punch the necessary drill points. See the instructions on the template.
- 2 Drill the holes.

Note 1: To locate the center of a hole on the opposite side of the door, drill a pilot hole completely through the door.

Note 2: For holes through the door, it is best to drill halfway from each side of the door to prevent the door from splintering.

4 Optional: Install door status switch (Optional for TV function wireless locks only)

- 1 Locate the centerpoint for the door status switch 2 1/2" (64mm) above the top of the faceplate mortise on the edge of the door as shown in Figure 4.
- 2 Drill a 1" (25 mm) diameter hole 1 3/4" (44 mm) deep for the door status switch.
- 3 Position the drill so the tip of the bit is approximately 1" (25 mm) into the hole and the

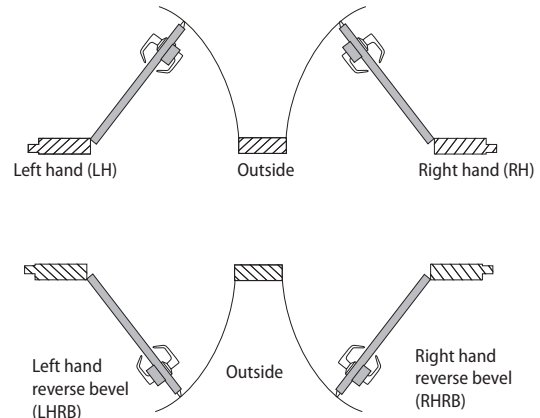


Figure 3 Door Handing Chart

Optional for Wireless TV Models

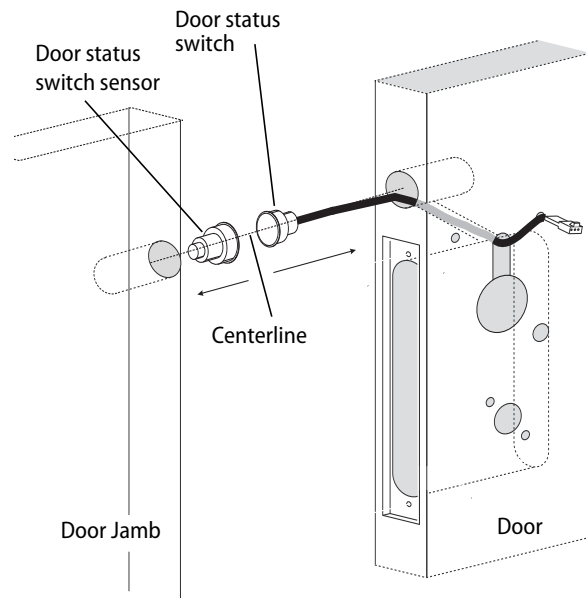


Figure 4 Installing the door status switch

Configuring & installing the mortise

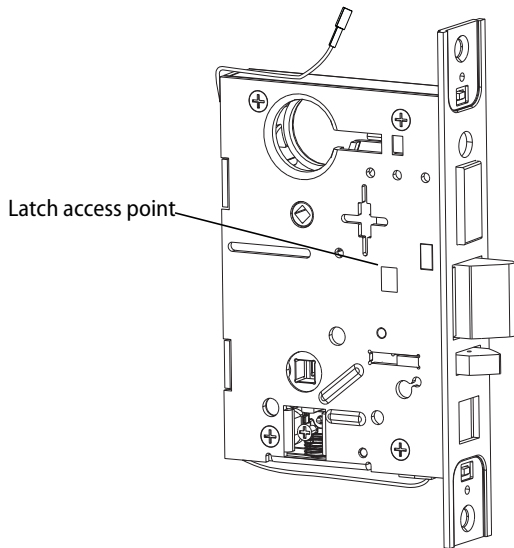


Figure 5 Rotating the latchbolt

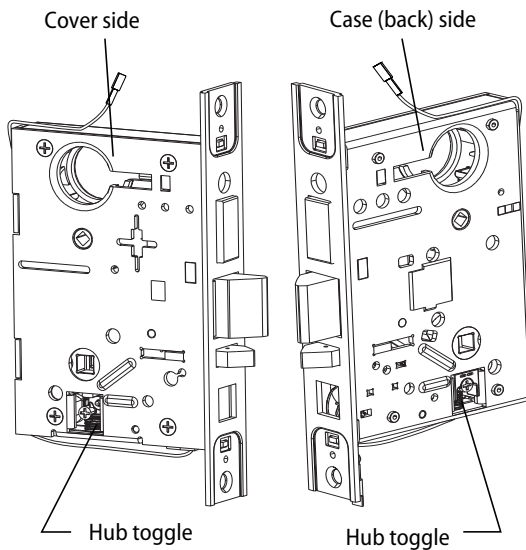


Figure 6 Positioning hub toggles

bit is close to the top edge of the hole. Then drill a 3/8" (10mm) channel at approximately a 35° angle from the door status switch hole into the mortise cavity as shown in Figure 4.

Caution: Make sure the wires are not routed across any sharp edges or over any surface that could damage the sleeving.

- 4 Press fit the door status switch assembly into the door status switch hole.
- 5 On the door jamb, drill a corresponding hole for the door status switch sensor. Use the door switch centerline as a guide. Press fit the sensor into the jamb.

5 Rotate latchbolt (if necessary)

Note: If a function specific mortise case was ordered, some steps for configuring the case have already been performed at the factory.

- 1 Determine whether you need to rotate the latchbolt to match the handing of the door.

Note: The angled surface of the latchbolt must contact the strike when the door closes.

- 2 If you need to rotate the latchbolt, insert a flat blade screwdriver into the latch access point approximately 1/2" (13 mm) into the case and press to extend the latch out of the case. See Figure 5.
- 3 Rotate the latchbolt past 180 degrees, keeping constant pressure on the latch access point. Then allow the latch to rotate back slightly and retract into the case.

6 Position hub toggles (if necessary)

- 1 Check whether the hub toggles are in the proper position for the lock. See the table below.

Hub toggle positions

Inside **down** (always unlocked)

Outside **up** (lockable)

Installation Instructions for Stanley Omnilock 45HOM Mortise Locks

Installing the trim

- For LH & LHRB doors, the inside is the case (back) side of the case and the outside is the cover side of the case. For RH and RHRB doors, the inside is the cover side of the case and the outside is the case (back) side of the case. The cover is mounted to the case with four screws.
- To change the position of a hub toggle, loosen the toggle screw, move the toggle into the desired position, and re-tighten the screw.

7 Install mortise case

- Drill the holes for the case mounting screws.
- Insert the mortise case into the mortise cavity, while feeding the motor wires and any optional sensor wires into the mortise cavity and keyhole to the inside of the door as shown in Figure 7.

Note: The armored front of the mortise case self-adjusts to the door bevel.

Option	DV	TV	Stand Alone	Wireless
Key Override Sensor (KOS)	■	■	■☒	■
Request-to-Exit (RQE)	■	■☒		■
Door Status Switch (DS) ^a	■	■☒		■
Latch Status Switch (LS)	■			■

a. Door status switch is located differently for DV and TV functions.

- Secure the mortise case with the case mounting screws.

8 Install trim mounting plates

- Insert the outside trim mounting plate through the door and mortise case.

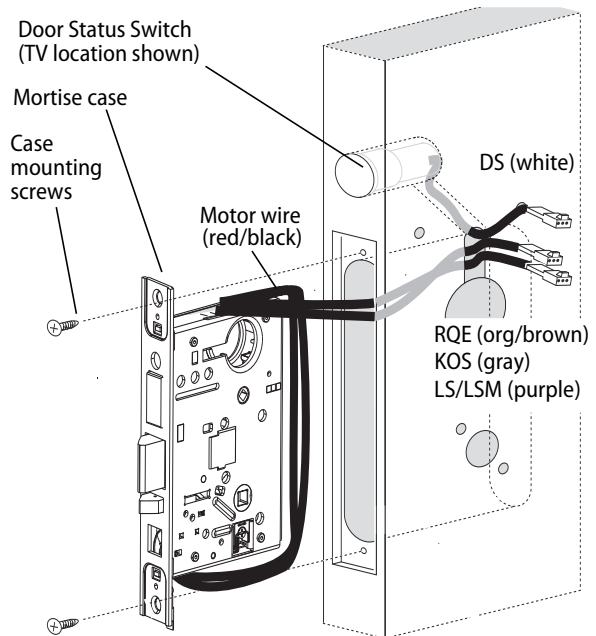


Figure 7 Installing the mortise case

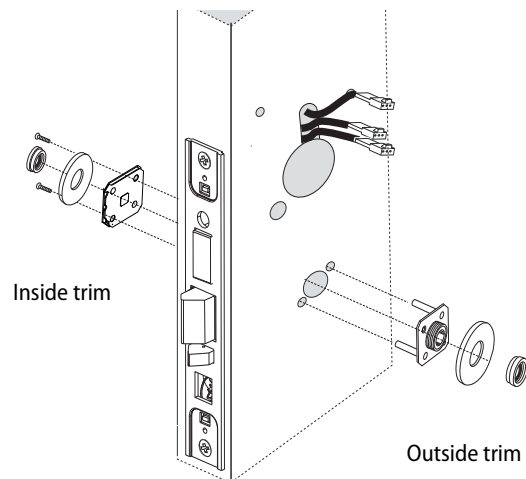


Figure 8 Installing the trim mounting plates

Installing the lock

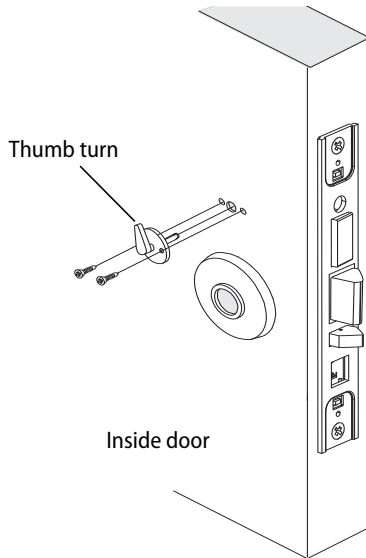


Figure 9 Installing the thumb turn

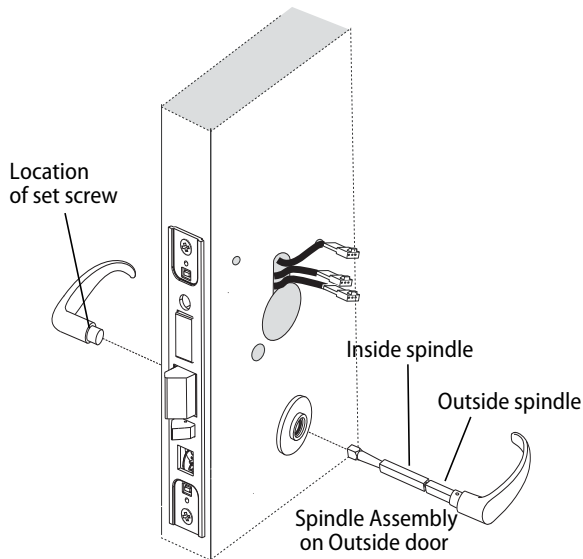


Figure 10 Installing the levers

- 2 Position the inside trim mounting plate opposite the outside trim mounting plate and screw them securely in place.

Caution: Do not overtighten the trim mounting plate screws. Overtightening may damage the locking mechanism.

- 3 Temporarily install a lever and test the lock to make sure that it doesn't bind.

9 Install thumb turn (TV function only)

- 1 Orient the thumb turn so it points up when the deadbolt is retracted, and toward the hinge edge of the door when the deadbolt is extended.
- 2 Install the thumb turn using the two screws provided. See Figure 9.

10 Install inside and outside levers

- 1 Unscrew the inside spindle one full turn to allow the spindles to turn freely. See Figure 10.
- 2 Remove the label from the inside spindle.
- 3 With the handle pointing toward the door hinges, insert the outside lever and spindle assembly into the lock from the outside of the door.
- 4 Slide the inside lever onto the inside spindle and secure it with the set screw.
- 5 Turn the levers to check that they operate smoothly.

Installation Instructions for Stanley Omnilock 45HOM Mortise Locks

Installing the lock

11 Install batteries

Four alkaline AA batteries (or two weatherized packs if installing a weatherized unit) are furnished with your Omnilock system and must be installed before proceeding with operation verification and system installation.

Note: For the Extreme Weatherized model, see Addendum (T83317) Extreme Weatherized Installation for battery and escutcheon installation.

- 1 Remove the gasket from the rear of the housing assembly as shown in Figure 11.
- 2 Remove the screw from the battery cover and remove the cover.
- 3 Install batteries with proper polarity as shown in Figure 12. (For weatherized battery packs, simply connect the wires from the battery pack to the circuit board as shown in Figure 13.)

Note: Be sure red and black motor wires are connected before attempting step 4. Align the wires together so that the wire colors match.

- 4 Press and hold the reset button on the PC board (as shown in Figure 12) until the green light on the keypad flashes (about three seconds) then release the button. If green light does not flash, see "Troubleshooting" on page 12.
- 5 Replace the battery cover. See Figure 11. Make sure that the tabs on the lower edge of the battery cover are hooked over the edge of the back plate and secure the cover with the screw.
- 6 Replace the gasket. See Figure 11. Make sure that it is inside the edge of the housing.

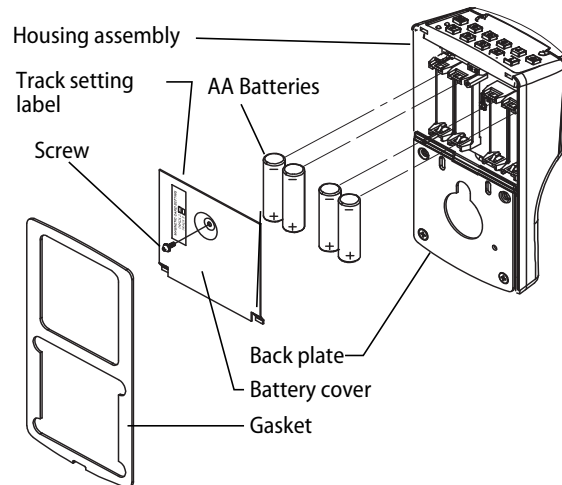


Figure 11 Installing batteries

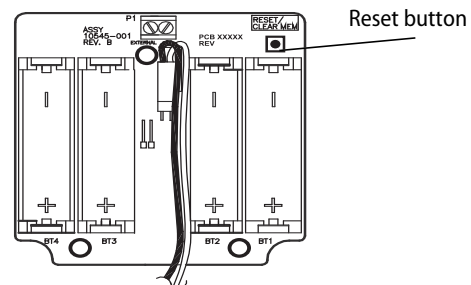


Figure 12 Using the reset button

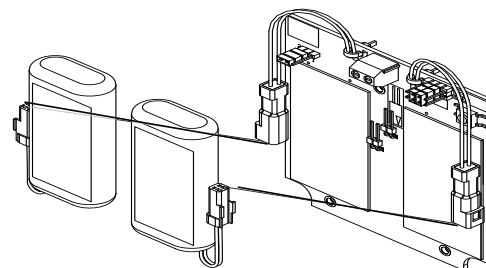


Figure 13 Installing weatherized batteries

Installing the lock

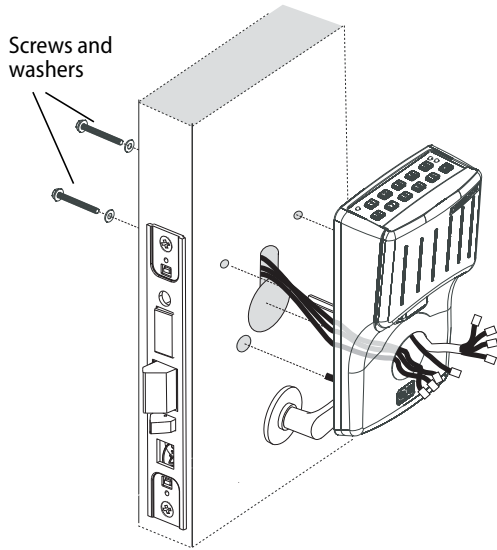


Figure 14 Installing the outside escutcheon

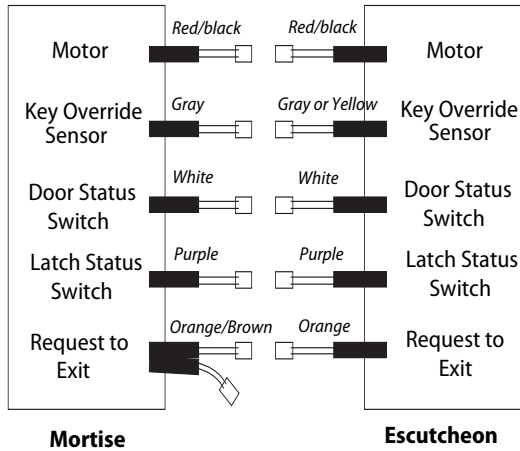


Figure 15 Simplified wiring diagram

12 Install outside escutcheon

- 1 Ensure that no wires are pinched when attaching the escutcheon to the door.
- 2 Insert the standoffs and grounding spring into the predrilled holes. Use screws and washers to attach the escutcheon from the inside of the door.

13 Connecting escutcheon wires

- 1 Connect the red and black motor wire from the mortise case to the red and black escutcheon motor wire. Align the wires together so that the wire colors match.
- 2 Connect the color-coded wires of the escutcheon wiring harness to the corresponding wire options on your mortise case. **Some wires may not be used.**

Note: Two RQE status switches are installed in the mortise case. However, only the switch for the inside of the lock needs to be connected. You will need to connect the 'Case Side' pair of RQE wires for LH and LHRB doors or the 'Cover Side' pair of RQE wires for RH and RHRB doors. See Figure 16. Wires are labeled.

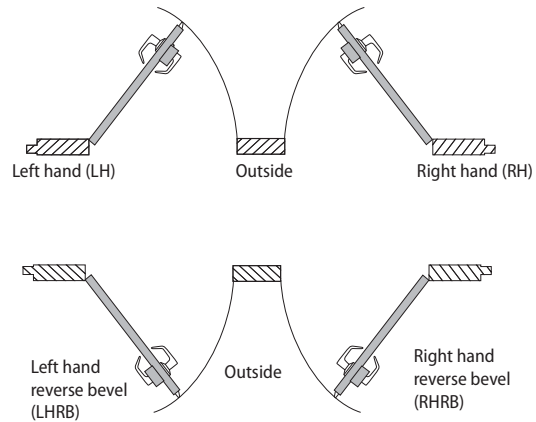


Figure 16 Door Handing Chart

Finishing the installation

14 Install cylinder

- 1 Push any excess wires into the escutcheon housing. Make sure no wires are pinched.
- 1 Make sure cylinder collar is positioned on the cylinder.
- 2 Thread the cylinder into the mortise case. Rotate the cylinder until the cylinder is flush against the collar and the cylinder cam is in the 12 o'clock position. See Figure 17.

Caution: A malfunction can occur if the cylinder is threaded in too far.

- 3 Secure the cylinder in the mortise case with the cylinder retainer screw.

15 Install mortise case faceplate

- 1 Secure the mortise case faceplate to the mortise case with the faceplate mounting screws. See Figure 18.
- 2 Check the lock for proper operation.

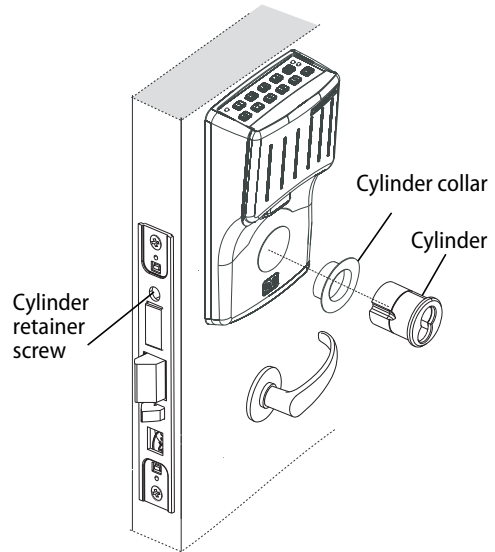


Figure 17 Installing the standard cylinder

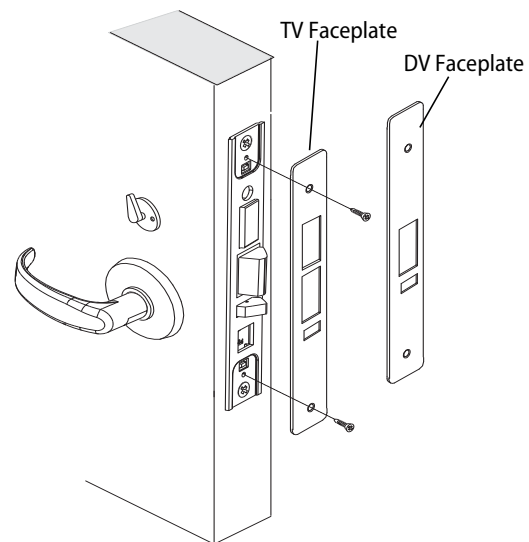


Figure 18 Installing the mortise case faceplate

Finishing the installation

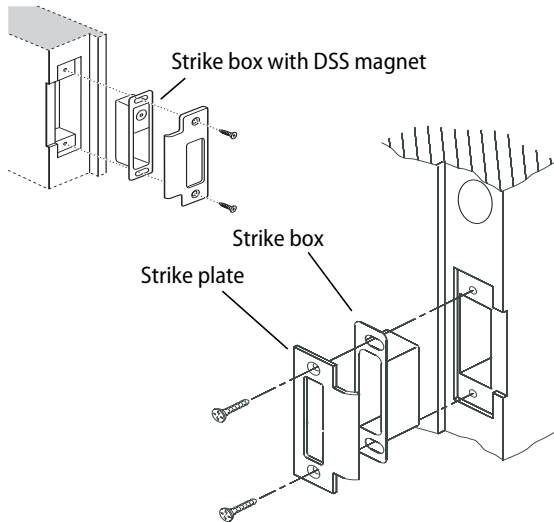


Figure 19 Installing the strike box and strike plate

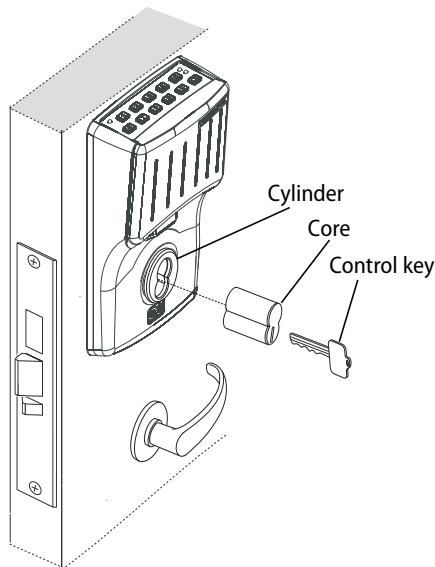


Figure 20 Installing the core

16 Install strike box and strike plate

- 1 If the door jamb has not been mortised for the strike box and strike plate, perform these steps:
 - a On the door jamb, locate the horizontal centerline of the strike (3/8" (10mm) above the centerline of the lock), as well as the vertical centerline of the strike.
 - b Mortise the door jamb to fit the strike box and strike plate.
 - c Drill the holes for the screws used to install the strike box and strike plate.

- 2 Insert the strike box into the mortise in the door jamb. Place the strike plate over the strike box and secure the strike with the screws provided.

Note: If installing a DV wireless model with a Door Status Switch, ensure that the magnet is located at the top of the strike box. See Figure 19.

- 3 Check the position of the auxiliary bolt against the strike plate (or the filled area of the strike box).

Note: The recommended gap between the door and jamb is 1/8" (3 mm).

17 Install core

- 1 Insert the control key into the core and rotate the key 15 degrees (midway between the 12 o'clock and 1 o'clock positions) to the right.
- 2 With the control key in the core, insert the core into the cylinder.
- 3 Return the control key to the 12 o'clock position and withdraw the key.

Caution: The control key can be used to remove cores and to access doors. Provide adequate security for the control key.

Finishing the installation

18 Check operation

Check the operation of the lock. For example, check that:

- door latches and opens properly
- deadbolt operates properly
- key access works
- door gap is 1/8" (3 mm)
- auxiliary bolt is held inside the case when the door is closed.

For assistance, contact your local Stanley Omnilock dealer.

19 Test lock

To test the lock for proper operation before the lock is programmed, follow these instructions:

For keypad locks

- 1 Press **1234 for the 2000 series, or 5011234 for the 500 series.**

The green light flashes and the latch unlock.

- 2 Turn the lever and open the door.

During the unlock time, the green light flashes. Then the red light flashes and the latch relocks.

For magnetic stripe or proximity card locks only

Note: *If the lock has a proximity card reader, it may have already been activated by the presence of an object near the card reader.*

- 1 Align the magnetic stripe card with the V mark by the card slot.

- 2 Insert and then remove the card.

The green light flashes and the latch unlocks.

- 3 Turn the lever and open the door.

During the unlock time, if using the Programming Default ID Card, the green light flashes. Then the red light flashes and the latch relocks.

Finishing the installation

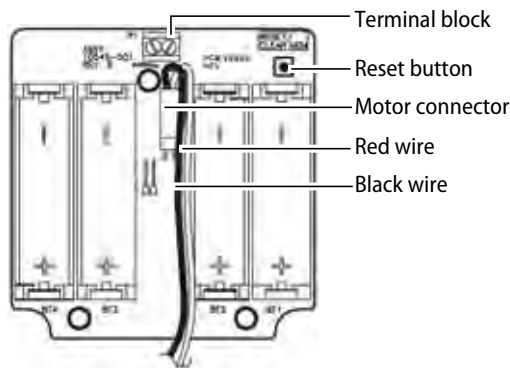


Figure 21 Using the reset button

20 Troubleshooting

If the mechanism doesn't unlock, remove the battery cover and check for proper orientation and seating of the batteries and motor connector. Ensure that wires are not pinched. Reset the electronics by pressing and holding the reset button on the circuit board until the light flashes green (approximately three seconds), then releasing the button. See Figure 21.

Note: *The system will go through a self-test and the green light will flash five times. You will hear the lock unlock, then relock three times. A red flash indicates a PC board or drive system problem. If a red flash or no flash is observed, check for proper orientation and seating of the batteries and motor connector, ensure that wires are not pinched, then repeat the reset process.*

Check operation

- 1 Press **1234 for the 2000 series, or 5011234 for the 500 series.**

During the unlock time, the green light flashes; then the red light flashes and the latch relocks.

- 2 Turn the lever and open the door.
- 3 If your system has a magnetic card reader, verify proper operation of the system using the magnetic card reader; otherwise, see "Test lock" on page 11.

A label on the housing assembly battery cover indicates the magnetic card track (track 2 or track 3) that the system is set to read. See Figure 11.



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6161 East 75th Street | Indianapolis, IN 46250 USA
www.stanleysecuritysolutions.com

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