

## Product

<b>Description</b>	Electric Strike and Proximity Card Reader with Antenna Module Mounted Separately in Frame
<b>Dimensions</b>	See pages 5-7
<b>Orientation</b>	Non-handed
<b>Compatibility</b>	Open Architecture
<b>Access Control Systems</b>	Interfaces with Wiegand Protocol Systems
<b>Proximity Cards</b>	Supports HID 26-39 Bit Formats
<b>Frequency</b>	Supports HID 125 kHz Credentials
<b>Indicators</b>	Red/Green LED and Buzzer
<b>Supervision</b>	Door Position Switch and Latchbolt Monitor

## Applications

<b>Frames</b>	Steel, Aluminum, Wood
<b>Trim Enhancer</b>	Included
<b>Locks</b>	Cylindrical
<b>Latchbolts Released*</b>	Accommodates 1/2"-5/8" latchbolts (5/8" with 1/8" door gap)
<b>Environment</b>	Suitable for Exterior Doors
<b>Temperature</b>	-32° F to 150° F (-35° C to 65° C)
<b>Humidity</b>	5 - 95%, Non-condensing

## Electrical

<b>Reader Module</b>	
<b>Operating Voltage</b>	12VDC +/- 20%
<b>Operating Current</b>	125 mA Max. @ 12VDC
<b>Electric Strike Module</b>	
<b>Operating Voltage</b>	12VDC +/- 10%
<b>Operating Current</b>	240 mA max. @ 12VDC

## Cable detail

<b>Reader Module</b>	
<b>Distance to Host</b>	500 ft. Max.
<b>Recommended Type</b>	18-22 AWG (Dependent on Distance) Stranded and Shielded
<b>Electric Strike Module</b>	
<b>Distance to Power</b>	See Page 4
<b>Recommended Type</b>	See Page 4

## Certifications

<b>Compliance</b>	FCC Part 15/IC Class B
<b>Security</b>	ANSI/BHMA 156.31, Grade 1

## Warranty

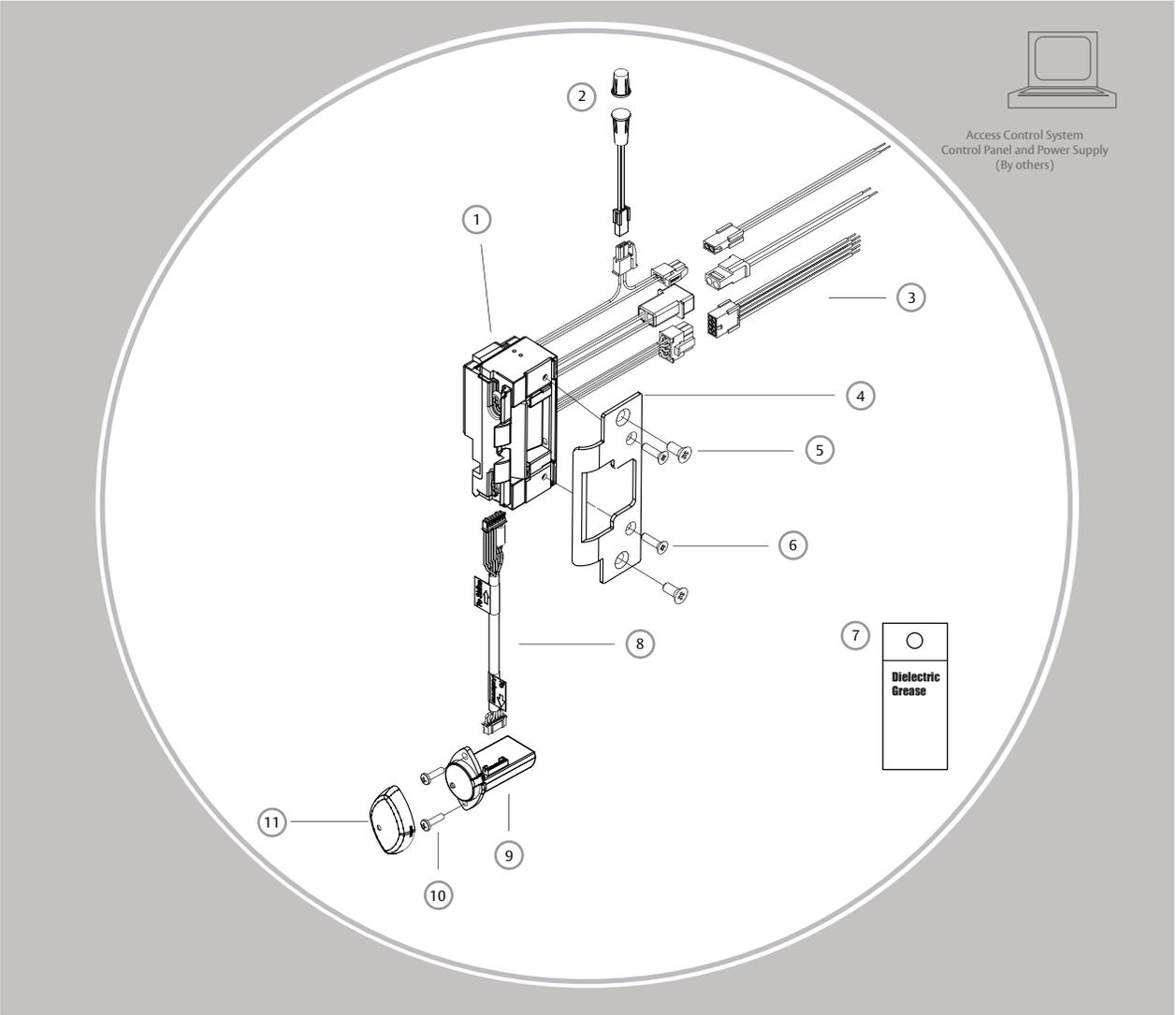
Lifetime Warranty against defects in materials and workmanship
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\* Faceplate options accommodate various keeper and latchbolt actions. For more detail, contact HES tech support at 800-626-7590

# Product Components

RF5910: EXTERNAL ANTENNA

- ① Hybrid Electric Strike
- ② Door Position Switch, Press-Fit Magnet and 10" Connector Cable (2 Pin)
- ③ Pigtail Connectors (8 pin and two 2 pin)
- ④ Faceplate (sold separately)
- ⑤ #12-24 Mounting Screws (included with faceplate)
- ⑥ #8-32 Faceplate Screws (included with faceplate)
- ⑦ Dielectric Grease (for humid applications)
- ⑧ 24" Cable (connecting reader/antenna and strike)
- ⑨ Reader/Antenna Body
- ⑩ #6-32 Reader/Antenna Screws
- ⑪ Reader/Antenna Cover



## Wiring Diagram

<p><b>8 Pin Connector (Reader Module)</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Red</td><td>(+) Board Power</td></tr> <tr><td>Black</td><td>(-) Board Power</td></tr> <tr><td>Green</td><td>Data 0</td></tr> <tr><td>White</td><td>Data 1</td></tr> <tr><td>Yellow</td><td>LED/Buzzer</td></tr> <tr><td>Blue</td><td>Not Used</td></tr> <tr><td>Orange</td><td>Not Used</td></tr> <tr><td>Brown</td><td>Not Used</td></tr> </table>	Red	(+) Board Power	Black	(-) Board Power	Green	Data 0	White	Data 1	Yellow	LED/Buzzer	Blue	Not Used	Orange	Not Used	Brown	Not Used	<p><b>Black 2 pin Connector (Strike Module)</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Tan</td><td>Common</td></tr> <tr><td>Pink</td><td>Door Closed and Latch Engaged</td></tr> </table> <p><b>White 2 Pin Connector (Strike Module)</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Gray (+)</td><td>Strike Power</td></tr> <tr><td>Violet (-)</td><td>Strike Power</td></tr> </table>	Tan	Common	Pink	Door Closed and Latch Engaged	Gray (+)	Strike Power	Violet (-)	Strike Power	<p><b>2 Pin Connector (Door Position Switch)</b></p> <p>Wire plugs into Hybrid Electric Strike</p>
Red	(+) Board Power																									
Black	(-) Board Power																									
Green	Data 0																									
White	Data 1																									
Yellow	LED/Buzzer																									
Blue	Not Used																									
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Tan	Common																									
Pink	Door Closed and Latch Engaged																									
Gray (+)	Strike Power																									
Violet (-)	Strike Power																									

# Installation Directions

## RF5910 EXTERNAL ANTENNA

**CAUTION!** Before connecting any device at the installation site, verify that there is 12VDC input voltage using a multimeter. Many power supplies and low voltage transformers operate at higher levels than listed. Any input voltage outside the electrical specifications outlined on page 1 may cause severe damage to the unit and will void the warranty. Also note that a linear power supply is recommended. Finally, this product contains electrostatic sensitive components. We recommend proper grounding techniques be observed during installation.

### Evaluate Opening

1. Verify opening is plumb and square. For important detail, see “Read Me” guide.

### Prepare Frame

2. Remove the dustbox and prepare door jamb for hybrid electric strike per the appropriate template detail (see pages 5-7). Be sure to allow enough room behind the strike in the cutout to avoid pinching any wires.

3. Drill a 1” diameter hole for reader/antenna per the appropriate template detail (see pages 5-7). Note that the reader/antenna may be positioned as desired, within limits of the 24” cable. If necessary (e.g. wood frames), drill a channel from the reader/antenna to the hybrid electric strike to accommodate the 24” cable.

4. Drill a 3/8” hole for the door position switch per the appropriate template detail (see pages 5-7). Note that the door position switch may be positioned as desired, within limits of its 10” connector. If necessary (e.g. wood frames), drill a channel from the door position switch to hybrid electric strike to accommodate the 10” cable. Next, drill a matching 3/8” hole in the door and install the press-fit magnet so that it will contact with the door position switch.

### Prepare Strike

5. Verify that the strike is in the correct mode of operation. This unit ships in fail secure mode. If you need to convert to fail safe, see page 8.

6. Attach the faceplate to the electric strike, using the #8-32 screws provided. Be sure that the ramps are on top of the faceplate (see page 4). Temporarily install in frame.

7. The deadlatch must not interfere with the RF5910 ramps (see page 4). Mark the centerline of the deadlatch onto the 5900 faceplate. Remove the RF5910 hybrid strike from the jamb. Loosen screws and slide the internal ramp until the groove between the ramps aligns with the mark made on the faceplate. Tighten the screws after any adjustment is made.

### Connect Components and Wiring

8. Check that the wires running from the host control panel and/or power supply are correct for the components and distance (see Wiring Diagram on page 2 and Wire Gauge Diagram on page 4). Connect the three pigtails provided (8 pin, white 2 pin and black 2 pin) to these wires and apply grease as needed. Connect the three pigtails to the hybrid electric strike. Note: It doesn’t matter which 2 pin connector is used. When power is connected, the hybrid electric strike will automatically run the initialization/self test described in step 18.

9. Connect and mount the door position switch, routing its 10” cable from the door position switch to the hybrid electric strike.

10. Plug the loose end of the door position switch cable into its 2 pin connector and apply dielectric grease as needed.

11. Connect the 24” cable to the reader/antenna (check labels to insure that you connect the correct end). Then, install the reader/antenna in the frame, using the #6-32 screws provided. Snap on the reader/antenna cover and pull the 24” cable through to the hybrid electric strike.

12. Plug the loose end of the 24” cable into the connector on the side of the hybrid electric strike.

13. Connect the wire bundle on the top of the hybrid electric strike to the pigtails/wire back to the host control panel. Check any pertinent information from the access control system installation guide or manual.

### Finish Installing

14. Re-install the hybrid electric strike unit in jamb cutout, using #12-24 screws provided (or wood screws where necessary).

15. If applicable, tighten the #10-32 screws holding the mounting tabs.

16. If opening is not plumb and square, see “Read Me” guide for recommended corrections.

### Testing and Operation

17. When power is supplied to the hybrid electric strike, the LED will flash green three times, while the beeper simultaneously beeps. The LED will then turn red. This sequence indicates that the micro-controller is operating properly.

18. Present a Proximity ID card to the reader/antenna. The LED will turn green, while the beeper beeps once. This indicates that the card was read successfully.

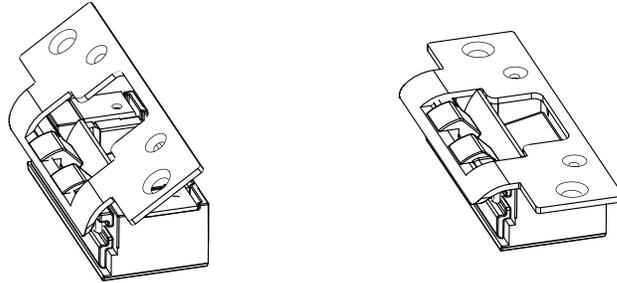
19. Simultaneously, the keeper will click open. This indicates that communication between the host and the hybrid electric strike is operational.

20. For further testing of communication with the host, consult the manual for the control panel or the site’s system administrator.

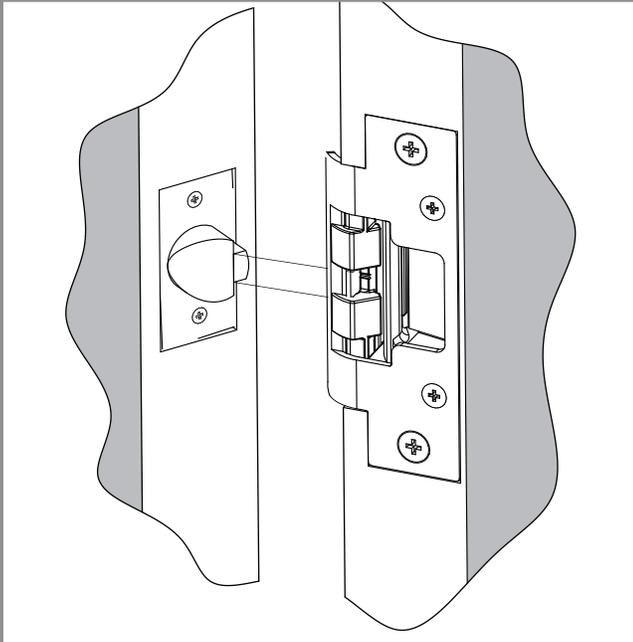
# Preparation

RF5910: EXTERNAL ANTENNA

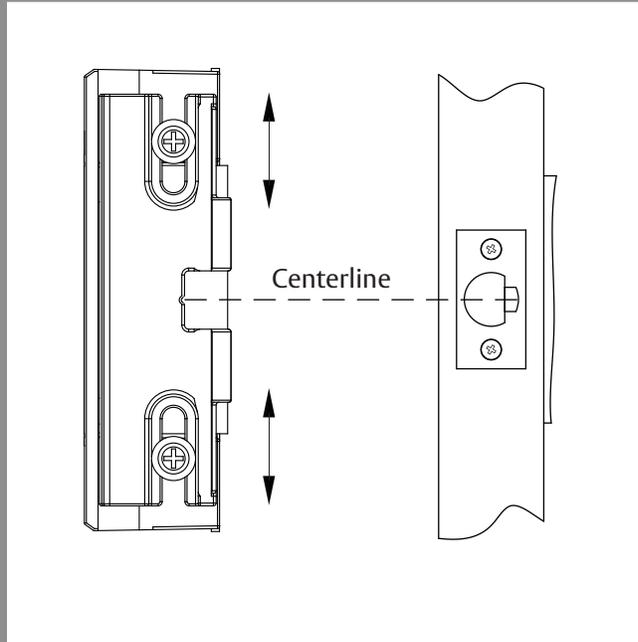
## FACEPLATE INSTALLATION



## VERTICAL ALIGNMENT



## VERTICAL ADJUSTABILITY



## WIRE GAUGE DIAGRAM

12VDC @ 240 mA

Max. One-way Distance	Voltage Drop/100'	Recommended AWG
800'	0.15	12 Gauge
500'	0.24	14 Gauge
300'	0.38	16 Gauge
200'	0.61	18 Gauge
120'	0.97	20 Gauge
100' or less	1.53	22 Gauge

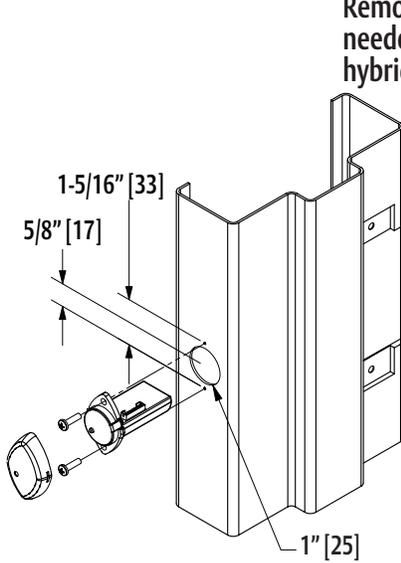
# Cutout Templates

RF5910: EXTERNAL ANTENNA

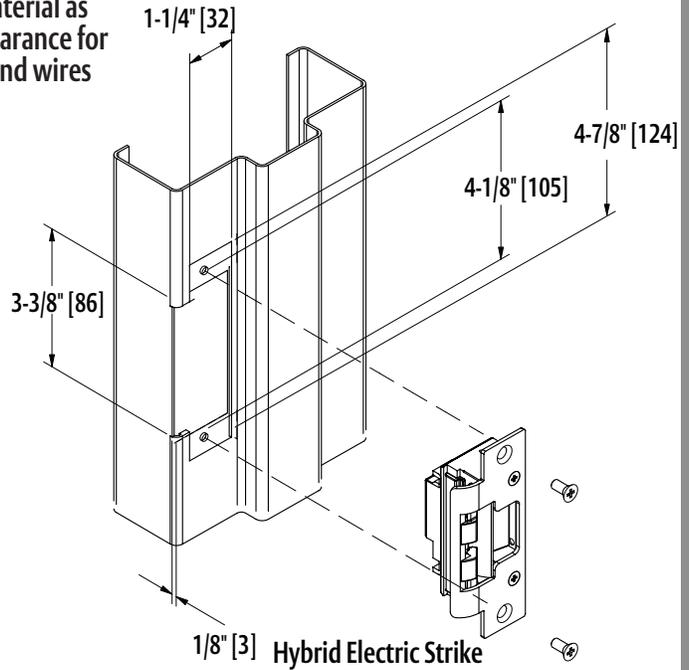
## RF5910 with 591 Faceplate

1-1/4" x 4-7/8" Square Corner Faceplate  
ANSI Metal Jamb Installations

Remove additional material as needed to provide clearance for hybrid electric strike and wires



Reader/Antenna

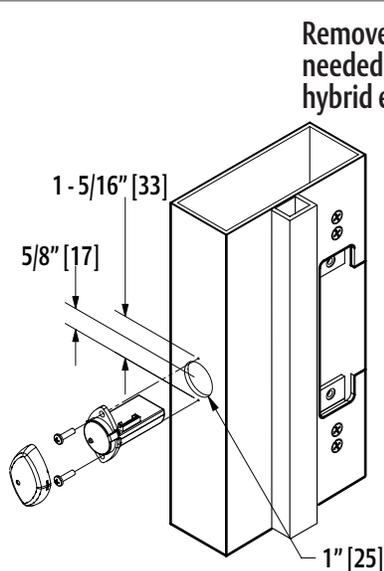


1/8" [3] Hybrid Electric Strike

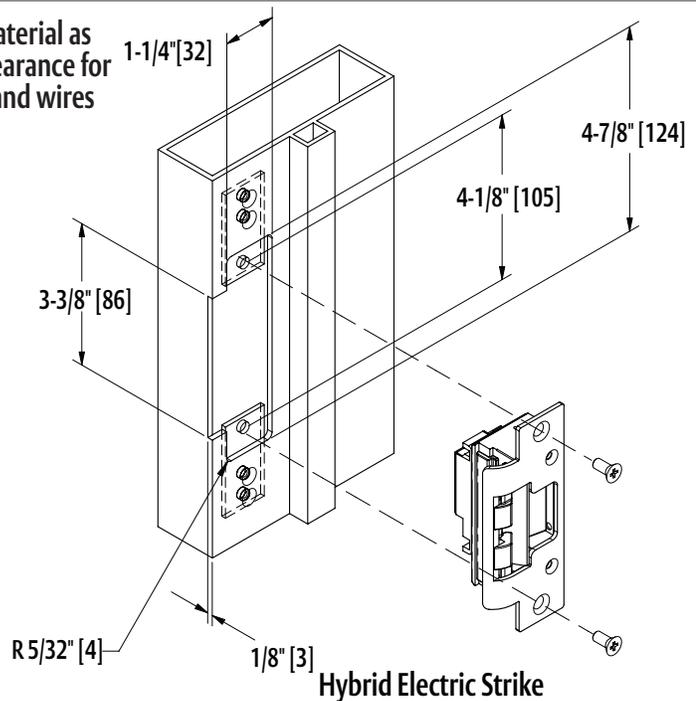
## RF5910 with 591-A Faceplate

1-1/4" x 4-7/8" Radius Corner Faceplate  
Aluminum Jamb Installations

Remove additional material as needed to provide clearance for hybrid electric strike and wires



Reader/Antenna



1/8" [3] Hybrid Electric Strike

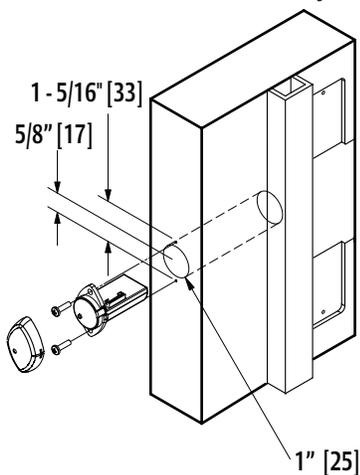
# Cutout Templates

RF5910: EXTERNAL ANTENNA

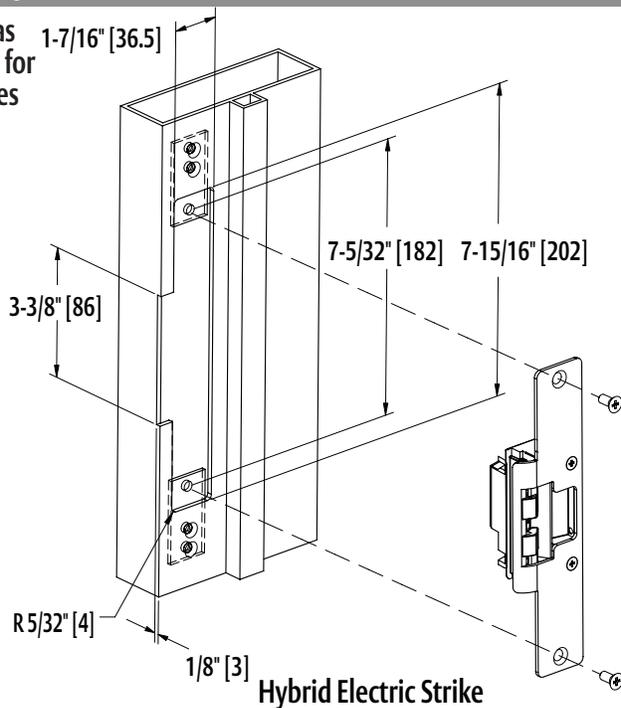
## RF5910 with 592 Faceplate

1-7/16" x 7-15/16" Radius Corner Faceplate  
Aluminum and Wood Jamb Installations

Remove additional material as needed to provide clearance for hybrid electric strike and wires



Reader/Antenna

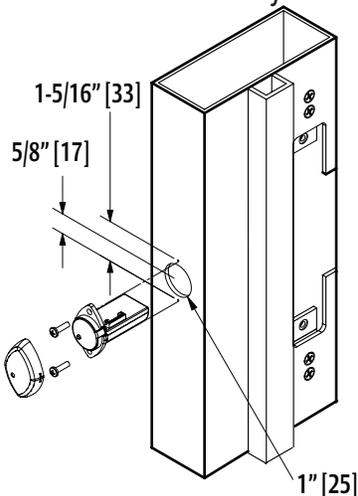


Hybrid Electric Strike

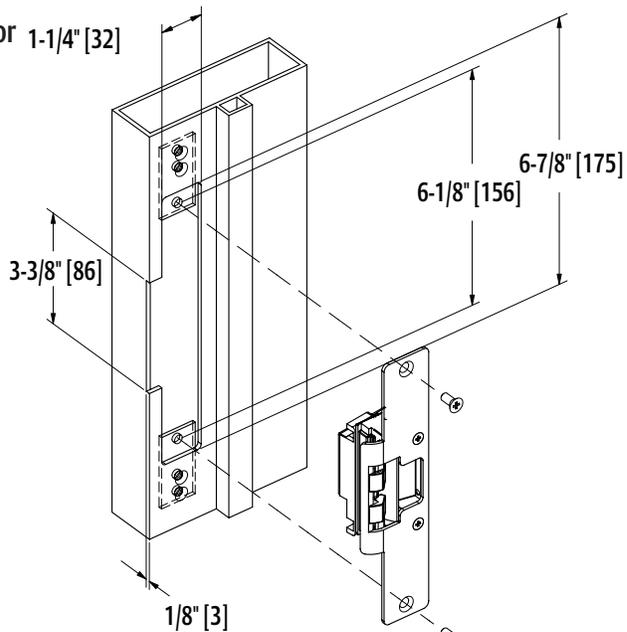
## RF5910 with 593 Faceplate

1-1/4" x 6-7/8" Radius Corner Faceplate  
Aluminum Jamb Installations

Remove additional material as needed to provide clearance for hybrid electric strike and wires



Reader/Antenna



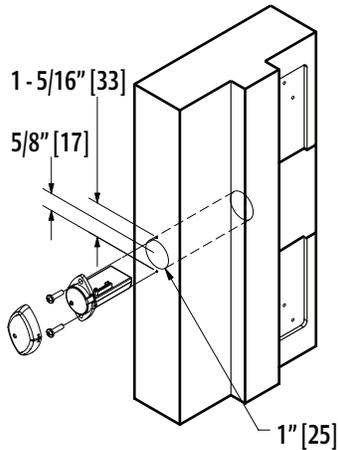
Hybrid Electric Strike

# Cutout Templates

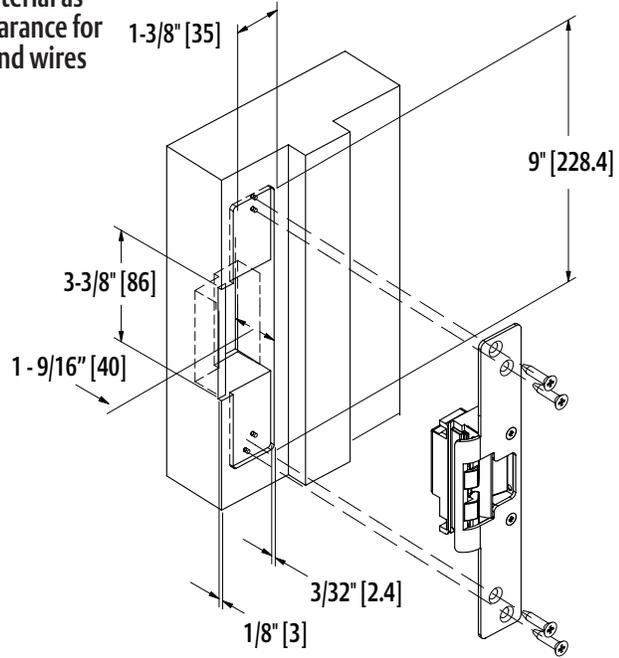
RF5910: EXTERNAL ANTENNA

## RF5910 with 595 Faceplate 1-3/8" x 9" Radius Corner Faceplate Aluminum or Wood Jamb Installations

Remove additional material as needed to provide clearance for hybrid electric strike and wires



Reader/Antenna



Hybrid Electric Strike

**Warning: Changes or modification to this device not expressly approved by HES, Inc., could void the user's authority to operate the equipment.**

NOTE: This equipment has been tested and found to comply with the limits for a class [B] digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

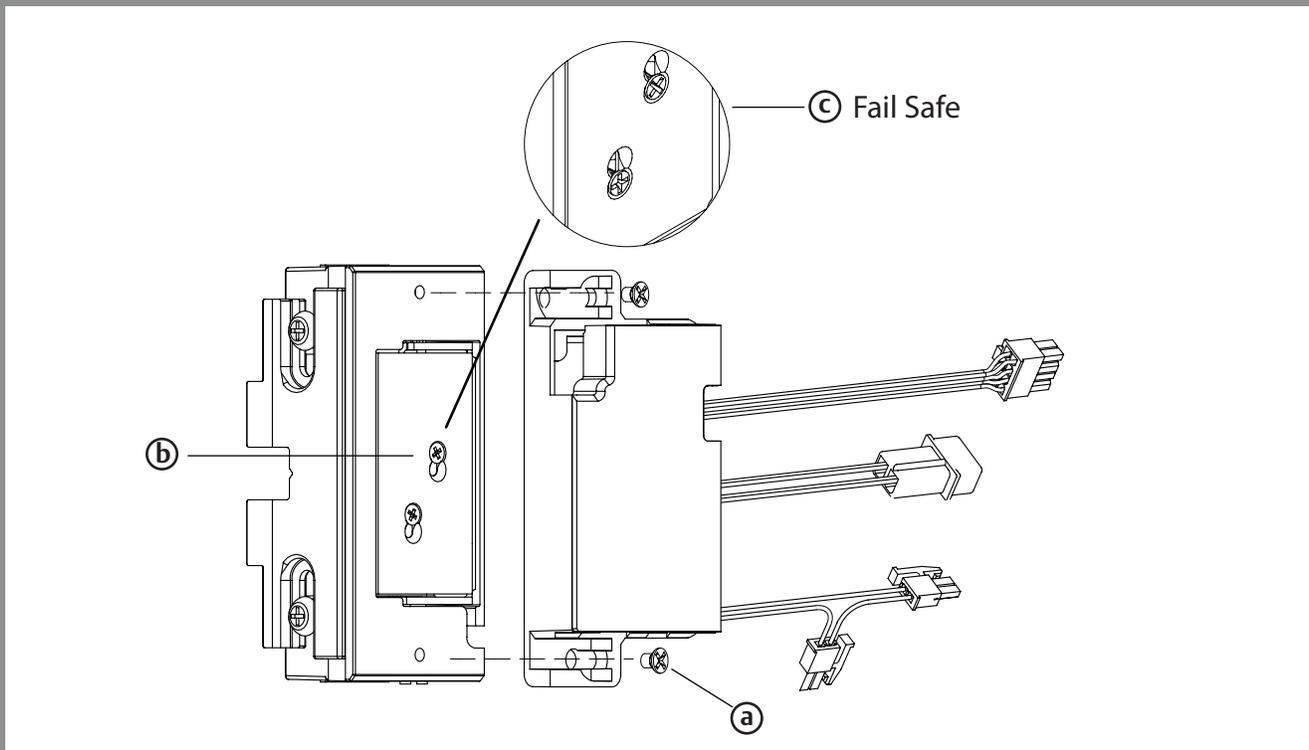
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This class [B] digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

# Fail Safe Conversion

RF5910: EXTERNAL ANTENNA



## Remove Reader Module

a. In order to change the mode of operation from fail secure (standard) to fail safe, first detach the reader module by removing the two screws on the back of the hybrid electric strike.

## Convert Mode

b. Loosen the two #2-56 screws located on the back of the strike module, as shown above, but do not remove them.

c. Move screws from the top of the hole to fail safe position.

d. Tighten screws.

## Finish

e. Replace the reader module and tighten the two screws to hold it in place.