Installation Instructions RF5010 and RF5210

RF5010 and RF5210: INTERNAL ANTENNA

HES, Inc.
22630 N. 17th Ave.
Phoenix, AZ 85027
800-626-7590

Product

Description	Integrated Electric Strike and Proximity Card Reader
Dimensions	See pages 4-6
Orientation	Non–handed
Compatibility	Open Architecture
Access Control Systems	Interfaces with Wiegand Protocol Systems
Proximity Cards	Supports HID 26–39 Bit Formats
Frequency	Supports HID 125 kHz Credentials
Indicators	Red/Green LED and Buzzer
Supervision	Door Position Switch and Latchbolt Monitor

Applications

Frames	Steel, Aluminum, Wood
Trim Enhancer	Included
Locks	Cylindrical
Latchbolts Released*	RF5010: Accomodates up to 5/8" Latchbolt RF5210: Accomodates up to 3/4" Latchbolt
Environment	Not Recommended for Outdoor use
Temperature	32˚F–150˚F (0˚C–65˚C)
Humidity	5–95%, Non-condensing

Electrical

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

Cable detail

Reader Module	
Distance to Host	500 ft. Max.
Recommended Type	18–22 AWG (Dependent on Distance) Stranded and Shielded
Electric Strike Module	
Distance to Power	See Page 3
Recommended Type	See Page 3

Certifications

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

*Faceplate options accommodate various keeper and latchbolt actions. For more detail, contact HES tech support at 800-626-7590

Warranty

Lifetime Waranty against defects in materials and workmanship

Product Components

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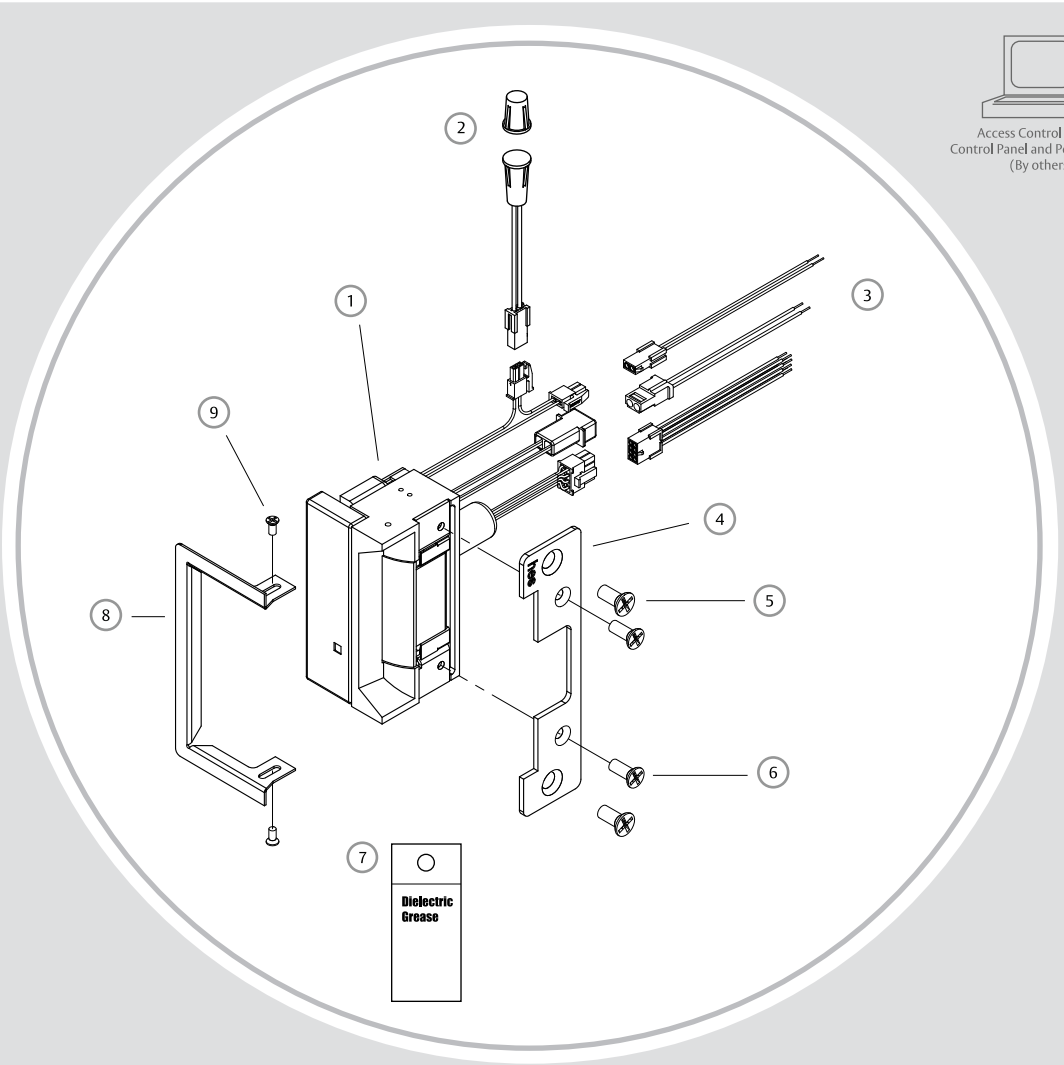
1. Hybrid Electric Strike
2. Door Position Switch, Press-Fit Magnet and 10" Connector Cable (2 Pin)
3. Pigtail Connectors (8 pin and two 2 pin)
4. Faceplate (sold separately)
5. #12-24 Mounting Screws (included with faceplate)
6. #8-32 Faceplate Screws (included with faceplate)
7. Dielectric Grease (for humid applications)
8. Trim Enhancer
9. Trim Enhancer Screws



Wiring Diagram

8 Pin Connector (Reader Module)	
Red	(+) Board Power
Black	(–) Board Power
Green	Data 0
White	Data 1
Yellow	LED/Buzzer
Blue	Not Used
Orange	Not Used
Brown	Not Used

Black 2 pin Connector (Strike Module)	
Tan	Common
Pink	Door Closed and Latch Engaged

White 2 Pin Connector (Strike Module)		
Gray	(+)	Strike Power
Violet	(–)	Strike Power

2 Pin Connector (Door Position Switch)
Wire plugs into Hybrid Electric Strike

Installation Directions

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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.

Prepare Frame

1. Prepare door jamb for hybrid electric strike per the appropriate template detail (see pages 4-6). Be sure to allow enough room behind the strike in the cutout to avoid pinching any wires.

2. Drill a 3/8" hole for the door position switch per the appropriate template detail (see pages 4-6). 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.

3. If applicable (e.g. aluminum frames),install mounting tabs (sold separately as P/N 152), using #10-32 screws.

4.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 7.

Connect Components and Wiring

5. 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 below). 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 14.

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

7. Plug the loose end of the door position switch cable into its 2 pin connector on the bottom of the hybrid electric strike and apply grease as needed.

8. Connect the wire bundle on the side 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

9. Attach the faceplate to the hybrid electric strike, using the #8-32 screws provided.

10. Install the trim enhancer on the hybrid electric strike (if needed to cover any extra space).

11. Install the hybrid electric strike in jamb cutout, using #12-24 screws provided (or wood screws where necessary).

12. If needed, see page 8 to make horizontal adjustments in frame (RF5210 only).

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

Testing and Operation

14. 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.

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

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

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

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 Template

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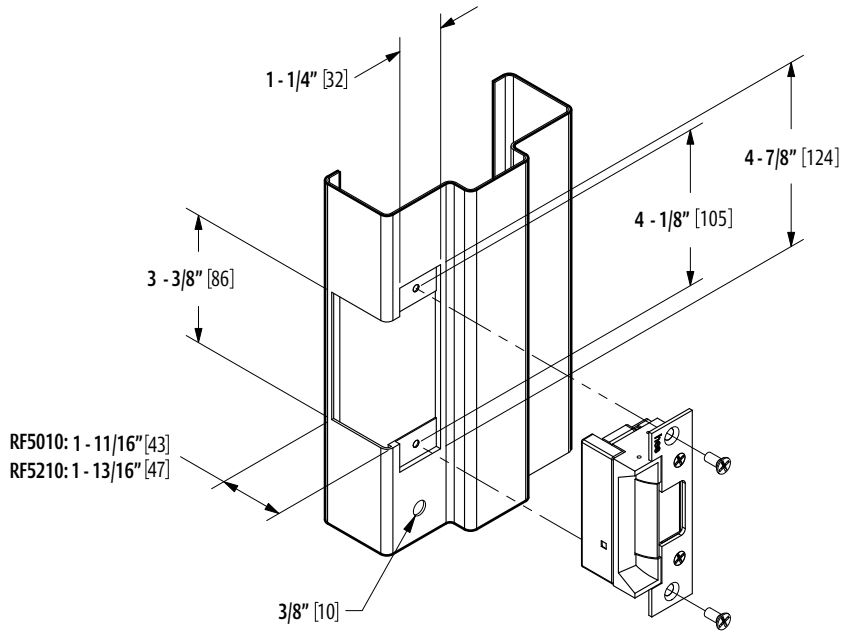
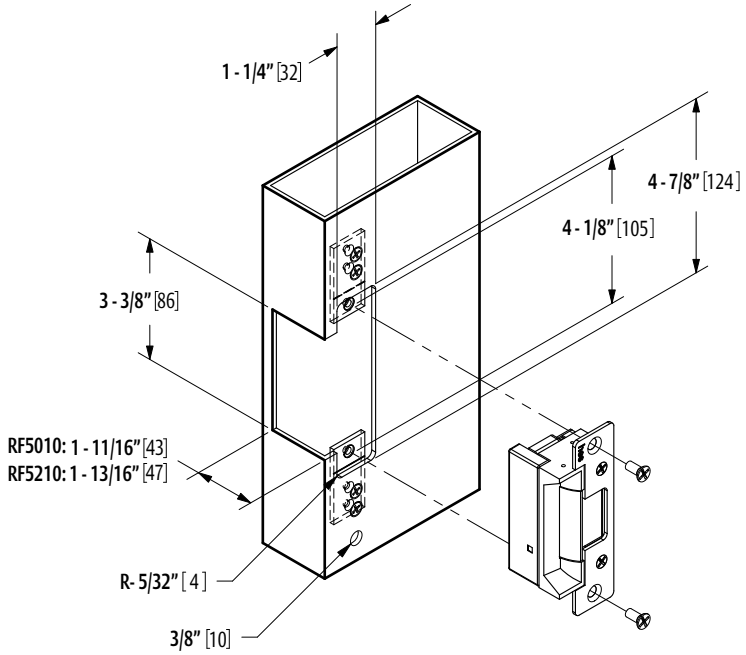
RF5010 or RF5210 with 501 Faceplate

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



RF5010 or RF5210 with 501-A Faceplate

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



Cutout Template

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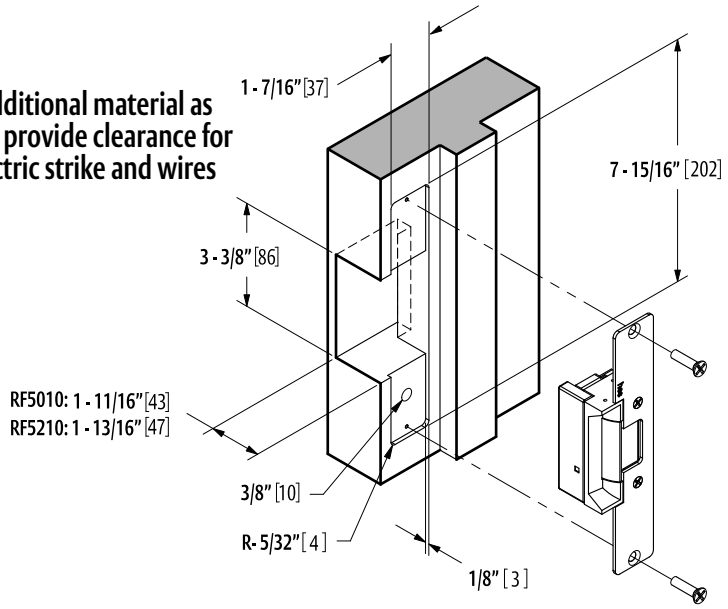
RF5010 or RF5210 with 502 Faceplate

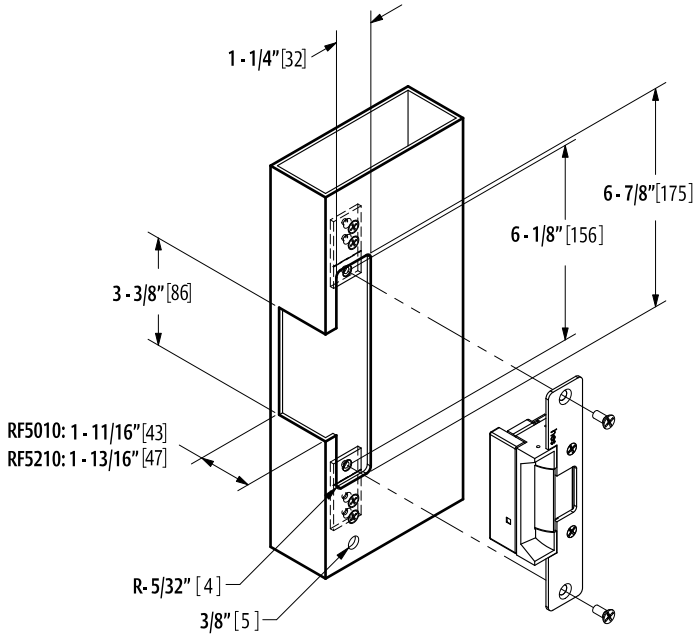
1-7/16" x 7-15/16" Radius Corner Faceplate
Aluminum and Wood Jamb Installations

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



RF5010 or RF5210 with 503 Faceplate

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



Cutout Template

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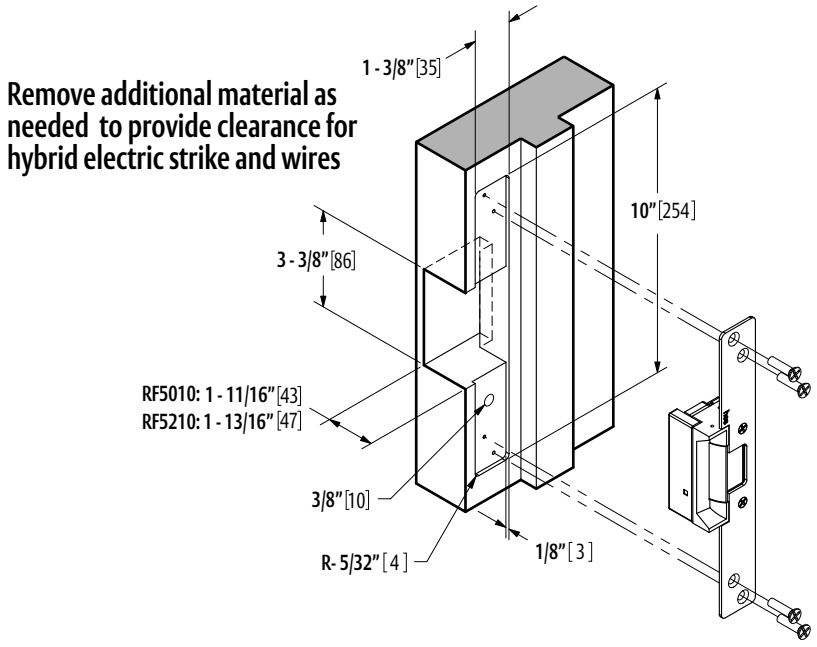
RF5010 or RF5210 with 504 Faceplate

1-3/8" x 10" Radius Corner Faceplate
Aluminum and Wood Jamb Installations



Fail Safe Conversion

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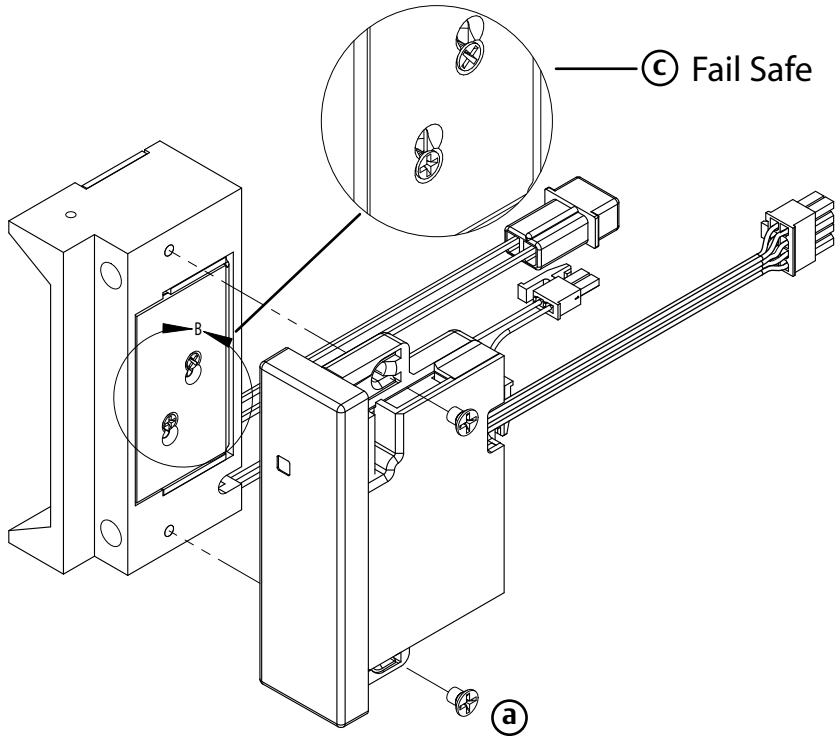

Remove Reader Module

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.

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