Excellence in Compliance Testing

# FCC Part 15.209
# Transmitter Certification

## Test Report

**FCC ID: VC3-RF5X10**

**FCC Rule Part: 15.209**

**ACS Report Number: 07-0074-15C**

Manufacturer: Hanchett Entry Systems, Inc.
Model(s): RF5010-IA, RF5010-EA, RF5210-IA, RF5210-EA

# Installation Guide

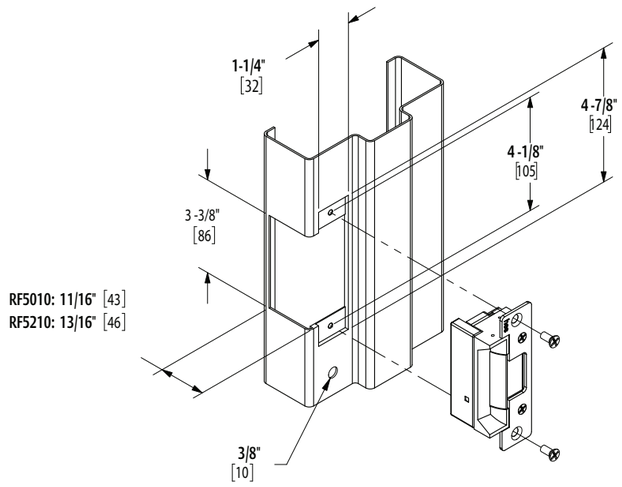
# Cutout Template

RF5010 and RF52010: OUTSWING VERSION



## RF5010 or RF5210 with 501 Faceplate

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




Door Position Switch

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'inerférencé canadienne causant des réglements 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.

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# Installation Instructions
# RF5010 and RF5210

HYBRID ELECTRIC STRIKES: OUTSWING VERSION

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



Outswing Version

## Product

| | |
|---|---|
| **Description** | Integrated Electric Strike and Proximity Card Reader |
| **Dimensions** | See page 4 |
| **Orientation** | Non-handed, Reversible |
| **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<br>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** | 10–14VDC |
| **Operating Current** | 125 mA Max. at 12VDC |
| **Electric Strike Module** | 250mA @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 (USA and Canada) |
| **Security** | UL 1034, Burglary-Resistant Listed |
| | ANSI/BHMA 156.31, Grade 1 |
| | MEA New York City Accepted |

## Warranty

Lifetime Waranty

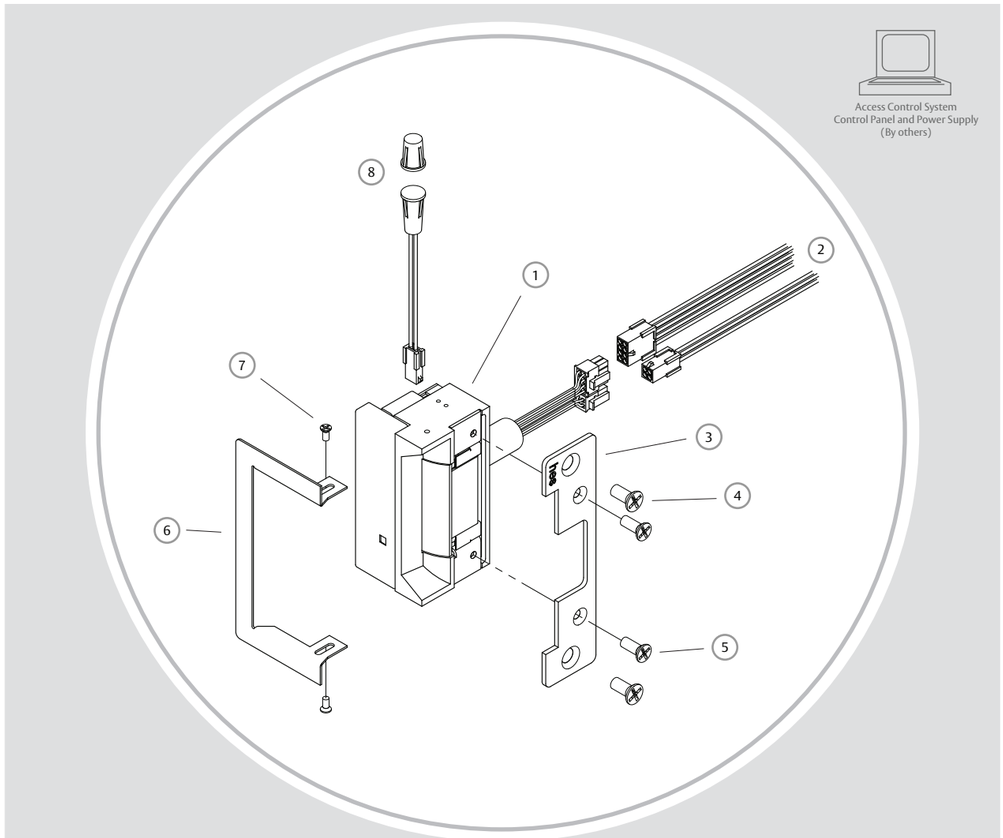
*Faceplate options accommodate various keeper and latchbolt actions. For more detail, contact HES tech support at 800-626-7590

# Product Components

RF5010 and RF5210: OUTSWING VERSION



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




## Wiring Diagram

| 8 Pin Connector (Reader Module) | |
|---|---|
| Red | (+) Board Power 10 - 14 VDC |
| Black | (–) Board Power |
| Green | Data 0 |
| White | Data 1 |
| Yellow | LED/Buzzer |
| Blue | Not Used |
| Orange | Not Used |
| Brown | Not Used |

| 4 Pin Connector (Strike Module) | |
|---|---|
| Gray | (+) Strike Power 12 VDC |
| Violet | (–) Strike Power |
| Tan | Common |
| Pink | Door Closed and Latch Engaged |

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

# Installation Directions

RF5010 and RF5210: OUTSWING VERSION



**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.**

## Prepare Frame

**1. Prepare door jamb for hybrid electric strike per the appropriate template detail (see page 4). 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 page 4). Note that the door position switch may be positioned as desired, within limits of its 10" connector. Next, drill a matching 3/8" hole in the door and install the press-fit magnet so that it comes into contact with the door position switch.**

**3. Install mounting tabs (sold separately as P/N 152) when applicable, using #10-32 screws.**

## Connect Components and Wiring

**4. 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 two pigtails provided (8 pin and 4 pin) to these wires. Note that a linear power supply is recommended.**

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

**6. Plug the loose end of the door position switch cable into the 2 pin connector on the bottom of the hybrid electric strike.**

**7. 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.**

## Finishing Installing

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

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

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

**11. Tighten the #10-32 screws holding the mounting tabs (when applicable).**

## Testing and Operation

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

**13. 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.**

**14. Simultaneously, the keeper should click open. This indicates that communication between the host and the hybrid electric strike is operational.**

**15. 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

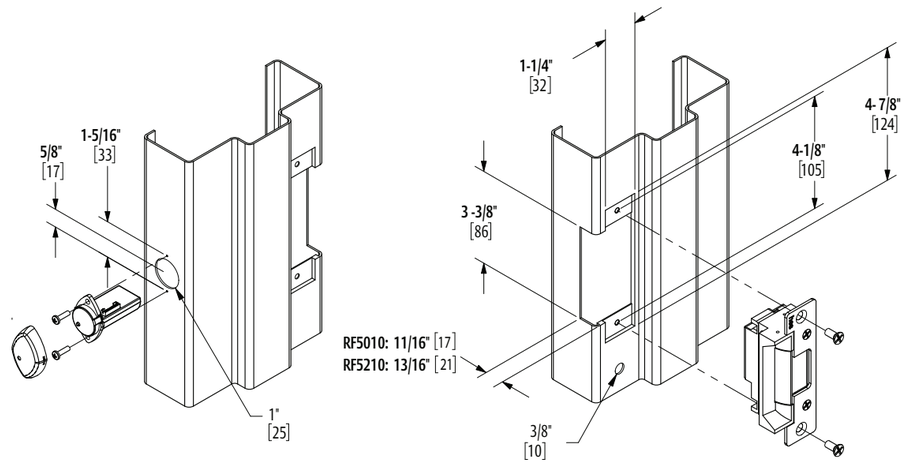
| 12VDC @ 250 mA | | |
|---|---|---|
| Max. One-way Distance | Voltage Drop/100' | Recommended AWG |
| 800' | 0.16 | 12 Gauge |
| 500' | 0.25 | 14 Gauge |
| 300' | 0.40 | 16 Gauge |
| 200' | 0.64 | 18 Gauge |
| 120' | 1.01 | 20 Gauge |
| 100' or less | 1.6 | 22 Gauge |

# Cutout Template

HYBRID ELECTRIC STRIKES: INSWING VERSION

## RF5010 or RF5210 with 501 Faceplate

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

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# Installation Instructions
# RF5010 and RF5210

HYBRID ELECTRIC STRIKES: INSWING VERSION

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



Inswing Version

## Product

| | |
|---|---|
| **Description** | Electric Strike and Proximity Card Reader with Antenna Module Mounted Separately in Frame |
| **Dimensions** | See page 4 |
| **Orientation** | Non-handed, Reversible |
| **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<br>RF5210: Accomodates up to 3/4" Latchbolt |
| **Environment** | Suitable for Exterior Doors |
| **Temperature** | 32°F-150°F (0°C-65°C) |
| **Humidity** | 5-95%, Non-condensing |

## Electrical

| | |
|---|---|
| **Reader Module** | |
| **Operating Voltage** | 10-14VDC |
| **Operating Current** | 125 mA Max. at 12VDC |
| **Electric Strike Module** | 250mA @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

| | |
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| **Compliance** | FCC Part 15 (USA and Canada) |
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| | ANSI/BHMA 156.31, Grade 1 |
| | MEA New York City Accepted |

## Warranty

Lifetime Waranty

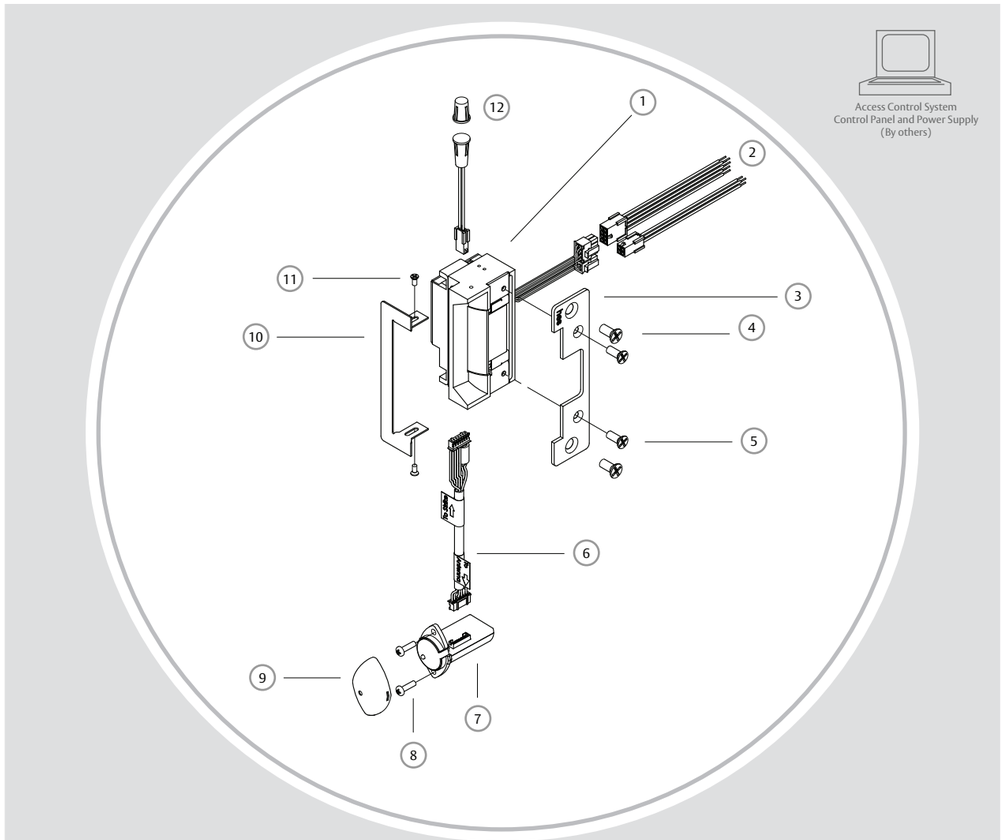
* Faceplate options accommodate various keeper and latchbolt actions. For more detail, contact HES tech support at 800-626-7590

# Product Components

RF5010 and RF5210: INSWING VERSION



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




## Wiring Diagram

| 8 Pin Connector (Reader Module) | |
|---|---|
| Red | (+) Board Power 10 -14 VDC |
| Black | (–) Board Power |
| Green | Data 0 |
| White | Data 1 |
| Yellow | LED/Buzzer |
| Blue | Not Used |
| Orange | Not Used |
| Brown | Not Used |

| 4 Pin Connector (Strike Module) | |
|---|---|
| Gray | (+) Strike Power |
| Violet | (–) Strike Power 12 VDC |
| Tan | Common |
| Pink | Door Closed and Latch Engaged |

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

# Installation Directions

RF5010 and RF5210: INSWING VERSION



**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.**

## Prepare Frame

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

**2. Drill a 1" diameter hole for reader/antenna per the appropriate template detail (see page 4). Note that the reader/antenna may be positioned as desired, within limits of the 24"cable.**

**3. Drill a 3/8" hole for the door position switch per the appropriate template detail (see page 4). Note that the door position switch may be positioned as desired, within limits of its 10" connector. Next, drill a matching 3/8" hole in the door and install the press-fit magnet so that it comes into contact with the door position switch.**

**4. Install mounting tabs (sold separately as P/N 152) when applicable, using #10-32 screws.**

## 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 two pigtails provided (8 pin and 4 pin) to these wires. Note that a linear power supply is recommended.**

**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 the 2 pin connector on the bottom of the hybrid electric strike.**

**8. 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.**

**9. Plug the loose end of the 24" cable into the 7 pin connector on the side of the hybrid electric strike.**

**10. 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.**

## Finishing Installing

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

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

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

**14. Tighten the #10-32 screws holding the mounting tabs (when applicable).**

## Testing and Operation

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

**16. 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.**

**17. Simultaneously, the keeper should click open. This indicates that communication between the host and the hybrid electric strike is operational.**

**18. 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 @ 250 mA | | |
|---|---|---|
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