INSTALLATION GUIDE
RBH FR-360-N PROXIMITY READER

This Installation Guide is intended for experienced installing technicians. It is a basic reference to ensure all connections are properly made. See the appropriate Product Manual for detailed information on installing RBH Proximity Readers. These documents may be downloaded from the RBH Access Technologies, Inc. website found at www.rbh-access.com; under Downloads.

Cable Requirements

All readers operate at up to 500 feet (152 m) of cable, using six-conductor (single LED) or seven-conductor (dual LED), shielded, stranded cable. Per the Security Industry Association's Wiegand specification, AWG 24 (such as Belden 9537) is the minimum gauge required for data transfer in a 500-foot run length. However, the proper wire gauge to use must be determined by the current draw requirements of the reader, the length of the cable run, and the voltage applied to the reader.

If the reader is to be operated at 5 VDC, 5 VDC must be available at the reader (long cable runs have a voltage drop due to the resistance in the cable). A larger gauge of wire (having less resistance) or a separate power supply near the reader may be required to ensure 5 VDC is available at the reader.

Output Formats

Wiegand (industry standard 26-bit Wiegand and custom Wiegand formats)

Grounding

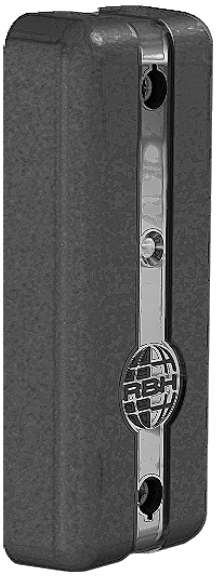
Shield (drain) continuity must run from the reader to the access panel. Shield (drain) and reader ground must be tied together at the access panel and connect to an earth ground at one point.

Power

A reader may be powered by the access panel, so the reader is powered on when the access panel is powered on. However the best case is to power the reader by a separate, linear power supply. Voltage: typically 5 to 14 VDC

Mounting

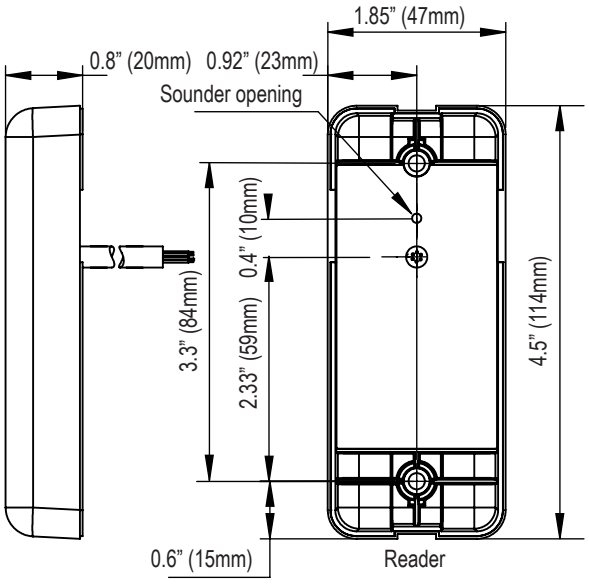
Use two #6 screws. Non corroding screws recommended for outdoor installations.



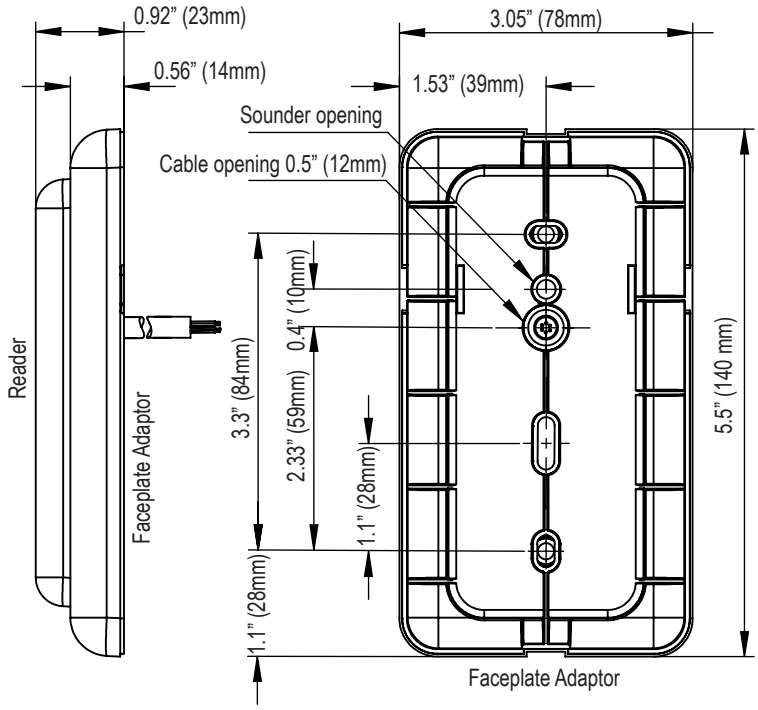
RBH-FR-360-N

Mullion mount Proximity Reader, Can be mounted over single gang electrical box with optional adaptor.

FR-360-N Reader Mounting



FR-360-N Reader Mounting with faceplate adaptor

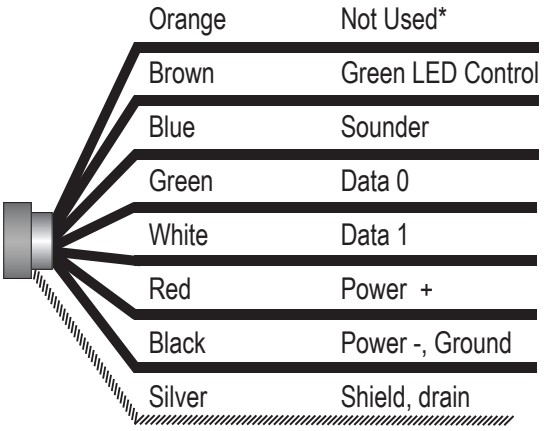


ADDITIONAL PARTS (ORDER SEPARATELY)

RBH-FR-360-N-PLATE
Mounting adaptor allows installation of FR-360 reader over North American or European style electrical single gang boxes

RBH-FR-360-N-PLUGS
Replacement set of screw cover plugs for FR-360 reader.

WIEGAND INTERFACE COLOR CODE



*See "Dual LED Control" document

Troubleshooting:

Problem: The reader does not recognize a card/tag (no beep, no LED flash)		
	Possible cause:	**Corrective action:**
1	One or more of the reader's wiring connections are incorrect	Power down the reader/access panel and verify the wiring connection are correct for the reader/ access panel combination.
2	The reader is not receiving proper power	Verify the voltage supplied to the reader is between 5 and 14 VDC
3	The reader is mounted too close to a device that radiates electromagnetic interference	Devices such as computer monitors radiate electromagnetic interference that affects read range. When possible, relocate either the reader or the device to provide greater separation between them
4	You are using an incorrect type of card	Make sure you are using an access card that is compatible with the reader

Problem: The reader has a short read range		
	Possible cause:	**Corrective action:**
1	The reader/access panel is not properly grounded	Ensure there is a quality earth ground connection made to the access panel. Refer to the access panel's documentation for information regarding the earth ground connection
2	The reader cable's shield wire has opened somewhere between the reader and the access panel	Verify the shield line from the access panel to the reader is one continuous, connected line. Check the access panel's manual to verify the shield line is correctly connected to the access panel
3	The reader is mounted too close to a device that radiates electromagnetic interference	Devices such as computer monitors radiate electromagnetic interference that affects read range. When possible, relocate either the reader or the device to provide greater separation between them
4	The power supply is generating electromagnetic interference	The power supply on the access panel must be a regulated, linear supply. Do not use switching supplies as they are often sources of electromagnetic interference

NOTE: The user is cautioned that making changes not approved by RBH Access Technologies may void the user's authority to use this equipment. Design and specifications are subject to change without notice. Products covered by patent number 6,611,198, 6,411,199 and D417,443. Other patents pending may apply.

All RBH Proximity Readers are compliant with following regulations Industry Canada Industrie Canada (FCC ID # RBH-125PROXFR)

FCC Compliance Statement: This device complies with Part 15 of the FCC rules. 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.

CE (0984) Compliance Statement:
Product can be used without license conditions or restrictions in all European Union countries, including Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Portugal, Spain, Sweden, and the United Kingdom, as well as other non-EU countries, including Iceland, Norway, and Switzerland

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