



Installation Sheet (Wiegand Interface)

SP-6820 Low-Frequency Card Reader

These instructions are for AWID's Model SP-6820 reader, using compatible proximity credentials from AWID.

Parts List

- (a) 1 Installation Sheet for SP-6820
- (b) 1 Model SP-6820 Reader
- (c) 2 #6-32 × 1" machine screw (for single-gang utility box)

Preparation

Reader Location: Select the reader's mounting location. The SP-6820 Reader may be screwed to a single-gang utility box like a cover plate, or to a wall or other surface. On a metal surface, read range is reduced about 20%. The SP-6820 may be installed indoors or outdoors, but it needs protection from direct rain or snow.

DC Power Supply: DC power for this reader is usually supplied from the +DC and Ground terminals of the Wiegand reader port on the system's panel. If this is not possible, use an independent power supply. Power may be shared with other readers if the supply has sufficient current capacity. The power supply should be close to +12 volts DC (as low as +5 volts is OK), 1 ampere capacity, linear-rated, regulated DC output.

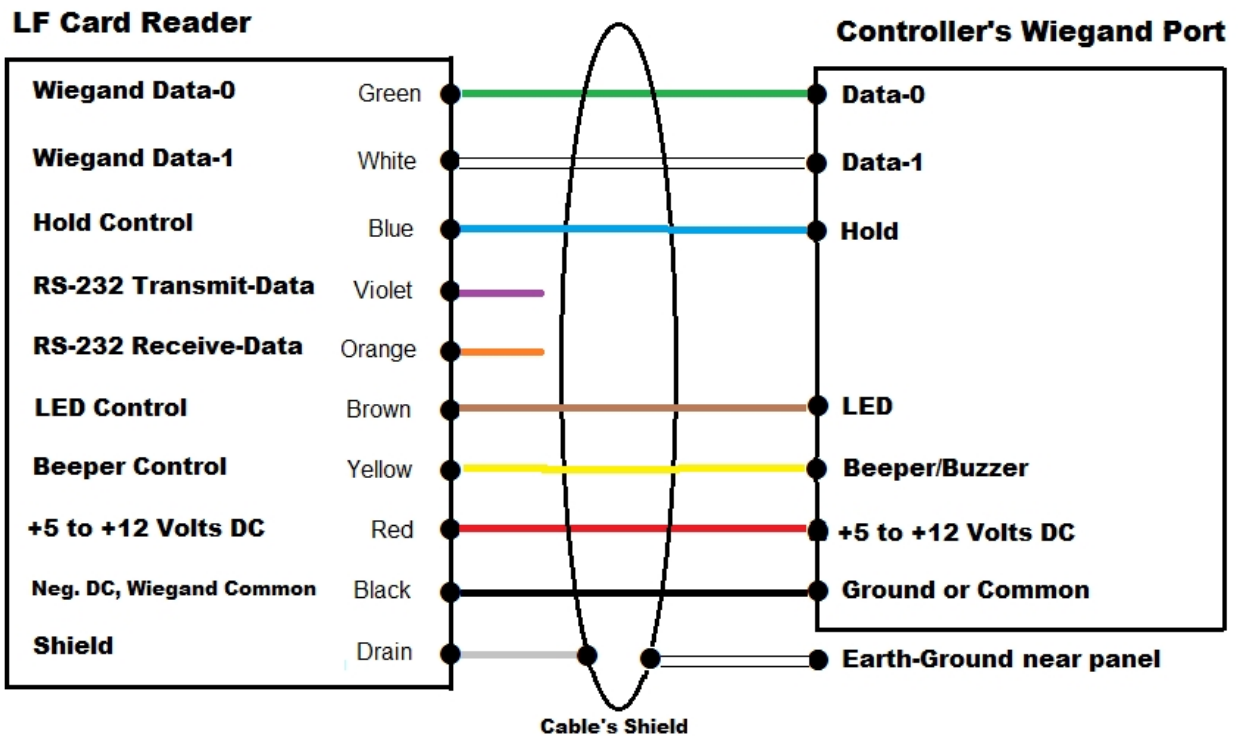
Cable to Controller and Power Supply: 4 to 7 conductors from the reader to the system (2 wires for DC power, 2 wires for Wiegand data, and 1 to 3 wires for external LED, Beeper/Alarm, and Hold control, if used). 22-gauge stranded wires. Overall 100% *shield for both power and data*. 500 feet maximum length.

- If the DC power supply is separated from the panel's reader port, the reader's **black** wire *must* be connected to *both* the DC power supply's Negative terminal and the panel reader port's Ground terminal.
- If the separate DC power supply is close to the reader, run two 22-gauge cables – 2 wires for DC power, and 3 to 6 wires for Wiegand data (including Ground) and for the external control lines, if used. *Both* cables must be overall-shielded and earth-grounded (at the end far from the reader).
- Conduit: If cables are pulled through metal conduit, the conduit should be earth-grounded (like the cables).

Installation

1. **Connector** – Cut off the 10-pin in-line connector from the end of the reader's cable. Discard the connector.
2. **Open the Reader** – Snap open the reader's front cover by inserting a wide screwdriver blade in the slot at the bottom edge of the cover. Twist the blade gently.
3. **Wire Connections** – Connect the reader's wires to the cable(s) for power and data.
 - a. First, connect **black** to the panel port's Ground terminal, and, if separate, to the power supply Negative.
 - b. Connect **green** to the Data-0 terminal. Connect **white** to the Data-1 terminal.
 - c. Connect the **gray** drain wire to the shield of the connecting cable.
If power and data are in separate cables, connect all three drains/shields together near the reader.
 - d. If the LED, Beeper/Alarm and/or Hold features are used, connect the **brown**, **yellow** and/or **blue** wires.
 - e. At the end of the cable(s) near the panel (and near the power supply, if separate), connect the **shield** to a verified earth-ground.
 - f. Last, connect **red** to the DC Positive terminal.

(continued)



4. **Reader Mounting** – Feed the reader’s cable through the utility box or the wall’s cable opening. Fasten the reader to the utility box or the wall, with screws through the holes inside the open reader. Use the supplied screws for mounting on a utility box. When mounting is finished, snap the cover on the reader.
5. **Reader Test** – When power is applied to the SP-6820, the LED initializes to steady-red for standby, and the beeper sounds. With every presentation of an AWID LF card or tag to the reader, the LED changes color momentarily, and the beeper sounds briefly. Read range with a compatible AWID card is up to 8 inches.
6. **System Test** – Wire the reader to the system’s controller. Program the code for the AWID proximity card or tag into the host system, with full priority, all doors groups, and all time zones. Present the card or tag to the reader. Observe door unlock or gate opening, indicating “Access Granted” by the system.

Technical Support • Call 408-825-1100, option 1. E-mail Support@awid.com.

SP-6820 has been evaluated to the following Access Control Performance Levels for UL standard 294:

1. Destructive Attack – Level I (No Attack).
 2. Line Security – Level I (No Line Security).
 3. Endurance – Level IV (100,000 cycles).
 4. Standby Power – Level I (No Standby Power).
- Access Control Reader, General Signaling Type NM.

