Installation Sheet (Wiegand Interface)
KP-6840 LF Card & PIN Reader

These instructions are for AWID's Model KP-6840 reader, using compatible proximity credentials from AWID.

Parts List   (b) 1 Model KP-6840 Reader/Keypad
(a) 1 Installation Sheet for KP-6840   (c) 2 #6-32 × 1" machine screw (for single-gang utility box)

Preparation

Reader Location: Select the reader's mounting location. The KP-6840 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 KP-6840 Reader may be installed indoors or outdoors, but 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 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).

Keypad Settings

The KP-6840 reader is shipped with the _keypad's_ output programmed for buffered 26-bit output, and its facility code (or site code) set at 000. These two settings can be changed at your shop before you go to the installation site. Just connect DC power from a bench supply or from a 9 volt or 12 volt battery to the **red** and **black** wires. Start either programming routine with DC **removed** from the KP-6840 unit. Keep the KP-6840 fully assembled.

Good keypad technique: Press key in straight for about ½ second. Separate the keystrokes -- one key at a time.

- **Keypad's Output Format**
    1. While the DC power is disconnected -- Press and hold the **4** key to change the format to 4-bit data burst; or hold the **8** key to change the format to 8-bit data burst; or hold the **2** key to restore 26-bit buffered data.
    2. With the **4** or **8** or **2** key still pressed in, connect the DC power. Within 3 seconds there is a beep sequence, and the LED changes to standby-red.
    3. Now release the pressed key. The change in keypad output format has been saved.

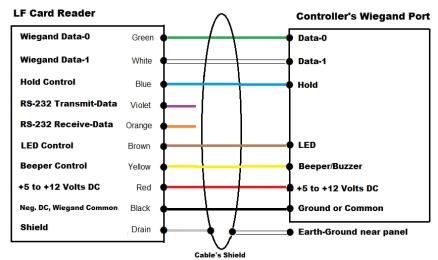- **Facility Code in Keypad's 26-bit Buffered Output**
    1. Connect the DC power. Watch the unit's LED. While it is amber, slowly enter the 10-digit password **9 1 4 3 6 9 8 8 0 0**; end with the # key. Press each key solidly. There is a short beep during each keystroke.
    2. Within 3 seconds, start entering the facility code's **3 digits** (between 001 and 255); end with the # key.
    3. There is a long beep and the LED color changes to standby-red. The facility code has been saved.

Keypad settings can be changed also on an installed KP-6840. The keypad's **format** can be changed anytime to any of the three formats, and the 26-bit's **facility code** can be changed to any value between decimal 001 and 255. *Note*: Selection of the **<u>Operation Mode</u>** (mix of card read and/or PIN) is done only in the host system's software.

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 frame. Twist the blade gently. Do not remove the keypad assembly.

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 <u>LED</u>, <u>Beeper/Alarm</u> and/or <u>Hold</u> 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.

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 KP-6840, the LED initializes to steady-red for standby, and the beeper sounds. With every presentation of an AWID LF card 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. Email Support@awid.com

The UL 294 performance levels to comply with are as follows:

Destructive Attack	Line Security	Endurance	Standby Power
I	I	I	I

Access Control Reader, General Signaling Type **NM**