



# Installation Sheet (Wiegand Interface)

## MR-1824 and MR-1824MC LF Card Readers

These instructions are for AWID's Model MR-1824 and MR-1824MC readers, using compatible proximity credentials from AWID. The "MC" model is compensated to mount the reader directly on a large metal surface.

<b>Parts List</b>	(a) 1 Installation Sheet for MR-1824/MC	(d) 4 Plastic screw anchor
	(b) 1 MR-1824 or MR-1824MC Reader	(e) 5 Screw-hole plug for reader's cover (1 spare)
	(c) 4 #6-20 × 1.375" self-tapping screw	(f) 2 Cable slot plug (pre-installed in MR-1824MC)

### Preparation

**Reader Location:** Select the reader's mounting location. Mount the **MR-1824** reader 4 inches away from metal. Mount the **MR-1824MC** on a flat metal surface at least 8 inches square. Observe ADA height requirements. This reader may be installed outdoors, but needs protection (non-metal housing) from direct rain, or sunlight when hot.

**DC Power Supply:** Use a separate power supply – 12 volts DC, current rating 1 ampere or more, linear-rated, regulated DC output. Do **not** connect the reader's **red** wire to the panel's +DC terminal. When the reader is connected to its power supply, voltage on the reader's red and black wires should be **12.0** volts. Power may be shared with other proximity readers if the power supply has sufficient current capacity.

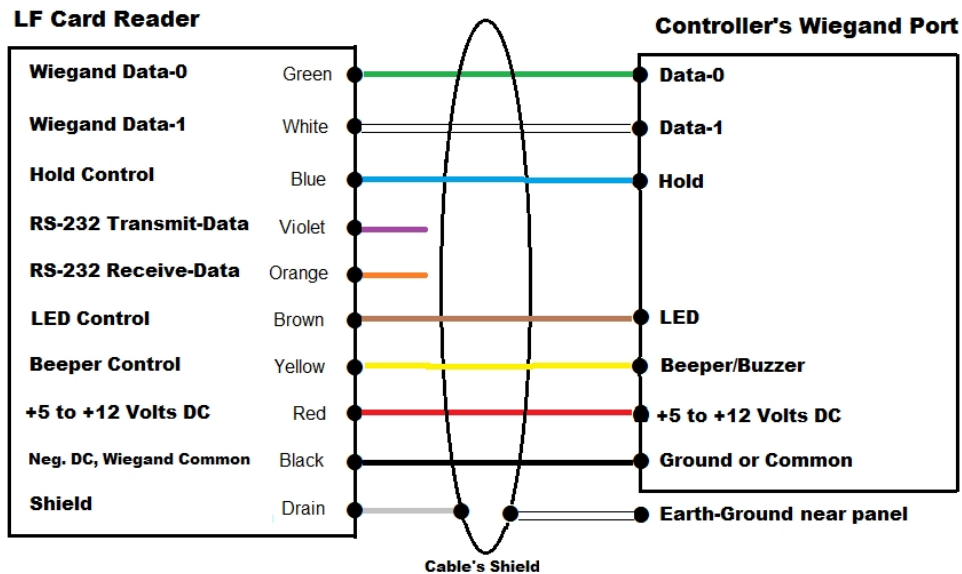
**Cable to Controller and Power Supply:** 4 to 7 conductors from the reader to the system (2 wires for DC power, 2 wires for Wiegand data, and 1, 2 or 3 wires for external LED, Beeper/Alarm, and Hold control, if used). 18 gauge. Overall 100% shield for both power and data. 500 feet maximum length.

- The reader's **black** wire must be connected to *both* the DC power supply's Negative terminal and the panel reader port's Ground or Negative or Common terminal (for Wiegand Data Common)..
- If the DC power supply is close to the reader, run two cables – 2 wires, 18 gauge for DC power, and 3 to 6 wires, 22 gauge for Wiegand data, 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** – Remove the 4 screws in the cover's beveled edges. Lift the cover off the base. Pull the cable behind the cover gently and remove the LED assembly. Save the 4 screws for final assembly in step 5.e.
3. **Mark the Mounting Holes** – Use the reader base as a template. Level the base. Mark the 4 mounting holes on the wall or surface. Mark and drill the cable's clearance hole (if needed). Pull the cable through the hole.
4. **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 or Negative terminal, *and* 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, connect the cables' **shield** to a verified earth-ground.
  - f. Last, connect **red** to the DC Positive terminal.

(continued)



5. **Mounting the MR-1824 or MR-1824MC** -- Note: Be careful not to touch the copper antenna or the electronic components. In the **MR-1824MC**, do *not* remove the 4 ferrite plates from the back of the reader.
  - a. Drill lead holes in the wall, if needed. Insert the 4 screw anchors (supplied), if needed.
  - b. For **MR-1824** (not MC): If the reader's cable is to exit either right or left edge of the reader base, lay the cable in the serpentine slot. Insert one of the cable slot plugs in the other edge of the reader base.
  - c. Fasten the reader base to the wall using the 4 supplied screws, or other fasteners that you select.
  - d. Re-insert the LED assembly into the lens recess on the cover. Position the cover on the reader base.
  - e. Using the 4 screws that you removed in step 2, fasten the cover securely to the reader base on the wall.
  - f. *After* you test the reader, insert the 4 screw-hole plugs in the cover over the fasteners.
6. **Reader Test** – When power is applied to the MR-1824, the LED initializes to steady-red for standby, and the beeper sounds. With every presentation of an AWID proximity card to the reader, the LED changes color momentarily, and the beeper sounds briefly. Read range with a compatible AWID card is up to 24 inches for the MR-1824, and up to 16 inches for the MR-1824MC. (See “Suggestions” (a), below.)
7. **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.

### Suggestions

- (a) For best performance, please read Technical Reference “MR-1824 – Assuring Maximum Read Range”. Download this memo from [www.awid.com](http://www.awid.com) > “Access Control” tab > “Readers”.
- (b) When the **brown** (LED) and **yellow** (Beeper/Alarm) wires are not connected, these features are active under reader control. When these wires are connected to the panel, the host system adds control of these features.
- (c) The **blue** wire should be connected only for Hold control by the host system (if the customer needs Hold).
- (d) For information on the RS-232 interface, download Technical Reference “Readers – RS-232 Interface”, or call Technical Support.

**Technical Support** • Call 408-825-1100, option 1. E-mail [Support@awid.com](mailto:Support@awid.com).

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

Destructive Attack	Line Security	Endurance	Standby Power
I	I	I	I

