Installation Sheet
XR-100 UHF Card Reader

These instructions are for AWID's Model XR-100 mullion-mount reader, using compatible UHF credentials from AWID.

Parts List

(a)	1	Installation Sheet XR-100
(b)	1	Model XR-100 Reader
(c)	2	#6-32 X 1" self-tapping screw (for sheet metal, wood, plastic, screw anchor, etc.)

Preparation

Reader Location: Select the reader's mounting location. The XR-100 Reader may be screwed to a door mullion or window mullion, or to a wall or other surface. On a metal surface, read range is reduced about 20%. The XR-100 Reader may be exposed directly to 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 nominal +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 conductors from reader to the system (2 wires for DC power, and 2 wires for Wiegand data). 22 gauge. Overall 100% *shield for both power and data*. 500 feet maximum length.

- If the DC power supply is *independent* 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's Ground terminal.
- If the DC power supply is *close to the reader*, run two 22 gauge cables – 2 wires for DC power, and 3 wires for Wiegand data. Both cables must be overall-shielded and earth-grounded.
- Conduit: If cables are pulled through *metal conduit*, the conduit should be earth-grounded (like the cables).

Procedure

1. Connector – Cut off the white 10-pin connector from the end of the reader's cable. Discard the connector.
2. **Switching Between Wiegand Mode and OSDP Mode –**

   a) Connect the TX (violet) cable to the RX (orange) cable of the RS-232 interface (wires coming out of the reader), then power on the reader.

   b) The reader will emit two long beeps, and a red light will flash, indicating that the mode has been switched.

   c) After switching, disconnect the TX cable from the RX cable and restart (power cycle) the reader to complete the process.

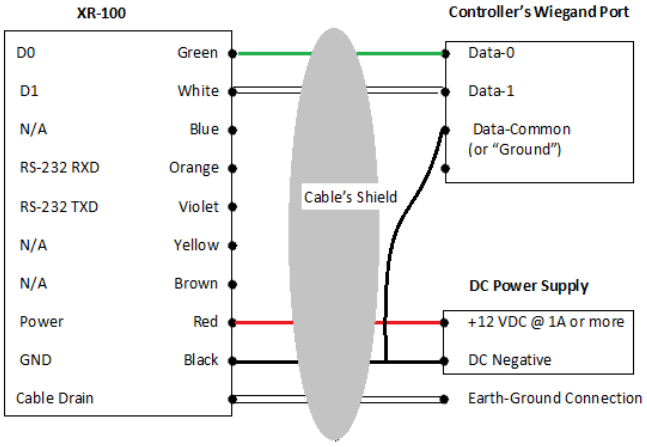
   - Wiegand Mode: 6 beeps, followed by all lights flashing, then a steady blue light.

   - OSDP Mode: 3 beeps, followed by a solid green light, then alternating between green and blue lights for one minute.

3. Wire Connections – Connect the reader's wires to the cable(s) for power and data.

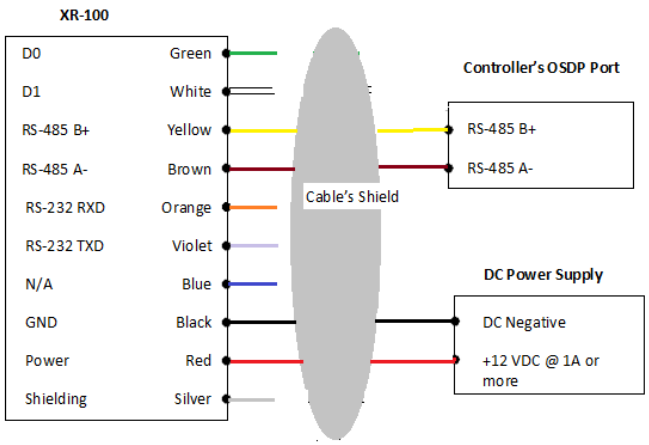
Wiegand mode –

a) 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 drain/shields together near the reader.
d) At the end of the cable(s) near the panel (and near the power supply, if separate), connect the **shield** toa verified earth-ground.
e) Last, connect **red** to the DC Positive terminal.



OSDP mode –

a) Connect **black** to the panel port's Ground terminal, and, if separate, to the power supply Negative.
b) Connect **yellow** to RS-485 B+. Connect **brown** to RS-485 A-.
c) Connect the **gray** drain wire to the shield of the connecting cable. If power and data are in separate cables, connect all three drain/shields together near the reader.
d) At the end of the cable(s) near the panel (and near the power supply, if separate), connect the **shield** toa verified earth-ground.
e) Last, connect **red** to the DC Positive terminal.



4. Reader Mounting – Feed the reader's cable through the cable opening in the mullion or wall. Mark and drill lead-holes in the surface where the reader will be mounted. Fasten the reader to the mullion or wall, with screws through the holes at the ends of the reader. Use supplied screws if suitable.

5. Screw-Hole Plugs – ***After*** *you have tested the reader,* press the plugs over the screw heads in the reader.

6. Reader Test – When power is applied to the XR-100, the LED initializes to steady-red for standby, and the beeper sounds. With every presentation of an AWID UHF card to the reader, the LED changes color momentarily, and the beeper sounds briefly. Read range with a compatible AWID card is up to 6 inches.

7. System Test – Wire the reader to the system's controller. Program the code for the AWID UHF card or keytag into the host system, with full priority, all doors groups, and all time zones. Present the card or keytag 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.