



uAccess XJ-1023

**Users Manual - 041419**



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## **FCC COMPLIANCE**

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.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radiofrequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### **FCC Caution:**

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

### **Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 5 cm between the radiator & your body.

**Note:** The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi products marketed in US must be fixed to US operation channels only.

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**NOTE: READ AND USE THIS MANUAL.**

**NOTE: FAILURE TO FOLLOW THE INSTALLATION GUIDE MAY RESULT IN POOR PERFORMANCE OR EVEN CAUSE PERMANENT DAMAGE TO THE READER, THUS VOIDS THE PRODUCT WARRANTY.**

## REVISION HISTORY

Version No.	Revised By	Date	Sections Affected	Remarks
1.0	AWID Engineering	9/2019	-	Initial version
1.1	AWID Engineering	10/2019	-	FCC ID assigned: OGS1356RM

# **1 INTRODUCTION**

AWID's uAccess XJ-1023 Reader is a smart card reader for switch plate mounting. This Reader will provide simultaneous Wiegand and RS-232 output formats. Its primary applications are Access Control and Time & Attendance applications.

## **1.1 GENERAL DESCRIPTION**

- Thin-line switch plate mounting
- LED visual indicator
- Indoor installation
- Audible feedback

## **1.2 SPECIAL FEATURES**

- Simultaneous Wiegand (Access Control) and RS-232 (Time & Attendance) outputs
- Slim housing designed for single gang box
- Permanently sealed electronics for application
- UV stabilized plastic housing

## **1.3 SUGGESTED APPLICATIONS**

- Access Control
- Time & Attendance
- Asset Management RFID

## 2 SPECIFICATIONS

Input voltage	.....+5V to +12 V
Input current	.....250 mA minimum
Read range	
Smart Card (ISO-14443 A/B)	.....Up to 1.5 inches (3.8 cm)
Transmit frequency	.....13.56 MHz
Receiver frequency	.....13.56 MHz
Operating temperature range	.....-30° C to +65° C (-22° F to 149° F)
Output format available	.....Wiegand & RS-232 (Standard)
Color	.....Dark Gray

### 2.1 MEASURE READ DISTANCE

To measure the read range between Reader and card, grasp the card by the corner or near the slot and move the card slowly toward the Reader, with the card surface parallel to the reader, until a BEEP occurs. The BEEP indicates that the Reader detects and read the card. In order to read again, the card must be fully withdrawn from the Reader's field of surveillance and then re-approached again. During normal operation, the card can be presented at any angle relative to the Reader, however this will result in slight variation of read range.

**Note: Do not "wave" the card in front of the Reader. "Waving" the card in front of the Reader will result in a diminished read range.**

## 3 PREPARATION FOR INSTALLATION

### 3.1 SITE SURVEY

Always conduct a site survey before starting installation, avoid any possible sources of interference. If the Reader is not installed properly, the performance will be degraded or more seriously the Reader may be damaged. The following is a list of installation procedures that should be followed during installation:

- Do not install the Reader in an area where sources of broadband noise may exist. Examples of broadband noise sources are motors, pumps, generators, AC/DC converters, non-interruptible power supplies, AC switching relays, light dimmers, CRT's, induction heater, ultrasonic welder etc.
- Do not bundle the reader wires together in one conduit with the AC power cables, lock power, and other signal wiring.
- Keep all the Reader wiring at least 12 inches (30 cm) away from all other wiring, which includes but not limited to, AC power, computer data wiring, telephone wiring and wiring to electrical locking devices.
- Do not install the reader within 12 inches (30 cm) of a computer CRT terminal.

### 3.2 PREFERRED READER INSTALLATION PRACTICES

- Make sure that the supply voltage of the Reader is within specification.
- Use cables with over-all shield (Drain).
- For best results, run the cable in an individual conduit with at least 12 inches distance from the AC power, computer data cables and cables for electrical locking devices.

- Use recommended cable. Do not use any un-shield "Twisted Pair" type cable.
- Use the largest wire gauge possible.
- Use dedicated and linearly regulated power supply, where applicable.
- Use Single Point Grounding (Earthing). No ground loops.

### 3.3 METAL MOUNTING

The Reader is pre-compensated for mounting on metal utility boxes.

### 3.4 GENERAL WIRING REQUIREMENTS

All the Reader wiring must be continuously shielded. AWID recommends using #22 AWG up to #18 AWG, six or seven-conductor shielded cables. Longer distances and higher current consumption on the power supply line will require larger gauge wires. Refer to Table 1, Figure 1 and Figure 2 on the following pages to determine your data lines' wiring requirement. Due to system data termination differences, contact your panel manufacturer for their specific requirements.

WIRE SIZE	#22 AWG (0.6mm Dia)	#18 AWG (1.2mm Dia)
WEIGAND	500ft (152 meters)	980 ft (300 meters)
RS-232	50 ft (15 meters)	50 ft (15 meters)

### 3.5 POWER SUPPLY

**AVOID** using a single power supply for Reader and the magnetic lock. Doing so will affect the Reader operation and can damage the Reader.

### 3.6 GROUNDING

Grounding is critical for proper operation of the Reader. When installing the Reader, it is crucial to assure that the earth ground is the best ground available. If you elect to use the AC main power ground, conduct a test by measuring its resistance relative to a known good ground, such as a cold water pipe or a structural steel that is in direct contact with the ground. This resistance should be less than 50 ohms. If you find that the AC main power does not provide adequate earth ground, try using a solid connection to a cold water pipe or for best results drive your own copper clad ground rod into the earth for the ground point.

For multiple Reader installations, it is critical that all Readers are connected to a single ground point. Using multiple ground points will create secondary current paths or ground loops that can affect the performance and cause damage to the Reader.

### 3.7 WIRING DIAGRAMS

The Reader is designed for Wiegand and RS-232 standard communication formats; use Figure 1 for Wiegand format installation and Figure 2 for RS-232 format installation. If an external power supply is being used, leave the Panel's Ground and Power terminals open and connect the Reader's Ground (Black) and 5-12VDC (Red) terminals to the external power supply.





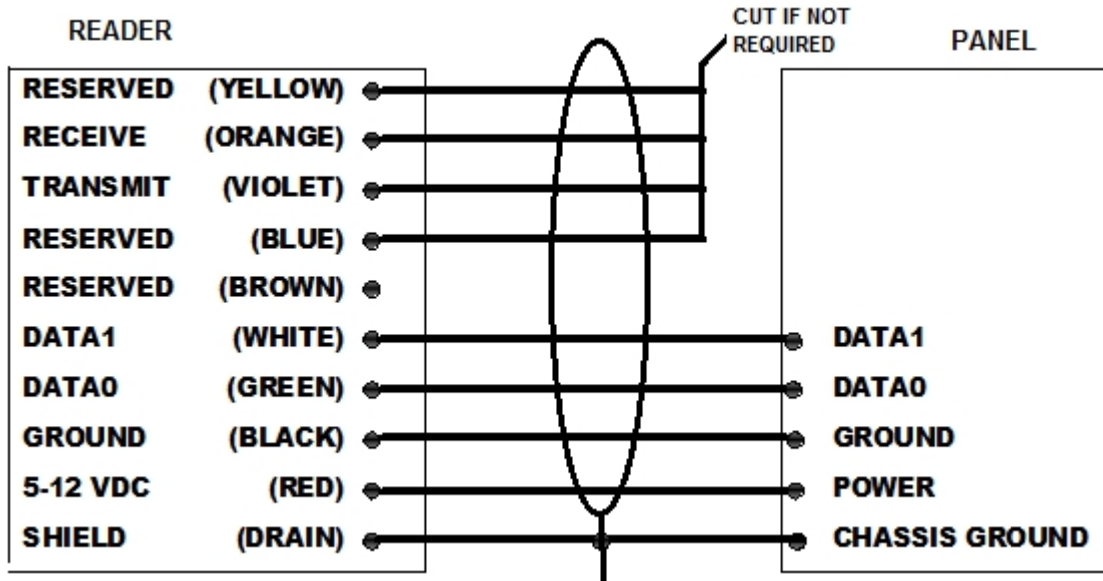


Figure 1 Wiring Diagram for Wiegand Output Format

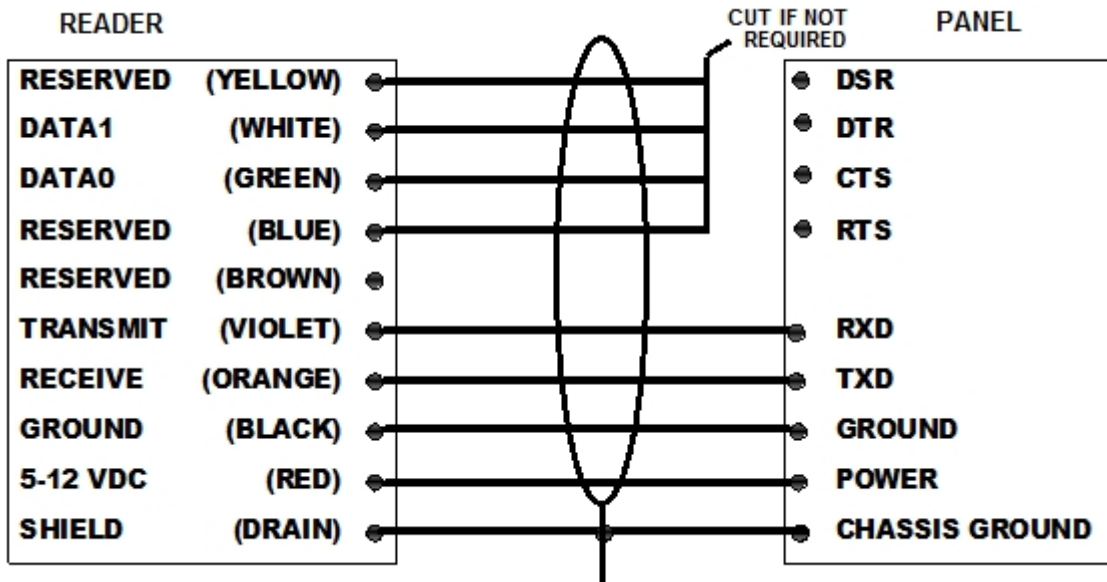


Figure 2 Wiring Diagram for RS232 Output Format

#### 4 Warranty

AWID's products are warranted to the original purchaser to be free of defects in material and workmanship for the life of the product. Any tampering or modification to the product will void this product warranty. AWID does not warrant any product as to its merchantability or suitability of use. AWID's sole and complete responsibility under this warranty is expressly limited to repair or replacement of the warranted product.

