Installation Sheet (Wiegand Interface)
Sentinel-Prox DC-1023 & DL-1027

Reader Description

The Dual Frequency Reader is a radio-frequency reader for Smart Cards and Smart Tags & a proximity reader for Access Control Systems. The Reader consists of a transmit/receive antenna and reader electronics in a polycarbonate housing. The reader electronics are potted with epoxy resin to protect against the environment. The Reader may be mounted like a cover plate on a single-gang electrical utility box, or on any surface (wall, cabinet, etc.). For a metal-compensated reader, see below.

Installation Procedure

1. Install a single-gang utility box, or drill two no. 27 (0.144 inch) clearance holes for the reader screws and one hole for the cable, at the desired location. Observe ADA height requirements.

2. DC-1023 only: Snap open the reader's front cover by inserting a wide screwdriver blade into the slot at the bottom edge of the cover, then twisting the blade gently (see Figure 1).

3. Clip off the white inline connector from the end of the reader's cable. Keep the wires as long as possible.

4. Connect the reader's cable to the controller panel as shown in Figure 2.
   Connect the *yellow* wire only if used for Beeper control by the panel.
   Do not connect the *orange, blue* and *violet* wires to anything. **Tape or cap all unused wires singly.**

5. Use a linear regulated DC power supply, between 5V and 12V (150 mA peak load).

6. Install the reader on the single-gang utility box or other surface. Fasten the reader to the utility box using supplied screws.

7. DC-1023 only: Re-attach the reader's front cover -- hook the cover over the top edge of the base, then snap the bottom closed by pressing it firmly.

8. Power up the reader. The reader is going through initialization, during these 5 seconds you will hear a series of beeps, after this the LED should be steady RED and ready to read cards.

Product Specifications

Cable to Controller
- 5 or 6 conductors (not twisted pairs), stranded, 22 AWG, color-coded insulation, overall 100% shielded (Number of conductors depends upon use of optional features – Beeper and LED. See Figure 2.)
- Length for Wiegand interface........................Up to 500 feet

Read Range (LF/HF)
- At 5V to 12V DC..2 to 3 inches (5 to 7.5 cm) typically, depending on type of card or tag

Metal Compensation
- This reader is metal compensated and can be mounted directly on metal

Characteristics
- Operating Temperature Range ....-35° C to 65° C (-31° F to 150° F)
- Operating Humidity......................................0 to 95%, non-condensing

Operating Parameters
- Excitation Frequency....................................13.56 MHz & 125 kHz
- Smart-card/smart-label protocols ....Depends on the "Revision" for the DC-1023 / DL-1027
- Wiegand-formated Data Output ....for HF this is protocol dependant, LF 26 bits to 56 bits

Notes

1. When **wiring** the reader, connect the black wire (ground) *first*, and the red wire (positive power) *last*.

2. When the **yellow wire** is not used, the beeper remains active and under the reader's internal control.

3. The Beeper and LED lines are **TTL logic levels**. *Never* apply power to them. They may be pulled to a low level (0 to 0.8 VDC) to enable their function. They must float at a high level when not used.

4. The Reader has both Wiegand-protocol and RS-232 serial **interface**. For information on RS-232, contact AWID's Technical Support.

5. For additional information, please visit AWID's Web site www.awid.com. For technical support questions visit www.awid.com/support or call **1-800-369-5533** (in the U.S.) or +**1-408-825-1100** from 8:00am to 5:00pm Pacific Time.
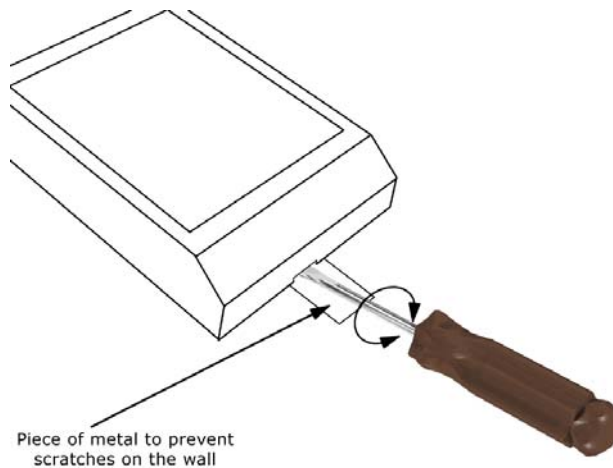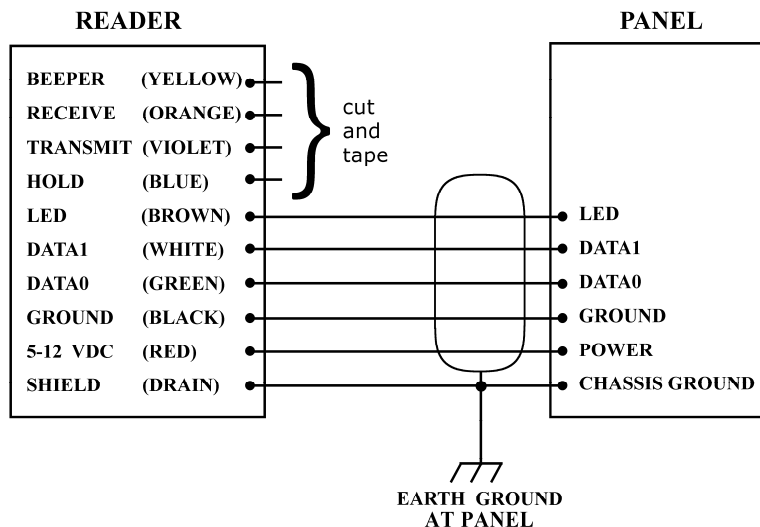

Piece of metal to prevent
scratches on the wall

FIGURE 1: Open the Cover (only DC-1023)

FIGURE 2: WIRING DIAGRAM – WIEGAND