Installation Sheet (Wiegand Interface)
Sentinel-Prox DK-1025 Reader

Reader Description

The DK-1025 Reader is a radio-frequency reader for Smart Cards and Smart Tags with integrated keypad 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 DK-1025 Reader may be mounted like a cover plate on a single-gang electrical utility box, or on any surface (wall, cabinet, etc.). (This reader is metal compensated and can be installed directly on metal)

Installation & Setup Procedure

A.   Setup (for Firmware MB, skip for M4,M8)

1. Connect DC power to the reader's black and red wires. (Leave other wires disconnected.) The LED is amber for about **3 seconds**. While the LED is amber, start entering the 10-digit password **9 1 4 3 6 9 8 8 0 0**, then press **#**. Hold each key for at least ½ second. There is a short beep with each keystroke.

2. Immediately enter the 3-digit site code (or facility code) **S S S**, then press **#**. There is a short beep with each keystroke.

    ▪   Program the host system for 26-bit Wiegand input from the keypad entry. The site code must be between 000 and 255.

    ▪   If you do not program the keypad's site code, the DK-1025 **default site code** of **000**.

    ▪   The site code for the keypad may be the *same as* or *different from* the site code of the credentials (cards, keytags or wafers), depending on requirements of the host system or the application.

3. If programming is successful, the beeper sounds 1 long beep. Then the LED is red to indicate Standby mode.

4. If the beeper doesn't sound and the LED doesn't change to red, remove power from the reader for a few seconds; then repeat steps 1 to 3, above. Do not pause between the password and the site code. The *yellow* wire must be disconnected from the panel and floating during the programming.

5. Always confirm programmed Site Code with the control panel.

B.   Installation

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. 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 (item c in the Parts List).

7. 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 (Metal-Compensated Reader)

- At 5 volts to 12 volts DC .... 2 to 3 inches (5 to 7.5 cm) typically, depending on type of card or tag

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 DK-1025
- Wiegand-formated Data Output .... for HF this is protocol dependant, LF 26 bits to 56 bits, Keypad 26 bits for FW: MB, 4-bits for FW: M4 and 8-bit for FW: M8

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 1.2 VDC) to enable their function. They must float at a high level when not used.

4. DK-1025 readers have 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.
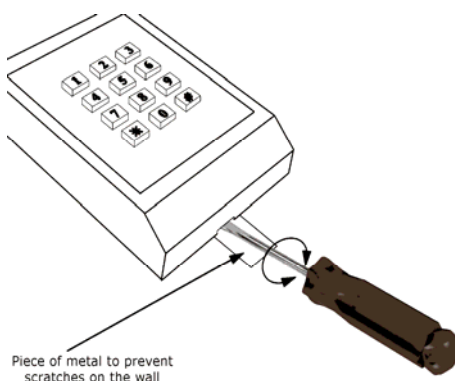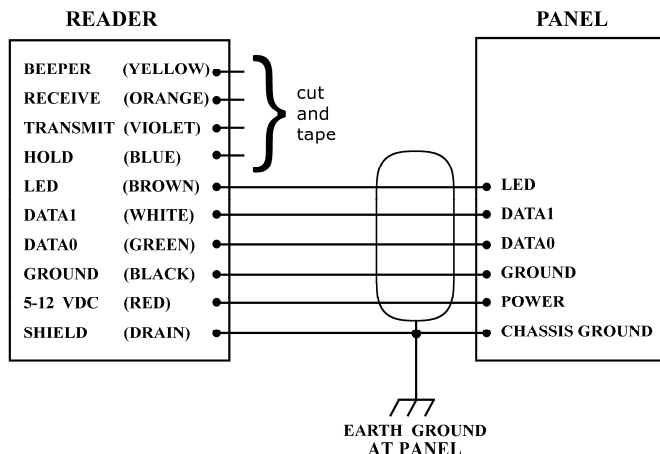

Piece of metal to prevent
scratches on the wall

FIGURE 1: Open the Cover

FIGURE 2: WIRING DIAGRAM – WIEGAND