

Installation Sheet (Wiegand Interface)

NDK-2025 Reader with Integrated Keypad



Reader Description

The NDK-2025 Reader is a radio-frequency proximity reader with integrated keypad for Access Control Systems. The Reader consists of a 12-key PIN pad, transmit/receive antenna, and reader electronics, in a durable metal housing. The reader and keypad electronics are potted with urethane resin to protect against the environment. The NDK-2025 Reader may be mounted like a cover plate on a single-gang electrical utility box, or on any surface.

Parts List

- (a) Installation Sheet
- (b) Sentinel-Prox NDK-2025 Reader

Installation Procedure

1. Install a single-gang electrical utility box, or drill two no. 27 (0.144 inch) clearance holes for the reader's screws and one hole for the cable, at the desired location. Observe ADA height requirements.
2. Clip off the white 10-pin in-line connector from the end of the reader's cable. Keep the wires as long as possible.
3. Remove reader's back plate, and install it on an electrical utility box or other surface. The supplied screws can be used to fasten the back plate to a utility box (item c in the Parts List).
4. Connect the reader's cable to the access control panel as shown in Figure 1. Connect the **yellow** wire only if used for Beeper control by the panel. In steps 8 and 9, let the yellow wire **float**. **Do not connect** the *orange* and *violet* wires to anything. **Tape or cap** all unused wires singly.
5. For red and black wires, use a linear regulated DC power supply, between 5V and 12V. (Minimum 1A)
6. Fasten the reader to its back plate, with supplied screw.
7. Power up the reader. The beeper will NOT sound and the LED will be a steady amber color.
8. While the LED is amber, present a valid proximity credential (card, keytag or wafer) briefly to the reader. (This initializes the reader) The Beeper sounds a few times, then the LED is blinking red to indicate Standby mode.
9. 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 7 to 8 above. Also, be sure that the *yellow* wire is disconnected from the panel and floating during the programming.

Operation Modes Revision MPC8 supports the following operation modes of the host system:

- Prox-plus-PIN** Present proximity card first, then enter PIN on keypad. **Prox-Only**.....Present proximity card only.
Pin-plus-Prox Enter PIN on keypad first, then present proximity card. **PIN-Only**Enter PIN on keypad only.
- (a) The number of PIN keystrokes required is determined by the host system (not by the NDK-2025).
 - (b) If the host system is programmed for the # command, complete the keypad PIN entry by pressing the # key.

Product Specifications

Cable to Controller

- 4 to 7 conductors (not twisted pairs), stranded, 22 gauge, color-coded insulation, overall 100% shielded
Note: The number of conductors depends upon use of NDK-2025's LED and Beeper features. See Figure 1.
- Length for Wiegand interface.....Up to 500 feet

Read Range with AWID card (Metal-Compensated Reader)

- At 5 volts DC.....Typically 2 inches
- At 12 volts DC.....Typically 2.5 inches

Characteristics

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- Indoor and OutdoorRated for outdoor installations
- Operating Temperature Range.....-35° C to 65° C (-31° F to 150° F)
- Operating Humidity.....0 to 95% non-condensing

Operating Parameters

- Excitation Frequency125 kHz
- Wiegand Output26 bits to 50 bits (determined by code in credentials)
- Keypad8-bit code for each keystroke

CertificationsFCC Part 15; Industry Canada

Notes

1. Power down before any wiring changes. Connect the *black* wire (ground) first, and the *red* wire (power) last.
2. When the *brown* and *yellow* wires are not used, the LED and beeper remain active, under the reader's internal control.
3. The LED and Beeper lines are logic levels. **Never** apply power to them. They may be pulled to the low logic level (0 to 1.2V DC) to enable their function, and float at the high logic level (3.6 to 5.0V DC) when not used.
4. The NDK-2025 *card reader* has the Wiegand-protocol interface. The NDK-2025 *keypad* has only 8-bit burst Wiegand output on the same 2 data lines.
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 8:00 a.m. to 5:00 p.m. PST.
6. FCC Compliance: This equipment has been tested and found to be in compliance with the limits for FCC part 15, Class A digital device. 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 radio frequency energy and, if not installed and used in accordance with instruction manual, may cause harmful interference with 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. The users are prohibited from making any change or modification to this product. Any modification to this product shall void the user's authority to operate under FCC Part 15 Subpart A Section 15.21 regulations.
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.
7. Industry Canada Compliance: Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

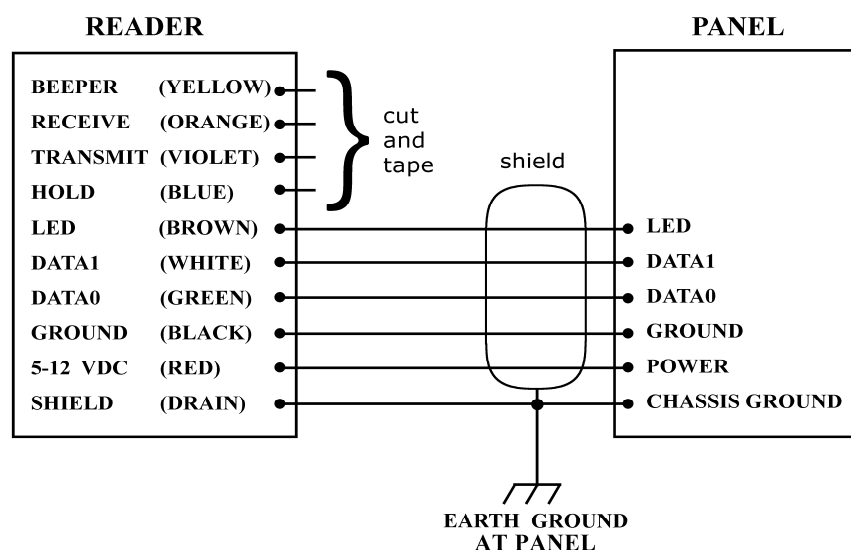


FIGURE 1: Wiring Diagram (Wiegand - see Procedure, Step 4)