AWID

DK-1025™
Sentinel-Prox™
Dual-Frequency Reader

AWID's DK-1025, 13.56 MHz Contactless & 125 kHz Proximity Card Reader w/ Keypad is a switch-plate-type reader for two technologies, combined with a 12-key numeric keypad, in a unit that fits on a single-gang box. The DK-1025 reader provides convenient read range for proximity and smart cards. The keypad may be used for PIN, programming, enrolling and data entry.

Installation The DK-1025 reader is designed to fit perfectly on a single-gang electrical utility box. The metal-compensation that is built into every DK-1025 reader assures minimal loss of read range when the reader is mounted on a metal surface. The DK-1025 reader also can be fastened by 2 screws on any wall or other surface. Installation may be indoors or outdoors, exposed to weather.

Features The DK-1025 reader contains a 2-color LED and a 4 kilohertz beeper. Both LED and beeper are controlled by the reader itself and also can be controlled externally by the host system. The LED can indicate access-granted by the host. The beeper can be used as an alarm that prevents further card reads until the alarm condition is cleared.

Programming (a) Customer orders DK-1025 Revision that produces keypad data output in one of 4-bit, 8-bit key-bursts or as 26-bit code transmission (like a reader with a 26-bit card.) (b) The installer programs the host system for DK-1025's operation mode.

Operating Modes The DK-1025 can be used for Card + PIN, PIN + Card, Card Only or PIN Only. Mode selection is made by programming the host system, not by selection in the DK-1025.

Testing The reader is *self-testing* – the LED and beeper alone assure the installer and cardholder of correct performance. The reader is also *self-diagnostic* – if DC power is unstable or if electrical noise is induced in the cable the reader resets.

Operation AWID's proximity readers use a re-present mode that requires that the user remove the card from the reader's field before the card can be read again. The DK-1025's card reader has both Wiegand and RS-232 outputs. The keypad has only Wiegand output. Code transmission from both interfaces is simultaneous. The card reader and keypad outputs share the same data wires.

Environment The DK-1025 reader is ready for installation indoors. For outdoor use, protect the DK-1025 by a hood that keeps water off the unit. If temperature is *below freezing*, use a housing with hinged cover over the keypad. The reader's ABS plastic enclosure is secure when its cover is on. The unit has epoxy resin over its circuits.

Credentials The DK-1025 reader contains two ready-to-use readers in a single enclosure. The low-frequency (LF) reader is for AWID's standard proximity (125 kHz) cards and tags: clamshell and graphics-quality cards, keytags, hangtags and adhesive wafers. The high-frequency (HF) reader is for 13.56 MHz "smart cards" with UID, Sector or AWID proprietary format. Read range varies with credential type.

FEATURES

Dual applications…
Both proximity and "smart card"

Compact size…
Fits like a cover plate on a box or wall

Clean, slim design…
Matches architecture on site

Ready for heavy use at all sites…
Non-contact reading of cards and tags

Easy mounting…
2 screws match holes in utility box

Special read range in a small unit…
2 to 3 inches w/ cards

Visual and audible indicators…
Red-Green LED and beeper inside

Tamper alarm…
Tamper detection

Controllable functions in reader…
LED and beeper can be wired to panel

Easy power…
Connects to panel's DC terminals

Quick wiring to host panel…
Basic 4-wire hook-up; 7 wires max

Standard Wiegand data output…
Data-0 & Data-1 panel connection

Alternative RS-232 data output…
Interface to PC or special controller

Uniform code formats in LF/HF…
Standard 26-bit plus special codes

Keypad to match host system…
Code may be 4-bit, 8-bit or 26-bit

No programming in reader…
DK-1025 ready to reads all AWID codes

Flexible application in same unit…
Reader + PIN, reader alone, PIN alone

All operation modes available…
Determined by system's programming

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ACCESSORIES AND SUPPLIES

Mounting hardware – 2 #6-32 x 1" machine screws (supplied). Use other fasteners as needed for mounting.

Power supply – Reader operates with voltage between +5 and +12 VDC. Most controller panels provide suitable voltage on power and ground terminals. External linear, regulated DC power supply may be used (150 mA or more current rating).

Cable for power and data – 22 AWG or larger, stranded, color-coded, overall 100% shielded and not twisted pair. Up to 9 conductors depending on connection of reader's controllable functions (LED, alarms, etc). For Wiegand, 4-8 conductors; for RS-232, 5 conductors.

Protective housing – DK-1025 reader-keypad is suitable for outdoor installation if not subject to rain or snow or lawn sprinklers. If temperature is always above freezing, mount reader inside a plastic hood or shield with an open front for access to the keypad. If temperature is below freezing, have a hinged door over the keypad to assure that the keys remain clear. AWID suggests The Housing Company's Model PCH049; its hinged door is easily removed or replaces.

Installation Sheet – Download full instructions from AWID's web site http://www.awid.com.

CREDENTIALS

- ISO-14443A (Mifare, DESFire*, Mifare Plus*)
    - UID or Sector Data
- ISO-14443B
    - UID or Sector Data
- ISO-15693 (Smart Label)
    - UID
- ISO-18000-3
- ASK Protocol*
- US Government PIV*
    - FIPS 201 transparent reader
- AWID/HID Proximity Card

*Note: 1. Special order required for DESFire, Mifare Plus and ASK.
2. FIPS 201 in process to release later.

PERFORMANCE CHARACTERISTICS

Read Range:
2-3 inches (5-7.5 cm) for 13.56 MHz (tag dependent)
2-3 inches (5-7.5 cm) for 125 kHz (tag dependent)

Transmitting Frequency:
13.56 MHz and/or 125 kHz

Voltage:
5-12 VDC, linear supply recommended

Current Requirement:
5 VDC @ 150 mA

LED Indicator:
Two-color LED: Red and Green

Audio Alarm:
4 kHz burst

Tamper Alarm:
Tamper Detection

Communication Interface:
Wiegand and RS-232

Data Format:
125 kHz: 26-56 bits(as programmed in cards or tags)
13.56 MHz: UID, Sector or AWID proprietary
Keypad: MB (sent in 26 bit format), M4 (4 bit bursts), M8 (8 bit bursts)

Cable to Controller:
9 conductors stranded 22 AWG or larger, color-coded insulation, overall 100% shielded

PHYSICAL CHARACTERISTICS

Dimension:
3.1 x 4.9 x 1.0 in (7.9 x 12.5 x 2.5 cm)

Weight:
7 oz (198 g)

Color:
Dark Gray

ENVIRONMENTAL

Operating Temperature:
-31˚F to 150˚F (-35˚C to 65˚C)

Operating Humidity:
5-95% non-condensing

CERTIFICATION

FCC Part 15 (US), IC (Canada), CE (EU), RoHS