AWID

DC-1023 ™
Sentinel-Prox ™
Dual-Frequency Reader

AWID's DC-1023 13.56 MHz Contactless & 125 kHz Proximity Card Reader is a combination of two reader technologies in a single small switch-plate-type enclosure. It is ready for installation on a wall or on a single-gang box. The DC-1023 reader provides convenient read range, along with high quality, reliability, durability, attractive appearance, and ease of installation.

Installation The DC-1023 reader is designed to fit perfectly on a single-gang electrical utility box. The metal-compensation that is built into every DC-1023 reader assures minimal loss of read range when the reader is mounted on a metal surface. The DC-1023 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 DC-1023 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.

Testing The reader is self-testing – using its own LED and beeper, it needs no interface to a controller to 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 The DC-1023 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. This feature eliminates multiple reads from a single presentation of the card. The DC-1023 has both Wiegand data interface for basic 4-wire connection (7 wires when all features are controlled), and also RS-232 serial interface. Code transmission from both interfaces is simultaneous.

Environment The DC-1023 reader is ready for installation indoors and outdoors. The ABS plastic enclosure, quickly installed when its cover is removed, provides a secure package when the cover is snapped on the base. Epoxy resin potting protects the electronic circuits.

Credentials The DC-1023 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"

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

Clean, handsome design…
Matches good 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…
Same basic wiring as proximity readers

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

No programming in reader…
DC-1023 ready to reads all AWID codes

Self-testing for good operation…
LED & beeper indicate performance

DC-1023™

Sentinel-Prox™ Dual-Frequency Reader

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 – DC-1023 reader is suitable for exposure to rain, snow and bright sunlight. To remove reader from view or abuse, mount the reader inside a Lexan housing.

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

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:
6 oz (170 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