SP-6820™ Sentinel-Prox™ Proximity Reader

AWID’s SP-6820 Proximity Card Reader is a switchplate-type reader that combines exceptional reading distance and easy mounting directly on a single-gang box. With a read range up to 8 inches, the SP-6820 reader delivers excellent performance without compromising quality, durability, attractive appearance, and ease of installation.

Installation The SP-6820 reader is designed to fit perfectly on a single-gang electrical utility box. The metal-compensation that is built into every SP-6820 reader assures minimal loss of read range when the reader is mounted on a metal surface. The SP-6820 reader also can be fastened by 2 screws on any wall or other surface.

Features The SP-6820 reader contains (a) a 3-color LED, (b) a 4 kilohertz beeper, and (c) a “hold” circuit. Both LED and beeper are controlled by the reader itself. All three functions 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. The “hold” circuit delays code transmission from the reader until the host requests it.

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 and its LED changes to amber.

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. This feature eliminates multiple reads from a single presentation of the card. The SP-6820 reader 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 SP-6820 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 All of AWID’s 125 kilohertz proximity credentials may be used with the SP-6820 reader. This includes clamshell and graphics-quality cards, keytags, hangtags, and adhesive wafers. Read range varies with the credential type.
OPERATING CHARACTERISTICS

Reading Distance:
With cards – Up to 8 inches (20 cm)
(varies with mounting or housing,
voltage applied to reader, and credential
type)

Excitation Frequency:
Transmit and Receive – 125 kHz

Antenna Output:
Omni-directional Low Frequency, field

Indicators (Control by Reader and Panel):
LED – 3 colors, red-amber-green
Beeper – piezo-electric, 4 kHz tone

Power Supply:
+5 volts to +12 volts DC ± 10%, linear,
regulated; current rating 120 mA or more

Communications Protocols:
Wiegand electrical interface
RS-232 serial interface

Code Formats:
Determined by AWID’s credentials
programmed with 26 bits to 50 bits

Cable (For Wiegand Interface):
4 to 7 conductors (not twisted pairs),
stranded, 22 gauge, color-coded, overall
100% shielded, plastic sheath, to 500 ft

PHYSICAL CHARACTERISTICS

Dimensions:
4.6 x 3.1 x 0.65 inch (11.7 x 7.9 x 1.7 cm)

Weight:
8 ounces  (227 g)

Material:
ABS 2-part enclosure, beige or gray
Epoxy resin potting on electronics

Cable (Integrated with Reader):
10 conductors, 22 gauge, 18 inches long
Overall shielded, gray plastic sheath

Mounting:
Single-gang utility box, wall, cabinet

ENVIRONMENT

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

Operating Humidity:
0% to 95%, non-condensing

Protection from Environment:
Use Lexan housing when reader must be
away from moisture or view.

Avoiding Interference:
Optimize reader performance by spacing
or shielding reader from neighboring
readers.

CERTIFICATION

ISO-9001:2000; FCC Part 15;  IC; CE mark;
UL listed;  RoHS compliant

ACCESSORIES & 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 volts and +12
volts DC.  Most controller panels provide suitable voltage on power and
ground terminals.  External linear, regulated DC power supply may be used
(120 milliamperes or more current rating).

Cable for power and data – 22 gauge, stranded, color-coded, overall
shielded, not twisted pair.  4 to 7 conductors depending on connection of
reader’s controllable functions (LED, beeper and “hold”).  For Wiegand, up
to 500 feet long.

Protective housing – SP-6820 reader is suitable for exposure to rain, snow,
and bright sunshine.  Mount reader inside a Lexan housing to remove
reader from view and abuse.  AWID suggests Model PCH049 housing from
The Housing Company.

Installation Sheet – Download full instructions from AWID’s Web site.

OPTIONAL

To designate optional HID compatibility, add “MP” suffix to the part number
(e.g. MR-1824-G-MP).

CREDENTIALS

Proximity cards, keytags and wafers – AWID offers a selection of cards, tags
and wafers for use with the SP-6820 reader.