

Specifications

INPUT:

Magnetic Stripe Cards, high or low coercivity, EMPI I, EMPI II or ANSI format, up to 14 characters.

CARD SIZE:

CR-80, 2.125" x 3.375" x .030", Track 1, 2, and 3 (53.97 mm x 85.73 mm x 0.762 mm)

OUTPUT:

Standard Wiegand 5-wire format with optional second LED control line. Optional "Clock and Data" format.

DISTANCE:

200 feet (61 m) with #22 AWG wire
500 feet (53 m) with #18 AWG wire

WARNING

To prevent damage to equipment, make all connections with the power "OFF" and the connector unplugged from the reader.

TEMPERATURE RANGE:

-35 to +66 degrees Celsius (-31 to 150 degrees Fahrenheit).

POWER:

35 mA at +10.5 VDC 13.0 DC

READ SPEED:

5 to 50 IPS on withdrawal

DIMENSIONS:

Reader; 6.75" H x 5.25" W x 2.75" D.
(17.14 mm x 13.33 mm x 6.98 mm)

LED:

Two Colors - Red and Green; Optional Amber

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. 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 the instruction manual, may cause harmful interference to 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.

☐ 3110-7801

☐ 3110-7802

Card Reader kit consists of:
3110-7801
1-Reader assembly
1-Installation Kit 2270-0780
1-Instructions 2280-3738

3110-7802
1-Reader assembly
1-Installation Kit 2270-0780
1-Instructions 2280-3738
1-Instructions 2270-4189

Model 780 Ruggedized P/T Reader w/keypad Model 780 Ruggedized P/T Reader w/Heater Bar



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General

The Model 780 is a Ruggedized Pass Through card reader with a keypad. The 12-Volt powered Reader is fully weatherproof. The reader accepts both EMPI and ABA format cards and reports both card and keypad data in a variety of output formats. Three LED's prompt the user for appropriate action.

A label located on the internal, rear surface carries part designations. The reader part number used when ordering is 3110-7801 or 3110-7802. Available in black only.

The Model 780 Ruggedized Pass Through Card Reader with keypad is UL Listed for both indoor and outdoor use.

Mounting

The card reader mounts on a single or double-gang electrical 'handy box' with conventional #6-32 machine screws. The vertical spacing of the mounting screws is 3.25" (8.25 cm) and for a double-gang handy box the horizontal spacing is 1.8125" (4.6 cm)

The reader is secured to its mounting plate with 2 tamper-proof screws, the supplied screws are #8-32 x 0.675" oval head screws. The driver is a #8 AVSAFE driver, PN# is 1180-0040 and is manufactured by;

AVDEL Corporation
50 Lackawanna Avenue
Parsippany, NJ 07054

(201) 263-8100

AVDEL PN# ASMD-0080-7750

If our choice of tamper screws is inconvenient, they may be replaced by another brand or by #8 round head machine screws.

Track Selection

Readers are shipped reading the track II physical location. If your card is coded on track 1, disassemble the read head assembly and rotate the reading head 180 degrees.

Electrical Connections

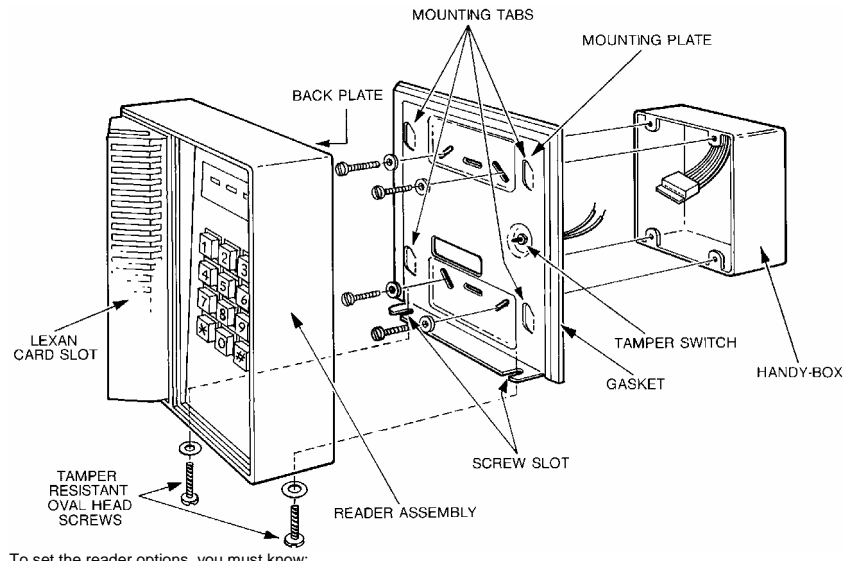
Connections from the reader cable to the host cable should be crimped or made with twist-on wire nuts. Unplug the reader connector before making the following splices:

PIN	FUNCTION	WIRE COLOR
1	+12 VDC	RED
2	LED Control Line A	BROWN
3	Data "1" /Data	WHITE
4	Data "0" /Clock	GREEN
5	COMMON	BLACK
6	LED Control Line B	YELLOW

Control and Data lines are normally High (+5V) when idle and pulled too common when active (less than 1V).

Two 22 AWG white wires convey the status of a tamper switch that indicates whether the reader is properly mounted or detached. The switch is CLOSED when the reader is mounted and OPEN when it is detached.

Option Switches



To set the reader options, you must know:

- Are the cards coded with EMPI or ABA data?
- Are the cards coded on Track I or Track II?
- Does the host system expect Wiegand 26 bit, Wiegand 34 bit or Clock and Data format ?

A miniature Dip switch which can be accessed from the back of the reader selects the following standard options:

3110-7801 Options

A	B	C	Option
off	off	off	ABA card into LinxRead panel
off	on	off	EMPI card to Wiegand 26 bit
off	on	on	EMPI card to Wiegand 34 bit
on	off	off	ABA card to Clock & Data bits
on	on	off	10 or 12 digit ABA Card to Wiegand 26 bit
on	on	on	10 or 12 digit ABA card to Wiegand 34 bit
on	off	on	ABA card to Wiegand bits

These selections cover the most common uses. If they do not serve your application, consult your system supplier for their setup method.

Installation Instructions

CAUTION
Before touching any internal reader parts, touch a grounded surface to discharge static electricity from your body.

- If not mounting to an electrical handy-box, select a suitable flat surface and use the mounting plate both as a template to establish drill hole location and as a guide to remove sufficient material to allow clearance for connection of the pig-tail to the wiring cable, and the tamper switch. The tamper switch can be found in the hardware package. If desired, it can be installed either as shown, or to the back plate with the tamper switch plunger facing the mounting plate. A hole in the back plate is provided for this purpose.
- Pull the required cable between host controller and reader mounting location. Connect the wire cable to the host.
- To install, you must first disassemble the reader assembly from the mounting plate. Use the special oval head screw driver (AVSAFE driver obtained separately) to loosen the (2) tamper resistant oval head screws from the bottom of the reader.

NOTE: It is not necessary to fully remove screws. Just loosen enough to remove the mounting plate. This will simplify re-assembly.

- Attach the provided pigtail connector to the wire cable at the mounting location. Connections can be crimped or made with twist-on wire nuts. Follow the appropriate color code and wire lead function.
- Pass the connector through the cutout in the mounting plate, and mount the plate to the mounting surface using the appropriate mounting holes in the plate. The type of mounting bolts (not provided) will be determined locally by the installer. They must provide a strong secure mounting.
- Make sure the wire nuts, or crimped connectors are located in the wall cavity, and only the pigtail connector passes through the mounting plate.
- Plug the connector into the back of the reader circuit board. The connector is designed to fit only one way. Carefully align the pin terminals of the circuit board with the corresponding holes in the connector and gently push together with a slight rocking motion. If not already accomplished, set the appropriate option switches on the back of the reader circuit board.
- Attaching the reader assembly to the mounting plate is the reverse of disassembly. Carefully align the (4) mounting tabs on the mounting plate with their corresponding slots in the back plate. Make sure the (2) oval head screws until the reader assembly is pulled firmly against the mounting surface. Do not over tighten these screws.

NOTE: This operation also depresses the tamper switch plunger.

- Test the reader as appropriate.

Powering ON & Self Test

Upon first application of power, the reader does a self-test sequence. Observe that the reader's green LED flashes four times.

If the reader does not make the above confirmation or continues with short double flashes, the self-test has failed and the reader must be replaced.

Diagnostic Tests

If the reader completes the self-test by flashing the LED but will not read cards the following steps apply:

1. Check that the voltage at the red and black wires is between 8.0 and 13.0 volts DC.
2. Verify wiring to the host controller.
3. Test reader by exchanging with another unit.
4. Do not attempt to adjust the reading head or its mount. It is factory calibrated and not field serviceable.

Internal damage or electronic failure requires replacement of the complete reader.