

Returned Material

Before returning ANY product, you must call the Customer Service Department (303) 302-2400, to obtain a Return Material Authorization (RMA) number. Equipment that fails during normal use within the warranty period (see warranty information) will be repaired or replaced at the discretion of Dorado by HID. Equipment that fails after the warranty period has expired from external sources (such as lightning or abuse) will be repaired at Dorado by HID's current labor rate after a repair estimate has been provided. Following agreement by the client as evidence by Purchase Order or Credit Card submitted.

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.

OUTPUT:

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

DISTANCE:

200 feet with #22 AWG wire
500 feet with #18 AWG wire

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.

LED:

Two Colors - Red and Green; Optional Amber

To view a parts list for our pass thru readers:

Please go to our website@

www.hidcorp.com/dorado

FCC Notice

Federal Communications Commission Radio Frequency interference statement

Warning: This equipment complies with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules. These Specifications are designed to minimize radio frequency interference in a residential installation; however there is no guarantee that radio or television interference will not occur in any particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on when the radio or television is on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the radio or television receiving antenna.
Relocate the equipment.
Move the equipment away from the receiver.
Plug the equipment into a different outlet so that the equipment and receiver are on different branch outlets.

If necessary, the user should consult the dealer or an experienced radio or television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"Interference to home electronic entertainment equipment handbook."

This booklet is available from the:

U.S. Government Printing Office
To order Government publications,
Phone toll free: 866-512-1800 (Dcarea: 202-512-1800),
Fax 202-512-2250,
Mail orders to
Superintendent of Documents, P.O.B371954,
Pittsburgh, PA 15250-7954, or
Order online from <http://bookstore.gpo.gov>
Order stock number: 004-000-00498-1.

Warranty Information

Dorado by HID warrants to the original purchaser That card readers are free from defects in material and, workmanship under normal use and service for 27 months, from date of original invoice, (control boards only). Normal wear and tear, including magnetic head wear, and damage caused Force Majeure, is excluded from this warranty. Unless otherwise agreed in writing by Dorado by HID, the buyer shall be responsible to assure the proper installation environment is provided, and Dorado by HID assumes no responsibility for malfunctions or damage due to improper installation of products. Dorado by HID's obligation under this warranty shall be limited to the repair or replacement of any returned product provided that the claim is presented within the time specified above. This warranty is in lieu of all other warranties express or implied, including the warranties of merchantability, or fitness for any particular use. In no event shall Dorado by HID be liable for any breach of warranty in an amount exceeding the net selling price of any defective products.

P/N: 2280-3865
REV 7
(NA3865)
ECO# 043102

☐ 3110-7401 Ruggedized P/T Reader ☐ 3110-7402 Ruggedized P/T Reader w/ Heater Bar

Card Reader kit consists of:

Reader 7401	Reader 7402
1-Reader assembly	1-Reader assembly
1-Installation Kit 2270-0780	1-Installation Kit 2270-0780
1-Instructions 2280-3865	1-Instructions 2280-3865
	1-Instructions 2280-4189

General

The Model 740 is a ruggedized Pass Through card reader for magnetic stripe access cards. The Reader is 12-Volt powered and fully weatherproof. The reader accepts both EMPI and ABA format cards and reports in a variety of output formats. Three LEDs prompt the user for appropriate action.

The reader part number used when ordering is 3110-7401 or 3110-7402. Available in Black only .

Please locate the following items in the installation kit..
If any are missing, please contact Dorado by HID

6 Wire Cable Connector assembly
Four 6-32 x 7/8" machine screws
Four #6 standard washers
Tamper switch assembly

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" and for a double-gang handy box the horizontal spacing is 1.8125".

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, Dorado by HID 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.



9292 Jeronimo Road
Irvine, CA 92618-1905
Phone : +1 (949) 598-1600
Fax : +1 (949) 598-1619

Installation Setup

WARNING

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

The Model 740 comes assembled from the factory. Located in the box with the reader you will find the pig-tail connector which is used to connect the reader to the external wiring.

The reader assembly is designed to be mounted vertically with the tamper resistant oval head screws facing the floor. Typically, the recommended reader height from the floor to the bottom of the reader assembly is 55 inches, however, user convenience is the determination factor.

The Lexan card slot which is part of the reader assembly is reversible to allow the card slot angle to match the natural angle of the wrist when holding the card during pass through reading. As an example, if the reader assembly is mounted on the right side of a door, the card slot angle should point right or away from the door. If mounted on the left side, the slot points left.

To change the card slot angle, remove the four screws holding the back plate to the reader assembly and remove the back plate. Remove the two screws holding the lexan card slot to the reader assembly and carefully remove the slot so as not to damage the connected read head wires. Rotate the card slot and plastic shield 180° and reassemble.

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

NOTE: The two blue wires connect to the HEATER BAR which must be powered by a 24VAC or 24ADC source. 3110-7402 reader only.

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 HEATER BAR	YELLOW BLUE

NOTE: The two BLUE wires connect to the HEATER BAR, which must be powered by a 24 VAC or 24 ADC source.

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

Two 22GA 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 ANSI 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?

3110-7401 Options

A	B	C	
off	on	off	EMPI Wiegand 26-bit
off	on	on	EMPI Wiegand 34-bit
on	off	off	ANSI clock and data all bits
on	off	on	ANSI all bits Wiegand
on	on	off	ANSI Wiegand 26-bit
on	on	on	ANSI Wiegand 34-bit

"D" IS NOT USED-SET TO OFF

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

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.

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 pig-tail 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 cut-out 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 pig-tail 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 and 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:

- Check that the voltage at the red and black wires is between 8.0 and 13.0 volts DC.
- Verify wiring to the host controller.
- Test reader by exchanging with another unit.
- 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.

