ADEMCO

**OmniProx™ Reader
Model Series OP-10/20/30/40**

Installation Instructions

WHAT IS THE ADEMCO OmniProx™ READER?

The OmniProx Reader is an RFID proximity card reader to be installed for use with access control systems.

These Installation Instructions contain the following information:

- Mounting Instructions
- Connecting the Reader to the Host
- Testing and Operation of the Reader

Visit www.omniprox.com for the latest information and technical support.

HOW TO MOUNT THE READER

To mount the Reader, perform the following:

SNAP ON/OFF TOP COVERS:
Hides mounting screws
and protects the reader
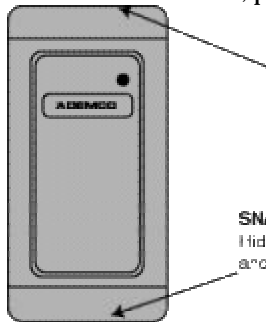
1. Determine an appropriate mounting position for the Reader.
2. Peel off the back of the self-stick mounting label template included with the unit and place at the desired mounting position. (Additional templates can be downloaded from www.omniprox.com.)
3. Using the template as a guide, drill two holes (hole size is indicated on mounting template) for mounting the Reader to the surface.
4. Drill a 7/16" (10mm) hole for the cable. If mounting on metal, place a grommet or electrical tape around the edge of the hole.
5. Route the interface cable from the Reader and/or power supply to the host. **A linear type power supply is recommended.**

NOTE: The OmniProx Reader can also be mounted using strong epoxy glue. After application, the Reader should be firmly held in place until the glue dries.

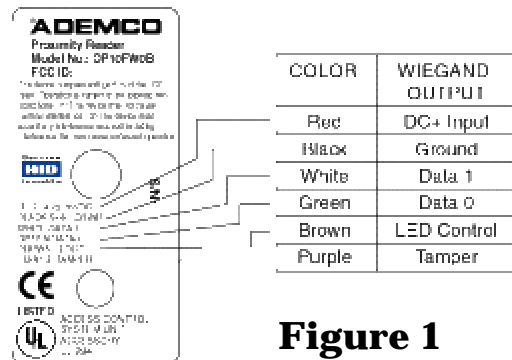Check all electrical codes for proper installation.

Mount the Reader with the appropriate screws (not supplied) as indicated on the template.

HOW TO CONNECT THE READER TO THE HOST

The OmniProx Reader is supplied with an 18-inch pigtail, having a 6-conductor cable. To connect the Reader to the Host, perform the following steps:

1. Prepare the Reader cable by cutting the cable jacket back 1¼ inches and strip the wires ½ inch.
2. Prepare the Host cable by cutting the cable jacket back 1¼ inches and strip the wires ½ inch.
3. Splice the Reader pigtail wires to the corresponding Host wires and cover each connection (see Figure 1).
4. If the tamper output is being utilized, connect the purple wire to the correct input on the host.
5. Trim and cover all conductors that are not used.

Figure 1 below shows how you should wire the Reader to the Host.

COLOR	WIEGAND OUTPUT
Red	DC+ Input
Black	Ground
White	Data 1
Green	Data 0
Brown	LED Control
Purple	Tamper

Figure 1

Cable Notes:

1. The individual wires coming out of the reader are color coded according to the recommended Wiegand standard.

2. When using a separate power supply for the Reader, this supply and the Host's power supply must have a common ground.

3. The recommended cable is Alpha 1295C which has five conductors. If the Host is monitoring the Reader's tamper output, use six conductor Alpha 1296C. Larger wire gauges are acceptable. The wire must be stranded with an overall shield, either foil or braided.

4. The cable shield wire on the Reader should be

attached to an Earth ground (best) or signal ground connection at the panel or power supply end of the cable. This configuration is best for shielding the Reader cable from external interference.

Genuine HID Compatible

OmniProx models with HID compatibility are capable of reading genuine HID cards under the terms of a license agreement between HID Corp. and the ADEMCO Group.

HOW TO TEST AND OPERATE THE READER

The Reader should be tested after wiring it to a power supply and the Host. Do this by performing the following steps:

1. Power up the Reader. The LED and Beeper will activate three times. This indicates that the Reader is working properly.

2. Present the appropriate type of ID card to the Reader. (See Table 1 for the correct card type based on the reader model.) The LED should momentarily flash green and a short beep will be emitted. This indicates that the card was read properly by OmniProx and this LED flash and beep is *generated by the Reader.*

3. After the card data is processed by the Host, the Host can then turn the LED green or yellow. Refer to the Host description of the LED operation if the Reader LED is controlled by the Host.

Table 1: Part Number vs. Feature Matrix

Model Number ♦	Card Type	Output Format	Read Range (Max.) *
OP10-FW*c*	HID	Wiegand	3"
OP11-AW*c*	ADEMCO	Wiegand	3"
OP20-FW*c*	HID	Wiegand	4"
OP21-AW*c*	ADEMCO	Wiegand	4"
OP30-FW*c*	HID	Wiegand	5"
OP31-AW*c*	ADEMCO	Wiegand	5"
OP40-FW*c*	HID	Wiegand	4"
OP41-AW*c*	ADEMCO	Wiegand	4"

♦ Last character of Omniprox P/N indicates color; B = Black, G = Gray, W = White, etc.

* Measured using HID Corp. Prox Card II (P/N 1326LSSMV) or equivilent. Range also depends on electrical environment and/or proximity to metal.

SPECIFICATIONS

Electrical Characteristics:

Power Supply Type:

Linear type Recommended

Operating Voltage Range:

4.75 – 16 VDC

Absolute Maximum (non-operating):

18 VDC

Current @ 12V:

Standby: 25 mA

Read: 40 mA

Tamper Output

Open collector, active low, max.sink current is 30 mA

Maximum Cable Distance to Host:

500 ft. (150 meters)

Card Read Distance:

See Table 1

Regulatory Approvals:

USA: UL 294 & FCC Part15 B

Europe: CE Listed

Operating Temperature Range:

-25° F to 145° F (-31°C to 63°C)

Operating Humidity:

0 to 95% (non condensing)

Dimensions:

OP-10/11:

3.15" (80mm) L x 1.58" (40mm) W x 0.50" (12.8mm) D

OP-20/21

4.73" (120mm) L x 1.65" (42mm) W x 0.55" (14mm) D

OP-30/31

5.71" (145mm) L x 1.69" (43mm) W x 0.79" (20mm) D

OP-40/41

4.33" (110mm) L x 2.96" (75mm) W x 0.59" (15mm) D

ADEMCO Limited Warranty

FEDERAL COMMUNICATIONS COMMISSION (FCC) Part 15 STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- If using an indoor antenna, have a quality outdoor antenna installed.

- Reorient the receiving antenna until interference is reduced or eliminated.

- Move the radio or television receiver away from the receiver/control.

- Move the antenna leads away from any wire runs to the receiver/control.

- Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.

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

"Interference Handbook"

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402.

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

Acknowledgements:

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