EtherProx™ Entry

Installation and Operation Manual

tyco

Fire &
Security

Software
House

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1. Important Safety Information

The safety guidelines for EtherProx Entry include:

- Power sources
- ANSI/UL listing (USA) and CSA 22.2 listing (Canada)
- UL 294-compliant installations
- FCC Class A digital device
- Canadian Radio Emissions Requirements

Power Sources

To power the door latch, you should use a power limited UL 294 or UL 603 door strike power supply. You can obtain the door strike power supply from AlarmSAF, Altronix, Securitron, and Software House. You can also use the door strike power supply to provide power to the reader units. The typical load on the power supply is 250 milliamps per reader. You can also power the readers by using the DIU supplied by Software House, or a Desktop Power Supply rated 12 VDC, 1.2 Amp minimum, with Class 2 and UL Markings. If you do not have a battery backup for the power supply, you cannot connect the power supply to a receptacle that is controlled by a switch.

ANSI/UL listing (USA) and CSA 22.2 listing (Canada)

A National Recognized Test Laboratory (NRTL) has examined and tested EtherProx Entry, InfoProx Entry, and InfoProx Exit readers according to the requirements of ANSI/UL 294 - Access Control System Units and CSA 22.2 – No. 205-M1983. The readers are low-voltage 12-volt assemblies that operate from power limited sources. When you install a reader according to the instructions in this manual and wire it according to the National Electrical Code (NEC), you can expect the reader to meet all safety requirements.

UL 294-compliant Installation

To ensure a secure installation that is in full compliance with UL 294 requirements for security and performance, follow these guidelines:

- You must install the wiring for the door controls on the secured side of the premises.
- If you provide backup power with the installation, the batteries in the 12-volt UL 294 or UL 603 power supply should provide power for the door strike and the readers for a minimum of four hours. If you do not provide backup power with the installation, make a permanent marking on the power supply label of the expected duration of the fully charged battery. The Software House DIU also provides battery power.
- According to UL 294 requirements, if you attempt to force open a door at an entrance that is controlled by an InfoProx reader, or tamper with the reader, an audible alarm will activate. A sound alarm device must

have a sound level of at least 85 decibels. An alarm must activate for 15 minutes. You can purchase a Battery Back Up Supervisory Siren sounder, Model 0821 from Street Smart Security. There are three ways to meet the UL 294 alarm requirements:

- Use a Software House DIU. The DIU closes a set of relay contacts when an intrusion or tamper is detected by the InfoProx Reader. The relay contacts activate the alarm.
- Reverse the Entry and Exit readers so that the door controls are on the secure side of the door. Use the relay output of the Exit reader to activate a supervised sound device.
- Use a standard UL burglar alarm system to monitor the door and the tamper activity at the InfoProx reader.

FCC Class A Digital Device

InfoProx readers have 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 device 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. The FCC ID is ACD/SPASSSERIES.

Canadian Radio Emissions Requirements

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la class A prescrites dans le Reglement sur le brouillage radiolelectrique edicte par le ministere des Communications du Canada.

2. Introduction

The Software House EtherProx™ Entry Reader is a compact door control unit that provides a sophisticated, cost-effective solution for single-door access monitoring and control. The unit's electronics are housed in a polycarbonate enclosure with an LCD display screen and three LED indicators. Despite being small enough to mount onto an electrical containment box, EtherProx Entry communicates to network-connected computers through a built-in web server, which establishes connections to computers anywhere in the world. In addition, for cardholders and administrators, the unit displays three LED status indicators and two lines of status information on its LCD screen. A built-in multi-tone sound device provides audible prompts and status indications for the user.

The EtherProx Entry door access system is ideal for controlling a single door, usually in a remote area. You can use EtherProx Entry for businesses, leisure facilities, members-only clubs, and secure areas in public buildings.

EtherProx Entry is also ideal for an establishment that initially requires a few readers and envisions future expansion. For example, you can link EtherProx Entry to a multi-door Access 2000 system, integrating alarm processing and card production facilities by changing the firmware.

EtherProx Entry maintains a database of valid cards that are added by using a web browser interface. The Web administration pages also allow you to configure EtherProx Entry for door event times, location names, login names, and passwords.

To connect to the EtherProx Entry for configuration of the unit and for access management, a personal computer with Microsoft Internet Explorer 5.5 and an Ethernet network adapter is required. Once the EtherProx Entry has been configured and the necessary card data has been entered, for backup purposes, you can upload data to the computer by means of its web server. In the event of data loss on EtherProx Entry, backup data can be downloaded to the reader's database. Additionally, EtherProx Entry may be connected to a local area or wide area network so that it can be controlled and queried remotely to generate activity, status, and alarm reports.

Description

The EtherProx Entry reader is housed in a polycarbonate, fully encapsulated enclosure that is both weather and vandal resistant. The keypad is required for PIN validation and for access to the Administration menu. EtherProx Entry supports HID 26 bit, HID 32 bit, and HID (Software House) 37 bit Wiegand proximity technology, under license from HID Corporation. The following cards and read ranges are supported.

CARDS	READ RANGES
ISOProx® II Card	9cm (3.6")
ProxCard™ Plus Card	6cm (2.4")
ProxCard® II Card	10cm (4")
ProxKey™ II Fob	4cm (1.6")

Each reader can service one InfoProx™ Exit reader configuration supported for IN/OUT control. Alternatively, a pushbutton can be connected as an input to the reader to provide egress from a controlled area where no exit reader is mounted.

In normal door mode, the EtherProx Entry reader has three analog inputs, as listed in the following table.

INPUT	DOOR MODE
Input 0	Monitors door position (Normally Closed)
Input 1	Monitors lock status (Normally Closed)

Input 2	Monitors request-to-exit button (Normally Open)

For normal door mode access, the reader has one relay reserved for a door strike. You can configure the relay to Powered to Secure or Powered to Unlock; the relay automatically fires when a valid card is presented to the reader.

Initially, enter all card ID numbers into the reader's database. When a valid card is read, access is granted. You can assign PINs to some or all of the cards to increase security. You can configure the reader to require a valid PIN after presenting a card. The PIN can be required on either the entry or the exit sides of the door, or on both sides, depending on your security needs.

You can set up time zones to limit access during specific hours. You can configure the reader to allow access to cardholders entering a specific Global Pin Code, without the need to present a card. This is especially useful for time-specific group functions or for situations where tight security is not required.

Reader Types

Software House manufactures four readers: EtherProx Entry; InfoProx Entry; InfoProx Exit, and InfoProx Online. The EtherProx Entry is a door control unit that is controlled through web-based software The InfoProx is a standalone door control unit that contains memory and data; the InfoProx Exit works with the InfoProx Entry or the EtherProx Entry. The InfoProx Online will be used with iStar 90X0 series controllers and AC 2000.

Since all the Prox readers look alike, a Sensor Pass (SPASS) identification code distinguishes one reader from another. The SPASS code appears on the back of a reader unit so that you can verify that you have the correct type of reader for your installation. The following table lists the reader units with their SPASS code.

PROX READER UNIT	SPASS CODE
InfoProx Entry	IPE
InfoProx Exit	IPX
InfoProx Online	IPO
EtherProx Entry	EPE

Note You can use the InfoProx Entry and EtherProx Entry only as entry readers; you cannot use an entry reader as an exit reader for another entry reader.

Preparing to Install EtherProx

There are several ways to install an EtherProx reader. You can use an optional Door Interface Unit (DIU) or reverse the Entry and Exit readers in order to comply with UL 294. A DIU is an option that provides power for the readers and additional inputs, outputs, and alarms. You can wire the door controls to the DIU, making the installation UL 294-compliant.

If you install readers for only inside access control and not for outside access control, your installation does not have to comply UL 294 requirements.

When you install the Entry reader on the secure side of the door, the wiring is not accessible during an attempted break-in. With this type of installation, the Transaction report will show an entrance as Access granted - Exit and an exit as Access granted – Entry.

The following table contains the secure and traffic control installation configurations for entry hardware, exit hardware, DIU, door control wiring, and sounder wiring.

INSTALLATION	ENTRY HARDWARE	EXIT HARDWARE	DIU	DOOR CONTROL WIRING	SOUNDER WIRING
Traffic control (see Figure 2)	Entry reader	REX switch	No	Entry reader	Not applicable
Traffic control (see Figure 3)	Entry reader	Exit reader	No	Entry reader	Not applicable
Secure (see Figure 4)	Exit reader	Entry reader	No	Entry reader	Exit reader
Secure (see Figure 5)	Entry reader	REX switch	Yes	DIU	DIU
Secure (see Figure 6)	Entry reader	Exit reader	Yes	DIU	DIU

The following diagrams contain the secure and traffic control installation configurations for entry hardware, exit hardware, DIU, and door control wiring. The diagrams illustrate how to configure the hardware. For details on connector pins and power wiring, see section 4, “InfoProx Hardware Installation.” For details on the DIU, see the DIU Installation and Operation Manual.

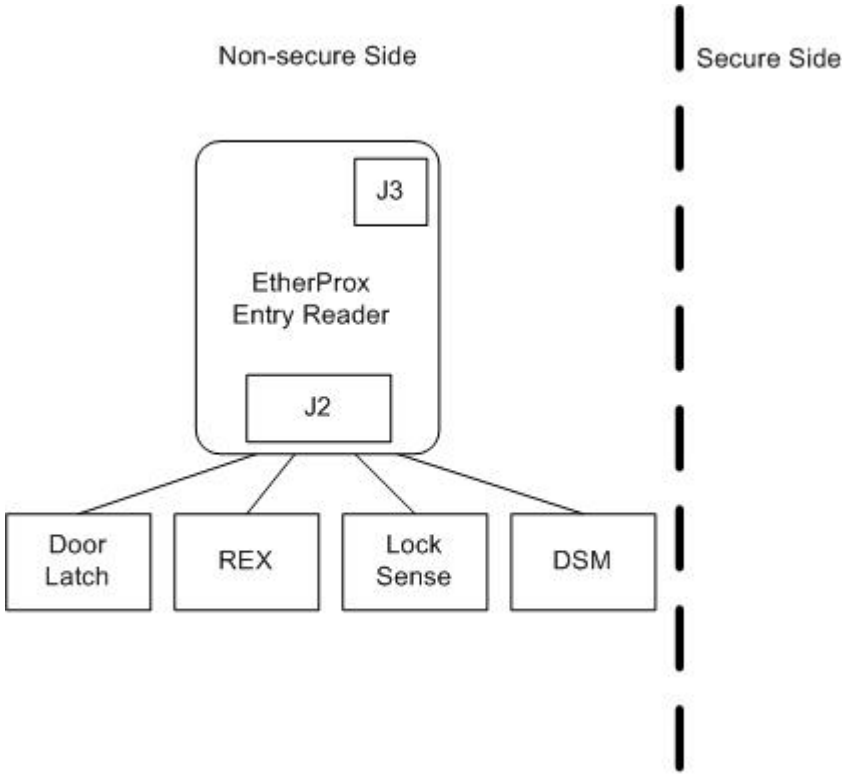

Figure 2: Traffic control with Entry reader and REX switch

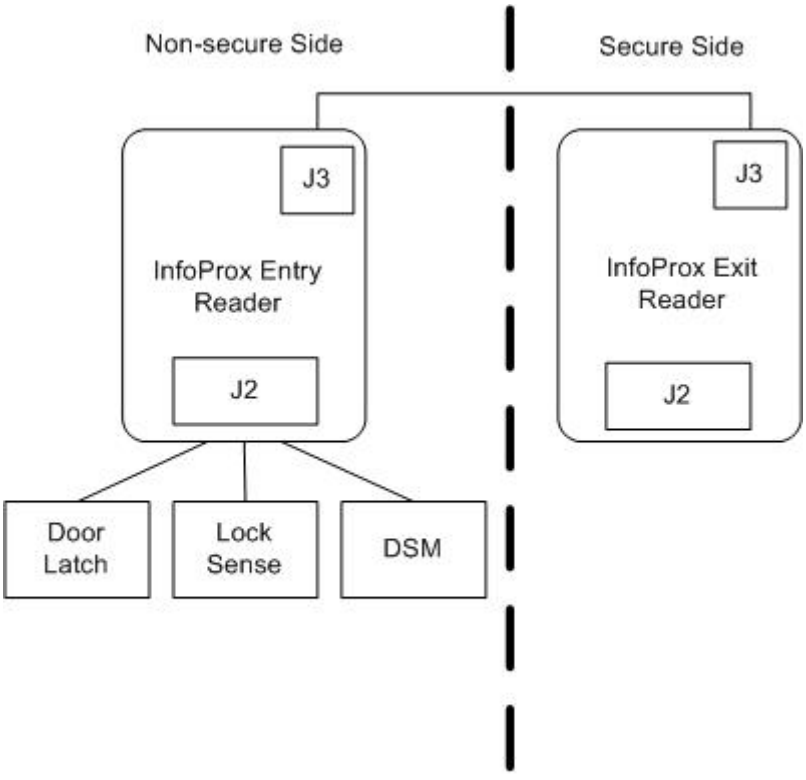

Figure 3: Traffic control with Entry reader and Exit reader

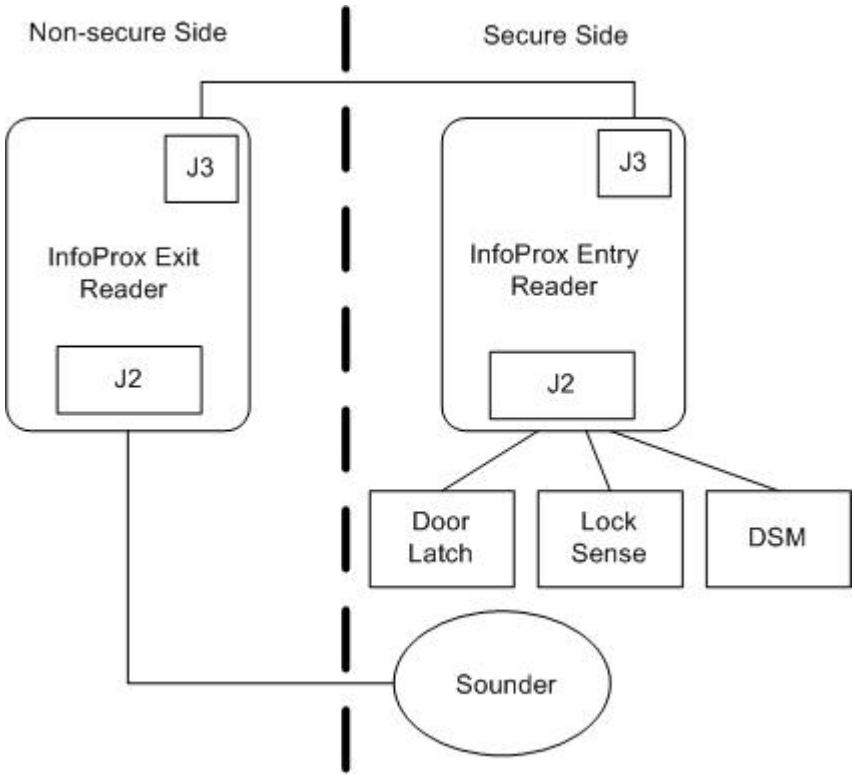

Figure 4: Secure with Exit reader and Entry reader

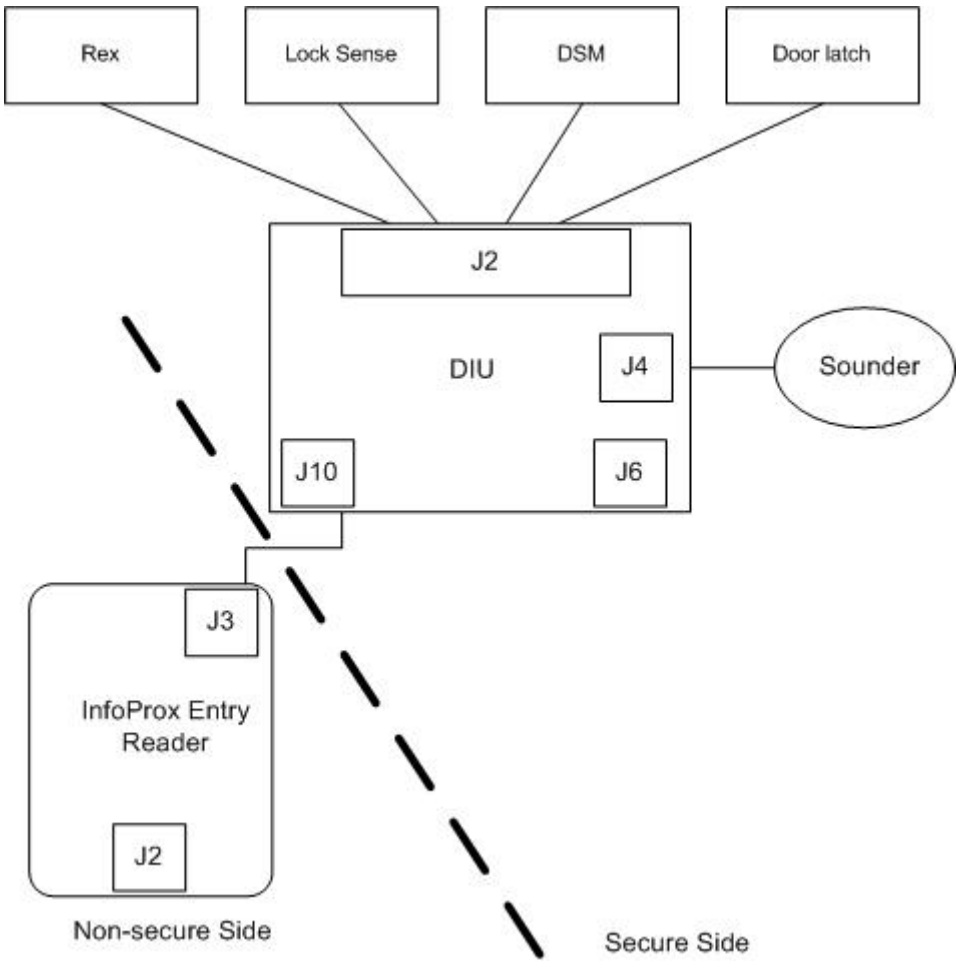

Figure 5: Secure with Entry reader, DIU, and REX switch

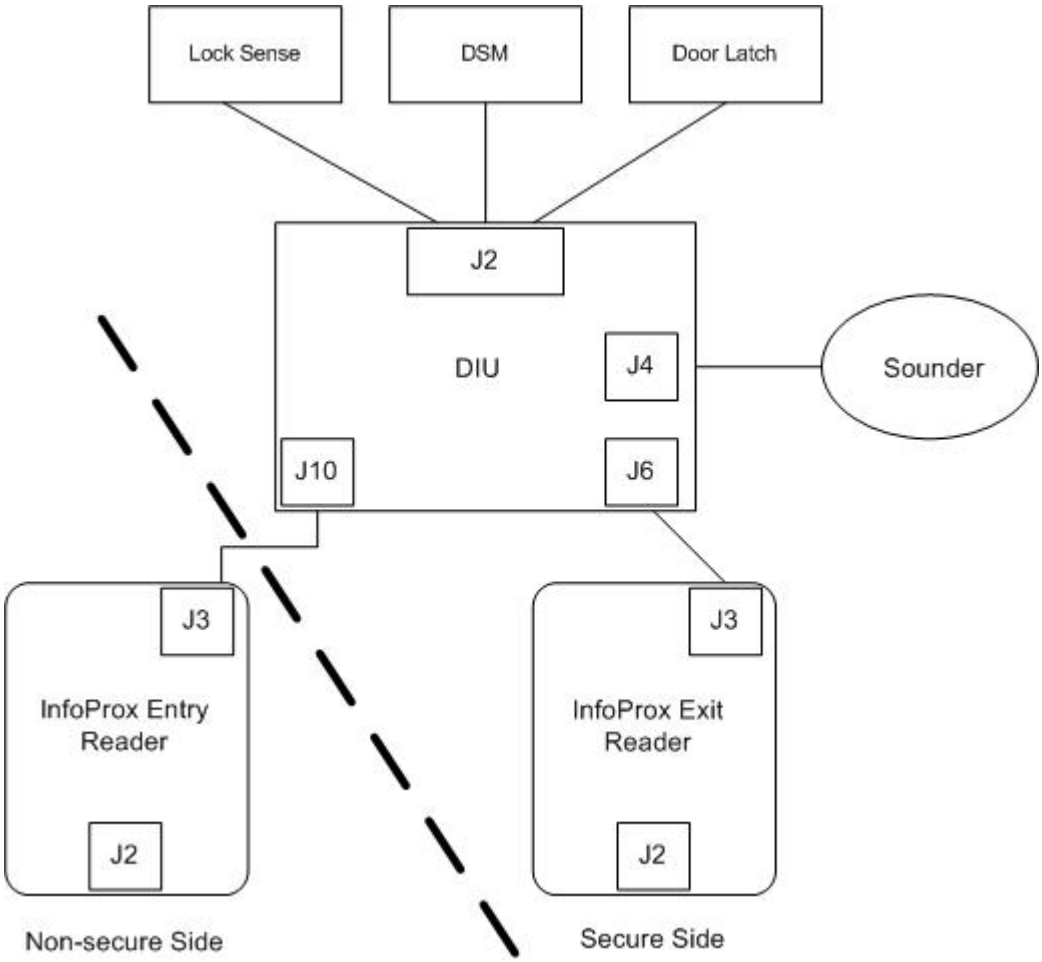

Figure 6: Secure with Entry reader, DIU, and Exit reader

3. EtherProx Entry Installation

EtherProx Entry mounts directly onto a standard UK or European (French) electrical containment box. North American installations require an adapter plate so you can use standard conduit and fittings. A clear polycarbonate screen covers the LCD for protection.

You pull the cables through the conduit, which terminate in the containment box. The following cables are required:

CABLE	CONNECTOR
Category 5 data network cable	4-pin socket (J5)
4-pair (max) cable for inputs and output	10-pin socket (J2)
2-pair (Belden 8723) cable to exit reader	4-pin socket (J3)

The EtherProx Entry unit uses **Phoenix Contact** connectors for inputs and outputs. You secure the cables into the screw terminals. Belden 8723 or equivalent cable is recommended for the 2-pair cable.

EtherProx Entry provides two stainless steel tamper-resistant mounting screws. These screws are concealed behind specially molded covers when the installation is complete.

Note The connectors on the EtherProx Entry reader are keyed to ensure correct orientation.

Power Connections

The EtherProx Entry reader contains an internal voltage regulator that requires an external power supply with nominal 12-volt output. The internal voltage regulator is capable of supplying at least 250 mA of current. The Power input is filtered, as well as Transzorb and reverse-voltage protected. Power is supplied to the reader by means of a J3 connector, as shown in Figure 1.

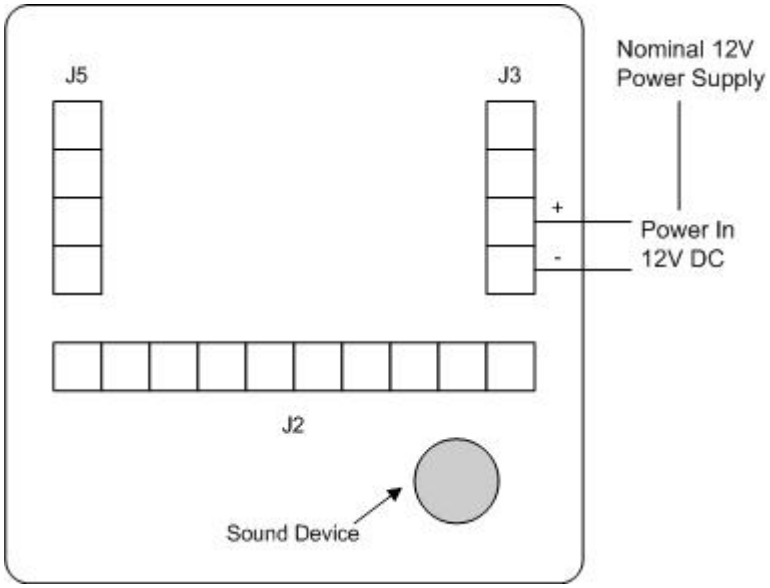

Figure 1: Terminal and Power Connections

> ***Note*** The Phoenix Contact terminals for the power and data connections can accommodate two leads fitted into one terminal.

The total cable length between the power supply and the reader depends on the type of cable you use and whether you connect an exit reader. Here are guidelines for determining the voltage:

1. For long cable runs, use Table 1 to calculate the voltage drop of the cable between the power supply and the reader.

EXIT READER	WIRE SIZE	VOLTAGE DROP/100 FT	VOLTAGE DROP/100 M
Y	18 AWG	0.64V	1.95V
Y	22 AWG	1.6V	4.9V
N	18 AWG	.38V	1.17V
N	22 AWG	0.96V	2.9V

Table 1: Voltage Table

2. Subtract the result from the power supply's output voltage.

3. If the result is greater than 7.0 volts, the wiring is adequate. If not, use heavier (lower gauge) wire or a power supply with a higher voltage output.

Example:	If you use a 22AWG wire with a 12-volt power supply 300 feet away from the readers, the voltage drops to 7.2 volts at the reader. Using the Table 1: Voltage Table to calculate the voltage, multiply 3 (300 ft) times the 1.6V drop equals a -4.8 drop for the 300 ft. span. Subtract 4.8 from the 12V supply, which equals 7.2. A voltage of 7.2 at the readers is sufficient power to operate the readers above the 7V minimum required. In this example, the total distance from the power source and the exit cannot be more than 300 ft.

Exit Reader Connections

The InfoProx exit reader is connected to the entry reader through a two-pair cable, providing power and communications. The connection is from connector **J3** on the entry reader to connector **J3** on the exit reader, and is connected at both ends with a four-pin Phoenix Contact socket (see Figure 2).

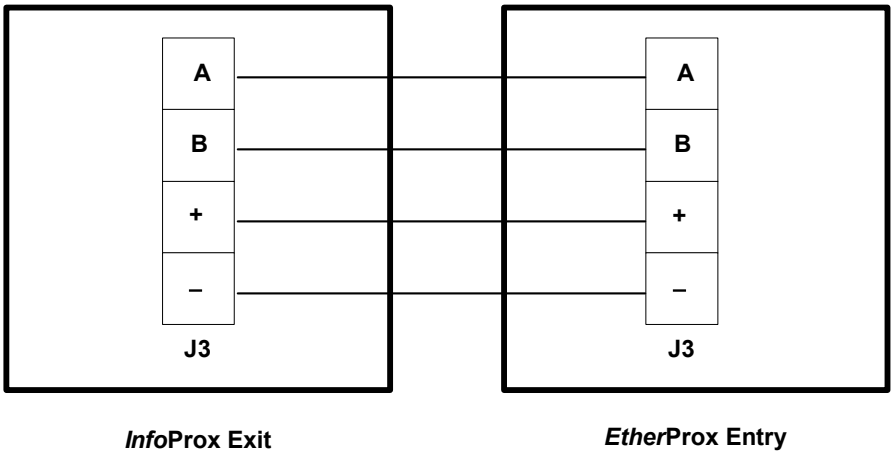

Figure 2: Exit Reader Connections

The recommended interconnecting cable is Belden 8723 or equivalent. It is not necessary to connect the drain wires in the cable. You can cut the drain wires off flush with the jacket.

EtherProx Entry Ethernet Connection

Connect the Ethernet cable to J5 using a Category 5 or better cable. Terminate the keypad end with a 4-pin Phoenix connector. Connect the other end of the Ethernet cable to an RJ-45 female connector (see Figure 4).

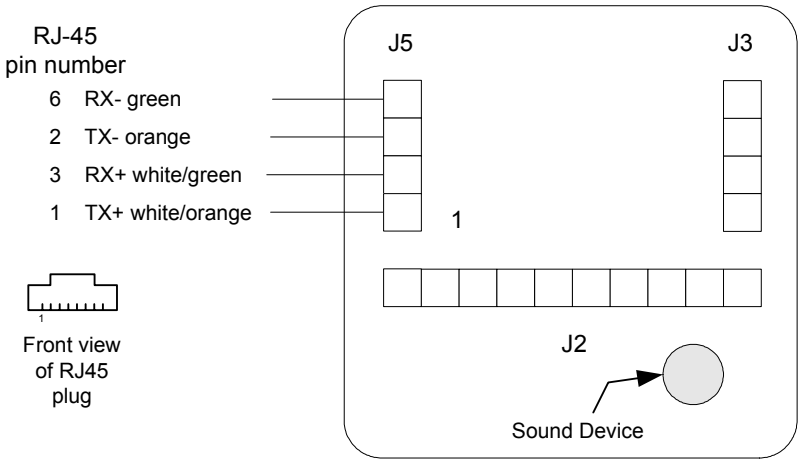

Figure 3:EtherProx Entry Connection

> ***Note*** The wire colors in Figure 3 may not always correspond with the particular cable you are using. For example, the orange conductor may be orange/white.

Door Connections

The door connections for normal door mode:

INPUT	DOOR CONNECTION
Input 0	Monitors door position (normally closed)
Input 1	Monitors lock status (normally closed)
Input 2	Exit push button (normally open)

The four inputs and the relay output for the reader are located in a 10-pin Phoenix Contact connector **J2**, as shown in Figure 4. The door control unit has a single-pole relay with a set of dry contacts rated at five amps at 30 VDC maximum. The **common** connection is available on pin 10; **the normally opened** connection is available on pin 9 of J2. For normal door mode, the relay is reserved for door strike control. The relay operates when a valid card is presented. You can configure the relay as Powered to Unlock or Powered to Secure.

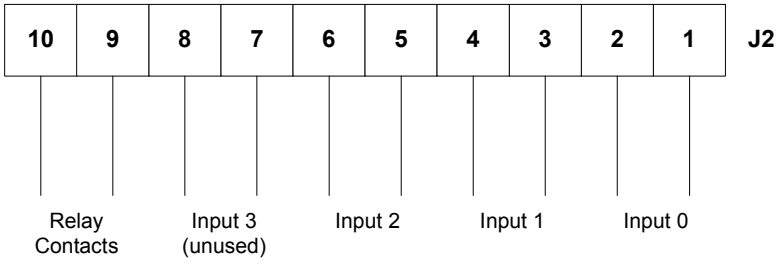

Figure 4: Inputs and Outputs on J2

> ***Note*** On the back of the unit, pin 1 is at the right end of the connector, as shown in Figure 4. Pin 10 is Common; Pin 9 is N/O.

The diagram in Figure 5 illustrates typical connections to a door. The power supply must have sufficient capacity to operate the door strike. You can connect three optional switches, which include:

- **Door state monitor switch** – a normally closed switch whose contacts are closed when the door is closed; EtherProx Entry uses the door state monitor switch to generate the *door held* and *door open* alarms
- **Lock status switch** - if present, a normally closed switch that is usually part of the door strike assembly. If lock status monitoring is enabled, the lock status switch must be connected
- **Exit pushbutton switch** – a normally opened switch that is used if the door lock must be released to leave the secured area

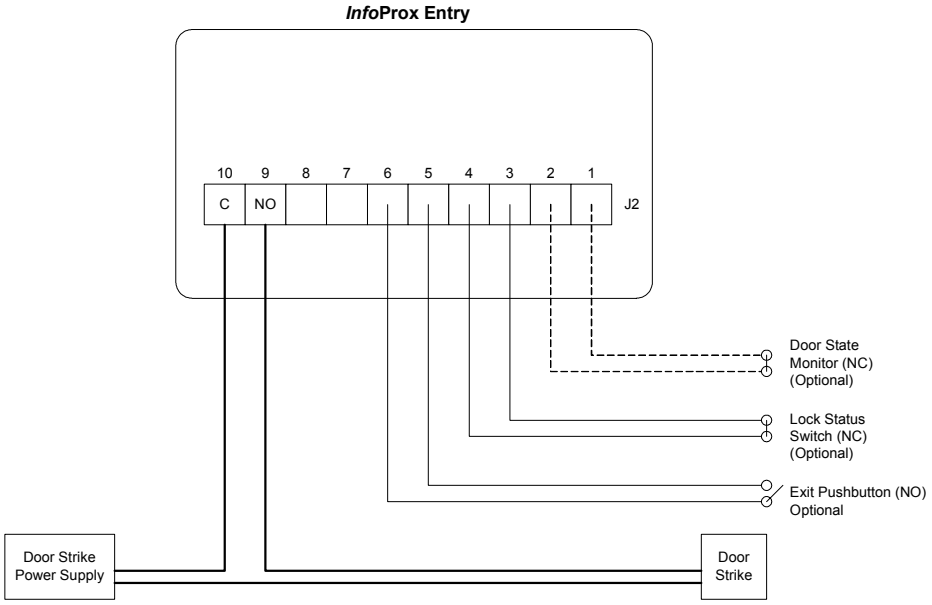

Figure 5: Typical Connections to a Door

Connecting an Exit Reader to the EtherProx

Both readers require a power supply of nominally 12V DC this can be taken from one power supply by tapping off the Phoenix connector J3 on the Entry reader as shown or by using two separate supplies. Communications from the EtherProx Entry Reader to the InfoProx Exit reader is taken from J3 on the Entry reader to J3 on the Exit reader. To connect an InfoProx Exit reader to the EtherProx Entry reader, refer to the diagram in Figure 6.

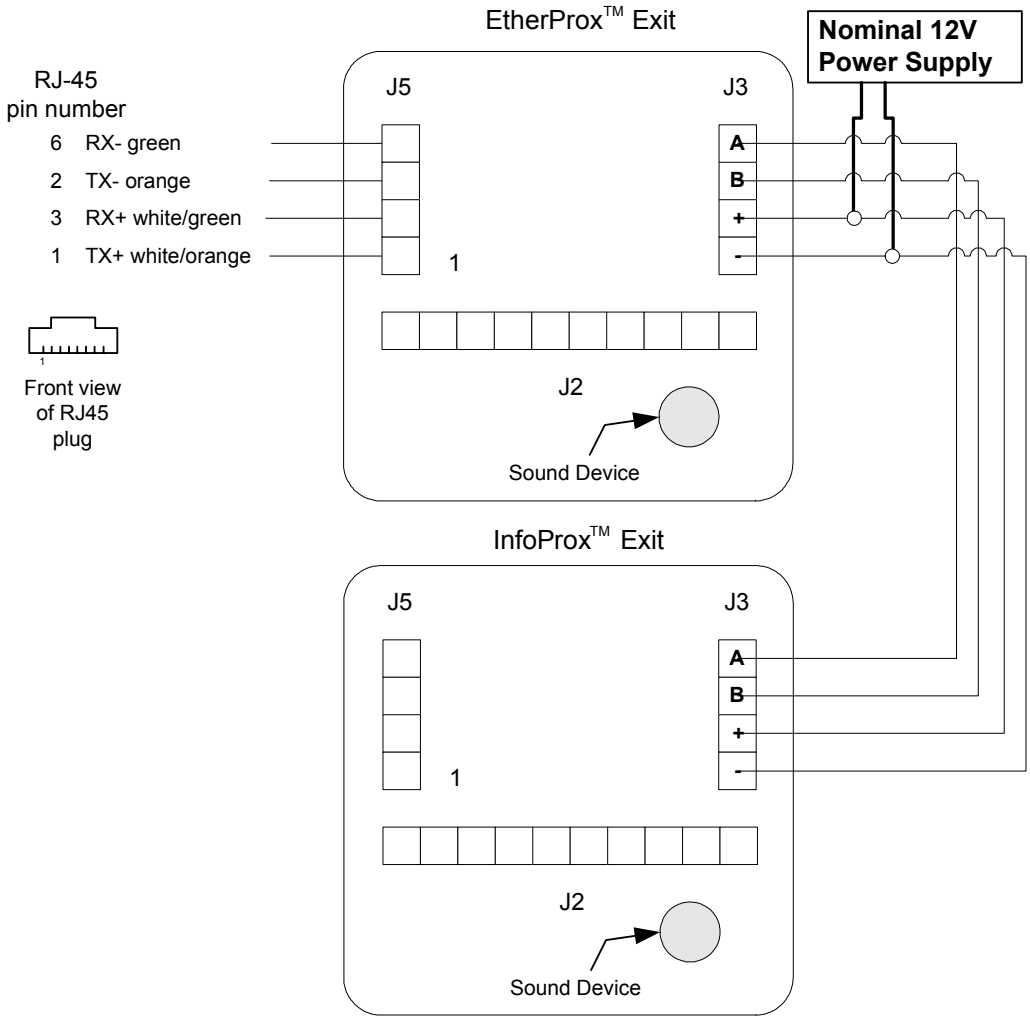

Figure 6: Exit Reader Connections

Installing the EtherProx Entry Unit

Follow these instructions to install the EtherProx Entry unit.

To install the EtherProx Entry unit

1. Make sure that you remove the shipping sticker (Remove before washing) from the sound device opening (see Figure 6).
2. Connect the power source. Verify that EtherProx Entry is working properly.
3. Recheck the wiring connections; make sure that all terminal screws are securely tightened.
4. Secure the adapter plate to the containment box, if required for a U.S. installation.
5. Position the reader over the containment box and tighten the two security screws, ensuring that the screws are not over tightened.
6. Make sure there are no gaps around the unit. With no gaps, you will prevent light from triggering the tamper sensor.
7. Fit the cover buttons firmly in place over the screws. To remove the cover buttons, use a screwdriver on the outer edges to lift the covers.

4. Configuring the EtherProx Entry

When you connect power to the EtherProx Entry reader for the first time, EtherProx uses the default configuration settings. However, you can configure the reader for your site requirements. You must complete the following tasks before you can use the reader:

- Set up an IP address
- Test the connection
- Set the time and date
- Enter a location name; change the user name and password
- Set up the initial door configuration
- Add Cardholders

Setting up an IP Address

To access EtherProx Entry through a network connection, assign a **unique IP address** to the device. Check with your local network administrator to coordinate the IP address and prevent network-addressing conflicts.

After you determine the IP address, you will need to set up the IP address for EtherProx Entry.

To set up an IP Address

1. At the EtherProx keypad, type ✱ ✱ ✱ **0 0 0 0**.

   The EtherProx Diags menu appears with the following prompt:

   ```
   <*  0^  0>
   ```

   > **!** If you do not press a key to select an option on the Administration menu within 10 seconds, the Administration menu will disappear.

2. Type **# # #.**

   The following prompt appears on the EtherProx Entry LCD.

   ```
   Configure
   ```

3. Press **0** to select **Configure.**

   The following prompt appears.

   ```
   IP address
   ```

4. Press **0** to select **IP** address.

   The following prompt appears.

   ```
   Manually
   ```

5. Press **0** to select **Manually**.

   The following prompt appears.

   ```
   Manual IP set
   ```

   You are now ready to enter the IP address.

6. On the keypad, type the IP address with an asterisk **(✱)** to represent a period (.). Be sure to include a period after the last number in the IP address. For example, for the IP address 172.31.10.10, type 172✱31✱10✱10✱

   > **!** To correct an entry, type a pound sign (#) to cancel the number. Then retype the IP address number with the asterisks.

7. When prompted, press **#** to confirm the new address.

Testing the Connection

After you set up the IP address, connect EtherProx Entry to your laptop or Local Area Network (LAN). When you use a laptop, you will need a a CAT 5 crossover cable. If you connect EtherProx Entry to a LAN or HUB, use a standard CAT 5 patch cable.

To verify the IP address and communications path, **ping** the EtherProx from a PC. To do so, open a DOS **Command Prompt** window, and type **ping**, followed by the IP address you had set up in the previous task. For example,

```
C:\>ping 172.31.10.10
```

If the IP address and communication path are correct, you should see a reply in the Command Prompt window that is similar to the following example:

```
Pinging 172.31.10.10 with 32 bytes of data:

Reply from 172.31.10.10: bytes=32 time=2ms TTL=32
Reply from 172.31.10.10: bytes=32 time=2ms TTL=32
Reply from 172.31.10.10: bytes=32 time=4ms TTL=32
Reply from 172.31.10.10: bytes=32 time=3ms TTL=32
```

If the IP address or communication path is incorrect, you should see a reply in the Command Prompt window that is similar to the following example:

```
Pinging 172.31.10.10 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.
```

Once you connect EtherProx Entry, you can set the time and date, as explained in the next section.

Setting the Time and Date

To continue configuring EtherProx Entry, you must run Microsoft **Internet Explorer** version 5.5 or higher. Other browsers, such as Netscape, will not work with EtherProx Entry software.

You can either enter the configuration settings manually or upload the configuration tables to EtherProx Entry. In this section, you will establish a network connection between EtherProx Entry and the PC by using Internet Explorer 5.5. Then you will set the time and date.

To set the time and date

1. Run Internet Explorer 5.5.
2. Type the EtherProx Entry IP address in the **Address** box and press **Enter**.

   The network should establish a connection to EtherProx Entry. A prompt appears asking you to enter a user name and password.
3. Enter the user name **web** and the password **spider.**

   After your login is validated, the Main Menu appears.
4. Click **Administer EtherProx.**

   The Administer EtherProx page appears.
5. Click **Update Clock**.

   The Update Clock page appears.
6. Verify that the time and date are correct.
7. Click **Update EtherProx clock**.

   The time and date appear on the Update Clock page.
8. Verify that the time and date are correct.
9. Click the **Back** button to return to the Administer EtherProx page.

Entering a Location Name; Changing the User Name and Password

A location name is useful when you configure more than one EtherProx. You can specify any location name, change the user name, and password, or continue to use the default user name and password.

If you want to change the user name and password, be sure to jot down the new user name and password for future reference. If you do not know the user name and password, you must return the EtherProx Entry reader unit to the manufacturer.

To enter a location name and change the user name and password

1. On the Main Menu, click **Administer EtherProx>EtherProx Configuration>Configure EtherProx**.

   The Configure EtherProx page appears.

2. Enter a location name and click **Update**.

3. Change the **default user name** and **password** by entering a new user name in the **New Login** box.

4. Enter the new password **twice**: once in the **New Password** box and again in the **Re-enter new password** box.

5. Click **Update**.

Setting up the Initial Door Configuration

To configure a door

1. On the Main Menu, click **Administer EtherProx>EtherProx Configuration>Configure Door**.

   The Door Configuration page appears.

2. In the Door Times section, specify the seconds for the **Unlock time** option.

3. Change the settings for any other **Door** options.

4. Click **Update**.

5. Administering the EtherProx Entry

EtherProx Entry runs as a web server, enabling you to administer EtherProx Entry through Internet Explorer. You will need a valid user name and password for the login procedure.

Establishing a Connection with EtherProx Entry

You must establish a connection with EtherProx Entry through Internet Explorer.

To establish a connection with EtherProx Entry

1. Open Internet Explorer.
2. Type the EtherProx Entry IP address in the **Address** box.

   The **EtherProx Entry** welcome page appears.
3. Click **Proceed**.

   The **Enter Network Password** dialog box appears.
4. Enter your user name and password.
5. Click **OK**.

   You may be prompted to enter your user name and password twice, which is a random validation check.

   Note For security purposes, you will be logged out after four minutes of inactivity. If this occurs, you must enter your password again to continue.

   The Main Menu appears. You can return to the Main Menu from any page by clicking **Main Menu**.

EtherProx Entry Main Menu

After you log in to EtherProx Entry, the EtherProx Entry Main Menu appears, as shown in Figure 8. The Main Menu allows you to perform the following functions:

- Administer cardholders
- View transactions
- Administer EtherProx

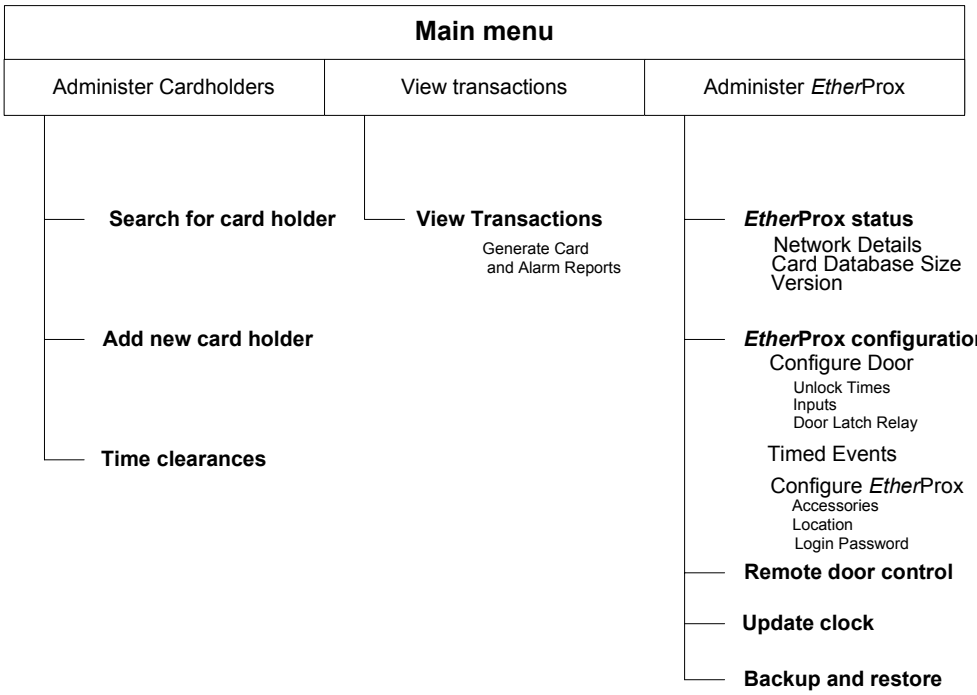

Figure 7: EtherProx Entry Main Menu

The **Main Menu** contains links to the following pages:

- **Administer Cardholders** (see Section 4.3**)** - search, add, edit, delete, and view cardholder records; set time clearances
- **View Transactions** (see Section 4.4**)** – view transactions, generate reports on card events, alarm events, or both
- **Administer EtherProx** (see Section 4.5**)** - view and change EtherProx Entry configuration settings

Administer Cardholders

Click **Administer Cardholders** to access the following cardholder administration options:

- Search for cardholder
- Add new cardholder
- Time clearances

You can search for cardholders in the database to view the cardholder information for a specific group of cardholders. You can search for a card by last name, first name, or card number.

To search for cardholders

1. On the Main Menu, click **Administer Cardholders>Search for Cardholder**.
2. Enter the search criteria.

   Note If you leave the search criteria boxes blank, EtherProx Entry will display all cardholder records.

3. Click **Go Search**.

   You should see a report page that contains cardholders records, based on your search criteria.

4. To view account information for a specific cardholder, in the **view** column on the report page, click the **//** symbol.

The Add New Cardholder feature lets you enter and edit cardholder information, and set the card status.

To add a cardholder

1. On the Main Menu, click **Administer Cardholder>Add New Cardholder**.
2. Enter a cardholder's last name, first name, and middle initial.
3. Enter the card numbers in the **Card number** box.

> ***Note*** If you do not know the card number for a particular cardholder, you can find the card number on the Transaction report page in the **Not in System** message. Copy the card number from the **Transaction** report page. Then paste the number into the **Card number** box.

4. Enter a 4-digit number in the **PIN** box if required.

> ***Note*** If you do not enter a PIN, EtherProx assigns a default value of 0000.

5. Click **Add**.

You can the set card status in the **Cardholder data** section of the Update Cardholder details page.

To set the card status

1. On the Main Menu, click **Administer Card Holders>Search for Cardholder**

   The Search for Cardholders page appears.

2. Enter the search criteria in the Search fields.

3. Click **Go Search**.

   The Cardholder Search Results page appears. You should see the cardholders records, based on your search criteria.

4. To view account information for a specific cardholder, in the View column on the report page, click the **//** symbol.

   The Update Cardholder Details page appears.

5. In the Cardholder Data section, select a card status.

   There are three card status options:

   Extended - sets the extended door opening time when a card is presented. Use the Extended status when a cardholder has a mobility problem and needs more than the standard amount of time to get through the doors.

   Lost/Stolen - prevents unauthorized use of a lost or stolen card.

   Operational - makes the card operational on the system. You can issue cards that you entered previously and then make them operational later by selecting the Operation status. You can also disable a card by deselecting the Operational status option. For example, disable the Operational status when an employee no longer works for the company.

You can specify a time period for clearance during which access is granted to a cardholder. You can set up time clearances for an individual cardholder or groups of cardholders.

To set time clearances

1. On the Main Menu, click **Administer Cardholders>Time Clearances**.

   The Time Clearance page appears. You should see a table with columns representing the days of the weeks, start time, and end time. In rows1 through 4, you can specify up to four time periods for a group.

2. Select a group from the Clearance Name drop-down list. For example, select Clearance A.

   Note You cannot adjust the **Always** and **Never** groups, as these are system defaults, but you can define up to six of your own groups from A – F.

3. Click a cell to select a day of the week.

   The cell you selected changes to green, indicating that access will be granted for that day.

   Note If you want to turn off access for a particular day, click that cell. The cell you selected changes to white, indicating that access will not be granted for that day.

4. Repeat step 3 to select additional days for which you will allow access.

5. Click a **Start** cell that corresponds to a day you selected.

   The Start cell appears in blue. The **Enter new time** boxes appear.

   Note Time is based on a 24-hour clock format. For example, for 5:00 PM set the time as 17:00. For midnight, se the time as 00:00.

   To specify a 24-hour time period, set the **Start** time as 00:00 and the **End** time as 23:59.

6. Click in the hour time box and type the hour with two digits. For example, for 5:00 PM, type 17.

7. Press **Tab**. In the minute time box, type the minutes. Then click **Update**.

   A message appears asking if you want to change the setting.

8. Click **OK**.

9. Click the **End** cell.

   The End cell appears in blue. The **Enter new time** boxes appear.

10. Repeat steps 6 through 8 to enter the end time.

11. Click **Submit Update** to save the time clearance settings.

    EtherProx will grant access for the days and time periods you specified.

> ***Note*** To restore the default time clearance settings, click **Restore Table**.

Example: Here is an example of time clearances for timed events. You use the EtherProx reader to control access to the cafeteria. The kitchen is open (Door Override) to everyone during breakfast (7:00 a.m. to 8:00 a.m.) and lunch (12:00 p.m. to 1:30 p.m.) on Monday through Friday. For the remainder of the day, 8:01 a.m. to 11:59 a.m. and 1:31 p.m. to 5:00 p.m., the cafeteria is accessible with use of a Global PIN. From 6:00 a.m. to 6:59 a.m. and 5:01 p.m. to 7:59 p.m., Monday through Friday, plus Saturdays and Sundays from 9:00 a.m. to 5:00 p.m., access to the kitchen is available using a Card-Only without a PIN. Access at any other time from Sunday through Saturday requires a Card and PIN (normal mode). Based on the example, Figure 8 shows how you would set the time clearances for the timed events.

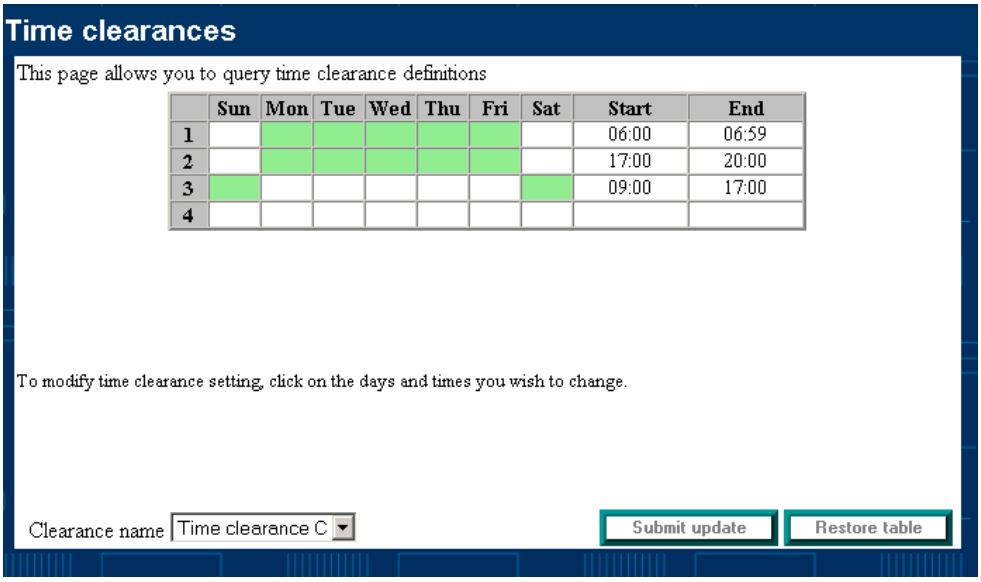

Figure 8: Time Clearances Page for Example

To set up time clearances for the timed events and configure the timed events that were used in the example, follow these steps:

To set time clearances and configure timed events, based on the example

1. On the Main Menu, click **Administer Card Holders>Time Clearances**.
2. Set the following time clearances:

   Clearance A = M-F (7:00 – 7:59); M-F (12:00 – 13:29)

   Clearance B = M-F (8:00 – 11:59); M-F (13:30 – 17:00)

   Clearance C = M-F (6:00 – 6:59); M-F (17:00 – 20:00); Sat, Sun (9:00 – 17:00)
3. On the Main Menu, click **Administer EtherProx**>**EtherProx Configuration>Configure Timed Events**.

   The Configure Timed Events page appears.
4. Set Door Override to **Time Clearance A**.
5. Set Card-Only no PIN to **Time Clearance C.**
6. Set Global Pin Only to **Time Clearance B**.
7. Click **Update**.

View Transactions

To view transactions, you generate a report for card-events, alarm-events, or both. Than you need to select report options to view the report.

To select report options and view the report

1. On the Main Menu, click **View Transactions**.

   The Transaction and Event Reporting page appears.
2. In the Type of Report Required section, select a report option.
3. Select time intervals in the **Starting from** and **Ending at** drop-down lists to specify a time range for the report.

4. Click **Generate report**.

   You should see a report page that lists all the selected transactions.

5. Scroll down to see the rest of the report transactions on the page.

6. Click **More Transactions** if the report continues on more than one page.

7. Display the report page you want to print.

8. Click **Print Report** at the top of the report page.

9. Click **OK** to print the report

Note	When EtherProx Entry memory is filled with transactions, the oldest transactions are overwritten by the new transactions.

Administer EtherProx

To access the Administer EtherProx page, on the **Main Menu**, click **Administer EtherProx**. The Administer EtherProx page contains the following configuration features:

- EtherProx status
- EtherProx configuration
- Remote door control
- Update clock
- Backup and restore

EtherProx Status

On the Administer EtherProx page, click **EtherProx Status**. The EtherProx Status page appears with the following status details:

STATUS TYPE	STATUS DETAIL
Network Details	IP Address
	Hardware Address
Card Database	Maximum # Cards
	# Cards
	Maximum # Transactions
	# Transactions
Version	S/W Version
	Build
	S/W Date
	H/W Version
	Board S/N

The EtherProx configuration options include:

- Configure Door
- Configure Timed Events
- Configure EtherProx

To change an EtherProx configuration setting

1. On the Main Menu, click **Administer EtherProx**>**EtherProx Configuration**.

   The EtherProx Entry Configuration menu appears.

2. Select a configuration option.

3. Make changes to the settings.

4. Click **Update**.

Note	Click **Default configuration** to return to the default settings.

Configure Door

The following table lists the Configure Door settings with their descriptions.

CONFIGURE DOOR SETTING	DESCRIPTION
Unlock Time	Length of time that the lock is released
Relock Delay Time	Number of seconds to delay the relock after a door is detected as open. You must enable Door Sensing for this setting to work.
Standard Door Open Time	Length of time a door can be open before an alarm is generated. You must enable the Door Sensing for this setting to work.
Extended Door Open Time	Length of time a special status card can hold a door open before an alarm is generated. You must enable the Door Sensing for this setting to work.
Door Held Warning	Length of time a door held warning sound is generated on the reader before the alarm goes off. You must enable the Door Sensing for this setting to work.
Alarm Sounder Duration	Length of time a door held open alarm or door forced open alarm warning is generated. You must enable the Door Sensing for this setting to work.
Powered to Secure	Specifies whether power to the lock secures the door (default).
Powered to Unlock	Specifies whether power to the lock unlocks the door.
Door Sensing Enabled	Specifies whether a door state switch is connected. If you disable this setting, the Standard Door Open Time, Re-lock Delay Time, Extended Door Open Time, Door Held Warning, and Alarm Sounder Duration settings will be disabled.
Lock Sensing Enabled	Specifies whether a lock status switch is connected.
Request to Exit Enabled	Specifies whether an exit pushbutton switch is connected.

Configure Timed Events

The **Timed Events** page lets you select events that you want to occur during specified time intervals, as shown in Figure 9.

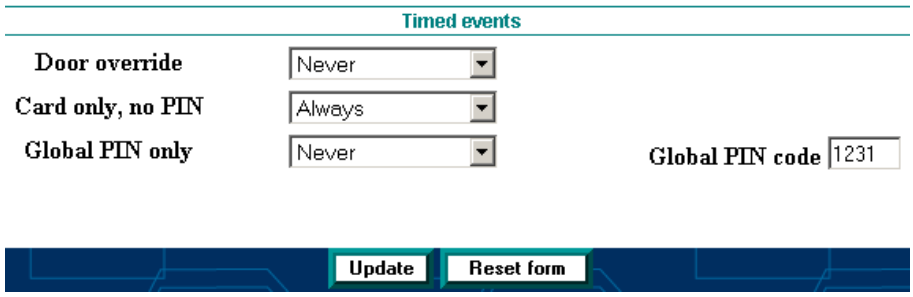

Figure 9: Timed Events Page

The following table lists the Configure Timed Events settings with their descriptions.

CONFIGURE TIMED EVENTS SETTING	DESCRIPTION
Door Override	Unlocks the door and allows unrestricted access. The parameters are the same as the groups in time clearances (See section 4.3, "Time Clearances").
Card Only, No PIN	If you use PINs with your cards, you can specify a time clearance group during which cardholders do not need to enter the PIN. For example, at a busy time of day.
Global PIN Only	Permits access with a global PIN that you specify in the Global PIN code box. When you enable this setting, cards are not required because anyone who knows the global PIN code can gain access.
Global PIN Code	Lets you specify or change the global PIN. The global PIN must contain four digits.

Configure EtherProx

On the Configure EtherProx page, you can select EtherProx device configuration parameters.

CONFIGURE ETHERPROX SETTING	DESCRIPTION
Door Interface Unit	Specifies whether a Door Interface Unit (DIU) is connected.
Entry PIN	Specifies whether a PIN is required for entry.
Exit Reader	Specifies whether an exit reader is connected.
Exit PIN	Specifies whether a PIN is required with an exit reader. If Exit Reader is disabled, the Exit Reader checkbox is unavailable.
Location Name	Specifies the EtherProx Entry location name.
New Login	Specifies a login name.
New Password	Specifies a new password.
Re-enter new password	Specifies whether to re-enter the new password for validation.

Remote Door Control

You can use the Open Door option to remotely open a door, which is similar to swiping an access card. On the Remote Door Control page, click **Open Door** to trigger the open door button and open a door immediately. The message Unlocking Door appears.

Update Clock

On the Update Clock page, you can set the time of the reader to the local time where you installed the reader. See section 3.3, "Set the Time and Date," for details. Click **Update EtherProx Clock** to update the time. Click **OK** to confirm updating the time.

Note If the EtherProx Entry is located in a time zone different from the one in which the computer is located, you must temporarily reset the computer time to coincide with the local time at the EtherProx Entry.

For example, to update an EtherProx Entry located in a time zone that is two hours behind the time zone set on the computer, use the Windows **Control Panel** to subtract two hours from the computer's current time setting before updating the EtherProx clock. Then reset the computer to the correct local time.

Backup and Restore

The Backup and Restore feature allows you to back up and restore EtherProx configuration and data files.

To back up configuration and data files

1. On the Main Menu, click **Administer EtherProx>Backup and Restore**.

   The Backup and Restore EtherProx data page appears.

2. Click **Start FTP Server**.

   When a connection is established, the FTP window appears with the following files:

   - **Cards.dat** - card table file
   - **Config.dat** - door configuration settings file
   - **Times.dat** - time zones file
   - **Trans.dat** - transactions file that contains all transactions made since the last backup
   - **System.dat** - system data file (password)

   Note When you copy the transactions from the EtherProx Entry **Trans.dat** file, the transaction records are deleted on the reader. You cannot copy the transaction records back to the reader. If you want to archive the transaction records, keep your **Trans.dat** files in a folder on your local computer.

3. Open Windows Explorer. Create a folder that will contain the backup files.

4. In the FTP window, select the files you want to back up.

5. In the FTP window, select **File**>**Copy to Folder**.

6. Open the folder that will contain the backup files.

7. Click **OK**.

   EtherProx copies the files to the folder you selected.

8. Close the Windows Explorer.

9. Click **Close Windows FTP program**.

To restore configuration and data files

1. On the Main Menu, click **Administer EtherProx>Backup and Restore**.

   The Backup and Restore EtherProx data page appears.

2. Click **Start FTP Server**.
3. Open Windows Explorer.
4. Open the folder that contains the files you want to restore.
5. Select and drag the files into the FTP window.
6. Close the windows.
7. Click **Close Windows FTP program**.

EtherProx Entry Messages and Responses

The EtherProx Entry reader has three LED indicators and an LCD display, which display the status and error messages during normal operation.

When communication has been established, the EtherProx Entry reader displays a blinking message. For example, if the screen blinks from E to S, which indicates a normal connection, the following status message appears:

```
EtherProx Rdr 16:30 E
   Show card
EtherProx Rdr 16:30 S
   Show card
EtherProx Rdr 16:30 E
   Show card
```

The E-S sequence shown in the example indicates that the Ethernet connection is valid. EtherProx is detecting a 10BaseT Ethernet connection. If no Ethernet connection is established and Comm is not valid, instead of E-S, the LCD will display a blinking -S sequence, as follows:

```
EtherProx Rdr 16:30 -
   Show card
EtherProx Rdr 16:30 S
   Show card
EtherProx Rdr 16:30 -
   Show card
```

When a card is presented to the reader, the name and status of the reader are displayed on the top line. Other status information and the current time are

displayed, too. Hours and minutes are shown in the 24-hour format. The colon flashes on the seconds digit.

> ***Note*** If the –S sequence appears, check your RJ45 connection and make sure that all connections are tight.

After a valid card swipe, the LCD displays a message, as shown in the following example:

```
Access granted
Show card  16:31
```

When a door override or similar operation is active, the following LCD display appears:

```
EtherProx Rdr E
Door open 16:35
```

The status and error messages and their meanings are listed in the three tables that follow: When a card is presented, one of the following responses is generated:

LCD message	LED	Comment
`Access Granted`	Green	Card valid for access
`Card Error RETRY`	Red	Problem reading card
`Card Expired`	Red	Card not operational but is in system.
`Lost/Stolen Card`	Flashing Red	No access allowed
`No Database!`	Red	No access; no cards in system.
`Not In System`	Red	Card number not known
`PIN Timed Out`	Amber	Requested PIN entered too late
`Wrong PIN,Retry`	Amber	Invalid card and PIN combination entered
`Wrong Timezone`	Amber	Card cannot be used at this time

Other LCD messages, shown on the top line of the LCD panel, include the following:

LCD message	LED	Comment
CLOSE DOOR	Flashing red	Door open illegally
Enter PIN	None	Enter PIN code for presented card

Idle state messages, shown on the bottom line of the LCD panel, include the following:

LCD message	LED	Comment
Door open	Flashing amber	Door unlocked, free access.
Enter PIN	Flashing amber	Card not required, only global PIN code
Show card	None	EtherProx Entry ready to read card.

6. Diagnostics

The EtherProx Entry reader provides a set of diagnostic tools for testing the EtherProx software and hardware. The EtherProx Diagnostic Menu System provides menus on how to work with diagnostics.

> ***Note*** Only installation and maintenance personnel should run diagnostics on EtherProx Entry.

Running Diagnostics

You can run the EtherProx diagnostic tools using the reader keypad. As you run the diagnostics, you will see messages appear on the LCD display.

To run diagnostics

1. To enter Diagnostic mode, at the reader keypad, press ✱✱✱**0000**.

   The following message appears on the LCD display:

   ```
   <*  0^  0>
   ```

2. Press **#** to continue.

   The following message appears on the LCD display:

   ```
   EtherProx Diags
   Information
   ```

   For details on the diagnostic menus, see section 5.2, “Understanding the Diagnostic Menu System.”

   > ***Note*** If you do not press a key for 10 seconds, EtherProx exits **Diagnostic Mode**.

3. To navigate through the diagnostic menus:

- Press **#** to move to the next menu item.
- Press **0** to select a menu item.
- Press ✱ to move to the previous menus and options.

> ***Note*** When you enter an IP address, type ✱ to represent each period in the IP address. You should end the IP address with ✱. You clear typing errors by pressing # to erase each character you want to delete.

When you reach the end of a submenu, the following message appears:

```
Back
```

> ***Note*** If you do not press a key for 10 seconds, EtherProx will move back through the menu tree and return to the Main Menu. Although there is one exception. The Input Test menu will hold for 60 seconds, and then EtherProx will move back through the menu tree and return to the Main Menu.

4. To exit Diagnostic mode, press **#** until you see the following menu item on the LCD display:

```
<*  0^  0>
```

5. Press **0**.

Understanding the Diagnostic Menu System

The following table contains the menu items in the EtherProx Diagnostic Menu System. The Main Menu contains four menu items: Information, Test, Configure, and Exit. These menu items contain submenu items and options, which appear in the Submenu and Option columns. You can run diagnostics on any of the options. In the Description column, there are descriptions of the options.

EtherProx Diagnostic Menu System			
Main Menu	**Submenu**	**Option**	**Description**
EtherProx Diags			
Information	**Info Menu**		
	Network	IP Address	Display current IP address and setting method
		MAC Address	Display ethernet address (in Hex w/o dashes)
		Web Server	Display server status
	Versions	S/W Type	EtherProx Entry or EtherProx
		S/W Version	Software version number
		S/W Date	Software version date
		H/W Version	Hardware version number
		H/W Ser/No.	Hardware serial number
	Database	DB Format	Type of database in use
		Free DB Space	Maximum number of records that can be stored
		# Cards	Number of records currently stored
		# Transactions	Number of events currently stored
	System	DIU	Shows if DIU is connected and operational
		Edit Reader	Shows if second reader is connected and operational
Test	**Test Menu**	**Local Test**	
	Local Device	Inputs	Test input operation
		Keypad	Test full keypad operation
		Leds	Test led sequence
		Aux Device Test	
	Aux Device(s)	Read Head	Verify exit reader read head operation
		Keypad	Test keypad operation
		Leds	Test LED sequence
Configure	**Configuration**	**Set IP Address**	
	IP Address	Manually	Set IP address manually
		Auto	Instruct to obtain IP automatically from an address server
	Aux Device(s)	**Set Aux Devices**	
		Auto detect	Not available
		DIU	Manually define Door Interface Unit as connected
		2nd Reader	Manually define second reader/keypad as connected
	Diagnostic code	Enter new code	Change code to access these diagnostics
	Special option	Enter UPD code	Code to request software update from server.
Exit <* 0^ #>			

Technical Support

If you are experiencing technical problems operating the EtherProx Entry Reader, contact your dealer. The Software House Customer Support Center is available to answer technical support questions on Monday through Friday from 8:00 am to 8:00 pm, Eastern Standard Time. The Customer Support Center phone numbers are 1-781-890-2287 and 1-800-392-2873.

Before calling, please check your manual and make sure that the EtherProx Entry unit is set up and powered properly. If you still need to call, have the following information available:

- Product name and number
- Version
- SPASS number
- Clear description of the problem

7. Glossary

Adapter Plate*:* A metal plate used to convert the reader from a European to a U.S. electrical containment box standard.

Alarm event: Activities such as door held or door forced. A transaction report contains alarm events.

Alarm sound device duration: The length of time the sounder will be active if a door held or forced occurs.

Browser*:* A computer application, such as Internet Explorer or Netscape, which allows Internet access and viewing of web pages.

Card event: Cardholder door access and rejects. A transaction report contains card events.

Cardholder: A person to which a card number has been assigned.

Cat 5: An Ethernet cable supporting 100mbps, using either Unshielded Twisted Pair (UTP) or Shielded Twisted Pair (STP).

Containment Box: A metal box used to contain wires and connectors for light switches, sockets, or various other devices.

Crossover Cable*:* A cable with Transmit pin(s) on one end wired to Receive pin(s) on the other. It is sometimes referred to as a “null modem cable.”

Decimal Format*:* The representation of a numerical quantity using digits 0-9 (base 10).

Door Control Unit (DCU): A door control unit that provides access control.

Door Control Unit System: The DCU system encompasses the entry door control unit, the exit reader, and any peripheral devices, such as the DIU.

Door forced: A forced entry through a door. The door control unit detects a door-forced condition when the Door Sense Monitor (DSM) activates without a valid card access or REX.

Door held: A door held alarm sounds after a valid card access if the cardholder holds the door open after the door open time expires.

Door Interface Unit (DIU): A device designed to connect to a door control unit, providing additional inputs, outputs, and alarms.

***Door open time*:** The length of time that the door can be open after a valid card access. The door open time is sometimes referred to as the shunt time.

Door Override: A mode where the door is unlocked.

Door sensing input: An input that monitors the Door State Monitor (DSM) switch.

Door strike time: The length of time that the lock will be open after a valid card read.

Door State Monitor (DSM): A switch that indicates whether a door is open or closed.

Download*:* The InfoProx door control unit is the central or controlling device from which users download data to a backup program on a computer.

Entry Reader*:* The InfoProx Entry Reader is a door control unit with memory, enabling it to work as a standalone access control device.

EtherProx System*:* A system defined by all the components that make EtherProx function as an integrated door control unit.

Ethernet*:* The most widely used Local Area Network (LAN), sending its communications through radio frequency signals carried by coaxial cable to computers in the network. TCP/IP is the most common software protocol for communication using Ethernet.

Exit Reader*:* An InfoProx Exit reader connects to an Entry Reader (either InfoProx or EtherProx) and serves as a remote access device or as a device on the secure side of a door used to exit that door.

Extended door open time: Additional time that a door will be shunted. For example, you can use extended door open time for disabled cardholders or for doors that are meant to be held open longer such as airport loading gates.

File Transfer Protocol (FTP): A TCP/IP software protocol used to transfer files between computers.

Gin: Global Identification number.

Global PIN: Global Personal Identification number.

Hardware address: See MAC address.

Hexadecimal Format*:* Illustrates binary code values with a numerical quantity using 0-15 digits and combining 0-9 + ABCDEF as values. Example: 0025BA.

Hotstamp Number*:* A number stamped by the manufacturer on the outside of a card. It is not always equivalent to the card number, which is the encoded system number.

IP Address: Internet Protocol address is the unique 32-bit number that serves as an address for a node in a TCP/IP network. Example: 172.31.10.20.

Liquid Crystal Display (LCD): A display technology used by the InfoProx and EtherProx readers.

Light Emitting Diode (LED): A display technology that emits light when conducting current.

Local Area Network (LAN): A communications network that serves users within a confined geographical area. LAN is comprised of servers, client workstations, and network operating systems, such as Windows NT or Unix that allow various nodes to communicate and share data within the LAN. Data transfer is managed by a transport protocol such as TCP.

Lock sensing input: An input that monitors a lock sensor that is available on some locks.

Lock sensor: Indicates whether a lock is engaged.

MAC Address: The unique 48-bit address burned into Ethernet and Token Ring adapters, identifying a specific network card from all others. The address is normally shown as 12 hexadecimal nibbles, for example, 00-50-F9-3A-64-BC.

NO/NC: Normally Open or Normally Closed contacts.

PIN: Personal Identification Number used with cards to allow access.

PIR: Passive infrared switch. Typically used for a REX.

Power to secure: Indicates that a door is locked (secured) when the door strike relay is powered (engaged).

Power to unlock: Indicates that the door is unlocked when the door strike relay is powered.

Proximity*:* A type of reader (read head) that operates without a card actually touching the reader. The proximity reader uses wireless Radio Frequency (RF) technology.

Reader*:* A door control unit that reads cards to allow access, which is one function of the unit.

Relock delay time: The amount of time, in seconds, to delay relocking the door after a valid card access. Sometimes referred to as relock time.

Relock time: see Relock delay time.

Request to exit input: The input that monitors the Request to exit (REX or RTE) switch. The REX switch might be a pushbutton or PIR. This input is frequently placed on the secure side of a door to allow egress without a card read.

REX: See request to exit.

Site Code: An encoded three-digit number that differentiates one set of cards from another. The site code is embedded by the manufacturer of the cards, usually at the request of the user.

Sounder*:* The **piezoelectric** device at the back of the reader from which sounds, such as alarms or confirmation beeps, emit: The Sounder is also referred to as the Sound Device.

Standard door open time: See Door open time.

Supervised input: An input that detects four states: normal, alarm, open circuit, and short circuit.

Swipe*:* Present a card to the reader within the read range.

System Number*:* The system number is an embedded card number; it appears in hexadecimal format on the door control unit LCD display.

Tamper Sensor*:* A light-sensing device on the back of the reader unit that sounds an alarm when the unit has been tampered with.

Time clearance: Configures access at specified days and times.

Time zone: Configures access levels based on the time clearance.

Transaction*:* Record of an event logged into a report file. Examples of events are alarms or actions, such as door access, door forced, or door held.

Unlock time: See Door strike time.

Unsupervised input: An input that detects two states: normal and alarm.

Upload*:* Moves data from the software backup utility on a computer to a reader. The reader is the primary and controlling device from which you can download data to a computer.