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Introduction

The AC-D32 is a proximity card and keypad access control unit.

The unit accepts up to 500 users and provides entry via the use of proximity cards and/or PIN codes.

Equipment provided

The following is provided as part of every AC-D32 package:

- AC-D32 Access Control Unit.
- Installation Kit
- Installation and Operating Instructions

Additional Equipment Required

1) Electric Lock Strike Mechanism Fail Safe (Power to Lock) or Fail Secure (Power to Open)

2) Power Supply with Backup Battery 12 to 16V DC (From a Regulated Power Supply)

3) Request To Exit (REX) Button Normally Open Type - Switch is closed when pressed.

4) BL-D40 External Sounder (Optional) Provides Siren, Bell, and Chime functions to AC-D32

Other Rosslare accessories can be found at Rosslare's Web Site:

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http://www.rosslare.com.hk

AC-D32

Technical Specification

Electrical Characteristics

 Operating Voltage Range:

 12 to 16V DC
 From a Regulated Power Supply

Not including attached devices

Not including attached devices

Maximum Input Current:

Standby: 40mA Max: 90mA Relay Outputs:

Lock Strike Relay Electronic, 3.5A with built in suppressor protection

Auxiliary Relay

Inputs:

REX N.O., Dry Contact Auxiliary Input (In / Monitor) N.C., Dry Contact in Monitor Mode N.O., Dry Contact in Input Mode

Form C. 1A

LEDs

Two Tri-colored LEDs

Built-In Proximity Reader

Read Range*3.5" (90mm)ModulationASK at 125kHzCompatible CardsAll 26-Bit EM Cards

Environmental Characteristics

Operating Temperature: -25°F to 145°F (-31°C to 63°C)

Operating Humidity: 0 to 95% (Non-Condensing)

Mechanical Characteristics

Dimensions: 4.80" (122mm) L x 2.95" (75mm) W x 0.94" (24mm) D

Weight:

0.3 lbs (130g)

* Measured using Rosslare Proximity Card (AT-11/12) or equivalent. Range also depends on electrical environment and proximity to metal.

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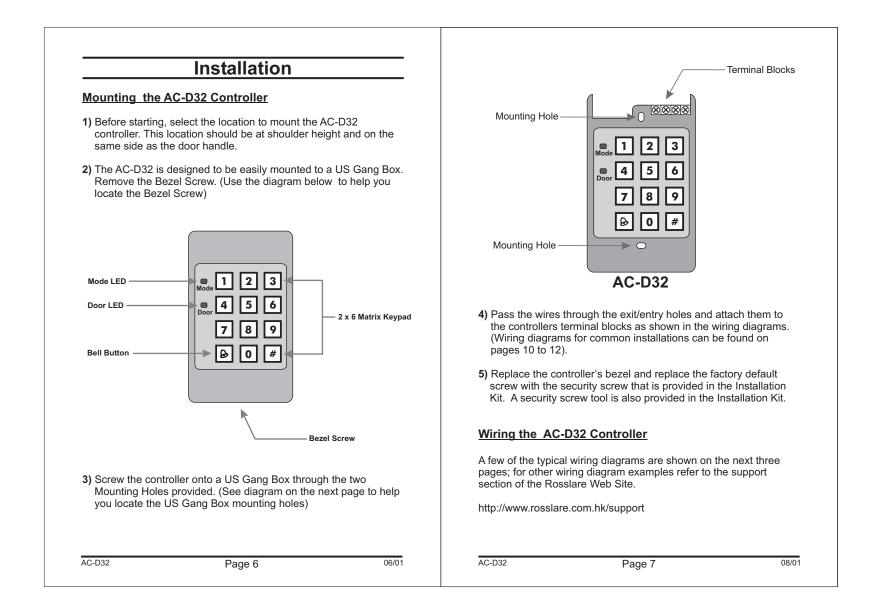
Key Features

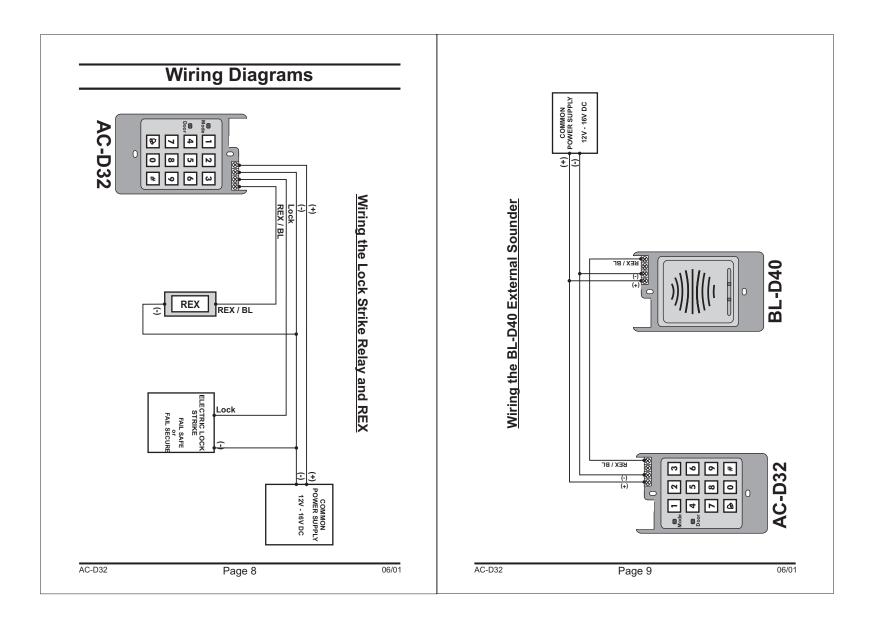
Here are some of the AC-D32's key features:

• Built in Proximity Card Reader (125 KHz ASK Modulation) • Built in Keypad for PIN code entry Internal Buzzer • Comes with security screw and security screw tool • Two Status / Programming Interface LED's • Three User Levels (Normal User, Secure User, Master User) • Three Modes of Operation (Normal Mode, Bypass Mode, Secure Mode) • "Code Search" feature makes maintaining user codes easier. Input for Request to Exit (REX) button. Lock Strike Electronic Relay with built-in suppressor protection. • Comes with mounting template for easier installation. • Built in Case and Back Tamper • Bell, Chime, Siren, and Strobe features available with BL-D40. Bell, Chime, Siren, Battery Backup, Tamper Output (Open Collector 20mA) features available with PS-X41 (Output Power 1.2A) and PS-X42 (Output Power 1.8A). Programmable Siren Time Programmable Lock Strike Release Time Comes with Suppression Diode (1N4004)

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Normal, Secure, & Master Users

The AC-D32 accepts up to 500 users and provides entry via the use of proximity cards and / or PIN codes. Each user is provided with two code memory slots, Memory Slot 1 (Primary Code) and Memory Slot 2 (Secondary Code). The two memory slots can be programmed as Proximity Cards, PIN codes, or a combination of both Proximity Cards and PIN codes.

The way in which the two memory slots are programmed determines a users access level and also determines the way in which the AC-D32 grants access in its three Modes of Operation.

There are three user levels:

Normal User

A Normal User only has a Primary Code and is only granted access when the AC-D32 is in Normal or Bypass Mode.

Secure User

A Secure User must have a Primary and Secondary Code programmed, the two codes must not be the same. The Secure User can gain access when the AC-D32 is in any of its three Modes of Operation. In Normal Mode the Secure User must use their Primary Code to gain entry. In Secure Mode the Secure User must present both their Primary and Secondary Codes in order to gain entry.

Master User

A Master User must have both Primary and Secondary Codes programmed with the same Proximity Card or PIN code. The Master User can gain access during any Mode of Operation by presenting their Proximity Card or PIN code to the controller. (The Master User is convenient but is less secure than a Secure User).

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Modes of Operation

Mode

The AC-D32 has 3 Modes of Operation:

1) Normal Mode.	
Mode LED is green	

\bigcirc	\bigcirc	Door
GREEN		

Normal Mode is the default mode. In Normal Mode the door is locked until a Primary Code is presented to the controller. Special codes such as "Open Code 1" and "Open Code 2" are active in Normal mode. (See Page 18 for more information on Open Code 1 & Open Code 2).

2) Bypass Mode.• Mode LED is orange



In Bypass Mode, access to the premises is dependent on whether the controller's Lock Strike Relay is programmed for Fail Safe Operation or Fail Secure Operation.

When the Lock Strike Relay is programmed for Fail Secure Operation, the door is locked until the Door Bell Button is pressed.

When the Lock Strike Relay is programmed for Fail Safe Operation, the door is constantly unlocked.

3) Secure Mode. • Mode I FD is red

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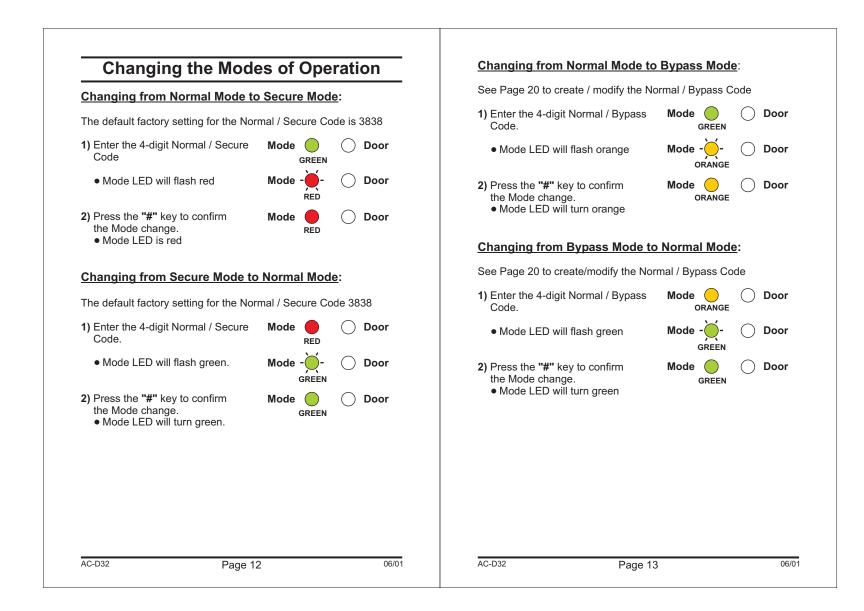
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Only Secure and Master Users can access the premises during the Secured Mode.

A Secure User must enter their Primary and Secondary Codes to gain entry. After entering their Primary Code the Door LED will flash green for 10 seconds, during which the Secondary Code must be entered.

A Master User only needs to present their Proximity Card or PIN code once to gain entry.

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Request to Exit (REX) Button

The REX button must be located inside the premises to be secured and is used to open the door without the use of a proximity card or PIN code, it is usually located in a convenient location, e.g. Inside the door or at a receptionist's desk. The function of the REX button depends on whether the Lock Strike Relay is programmed for Fail Safe Operation or Fail Secure Operation. The door chime in the BL-D40 does not sound when the REX button is used to open the door.

- 1) Fail Secure Operation: From the moment the REX button is pressed, the door will be unlocked until the "Lock Strike Release Time" has passed. After this time, the door will be locked even if the REX button has not been released.
- 2) Fail Safe Operation: From the moment the REX button is pressed, the door will be unlocked until the REX button is released, plus the "Lock Strike Release Time". In this case the "Lock Strike Relay" only begins its count down once the REX button has been released.

Case and Back Tamper

If the case of the controller is opened or the controller is removed from the wall, a tamper event is triggered and a coded tamper signal is sent to a BL-D40, PS-X41 Series or PS-X42 Series Power Supply, or other compatible device.

If the BL-D40 External Sounder , PS-X41 Series or PS-X42 Series Power Supplies receive a Tamper Event Signal, they will activate a Siren and if available a Strobe Light. The Siren time can be easily programmed in the AC-D32 from 0 to 9 minutes.

Clearing a tamper event is done by entering a valid User or Open Code that will open the Lock Strike Output in the current Mode of Operation. For example, while in Secure Mode, using the Open Code to clear tamper event will not work because the Open Code does not work in Secure Mode. However, applying a Master Code or Secure Code will clear the tamper event in Secure Mode.

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BL-D40 External Sounder

The BL-D40 External Sounder is compatible with the AC-X31, AC-X32, AC-X41, and AC-X42 series Standalone Controllers (For a more up-to-date list of compatible products check the Rosslare Web Site at www.rosslare.com.hk). It is designed to operate indoors and installed within the premises to be secured. The Sounder can be powered by 16V AC or 12 to 24V DC power supply.

The BL-D40 is capable of emitting four different types of alerts both audible and visual; Bell, Door Chime, Siren, and Strobe Light.

- 1) The Bell always sounds when the controller's doorbell button is pressed.
- 2) The Door Chime can be programmed to sound whenever the controller unlocks the door (the Door Chime does not sound when the REX button is used to open the door).
- **3)** The Siren can be programmed to sound when the case of the controller is opened or when the controller is removed from the wall. The controller can also program the length of the Siren in the BL-D40.

The Controller communicates with the BL-D40 using a coded proprietary Rosslare communications protocol. This provides a more secure link between the Controller and the BL-D40. If the BL-D40 receives any unrecognized codes on its communication line or communication between the controller and the BL-D40 are severed, the Strobe with flash repeatedly until the communication problem has been resolved.

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Programming the AC-D32

Programming the AC-D32 is done solely via the unit's keypad driven Programming Menu System. To reach the Programming Menu System the AC-D32 must first be placed into Programming Mode. See "Entering Programming Mode" on Page 17 for more information.

During the AC-D32's manufacturing process certain codes and settings are pre-programmed. These settings are the called the "Default Factory Settings".

The table below shows the names of all the AC-D32 Menus. It also shows of all the AY-D32's default factory codes and settings.

Programming Menu

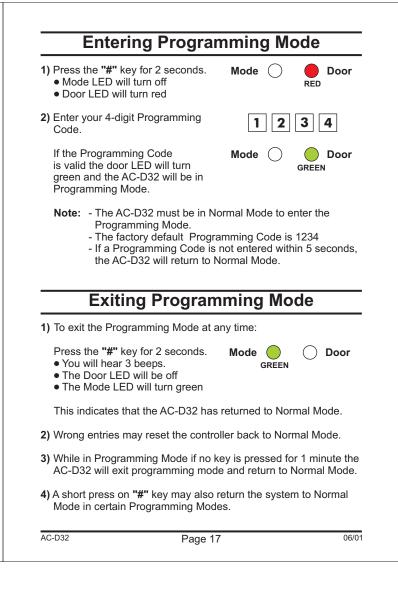
Factory Settings	Menu Description	Menu Number
2580 0852 1234 3838 N/A 0004	Change Open Code 1 Change Open Code 2 Change Program Code Change Normal / Secure Code Change Normal / Bypass Code Change Door Release Time Enroll Proximity Cards, PIN Code or both. Delete Proximity Cards Or PIN Code Return to Default Factory Setting	1 2 3 4 5 6 7 8 0

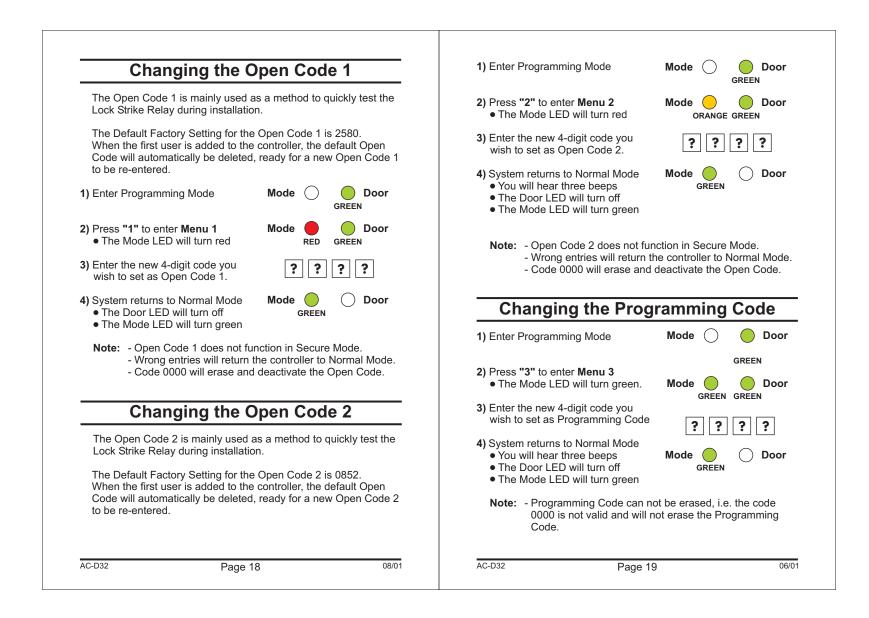
You will find a complete description and instructions for each of the above menu items on the following pages.

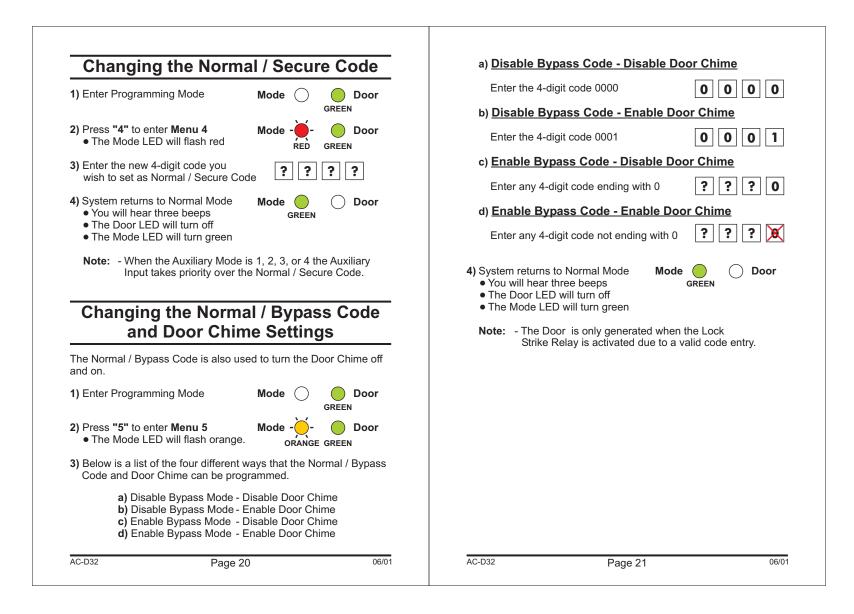
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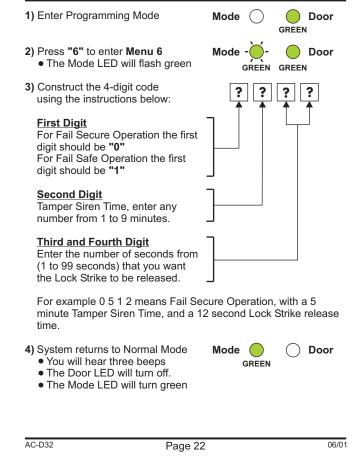
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Setting Fail Safe/Secure Operation Setting Tamper Siren Time Setting the Lock Strike Release Time



Enrolling Primary & Secondary Codes

Primary Codes

- Primary Codes can only be enrolled to an empty User Slot, i.e a slot where there is no existing Primary Code.
- Primary Codes must be unique, i.e. one users Primary Code may not be the same as another users Primary Code.
- Primary Codes cannot be the same as any system codes, such as the Normal / Secure Code or Open Code.
- Users who hold a Primary Code can gain entry only during Normal Mode.

Secondary Codes

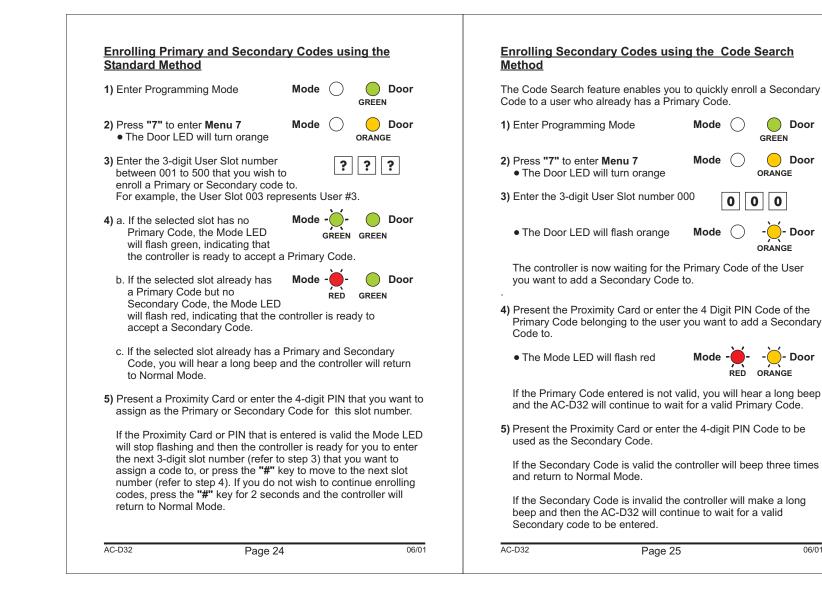
- Secondary Codes can only be enrolled to User Slot that already has a Primary Code enrolled but no Secondary Code.
- Secondary Codes do not have to be unique, i.e. multiple users can all hold the same Secondary Code.
- Secondary Codes cannot be the same as any system codes, such as the Normal / Secure Code or Open Code.
- Users who hold Secondary Codes can gain entry in any Mode of Operation.

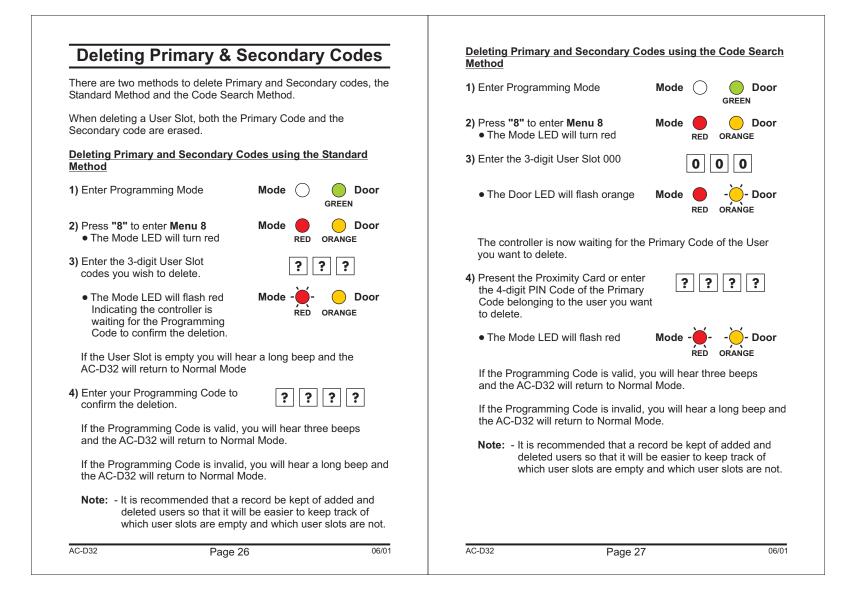
Enrolling Primary and Secondary Codes

There are two methods to enroll Primary and Secondary codes, the Standard Method and the Code Search Method.

- A. The Standard Method is mainly used when the User Slot number for the user you wish to program is known. You can program both Primary and Secondary Codes using the Standard method. (See Enrolling Users with the Standard Method on Page 24)
- B. The Code Search Method is mainly used when enrolling a users Secondary Code and the User Slot Code is unknown. The Code Search method only works if a users Primary Code is already enrolled but the Secondary Code is not. (See Enrolling Users with the Code Search Method on Page 25)

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Return To Factory Default Settings

Warning:

You must be very careful before using this command! Doing so will erase the entire memory which includes all User and Special Codes, and return all codes to their factory defaut settings.

1) Enter Programming Mode



? ? ? ?

2) Press "0" to enter Menu 0 • The Mode LED will flash red

The Door LED will flash red

3) Enter your 4-digit Programming Code.

- If the Programming Code is valid, all memory will be erased, you will hear three beeps and the controller will return to Normal Mode
- If the Programming Code is invalid you will hear a long beep and the controller will return to Normal Mode without erasing the memory of the controller.

Replacing a lost Programming Code

Note: The AC-D32 must be in Normal Mode otherwise this will not work. Make sure that the Mode LED is green before proceeding.

- 1) Remove power from the AC-D32
- 2) Press the REX button
- 3) Apply power to the unit with REX button pressed
- 4) Release the REX button
- 5) You now have 15 seconds to program a new Programming Code into the unit using the initial default code 1234, before the controller reverts to the existing code.

Replacing a lost Normal / Secure Code

- **Note:** The AC-D32 must be in Secure Mode otherwise this will not work. Make sure that the Mode LED is red before proceeding.
- 1) Remove power from the AC-D32
- 2) Press the REX Button
- 3) Apply power to the unit with REX button pressed.
- 4) Release the REX Button

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5) You now have 15 seconds to program a new Normal / Secure code into the unit using the initial default code 3838, before the controller reverts to the existing code.

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Glossary

Α

Access Control: Primarily refers to a device or set of devices controlling the entry of people traveling through a door or set of doors. Amplitude Shift Keying (ASK): The

Amplitude Shift Keying (ASK): The type of data communications between the Proximity Card and the Proximity Reader.

ASK: An abbreviation of "Amplitude Shift Keying".

В

Back Tamper: The electronic tamper signal advising the controller that the controller has been removed from the wall.

Bypass Code: The four digit code used to change the Mode of Operation of the AC-D32 from Normal to Bypass Mode or vice versa.

Bypass Mode: A Mode of Operation where door access is not restricted to valid users. In this mode the door may be released by anyone pressing the bell button.

С

Cards: See Proximity Cards Case Tamper: The electronic tamper signal advising the controller that the case has been opened.

D

Default Factory Setting: The settings that the controller is preprogrammed with when the controller is manufactured. **Direct Shunt Delay:** The delay time (user programmed) used in Direct Shunt (See Direct Shunt). **Door Bell:** The alert sound activated when the door bell button on the AC- D32 is pressed. (Requires the BL-D40 External Sounder) **Door Chime:** The alert sound activated when the lock strike unlocks the door after a valid code has been presented. (Requires the

BL-D40 External Sounder)

F Fail Safe: The system setting in which a total power loss leaves the connected door unlocked. Fail Secure: The system setting in

which a total power loss leaves the connected door locked.

Lock Strike: Term used for the electronic or electromagnetic door lock used for locking or unlocking the door.

Lock Strike Release Time: The amount of time (user programmed) that the Lock Strike remains unlocked when a valid code is entered.

Μ

Master User: A user which has a Primary and Secondary Code which are the same, and can gain access in any Mode of Operation.

Mode of Operation: The state of operation of the controller. There are three "Modes": Normal Mode, Bypass Mode, and Secure Mode.

Ν

Normal Mode: The system setting (Mode of Operation) in which all valid users have access upon presenting a valid Proximity Card or PIN Code (Primary Code). **Normal / Bypass Code:** The four digit code used to change the controllers Mode of Operation from Normal to Bypass Mode or vice versa.

Normal / Secure Code: The four digit code used to change the controllers Mode of Operation from Normal to Secure Mode or vice versa.

Normal User: A user who only has a Primary Code and can only gain access in Normal Mode.

Normally Closed: A relay output from the controller that is activated (closed circuit) under normal conditions.

Normally Open: A relay output from the controller that is de-activated (open circuit) under normal conditions.

0

Open Code 1: The four digit code used to activate the Lock Strike Relay for testing purposes during installation.

Open Code 2: The four digit code used to activate the Lock Strike Relay for testing purposes during installation.

Ρ

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Primary Code: The unique code issued to enable access in Normal Mode. Users with only primary codes are Normal Users.

Programming Code: The four digit code required when entering programming mode, deleting users, and resetting the AC-D32 to its factory default settings.

Programming Mode: The mode used when programming the AC-D32's system settings.

Proximity Cards: Electronically numbered ID badges allocated to system users and read by the Proximity Card Reader.

R

Relay: An electronically controlled switch used for providing an Open Circuit or Closed Circuit output to external devices.

REX: An abbreviation of "Request To Exit".

Request To Exit (REX): Refers to a button which can release the door from inside. Commonly located at the reception desk, or near a door as an emergency door release.

S

Secondary Code: An additional code issued to enable access in Secured Mode. Users with non-identical Primary and Secondary Codes are Secure Users. Users with identical Primary and Secondary Codes are Master Users.

Secure Mode: The system setting (Mode of Operation) in which only valid Secure and Master Users have access upon presenting a valid code. Secure User: A user which has a Primary Code and Secondary Code that are non-identical, and can gain access in any Mode of Operation. Strike: See Lock Strike

Т

Tamper Siren: The alert sound activated when a Back Tamper or Case Tamper event occurs. (Requires the BL-D40 External Sounder)

Tamper Siren Time: The time (user programmed) that the Tamper Siren will sound when activated.

Terminal Block: The rectangular connectors on the PCB used to attach wiring from external devices.

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			Technical Support	
		Ir	ternational Web Site:	
			http:///www.rosslare.com.hk/support/	
		A	sia, Australia, & South America:	
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