#### SELF CONTAINED ACCESS CONTROL SYSTEM STYLES:

#### 232i-INDOOR STYLE

- Flushmount, indoor design.
- 232w-WEATHER RESISTANT STYLE
  Flushmount, outdoor design.
- 232r-RUGGEDIZED STYLE
- Weatherproof self-contained metal housing.
- Vandal resistant.
- Cast metal housing suitable for wall, post or gooseneck mounting.
- Available in White or Black.

#### ACCESSORIES:

#### INSTALLATION

- IEI-280 WEATHERPROOF SURFACE BACK BOX.
- IEI-281 FLUSH MOUNT BACK BOX.
- IEI-12 or 24 VDC PLUG-IN POWER SUPPLY. 1000mA.
- IEI-293 THREE RELAY PLUG--IN BOARD with FORM C, 1 Amp relays. Converts transistor outputs to dry contacts (for use with Command and Control indoor, weather resistant and Mullion styles).

#### **MAGNETIC STRIPE CARDS**

Track II encoded, low coercivity cards.

• IEI-MAGCRD – Lots of 10, 25, or 100.

#### 232se-SEALED ENVIRONMENTAL STYLE

- Weatherproof self-contained metal housing.
- Vandal resistant.
- Small design suitable for residential, commercial and industrial applications.

#### 234 KEYPAD CARD READER SYSTEM

- Weatherproof metal housing.
- Uses any ABA standard track II magstripe card.
- Access via card, keypad or both.
- 60 users

#### TAMPER PROTECTION

- IEI-282 TAMPER SWITCH detects faceplate removal.
- IEI-283 SECURITY MODULE responds to tamper switch (included) and cuts all in/out power to the door lock. Wires can't be crossed to unlock door. Must be reset from inside the protected area.
- IEI-289 TAMPER SCREWS TRI-HEAD.
- IEI-267 1/4" DRIVER.
- IEI-270 ADAPTER SOCKET TRI-HEAD.
- IEI-288 TAMPER SCREWS ALLEN WITH PIN
- MAG. SWITCH. IEI # 254-1137

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## 233 CARD READER

**DOOR & GARD SELF-CONTAINED ACCESS CONTROL SYSTEMS** offer field proven reliability and cost effective solutions for residential, commercial and industrial installations. Elegant, yet durable, Door & Gard systems blend with virtually any decor. Designed for compatibility with virtually any electric locking device, Door & Gards accept power from a 12 or 24 Volt AC/DC supply.

### FEATURES:

- LOCK RELEASE RELAY
- LOCK RELEASE TIMER
- FORCED DOOR ALARM RELAY
- PROPPED DOOR ALARM RELAY
- ALARM SHUNT RELAY
- TIMED EGRESS INPUT (REX)
- 120 USERS
- FRONT PROGRAMMING
- USE ANY ABA STANDARD TRACK II ENCODED MAGNETIC STRIPE CARD

#### MEMORY

The 233 Card Reader contains non-volatile EEPROM memory. This means your cards and other programming options are not erased when you remove power from the unit, even for extended periods of time.

#### PROGRAMMING

All programming commands are entered on the front of the keypad controller. When adding users, swipe the cards on the card reader to store in the controller memory. To gain access to program mode, you must know the master code and enter 99#master code\*. The default master code is 1234.

#### CARD USERS

You can program up to 120 individual users into the 233 Card Reader. User location one is reserved for the Master Code, which is used for programming. The remaining 119 user locations are reserved for card users, which can use any ABA standard track II encoded magnetic stripe cards. The master code can't be programmed as a card user.

#### LOCK RELEASE (MAIN) RELAY

The main relay is used to control the door's locking device. When you swipe a valid card or trigger the REX input, this relay activates immediately and stays energized for the time programmed with the master code. Valid times are 1 to 90 seconds or 00 to latch/toggle. The default is 5 seconds.

#### FEATURES AND PROGRAMMING GUIDE FOR SELF-CONTAINED ACCESS CONTROL SYSTEMS:

#### FORCED DOOR RELAY

The forced door relay energizes if the door position switch is opened without first swiping a valid card, entering the master code or closing the REX input. This alerts you that the door was forced opened. You can program this relay to energize from 10 seconds to 15 minutes or to latch/toggle. The default is 10 seconds. Entering the master code or swiping a valid card cancels the forced door alarm, once it's triggered.

#### PROPPED DOOR RELAY

The propped door relay energizes if the door position switch remains open after the propped door time expires. This alerts you if someone has left the door open. You can program the propped door time from 10 seconds to 15 minutes. The default time is 30 seconds. The propped door relay de-energizes when the door position switch is closed.

#### ALARM SHUNT RELAY

The alarm shunt relay is used to bypass existing door contacts for an alarm system. It energizes with the main relay and de-energizes 1 second after the door position switch input is closed.

#### DOOR POSITION SWITCH INPUT

This input is used to connect a normally closed door position switch to monitor the status of the door. It is used for the forced door, propped door and alarm shunt features.

#### TIMED EGRESS/REQUEST TO EXIT (REX) INPUT

The REX input is a normally open loop that is triggered when the input is momentarily closed. When activated, the main relay energizes for the same time period as the Master Code.

#### VESTIBULE/ATM MODE

In Vestibule/ATM mode, swiping any ABA Track II encoded magnetic stripe card gains access to the door. Special wiring and programming is required. Refer to the included ATM Vestibule addendum for additional information and wiring. There is also an additional option that grants access even when there is a read error, to ensure that users gain access.

## **TESTING THE KEYPAD**

- 1. Connect the positive (+) lead of your power supply to the terminal strip (TS1) V+ input.
- 2. Connect the negative (-) lead of your power supply to the terminal strip (TS1) V- input.
- 3. Turn on your power supply.
- 4. Press 7890#123456 \*. If all 12 key presses are verified, the keypad enters self-test mode: the LEDs cycle (off, red, yellow, green), followed by 3 beeps. When complete the red LED turns on solid. If this does not happen, try entering test mode again.

Note: If the self-test does not respond as described above, it's possible the memory is corrupted. Try defaulting the unit using the 46#00000#00000#\*\* command. Warning: This command erases your programmed users. If the keypad is still not functioning properly call IEI Technical Support.

5. Enter the master code of 1234\* to energize the main relay. Refer to programming section to program any additional features.

#### NOTE:

IEI recommends getting familiar with the 233 Card Reader prior to installing it in the field. This will familiarize you with the product and save you time on the job site. You can even pre-program the unit with the end user's cards prior to installation.

#### ACCESS CONTROL DEFAULTS

The following default settings are factory programmed:

- Master Code (user 1): 1234 \*. •
- Main Relay Time: 5 seconds. •
- Keypress Feedback: on.
- Propped Door Time: 30 seconds •
- Forced Door Time: 10 seconds •

Refer to the Programming Options Chart on the next page if you need to change these default settings and for additional programming options. Please read section 2 (Programming) for typical programming steps before moving on to the Programming Options Chart.

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PROGRAMMING					
- 1.	Enter programming mode Press 99 # (master code) *	Yellow LED Flashes slowly			
2.	<b>To Change master code</b> <sup>1</sup> Press 1 # (new master code) * Press (new master code) * If you must change the Main Relay Time, see option 2 on the Programming Options chart.	Flashes fast Flashes slowly			
3.	<b>To Add/change second card</b> Press 2 # ** Swipe Card	Flashes fast Flashes slowly			
4.	<b>To Add/change third card</b> Press 3 # ** Swipe Card	Flashes fast Flashes slowly			
	You can continue adding cards in this fashion up to user 120.				
5.	Exit programming mode Press *	Off			
NOTES:					
1.	The default master code is 1234 *.				
2.	The master code is always user 1.				
3.	The master code allows access to programming mode and activates the main relay.				
4.	The master code may be from 1-6 digits in length, and digits may be repeated.				
5.	If you forgot the master code or it is not working, momentarily push SW1, (see wiring diagram for location) to enter program mode and either re-program the master code or go to option #16 on the Programming Options chart to default keypad.				

6. If the yellow LED lights solid while in programming mode, an error has occurred. Press \* to clear (vellow LED should start flashing) and start over from step 2 or 3 above.

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PROGRAMMING OPTIONS CHART The following is a complete list of programming command available in the 233 Card Reader.				
1.	Enter programming mode	Press	99 # (master code) *	
2.	Change master code/set Main relay time <sup>1</sup> Example: Master code of 4321/relay time of 10 seconds	Press Press	(time) # 1 # (new code) * (new code) * 10 # 1 # 4321 * 4321 *	
3.	Add/change user	Press	(user number) # ** swipe card	
4.	Add/change user to toggle main relay <sup>1</sup>	Press	(00) # (user number) # ** swipe card	
5.	Delete user codes	Press	(user number) # * *	
6.	Turn keypress feedback/yellow LED on	Press	30 # 0 # 1 # * *	
7.	Turn keypress feedback/yellow LED off	Press	30 # 0 # 0 # * *	
3.	Energize Propped Door relay with any Track II card (ATM Mode)	Press	31 # 0 # 1 # **	
9.	Disable previous option (8)	Press	31 # 0 # 0 # **	
0.	Energize Forced Door relay with any Track II card (ATM Mode)	Press	31 # 1 # 1 # **	
1.	Disable previous option (10)	Press	31 # 1 # 0 # **	
12.	Energize Vestibule/ATM mode even on read error	Press	31 # 2 # 1 # **	
13.	Disable previous option (12)	Press	31 # 2 # 0 # **	
14.	Set propped door time <sup>2</sup>	Press	44 # time # 0 # **	
15.	Set forced door time <sup>2</sup>	Press	45 # time # 0 # **	
16.	Erase keypad memory/reset defaults	Press	46 # 00000 # 00000 # **	
17.	Sequentially add users <sup>3</sup>	Press	53 # 1 # (starting user number) # ** swipe first card swipe second card,	

#### NOTES:

- /toggle is accomplished by entering a time of 00.
- time can't be programmed to latch/toggle.
- the next card swiped is programming into user location 3.

1. You must always enter two digits when programming the relay time. Example: 5 seconds = 05. Latching

2. Propped Door and Forced Door times must be programmed in intervals of 10 seconds. i.e. 10, 30, 60, ... up to 900 seconds. Forced door time of 00 will latch/toggle output, until reset by code. The propped door

3. In command 53, if the starting user number is 2, the first card swiped is programming into user location 2,