Access Control Module V1.1
DGP2-ACM1P

Instructions

DGP2ACM1-EI02

PARADOX®
SECURITY SYSTEMS
780 boul. Industriel, St-Eustache, Montreal, Quebec, Canada J7R 5V3
Fax: (450) 491-2313 www.paradox.ca

PRINTED IN CANADA - 06/2002

Introduction

The Access Control Module is designed to be used with the Digiplex (DGP-48) or DigiplexNE (DGP-NE96) control panel's Access Control feature. Access Control is designed to monitor and control the access for up to 32 designated doors without the need of an additional control panel. Each DGP2-ACM1P allows you to connect a reader (PosiProx CR-R880-A or PosiPIN CR-R885-BL), a REX device (Paradoor 460), a door contact and a locking device to control the access to one door. If desired, door contacts can also be assigned to zones in the control panel to link the doors to the alarm system. This will allow you to use the same door for the Access Control system and the alarm system. Only two of the Access Control features require that the Access Control door's door contact be assigned to a zone: *"Burglar Alarm on Forced Door"* and *"Access to Armed Access Control Doors"* (refer to the *Digiplex* or *DigiplexNE Reference & Installation Manual*).

Technical Specifications*

AC Power:	16Vac, 20/40VA, 50 - 60Hz
Aux. Power:	12Vdc, typical 600mA, 700mA max.
Battery:	12Vdc, 4Ah minimum
Number of Outputs:	2; one 50mA PGM output, one form "C" relay rated @ 125V, 5A receptive load
Number of Zones:	2 (Door Contact & REX device)
Number of Inputs:	2 (Negative Trigger & Tamper inputs)
Control Panel Compatibility:	Any Digiplex (DGP-48) V2.20 or higher Any DigiplexNE (DGP-NE96)

* Specifications may change without prior notice.

Installation of the Access Control Module

The module is connected to the control panel's communication bus. Connect the module to the control panel as shown in Figure 1. Please refer to the *Digiplex* or *DigiplexNE Reference & Installation Manual* for the maximum allowable installation distance from the control panel. Devices connected to the PGM output must be connected as shown in Figure 1, Inset 1 (see reverse side). Refer to Figure 1 for connection drawings for the REX device, reader, locking device and door contact.

The door contact follows the control panel's EOL definition. When EOL is enabled and the door contact is not used, place a 1kΩ resistor across the CT and AUX- input terminals. If EOL is not enabled, use a jumper. If the REX device is not used, place a jumper across the REX and AUX- terminals.

Connecting AC Power & Backup Battery

The DGP2-ACM1P is available with a built-in power supply. This power supply is used to provide power to the door locking device.

AC Power:
Use a 16.5Vac (50/60 Hz) transformer with a minimum 20VA rating to provide sufficient AC power. Do not use any switch-controlled outlets to power the transformer. Connect the transformer as shown in Figure 1 (see reverse side).

Backup Battery:
To supply power to the module's door lock relay during a power failure, connect a 12Vdc 4Ah rechargeable acid/lead or gell cell backup battery as shown in Figure 1 (see reverse side). Connect the battery after applying AC power. When installing the battery, verify proper polarity as reversed connections will blow the battery fuse.

Connecting the External Negative Trigger

The DGP2-ACM1P comes supplied with an external negative trigger. You can use a PGM from the control panel or another module to release the access control door lock. Connect the desired PGM output terminal to the "**TRIG (-)**" terminal of the module as shown in Figure 1 (see reverse side). Once connected, program the desired PGM event. When the event occurs, the door will unlock.
The external negative trigger can also be triggered using a push-button. When the push button is pressed, the door will unlock. Connect the push-button as shown in Figure 1 (see reverse side).

Programming Method

To enter the DGP2-ACM1P's programming mode:

STEP 1: Press and hold the **[0]** key
STEP 2: Enter the **[INSTALLER CODE]**
STEP 3: Enter section **[953]** (DGP-48) / **[4003]** (DGP-NE96)
STEP 4: Enter the DGP2-ACM1P's 8-digit **[SERIAL NUMBER]**
STEP 5: Enter the 3-digit **[SECTION]** you want to program
STEP 6: Enter the required data

The DGP2-ACM1P can also be programmed using the WinLoad Security Software (V2.0 or higher) or using the control panel's *Module Broadcast* feature. Refer to the control panel's *Reference & Installation Manual* for more details. Please note that the serial number can be located on the Access Control Module's PC board.

Section [001] - Options [1] to [8]
Assigning Doors to Partitions

The Access Control door can be assigned to one or more partitions in the alarm system. This means that the actions performed with the Access Control Card will be directly linked to the partition(s) assigned to that door. To assign an Access Control door to a partition, simply enable the option that corresponds to the desired partition. Options **[1]** to **[8]** represent partitions 1 to 8 respectively. *Partition 1 is enabled by default.*

The Access Control Module can only be assigned to partitions 5 to 8 if connected to a DigiplexNE control panel.

Section [002] - Option [1]
Tamper Input

The DGP2-ACM1P does not come equipped with a tamper switch. If required, enable option **[1]** and connect a tamper switch to the "**TMP**" input as shown in Figure 1, Inset 2 (see reverse side). When a tamper is detected on the module, it will send a tamper report to the control panel via the bus. *Default: Option **[1]** OFF.*

Section [002] - Option [3]
Reader's Red LED to Follow Partition's Status

The reader's red LED can be programmed to flash according to the partition's status. When this feature is enabled, the reader's red LED will flash when the partition is arming, in Exit Delay, in Entry Delay, in Burglar Alarm or in Fire Alarm. *Default: Option **[3]** is ON.*

Section [002] - Option [4]
Reader's Beep to Follow Partition's Status

This feature will only function when section [002] option **[3]** is enabled. The reader can be programmed to beep according to the partition's status. When this feature is enabled, the reader will beep when the partition is arming, in Exit Delay, in Entry Delay, in Burglar Alarm or in Fire Alarm. *Default: Option **[4]** is ON.*

Section [002] - Option [7]
Reader's Green LED Options upon Access Granted

With option **[7]** ON, when the Access Control card is presented to the reader, the reader's LED will turn green during the door's unlocked period (or until the door closes). With option **[7]** OFF, the reader's LED will extinguish briefly to indicate that the door is unlocked. *Default: Option **[7]** is ON.*

Section [002] - Option [8]
Unlock on REX (Request for Exit)

When the REX device detects movement, it can permit passage with or without turning the door handle. If this option is enabled, the door is unlocked when the REX device detects movement and users on either side of the door will be able to open the door. If this option is disabled, the door will unlock once the handle is turned only on the REX device's side. *Default: Option **[8]** is OFF.*

Section [006]
Door Unlocked Period

The Door Unlocked Period is the time the door can remain unlatched after access is granted or after a Request for Exit is received. Enter any value between 001 and 255 seconds. *Default: 005 seconds.*

Section [007]
Door Unlocked Period Extension

The Door Unlocked Period Extension is the amount of time added to the Door Unlocked Period in section [006], which leaves the door unlatched longer. This will allow those with this feature enabled on their User Access Codes extra time to enter, which may be useful for the physically challenged or for seniors. Enter any value between 001 and 255 seconds. *Default: 015 seconds.*

Section [002] - Option [6]
Relock Interval

The locking device will remain unlatched during the *Door Unlocked Period* (section [006]), but once the door is opened it can be programmed to latch as soon as the door closes or latch immediately even if the door has not closed. When the option is ON, the locking device will latch when the door closes. When the option is OFF, the locking device will latch immediately. *Default: Option **[6]** is OFF.*

Section [013]
Door Unlocked Schedule

The Door Unlocked Schedule determines the hours, days, and holidays that the door will remain unlocked. Therefore, users will not have to present their Access Control Cards to the reader in order to gain access to an Access Control Door during the Door Unlocked Schedule. The schedule consists of two programmable time periods called *Intervals* that determine the time of day and which days the users will be granted access. When a schedule is programmed with "H", users will have access during the holidays programmed in the control panel (refer to the *Digiplex* or *DigiplexNE Reference & Installation Manual*). Program the Start Time and End Time according to the 24-hour clock within the same day.

Option	Day	Option	Day	Option	Day
[1]	Sunday (S)	**[4]**	Wednesday (W)	**[7]**	Saturday (S)
[2]	Monday (M)	**[5]**	Thursday (T)	**[8]**	Holidays (H)
[3]	Tuesday (T)	**[6]**	Friday (F)		

For example, program:
- *Interval A: Start time **07:00**, End time **16:00**, Days **_ M T W T F _ _***
- *Interval B: Start time **10:00**, End time **17:00**, Days **S _ _ _ _ _ S H***

The door will stay unlocked on Monday, Tuesday, Wednesday, Thursday, and Friday between 7AM and 4PM and on Saturday, Sunday, and Holidays between 10AM and 5PM. Therefore, users will not have to present their Access Control Cards during the Door Unlocked Schedule.

Section [002] - Option [5]
Card Activates Door Unlocked Schedule

When the Door Unlocked Schedule is programmed and this option is enabled, the door is locked until the first valid Access Control Card is presented. Once the door is unlocked, it will remain unlocked until the end of the schedule. *For example: the schedule is 7AM to 5PM Monday to Friday, option **[5]** is enabled, and a valid Access Control Card is presented to the reader at 8AM on Monday. Although the schedule started at 7AM, the door remained locked from 7AM to 8AM. Once access was granted at 8AM, the door remained unlocked until 5PM. Default: Option **[5]** is OFF.*

Section [003] - Option [1]
Door Left Open Access Alarm

When an Access Control door is opened after an Access Granted or a Request for Exit, a local access alarm can be generated if the door is not closed within a certain period of time (see section [008]). *Default: Option **[1]** is OFF.* When the Door Left Open Alarm is disabled, the following sections are also disabled:

Section
[003] Option **[2]** Door Left Open Pre-alarm
Option **[3]** Door Left Open Alarm (audible/silent)
Option **[4]** Door Left Open Alarm follows (restore/timer)
[008] Door Left Open Interval Before Access Alarm
[009] Door Left Open Pre-alarm Timer
[010] Beep timer for Door Left Open Alarm

Section [008]
Door Left Open Interval before Access Alarm

The Door Left Open Interval is the time that a door can remain open after an Access Granted or a Request for Exit without generating a local access alarm. Enter any value between 001 and 255 to determine the number of seconds the door may remain open before the local access alarm is triggered. *Default: 060 secs.*

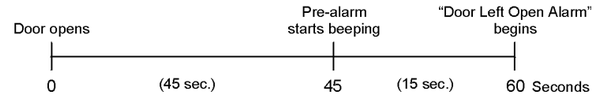
Section [003] - Option [2]
Door Left Open Pre-alarm

An Access Control door is programmed with a Door Left Open Interval (see section [008]). The Pre-Alarm will cause the reader to beep a certain time before the end of the Door Left Open Interval to alert users that the Access Control door was left open and will generate a local access alarm if it is not closed. The Pre-Alarm beeps slower than the Door Left Open Alarm (about twice every second). Program the pre-alarm timer in section [009]. Enabling the option will enable the Door Left Open Pre-alarm feature. *Default: Option **[2]** is ON.*

Section [009]
Door Left Open Pre-alarm Timer

This timer will trigger the Door Left Open Pre-Alarm before the end of the Door Left Open Interval (see section [008]). *For example, if 60 seconds is programmed in section [008] and 15 seconds is programmed in section [009], then 60 minus 15 is 45. Therefore, the reader will start beeping after the door has been open for 45 seconds.* Enter any value between 001 and 255 to determine the seconds before the expiry of the Door Left Open Interval that the reader will beep. *Default: 015 secs.*

Door Left Open Interval: Section **[008]** = 060 seconds
Door Left Open Pre-alarm Timer: Section **[009]** = 015 seconds



Section [003] - Options [3] and [4]
Door Left Open Alarm Feedback

An Access Control door is programmed with a Door Left Open Interval (see section [008]). Once this interval has expired, the Door Left Open Alarm can be either audible or silent and will either beep as long as the local access alarm is occurring or follow the beep timer in section [010]. The sound of the Door Left Open Alarm resembles the rapid beep generated during the last ten seconds of the Exit Delay. When the door is closed during a local access alarm, the Door Left Open Restore event can be logged in the Event Buffer. With option **[3]** ON, the alarm will be audible. With option **[4]** ON, the Door Left Open Alarm is set to follow the beep timer programmed in section [010]. With option **[4]** OFF, the Door Left Open Alarm is set to beep as long as the alarm is occurring. *Default: Option **[3]** is ON and option **[4]** is OFF.*

Section [010]
Beep Timer for Door Left Open Alarm

With section [003] option **[4]** ON, this beep timer determines the amount of time the Door Left Open Alarm will beep. Once the Door Left Open Interval (see section [008]) has expired, the Door Left Open Alarm will be triggered. Enter any value between 001 and 255 to determine the number of seconds the local access alarm will beep. *Default: 005 seconds.*

Section [003] - Option [5]
Door Forced Open Options

If an Access Control door is opened without an Access Control Card, an external trigger or receiving a Request for Exit, an Access Alarm can be generated. A Burglar Alarm can also be generated (refer to the *Digiplex* or *DigiplexNE Reference & Installation Manual*). When the door is closed during an Access Alarm, the Door Forced Open Restore event can be logged in the Event Buffer. Enabling the option will enable the Door Forced Open Alarm. *Default: Option **[5]** is OFF.* When the Door Forced Open Alarm is disabled, the following sections are also disabled:

Section

[003] Option **[6]** Door Forced Open Alarm (audible/silent)
Option **[7]** Door Forced Open Alarm follows (restore/timer)
[011] Beep timer for Door Forced Open Alarm

Section [003] - Options [6] & [7]
Door Forced Open Feedback

The local access alarm can be either audible or silent and will either beep as long as the local access alarm is occurring or follow the beep timer in section [011]. The sound of the Door Forced Open Alarm resembles the rapid beep generated during the last ten seconds of the Exit Delay. Enabling option **[6]** will make the alarm audible. Enabling option **[7]** sets the Door Left Open Alarm to follow the beep timer programmed in section [011]. Disabling option **[7]** sets the Door Forced Open Alarm to beep as long as the alarm is occurring. *Default: Option **[6]** is ON and option **[7]** is OFF.*

Section [011]
Beep Timer for Door Forced Open Alarm

This beep timer determines the amount of time the Door Forced Open Alarm (see section [003] options **[6]** & **[7]**) will beep. Enter any value between 001 and 255 to determine the number of seconds the Door Forced Open Alarm will beep. *Default: 005 seconds.*

Section [002] - Option [2]
Battery Charging Current

With section [002] option **[2]** OFF, the battery charging current will be 350mA. With section [002] option **[2]** ON, the battery charging current will be 700mA. Setting the charging current at 350mA will take longer to recharge the battery than at 700mA, but will consume less power from the module itself. *Default: Option **[2]** is OFF.*

Section [004] - Option [1]
PGM Deactivation Option

If the module is in PGM Timed Mode, the PGM will be deactivated according to the PGM Timer (see section [012]) instead of the PGM Deactivation Event. Enabling option **[1]** sets the PGM to follow the PGM Timer. Disabling option **[1]** sets the PGM to follow the PGM Deactivation Event. *Default: Option **[1]** is OFF.*

Section [004] - Option [2]
PGM Normal State

The on-board PGM can be set as Normally Open or Normally Closed. Enabling option **[2]** will set the PGM as a Normally Closed (N.C.) contact. Disabling option **[2]** will set the PGM as a Normally Open (N.O.) contact. *Default: Option **[2]** is OFF.*

Section [004] - Option [3]
PGM Base Time

If the PGM is set in PGM Timed Mode (see section [004] option **[1]**), you must define whether the value programmed in section [012] (PGM Timer) is in minutes or seconds. Enable option **[3]** to set the PGM Timer in minutes. Disable option **[3]** to set the PGM Timer in seconds. *Default: Option **[3]** is OFF.*

Sections [014] to [017]
PGM Activation Event

The PGM Activation Event determines which event will activate the Access Control Module's on-board PGM output. The Event Group specifies the event, the Feature Group identifies the source, and the Start # and End # sets the range within the Feature Group. Use the PGM Programming Table in the *Digiplex/DigiplexNE Modules' Programming Guide* to program the PGM Activation Event. Enter the sections that correspond to the Event Group, Feature Group, Start # and End # of the PGM and enter the required data.

	Event Group	Feature Group	Start #	End #
PGM	[014]	[015]	[016]	[017]

Sections [018] to [021]
PGM Deactivation Event

If the *PGM Deactivation Option* is set to follow the PGM Deactivation Event (Section [004] option **[1]**), the PGM will return to its normal state when the event programmed in sections [018] to [021] occurs. The Event Group specifies the event, the Feature Group identifies the source, and the Start # and End # sets the range within the Feature Group. Use the PGM Programming Table in the *Digiplex/DigiplexNE Modules' Programming Guide* to program the PGM Deactivation Event. Enter the sections that correspond to the Event Group, Feature Group, Start # and End # of the PGM and enter the required data.

	Event Group	Feature Group	Start #	End #
PGM	[018]	[019]	[020]	[021]

Only Event Groups 000 to 055 can be used to program the Access Control Module's PGM Activation & Deactivation Events.

Section [012]
PGM Timer

If the PGM Output is set to follow its PGM Timer (see section [004] option **[1]**), the value entered in section [012] represents the amount of time that the PGM will remain activated. To program the PGM Timer, enter a 3-digit decimal value from 001 to 255 in section [012]. Depending on the PGM Base Time (section [004] option **[3]**), the PGM Timer will either be in seconds or minutes. *Default: 005.*

Section [030]
PGM Test

Entering section [030] will activate the PGM for 8 seconds to verify if the PGM is functioning properly.

Section [005]
AC Failure Report Delay

The value programmed in section [005] represents how long the Access Control Module will wait before reporting an AC power failure to the control panel. To program the timer, enter any value between 000 to 255 minutes into section [005]. *Default: 000 (Instant Report).*

Section [004] - Option [8]
AC and Battery Supervision

This feature applies to any DGP2-ACM1P versions 1.1 or higher.

Enable section [004] option **[8]** if the DGP2-ACM1P's power supply is not being used. This disables AC and battery power supervision and prevents a trouble from being generated. *Default: Option [8] is OFF.*

Section [004] - Option [5]
PIN Entry on PosiPin*

This feature pertains to the Card and Code Access option programmed in the DigiplexNE control panel (refer to the Access Control section of the DigiplexNE Reference & Installation Manual). With the Card and Code Access option ON, a user must present their access card to the reader and then enter their PIN to enter an Armed access control door. If the reader is connected to an DGP2-ACM1P and if there is no keypad nearby in which to enter a PIN, access will be denied. With section [004] option **[5]** ON and by installing a PosiPIN (CR-R885-BL), the user can present their card to the PosiPin reader and then enter their PIN on the PosiPin's keypad to acquire access. *Default: Option **[5]** is OFF.*

Section [004] option [5] can only be used with the DigiplexNE control panel. If the access control door is using an ordinary proximity reader and is connected to the Access Control Module, disable the door's Card and Code Access option in the DigiplexNE.

Section [003] - Option [8]
Reader Feedback

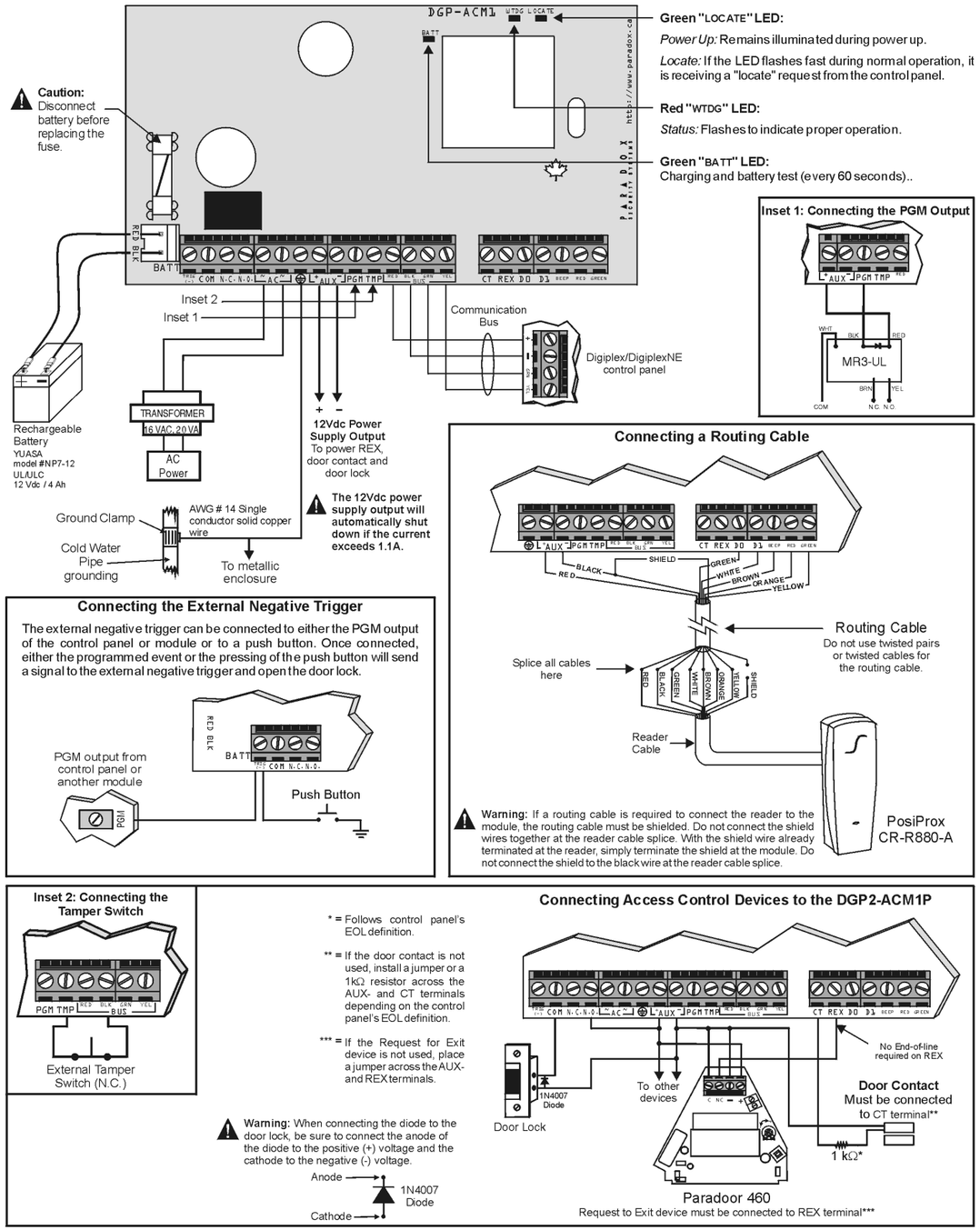
The reader can be programmed to give visual feedback only (reader's LED flashing) or both visual and audible feedback (reader will flash and beep). If option **[8]** is ON, the reader's feedback is both visual and audible. If option **[8]** is OFF, the reader's feedback is visual only.

Section [040]
Access Card Serial Number Display

This feature applies to any DGP2-ACM1P versions 1.02 or higher.

This feature allows you to view an access card's serial number. Using an LCD keypad, enter the DGP2-ACM1P's programming mode and then enter section [040]. Present the desired access card(s) to the reader connected to the DGP2-ACM1P. The access card's serial number will be displayed on the keypad's LCD screen. **In this mode, the door connected to the module cannot be accessed.**

Figure 1: Connecting the DGP2-ACM1P



***Configuring the PosiPIN's Keypad**

In order for the PIN Entry on PosiPIN option (section **[004]** - option **[5]**) to work with the DigiplexNE, the PosiPIN's keypad communication format must be set to 8-bit Wiegand. For more information, please refer to the *PosiPIN Installation and Operating Instructions*. To configure, **from the PosiPIN**, perform the following:

STEP 1: Press and hold the **[CLEAR]** key for 4 seconds *(the reader emits a confirmation beep and the green LED illuminates)*.
STEP 2: Enter the PosiPIN's **[INSTALLER CODE]** (default: 000000) and press the **[ENTER]** key *(reader emits a confirmation beep and the green LED flashes)*.
STEP 3: Enter section **[002]** and press the **[ENTER]** key *(reader emits a confirmation beep and the green LED stops flashing)*.
STEP 4: Press the **[0]** key (8-bit Wiegand) and press the **[ENTER]** key *(reader emits a confirmation beep and the green LED flashes)*.
STEP 5: Press and hold the **[CLEAR]** key for 4 seconds to exit programming mode *(the reader emits a rejection beep and the green LED extinguishes)*.