

# CanProx Proximity/Keypad Reader

## INSTALLATION INSTRUCTIONS

July 2018



*Cutting edge simplicity*

# Table of Contents

<b>Specifications .....</b>	<b>3</b>
<b>Introduction.....</b>	<b>4</b>
<b>Wall Mounting .....</b>	<b>6</b>
<b>Wiring - Cansec Controllers.....</b>	<b>7</b>
<b>Wiring - 3<sup>rd</sup> Party Controllers.....</b>	<b>7</b>
<b>Programming.....</b>	<b>8</b>
• P-640-HA & P-620-HA (26-bit Wiegand Output).....	8
• P-640-HA37 & P-620-HA37 (Cansec 37-bit Wiegand Output) .....	8
• Special Configuration Card For Cansec H1000 Controller.....	9
<b>Proximity/Keypad Reader Usage .....</b>	<b>9</b>
<b>Card + PIN Interface Module - Optional.....</b>	<b>10</b>
• Card + PIN Usage .....	12
<b>Reader/Keypad Troubleshooting.....</b>	<b>13</b>
<b>Appendix .....</b>	<b>14</b>
• 8-bit Burst Keypad Mode .....	14

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# Specifications (P-640)

**Description:** ..... CanProx Proximity/Keypad Reader  
*Compatible with both AWID and HID 125kHz credentials*

**Models:**

P-640-HA..... Standard 26-bit Wiegand  
P-640-HA37..... Cansec 37-bit Wiegand

**Warranty:** ..... Limited lifetime warranty against defects in material and workmanship

**Operating Voltage:** ..... 5 to 16 VDC

**Current Draw:** ..... 30 mA min., 70 mA typical, 110 mA max.

**Reader Output Formats:**

Model P-640-HA ..... 26-bit Wiegand  
Model P-640-HA37 ..... Cansec 37-bit Wiegand

**Keypad Output Formats:**

Model P-640-HA ..... 8-bit burst\* (default) & 26-bit Wiegand  
Model P-640-HA37 ..... 8-bit burst\* (default) & Cansec 37-bit Wiegand

**Frequency:** ..... 125 KHz

**Range:** ..... up to 7" (varies with reader voltage and credentials)

**Operating Temp:** ..... -40 °C to 65 °C (-40 °F to 149 °F)

**Dimension (HxWxD):** ..... 117mm x 76mm x 19mm [4.6 in x 3.0 in x 0.77 in]

**Weight:** ..... approx. 113 g (4 oz)

**Certification:** ..... FCC, ICC, CE, C-Tick

**Colour:** ..... Black

**Housing:** ..... Electronics sealed in weather and tamper resistant epoxy potting

**Mounting:** ..... Metal or plastic US Single-gang wall mount and flat surfaces

**Environment:** ..... Indoor/outdoor

**Rated IP 67:** ..... Sealed against dust; protection against powerful water jet

**LED:** ..... Four-state (red, green, amber, off)

**Beeper:** ..... Standard

**Cable:** ..... up to 7 conductors, 22 AWG, stranded, overall shield; 150 m (500 ft) max length

\*May also be configured to output keypad data in 4-bit burst mode for use with H1000 controllers.

Specifications subject to change without notice.

# Specifications (P-620)

**Description:** ..... CanProx Proximity/Keypad Reader  
*Compatible with both AWID and HID 125kHz credentials*

**Models:**

P-620-HA..... Standard 26-bit Wiegand  
P-620-HA37..... Cansec 37-bit Wiegand

**Warranty:** ..... Limited lifetime warranty against defects in material and workmanship

**Operating Voltage:** ..... 5 to 16 VDC

**Current Draw:** ..... 30 mA min., 70 mA typical, 110 mA max.

**Reader Output Formats:**

Model P-620-HA ..... 26-bit Wiegand  
Model P-620-HA37 ..... Cansec 37-bit Wiegand

**Keypad Output Formats:**

Model P-620-HA ..... 8-bit burst\* (default) & 26-bit Wiegand  
Model P-620-HA37 ..... 8-bit burst\* (default) & Cansec 37-bit Wiegand

**Frequency:** ..... 125 KHz

**Range:** ..... up to 5" (varies with reader voltage and credentials)

**Operating Temp:** ..... -40 °C to 65 °C (-40 °F to 149 °F)

**Dimension (HxWxD):** ..... 155mm x 45mm x 23mm [6.1 in x 1.78 in x 0.91 in]

**Weight:** ..... approx. 113 g (4 oz)

**Certification:** ..... FCC, ICC, CE, C-Tick

**Colour:** ..... Black

**Housing:** ..... Electronics sealed in weather and tamper resistant epoxy potting

**Mounting:** ..... Metal or plastic US Single-gang wall mount and flat surfaces

**Environment:** ..... Indoor/outdoor

**Rated IP 67:** ..... Sealed against dust; protection against powerful water jet

**LED:** ..... Four-state (red, green, amber, off)

**Beeper:** ..... Standard

**Cable:** ..... up to 7 conductors, 22 AWG, stranded, overall shield; 150 m (500 ft) max length

\*May also be configured to output keypad data in 4-bit burst mode for use with H1000 controllers.

Specifications subject to change without notice.

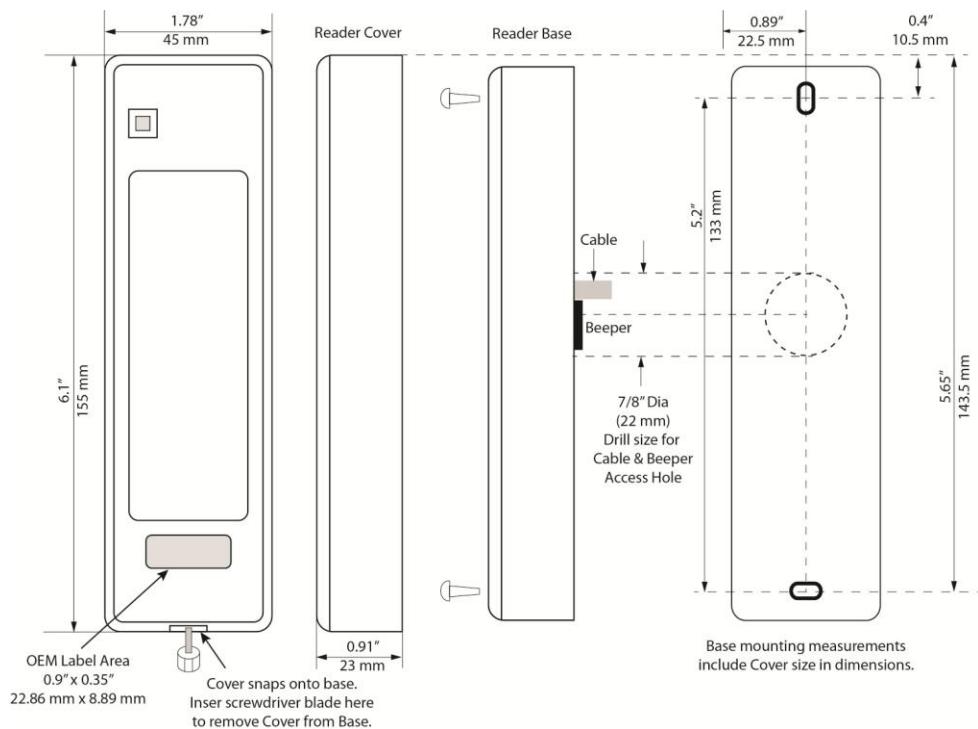
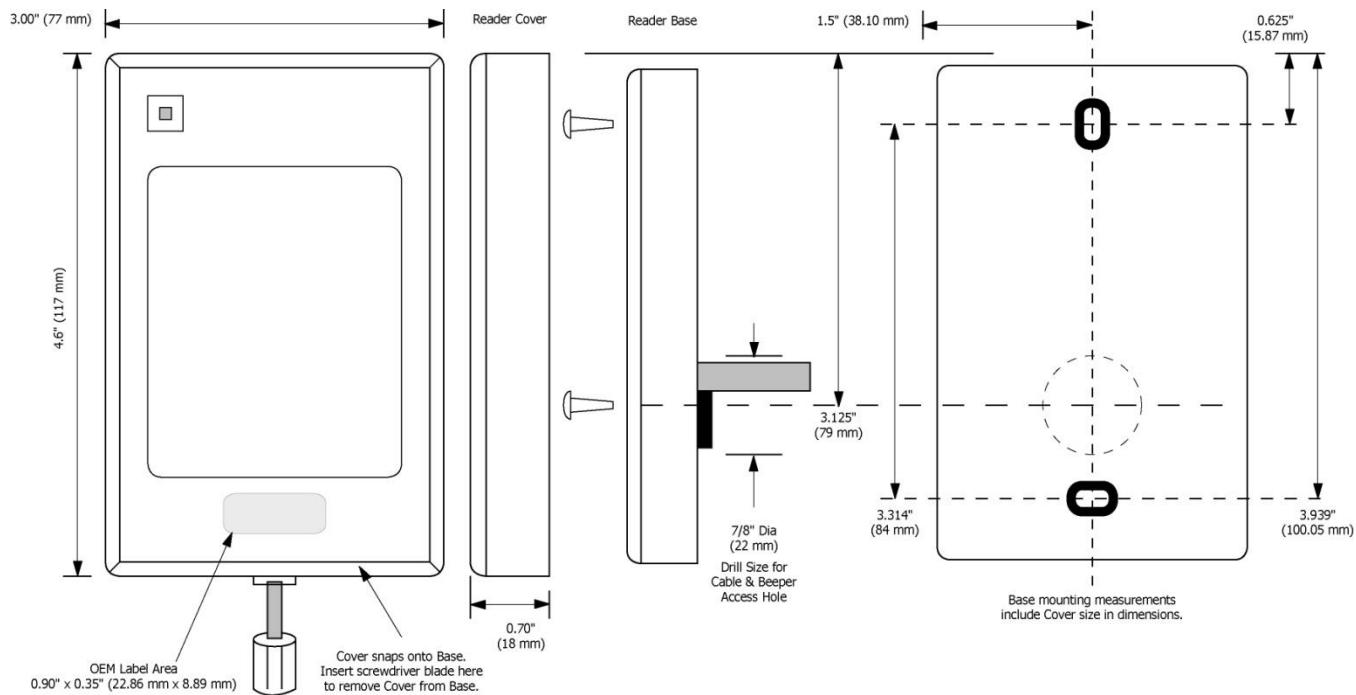
# Introduction

The CanProx Proximity/Keypad Reader integrates both a proximity reader and keypad into a single unit making it ideal for applications requiring an access credential and/or personal identification number (PIN).

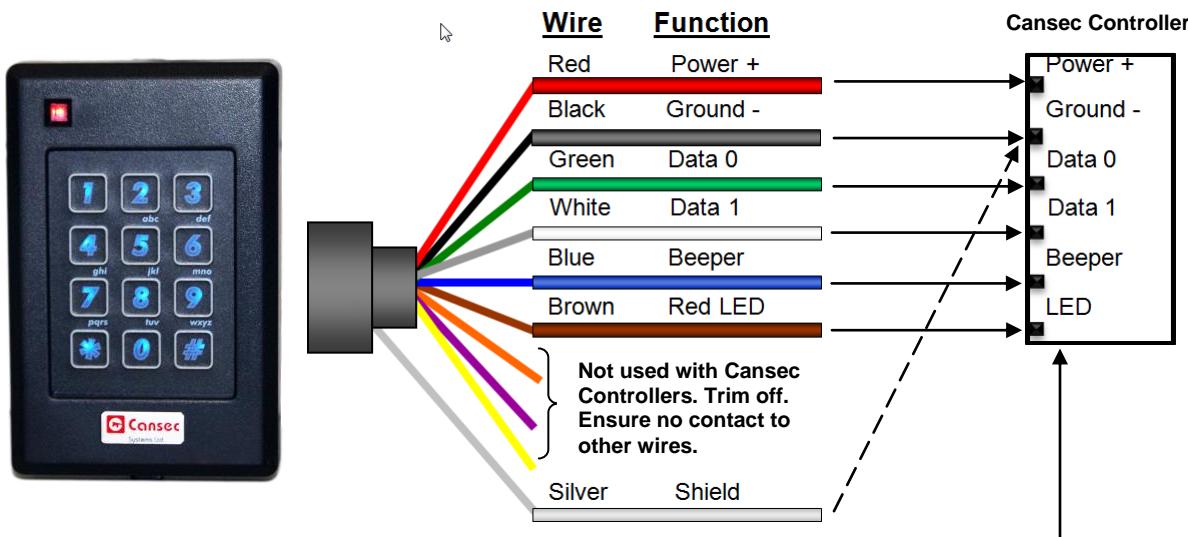
**NOTE:** Keypad data is transmitted in either Cansec 37-bit (P-640-HA37 & P-620-HA37) or standard 26-bit (P-640-HA & P-620-HA) Wiegand data format. P-640-HA37 & P-620-HA37, and P-640-HA & P-620-HA have different firmware and are not interchangeable.

**NOTE:** Tech Support will only be provided where product installation guidelines have been followed.

# Wall Mounting

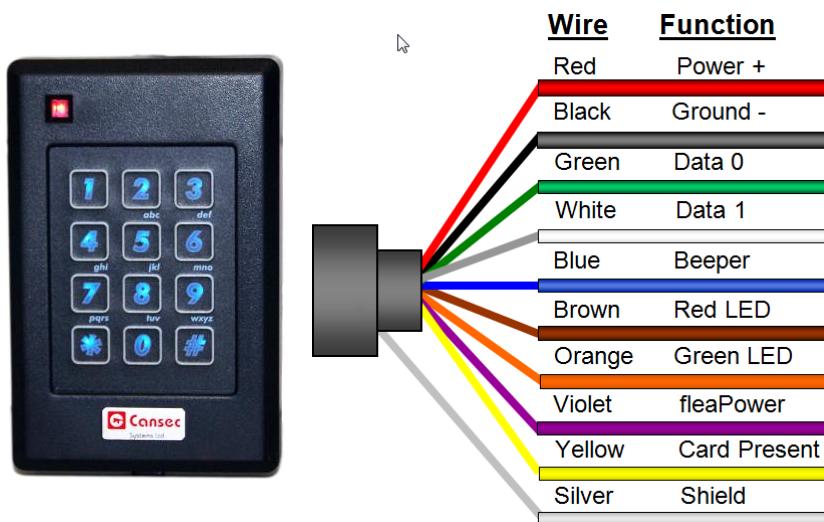


# Wiring - Cansec Controllers



**Important:** For illustration purposes only. Pin placement is not in order as shown and does not match the layout of many Cansec controllers. Please refer to the controller installation manual for the pin layout and match up each wire to the corresponding pin. E.g. Power wire – Power pin, Ground wire – Ground pin etc...

# Wiring - 3<sup>rd</sup> Party Controllers



# Programming

## P-640-HA & P-620-HA (26-BIT WIEGAND OUTPUT) – APPLICABLE FOR 3RD PARTY AND CANSEC CONTROLLERS

The reader is shipped with the keypad outputting 8-bit burst Wiegand. To change the keypad output to 26-bit Wiegand, follow the procedure below. *See Appendix for 8-bit burst mode.*

1. Cycle power to the reader.
2. Present the Wiegand Keypad Data Mode control card to the reader – reader will beep four times.
3. Enter the facility code to be applied to the keypad (FC = 0 to 255); the default facility code is usually 0. If an unacceptable facility code is entered the reader will give out one long beep.
4. Press the “#” key - reader will beep four times to indicate success.
5. Press the “\*” key – reader should beep four times to indicate 26-bit mode is enabled.

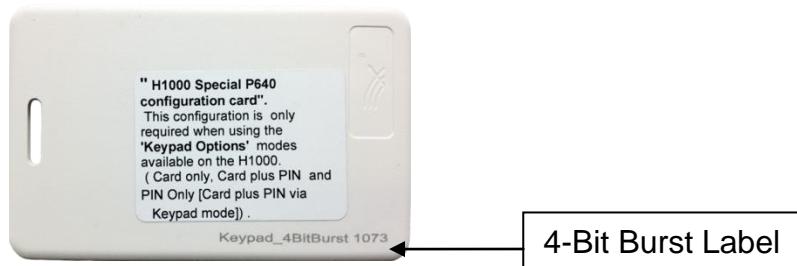
## P-640-HA37 & P-620-HA37 (CANSEC 37-BIT WIEGAND OUTPUT) – APPLICABLE FOR CANSEC CONTROLLERS ONLY

The reader is shipped with the keypad outputting 8-bit burst Wiegand. To change the keypad output to Cansec 37-bit Wiegand, follow the procedure below. *See Appendix for 8-bit burst mode.*

1. Cycle power to the reader.
2. Present the Wiegand Keypad Data Mode control card to the reader – reader will beep four times.
3. Enter the facility code to be applied to the keypad (FC = 0 to 32767); the default facility code is usually 0. If an unacceptable facility code is entered the reader will give out one long beep.
4. Press the “#” key - reader will beep four times to indicate success.
5. Press the “\*” key – reader should beep four times to indicate 37-bit mode is enabled.

## CONFIGURATION CARD FOR CANSEC H1000 AND MAP1 OR MAP2 CONTROLLERS

The following is a sample of one of the 4-bit burst configuration cards, which when presented to the P-640-HA, P-620-HA or P-640-HA37, P-620-HA37 reader will enable it to use 4-bit burst in keypad mode. This configuration is **only** required when using the “Keypad Options” modes available in Hurricane software (Card only, Card plus PIN and PIN only) or “Card + PIN”, “Card + PIN or Keypad Card ID” options in First Access software.



See “*H1000 Integrated Keypad Installation Guide*” for detailed installation and configuration instructions for H1000.

## Proximity/Keypad Reader Usage

- **Keypad usage:** enter a PIN number between 1 and **65534** follow by “#”
- **Reader usage:** present a compatible proximity credential to the reader

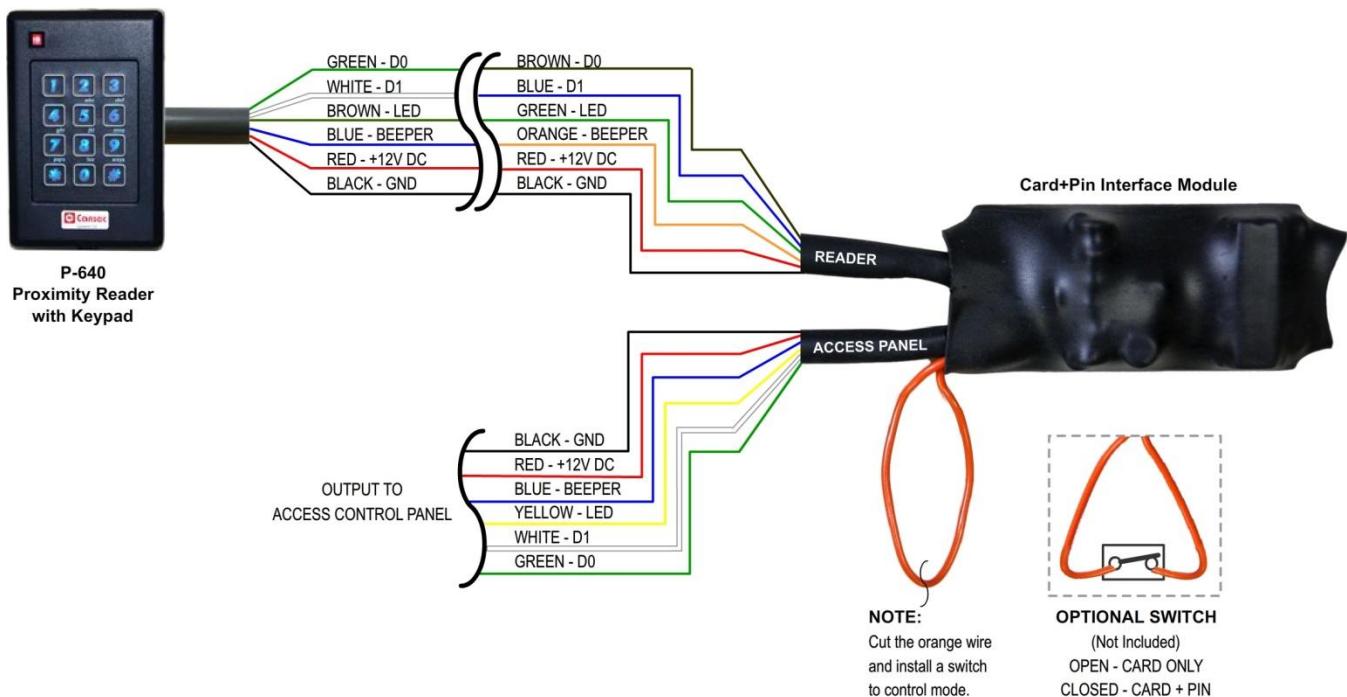
**NOTE:** Keypad and reader modes are both enabled and cannot be toggled. This allows the usage for both card users and PIN users.

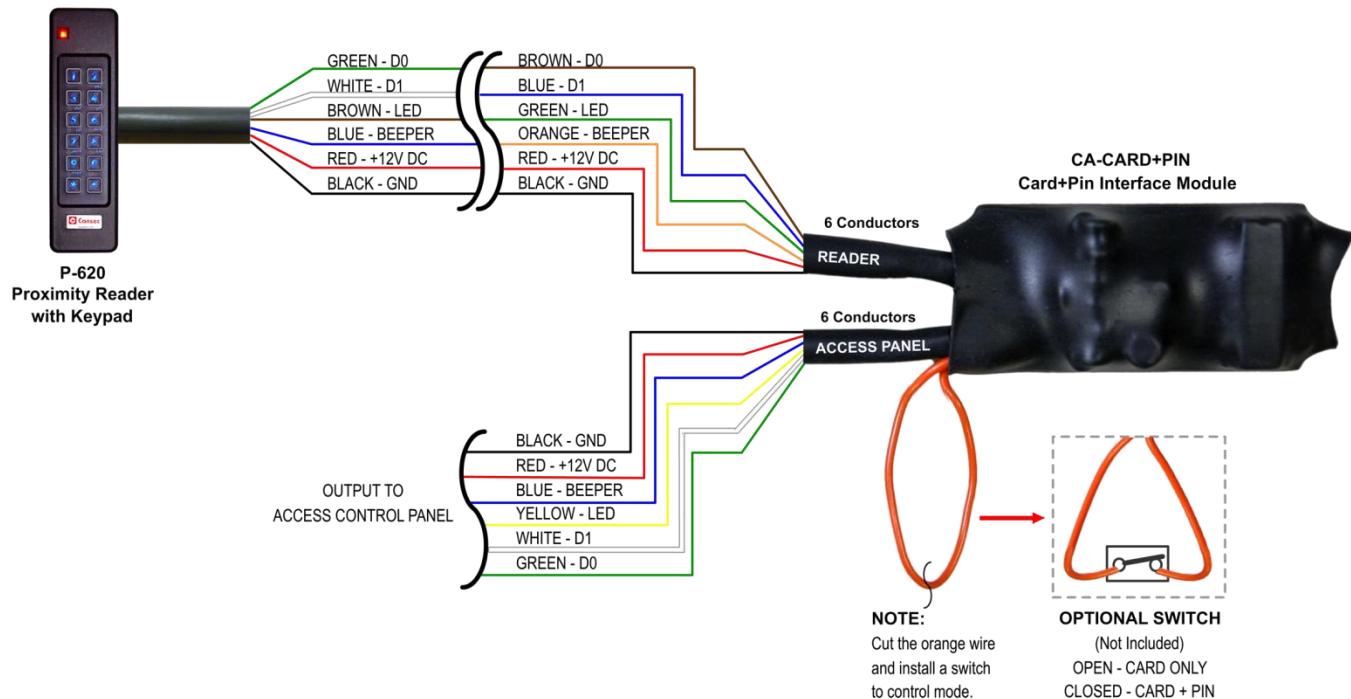
# Card + PIN Interface Module - Optional

**NOTE:** Card + PIN Interface Module (part number CA-CARD+PIN) is not included with P-640-HA, P-620-HA or P-640-HA37, P-620-HA37. CA-CARD+PIN must be purchased separately. The module and the PIN generation utility are not required for MAP1 or MAP2 panels.

**NOTE:** Must program keypad to output 8-bit Wiegand. See Appendix for 8-bit burst mode.

The reader/keypad alone does not provide the Card + PIN feature also known as *Two Factor Authentication*. Cansec developed the CA-CARD+PIN interface board which can be purchased to allow Card + Pin capability to be added to access control units which do not have that capability. *Software (available to download for free at cansec.com) is required to generate the PIN for the card.*



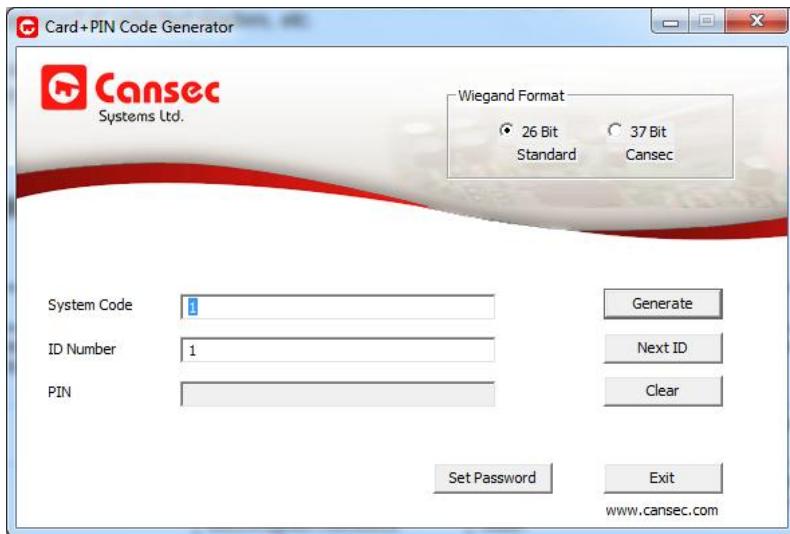


The interface board is designed to be used with Cansec's P-640-HA, P-620-HA or P-640-HA37, P-620-HA37 Proximity/Keypad Reader.

The Proximity/Keypad Reader is connected to the interface board which in turn is connected to a regular Wiegand reader port on a Cansec or other manufacturer's controller.

In addition to operating in Card+PIN mode, the mode can be changed to Card Only mode by opening the orange wire using a dry contact relay from an access control system, a programmable timer, key-switch, etc. This allows, for example, the reader operating mode to be set to Card Only during the day and Card+PIN off hours.

If the mode control circuit is connected to a relay which is managed by an access system, the mode can be changed manually by the operator or in response to certain events (subject to the capability of the access control system used). This could include things such as time, date, specified input point in alarm, specified card used at selected readers, etc.



## CARD + PIN USAGE

When a card is presented, the user must enter a 4 digit PIN, which is algorithmically derived from the System/Facility Code and ID number of the card they presented, followed by “#” key. If the correct PIN is entered on the keypad, the System/Facility Code and ID data from the card is transmitted to the connected access control unit. If the PIN entered is not correct, or no PIN is entered, nothing is sent to the connected controller.

# Reader/Keypad Troubleshooting

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
The reader does not recognize a card/tag (no beep, no LED flash).	1. One or more of the readers' wiring connections are incorrect.	Power down the reader/access panel and check that your wiring is correct.
	2. The reader is not receiving proper power from the access panel.	Measure the voltage at the reader. It should be between +5 VDC and +14 VDC.
	3. The reader is mounted too close to a device that radiates electromagnetic interference.	If possible, install the reader in a different location or move any other electronic devices away from the reader.
	4. You are using an incorrect type of card.	Make sure you are using an access card that is compatible with the reader.
The reader has a short read range.	1. The connection of the reader's shield wire has opened somewhere.	Check the shield line for open connections. Make sure it is properly connected to the access panel.
	2. The reader is mounted too close to a device that radiates electromagnetic interference.	If possible, install the reader in a different location or move any other electronic devices away from the reader.
	3. The power supply is generating electromagnetic interference.	The power supply on the access panel must be a regulated, linear supply. Switching supplies are often sources of electromagnetic interference.

# Appendix

## 8-BIT BURST KEYPAD MODE

While in the 8-bit burst mode each key press results in the reader transmitting 8 bits of data to the host.

The Proximity/Keypad Reader is usually shipped in 8-bit burst mode. However, if it was programmed to output standard 26-bit Wiegand or Cansec 37-bit Wiegand then follow the steps below to enable 8-bit burst:

1. Cycle power to the reader.
2. Present the Wiegand Keypad Data Mode control card to the reader – reader will beep four times.
3. Press the “#” key – reader will beep four times to indicate success.
4. Press “\*” key – reader should beep once to indicate 8-bit burst is enabled.

CanProx Proximity/Keypad Reader is compliant with the following organizations:

