cardax

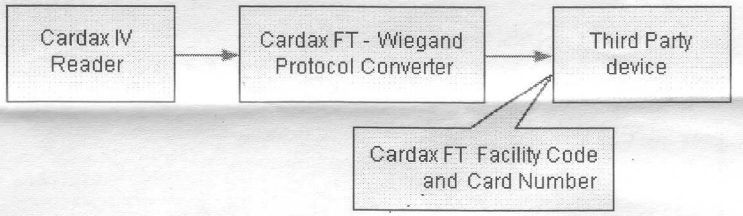
Release Note

"Cardax FT - Wiegand Protocol Converter"

Introduction

The "Cardax FT - Wiegand Protocol Converter" acts as an interface between a Cardax IV reader and a third party device that accepts Wiegand data. The Wiegand Protocol Converter acts as a protocol translator from the card data received from the Cardax IV reader into Wiegand data sent to the third party device.

As shown in the following diagram, this feature uses the Wiegand Protocol Converter and any standard Cardax IV Readers.



Before you begin

Shipment contents

Check the shipment contains the correct items.
The Shipment Contents below lists the items despatched for the "Cardax FT - Wiegand Protocol Converter":

- 1 x Cardax FT – Wiegand Protocol Converter unit
- 1 x "Cardax FT - Wiegand Protocol Converter" Release Note (this document)

Firmware

Version vGC1.02//b00 (or later) of the Cardax FT - Wiegand Protocol Converter firmware code supports the Wiegand output protocol.

Power Supply Requirements

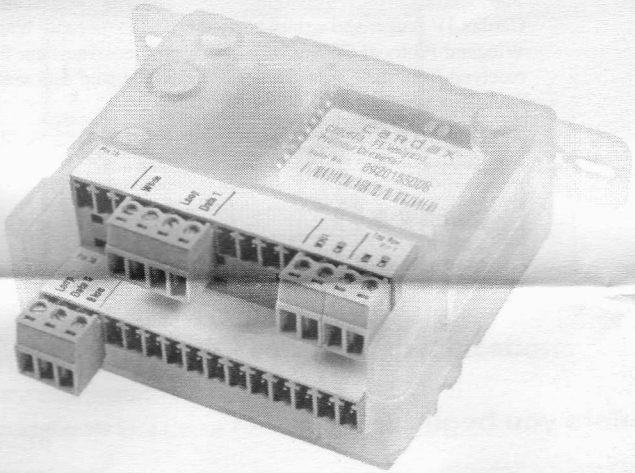
Power for the Wiegand Protocol Converter and the Cardax Reader are to be supplied from an "External" power supply.

The Wiegand Protocol Converter requires a 13.6 V DC (± 15%) power supply. This is connected through the terminals labelled VIN and GND.

The power supply cable must be of sufficient size to ensure that the voltage at the unit terminals is the recommended 12 Vdc.

Installation

1. Mount the Wiegand Protocol Converter and the Cardax IV Reader .
2. Install the cabling from the Wiegand Protocol Converter to each of the devices.
3. Connect the reader to the Wiegand Protocol Converter.



Pin 15	White	Loop	Data 1			VOUT	GND	Top Row Pin 1 VIN	GND
Pin 30									Bottom Row Pin 16
Loop Data 0 Blue									

Top Row:

WHITE	=	White wire of Cardax Reader
LOOP	=	Connect this into Bottom Row Loop
DATA 1	=	DATA 1 line of third party device
VOUT	=	Red wire of Cardax Reader
GND	=	Black wire of Cardax Reader
VIN	=	Power In +ve
GND	=	Power In Ground

Bottom Row:

LOOP	=	Connect this into Top Row Loop
DATA 0	=	DATA 0 line of third party device
BLUE	=	Blue wire of Cardax Reader

4. Connect the Wiegand Protocol Converter to the third party device.

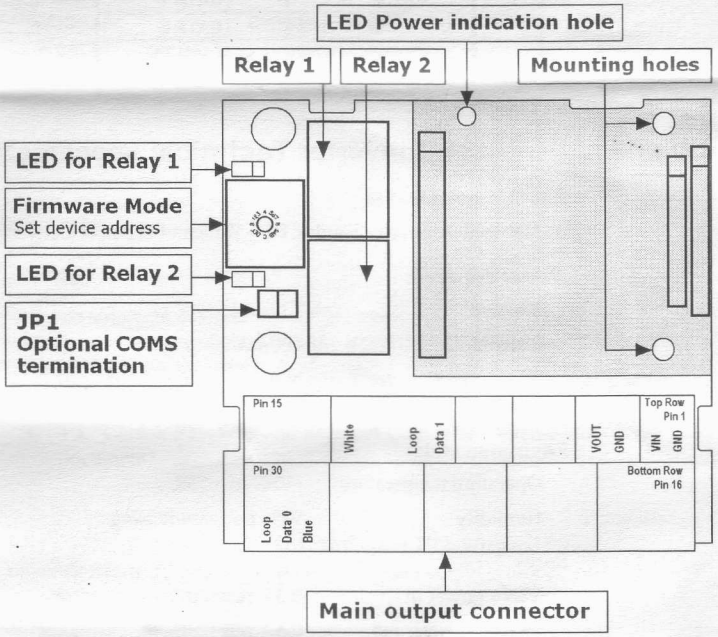
   Note: Wires used must be a minimum size of 0.2mm for connecting the Wiegand Protocol Converter to the third party device.

5. Connect the Wiegand Protocol Converter to the power supply.

   Note: Power for the Wiegand Protocol Converter and Cardax Reader is supplied from the power supply.

6. Carefully set the Firmware Mode switch on the Wiegand Protocol Converter to position 1, using the appropriate sized screwdriver. Refer to the next section "Component layout" for the location of the Firmware Mode switch.

Component layout



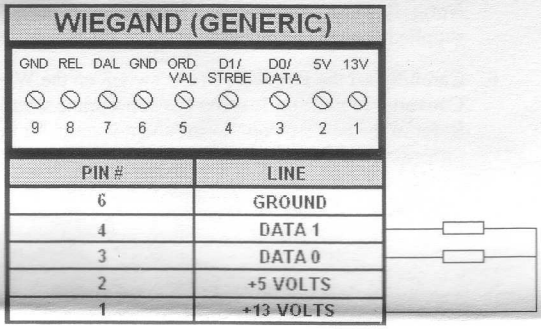
Wiegand Output Format

The Wiegand Protocol Converter unit converts the Cardax card data to Wiegand data using the following format:

Mode 1	40 bit wiegand output: - first 16 bits are the Cardax facility code - next 24 bits are the Cardax card number

Wiring

The Wiegand data lines are required to be pulled high. If the third party device does not have any internal pull-ups on the data lines, external pull-ups using 1.5K resistors are required, as shown in the following wiring diagram:



Wiegand Protocol Converter Technical specifications

Routine maintenance

Not applicable for a Cardax FT - Wiegand Protocol Converter

Power required:

Voltage	13.6 ± 15% V DC
Current	100mA
Relay contact current rating at 24 V DC	N/A

Environmental:

Operating temperature	-10°C to +55°C
Humidity	95% non-condensing

Fuses

VIN - power in	0.5A resettable thermal fuse
VOUT - power out	0.5A resettable thermal fuse

Dimensions

Height:	30mm
Depth:	75mm (65mm without connectors)
Width:	98mm (72mm without breakoffs)

CE

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