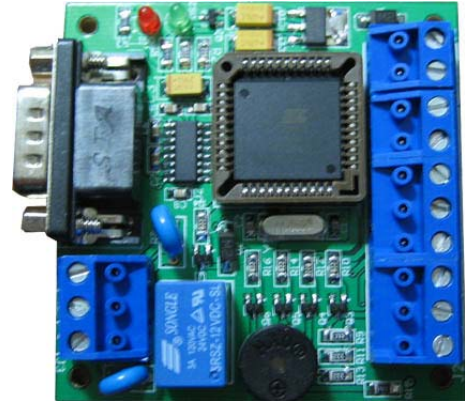


Wiegand to RS232 Converter

MA1405 is a Wiegand to RS232 converter. When Wiegand data is received, the MA1405 will automatically convert the Wiegand data from 3-bit up to 42-bit to a formatted ASCII string on the RS232 port. In a reverse process, when the formatted ASCII string is used as input to the RS232 port of the converter, the converter can convert the formatted ASCII string to Wiegand data format and output on the Wiegand data line port.



1. Specification

1.1 Communications:

9600 BPS ASYNC, 8 bits, 1 Stop, No Parity.

1.2 Wiegand Data Format

The format of the Wiegand data is shown as follows:



1.3 RS232 Data Format

The format of the RS232 data is in the form of 16-byte ASCII string (In Hex Format) as follow.



The Parity Character P is defined as follow.

| RS232 Side | Wiegand Side | |
|------------|----------------|----------------|
| P | P _S | P _E |
| 0 | 0 | 0 |
| 1 | 0 | 1 |
| 2 | 1 | 0 |
| 3 | 1 | 1 |

1.4 Command Data

| Command (4 Byte Hex Value) | Description |
|---|-------------------------------|
| 02 _H 31 _H 30 _H 03 _H | Turn on Reader Green LED |
| 02 _H 31 _H 31 _H 03 _H | Turn off Reader Green LED |
| 02 _H 31 _H 32 _H 03 _H | Toggle LED |
| 02 _H 32 _H 30 _H 03 _H | Turn on Reader Buzzer |
| 02 _H 32 _H 31 _H 03 _H | Turn off Reader Buzzer |
| 02 _H 33 _H 30 _H 03 _H | Turn on Converter Status LED |
| 02 _H 33 _H 31 _H 03 _H | Turn off Converter Status LED |
| 02 _H 34 _H 30 _H 03 _H | Turn on Converter Relay |
| 02 _H 34 _H 31 _H 03 _H | Turn off Converter Relay |
| 02 _H 35 _H 30 _H 03 _H | Turn on Converter Buzzer |
| 02 _H 35 _H 31 _H 03 _H | Turn off Converter Buzzer |
| 02 _H 36 _H 30 _H 03 _H | Turn on Reader Red LED |
| 02 _H 36 _H 31 _H 03 _H | Turn off Reader Red LED |

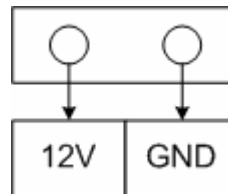
2. Connectors:

There are total 3 pluggable connectors and one DB9 male connector located on the MA1405 board serving different functions as described below.

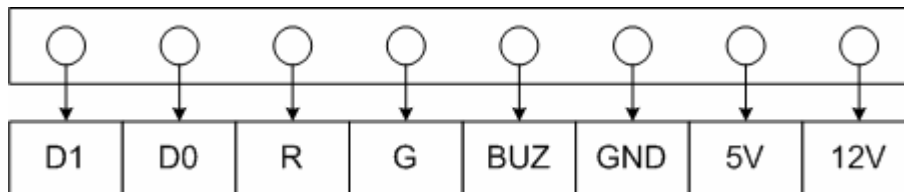
| Connector Symbol | Description |
|------------------|--------------------------|
| J1 | 9V – 12V DC Power Supply |
| J2 | Wiegand Reader Port |
| J3 | Relay Output |

2.1 Connector J1

| Connector J1 Port Assignment | |
|------------------------------|------------------------|
| Designator | Description |
| 12V | 12V DC Power Supply In |
| GND | Power Supply Ground |



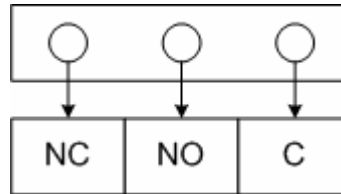
2.2 Connector J2



| Connector J2 Port Assignment | |
|------------------------------|----------------------|
| Designator | Description |
| D1 | Wiegand Data 1 |
| D0 | Wiegand Data 0 |
| R | To Reader Red LED |
| G | To Reader G LED |
| BUZ | To Reader BUZ |
| GND | To Reader Ground |
| 5V | To 5V Reader Supply |
| 12V | To 12V Reader Supply |

2.3 Connector J3

| Connector J3 Port Assignment | |
|------------------------------|----------------|
| Designator | Description |
| NC | Normally Open |
| NO | Normally Close |
| C | Common |



2.4 DB9 Male

| DB9 Male Port Pin Assignment | |
|------------------------------|-----------------------|
| Designator | Description |
| 1 | Unused |
| 2 | TX data to terminal |
| 3 | RX data from terminal |
| 4 | Unused |
| 5 | Ground |
| 6 | Unused |
| 7 | Unused |
| 8 | Unused |
| 9 | Unused |



