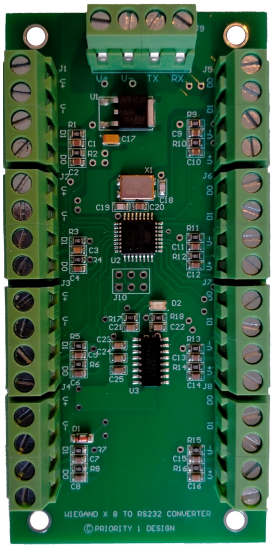
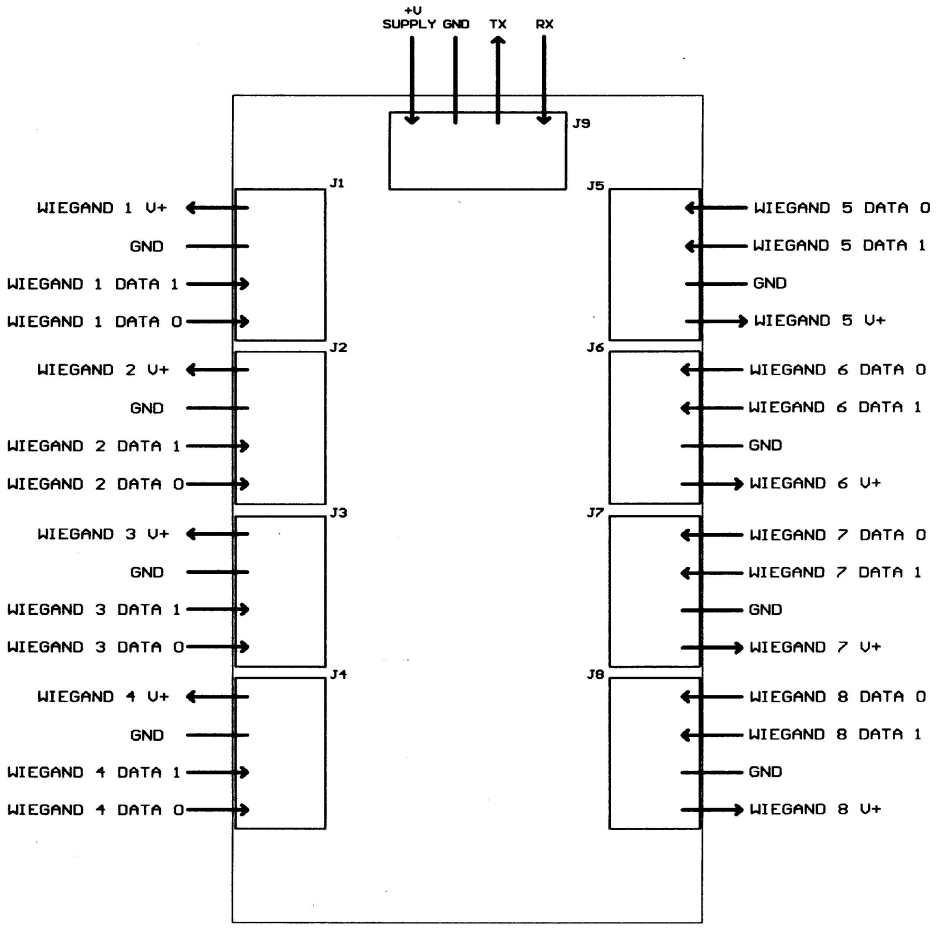
WIEG8PRT-A
Eight port Wiegand to RS232 Converter.

Designed for embedding into products manufactured by third-parties, this Wiegand to RS232 converter is designed with 8 ports for taking up to 8 Wiegand sources. Using Wiegand 26, and other formats, and converting it to a RS232 data stream at 9600 Baud.



- **Input connectors for 8 separate wiegand streams.**
- **One RS232 output and input port.**
- **DC operation from 6.0V - 24.0V dc.**
- **Wiegand 26 bit format,**
  Generic Wiegand detection up to 56 bits.
- **Outputs hexadecimal ASCII characters at 9600 Baud.**
- **Individually set port formats**
- **4 mounting holes**

Connector Pin Description:



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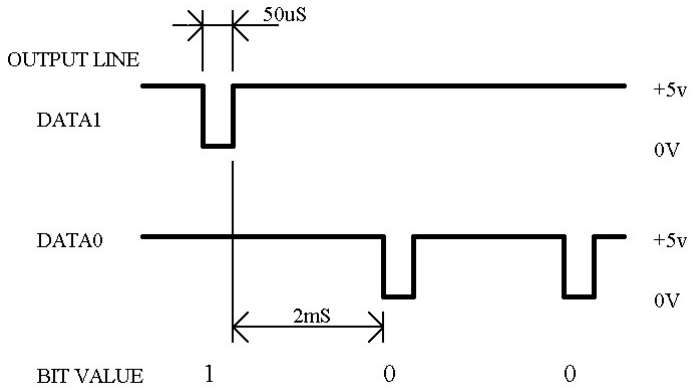
Wiegand input format description:

Wiegand protocol provides 2 lines for data transfer. A pulsed transition on the DATA1 line indicates a logic 1 bit, while a pulsed transition on the DATA0 line indicates a logic 0 bit. In their idle state both lines are held high. During data transfer the appropriate logic line will pulse low for 50uS followed by a period of 2ms where both lines are held high. In this fashion each bit is transmitted in sequence until all bits are sent. The end of the transmission is signaled by both lines being held high for more than 50mS. The following figure shows an example of the timing sequence for Wiegand protocol.



Protocol Selection.

Each port can be individually configured using ASCII string commands. The protocol for which is described below. Once set the configuration is stored in non volatile memory and recalled during power up.

Set Format command.

Protocol: **SFxww<crn>** ,where x = port number 1 to 8
, ww is the format selected for that port in heximal.
ww = 00 for 26 bit Wiegand mode.
= 01 for Generic Wiegand mode
, <crn> is $0D carriage return.

Command Protocol Example	Response.	Description.
SF200<crn>	**OK<crn>**	**Port 2 is set for 26 bit Wiegand**
ST401<crn>	**OK<crn>**	**Port 4 is set for Generic mode.**

Wiegand 26 input format description:

Wiegand 26 protocol is defined as a stream of 26 bits, consisting of 1 Even parity bit, 24 data bits, and 1 Odd parity bit.

Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Note	P	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	P
	P	E	E	E	E	E	E	E	E	E	E	E	E													
														O	O	O	O	O	O	O	O	O	O	O	O	P

Note:

E: Even 0: odd P: parity bit D: DATA

The WIEG4PRT-A will read a signal presented in Wiegand 26 format and after checking for parity and bit length will convert the data stream to a serial RS232 output. As only 24 bits of the 26 bit stream is data the string is converted to 6 ASCII coded characters representing 24bits in
hexadecimal coding.
The format for this is:

PA:XXYYZZ<crn> where P is the ascii start character for all data output strings.
A is the port number (1-8) indicating the port the wiegand data was received on.
XX are the hexadecimal representation of bits 1-8
YY are the hexadecimal representation of bits 9-16
ZZ are the hexadecimal representation of bits 17-24
<crn> is a carriage return character $0D

Eg:

P2:005322<crn> represents the wiegand data of 005322 arriving on port 2

Generic Wiegand input mode description:

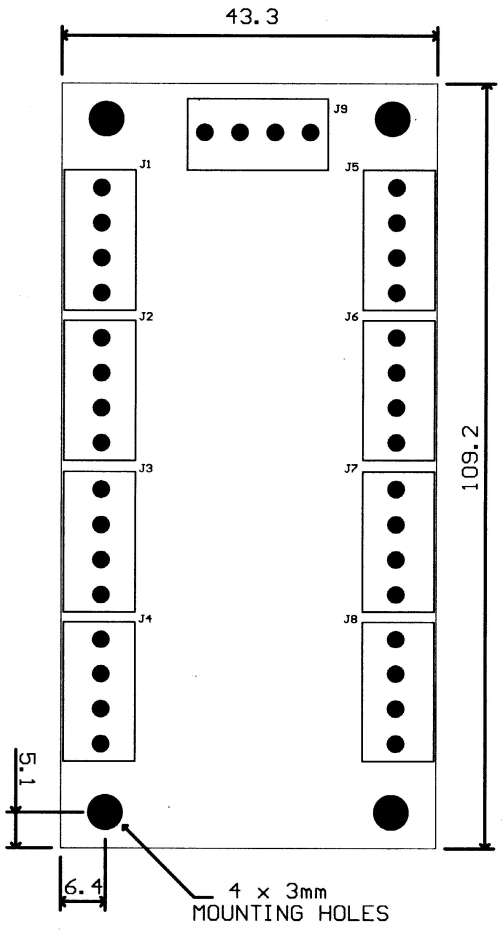
Generic Wiegand input mode allows the unit to detect Wiegand protocol streams that may not be standard 26 bit. In this mode the unit reports the data bit stream read without checking and removing check bits. The first two characters of the output string are hexadecimal numbers that indicate the number of bits detected. Data is sent on 8 bit boundaries with zeros padded on the left for unused bits. The data shown also includes any check bits that may be included in the wiegand input string. A maximum of 56 bits of wiegand data can be detected in this mode.

The format for this is:

PA:SSnnnnnn<crn> where P is the ascii start character for all data output strings.
A is the port number (1-8) indicating the port the wiegand data
SS is the hexadecimal value representing the number of bits received.
nnnnnn are the hexadecimal data output and will vary in size depending on the number of bits detected. 2 characters are needed to represent 8 binary bits.
<crn> is a carriage return character $0D

eg,
P2:1A033C0C64 "this is a 26 bit stream on port 2"
P2:1A033C0BE1
P3:2A0064CE0010B2 "this is a 42 bit stream on port 3"
P3:2A0064CE0010B4

Dimensions:



All dimensions in mm.

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