

Reader to RS232 converter

Installation Guide

General

The CS Technologies reader to RS232 converter connects a range of readers and converts their output into standard RS232 signals for interfacing with a PC or other equipment. Used in conjunction with CS Technologies Wedge software this means that the readers can be used as a 'keyboard wedge', simulating keystrokes on the PC keyboard and allowing the access control credentials to be used for a variety of other purposes.

The converter supports the following reader types:

- Magstripe – track 1 format
- Magstripe – track 2 format
- Wiegand
- IButton/Silicon Key
- Presco

Applications include point of sale, credential registration, reader verification and many others.

Features

- ❑ Dedicated single-purpose controller; no programming necessary.
- ❑ Easy installation
- ❑ On-board links select magstripe track 1, magstripe track 2, wiegand and iButton/Silicon Key interface. Presco interface works in conjunction with any of the above interfaces.
- ❑ Operates from 12VDC or 5VDC
- ❑ Interfaces with standard PC com port using two wires (ground and receive data)
- ❑ Outputs data in standard ASCII format
- ❑ Easy to use software package (WEDGE) allows conversion of the RS232 data to keystrokes as well as other integrations with any other software package.
- ❑ 100% Australian made and designed



Specifications

Power supply:	12VDC or 5VDC
Current Consumption:	50mA max (converter only – allow for consumption of reader also)
Temperature range:	0°C to 70°C
Humidity range:	0 to 95% relative noncondensing
Dimensions:	Box: 86x66x30mm Board: 80x60x28mm
Shipping weight:	300g
Housing:	High impact ABS plastic box with bulkhead mounting lugs
Reader interfaces:	Silicon Key (one-wire) interface Magstripe (Track 1) Magstripe (Track 2) Wiegand Presco
Output:	RS232 data string at 9600 baud, 8 data bits, 1 stop bit, no handshaking. Input data is converted to ASCII string in either hex or decimal (depending on reader type), terminated by carriage return/line feed. Start character is ‘;’, end character is ‘=’.
Software:	Compatible with a wide range of software packages. CS Technologies Wedge software (available separately) makes the converter into a keyboard wedge.

Cable Types

Function	Cable
Silicon Key reader to converter	CAT5
Wiegand reader to converter	4 or 6-core screened cable
Presco reader to converter	4 core non-screened cable
Magstripe reader to converter	4-core screened cable
Converter to PC	4-core screened cable

Installation Procedure

Mounting the converter:

The converter should be mounted in a convenient location. Removing the base of the box will release the circuit board which can be terminated. To mount the box, make all connections first then replace the base of the box and mount the box using the two 'bulkhead' mounting tabs on the top and bottom of the box.

Connecting to the PC:

The output from the interface is RS232 data at 9600 baud, no parity, 8 data bits, 1 stop bit, no handshaking. The GND wire from the RS232 interface on the PC connects to GND, and the RXD wire from the RS232 interface on the PC (pin 2 on a D9 connector or pin 3 on a D25 connector) connects to IN4.

Note if handshaking is required simply connect IN3 to RTS on the serial port. If not required simply do not connect the RTS pin.

Configuring the interface:

Select the data format to be transmitted by the interface by following the instructions below to set the reader type.

Put the programming link LK1 on.

Enter the appropriate command below into the programming keypad

0E = Magstripe Track 1

1E = Wiegand

2E = Magstripe Track 2

3E = Silicon Key – (Hex format)

4E = Silicon Key – (Decimal format)

The keypad will beep 5 times and the controller will beep 10 times when an appropriate format is selected.

Take the programming link LK1 off when finished.

Note configuration does not matter for Presco readers. It will always output the data (programming link LK1 must be off)

Before powering up the converter:

- Unit installed in dry, secure location
- Field wiring installed
- Connections to PC verified
- Connections to reader verified
- No short to earth on any input or output

After powering up the interface:

- Controller beeps a number of times depending on the reader type – 1 for magstripe track 1, 2 for wiegand, 3 for magstripe track 2, 4 for silicon key
- LED1 (Power) on
- LED2 (Heartbeat) flashing

Operational check:

- Present a credential at the reader. The controller should beep as the read is processed, and data should be transmitted to the PC.
- Data format as follows:
 - Start character ';', end character '=', CR/LF terminates
 - Wiegand and Silicon key – data is in hex format
 - Magstripe – data is in ASCII format

