

### 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.

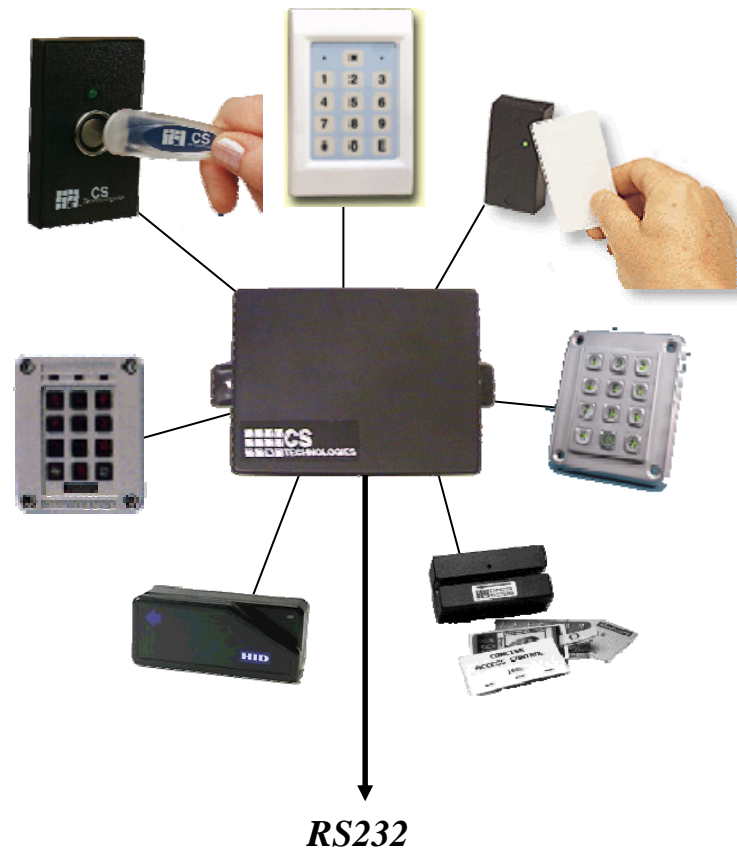
The converter supports the following reader types:

- 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	6-core screened cable
Presco reader to converter	4-core unscreened cable
Magstripe reader to converter	4-core screened cable
Converter to PC	4-core 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.

### Configuring the interface:

Select the data format to be transmitted by the interface by following the instructions above for each reader type, summarised as follows:

Reader	LK1	Link Pin IN3 to GND	IN1	IN2
Magstripe track 1	OFF	NO	ON	OFF
Magstripe track 2	ON	NO	ON	OFF
Wiegand	OFF	YES	ON	ON
Silicon Key	ON	YES	OFF	OFF
Presco	OFF	ON	OFF	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

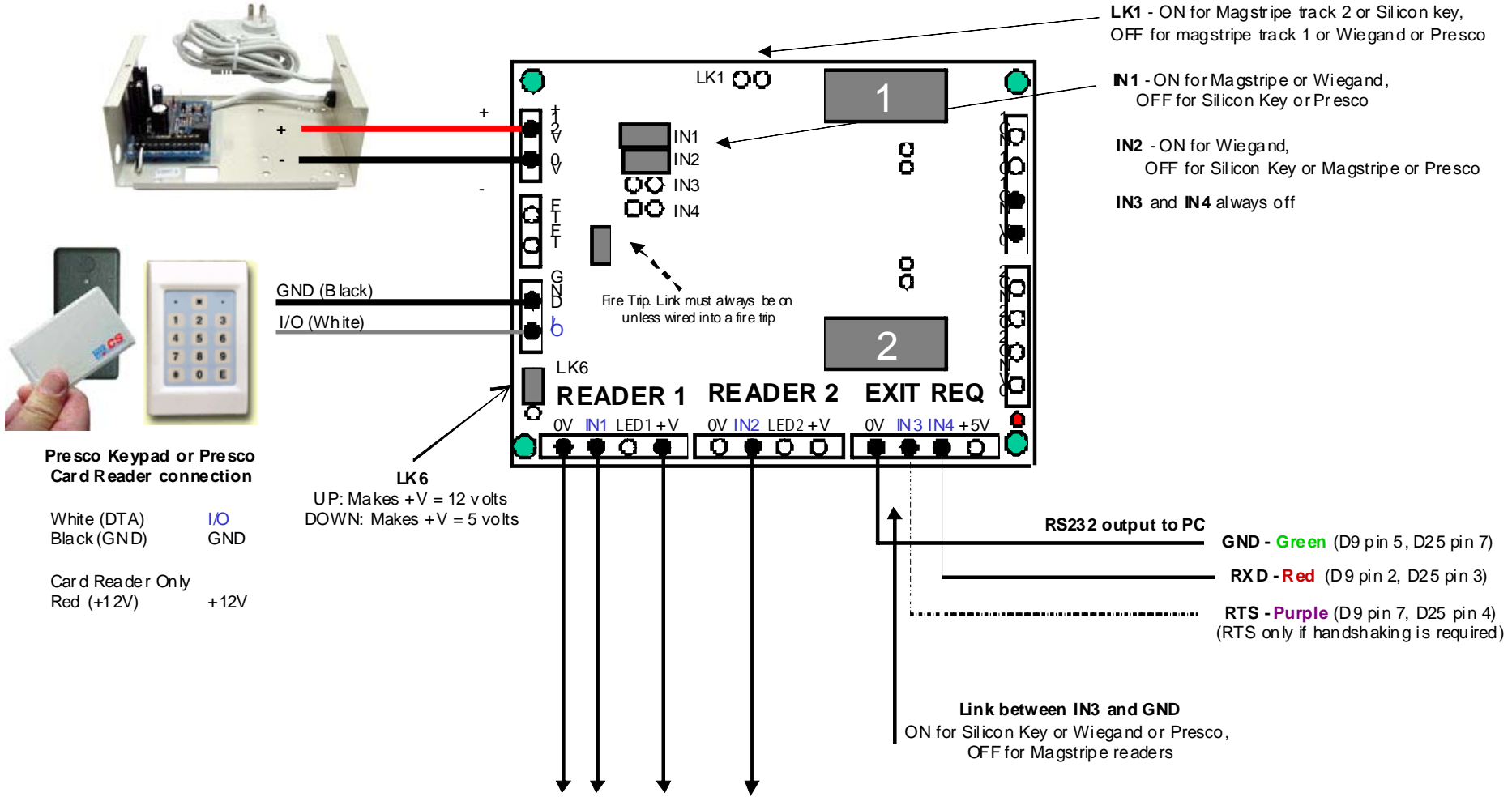
### After powering up the interface:

- 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

# Reader to RS232 Converter (v1.81) Installation Guide



### Presco Keypad or Presco Card Reader connection

White (DTA)	I/O
Black (GND)	GND
Card Reader Only	
Red (+12V)	+12V

GND (Black)  
I/O (White)

**LK6**  
UP: Makes +V = 12 volts  
DOWN: Makes +V = 5 volts



### Silicon key connection

Black (GND)	0V
White (DATA)	IN1
Blue (Green LED)	LED1
Red (+5V)	+V



### Wiegand connection

0V (Black)	0V
Power (Red)	+5V or +12V
Data 0 (Green)	IN1
Data 1 (White)	IN2



### Clock and data connection

0V (Green)	GND
+5V (Yellow)	+5V
CLK (Red)	IN1
DATA (Brown)	IN2