

# 728-52 USB FSK Desktop Reader

## REV 2 Data Sheet

### Overview

The USB FSK Desktop proximity reader connects to a PC via USB. It reads the code from an HID H10301 or H10304 transponder and outputs the code in the form of keystrokes which enables the user to capture the transponder code into any PC application which accepts keyboard entry.

A 10-way DIP switch on the back of the unit is used to select the required output format. A green LED and a beeper are used to indicate a successful read and a red LED indicates an error condition.

The reader has a type B USB socket and when connected to the PC the device enumerates as a Human Interface Device (HID) class device.



### Specifications

- Power requirements - USB bus powered - 4.40V - 5.25V. Current consumption is typically 60 mA.
- RF Frequency: 125 kHz.
- Cards supported: HID H10301 (26 bit format), H10304 (37 bit format).
- Output formats: Hexadecimal or decimal digits with or without leading zeros, Wiegand format (site code, user code), Wiegand format (user code only).
- Termination options: None, ENTER.
- Operating temperature range: 0°C - +50°C.
- Weight: 185 grams.
- Dimensions: 118 x 54 x 21 mm.

### Connections

To install this wedge reader:

Connect the reader to the PC with a "A male-B male" (printer type) USB cable.

## Output Mode Selection

The 10-way switch is used to select the output format, length and termination as per the following tables:

### Leading zeros (SW1)

	SW1
Leading zeros included	ON
Leading zeros suppressed	OFF

### Decimal/hexadecimal (SW2)

	SW2
Decimal format	ON
Hexadecimal format	OFF

### Output format (SW5-8)

	Note	SW5	SW6	SW7	SW8
Standard (card number only)	1	OFF	OFF	OFF	OFF
Wiegand (site code/user code)	2	OFF	OFF	OFF	ON
Wiegand (user code only, no site code)	2	OFF	OFF	ON	OFF

### Notes:

1. All the bits on the card are assumed to be card number.
2. For H10301 cards: 8 bits are site code and 16 bits are user code. For H10304 cards: 16 bits are site code and 19 bits are user code.
3. SW3 and SW4 - reserved for future use.

### Termination (SW9)

The reader will generate the following keystroke after the number:

	SW9
None	OFF
Enter	ON

### Keyboard layout (SW10)

	SW10
English keyboard	OFF
International keyboard	ON

If SW10 is ON the keyboard wedge outputs ASCII codes instead of scancodes. This has the advantage of being keyboard layout independent, but the speed of output is slower.

## Examples:

Card type: H10301 (26 bit format)

Data bits: 00001111 0000010101101111

Output depending on settings:

SW1	SW2	SW7	SW8	Description	Output
ON	ON	OFF	ON	Wiegand, decimal, leading zeros	015 01391
OFF	ON	OFF	ON	Wiegand, decimal, no leading zeros	15 1391
ON	OFF	OFF	ON	Wiegand, hex, leading zeros	0F 056F
OFF	OFF	OFF	ON	Wiegand, hex, no leading zeros	F 56F
ON	ON	ON	OFF	User code only, decimal, leading zeros	01391
OFF	ON	ON	OFF	User code only, decimal, no leading zeros	1391
ON	OFF	ON	OFF	User code only, hex, leading zeros	056F
OFF	OFF	ON	OFF	User code only, hex, no leading zeros	56F
ON	ON	OFF	OFF	Standard, decimal, leading zeros	00984431
OFF	ON	OFF	OFF	Standard, decimal, no leading zeros	984431
ON	OFF	OFF	OFF	Standard, hex, leading zeros	0F056F
OFF	OFF	OFF	OFF	Standard, hex, no leading zeros	F056F

Card type: H10304 (37 bit format)

Data bits: 0000111101011011 0001100010101101111

Output depending on settings:

SW1	SW2	SW7	SW8	Description	Output
ON	ON	OFF	ON	Wiegand, decimal, leading zeros	03931 050543
OFF	ON	OFF	ON	Wiegand, decimal, no leading zeros	3931 50543
ON	OFF	OFF	ON	Wiegand, hex, leading zeros	0F5B 0C56F
OFF	OFF	OFF	ON	Wiegand, hex, no leading zeros	F5B C56F
ON	ON	ON	OFF	User code only, decimal, leading zeros	050543
OFF	ON	ON	OFF	User code only, decimal, no leading zeros	50543
ON	OFF	ON	OFF	User code only, hex, leading zeros	0C56F
OFF	OFF	ON	OFF	User code only, hex, no leading zeros	C56F
ON	ON	OFF	OFF	Standard, decimal, leading zeros	02061026671
OFF	ON	OFF	OFF	Standard, decimal, no leading zeros	2061026671
ON	OFF	OFF	OFF	Standard, hex, leading zeros	07AD8C56F
OFF	OFF	OFF	OFF	Standard, hex, no leading zeros	7AD8C56F