728-52 Rev 3 USB FSK Desktop Reader

Data Sheet

The USB FSK Desktop 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 mini B USB socket and when connected to the PC the device enumerates as a Human Interface Device (HID class).

Specifications

- Power requirements: USB bus powered. Current consumption 60 mA (typical)
- Operating Frequency: 125 kHz
- Cards supported: HID H10301 (26 bit format), H10304 (37 bit format)
- Output formats supported: Hexadecimal or decimal digits with or without leading zeros; Wiegand format (site code + user code); Wiegand format (user code only); Stanley format (site code + user code); Stanley format (user code only)
- Termination options: None, ENTER
- Operating temperature range: 0 ºC to +50 ºC
- Weight: 55 grams
- Dimensions: Reader 100 x 59 x 21 mm

Connections

To install the Desktop reader:
Connect the reader to the PC with a mini B 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 formats (SW5 - SW8)

	Note	SW5	SW6	SW7	SW8
Standard	1	OFF	OFF	OFF	OFF
Wiegand (site code + user code)	2	OFF	OFF	OFF	ON
Wiegand (user code only)	2	OFF	OFF	ON	OFF
Stanley (site code + user code)	3	OFF	ON	OFF	ON
Stanley (user code only)	3	OFF	ON	ON	OFF

Notes:
1. All the bits on the card are assumed to be the card number
2. For H10301 cards: 8 bits are the site code and 16 bits are user code. For H10304 cards: 16 bits are the site code and 19 bits are the user code
3. For H10304 cards: 6 bits are the site code and 29 bits are the user code. Additionally for Stanley format SW2 = ON and SW1 = OFF
4. SW3 – SW4 – reserved for future use

Termination (SW9)

	SW9
None	OFF
ENTER	ON

Keyboard layout (SW10)

	SW10
English keyboard	OFF
International keyboard	ON

If SW10 is ON the Desktop reader outputs ASCII codes instead of scancodes. This had the advantage of being keyboard independent but the output speed is slower.

Examples

Card type: H10301 (26 bit format)
Data bit: 000001111 0000010101101111

Output depending on settings:

SW1	SW2	SW6	SW7	SW8	Description	Output
ON	ON	OFF	OFF	ON	Wiegand, decimal, leading zeros	015 01391
OFF	ON	OFF	OFF	ON	Wiegand, decimal, no leading zeros	15 1391
ON	OFF	OFF	OFF	ON	Wiegand, hex, leading zeros	0F 056F
OFF	OFF	OFF	OFF	ON	Wiegand, hex, no leading zeros	F 56F
ON	ON	OFF	ON	OFF	User code only, decimal, leading zeros	01391
OFF	ON	OFF	ON	OFF	User code only, decimal, no leading zeros	1391
ON	OFF	OFF	ON	OFF	User code only, hex, leading zeros	056F
OFF	OFF	OFF	ON	OFF	User code only, hex, no leading zeros	56F
ON	ON	OFF	OFF	OFF	Standard, decimal, leading zeros	00984431
OFF	ON	OFF	OFF	OFF	Standard, decimal, no leading zeros	984431
ON	OFF	OFF	OFF	OFF	Standard, hex, leading zeros	0F056F
OFF	OFF	OFF	OFF	OFF	Standard, hex, no leading zeros	F056F

Card type: H10304 (37 bit format)
Data bit: 0000111101011011 0001100010101101111

Output depending on settings:

SW1	SW2	SW6	SW7	SW8	Description	Output
ON	ON	OFF	OFF	ON	Wiegand, decimal, leading zeros	03931 050543
OFF	ON	OFF	OFF	ON	Wiegand, decimal, no leading zeros	3931 50543
ON	OFF	OFF	OFF	ON	Wiegand, hex, leading zeros	0F5B 0C56F
OFF	OFF	OFF	OFF	ON	Wiegand, hex, no leading zeros	F5B C56F
ON	ON	OFF	ON	OFF	User code only, decimal, leading zeros	050543
OFF	ON	OFF	ON	OFF	User code only, decimal, no leading zeros	50543
ON	OFF	OFF	ON	OFF	User code only, hex, leading zeros	0C56F
OFF	OFF	OFF	ON	OFF	User code only, hex, no leading zeros	C56F
ON	ON	OFF	OFF	OFF	Standard, decimal, leading zeros	02061026671
OFF	ON	OFF	OFF	OFF	Standard, decimal, no leading zeros	2061026671
ON	OFF	OFF	OFF	OFF	Standard, hex, leading zeros	07AD8C56F
OFF	OFF	OFF	OFF	OFF	Standard, hex, no leading zeros	7AD8C56F
OFF	OFF	ON	OFF	ON	Stanley, site code + user code, decimal, no leading zeros	3 450413935
OFF	OFF	ON	ON	OFF	Stanley user code only, decimal, leading zeros	450413935