

FEATURES:

- 125kHz transponders support (EM4102, HITAG1/S,HITAG2, HID ISO PROX II)
- 1WIRE interface (DS1990 emulation)
- Serial interfaces (UART-TTL, RS232-5V)
- Wiegand interface (configurable)
- Wide supply range
- Over/reverse voltage protection
- Built-in antenna
- Built-in buzzer
- Low Power consumption
- Built-in two LEDs indicator (green + red)
- Thin, compact enclosure
- Settings by button or serial interface
- Built-in bootloader
- E-mark certification ready



TECHNICAL PARAMETERS:

Power Supply	7-32V
Operating frequency	110KHz-125kHz
Average power consumption	5mA (for 1-WIRE, Wiegand) 12mA (for serial interfaces)
Interface	1WIRE: 3,3V – 5V UART 0-5V, 9600,8,n,1 RS232, 9600,8,n,1 Wiegand – 37bits
Sink current for LED and buzzer controll	Max 150uA
Read range	Up to 8cm (depends on transponder)
Working temperature	-20c ÷ +65c
dimension	54mm x 85mm x 7mm
Cord length	1m
Connector	2x3 pin male Molex MicroFit3.0

CONNECTOR PINOUTS:

PIN	Wire color	Function
1	GREEN	7 - 32 volt supply
2	BLUE	Green LED, RX for UART
3	GREY	Ground signal controlling buzzer
4	BROWN	1-Wire data, Wiegand '0'
5	WHITE	Red LED, TX for UART, Wiegand '1'
6	YELLOW	Ground



1. Factory and default configuration.

To set default configuration, press button via small hole on reader back side for 5 seconds. Procedure is confirmed by buzzer. This sets parameters as below:

- Interface:
1WIRE, DS1990 emulation, Family code 1, id is sending as long as card is in field,
- Card type:
Unique (EM4102)

LED and buzzer control: by pull control wires to ground

2. Change settings using button.

Transponder type and interface can be changed using back button only.

STEP	Number of click	1	2	3	4	5	6
1	MENU1-transponder	-	Unique/Q5	HID	Hitag-1,S	Hitag-2	ALL
2	'Double short beep' - confirmation						
3	MENU2 – interface	-	RS232	UART-TTL	1-WIRE multiple	1WIRE single	Wiegand
4	'triple short beep' - confirmation						

3. 1-WIRE interface:

Reader supports Read_ROM and Search_ROM commands. Family code is '1' by default and can be optionally changed. Single code mode and multiple code mode(DS1990 compatibility) can be set.

In 1-WIRE mode, LEDs and buzzer are control by wires by pulling it to LOW.

4. RS232/UART interface:

In this mode, two protocol are available. Simple and Netronix Protocol. Both are working simultaneously.

By default, in simple mode, ID is sending automatically after card detect to TX pin as ASCII chars with CR+FL. Format can be changed using Netronix protocol commands (please contact with us for details).

LEDs and buzzer are controlled by 5-bytes frame as below:

Byte	Name	Description
1	Indicator	Defines (on 3 bits) which element will be control. Writing 0, resets all indicator. Multiple items can be control <div style="border: 1px solid black; padding: 2px; display: inline-block;"> - - - - LR LG BU </div> - LR –red led - LG – green led - BU buzzer

2	Pulses	Number of pulses. Writing 0 means infinity.
3	Ton	Time in 0,1s when element is turned on
4	Toff	Time in 0,1s when element is turned off
5	CRC	XOR operation on bytes1-4

Example:

0x03 0x03 0x01 0x02 0x03 – 3 fast (0,1s on, 0,2s off) green LED blinks with buzzer beeps.

For more information about extended Netronix protocol, please contact with us.

5. WIEGAND interface:

Wiegand is in 37bits mode with left alignment by default. This parameters can be changed using serial interface commands.

In Wiegand mode, green LED and buzzer are control by wires by pulling it to LOW. Red led can not be control in Wiegand.

For more information please contact with us: netronix@netronix.pl