

## 1W-H0-04P (K)\*

RFID reader | 13.56 MHz | Mifare

Product Card



\* Letter K refers to a reader with a common cathode.

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### Before use ...



Please do not open the reader and do not make any changes. This results in loss of warranty.



In case of any questions please contact with us. We certainly answer to all questions and solve possible problems.



Please carefully read the following information before connecting the reader.



Please keep in mind, that there are factors as metal surfaces, which can affect on radio communication and correct reader operation. It is advisable to consult the mounting conditions before use with our staff.



Please contact with us before sending damaged products.



We offer possibility to change input voltage range, cable length and terminate it with a plug. Before make an order please contact with us to determine the details.

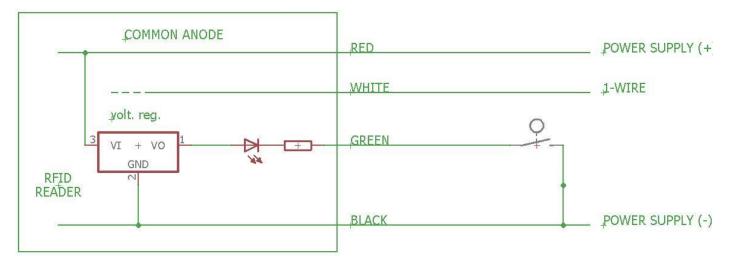


The RFID reader **1W-H0-04P (K)** reads identification data (UID) wireless of passive transponders (cards, tags, etc.) compatible with ISO/IEC14443-3-A (e.g. MIFARE cards). The built-in one-color LED for any use.

LED is powered by internal voltage regulator via built-in resistor. The light is on when the appropriate LED is connected to the minus of power supply.

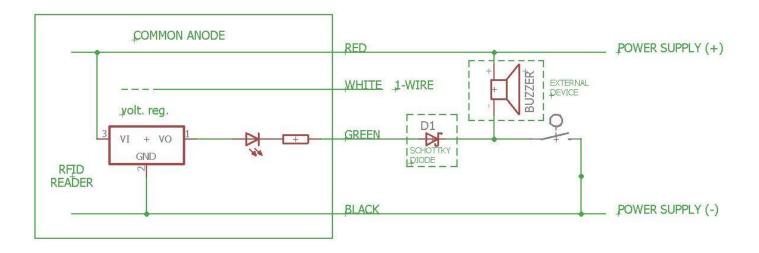
Black	-	power supply (-)	
Red	-	power supply (+)	
Green	-	red LED	cathode (anode for "K" version)
White	-	1-Wire	

The reader should be connected according to the scheme "A". In case of necessity of simultaneous control of LED and other devices (e.g. Buzzer) connect the reader according to the scheme "B":



#### SCHEME A





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$$R_x = \frac{(Us - 1.6V)}{Id} - 220\Omega$$

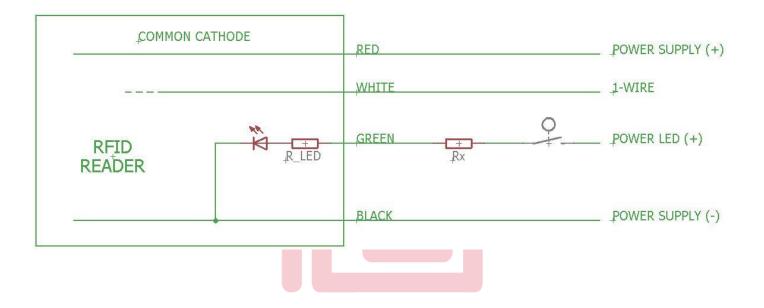
where:

R<sub>x</sub> – External resistor

Us – Power supply voltage of LED Id – LED current (max. 10mA)

Connect the reader according to the scheme "C":

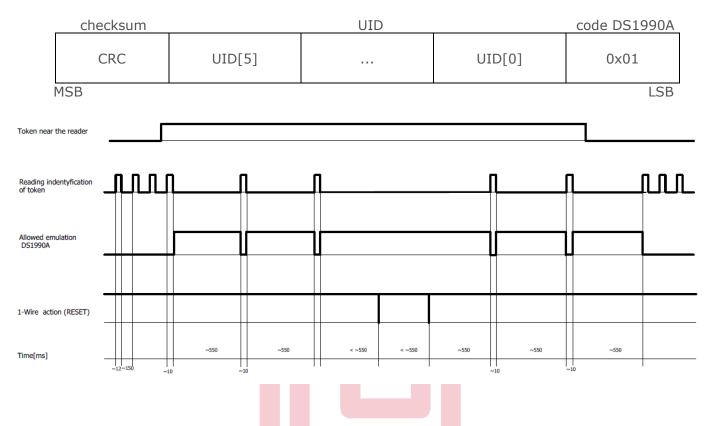
#### SCHEME C



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#### **DS1990A** emulation

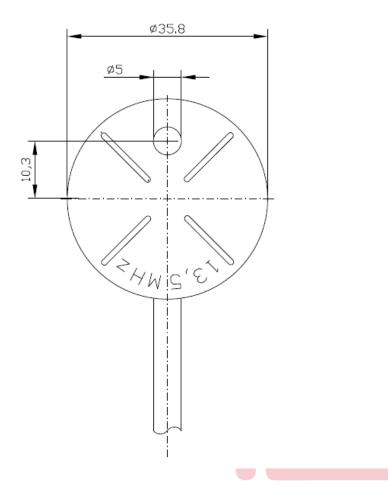
The read data are sent via 1-Wire interface, emulating the MAXIM DS1990A. For transponder UIDs of 4 bytes long, the oldest 2 bytes UIDs [4] and UID [5] are sent as 0x00 (zero) while, UIDs of 7 or 10 bytes are sent with 6 least significant UID bytes.

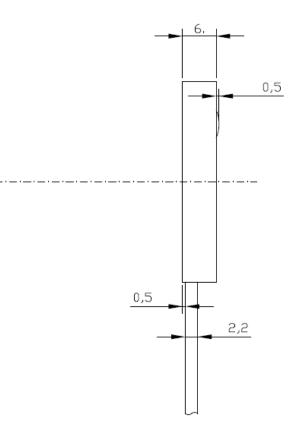


1. The reader is waiting for the proximity of the token (card) trying to read it at a frequency of about 6 times per second. ( $\sim 12 \text{ ms}$  [checking the presence of the card] +  $\sim 150 \text{ ms}$  [gap between successive checks]).

2. After the token is approached, its identifier is read ( $\sim 10 \text{ ms}$ ) and it is stored for a period of  $\sim 550 \text{ ms}$  during which it is possible to emulate the read number as the MAXIM iButton DS1990A.

3. If during this  $\sim$  550 ms on the 1-wire bus no RESET pulse initiating the transmission appears, the identifier is forgotten and the reading is repeated. Otherwise, the time of remember the identifier will be extended for another 550 ms from the moment of the RESET pulse.





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#### **Technical Data**

Power supply	6,5-30 V DC (5-15V DC to order)	
Nominal power supply voltage	12 V DC	
Power supply efficiency	1 A	
Peak current	55 mA	
Average receiver current	15 mA (without LED)	
Peak receiver current	45 mA	
Red LED current	7 mA (for "K" version do not exceed 10 mA)	
Frequency	13,56 MHz	
Type of transponder	ISO/IEC14443-3-A	
Surface of the antenna	8,6 cm <sup>2</sup>	
Reading range	~4cm	
Reading frequency	6/s for identification	
	2/s when transponder is in range of the reader	
Supported 1-Wire commands	0x33 (0x0F) - Read ROM 0xF0 - Search ROM	
Mounting method	tape, glue, etc.	
Cable length	0,4 m (flat cable)	
Reader temperature	-20° C	
	+80° C	
ROHS	YES	

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 RS-H3-06 BZ
 RS-H0-05 M12

 1W-H0-06P BZ
 1W-H0-06 BZ
 1W-H0-04P
 1W-H0-05
 1W-H5-05-M12
 1W-H3-06-BZ-M12