1W-H0-05 *(K)* M12*

RFID reader | 13.56 MHz | Mifare

Product Card

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

DREXIA Tomasz Wojtasik
Regatowa 19a
93-482 Lodz, Poland
www.drexia.pl
biuro@drexia.pl

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.*

DREXIA Tomasz Wojtasik
Regatowa 19a
93-482 Lodz, Poland
www.drexia.pl
biuro@drexia.pl

General information

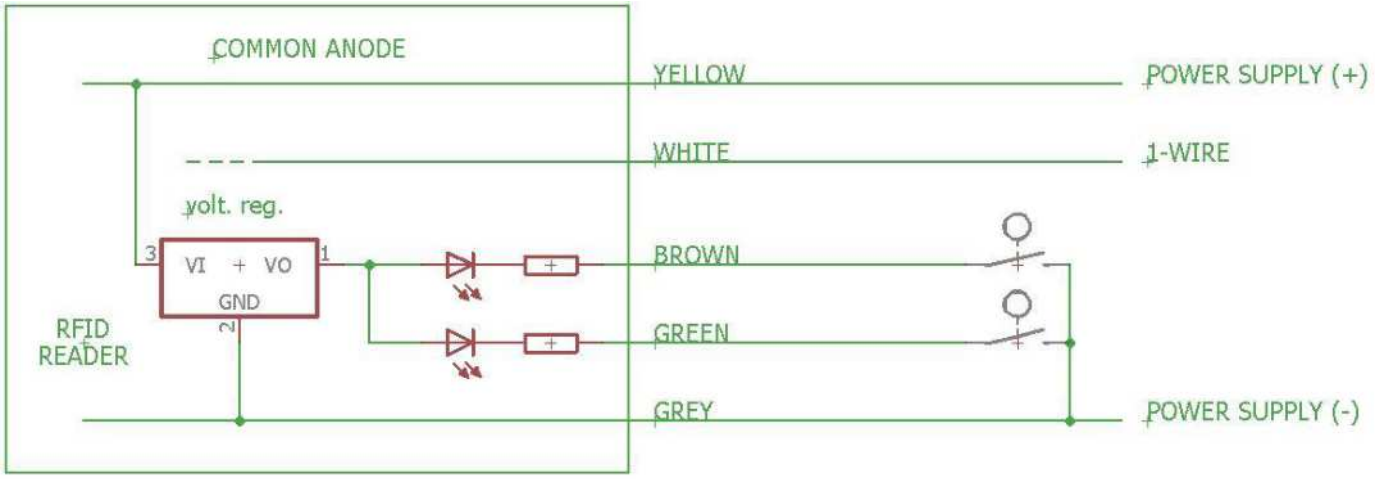
The RFID reader **1W-H0-05 (K) M12** reads identification data (UID) wireless of passive transponders (cards, tags, etc.) compatible with ISO/IEC14443-3-A (e.g. MIFARE cards). The built-in two-color LED for any use.

LEDs are 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.

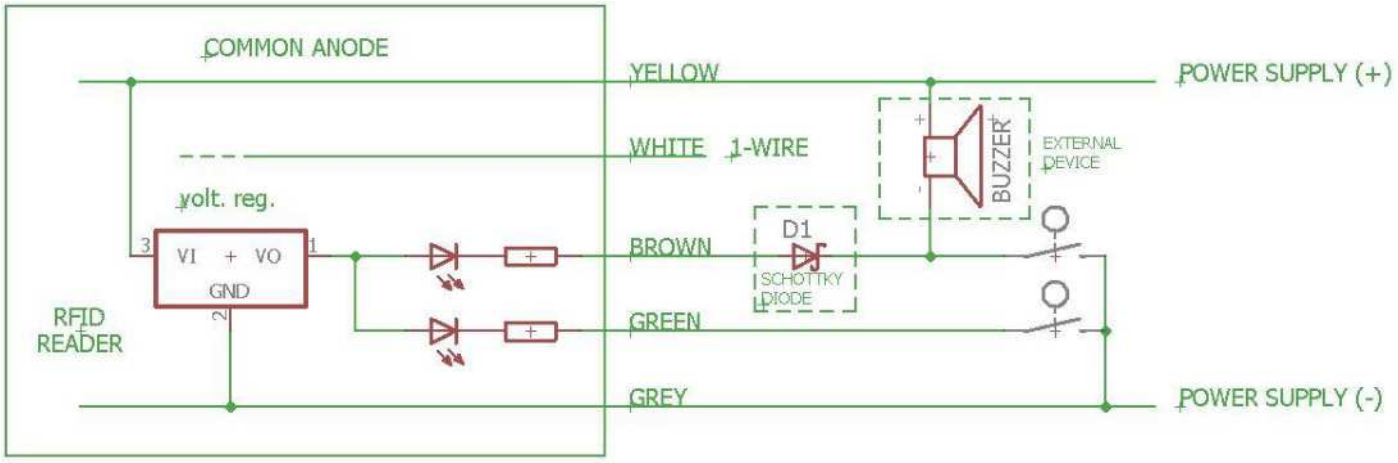
Grey	–	power supply (-)	
Yellow	–	power supply (+)	
Green	–	green LED	cathode (anode for „K" version)
Brown	–	red LED	cathode (anode for „K" version)
White	–	1-Wire	

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



SCHEME B



DREXIA Tomasz Wojtasik
Regatowa 19a
93-482 Lodz, Poland
www.drexia.pl
biuro@drexia.pl

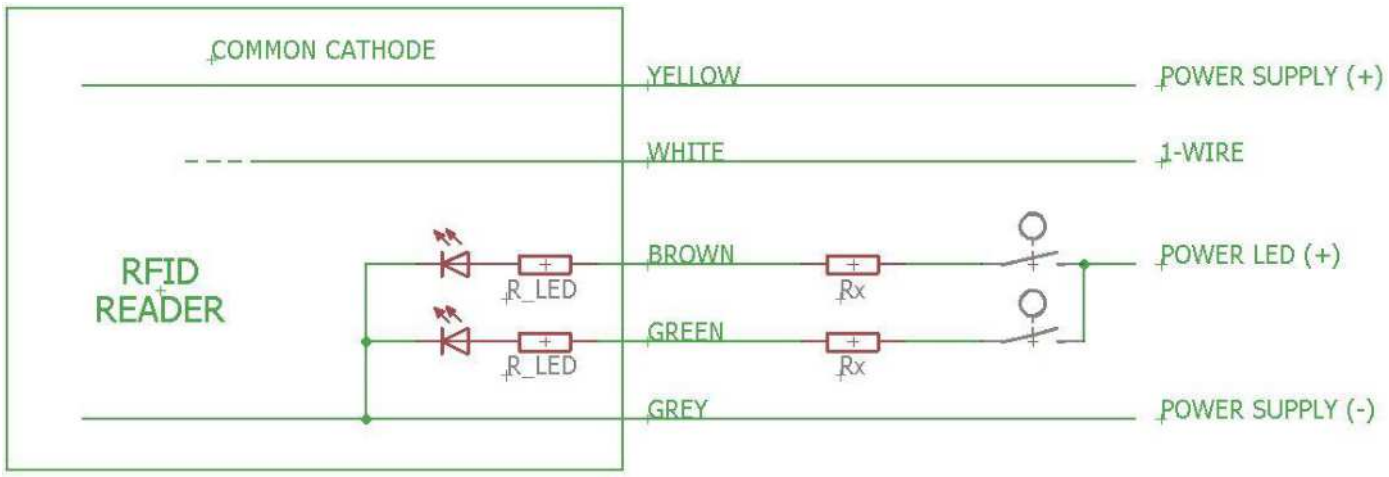
For product with common cathode: LED connected in series with a resistor 220R has a cathode connected to the negative power supply. LED is activated when is connected to plus of power supply. To connect more than 5V, it is advised to use external resistor to avoid exceeding the maximum LED current. Minimum value of resistor can be calculated from the formula:

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

where:
R_x – External resistor Us – Power supply voltage of LED Id – LED current (max. 10mA)

Connect the reader according to the scheme „C”:

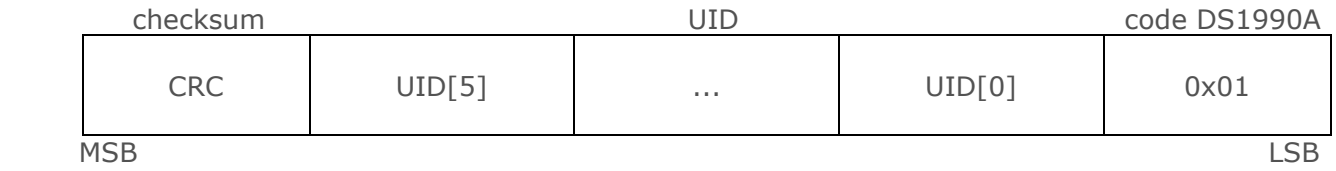
SCHEME C

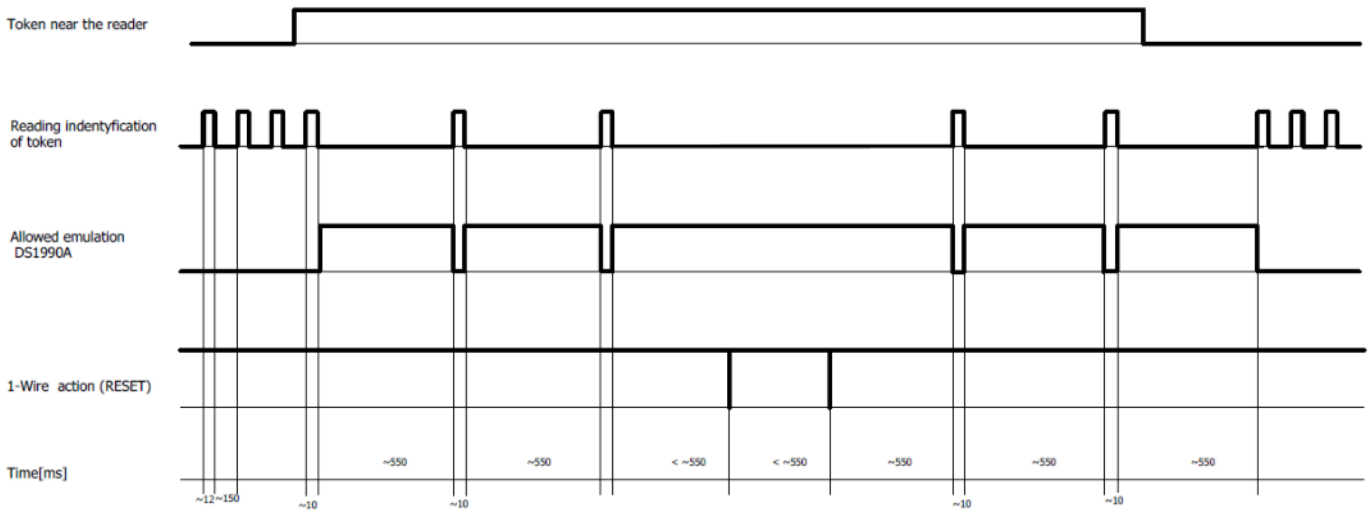


DREXIA Tomasz Wojtasik
Regatowa 19a
93-482 Lodz, Poland
www.drexia.pl
biuro@drexia.pl

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.



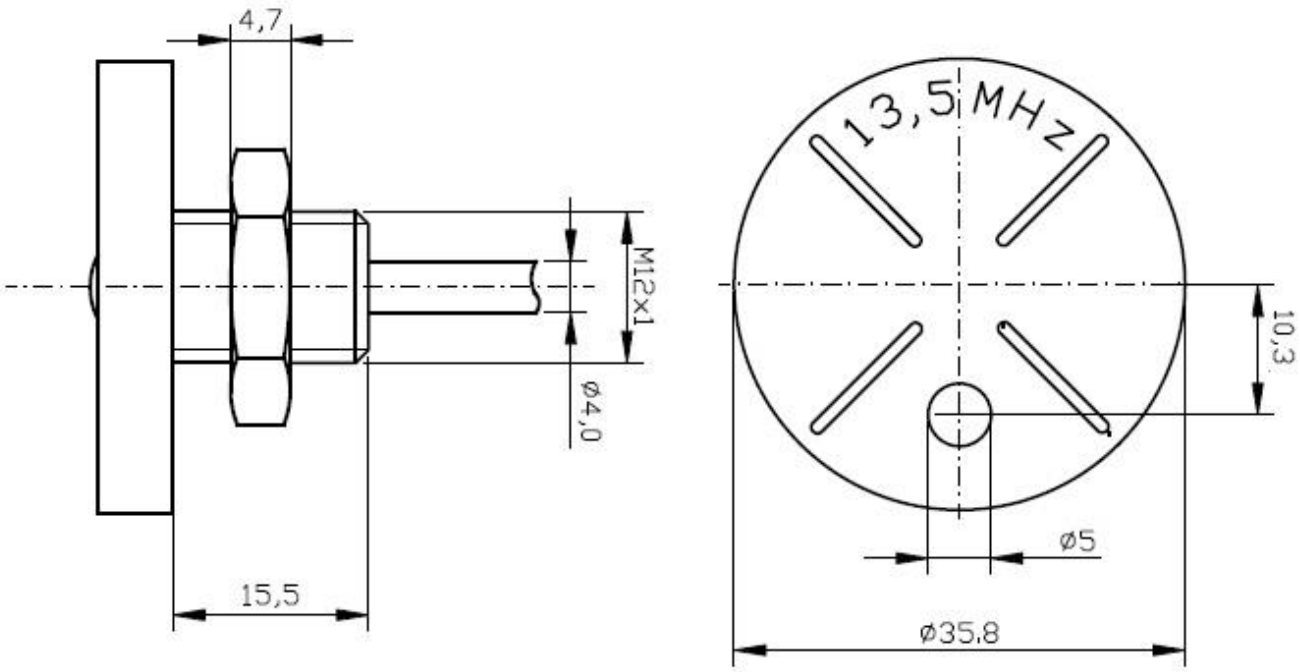


1. The reader is waiting for the proximity of the token (card) trying to read it at a frequency of about 6 times per second. (~ 12 ms [checking the presence of the card] + ~ 150 ms [gap between successive checks]).

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

3. If during this ~ 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.

External dimensions



DREXIA Tomasz Wojtasik
Regatowa 19a
93-482 Lodz, Poland
www.drexia.pl
biuro@drexia.pl

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	60 mA
Average receiver current	15 mA (without LED)
Peak receiver current	45 mA
Green LED current	7 mA (for „K" version do not exceed 10 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^2
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	M12 Thread
Cable length	0,4 m
Reader temperature	-20° C +55° C
ROHS	YES

DREXIA Tomasz Wojtasik
Regatowa 19a
93-482 Lodz, Poland
www.drexia.pl
biuro@drexia.pl