



**1-Wire relay with  
one input/output port**

**SEAHU SH020**



## Description:

Relay controlled by 1-Wire bus. Except relay device contain clamp with program-able logical input/output in 5V level. Module have two RJ12 connectors who can enable join module into 1Wire bus with easy continue bus to next 1-Wire devices. Module is powered from 1-Wire bus. Modelu is suitable e.g. for switch electric valve with control end position. Module case can easy mount into wall or into socket installation box. For visual control module have three led: power, relay status, input/output status.

## Specifikace:

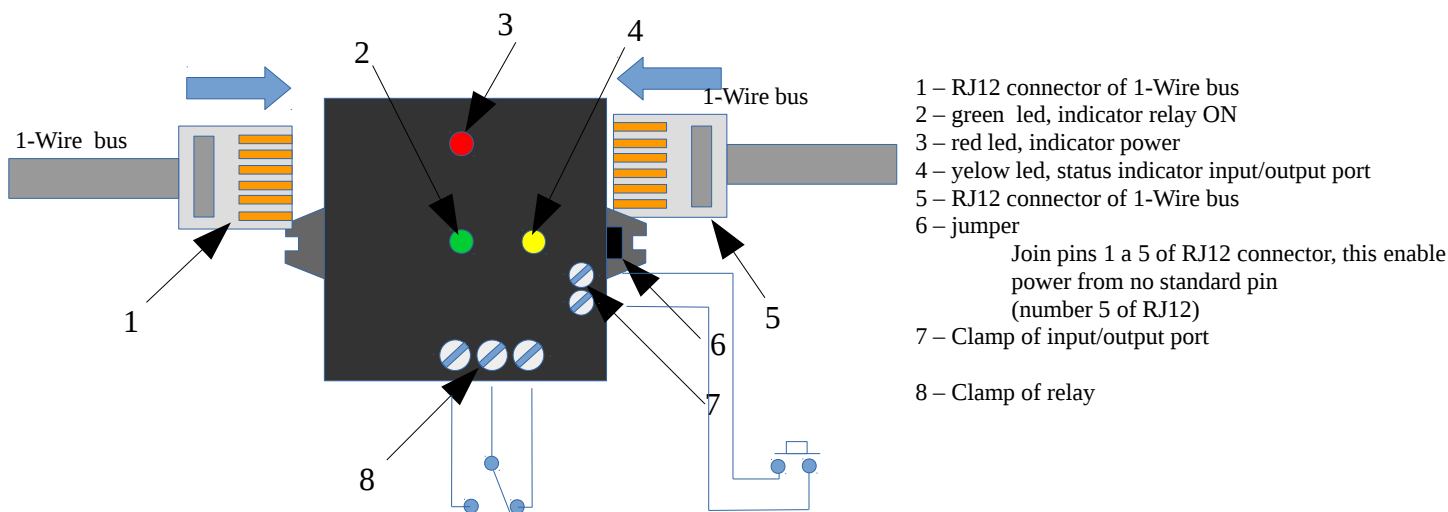
relay - 15A/125V~  
 15A/24V=  
 10A/250V~  
 U 5 V  
 R 69 Ω  
 P 0,36 W

Based on device DS 2413 more on <https://datasheets.maximintegrated.com/en/ds/DS2413.pdf>

port A – relay

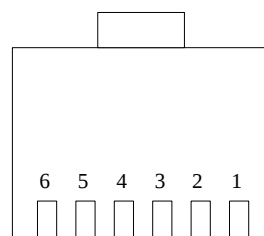
port B – program-able input/output

## Zapojení:



## Description RJ12 connector for 1-Wire bus:

PIN	Name of signal	POPIS
1	V <sub>DD</sub>	5 V DC power
2	GND	Ground
3	OW	1-Wire Data (5V logic)
4	GND	Ground
5	[V <sub>DD</sub> ]	If jumper ON then power 5V else No connection.
6	N.C.	No connection



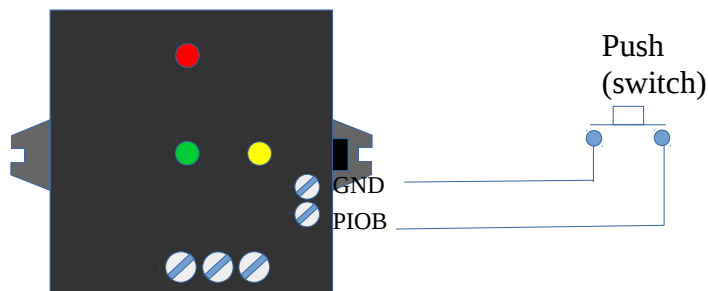
Lookin into female RJ12 connector

## Description of control:

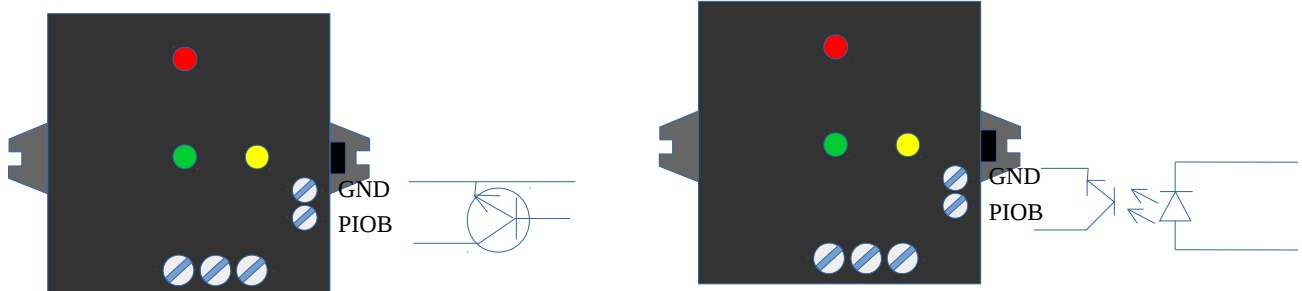
Module is based on device **DS2413P**. This device contain two binary ports (A, B) controlled by 1-Wire bus. Both ports have output with open collector. Default setting of ports is input. Relay is On by write 0 into port A. Port B is free to use, trough resistor and led diode is set to logical 1 linked into clamp. This logical 1 can by down to 0 by external switch (as input) or programmatic by set port B to output and write 0 into this port (as output).

## Example connection input/output port:

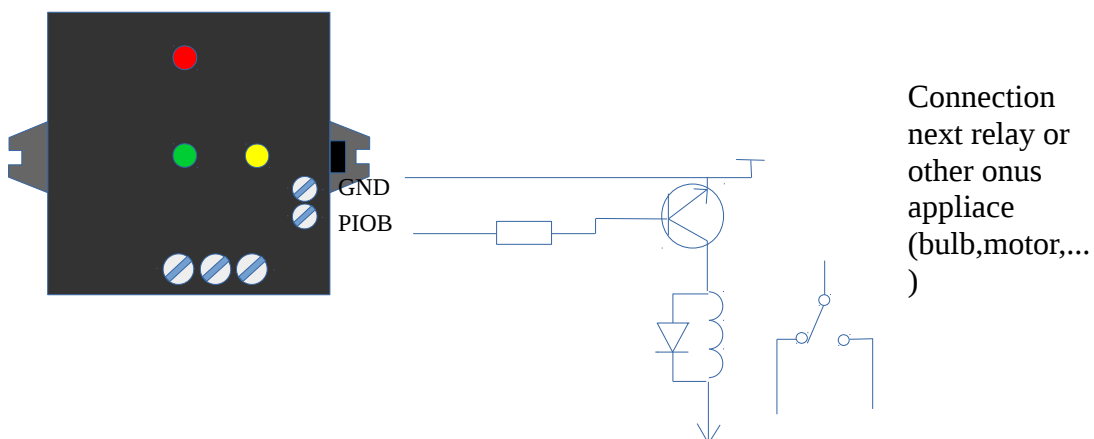
Connect push, end position switch, door or window contact etc.



Connect input into transistor or optocoupler:



Connection as output:



**More information:**

<http://www.seahu.cz>

<https://en.wikipedia.org/wiki/1-Wire>

<http://owfs.org>

<https://github.com/seahu/SH019> – source code examples for ARDUINO, LINUX a OWFS

<https://datasheets.maximintegrated.com/en/ds/DS2413.pdf> – data sheet of used device DS2413

**Write:**

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