

## WiWo 1

### INTRODUCTION

WiWo 1 uses the NRG #40H anemometer output as its input. It is a instrument which activates a 2-contact relay, in case wind speed surpasses a limit, which is user adjustable via 3 switches.

This is useful in order to open or close a control circuit, such as a photovoltaic panel tracker, which is affected by the high wind speed.

### HOW IT OPERATES

Samples are taken in a 10-second time period and the average wind speed is calculated, which, if surpasses the limit, it activates the relay. This limit is defined by the user via the SW1, SW2, SW3 switches (in m/sec and Hz), as it can be seen in the 4<sup>th</sup> and 5<sup>th</sup> column of the table below.

SW3	SW2	SW1	Activates the relay		Deactivates the relay	
			m/sec	Hz	m/sec	Hz
0	0	0	16	20.4	13	16.5
0	0	1	18	23.0	14	17.8
0	1	0	20	25.7	16	20.4
0	1	1	22	28.3	18	23.0
1	0	0	24	30.9	19	24.4
1	0	1	26	33.5	21	27.0
1	1	0	28	36.1	22	28.3
1	1	1	14	17.8	11	14.0

The relay's contacts are 2, one *normally closed* and one *normally open*. When the relay is activated, the first one is opened and the second one is closed.

The instrument checks if it will return to the normal status (the first contact closed and the second one opened) if the following conditions apply:

- If 100 seconds pass **and**
- Wind speed becomes lower than a limit.

The process is the same, ie the wind speed is checked, per 10 second intervals, but the relay deactivation limit is 80% lower than the activation limit, as it can be seen in the table's last 2 columns.

### POWER SUPPLY

**Voltage:** 24VDC.

### RELAY DRIVING CIRCUIT

The maximum currents allowed through the relay are:

**dc: 2A at 24V.**

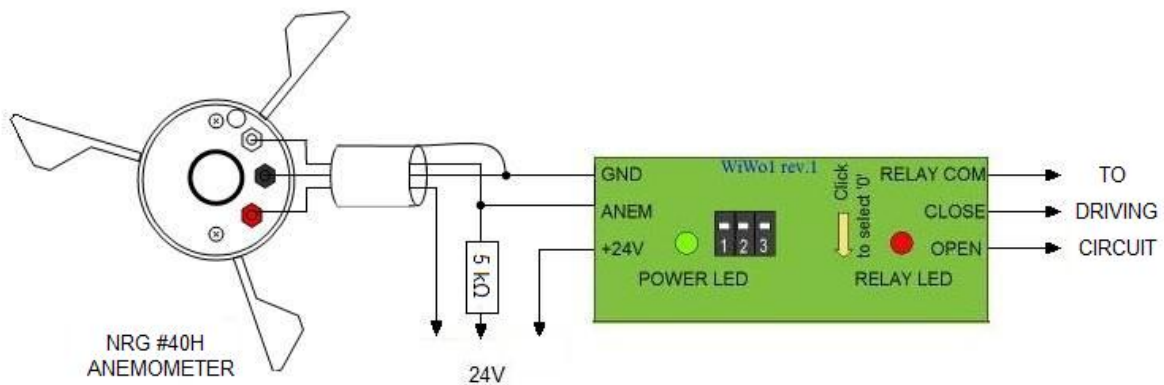
**ac: 0,5A at 220V.**

### SIGNALING LEDS

- **Green:** ON, when the instrument has power supply
- **Red:** ON, when the relay is activated. OFF, when it is deactivated.

### PIN CONNECTIONS

The anemometer's red screw and the '+24V' pin are connected to a 24V power supply. The black screw is connected to GND, while the white one corresponds to the output signal and it is connected to the 'ANEM' pin and to 24V, via a 5KOhm resistor.



- **PROTECTION:** Over voltage, inverse connections at power supply pins.
- **BOX:** Rail, (H x W x D) 80 x 23 x 74 mm.
- **Weight:** 80 gr.
- **CONNECTIONS:** screw terminals.
- **OPERATING TEMPERATURE:** -20° ~ +70°
- **IP RATING:** 20
- **WARRANTY:** 1 year.

