µWakeupper

(for normal opened & normal closed switches)

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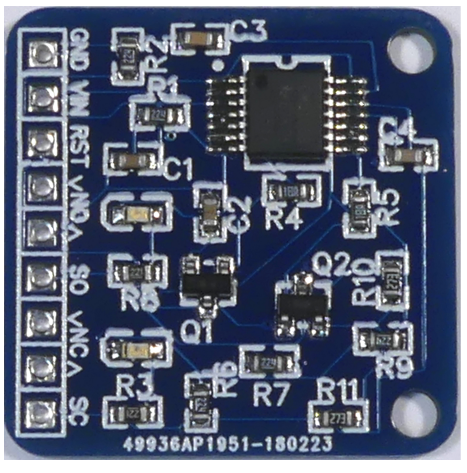

Hi there,

thank you for choosing the **µWakeupper** for your project.

This is a short summary on how to use and connect the **µWakeupper** with your preferred microcontroller, e.g. ESP8266, ESP32 or ATtiny.

Why the µWakeupper?

Most of the new modern MCUs (microcontroller units) come with a power savings feature, usually called “deep sleep”. Your code will be executed until you call the required function, e.g. `ESP.deepSleep(durationInMicrosecondsToSleep)`. In this state the MCU requires a minimum of current - until a wake up event occurs. This can be a timer event (after `durationInMicrosecondsToSleep`) or an external/dedicated reset on the MCUs RST-Pin. So in many projects, **you can extremely extend the runway** of your battery powered MCU using the deep sleep mode; only wake up if necessary, when a switch is closed or opened. This can be, for example a magnetic reed switch mounted to a door/window or a ball switch attached to the cover of your postbox. Just connect the desired switch/button to the **µWakeupper** board and it will take care about the proper MCU reset handling.

How to connect the µWakeupper?

```
GND - Ground (usually GND-Pin of your MCU)
VIN - Voltage in (usually VIN-Pin of your MCU, 3V3 or 5V)
RST - Reset (goes to your RST-Pin of your MCU)

NO< - Normal opened switch Out (Voltage - from VIN - to your switch)
NO> - Normal opened switch In (COM from your switch)
SO  - Status opened (HIGH/active, LOW/inactive)

NC< - Normal closed switch Out (Voltage - from VIN - to your switch)
NC> - Normal closed switch In (COM from your switch)
SC  - Status closed (HIGH/active, LOW/inactive)
```

What else?

- Basically, you can connect two switches (NO and NC) at the same time or just one. If NC is not in use, I recommend to shorten the two NC pins (e.g. with a jumper).
- Both SO and SC pins come with an onboard **pull up resistance of 27K each** (R10/R11).
- If SO and SC is HIGH, the LED next to the PIN is turned on. To reduce current consumption while active, feel free to unsolder the LEDs or just the resistors R8 (SO-LED) and/or R3 (SC-LED).
- The standby current of the **µWakeupper** is about **15µA**.

I’m really happy, if you think the **µWakeupper** is a useful add-on to your project. Just let me know about your experiences on twitter (**@moreioLabs**).

Have fun and please don’t stop making cool things,

Tobias

