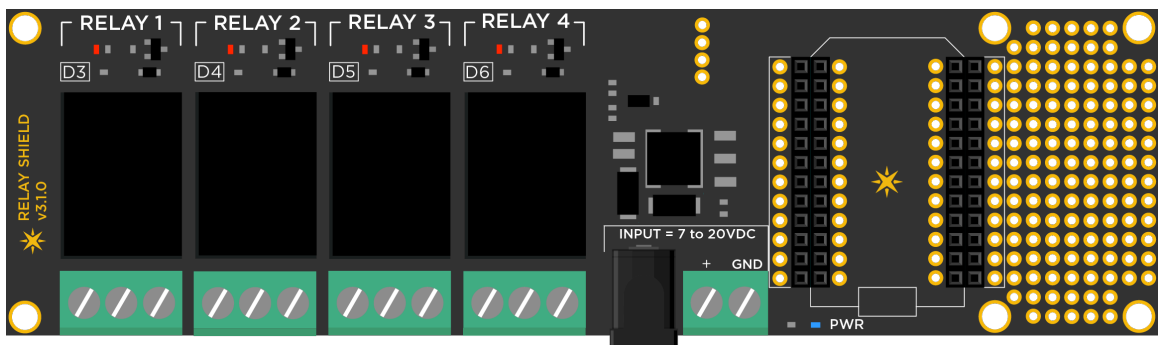


## RELAY SHIELD

The Relay Shield allows you to take over the world, one electric appliance at a time. Want to control a lamp, fan, coffee machine, aquarium pumps or garden sprinklers? Then this is a solution for you!

The shield comes with four relays that are rated at a max of 220V @10Amp allowing you to control any electric appliance rated at under 2000 Watts. You are not just limited to an appliance though; any gadget that requires high voltage and/or a lot of current can be controlled with this shield.



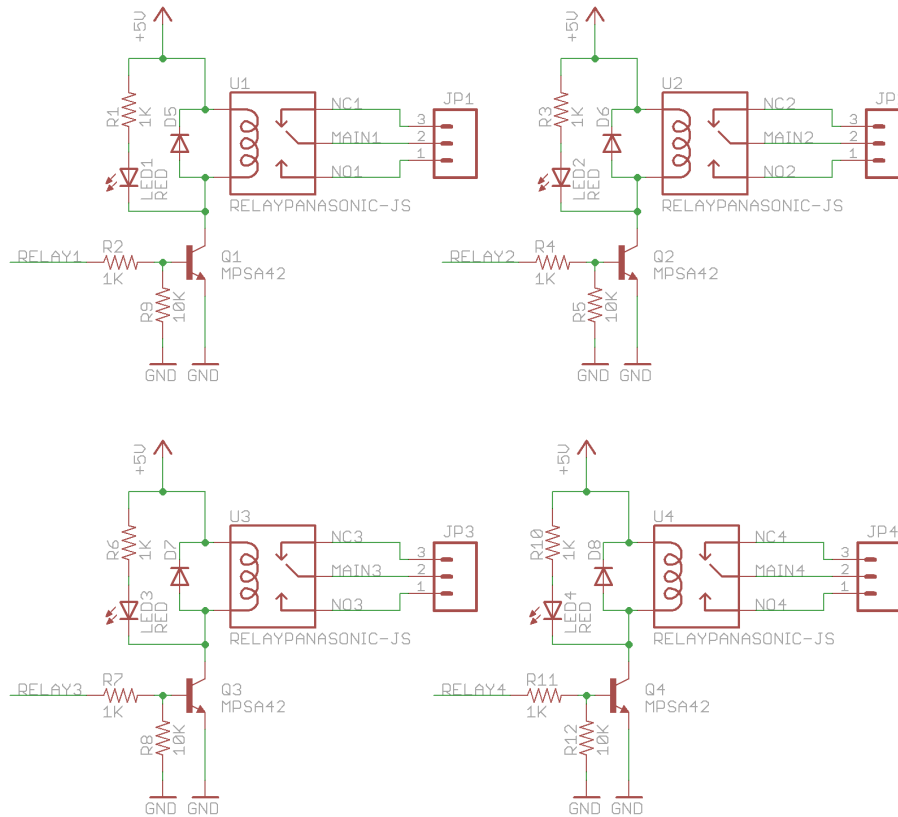
We have even provided a small prototyping area around the shield for you to add more components or connectors. A temperature sensor to go along with your brewer, maybe?

**IMPORTANT:** This shield provides regulated power (5V) to the seated Particle device and relays. However, it does not support power to the devices controlled by the relays.

### OPERATION:

The schematic for the relay shield is simple and self explanatory. The shield has four relays that are controlled by pins D3, D4, D5 and D6 on the Particle device. Each relay is triggered via a NPN transistor that takes a control signal from the Particle device and switches the relay coil ON and OFF, which in turn makes or breaks the electrical contact on the output. There is also a fly-back diode connected across the coil to help protect the transistor from high voltage transients caused during switching.

**NOTE:** On the under side of the relay shield (top center), you will see 4 solder pads that are by default bridged via traces. You can scratch off the trace to disconnect the control pin from the preassigned ones (D3 to D6) and wire up based on your project requirement.



The relays are SPDT (Single Pole Double Throw) type, which means they have three terminals at the output: COMMON (COMM), Normally Open (NO) and Normally Closed (NC). We can either connect the load in between the COMM and NO or COMM and NC terminals. When connected in between COMM and NO, the output remains open/disconnected when the relay is turned OFF and closes/connects when the relay is turned ON. In the later case, the output remains closed/connected when the relay is OFF and opens/disconnects when the relay is ON.

### SPECIFICATIONS (V3.X.X)

- Operating voltage: 7 to 20V DC
- Current consumption: 150mA min to 290mA max (at 9V DC)
- Relay Max Voltage: 220V AC
- Relay Max Current: 10Amp at 125V AC
- Relay Part Number: JS1-5V-F [Data Sheet](#)
- Dimensions: 6.0" x 1.7"
- Weight: 80 gms

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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