

# HC-SR04 ultrasonic ranging sensor



This feature is included only in `tasmota-sensors` binary



When [compiling your build](#) add the following to `user_config_override.h`:

```
#ifndef USE_SR04
#define USE_SR04 // Add support for HC-SR04
ultrasonic devices (+1k code)
    #define SR04_MAX_SENSOR_DISTANCE 500 // Set sensor max detection
distance #endif
```

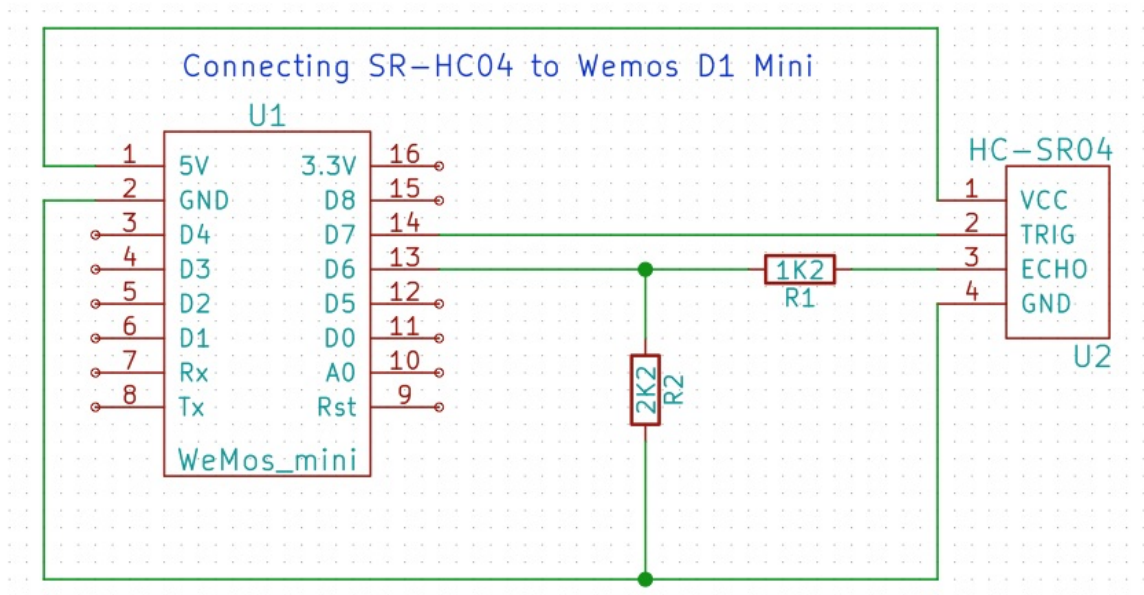
HC-SR04 (HC-SR04P and JSN-SR04T) is an ultrasonic ranging sensor. Provides 2cm to 300cm of non-contact measurement functionality with a ranging accuracy that can reach up to 3mm. Each HC-SR04 module includes an ultrasonic transmitter, a receiver and a control circuit. See [HC-SR04 Ultrasonic Sensor](#) for more information.

Buy example: - [AliExpress](#) - [Sparkfun](#)

The [US-100](#) can also be use as a HC-SR04 if you remove the jumper at the back (check Adafruit documentation).

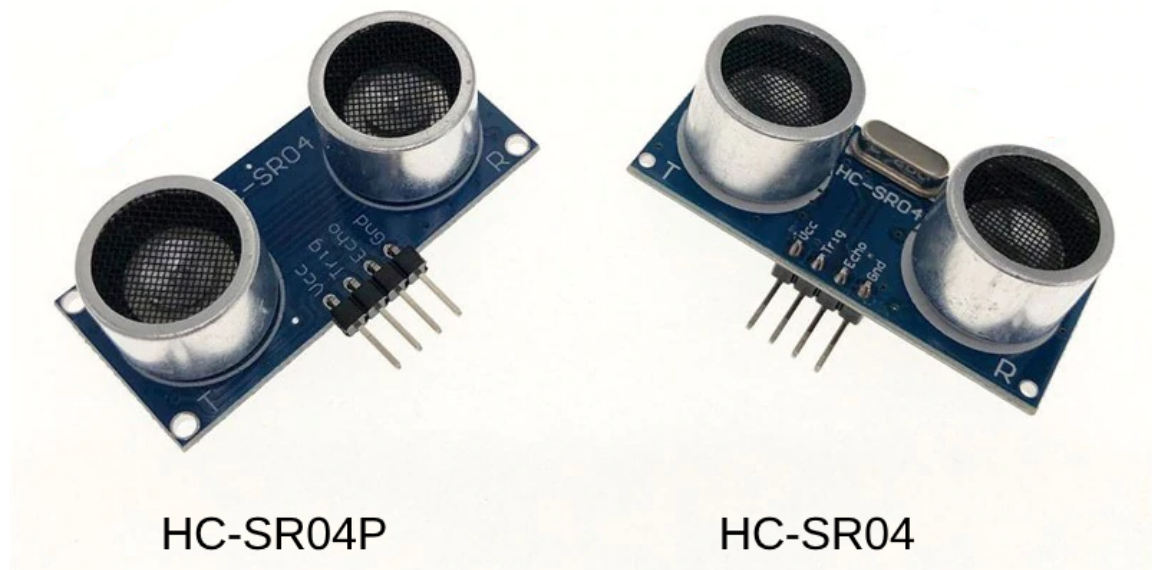
## Configuration

## Wiring



The HC-SR04 operates at 5V and therefore the echo signal will be 5V as well. Connecting the echo pin via a voltage divider (see schematic) will divide the 5V to 3.3V, which is the operating voltage of an ESP8266.

There is a variant of the HC-SR04, called HC-SR04P. It mainly operates at 3.3V and then it doesn't need the voltage divider but you will notice a range drop of about 1 meter.



## Tasmota Settings

In the **Configuration -> Configure Module** page assign:

1. GPIOx to SR04 Tri (69)
2. GPIOy to SR04 Ech (70)

Module parameters

Module type (Sonoff Basic)

Generic (18) ▼

D3 GPIO0 Button1	None (0) ▼
TX GPIO1 Serial Out	None (0) ▼
D4 GPIO2	None (0) ▼
RX GPIO3 Serial In	None (0) ▼
D2 GPIO4	None (0) ▼
D1 GPIO5	None (0) ▼
D6 GPIO12 Relay1	SR04 Tri (73) ▼
D7 GPIO13 Led1i	None (0) ▼
D5 GPIO14 Sensor	SR04 Ech (74) ▼
D8 GPIO15	None (0) ▼
D0 GPIO16	None (0) ▼
A0 ADC0	None (0) ▼

Save

## Tasmota Main

After a reboot webUI displays the HC-SR04 distance.

<b>SR04 Distance</b>	<b>16.754cm</b>
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Sensor sends a `tele/%topic%/SENSOR` JSON response:

```
{"Time": "2019-01-01T22:42:35", "SR04": {"Distance": 16.754}}
```