

ESP8266 10A 220V Network Relay WIFI Module

Please note this document have been directly translated from Chinese

Part No 008266NRW



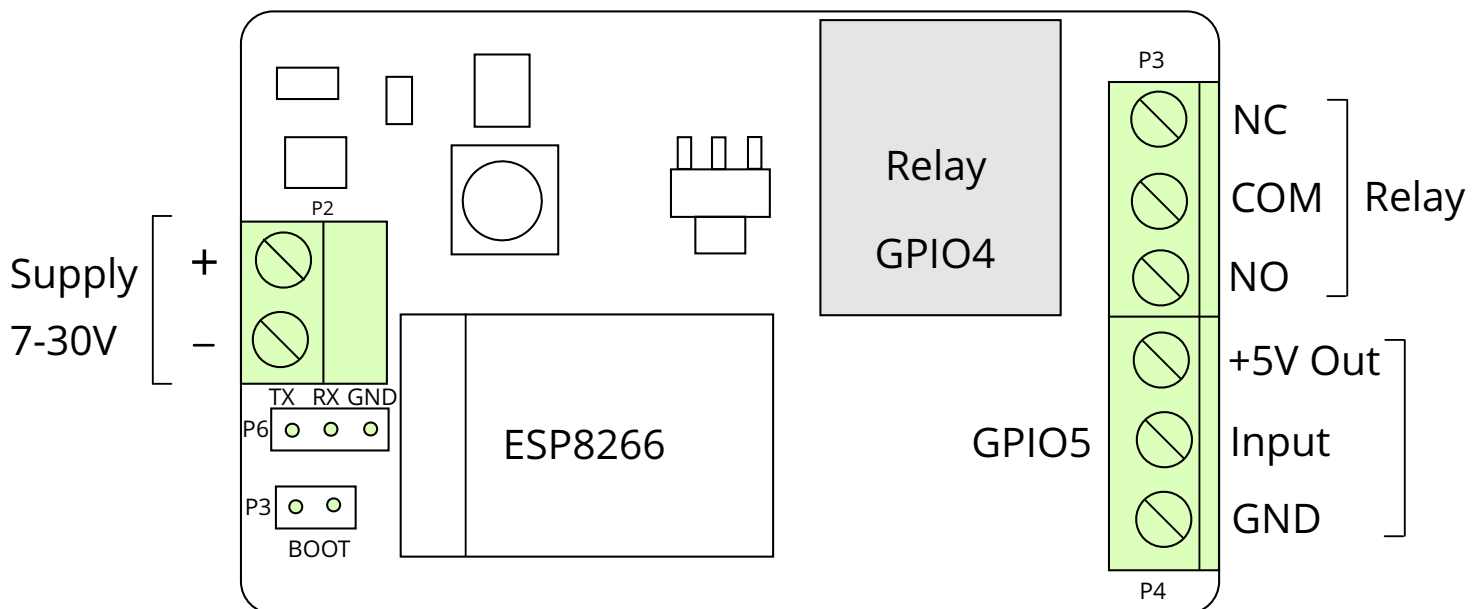
The ESP8266 10A 220V Network Relay WIFI Module will take charge of your electrical equipment by WIFI control.

This module has a wide input voltage range 7-30 V DC and input over-voltage protection. The circuit board has an output status indicator and an input status indicator. It can be accessed through the TCP client server control and also be controlled through the HTTP protocol, the control of diverse and easy to operate.

Specification

- ESP8266-12E Chipset Wifi Module
- 4-layers PCB design.
- Input voltage range 7-28 VDC (30V Max)
- Optocoupler input isolation
- Relay 220V 10A relay
- Status indicator
- Access control server via TCP CLIENT mode via HTTP protocol control
- Overvoltage protection
- Size 65 x 40 x 18 mm

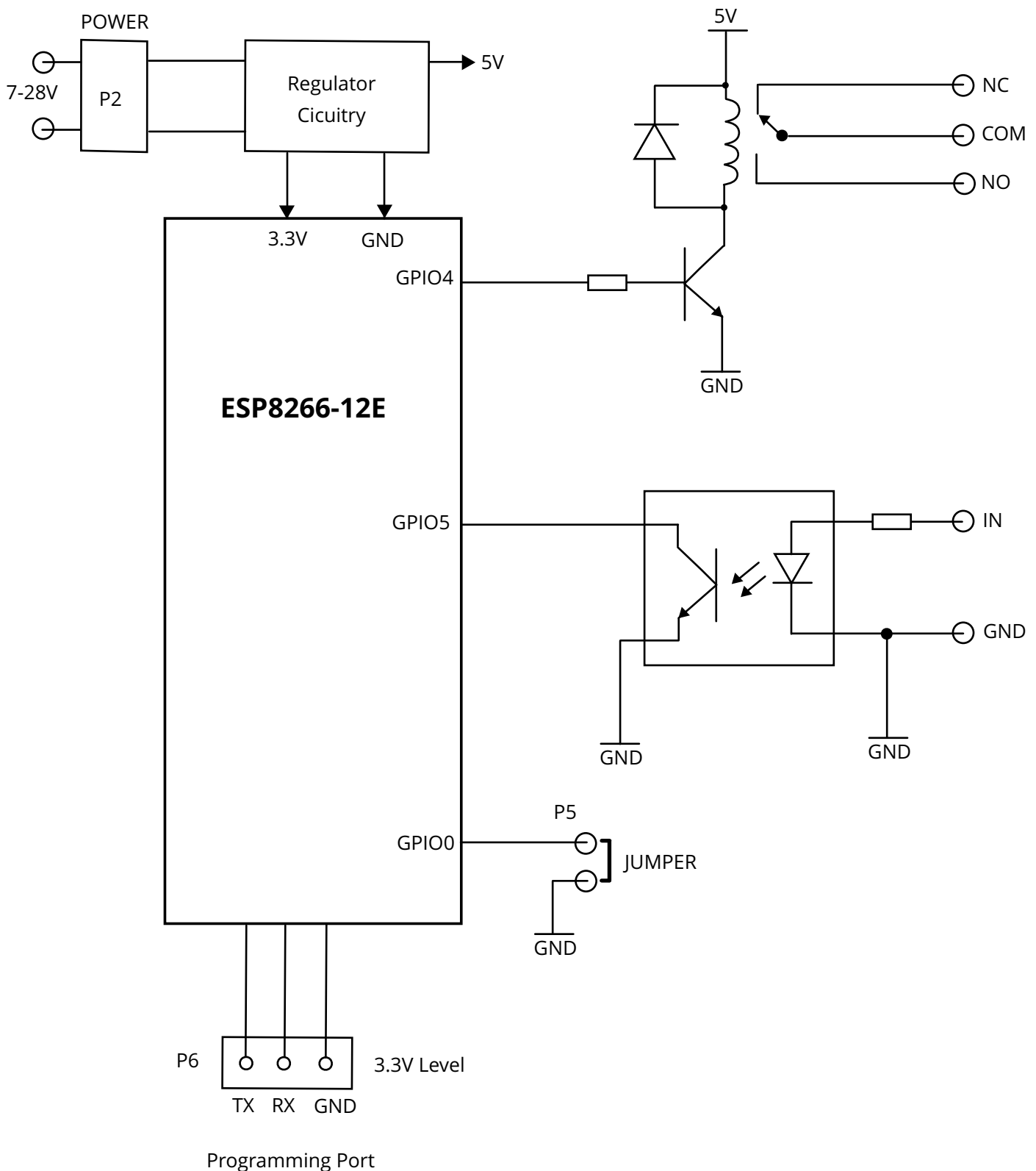
Board Layout



Top View

Board Layout

The device contains an integrated ESP8266-12E, but only pins GPIO4 and GPIO5 are used for IO. GPIO4 is used for the controlling relay and GPIO5 is an optocoupler input.



Modes

The ESP8266 WIFI Relay Module has two modes of operation

- AP Mode (Webpage)
- Program Mode

AP Mode (Webpage)

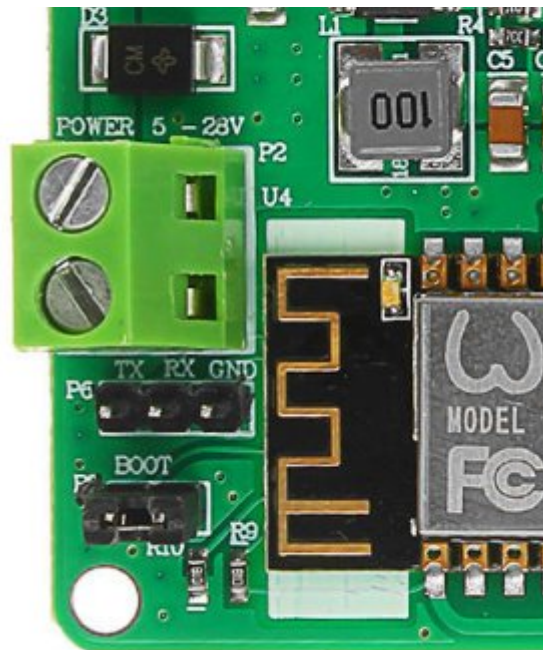
Example

Connect a power source to Connector P2. Connect your computer or phone to the yunshan_wifi_xx_xx_xx network (where it appears the xx are hexadecimal numbers pulled from the ESP8266 MAC address). My device responded to the supplied password of yunshan123456789. Once a connection was established, I simply entered the IP address of 192.168.4.1 into my browser. Once there, I was greeted by a Chinese web page, the translation of which appears below. From this webpage, I was able to open and close the relay. The status of the GPIO5 optocoupler input is also displayed on this webpage.

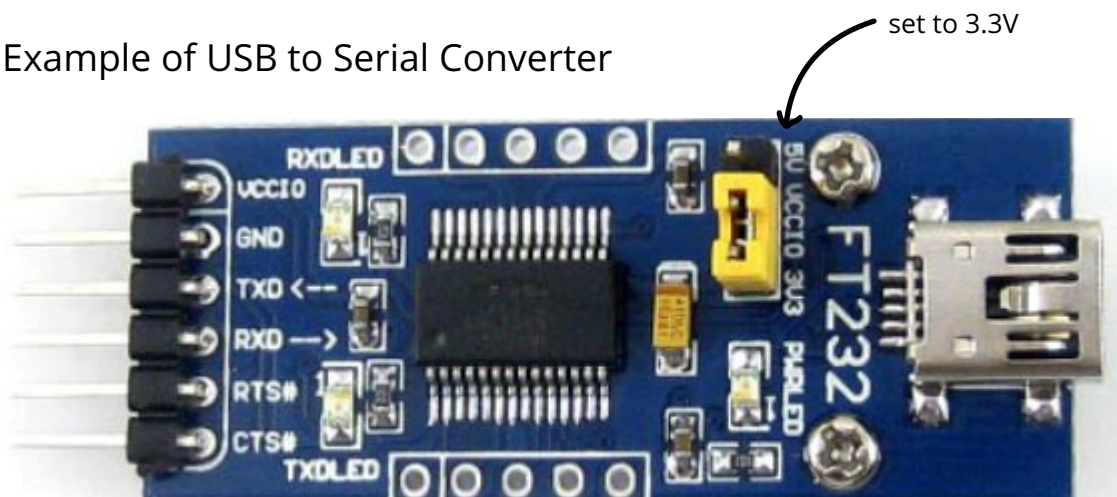


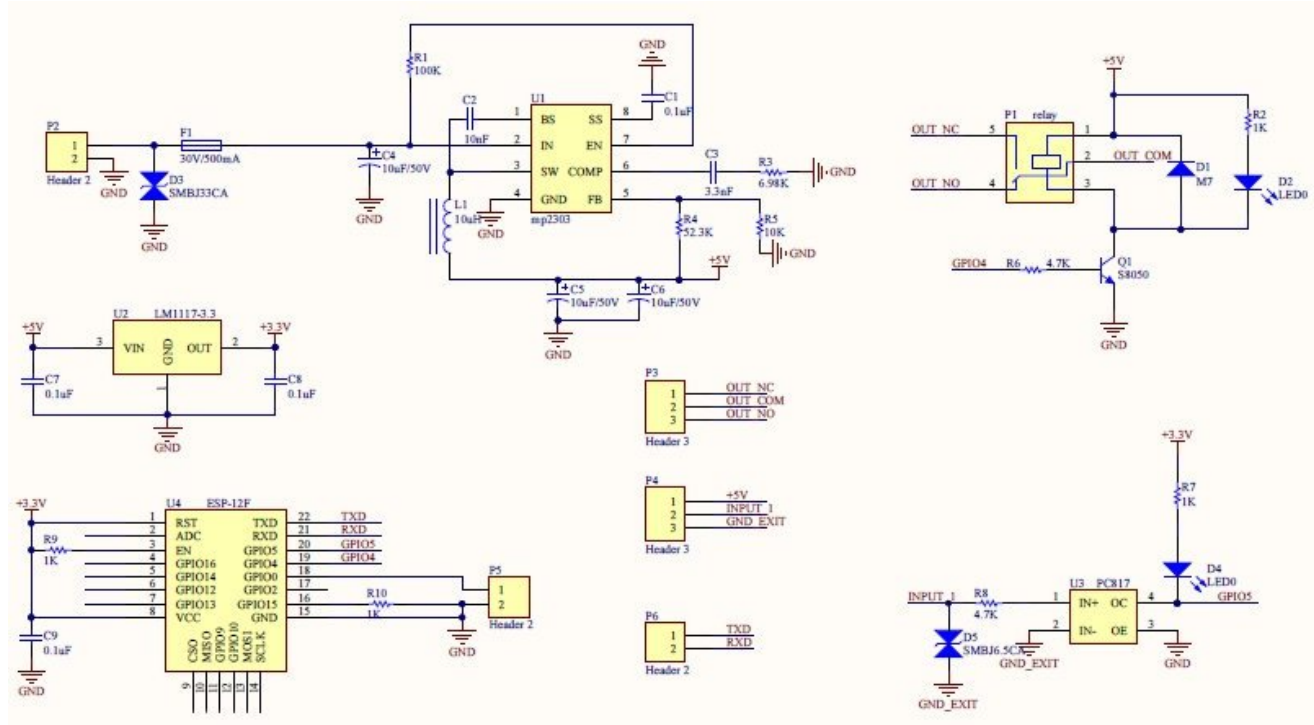
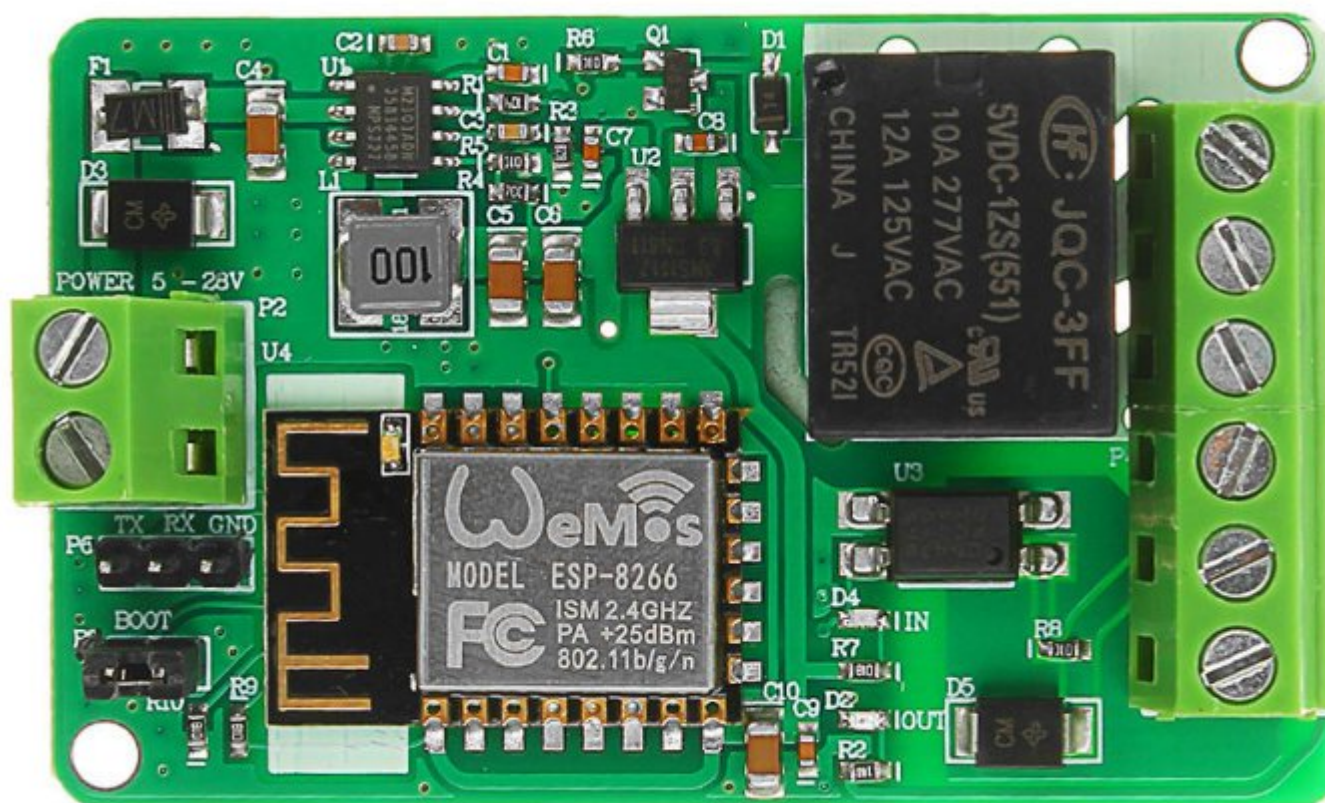
Program Upload Mode

On the lower left portion of the PCB is a section that grants access to the ESP8266 pins for programming (see the above photo). These same pins are also useful for TTL serial output purposes (debugging, etc.). Separate 2 and 3-pin headers will need to be soldered into these connector holes (labeled P5 and P6). The ESP8266 GPIO4 controls the relay through a 2N3904 transistor. Setting GPIO4 high, causes the relay to close the NO contact with Common and the NC contact to open. Additionally, taking connector "G" high causes GPIO5 to also go low isolated via a PC817 photocoupler. Please note the serial programming cable or module must be set to 3.3v signal levels.



Example of USB to Serial Converter





Web References and Interesting Reading

- Tasmoto Web Framework - https://www.youtube.com/watch?v=08_GBROKQH0

- Simple ESP8266 Control - https://www.youtube.com/watch?v=dWM4p_KaTHY

- ESP8266 Web Server Access With Python Client And Arduino IDE

<https://www.youtube.com/watch?v=CpWhIJXKuDg>

- Node MCU flasher Software

<https://randomnerdtutorials.com/flashing-nodemcu-firmware-on-the-esp8266-using-windows/>

- Article by Hotmcu with resources

<https://www.hotmcu.com/esp8266-10a-220v-network-relay-wifi-module-input-dc-7v30v-p-325.html>

- Code Example

<https://ucexperiment.wordpress.com/2016/12/18/yunshan-esp8266-250v-15a-acdc-network-wifi-relay-module/>

Example 1

<https://pastebin.com/raw/TN7ZVdjK>

Example 2

<https://pastebin.com/raw/wgeYhZE7>