4duino IoT WLAN Unterputz Relais

ALL-ESP8266-IoT-Relais

Benutzerhandbuch
Anschlüsse

- N
- L
- NO
- COM
- NC

Analoger Eingang
maximal 10V

digital I/O Header
3,3V Signale

Taster am Input #0

Reset-Taster
Verkabelungsbeispiel für eine 230V Last

von der Versorgungsleitung N L zum Verbraucher (max. 16A)

230V ACHTUNG LEBENSGEFÄHR

Erste Inbetriebnahme

1. Verkabeln Sie das ALL-ESP8266-IoT-Relais wie oben beschrieben


3. Falls sich die Konfigurationsseite nicht automatisch öffnet, gehen Sie im Browser Ihres Smartphones/Tablets/Computers auf die Adresse: 192.168.4.1

4. Folgen Sie den Anweisungen in der Benutzeroberfläche:
   - „Configure WiFi“
   - Wählen Sie Ihr WLAN-Netzwerk aus und geben Sie das zugehörige Kennwort ein
   - Bestätigen Sie mit „Save“

Wenn anschließend das WLAN-Netzwerk des ALL-ESP8266-IoT-Relais nicht mehr sichtbar ist, war die Konfiguration erfolgreich.
Falls nicht stellen Sie sicher, dass das Relais richtig angeschlossen ist und wiederholen Sie die Schritte 2-4.

Für die Konfiguration des Relais müssen Sie in Ihrem Browser die IP-Adresse des ALL-ESP8266-IoT-Relais aufrufen.
Die IP-Adresse Ihres ALL-ESP8266-IoT-Relais finden Sie entweder in Ihrem Router oder über eine IP-Scanner-App (wie z.B. Fing) heraus. Alternativ kann die IP-Adresse über ein Terminalprogramm (z.B. PuTTY) ausgelesen werden. (Baudrate 115200)
Sollte keine Ausgabe erfolgen, drücken Sie 1x auf die RST-Taste.

Bei einem Neustart verbindet sich das ALL-ESP8266-IoT-Relais automatisch mit dem vorher eingestellten WLAN-Netzwerk, solange es verfügbar ist. Ansonsten ist er wieder Access Point und muss neu konfiguriert werden. (siehe Schritte 2-4)
Bedienung

Info: Durch Drücken der Taste #0 wird der Zustand des Relais invertiert.

Öffnen Sie die IP-Adresse des ALL-ESP8266-IoT-Relais in Ihrem Webbrowser.

ESP_UP_Relais - IP: 192.168.3.179

Elektronisches Relais (ausgeschaltet)

ESP_UP_Relais 56B2B677EB79

Dienstag den 11.09.2018 um 16:51:47

Manuell schalten

Relais manuell einschalten
Relais manuell ausschalten
Relais manuell invertieren

Timer

Aktion hinzufügen (0 von maximal 50 benutzt)

Historie

16:32:26: Relais beim Neustart ausgeschaltet.

Historie löschen
Einstellungen
Seite neu laden
Relais neu starten
Aktion hinzufügen – Aktion Schaltung
Hier wird einmalig geschalten.
In diesem Beispiel wird Mo – Fr um 08:00 Uhr das Relais eingeschalten. (z.B. Kaffeemaschine)

Timer

☐ Montag ☐ Dienstag ☐ Mittwoch ☐ Donnerstag ☐ Freitag ☐ Samstag ☐ Sonntag

Zeitpunkt: Stunde: 00 Minute: 00

Aktion Schaltung
Relais ☐ ausschalten ☐ einschalten ☐ invertieren ☐ zufällig schalten

Aktion Intervall
Intervall ☐ aus-ein -> aus ☐ aus-ein -> ein ☐ ein-aus -> aus ☐ ein-aus -> ein
Intervall ☐ invertieren-invertieren -> Zustand nicht ändern

Schaltdauer: Intervall Nr. 1: 01 Minuten, Intervall 2: 01 Minuten.

Zeitpunkt Aktionsende: Stunde: 00 Minute: 00

Timer-Aktion hinzufügen
Abbrechen

Aktion hinzufügen – Aktion Intervall
Hier wird wiederholt geschalten.
In diesem Beispiel wird am Wochenende von 10:00 – 17:00 Uhr das Relais immer wieder für 3 Minuten eingeschalten und für 2 Minuten ausgeschalten. Zum Aktionsende wird das Gerät ausgeschalten. (z.B. Springbrunnen)

Timer

☐ Montag ☐ Dienstag ☐ Mittwoch ☐ Donnerstag ☐ Freitag ☐ Samstag ☐ Sonntag

Zeitpunkt: Stunde: 10 Minute: 00

Aktion Schaltung
Relais ☐ ausschalten ☐ einschalten ☐ invertieren ☐ zufällig schalten

Aktion Intervall
Intervall ☐ aus-ein -> aus ☐ aus-ein -> ein ☐ ein-aus -> aus ☐ ein-aus -> ein
Intervall ☐ invertieren-invertieren -> Zustand nicht ändern

Schaltdauer: Intervall Nr. 1: 3 Minuten, Intervall 2: 2 Minuten.

Zeitpunkt Aktionsende: Stunde: 17 Minute: 00

Timer-Aktion hinzufügen
Abbrechen

Beispiel:

- ein
- Intervall Nr. 1
- aus
- Intervall Nr. 2
-> ein
-> Aktionsende

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**API-Kommandos**

**Relais einschalten:** IP-Adresse/ButtonOn  

**Relais ausschalten:** IP-Adresse/ButtonOff  

**Relais invertieren:** IP-Adresse/ButtonInvert  

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**Programmierung**

Falls Sie Ihr ALL-ESP8266-IoT-Relais mit einer eigenen Firmware flashen wollen, gehen Sie wie folgt vor:

1. Folgen Sie den Anweisungen im Brick’R’knowledge IoT Handbuch, um die Programmierumgebung zu installieren und für den ESP8266 vorzubereiten (Kapitel 5.2)
   
   Hier geht es zum Handbuch:  

2. Verbinden Sie den digital I/O Header Ihres ALL-ESP8266-IoT-Relais mit Ihrem Programmer  
   
   GND <=> GND  
   TX <=> RX  
   RX <=> TX  
   3V3 <=> 3V3

   **Achtung: Der Programmer MUSS auf 3,3V Pegel eingestellt sein!!**  
   (Wir empfehlen die Artikelnummer #111990 aus unserem Sortiment)

3. Verbinden Sie Ihren Programmer mit Ihrem Computer (ggf. installieren Sie den entsprechenden Treiber)

4. Öffnen Sie die Arduino Programmierumgebung und wählen Sie unter dem Reiter „Werkzeuge“ als Board den ESP8266, den COM-Port Ihres Programmers und stellen Sie den richtigen Programmer ein

5. Nun müssen Sie den ESP8266 in den Programmiermodus versetzen  
   a. Halten Sie den Taster #0 gedrückt  
   b. Drücken Sie kurz den RST Taster  
   c. Lassen Sie erst jetzt den #0 Taster wieder los

6. Nun ist Ihr ALL-ESP8266-IoT-Relais bereit zur Programmierung
**Pin Belegung**

<table>
<thead>
<tr>
<th>Pin Header Nummer</th>
<th>ESP8266 I/O</th>
<th>Funktion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>#1</td>
<td>TxD (Uart)</td>
</tr>
<tr>
<td>2</td>
<td>3V3</td>
<td>3V3</td>
</tr>
<tr>
<td>3</td>
<td>#2</td>
<td>RxD (Uart)</td>
</tr>
<tr>
<td>4</td>
<td>#5</td>
<td>SCL (I2C*)</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
<td>GND</td>
</tr>
<tr>
<td>6</td>
<td>#4</td>
<td>SDA (I2C*)</td>
</tr>
<tr>
<td>7</td>
<td>#0</td>
<td>Flash</td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td>5V</td>
</tr>
</tbody>
</table>

*10k Pull-Up Widerstände sind bereits auf dem Board vorhanden*

Das ALL-ESP8266-IoT-Relais lässt sich optional auch über Pin 5 & 8 mit 5V DC versorgen und ist auch so komplett funktionstüchtig.

**Relais**

Hersteller: Omron
Modell: G5RL-K1-E

Hier der Link zum Datenblatt des Relais:

Die Set-Spule wird von I/O #14 angesteuert und die Reset-Spule von I/O #12.
Sicherheitshinweise

Beachten Sie unbedingt folgende Hinweise:

- Führen Sie niemals eine Installation während eines Gewitters durch.
- Setzen Sie das Gerät im Betrieb niemals direkter Sonneneinstrahlung aus.
- Betreiben Sie das Gerät niemals in die Nähe von Wärmequellen.
- Stellen Sie das Gerät niemals auf Oberflächen, die wärmeempfindlich sind.
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