**Bill of Materials: Garage Sensor V2.01.fzz**

Saturday, March 30 2019, 18:31:46

**Assembly List**

| **Label** | **Part Type** | **Properties** |
| --- | --- | --- |
| 1117 | Voltage Regulator AMS1117 | voltage 3.3; package sot223; variant variant 1; chip AMS1117; current 1100mA |
| 5V | Power Jack | type 5.5mm barrel; package power\_jack\_pth\_lock; variant pth\_lock |
| C1 | Electrolytic Capacitor | voltage 16V; capacitance 100µ; package 0605 [SMD, electrolytic] |
| C2 | Capacitor | package 1206; variant 1206; part # 10nf |
| C3 | Capacitor | package 1206; variant 1206; part # 10nf |
| D1 | Rectifier Diode | type Rectifier; package Melf DO-213 AB [SMD]; part # 1N4007 |
| ESP-12E/F | ESP-12EF | variant 12EF; part # ESP-12EF |
| LED1 | LEDs | package led-1206; variant 1206; part # Green |
| LED2 | LEDs | package led-1206; variant 1206; part # Blue |
| O G V | Generic male header - 3 pins | form ♂ (male); hole size 1.0mm,0.508mm; pin spacing 0.1in (2.54mm); pins 3; package THT; row single |
| O G V | Generic male header - 3 pins | form ♂ (male); hole size 1.0mm,0.508mm; pin spacing 0.1in (2.54mm); pins 3; package THT; row single |
| O G V | Generic male header - 3 pins | form ♂ (male); hole size 1.0mm,0.508mm; pin spacing 0.1in (2.54mm); pins 3; package THT; row single |
| Q1 | NPN-Transistor | type NPN; package SOT-23 [SMD] |
| Q2 | NPN-Transistor | type NPN; package SOT-23 [SMD] |
| Q3 | NPN-Transistor | type NPN; package SOT-23 [SMD] |
| R1 | 68Ω Resistor | resistance 68Ω; tolerance ±5%; package 1206 [SMD] |
| R2 | 10kΩ Resistor | resistance 10kΩ; tolerance ±5%; package 1206 [SMD] |
| R3 | 22Ω Resistor | resistance 22Ω; tolerance ±5%; package 1206 [SMD] |
| R4 | 10kΩ Resistor | resistance 10kΩ; tolerance ±5%; package 1206 [SMD] |
| R5 | 10kΩ Resistor | resistance 10kΩ; tolerance ±5%; package 1206 [SMD] |
| R6 | 10kΩ Resistor | resistance 10kΩ; tolerance ±5%; package 1206 [SMD] |
| R7 | 47kΩ Resistor | resistance 47kΩ; tolerance ±5%; package 1206 [SMD] |
| R8 | 47kΩ Resistor | resistance 47kΩ; tolerance ±5%; package 1206 [SMD] |
| R9 | 47kΩ Resistor | resistance 47kΩ; tolerance ±5%; package 1206 [SMD] |
| R10 | 1kΩ Resistor | resistance 1kΩ; tolerance ±5%; package 1206 [SMD] |
| R11 | 1kΩ Resistor | resistance 1kΩ; tolerance ±5%; package 1206 [SMD] |
| R12 | 1kΩ Resistor | resistance 1kΩ; tolerance ±5%; package 1206 [SMD] |
| RST | SWITCH-MOMENTARY-2 | package tactile-switch-1101ne; variant -smd-1101ne |
| RUN | Toggle Switch | switching circuit SPDT; package THT |
| S1 | Generic male header - 2 pins | form ♂ (male); hole size 1.0mm,0.508mm; pin spacing 0.1in (2.54mm); pins 2; package THT; row single |
| S2 | Generic male header - 2 pins | form ♂ (male); hole size 1.0mm,0.508mm; pin spacing 0.1in (2.54mm); pins 2; package THT; row single |
| S3 | Generic male header - 2 pins | form ♂ (male); hole size 1.0mm,0.508mm; pin spacing 0.1in (2.54mm); pins 2; package THT; row single |
| SER | Generic male header - 3 pins | form ♂ (male); hole size 1.0mm,0.508mm; pin spacing 0.1in (2.54mm); pins 3; package THT; row single |

**Shopping List**

| **Amount** | **Part Type** | **Properties** |
| --- | --- | --- |
| 1 | Voltage Regulator AMS1117 | voltage 3.3; package sot223; variant variant 1; chip AMS1117; current 1100mA |
| 1 | Power Jack | type 5.5mm barrel; package power\_jack\_pth\_lock; variant pth\_lock |
| 1 | Electrolytic Capacitor | voltage 16V; capacitance 100µ; package 0605 [SMD, electrolytic] |
| 2 | Capacitor | package 1206; variant 1206; part # 10nf |
| 1 | Rectifier Diode | type Rectifier; package Melf DO-213 AB [SMD]; part # 1N4007 |
| 1 | ESP-12EF | variant 12EF; part # ESP-12EF |
| 1 | LEDs | package led-1206; variant 1206; part # Green |
| 1 | LEDs | package led-1206; variant 1206; part # Blue |
| 4 | Generic male header - 3 pins | form ♂ (male); hole size 1.0mm,0.508mm; pin spacing 0.1in (2.54mm); pins 3; package THT; row single |
| 3 | NPN-Transistor | type NPN; package SOT-23 [SMD] |
| 1 | 68Ω Resistor | resistance 68Ω; tolerance ±5%; package 1206 [SMD] |
| 4 | 10kΩ Resistor | resistance 10kΩ; tolerance ±5%; package 1206 [SMD] |
| 1 | 22Ω Resistor | resistance 22Ω; tolerance ±5%; package 1206 [SMD] |
| 3 | 47kΩ Resistor | resistance 47kΩ; tolerance ±5%; package 1206 [SMD] |
| 3 | 1kΩ Resistor | resistance 1kΩ; tolerance ±5%; package 1206 [SMD] |
| 1 | SWITCH-MOMENTARY-2 | package tactile-switch-1101ne; variant -smd-1101ne |
| 1 | Toggle Switch | switching circuit SPDT; package THT |
| 3 | Generic male header - 2 pins | form ♂ (male); hole size 1.0mm,0.508mm; pin spacing 0.1in (2.54mm); pins 2; package THT; row single |

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**NOTE:**

You will also need one 5V High Level relay and one magnetic switch for each door. A High Level Relay is required so that the doors do not actuate should there be a power failure.