**Mobile Networks and Internet of Things**

**SolarMax**

**Group 9** - Diogo Luís (96922), Duarte Marques (96523)

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List of materials

**Table 1**: Complete list of materials used in the project, including the respective identification for the elements used in the Fritzing diagrams of Figure 1.

|  |  |  |  |
| --- | --- | --- | --- |
| **Identification** | | **Component** | **Quantity** |
| **1** | | [Solar Cell 12V 250mA](https://www.ptrobotics.com/solar/5358-solar-cell-12v-250ma.html) | 1 |
| **2** | **A** - Above  **B** – Below | [Servo MG996R 180º 11kg/cm](https://www.botnroll.com/pt/servos/3168-servo-mg996r-180-11kg-cm.html) | 2 |
| **3** | **A** – LDR sensors  **B** – Voltage divider | [Protoboard 70x90](https://www.botnroll.com/pt/pcbs/4537-placa-circuito-impresso-perfurada-face-simples-70x90mm.html)mm | 2 |
| **4** | | [LDR 5528 VT90N2 5](https://www.botnroll.com/pt/luz-imagem/3617-vt90n2-ldr-1k-5mm-sensor-de-luz.html)mm | 4 |
| **5** | **A** – LDR sensors  **B** – Voltage divider | [Resistance 10K 1/4W](https://www.botnroll.com/pt/resistencias/179-resistencia-10k.html) | 7 |
| **6** | **A** – Servo above  **B** – Servo below | [Step-down LM2596 10W](https://www.botnroll.com/pt/conversores-dcdc/937-lm2596-step-down.html) | 2 |
| **7** | | [Battery Ni-MH 12V 800mAh AA - BNRA](https://www.botnroll.com/pt/3-bot-n-roll-one-c/1003-bateria-12v-ni-mh-aa-800mah-wwwbotnrollcom.html) | 1 |
| **8** | | [Mini Digital Voltmeter Red LED](https://www.electrofun.pt/display/mini-voltimetro-digital) | 1 |
| **9** | | [Switch ON/OFF Black 15A 250V](https://mixtronica.com/basculante-interruptores/22642-interruptor-basculante-1-circuito-onoff-preto-15a-250v.html) | 1 |
| **10** | | [DC male 5.5x2.1x10mm](https://mauser.pt/catalog/product_info.php?cPath=735_751_2905_754&products_id=011-0678) | 1 |
| **11** | | [DC female 5.5x2.1mm](https://mauser.pt/catalog/product_info.php?cPath=1874_640_387_1153&products_id=011-3175) | 1 |
| **12** | | [Unipolar ON-OFF Pressure Switch](https://mixtronica.com/pressao-interruptores/11479-interruptor-pressao-2-posicoes-unipolar-redondo-on-off.html) | 1 |
| **13** | | Arduino UNO WiFi Rev2 | 1 |
|  | | | |
| **Additional material** | | [Jumper wires M/M 30cm](https://www.botnroll.com/pt/jumpers/1083-jumper-wires-premium-12-mm-pack-of-10.html) | 9 |
| [Screws M1x10mm](https://www.leroymerlin.pt/produtos/ferragens/ferragens-de-fixacao/parafusos/10-micro-parafusos-cilindrico-1x10-13571040.html) | 2 |
| [Screws M1.4x16mm](https://mauser.pt/catalog/product_info.php?cPath=115_2234_1577_3035&products_id=092-0160) | 6 |
| [Screws M2x20mm](https://mauser.pt/catalog/product_info.php?cPath=115_2234_1577_3036&products_id=092-0172) | 9 |
| [Screws M3x6mm](https://www.botnroll.com/pt/parafusos/619-pernos-m36-em-nylon-conjunto-de-10.html) | 6 |
| [Screws M3x14mm](https://mauser.pt/catalog/product_info.php?cPath=115_2234_1577_3035&products_id=092-0016) | 6 |
| [Screws M4x25mm](https://mauser.pt/catalog/product_info.php?cPath=115_2234_1577_3036&products_id=092-0245) | 4 |
| [Nuts M1.4](https://mauser.pt/catalog/product_info.php?cPath=115_2234_1578&products_id=092-0161) | 4 |
| [Nuts M2](https://mauser.pt/catalog/product_info.php?cPath=115_2234_1578&products_id=092-0169) | 1 |
| [Nuts M3](https://mauser.pt/catalog/product_info.php?cPath=115_2234_1578&products_id=092-0158) | 10 |
| [Nuts M4](https://mauser.pt/catalog/product_info.php?cPath=115_2234_1578&products_id=092-0244) | 4 |
| [Washer M1](https://www.leroymerlin.pt/produtos/ferragens/ferragens-de-fixacao/parafusos/10-micro-parafusos-cilindrico-1x10-13571040.html) | 2 |
| [Washer M1.4](https://mauser.pt/catalog/product_info.php?cPath=115_2234_1586_3038&products_id=092-0072) | 4 |
| [Spacers M3](https://mauser.pt/catalog/product_info.php?cPath=324_708_1566_3044&products_id=096-2155) | 4 |
| [UHU patafix deco](https://www.leroymerlin.pt/produtos/tintas-e-drogaria/colas-e-fitas-adesivas/colas/pastilhas-de-fixacao-patafix-homedeco-uhu-14864724.html) | - |
| [Lexman Loudspeaker cable 2x1 1.5mm2](https://www.leroymerlin.pt/produtos/eletricidade-e-smart-home/equipamentos-para-tv/cabos-de-som/cabo-hi-fi-lexman-2x1-5mm2-vm-pr-fc-e-10m-82658664.html) | - |
| [Black copper wire 1x0.5mm2](https://mauser.pt/catalog/product_info.php?cPath=1874_56_2732_2785&products_id=016-0594) | - |
| [Red copper wire 1x0.5mm2](https://mauser.pt/catalog/product_info.php?cPath=1874_56_2732_2785&products_id=016-0593) | - |
| 3D-printed parts | 7 |
| Cellphone/tablet device and cable | 1 |

**1**

Fritzing diagram



**Figure 1**: Fritzing diagram of the hardware connections performed with the materials identified in Table 1.

**2**