| Name           | Туре        | Value                      | Quantity | Size/Package | Note                                       |
|----------------|-------------|----------------------------|----------|--------------|--|
|                | G           | 100u, 50V surface          |          |              | 77   |
| C1             | Capacitor   | mount<br>220u, 35V surface | 1        | 8x11.5mm     | >=50V                                      |
| C2             | Capacitor   | mount                      | 1        | 8x11.5mm     | >=35V                                      |
| C3, C4         | Capacitor   | 0.1μ                       | 2        | SMD 0805     | Filter cap                                 |
| D1             | Diode       | S1B                        | 1        | SMA          | Half-wave rectifier                        |
| D2             | Diode       | SS34                       | 1        | SMB          | Schottky                                   |
| DF             | Diode       | S1B                        | 1        | SMA          | Flyback protection                         |
| TVS0-9         | TVS         | SMBJ48CA                   | 10       | SMB          | Bidirectional transient voltage suppressor |
| IC1            | IC          | LM2596S-5.0                | 1        | DDPAK/TO-263 | Switching regulator                        |
| IC2            | IC          | 74HC595N                   | 1        | SOIC-16      | Shift register                             |
| IC3            | IC          | DS1307                     | 1        | SOIC-8       | RTC  |
| L1             | Inductor    | 150uH                      | 1        | SMD CDRH125  | power inductor                             |
| LED            | LED         | Green                      | 1        | SMD 0805     | Power indicator LED                        |
| RLED           | Resistor    | 1K                         | 1        | SMD 0805     | LED current limiting                       |
| ROE            | Resistor    | 10K                        | 1        | SMD 0805     | NOE pull-up resistor                       |
| RQ             | Resistor    | 10K                        | 1        | SMD 0805     | MOSFET pull-down resistor                  |
| RR             | Resistor    | 4.7K                       | 1        | SMD 0805     | Rain sensor current limiting resistor      |
| RS             | Resistor    | 33K                        | 1        | SMD 0805     | Rain sensor pull-up resistor               |
| Q1             | MOSFET      | 2N7002                     | 1        | SOT-23       | MOSFET (for driving relay)                 |
| T1-T8          | Triac       | BT1308W                    | 8        | SOT-223      | solenoid driver                            |
| AC IN          | Term. Block | screw terminal             | 1        | HT3.96-2p    | AC in                                      |
| COM, Rain      | Term. Block | screw terminal             | 2        | 2EDG 5.08-2p | COM, Rain sensor port                      |
| S1-8           | Term. Block | screw terminal             | 1        | 2EDG 5.08-8p | Station terminals                          |
| Relay          | Relay       | HK23F-DC5V                 | 1        |              | Mini-relay (5V, contact rating 120VAC/2A)  |
| EXP            | Header      | 2x4 male right-angled      | 1        |              | zone expansion connector                   |
| X1             | resistor    | 32.768KHz                  | 1        |              | crystal for RTC                            |
| PTC            | PTC fuse    | SMD 1812, 1A               | 1        |              | fuse (on 5V line)                          |
| FUSE           | 2A fuse     | Solder-on fuse             | 1        |              | fuse (on 24VAC line)                       |
| Battery holder | Bat         | 12mm                       | 1        |              | backup batt for RTC                        |
| Coin battery   | Bat         | CR1220 coin                | 1        |              |  |

| Separation |         |         |   |  |
|------------|---------|---------|---|--|
| Pillars    | Pillars | M3 x 17 | 3 |  |