# Water Valve Control 1

Conn2
Rly1
D1 1N4004
Close BR
Open BL
YL
GND
Vdc
Q1 BC847B
R7 5K
Valve1
R8 5K
GND
+3V3
Red
D3
R9 47
BC847B Q3
GND

# Aux Control 1

Conn7
Rly3
D8 1N4004
Vdc
Q6 BC847B
R17 10K
AUX1
R18 10K
GND
+3V3
Red
D7
R16 47
BC847B Q7
GND

# Water Temp Sensor

Conn9
+3V3
R15 4.7K
+3V3
Temp
GND

# Water Detect

Conn5
+3V3
1.0K R10
Vdc
WTR
GND

# Microcontroller

TP2 3v3
R5 10K
RST
C7 1.0uF
C6 100nF
R3 10K
R22 2K
+3V3
GND
R24 2K
C5 100nF
C8 100nF
EN
Valve1
Valve2
Sensor1
LED
AUX2
AUX1
GND
R4 10K
GND

U1 ESP-WRODN-D2D-N4
3V3
EN
IO14
IO12
IO13
IO15
IO2
IO0
GND
TXD
RXD
IO4
GND
GND
IO16
TOUT
RST
IO5
GND
TXD
RXD
IO4
19 GND
18 GND
17 IO16
16 WTR
15 Sensor2
14 RST
13 GND
12 Rx
11 Tx
10 Temp
GND

# Water Valve Control 2

Conn6
Rly2
D6 1N4004
Close BR
Open BL
YL
GND
Vdc
Q4 BC847B
R13 5K
Valve2
R14 5K
GND
+3V3
Red
D5
R12 47
BC847B Q5
GND

# Aux Control 2

Conn8
Rly4
D10 1N4004
Vdc
Q8 BC847B
R20 6K
AUX2
R21 5K
GND
+3V3
Red
D9
R19 47
BC847B Q9
GND

# Microcrontroller Programming

AUX1
R23 1K
S1 PROG
GND
AUX1
RST
RESET
Conn1
6 5
4 3
2 1
Rx
Tx
EN
GND

# Power Source

J1
D11 SS14
+12V
Vdc
C10 470uF
GND

# Power Supply

C3 100nF
L1 3.3uH
TP1 3v3
+3V3
TP3 Vdc Vdc
U3 TPS56120100CR
Vdc
C1 10uF
C2 10uF
EN
FB
VIN
VBST
SW
GND
R1 33K
C4 47uF
R2 10K
GND
GND
GND
GND

# Water Flow Sensor 1-2

Conn3
+3V3
R25 10K
+3V3
Sensor1
GND
Conn4
+3V3
R26 10K
+3V3
Sensor2
GND

# Status LED

+3V3
LED
D2
Blue
R6 5K
BC847B Q2
GND

# Power On LED

Vdc
R11 900
D4
Green
GND