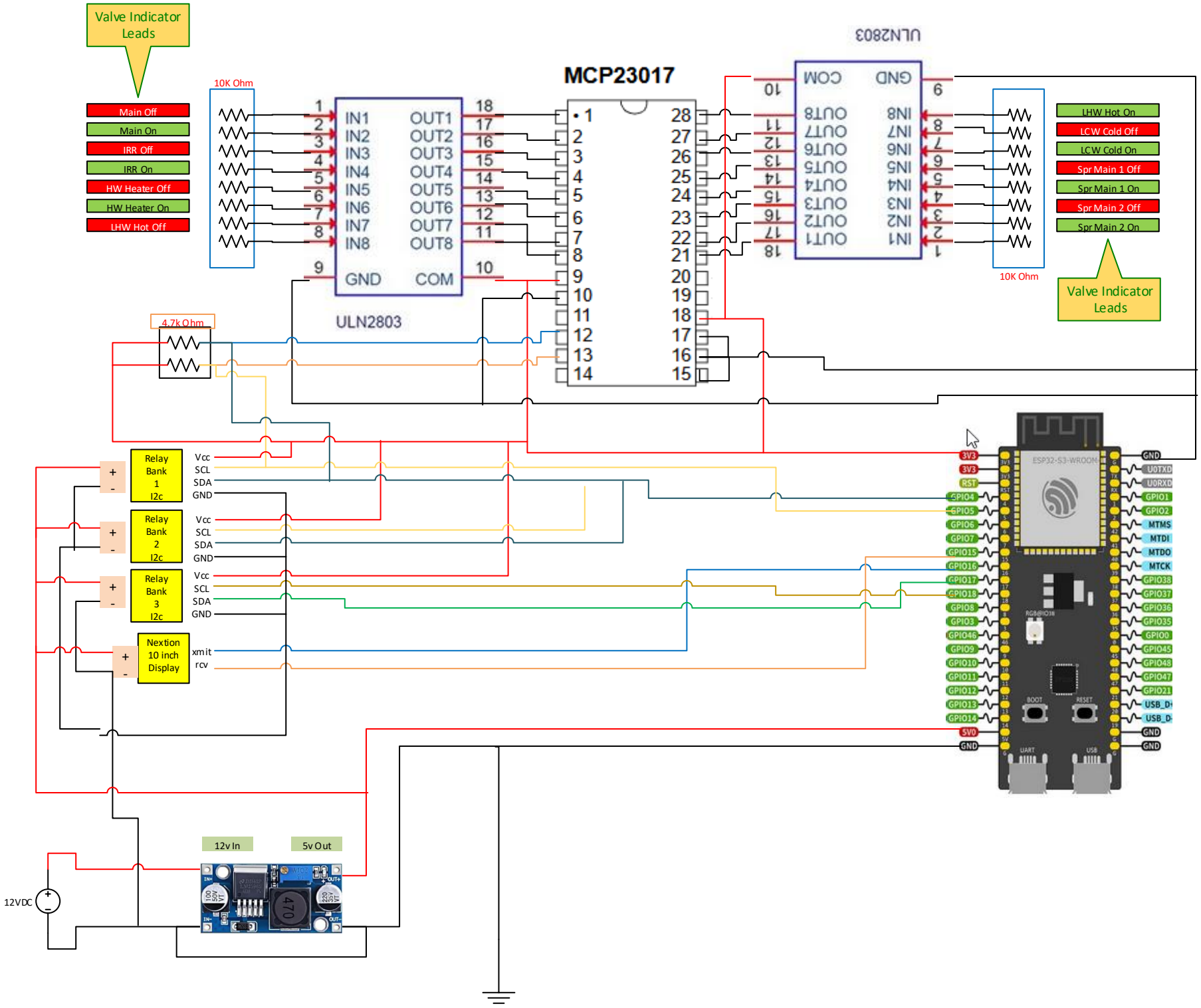
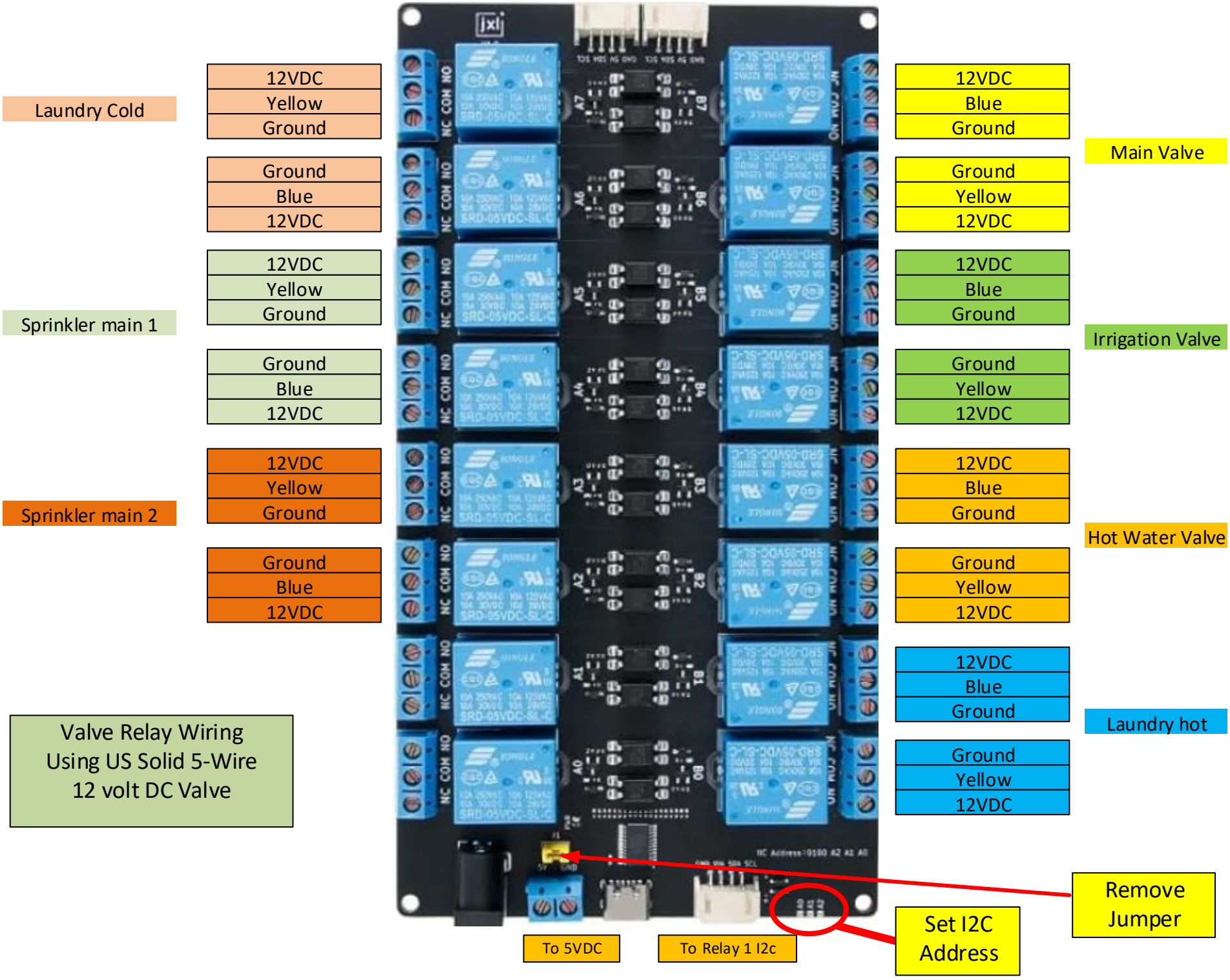
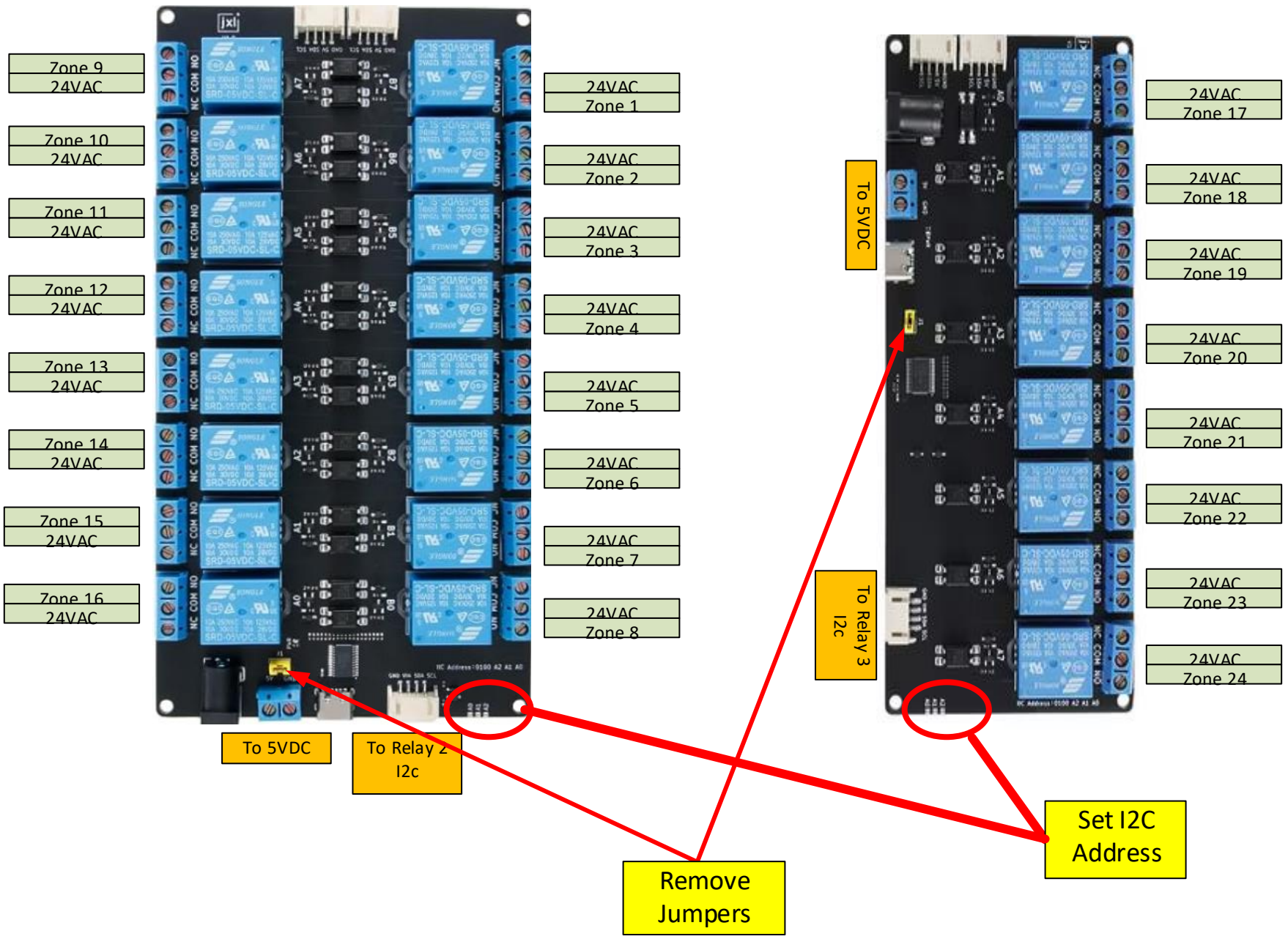
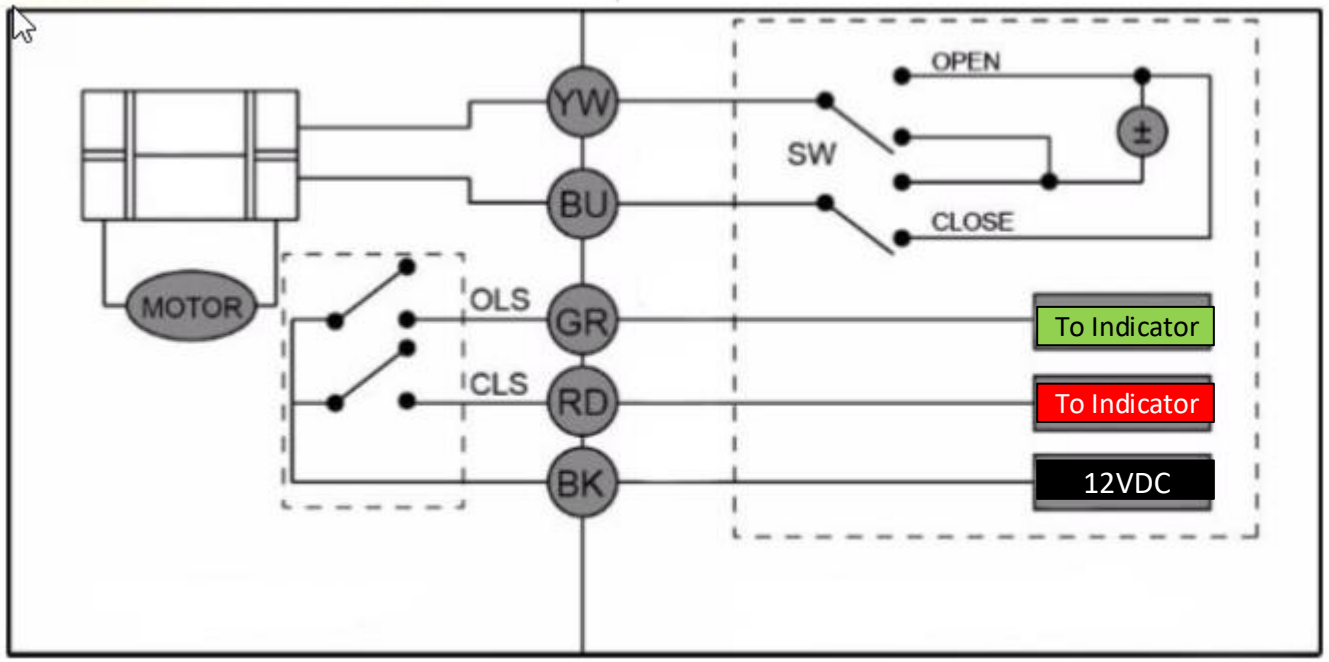

Valve Indicator Leads
Main Off
Main On
IRR Off
IRR On
HW Heater Off
HW Heater On
LHW Hot Off
10K Ohm
IN1
IN2
IN3
IN4
IN5
IN6
IN7
IN8
GND
OUT1
OUT2
OUT3
OUT4
OUT5
OUT6
OUT7
OUT8
COM
ULN2803
MCP23017
ULN2803
COM
GND
OUT8
OUT7
OUT6
OUT5
OUT4
OUT3
OUT2
OUT1
IN8
IN7
IN6
IN5
IN4
IN3
IN2
IN1
10K Ohm
LHW Hot On
LCW Cold Off
LCW Cold On
Spr Main 1 Off
Spr Main 1 On
Spr Main 2 Off
Spr Main 2 On
Valve Indicator Leads
4.7k Ohm
Relay Bank 1 I2c
Relay Bank 2 I2c
Relay Bank 3 I2c
Nextion 10 inch Display
Vcc
SCL
SDA
GND
xmit
rcv
ESP32-S3-WROOM
12VDC
12v In
5v Out

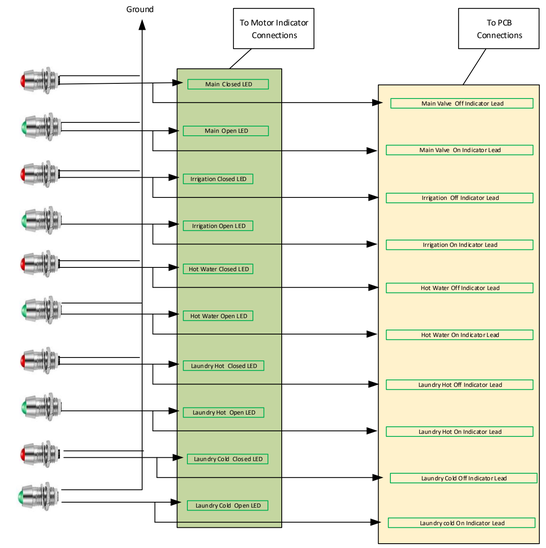

Laundry Cold
12VDC
Yellow
Ground
Ground
Blue
12VDC
Sprinkler main 1
12VDC
Yellow
Ground
Ground
Blue
12VDC
Sprinkler main 2
12VDC
Yellow
Ground
Ground
Blue
12VDC
12VDC
Blue
Ground
Main Valve
Ground
Yellow
12VDC
12VDC
Blue
Ground
Irrigation Valve
Ground
Yellow
12VDC
12VDC
Blue
Ground
Hot Water Valve
Ground
Yellow
12VDC
12VDC
Blue
Ground
Laundry hot
Ground
Yellow
12VDC
Valve Relay Wiring
Using US Solid 5-Wire
12 volt DC Valve
To 5VDC
To Relay 1 I2c
Remove
Jumper
Set I2C
Address


Zone 9 24VAC
Zone 10 24VAC
Zone 11 24VAC
Zone 12 24VAC
Zone 13 24VAC
Zone 14 24VAC
Zone 15 24VAC
Zone 16 24VAC
24VAC Zone 1
24VAC Zone 2
24VAC Zone 3
24VAC Zone 4
24VAC Zone 5
24VAC Zone 6
24VAC Zone 7
24VAC Zone 8
To 5VDC
To Relay 2 I2c
To 5VDC
To Relay 3 I2c
24VAC Zone 17
24VAC Zone 18
24VAC Zone 19
24VAC Zone 20
24VAC Zone 21
24VAC Zone 22
24VAC Zone 23
24VAC Zone 24
Remove Jumpers
Set I2C Address



1. When switch is set to open, the valve will fully open. Once fully open, the valve will largely de-energize. The Open Limited Signal will be energized, indicating that the valve is fully open.
2. When switch is set to close, the valve will fully close. Once fully closed, the valve will largely de-energize. The Closed Limited Signal will be energized, indicating that the valve is fully closed.
3. In case of power loss, valve will remain in its current state.

US Solid
5 Wire Valve Diagram



To PCB Connections