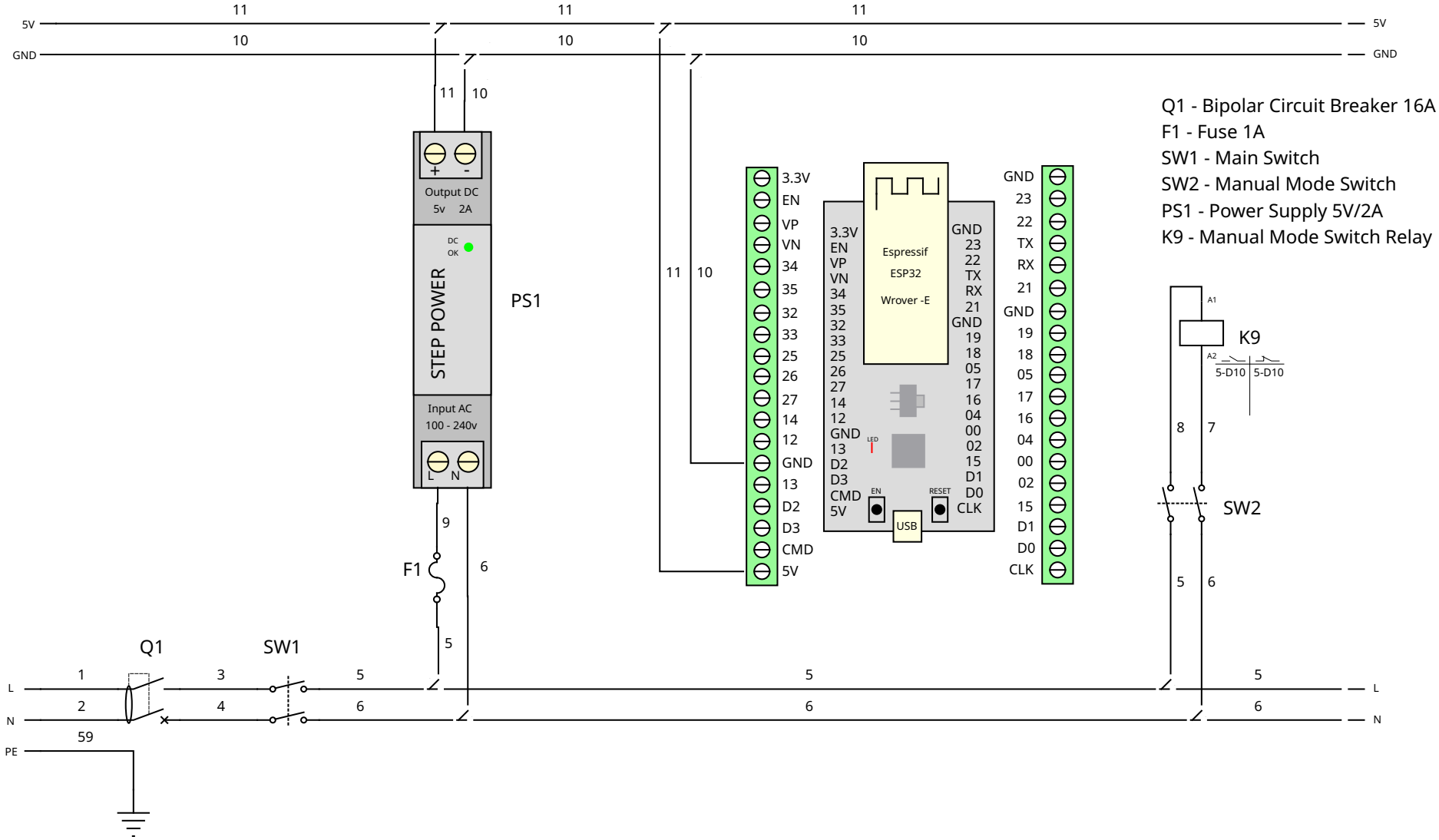
Instituto Politécnico Portalegre

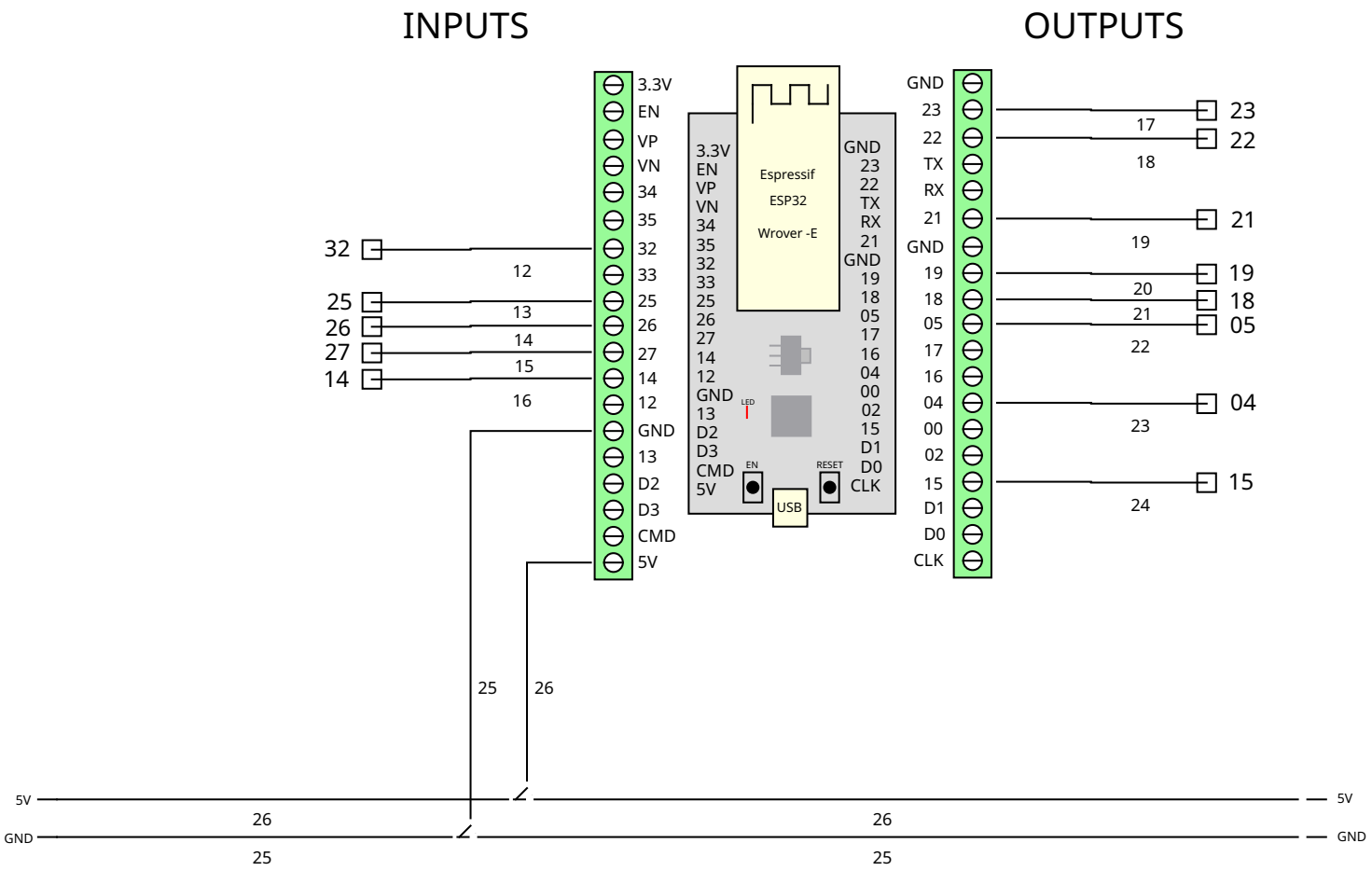
POLITÉCNICO DE PORTALEGRE
Escola Superior de Tecnologia e Gestão

Intelligent Destiller

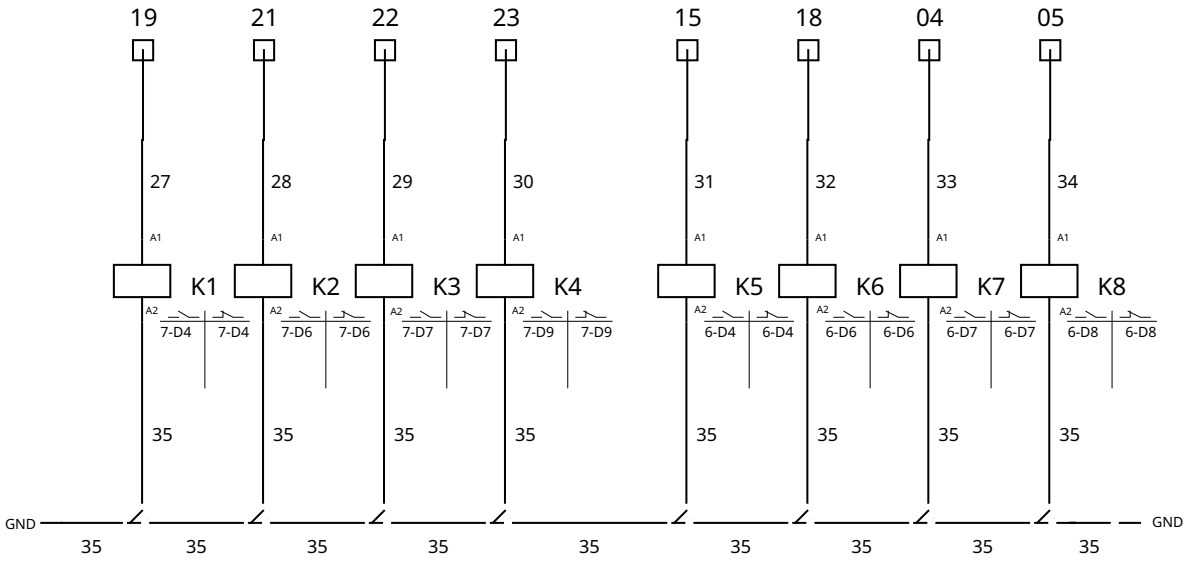
DOCENTE: Sérgio Correia
DISCENTES: Sérgio Carmo
N.º 19749



Author: Sérgio Carmo	Power Supply	File: Power Supply
Date:		Folio: 2/10

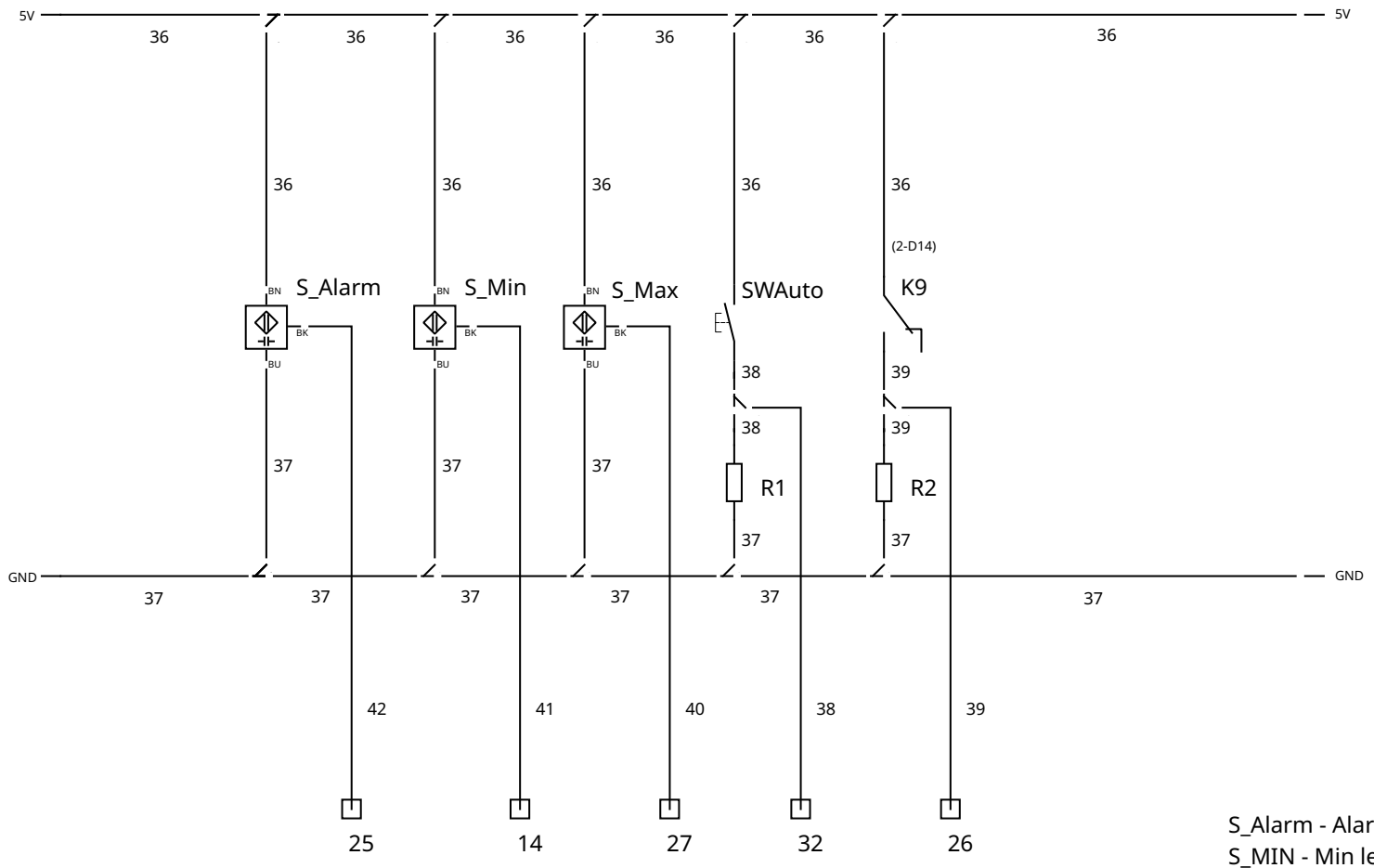


Author: Sérgio Carmo	Inputs / Outputs
Date:	File: Inputs / Outputs
	Folio: 3/10



V1 - Cold Water Electronic Valvule In
V2 - Vapor Electronic Valvule out
BMB - Water Pump
RAQ - Water Heater
LED AUTO - Auto Mode Indicator
LED ALARM - Alarm Indicator
LED MAX - Max Water Level Indicator
LED MIN - Min Water Level Indicator

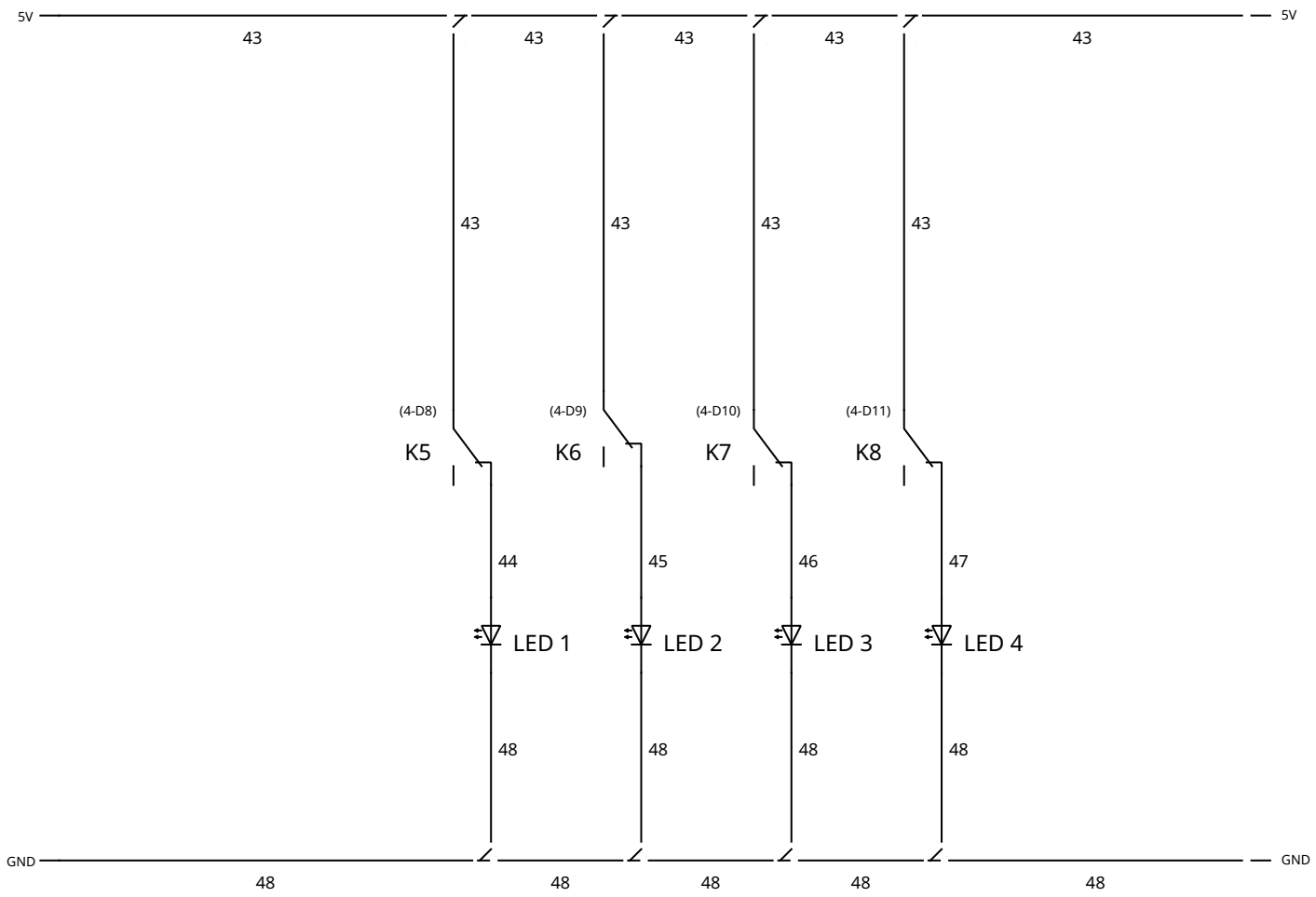
Author: Sérgio Carmo	Digital Outputs	File: Digital Outputs
Date:		Folio: 4/10



S_ALARM	S_MIN	S_MAX	SW_AUTO	SW_MAN

S_Alarm - Alarm level water sensor
S_MIN - Min level water sensor
S_MAX - Max level water sensor
SW_Auto - Push Button Auto Mode
SW_MAN - Switch Manual mode
R1, R2 - 10 k ohm resistor

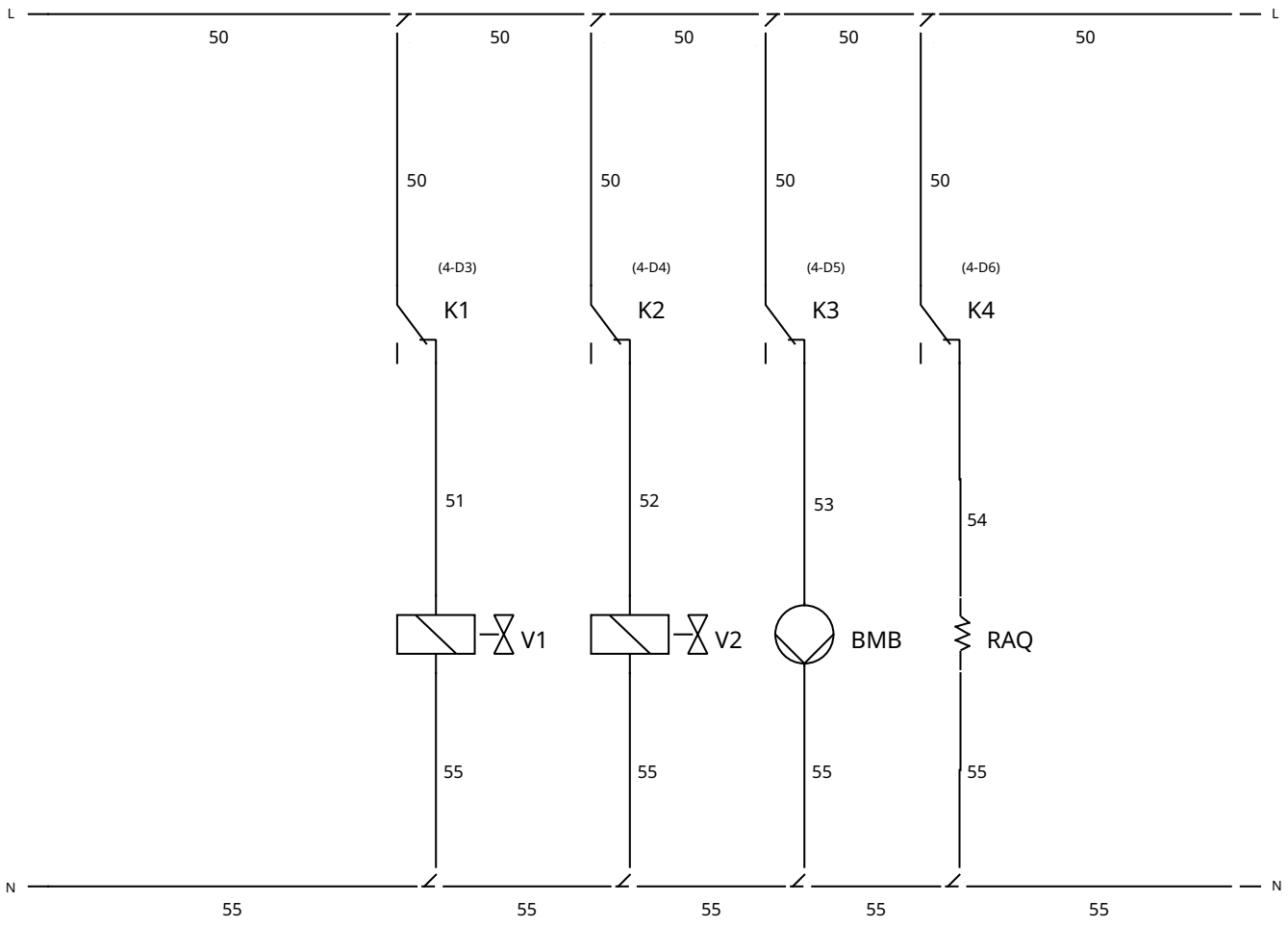
Author: Sérgio Carmo	Digital Inputs	File: Digital Inputs
Date:		Folio: 5/10



LED AUTO	LED ALARM	LED MAX	LED MIN

R5 - Relay Output 5
R6 - Relay Output 6
R7 - Relay Output 7
R8 - Relay Output 8
LED 1 - Auto Mode Indicator
LED 2 - Alarm Indicator
LED 3 - Max Water Level Indicator
LED 4 - Min Water Level Indicator

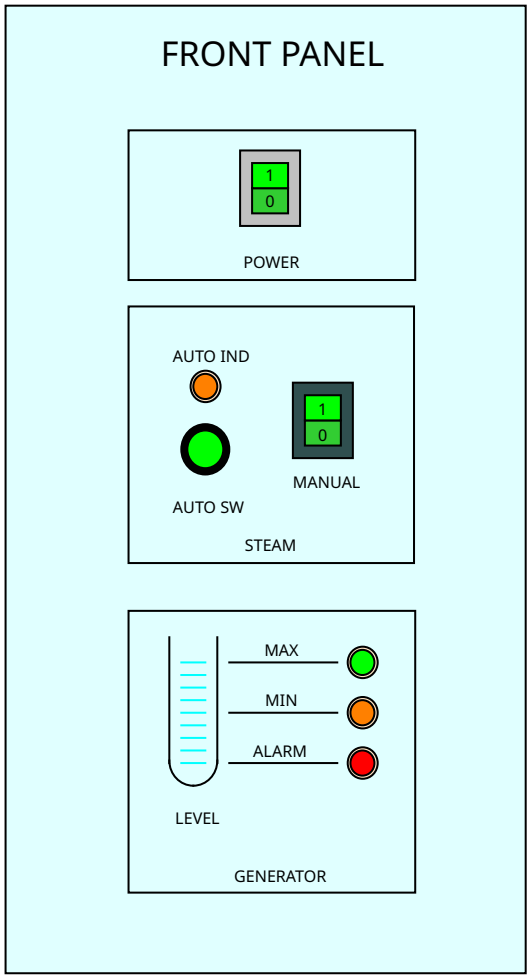
Author: Sérgio Carmo	Outputs 5v	File: Outputs 5v
Date:		Folio: 6/10



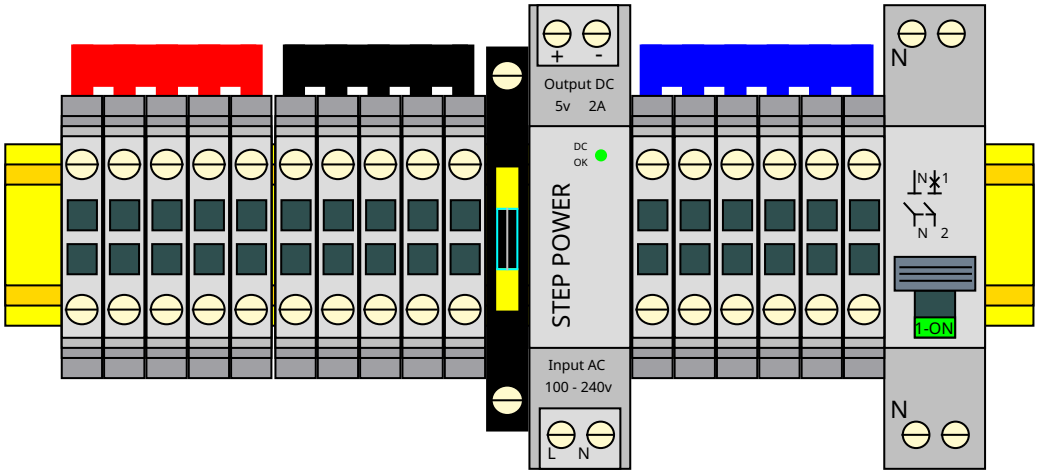
V1	V2	BMB	RAQ

R1 - Relay Output 1
R2 - Relay Output 2
R3 - Relay Output 3
R4 - Relay Output 4
V1 - Cold Water Electronic Valvule In
V2 - Vapor Electronic Valvule out
BMB - Water Pump
RAQ - Water Heater

Author: Sérgio Carmo	Output 230V	File: Output 230V
Date:		Folio: 7/10



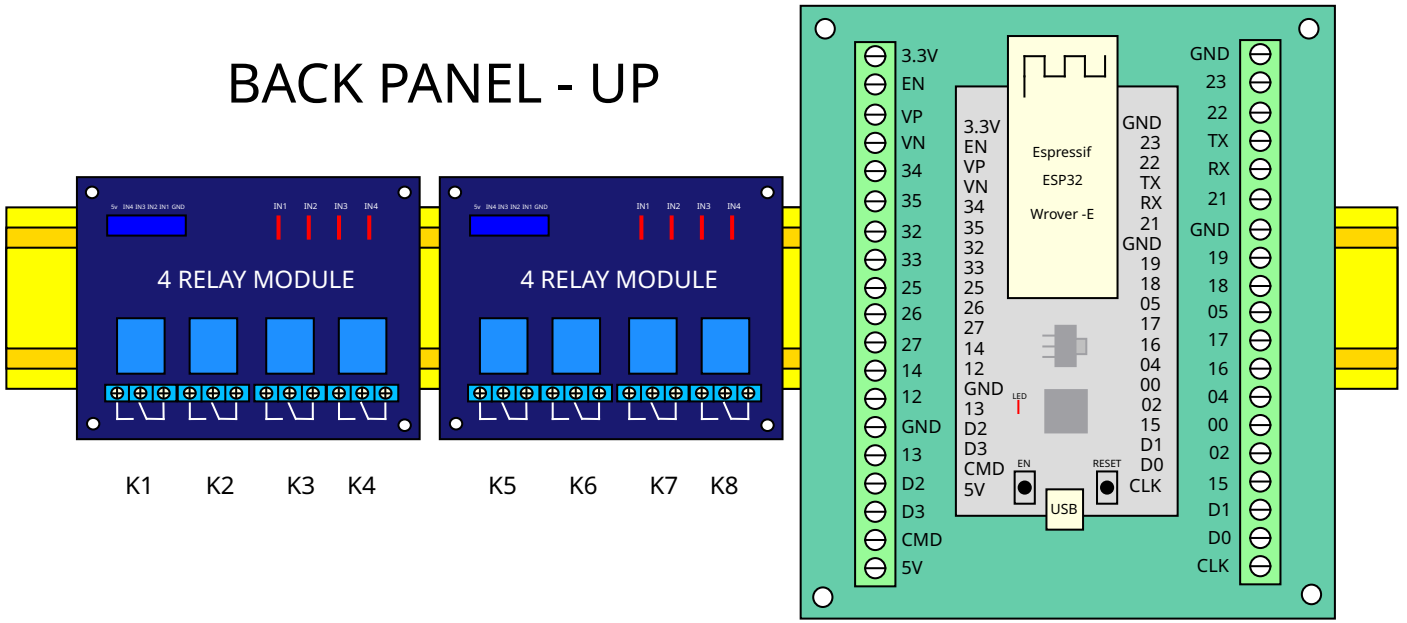
SIDE PANEL



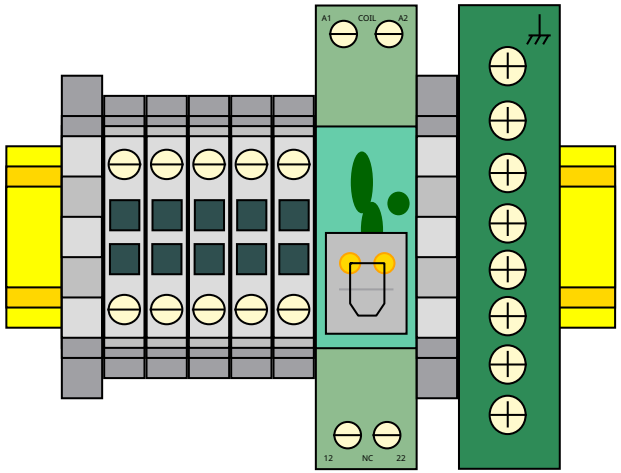
F1 PS1 Q1

Author: Sérgio Carmo	Layout: Front + Side	File: Layout: Front + Side
Date:		Folio: 8/10

BACK PANEL - UP



BACK PANEL - DOWN



Author: Sérgio Carmo	Layout: Back	File: Layout: Back
Date:		Folio: 9/10

Quantity	Description	Manufacturer	Ref. Manufacturer	Supplier	Ref. Supplier
1	Circuit Breaker 16A	Schneider Eletric	iDPN N C 16A	se.com	A9N21547
1	Main Switch With Built-in 240V Neon Indicator				
1	STEP-PS/ 1AC/ 5DC/2 - Power supply unit	Phoenix Contact	2320513	Mouser.com	651-2320513
1	DIN Rail Terminal Blocks UK 5-HESI N (Fuse 1A)	Phoenix Contact	651-3000539	Mouser.com	3000539
1	Esp32-Wrover-E	EspressIf	ESP32_DevKitc_V4	Mouser.com	356-ESP32WRVE22864PC
1	Terminal Adapter for ESP_32 (38-pin)		616		
2	4-Channel 5V Relay Module	SAINSMART	2PH63083A		
3	Optical liquid level sensor	Cynergy3	OLS710D3SH	Mouser.com	285-OLS710D3SH
1	Push Button				
1	Relay 250V 2x2A	Phoenix Contact	2987972	Mouser.com	651-2987972
1	Relay base 300VAC 12A	Phoenix Contact	28 33 521	Mouser.com	651-2833521
2	10k ohm Resistor				
4	5V LED Indicator Red/Orange/Green (10mm)	Gebildet	E738A		
2	240V Water Valve 0-12 Bar	M&M	B297DVE		
1	240V Oscillating Pump	Gorman Rupp Industries	14825-669		
1	240V Water Heater				
1	Push Switch Button With Built-in 240V Neon Indicator				
29	DIN Rail Terminal Blocks SRL 3 (Bus Connector)	Weidmuller	2614930000	Mouser.com	470-2614930000
1	DIN Rail Connector 8 Outputs				
4	DIN Rail Terminal Blocks SRL 3	Weidmuller	2614930000	Mouser.com	470-2614930000