

## IO

Number	PIN		Signal name on schematic	I/O?	Device in machine	Purpose	ON schematic?	Relay module	
1	1	R a s p b e r r y p i c o	waterHeater1	O	Water heater nr 1		Y	RIGHT	
2	2		waterHeater2	O	Water heater nr 2		Y	RIGHT	
3	4		waterPump1	O	Water pump nr 1		Y	TOP	
4	5		waterPump2	O	Water pump nr 2		Y	TOP	
5	6		DS18B20_1wire	1-wire	DS18B20 temp sensors		Y		
6	7		teaBrewerServo1	PWM	Tea Brewer nr 1		Y		
7	9		teaBrewerServo2	PWM	Tea Brewer nr 2		Y		
8	10		Future PWM1	PWM	Future PWM1		Y		
9	11		Future PWM2	PWM	Future PWM2		Y		
10	12		Future PWM3	PWM	Future PWM3		Y		
11	14		SDA	I2C	IO Expanders				
12	15		SCL	I2C	IO Expanders				
13	16		rgbLightR	PWM	RGB Light		Y		
14	17		rgbLightG	PWM	RGB Light		Y		
15	19		rgbLightB	PWM	RGB Light		Y		
16	20		ledStrip	PWM	LED Strip (addressable)				
17	21		RP2UARTTX	UART TX	Raspberry pi 2		Y		
18	22		RP2UARTRX	UART RX	Raspberry pi 2		Y		
19	24		sugarLvl2	I	Sugar Dispenser 2		Y		
20	25		sugarServo1	PWM	Sugar Dispenser 1		Y		
21	26		sugarServo2	PWM	Sugar Dispenser 2		Y		
22	27		ingridServo	PWM	Ingredients dispenser		Y		
23	29		sugarLvl1	I	Sugar Dispenser 1		Y		
24	31		Future_A1	I			Y		
25	32		Future_A2	I			Y		
26	34		Future_A3	I			Y		
27	0	L E F T	OUT1_screw1RL	O	Screw Conveyor 1		Y	LEFT	
28	1		OUT2_screw1RR	O	Screw Conveyor 1		Y	LEFT	
29	2		OUT3_screw2RL	O	Screw Conveyor 1		Y	LEFT	
30	3		OUT4_screw2RR	O	Screw Conveyor 2		Y	LEFT	
31	4		OUT5_screw3RL	O	Screw Conveyor 3		Y	LEFT	
32	5		OUT6_screw3RR	O	Screw Conveyor 3		Y	LEFT	
33	6		OUT7_screw4RL	O	Screw Conveyor 4		Y	LEFT	
34	7		OUT8_screw4RR	O	Screw Conveyor 4		Y	LEFT	
35	8	E X P A N D E R	screwFeederLvl1	I	Screw Conveyor 1		Y		
36	9		screwFeederLvl2	I	Screw Conveyor 2		Y		
37	10		screwFeederLvl3	I	Screw Conveyor 3		Y		
38	11		screwFeederLvl4	I	Screw Conveyor 4		Y		
39	12		dripTrayLvl	I	Drip Tray		Y		
40	13		cupSensor	I	Cup sensing device		Y		
41	14		Future_O5	O			Y		
42	15		Future_O6	O			Y		
43	0		T O P	OUT1_pump1	O	Liquid Conveyor 1		Y	TOP
44	1			OUT2_pump2	O	Liquid Conveyor 2		Y	TOP
45	2			OUT3_pump3	O	Liquid Conveyor 3		Y	TOP
46	3			OUT4_pump4	O	Liquid Conveyor 4		Y	TOP
47	4			OUT5_pump5	O	Liquid Conveyor 5		Y	TOP

Number	PIN		Signal name on schematic	I/O?	Device in machine	Purpose	ON schematic?	Relay module
48	5	I O  E X P A N D E R	OUT5_pump6	O	Liquid Conveyor 6		Y	TOP
49	6		liquidLv1	I	Liquid Conveyor 1		Y	
50	7		liquidLv2	I	Liquid Conveyor 2		Y	
51	8		liquidLv3	I	Liquid Conveyor 3		Y	
52	9		liquidLv4	I	Liquid Conveyor 4		Y	
53	10		liquidLv5	I	Liquid Conveyor 5		Y	
54	11		liquidLv6	I	Liquid Conveyor 6		Y	
55	12		waterTankLv1	I	Water container 1		Y	
56	13		waterTankLv2	I	Water container 2		Y	
57	14		wasteTankLv1	I	wasteTankLv1		Y	
58	15		Future_I0	I			Y	
59	0		Future_I1	I			Y	
60	1		Future_I2	I			Y	
61	2		Future_I3	I			Y	
62	3		Future_I4	I			Y	
63	4	Future_I5	I			Y		
64	5	Future_I6	I			Y		
65	6	R I G H T  I O  E X P A N D E R	Future_O1	O			Y	
66	7		Future_O2	O			Y	
67	8		Future_O3	O			Y	
68	9		Future_O4	O			Y	
69	10		Future_rel1	O	Future relay		Y	RIGHT
70	11		ultrasonicAccelerator	O	Ultrasonic Accelerator		Y	RIGHT
71	12		compressor	O	Compressor		Y	RIGHT
72	13		hosesActuatorRL	O	Hoses moving mechanism		Y	RIGHT
73	14		hosesActuatorRR	O	Hoses moving mechanism		Y	RIGHT
74	15		peltierModule	O	Liquid Conveyor 6		Y	RIGHT
					OUT count:	30		
					IN count:	27		
					PWM count:	12		
					Other count:			

Number	PIN		Connections		
1	1	<b>R a s p b e r r y p i p i c o</b>	Relay		
2	2		Relay		
3	4		Relay		
4	5		Relay		
5	6		3xPIN 3v3, 1-wire, GND		
6	7		3xPIN 5v, signal, GND		
7	9		3xPIN 5v, signal, GND		
8	10		3xPIN 5v, signal, GND		
9	11		3xPIN 5v, signal, GND		
10	12		3xPIN 5v, signal, GND		
11	14		Internal		
12	15				
13	16		4xPIN 3x transistor out, GND		
14	17				
15	19				
16	20		3xPIN 12v/5v, signal, GND		
17	21		3xPIN signal x2, GND		
18	22				
19	24		3xPIN 5v, signal, GND		
20	25		3xPIN 5v, signal, GND		
21	26		3xPIN 5v, signal, GND		
22	27		3xPIN 5v, signal, GND		
23	29		3xPIN 5v, signal, GND		
24	31		3xPIN 5v, signal, GND		
25	32		3xPIN 5v, signal, GND		
26	34		3xPIN 5v, signal, GND		
27	0	<b>L E F T</b>	Relay		
28	1		Relay		
29	2		Relay		
30	3		Relay		
31	4		Relay		
32	5		Relay		
33	6		Relay		
34	7		Relay		
35	8		<b>E X P A N D E R</b>	3xPIN 3v3/5v, signal, GND	
36	9			3xPIN 3v3/5v, signal, GND	
37	10	3xPIN 3v3/5v, signal, GND			
38	11	3xPIN 3v3/5v, signal, GND			
39	12	3xPIN 3v3/5v, signal, GND			
40	13	3xPIN 3v3/5v, signal, GND			
41	14	3xPIN 3v3/5v, transistor out, GND			
42	15	3xPIN 3v3/5v, transistor out, GND			
43	0	<b>T O P</b>		Relay	
44	1			Relay	
45	2		Relay		
46	3		Relay		
47	4		Relay		

Number	PIN		Connections		
48	5	<b>I O E X P A N D E R</b>	Relay		
49	6		3xPIN 3v3/5v, signal, GND		
50	7		3xPIN 3v3/5v, signal, GND		
51	8		3xPIN 3v3/5v, signal, GND		
52	9		3xPIN 3v3/5v, signal, GND		
53	10		3xPIN 3v3/5v, signal, GND		
54	11		3xPIN 3v3/5v, signal, GND		
55	12		3xPIN 3v3/5v, signal, GND		
56	13		3xPIN 3v3/5v, signal, GND		
57	14		3xPIN 3v3/5v, signal, GND		
58	15		3xPIN 3v3/5v, signal, GND		
59	0		<b>R I G H T I O E X P A N D E R</b>	3xPIN 3v3/5v, signal, GND	
60	1			3xPIN 3v3/5v, signal, GND	
61	2			3xPIN 3v3/5v, signal, GND	
62	3			3xPIN 3v3/5v, signal, GND	
63	4	3xPIN 3v3/5v, signal, GND			
64	5	3xPIN 3v3/5v, signal, GND			
65	6	3xPIN 3v3/5v, transistor out, GND			
66	7	3xPIN 3v3/5v, transistor out, GND			
67	8	3xPIN 3v3/5v, transistor out, GND			
68	9	3xPIN 3v3/5v, transistor out, GND			
69	10	Relay			
70	11	Relay			
71	12	Relay			
72	13	Relay			
73	14	Relay			
74	15	Relay			