

# Bill of Materials

## Controller

Export Date: Wed Aug 27 04:48:46 PM +03 2025

Total Components: 26

Reference	Value	Footprint	Quantity	Rating/ Spec
C6	0.1u	Capacitor_THT:CP_Radial_Tantal_D5.5mm_P5.00mm	1	63V
C1-C4,C8	100n	Capacitor_THT:C_Disc_D5.0mm_W2.5mm_P5.00mm	5	50V
C5	0.33u	Capacitor_THT:CP_Radial_Tantal_D5.5mm_P5.00mm	1	50V
C7	47u	Capacitor_THT:C_Radial_D6.3mm_H11.0mm_P2.50mm	1	50V
R7-R10,R14,R21-R24	470	Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal	9	%1
R26	820	Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal	1	
R12	1k	Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal	1	
R1,R2,R11,R13,R15,R16,R25	10k	Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal	7	
R3-R6,R17-R20	10k	Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal	8	%1
D30	1N4001	PCM_Diode_THT_AKL:D_D0-41_SOD81_P7.62mm_Horizontal	1	
D1-D8,D11-D14,D16-D23,D26-D29,D31-D33	1N4148	PCM_Diode_THT_AKL:D_D0-35_SOD27_P7.62mm_Horizontal	27	
Q1	2N3904	PCM_Package_T0_SOT_THT_AKL:T0-92_Inline_Wide_EBC	1	
Q2	2N4401	PCM_Package_T0_SOT_THT_AKL:T0-92_Inline_Wide_EBC	1	
R27,R28	4k7	Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal	2	
U3	74LS08	Package_DIP:DIP-14_W7.62mm_Socket	1	
U1,U2	74LS74	Package_DIP:DIP-14_W7.62mm_Socket	2	
U4	74LS86	Package_DIP:DIP-14_W7.62mm_Socket	1	
BZ1	Buzzer_5V	Buzzer_Beeper:Buzzer_12x9.5RM7.6	1	
HS1	Heatsink_Generic	Power_Module_Library:T0-220_Heatsink	1	
J3,J4,J8-J22	JST_02	Connector_JST:JST_XH_B2B-XH-A_1x02_P2.50mm_Vertical	17	
J1,J2,J5,J6	JST_07	Connector_JST:JST_XH_B7B-XH-A_1x07_P2.50mm_Vertical	4	
U5	L7805CV	PCM_Package_T0_SOT_THT_AKL:T0-220-3_Vertical	1	
D15	LED_5mm	Connector_JST:JST_XH_B2B-XH-A_1x02_P2.50mm_Vertical	1	
D9,D10,D24,D25	LED_Dual_AKA	Connector_JST:JST_XH_B3B-XH-A_1x03_P2.50mm_Vertical	4	

Bill of Materials - Controller

Reference	Value	Footprint	Quantity	Rating/ Spec
J7	Screw_Terminal_2_P5.00mm	TerminalBlock_Phoenix:TerminalBlock_Phoenix_PT-1,5-2-5.0-H_1x02_P5.00mm_Horizontal	1	
JP1,JP2	~	Connector_PinHeader_2.54mm:PinHeader_1x02_P2.54mm_Vertical	2	