

Amplifier Housekeeping Version 4.3 - © 2016 ASTXLabs

MCU Controller board

Qty	Reference Designator	Value	Item Description	Footprint	Info/Options
1		HOUSEKEEPING CONTROLLER V4.3	PCB	80x80mm	PCB rev v4.3 20160626
1	C9	0.01µF / 630V	Capacitor	pitch 7.5mm	
13	C3 C4 C5 C6 C10 C11 C12 C13 C14 C15 C16 C17 C22	100nF / 63V	Capacitor	SMD 1206	
4	C18 C19 C20 C21	22µF/16V BP	Bipolar capacitor	diam. 8, pitch 4mm	
2	C7 C8	330µF/10V	Polarized capacitor	diam. 7, pitch 2.54mm	
2	C1 C2	470µF / 35V	Polarized capacitor	diam. 10, pitch 5mm	
13	D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13	1N4148	Diode	SMD 1206	
1	F1	50mA Tr	Fuse incl. holder	Fuse holder 5x20mm, pitch 22.5mm	
2	F2 F3	350mA Tr	Fuse incl. holder	Fuse holder 5x20mm, pitch 20mm	
2	LED1 LED2		Diode	vert. mount, pitch 2.54mm	
2	Q3 Q5	BC337	NPN-Transistor	TO92	
3	Q1 Q2 Q4	BC327	PNP-Transistor	TO92	
2	R40 R41	22	SMD thick film resistor	SMD 1206	
7	R16 R23 R24 R25 R26 R37 R38	1k	SMD thick film resistor	SMD 1206	
2	R5 R7	2.2k	SMD thick film resistor	SMD 1206	
3	R1 R21 R22	2.7k	SMD thick film resistor	SMD 1206	
6	R2 R9 R10 R12 R19 R20	4.7k	SMD thick film resistor	SMD 1206	
4	R3 R8 R11 R33	12k	SMD thick film resistor	SMD 1206	
4	R27 R28 R29 R30	47k	SMD thick film resistor	SMD 1206	
5	R4 R6 R13 R14 R34	100k	SMD thick film resistor	SMD 1206	
2	R31 R32	220k	SMD thick film resistor	SMD 1206	
1	T3	230V / 2 x 6V / 3.6 VA	GERTH 387.12-2 3.6VA	41x35mm	115V AC version available on request
1	U3	L7905CV	Neg. linear voltage regulator	TO220	
1	U2	L7805CV	Pos. linear voltage regulator	TO220	
1	U1	DF06	Bridge Rectifier	DIP 8, 4pol.	
1	U4	PIC16F1829	Pre-programmed PIC Microcontroller	PDIP20	Minimum required software version: powerctl v4.2.549 2016.07.06 15:08:03, © 2016, astx@aws-it.at
1	ZD1	ZF2.1	Zener diode 0.5W	vert. mount, pitch 2.54mm	

1	RESET		2 pol. connector	pitch 2.54mm	
2	EXT_ON_OFF PWR_SW		2 pol. connector	pitch 2.54mm	
1	T3_230V/115V		2 pol. connector	pitch 7.62mm	
6	I2C MUTE_LE MUTE_RI MCU RELAY_CTL SPK_DC_CTL STDBY_PWR_LED		4 pol. connector	pitch 2.54mm	
1	GND1/GND2		2 pol. connector	pitch 5.08mm	
5	AN1 AN2 AN3 AN4 AN5	10k	Vishay NTC NTCLE100E3103HB0	pitch 2.54mm	(optional useable as digital inputs)

Mains / Relay board to control up to 2 toroids

Qty	Reference Designator	Value	Item Description	Footprint	Extras
1		MAINS INRUSH CONTROL	PCB	80x80mm	PCB rev v4.0 20160428
3	C1 C2 C3	0.01µF/630V	Capacitor	pitch 7.5mm	No 2nd toroid: omit C2
2	D1 D2	1N4002	Diode	vert. mount, pitch 2.54mm	
2	F1 F2	4 A Tr	Fuse incl. holder	Fuse holder 5x20mm, pitch 22.5mm	No 2nd toroid: omit F2
8	R1 R2 R3 R4 R5 R6 R7 R8	150E / 5W	VITROHM KH208 series	pitch 28mm	No 2nd toroid: omit R5,R6,R7,R8
2	RL1 RL2	Finder 40.52 / 2x8A 250VAC	RELAY_2POL	RELAY_2POL_UM	optional: Schrack RTE24012
5	230V_INT MAINS_230V T1_230V T2_230V T3_230V		2 pol. connector	pitch 7.62mm	No 2nd toroid: omit T2_230V
1	RELAY_CTL		4 pol. connector	pitch 2.54mm	