

Part List for solder station project

Encoder PCB

Designator	Part	Additional information
R1	20 turn variable resistor delta pin type type 1K	
R2, R3, R4, R5, R6, R7, R10	SMD resistor 100R 0805 package	
R8, R9	SMD resistor 10K 0805 package	
R11	SMD resistor 4K7 0805 package	
R12	SMD resistor 3K3 0805 package	
R13	SMD resistor 2K2 0805 package	
R14	SMD resistor 100K 0805 package	
C1, C3, C4, C5, C6, C7, C8, C9, C11	SMD X7R capacitor 100nF 0805 package	
C12	SMD X7R capacitor 10nF 0805 package	
C2	Capacitor THD 3300uF 35V	
C10	Capacitor THD 10uF 10V	
D1	Rectifier bridge B40C5000	
D2	Diode MBRS120	
D3	SMD LED red G1206 package	
L1	SMD inductor 47uH 1812 package	Reichelt BN: L-1812 AS 47μ
Q1	IRFR9530 TO220 package	
Q2	SMD BC847C	
U1	ATMega8-16 or ATMega8-8 plus socket	
U2	uA78S05 TO220 package	
U3	LM317T TO220 package	
SW1	Rotary encoder THD ALPS STEC12 series	Pushbutton function is not used by firmware Reichelt: STEC12E08
J1	16 pin single row 2.54mm pitch pin-strip.	
J2,J3	Wire connection blocks 2pin 5.08mm pin pitch	
J3	Connector set, single row 8 pin 2.54mm pin pitch	
F1	Fuse holder 22.5mm pin pitch	Reichelt BN: PL 11200

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Additional components:

- 24V 60(80)W power supply:
 - Transformer with IEC power connector including integrated fuse
 - Or external supply with earth ground fed thru !
- Mains switch
- Connector for soldering iron (depends on iron, refer to schematic)
- Knob for encoder
- Light pipe for LED (Reichelt BN: MEN 1282.1000)
- LC Display 16 chars 2 rows with backlight (Manufacturer: Electronic Assembly Reichelt BN: LCD 162C BL see notes in project description)
- Optional frame for LCD (Reichelt BN: LCD FRONT 2)
- Heatsink HS1 plus 3 mounting clips (Reichelt: B PR116/94-M3 + 3 X MC 725)
- Distance bolts for PCB mounting
- Case for whole unit (size depends on type of power supply)
- Screws to mount PCB and Heatsink
- Silicone foil (Reichelt: SI 6018)
- Cables for internal cabling
- Fuse 5A (5 x 20)
- Soldering iron