

This circuit is only a design concept, it has not been tested.

this circuit is optional overload tripper

use EMI RFI filter Mains Socket

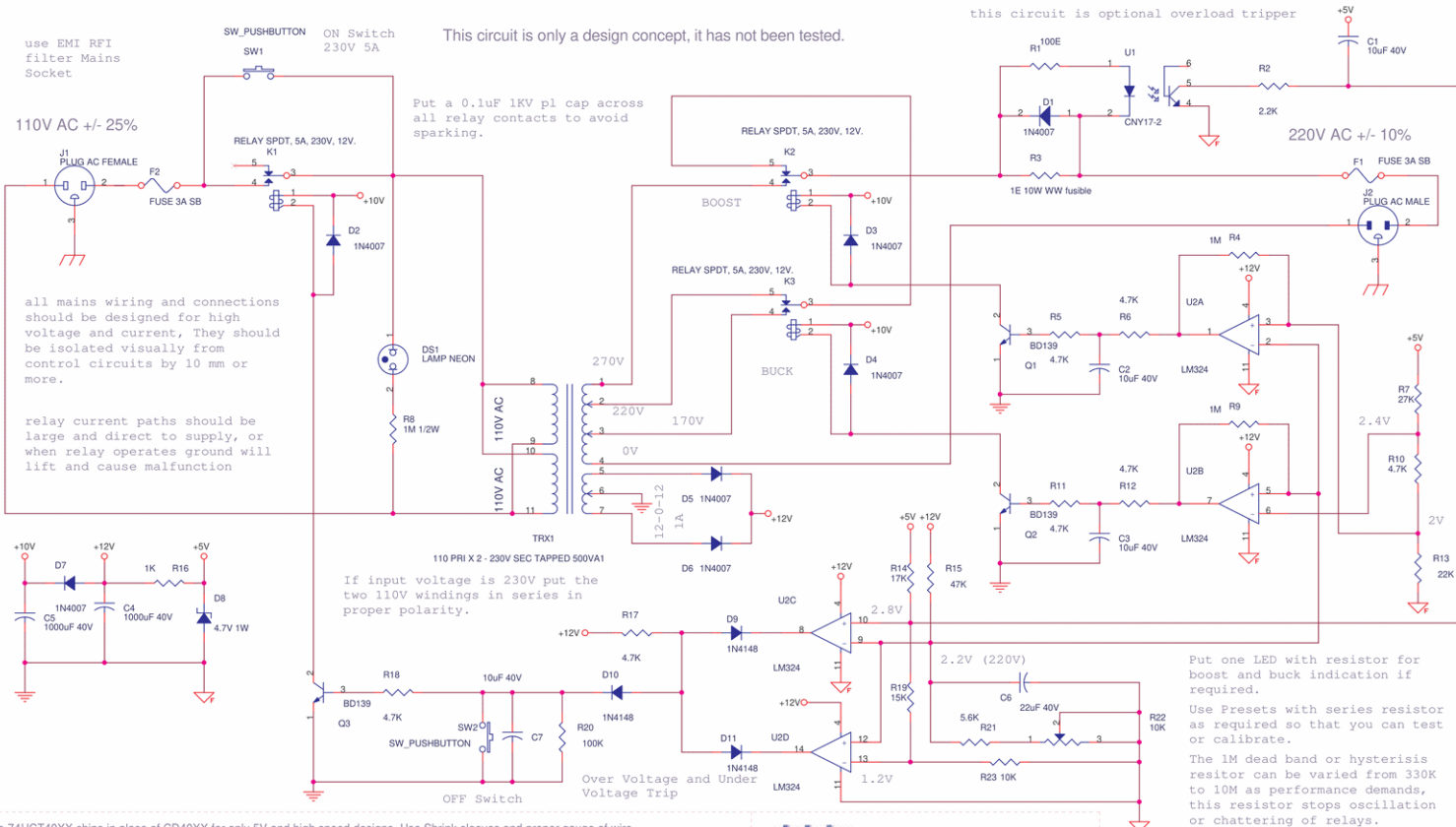
SW_PUSHBUTTON ON Switch 230V 5A

110V AC +/- 25%

all mains wiring and connections should be designed for high voltage and current. They should be isolated visually from control circuits by 10 mm or more.

relay current paths should be large and direct to supply, or when relay operates ground will lift and cause malfunction

Put a 0.1uF 1KV pl cap across all relay contacts to avoid sparking.



If input voltage is 230V put the two 110V windings in series in proper polarity.

Put one LED with resistor for boost and buck indication if required.

Use Presets with series resistor as required so that you can test or calibrate.

The 1M dead band or hysteresis resistor can be varied from 330K to 10M as performance demands, this resistor stops oscillation or chattering of relays.

use 74HCT40XX chips in place of CD40XX for only 5V and high speed designs. Use Shrink sleeves and proper gauge of wire. put 104 CD cap for all ICs from positive to negative close to IC, even if omitted in circuit, for opamps on dual supply two caps. unused inputs of logic and opamps pull up or down to avoid oscillations and noise. connect supply of all chips if not mentioned. "analog ground" and "digital ground" must be linked at power supply only, avoid loops, let grounds radiate from a ground plane. use MFR 1% for all Resistors, 33E means 33 ohms, 22K means 22 kilo ohms, 1M is 1 megohm. 10T tp means ten turn trimpot. '474 CD' is 47 with 4 zeros pF, 470000 pF, 470 nF, 0.47uF, ceramic disc. "pl" is plastic, low leakage multilayer.

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