

Thermostatic Soldering Iron LED

By G8MNY

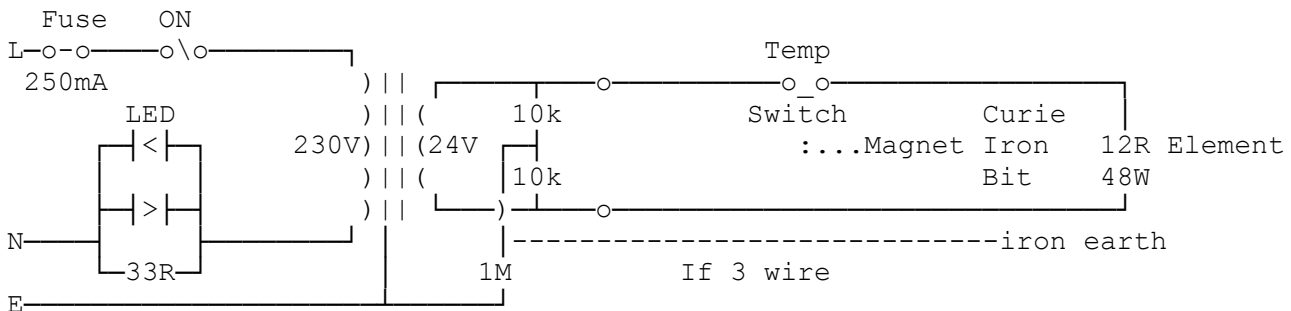
(Updated Mar 11)

(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

This circuit is suitable "Magnetic Curie Point" temperature switch controlled mains irons! The LED lights up when the Iron is plugged in & is drawing current in its heat cycle it goes out when it is up to temperature. It also works on some internally electronic controlled 24V irons too.

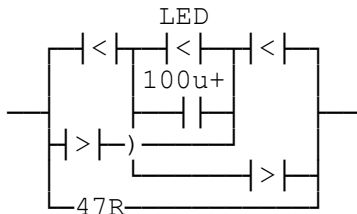
Also shown is a static earth, that keeps the stray tip voltage down to about 12V AC MAX, while still giving an un earthed iron for work on live circuits (~100V) safely.

CIRCUIT



The LED is connected to the mains neutral, but even so good insulation is needed! The bypass diode connected the reverse way is a 1N4001 & stop mains reverse voltage appearing across the LED. The value of 33R is selected so that the LED is not lit with just the transformer magnetising current.

If the 50Hz flashing LED is annoying, blows up the LED, or is not bright enough try this more complex circuit instead...



Here the 47R is selected for brightness & unlit LED when the iron is not on. The 100uF protects the LED from the spiky power up surges as well smooth out the 100Hz LED DC power. Diodes are all 1N4001.

Also see my Tech Bul on "Soldering Iron Economiser/Boost"

Why Don't U send an interesting bul?

73 De John, G8MNY @ GB7CIP