

# Electrical Energy Sources



# Household appliances



# Power ratings of appliances

- Clock 10W
- Table lamp 100W
- Drill 750W
- Iron 1.2kW
- Kettle 2.4kW
- Immersion heater 3.0kW
- Cooker 11.5kW

# Power Rating Label

**Frequency**  
50 Hz

**Voltage**  
230V ~

**Power**  
2000W



**Double  
insulated**

# Power Rating Plate

Model 4597 iron

230 V ~ 50 Hz

1200 W

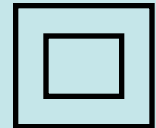
Made in UK

Model BD 760K Drill

230V ~ 50 Hz

750 W

Made in Spain



# What's the difference?



# Flexes and Power

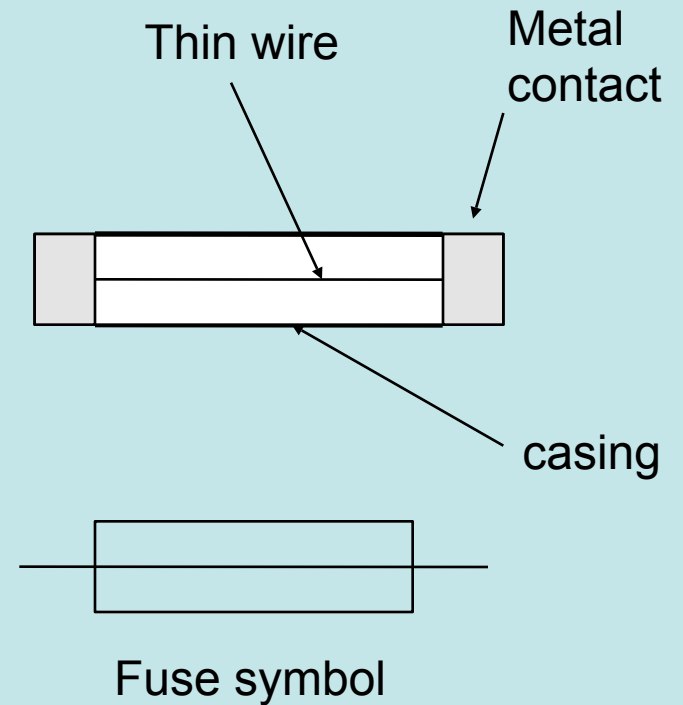
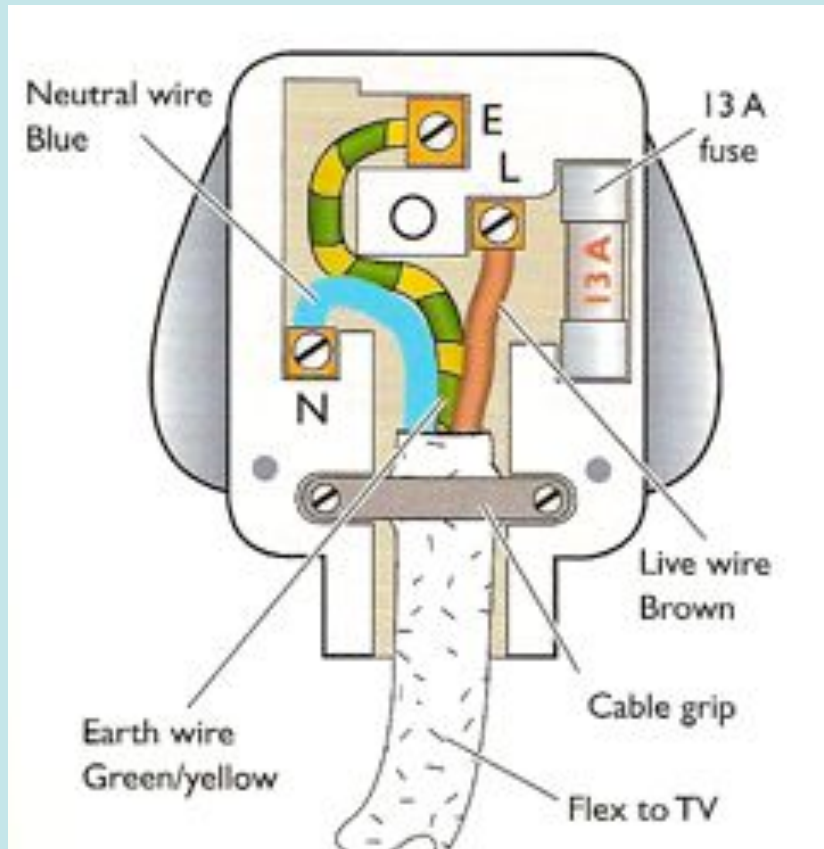
<b>Power rating</b>	<b>Typical appliance</b>	<b>Conductor thickness</b>	<b>Maximum current</b>
Up to 700W	Clock, food mixer	0.50 mm <sup>2</sup>	3A
700 – 1380 W	Hair dryer; toaster	0.75 mm <sup>2</sup>	6A
1380 – 2300W	Kettle, fan heater	1.00 mm <sup>2</sup>	10A
2300 - 3000W	3kW heater	1.25 mm <sup>2</sup>	13A

# Fuses and safety

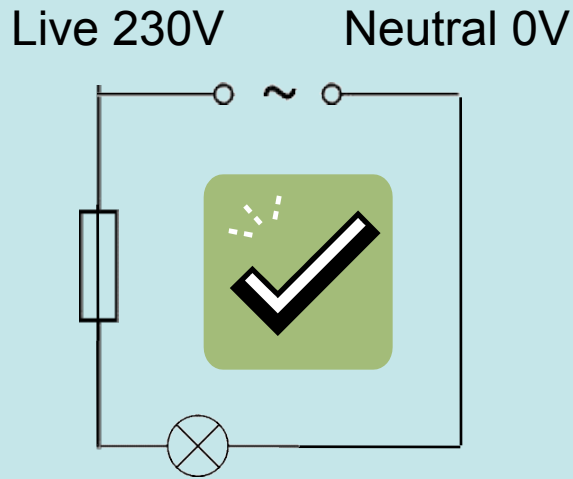




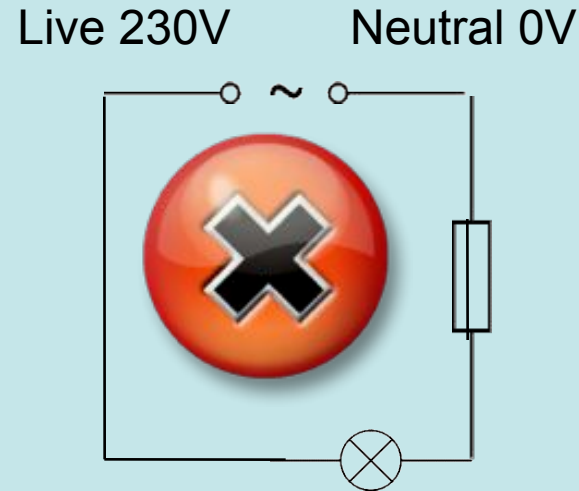
# Plugs and fuses



# Fuses must be connected to the live terminal



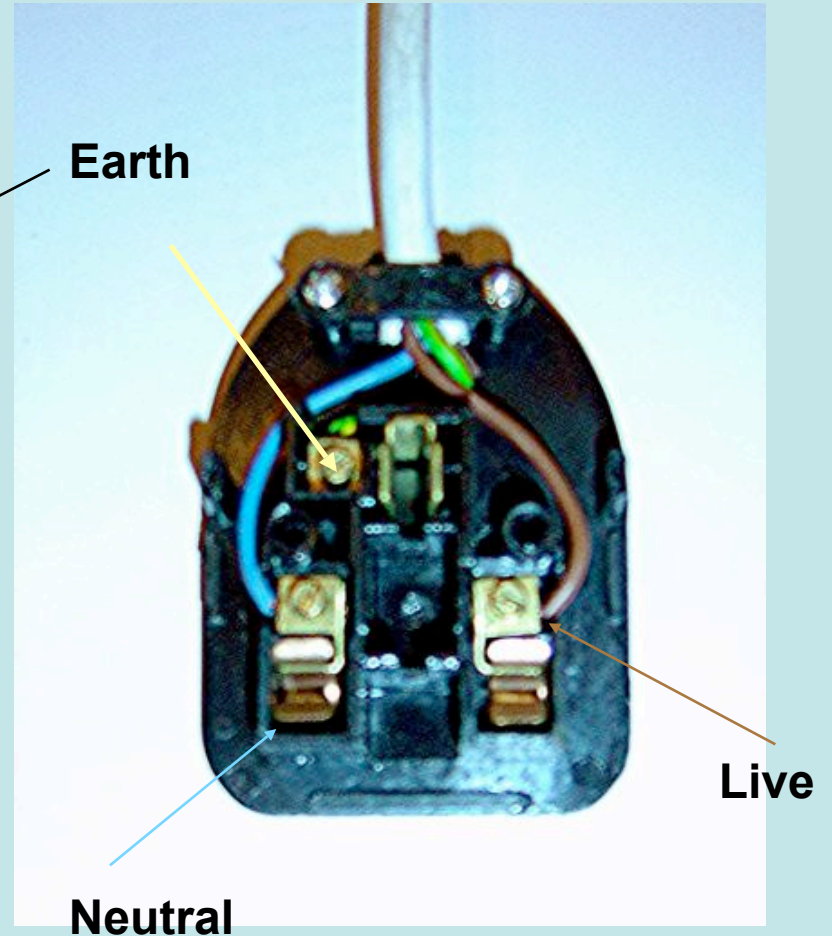
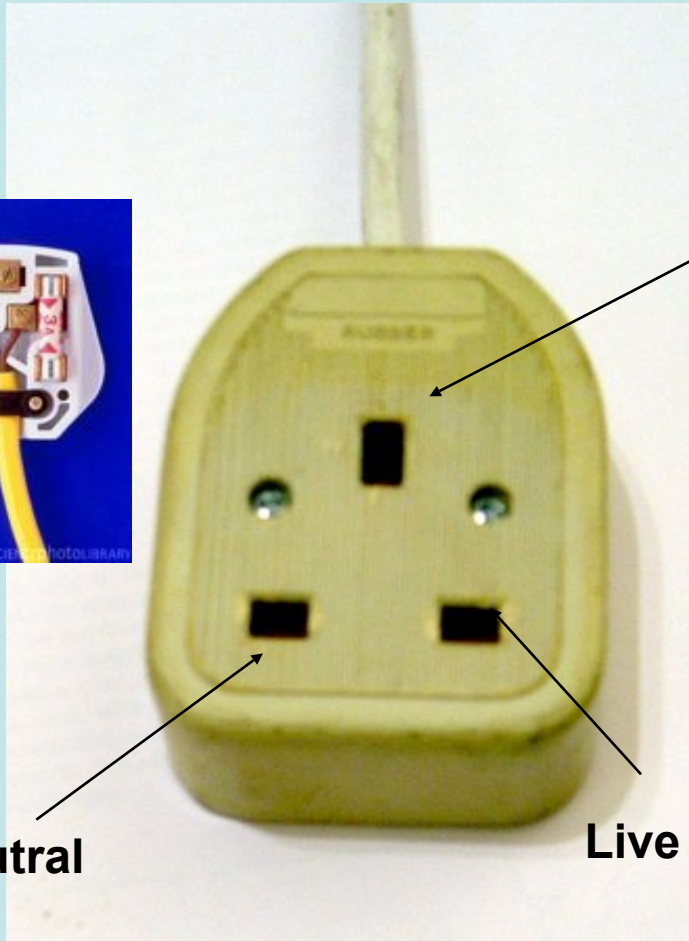
If fuse blows lamp is only connected to neutral (0V) so is safe



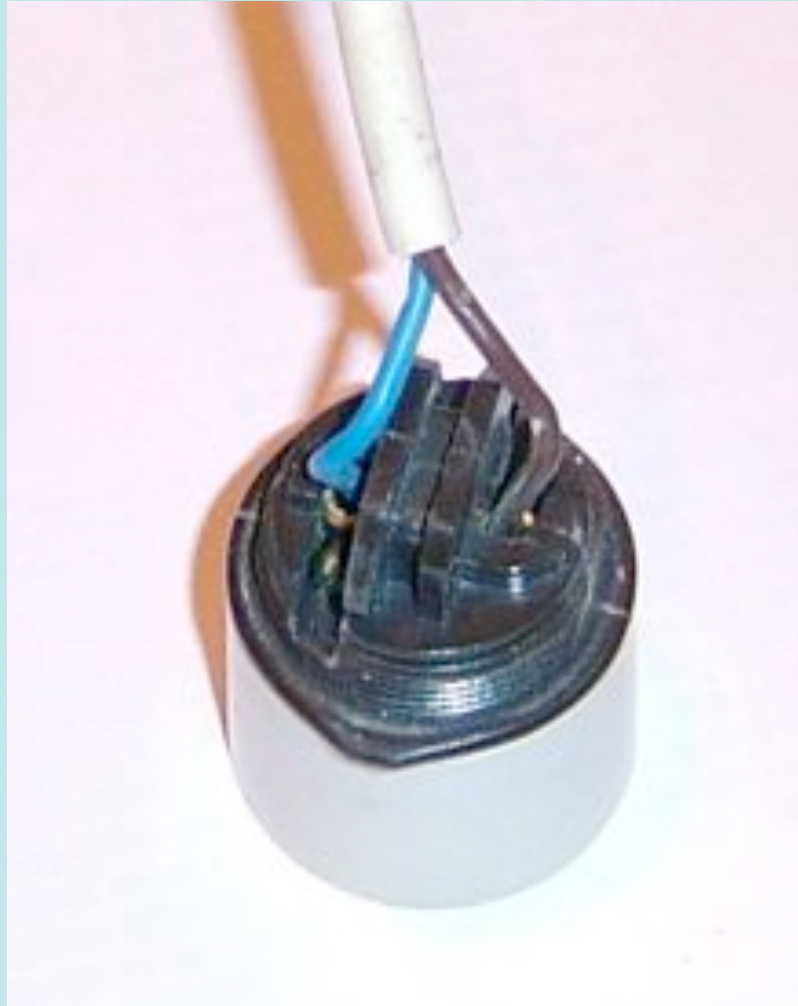
If fuse blows lamp is **still connected to live** and so is at a high voltage

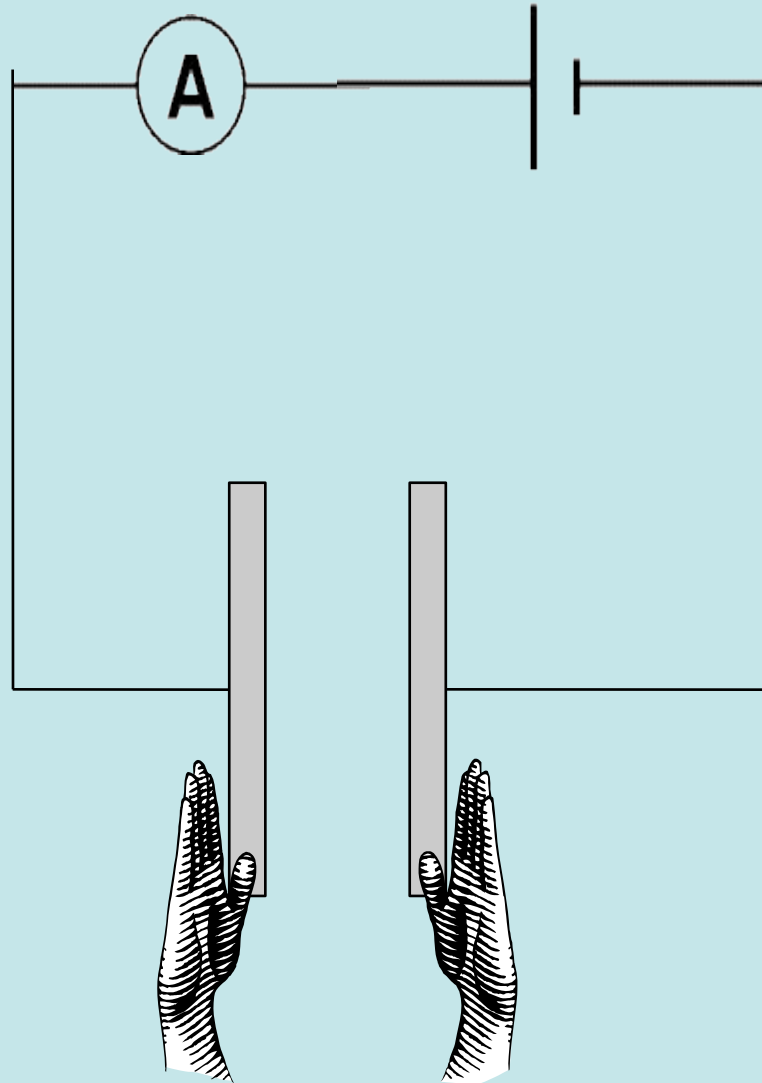
**The same principle applies to switches. Switches must always be connected to the live terminal.**

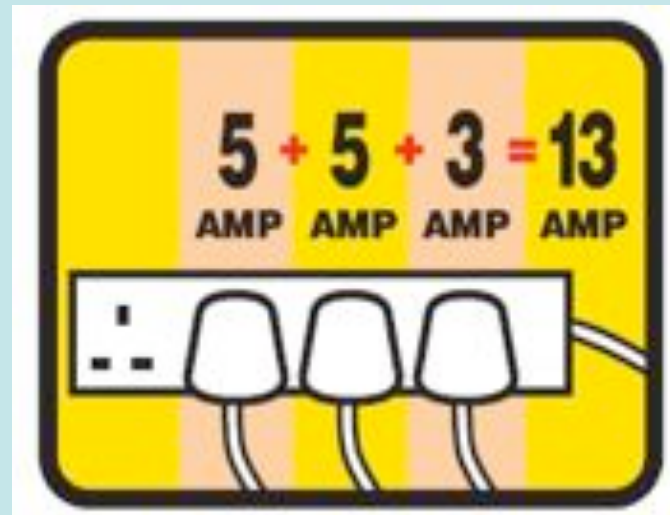
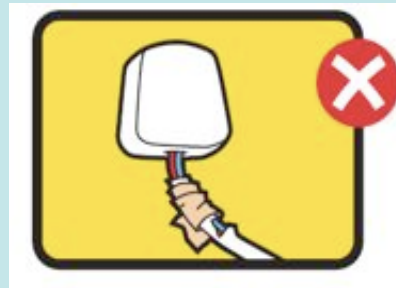
# Extension lead wiring

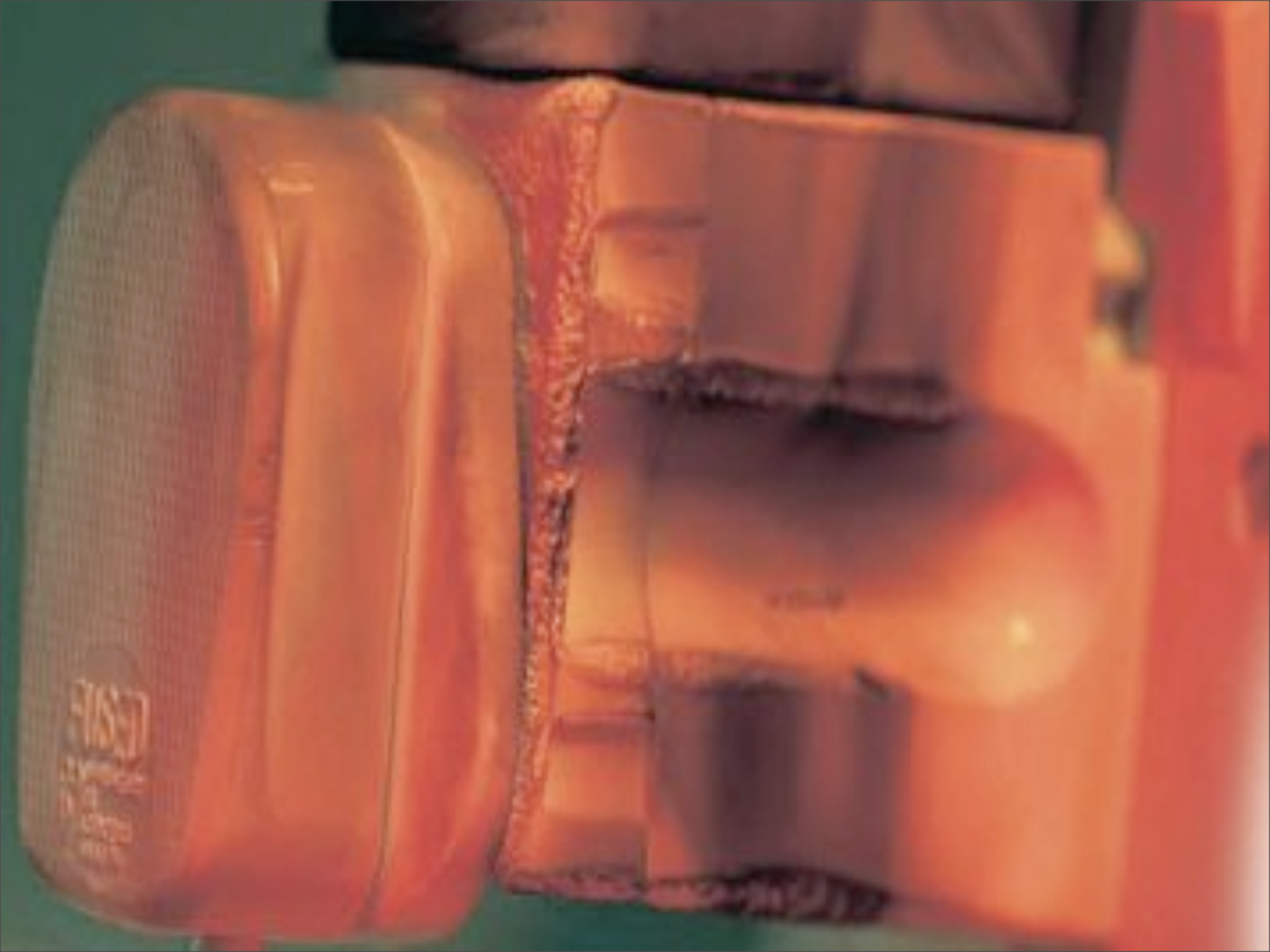


# Light socket wiring









# What's the difference?





# What's the difference?



**230V A.C. Can be fatal,  
continuous supply**



**1.5V D.C. Safe, runs out**