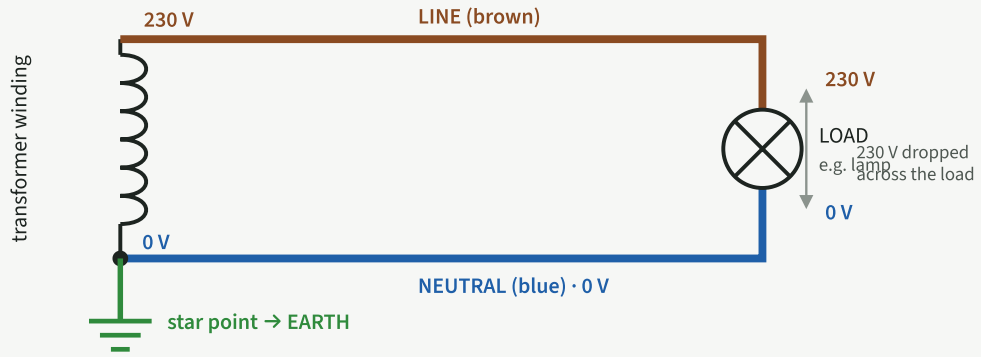
THE BASIC SUPPLY CIRCUIT

WHERE DO YOUR 230 VOLTS ACTUALLY COME FROM?

This diagram comes up again and again. It shows where your 230 V actually comes from.



One end of the supply transformer's winding is the **star point**, which is connected to **earth** and held at 0 V. The other end is at 230 V. The line (brown) carries 230 V to the load, and the neutral (blue) returns at 0 V. The full 230 V is dropped across the load.

- The **star point** is where the neutral and earth join at the transformer. From there it goes down into the ground. The electricity doesn't disappear: it's a continuous loop.
- The coil in this drawing is the transformer's **secondary** winding. The secondary side is always **star**.
- A **circle with an X** is the symbol for a lamp. Lamps are **resistive loads**.
- The symbol with three horizontal lines is **earth (ground)**.
- It's called **line** (it used to be called phase), not "live". Both the line and the neutral are live conductors, and you can get a shock from either.

> **Cable colours (current UK harmonised):** Line = brown · Neutral = blue · Earth (CPC) = green/yellow · on 3-phase: L1 brown, L2 black, L3 grey.

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