

What is Switched Live?

The *switched live* is the conductor in an electrical circuit that carries current only when a connected device is actively switched on. It is part of the switched circuit, meaning it becomes live (energised) when a switch (e.g., light switch, fan isolator) is engaged, allowing power to flow to the appliance.

Key Characteristics:

- Typically coloured **brown** (UK wiring standards post-2004, harmonised with BS 7671:2018+A2:2022).
- Must **never** be confused with the *permanent live* (always energised) or *neutral* (return path).
- Critical for safe operation of lighting, extractor fans, and other switched appliances.

Practical Example:

In a UK residential lighting circuit:

- The *permanent live* (from the consumer unit) connects to the switch.
- The *switched live* runs from the switch to the light fitting, activating only when the switch is turned on.

Building Regulations & Compliance:

- **BS 7671 (IET Wiring Regulations, 18th Edition + Amendment 2:2022)** - Mandates correct identification and segregation of conductors.
- **Approved Document P (Electrical Safety - Dwellings)** - Requires safe installation practices in domestic buildings.

Related Essential Terms

1. **Permanent Live:** The continuously energised conductor supplying power to a circuit. Must be isolated before maintenance.
2. **Neutral (N):** The return path for current, completing the circuit. Typically *blue* in UK installations.
3. **Earth (CPC - Circuit Protective Conductor):** Safety conductor providing a path for fault current, preventing electric shock. Coloured *green-and-yellow*.
4. **Double-Pole Switching:** Isolates both live and neutral (e.g., for bathroom extractor fans, complying with *Part F (Ventilation)*).
5. **Part P of Building Regulations:** Governs electrical safety in dwellings, requiring notification of certain works to Local Authority Building Control (LABC).
6. **Zoning (Electrical Installations):** Specific rules for circuits in high-risk areas (e.g., bathrooms under *Part P* and *BS 7671 Section 701*).
7. **Consumer Unit (Fuse Board):** Distributes and protects circuits via MCBs/RCDs. Must comply with *BS 7671* and *Amendment 3 (2015)* fire safety updates.