CONTINUITY WHEN YOU CAN'T ISOLATE

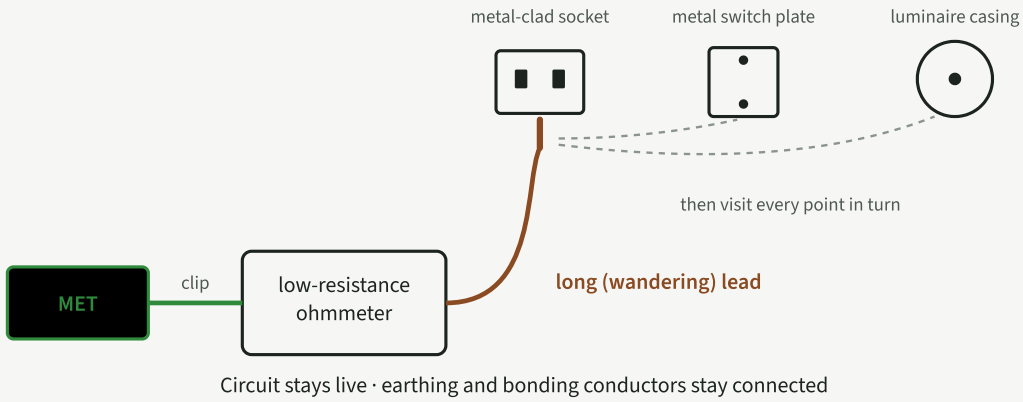
THE CIRCUIT CAN'T BE SWITCHED OFF. HOW DO YOU TEST THE CPC?

Q16Book · a hidden periodic question
A server room circuit feeds metal-clad accessories and can't be switched off.
How do you check cpc continuity?

1. **a**With an earth fault loop impedance tester
2. **b**With a voltage indicator, line to earth
3. **c**With a long (wandering) lead and a low-resistance ohmmeter
4. **d**With a polarity indicator between neutral and earth

Answer c. "Can't be switched off" tells you it's a **periodic**, even though it doesn't say so. On initial verification the circuit would be dead anyway.

- Normally you'd use **test method 1 (R1 + R2)**: link line and cpc at the board, then test between the line and cpc terminals at **every point**, e.g. every luminaire **and** every switch on a lighting circuit. That needs the circuit **dead**.
- Section 3.10 covers testing during periodics. It's short and refers back to the section 2 tests (2.6.5 onwards), but it adds some extra points.
- Where you can't isolate, **don't disconnect** protective and bonding conductors. Under fault conditions, exposed and extraneous-conductive-parts could rise to a dangerous voltage.
- The next paragraph gives the convenient way: the **wandering lead** (long lead) method. Clip the long lead to the **MET**, then touch the other lead on each **metal accessory**: switch screw heads, metal-clad sockets and luminaire casings. Be careful up steps, and cordon off the area.



The wandering (long) lead method measures from the MET to each metal accessory, so you don't have to switch the circuit off.

GN3 · 2.6.5 continuity, test method 1 (R1 + R2)

GN3 · 3.10 testing during periodic inspection

GN3 · can't isolate: don't disconnect protective conductors, use the wandering / long lead · 3.10.3 · **p.128**

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