THE NEON THAT FAILS A GOOD CIRCUIT

0.22 MEGOHMS AND THE SWITCH NEON IS LIT. FAULT?

Cooker switches often have a **neon indicator**. Leave one in circuit and test line to neutral at 500 V, and the neon lights — and the reading collapses to something like **0.22 MΩ**. A perfectly good circuit has just “failed”. The same happens with lamps left in a lighting circuit: they glow, and the reading drops.

Neon in circuit	Joined in a block
L–N at 500 V · the neon lights	switch not fitted yet
0.22 MΩ	**>900 MΩ**
looks like a fault · isn’t	the cable, proved

Know what’s on the circuit before you trust a low reading. A neon or a lamp is a path between line and neutral; the meter can’t tell it from a fault.

✋ **Switching it off doesn’t solve it.** With the switch off, the cable beyond the switch isn’t tested — and the neon is often on the load side anyway. Most neons can’t be disconnected either. The answer is the two-stage test.

Lighting circuits: test before the lamps go in.
Fifty downlights is fifty lamps to take out again if you fit them first. Your tests don’t prove the lamps work — that’s functional testing.

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