SUPPLY POLARITY, AND THE EDISON SCREW LAMP

THE LAMP STILL LIGHTS. IS IT SAFE?

SUPPLY POLARITY: THREE TESTS, OR TEN

Circuit polarity is proved during continuity, dead. Supply polarity is the live one.

SUPPLY	TESTS
Single phase	**3**
Three phase	**10**

THE EDISON SCREW LAMP, AND WHY LINE-TO-NEUTRAL WILL NOT FIND IT

Guidance Note 3 · 2.6.12 · p.77 . The polarity test makes sure **every fuse and single-pole control and protective device is in the line conductor**, and that the **centre contact of a screw lampholder is connected to the line** (the book excepts E14 and E27 lampholders to BS EN 60238). This is the clearest example of why polarity matters, and why the centre contact needs a check of its own.

PART OF THE LAMP HOLDER	CORRECTLY CONNECTS TO
The **screw shell**	**Neutral**
The **centre pin** at the bottom	**Line**

NOW SWAP THE BROWN AND THE BLUE

Does the lamp light? **Yes.** It works perfectly.

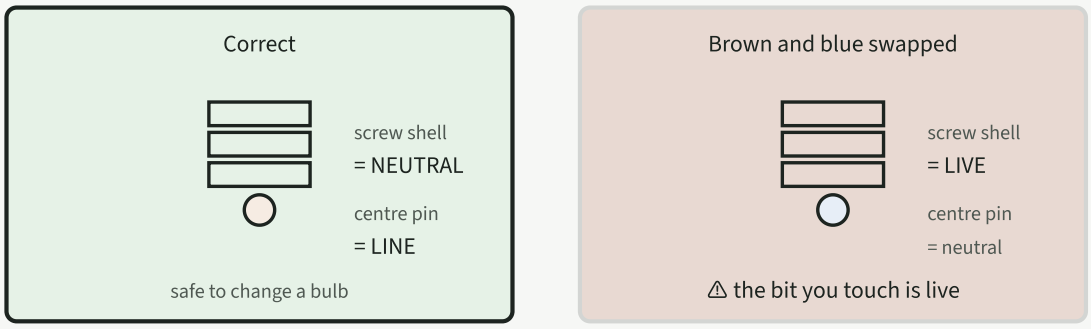
So a line-to-neutral test tells you nothing — you have two live conductors and they are both connected.

What has actually happened: the **screw shell is now live**, permanently — the part you touch when you change the lamp.

> **The centre contact gets its own check**

An $R_1 + R_2$ test (method 1) does not prove that the **centre contact** of an ES lampholder is the line. That needs its own check, between the centre contact and the line (**Guidance Note 3** · 2.6.12 · p.77 ; the book excepts E14 and E27

lampholders to BS EN 60238). It is the same lesson as the ring final circuit: one reading on its own does not prove polarity.



The lamp lights either way — so a line-to-neutral test proves nothing. Only a polarity test finds this.

Both conductors are connected and the circuit works, so every continuity and function check passes. The fault only shows when someone unscrews the bulb.

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