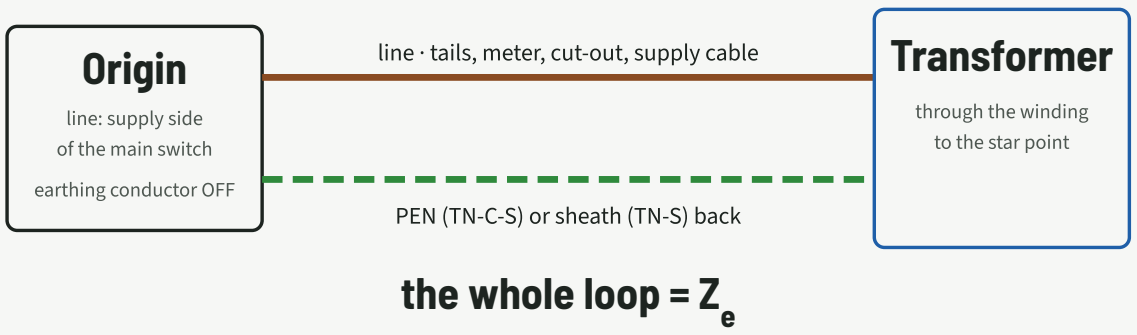
MEASURING ZE

WHY TAKE THE EARTHING CONDUCTOR OFF FIRST?

1. Supply polarity confirmed. Main switch still **off and locked**.
2. **Disconnect the earthing conductor** from the MET. That removes the parallel paths through the bonding and the pipework, so you measure the supply's earth alone.
3. Loop impedance setting. Clip one lead to the **disconnected earthing conductor**, the other on the **line** terminal on the supply side of the main switch. It's live: GS38 probes.
4. Press test. The meter applies a small load for a moment — you may hear it click — and shows the impedance.
5. **Reconnect the earthing conductor.** Straight away, before anything else.



Everything outside your installation: the supplier's line conductor out to the transformer, and the earth path back. With the earthing conductor off the MET, nothing of yours is in parallel with it.

WHAT IT SHOULD READ

SYSTEM	EXPECTED MAXIMUM Z_E
TN-C-S (PME)	about **0.35 Ω**
TN-S	about **0.8 Ω**

✋ **Rule of thumb, not a hard limit.** These are the figures the supplier typically declares.

Two leads or three?
Some meters measure Z_e with two leads, line and earth. Others want the neutral connected as a third. Learn your own meter.

Z_e goes on **EIC page 2**, in the nature of supply parameters box.

A sensible Z_e also lets you tick **earthing conductor continuity** on EIC page 2.

Your lead was on the earthing conductor itself, so the loop you measured runs through it, back to the source.

> **Electrician's Guide** · p.53 · typical maximum Z_e: 0.35 Ω TN-C-S, 0.8 Ω TN-S

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