THE GLOBAL INSULATION RESISTANCE TEST, THREE PHASE AND THE PERIODIC

CAN YOU TEST EVERY CIRCUIT IN ONE GO?

THE GLOBAL TEST

Instead of circuit by circuit, you can test a group of circuits at once: main switch off, the circuit breakers **on**, one probe on the outgoing side of the main switch or busbar, the other on the earth bar (then the neutral bar). Every circuit fed from it is tested in one go.

- It's quicker. But the reading is all those circuits **in parallel**
- It means switching on **RCBOs and AFDDs** — and an AFDD RCBO costs well over a hundred pounds. Leave those circuits out and test them on their own.

> ✋ **A poor global figure doesn't fail anything on its own.** Go back and test the circuits individually to find which one is pulling it down.

THREE PHASE, AND THE PERIODIC

Three phase is ten tests at 500 V: each line to neutral, each line to earth, each pair of lines, and neutral to earth.

On a **periodic** you often don't know what's connected, and you can't go through someone's home looking behind every cupboard. One cautious approach some inspectors take is to test **live conductors to earth only, at 250 V**, and N/A the live–live column — with the reason written in the remarks. That only applies where the equipment **can't be disconnected** (Reg 643.3.2); where it can, disconnect it and test as normal.

> ✋ **That's a periodic choice, not initial verification.** On new work, every conductor is tested against every other at the full test voltage for the circuit. Don't bring the periodic shortcut into an initial verification assessment.

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