ZE AND PROSPECTIVE FAULT CURRENT ON THREE PHASE

WHY DOUBLE THE SHORT CIRCUIT READING?

Same tests, once per line. Earthing conductor off the MET, earth lead on it, then:

TEST	L1	L2	L3
Z_e (line to earth)	0.80 Ω	0.78 Ω	0.75 Ω
PEFC (line to earth)	0.288 kA	0.295 kA	0.307 kA
PSCC (line to neutral)	0.297 kA	0.287 kA	0.300 kA
PSCC × 2	0.594 kA	0.574 kA	**0.600 kA**

- Record the **highest Z_e** — 0.80 Ω in the example.
- The worst short circuit on three phase is a fault **across all three lines** — and many testers can't be connected across 400 V. So measure line to neutral and **double** it. Guidance Note 3 says that, as a rule of thumb, the three-phase short-circuit level is about twice the single-phase value, and that this errs on the side of safety.
- Record the **highest** of the six (after doubling) as I_{pf} — 0.600 kA here.

Then reconnect the earthing conductor. At each sub-board, repeat it all as Z_{db}, doubling the PSCCs again.

> **Guidance Note 3** · 2.6.16 · prospective fault current · three phase, about twice the single-phase value · p.88

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