PHASE ROTATION

L1 TO L3, OR L3 TO L1?

Guidance Note 3 · 2.6.17 · p.93 for the phase sequence test — highlight it — and 4.8 · p.140 for phase rotation instruments. It is a **live** test, because it needs a live three-phase board.

What it is, in one line: **a polarity check for a three-phase supply**. It proves the phases arrive in the right order.

DISPLAY	MEANING
Arrow to the right	Correct — phases in sequence
Arrow to the left, or **L** lights up	Reverse — something is in the wrong place

THE TEST SEQUENCE — AND IT HAS TO BE THIS WAY ROUND

L1 to L2 then L2 to L3 then **L3 to L1**

That last one is **L3 to L1**, not L1 to L3.
Your hands cross over to do it. You are drawing a **clockwise circle.**

✋ **Get the last pair backwards and you fail a good board.** If you take L1 to L3 instead of L3 to L1 you will get a left-hand indication on an installation that is perfectly correct. The right probe goes on L3.

Check the colours first.

Brown is L1, black is L2, grey is L3. If a conductor is in the wrong terminal you can usually spot it by eye at the board before you test anything.

What reverse rotation actually does.

A three-phase motor runs backwards. A domestic analogy: a drum turning the wrong way. Whatever the motor drives runs the wrong way too.

Not every instrument does it.

A good approved voltage indicator will, some multifunction testers will, and dedicated instruments exist. Check before you need it.

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