TABLE B1, AND CALCULATING AN EXPECTED RESULT

WHAT SHOULD A 10 METRE CONDUCTOR READ?

Table B1 in Guidance Note 3's **Appendix B** gives the resistance of conductors in **milliohms per metre**, and it's the table you'll live in.

READING TABLE B1

The star ★	Marks the **twin & earth** sizes — the combinations you actually buy. Worth highlighting
First column	One conductor on its own
Second column	The associated protective conductor, for two-conductor tests

✋ **For an R2 test, ignore the second column.** It says "line conductor" at the top, and that throws a lot of people. On an R2 test you only have **one** conductor, so just read it as "conductor". First column only.

$$\text{Expected R} = (\text{m}\Omega/\text{m} \times \text{length in metres}) \div 1000$$

10 MM² CONDUCTOR, 10 METRES

Table B1 · 10 mm² = **1.83 mΩ/m**

R = (1.83 × 10) ÷ 1000
R = 0.0183 Ω expected

What's the point of the calculation?

It gives you an **expected result** before you put a meter on anything. If your measurement lands nowhere near it, you know to investigate rather than write it down. This is not the same as the appliance test — there's no 0.1 Ω added here. This is the cable alone.

AND BACKWARDS: FINDING THE LENGTH FROM THE RESISTANCE

$$\text{Length} = (R \times 1000) \div \text{m}\Omega/\text{m}$$

Where this is genuinely useful.
You cannot measure a cable that's under floorboards. But you can measure its **resistance**, and if you know the conductor size, Table B1 gives you the length. The by-the-book approach is to measure the drum before you install — measure a known 100 m drum, and you can work out any length off it. Almost nobody does; they run the cable in and test afterwards. Both get you there.

GN3 · Appendix B · Table B1 · mΩ/m · ★ = twin & earth ★

Free section from Sparky Study Notes. The full Level 3 notes, 1,463 practice questions and the video lessons: sparkystudynotes.co.uk