TEST INSTRUMENTS AND GS 38 FOR THE EXAM

WHICH INSTRUMENT DOESN'T NEED GS 38 LEADS?

GS 38 is **Guidance Sheet 38** from the HSE. It covers the **leads and probes** you hold, not the tester itself. It's **non-statutory** guidance, not law. But if someone gets hurt, the first question will be why you weren't following GS 38.

> **Watch out: instrument standards**A common mix-up is "BS 61010 and BS 6157". The standards are **BS EN 61010** (**safety** of the instrument) and **BS EN 61557** (**performance**, i.e. how well it does each test). They're easy to mix up. Details are at the start of GN3 section 4.

Q9Knowledge · book backs it up

Which of these does not need GS 38 test leads to be used safely?

1. **a**An insulation resistance tester
2. **b**A low-resistance ohmmeter
3. **c**A phase rotation tester
4. **d**An approved voltage indicator

- **Insulation resistance**: the tester **generates** 500 V at probe tips millimetres from your fingers.
- **Phase rotation**: only works on a **live** supply, with 400 V between phases.
- **Approved voltage indicator**: you're measuring live supply voltage.
- **Low-resistance ohmmeter** (continuity): only a few volts (about 5 V). It can't harm you, so the answer is **b**.

GN3 says to pay particular attention to safety with tests using instruments that can **generate more than 50 V** (like insulation resistance) or that use the **supply voltage**. Read "safety aspects" there as GS 38, but **don't write it in**.

GN3 · safety with tests over 50 V or using supply voltage

GN3 · Section 4 · instrument standards

Worth knowing: a low-resistance ohmmeter's open-circuit voltage is between 4 V and 24 V under BS EN 61557-4, so "about 5 V" is typical.

Q10Book

What's the minimum short-circuit test current GN3 gives for a low-resistance ohmmeter?

1. **a**50 mA
2. **b**100 mA

3. **c**150 mA
4. **d**200 mA

Answer d: not less than 200 mA. Questions about the **meter itself** (ranges, settings, test currents) come from **section 4**. Section 2 is about **how to do the tests**. Don't read it as "no more than": it's a **minimum**.

GN3 · 4.3 low-resistance ohmmeters · ≥ 200 mA · **p.135**

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