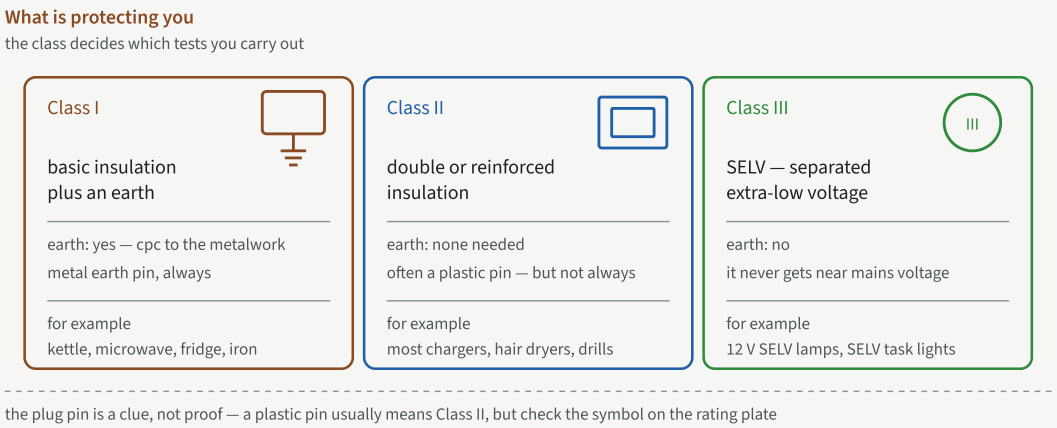
CLASSES I, II AND III

CLASS I OR CLASS II. HOW CAN YOU TELL?

The single biggest topic here. **Class tells you how the equipment protects you from electric shock** — and it decides which tests you'll carry out.

	CLASS I	CLASS II	CLASS III
Protection	Basic insulation **plus an earth**	**Double or reinforced** insulation	**SELV** — separated extra-low voltage
Earth	**Yes** — CPC to the metalwork	No earth needed	No
Plug earth pin	Always **metal**	Often plastic — but not always	—
Symbol	—	**Square inside a square**	—
Examples	Kettle with metal body, microwave, cooker, fridge, iron, coffee machine	Plastic-cased fan, most lamps and light fittings	Anything fed from a transformer at SELV



The class is the single biggest thing on this subject, because it decides what you test. A **Class I** item has an earth to prove, so it gets an earth continuity test. A **Class II** item has none — its protection is the insulation itself, marked with the square inside a square. A plastic plug pin is a hint, not evidence: check the rating plate.

□ **The class II symbol is the square inside a square.** It means double **or** reinforced insulation — reinforced being a single layer thick enough that contact with live parts isn't credible. Class I has no class mark of its own: Table 6.1 says only that the terminal where the protective conductor connects may be marked — with the earth symbol, the letters PE, or green-yellow. And the class II mark **isn't mandatory**, so a missing square doesn't make something class I.

✋ **Don't judge by casing alone.** A mostly plastic body doesn't make it class II: a coffee machine with a plastic body and a metal front panel is **class I** if that metal is earthed and there's no class II symbol. And a class II item can still have **accessible metal parts** — a plastic fan with a metal grille is class II because it's double insulated. Look for the symbol and the earth pin, not the material.

WHICH IS SAFER?

Most people say class I, because it's earthed. The better answer is that **it depends on condition**. Lose the earth conductor on a class I appliance and a fault makes the casing live. Wear through the insulation on a class II and you're exposed too. Both rely on being maintained.

Why lamp flex can have no CPC.

A two-core flex to a **plastic** pendant is fine when the lamp holder is **class II**. Check the fitting — the double-insulation squares will be marked on it. A **metal** pendant is class I, so it needs a CPC, terminated at the rose.

Section 2 · class I and class II definitions

Section 6 · classification of equipment, with the symbol table

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