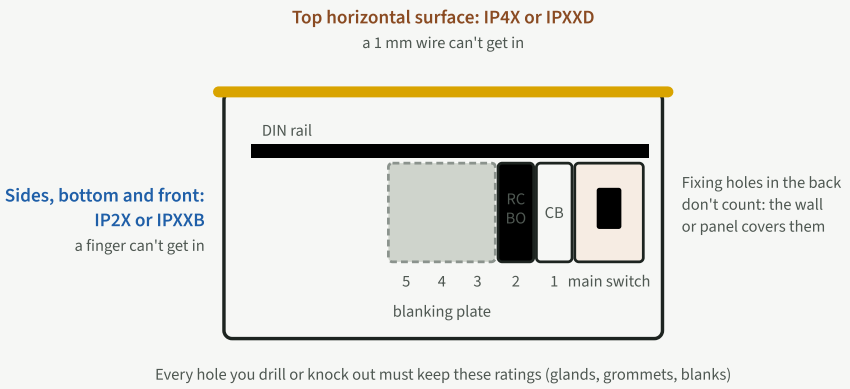
CONSUMER UNIT IP RATINGS AND BLANKS

IP4X OR IPX4 ON TOP OF THE BOARD?

As well as being non-combustible, the enclosure must keep an **adequate IP rating** (International Protection). A consumer unit is an **enclosure containing live parts**, just like a socket-outlet, so the same minimums apply:



Redrawn from our five-way board: CB in way 1 next to the main switch, RCBO in way 2, and a metal blank over ways 3 to 5.

SURFACE	MINIMUM	WHAT IT MEANS
Top horizontal surface	IP4X or IPXXD	Objects ≥ **1 mm** (a wire) can't get in. Tops catch dropped items: screws, offcuts, swarf.
Sides, bottom, front	IP2X or IPXXB	Roughly a **finger**: **12.5 mm** for IP2X, and the **12 mm** jointed test finger, **80 mm** long, for IPXXB.

Watch out: IP4X, not IPX4A common mix-up is saying the top surface must be "IPX4". It should be **IP4X**: the **first** digit (solid objects, a 1 mm wire). IPX4 would be splash protection against water, which is a different thing.

- **Code of Practice for In-service Inspection & Testing of Electrical Equipment** ("the PAT testing book") · Appendix 2 · IP codes explained

THE CLEAREST EXPLANATION OF IP CODES

- **BS 7671** · Reg 416.2.1 · barriers/enclosures at least IP2X or IPXXB
- **BS 7671** · Reg 416.2.2 · readily accessible top horizontal surfaces at least IP4X or IPXXD

BLANKS: KEEPING THE FRONT COVERED

- The cover has a slot for the breakers. If a way has **no device** in it (our five-way board with two circuits leaves ways 3, 4 and 5 empty), the gap must be closed with a **blanking plate**.
- Our metal blank **hooks in** and slides along, and can only be fitted with the cover **off**. With the cover and breakers in place it's secure and very unlikely to move.
- You can also get **flexible plastic** blanks. Make sure the one you fit keeps fingers out **and** is **durable enough** for the environment it's in.
- **A spare circuit breaker can be used as a blank.** It's allowed. It's just expensive: a pack of 10 blanks costs about **£1**, one breaker about **£3–£4**. This comes up a lot.

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