WHICH RCD TESTS ARE ACTUALLY REQUIRED

HALF, ONE, OR FIVE TIMES?

> BS 7671 requires one times. Guidance Note 3 recommends half times and one times. Five times is optional.

BS 7671 only requires a test at **one times** (1×IΔn), with the instrument set to **Type AC**, and the result recorded on the Schedule of Test Results. Guidance Note 3 sets out two lists beside it.

TEST	EXPECTED RESULT	STATUS
Half times	Should **not** trip	Recommended · Table 2.18(a)
One times	Trip within **300 ms** (non-delayed) · **500 ms** (S-type)	Recommended · Table 2.18(a) · the one BS 7671 requires
Five times	Within **40 ms** (non-delayed, 30 mA or less) · **150 ms** (S-type)	Optional · Table 2.18(b)

The one-times test is run at **0°** and **180°**, and the **longer** of the two times is recorded — in column 28 of the Schedule of Test Results. Older non-delay devices to BS 4293 or BS 7288:1990 have a **200 ms** limit at one times.

Two lists, and they do different jobs.

Guidance Note 3 · Table 2.18(a) · p.96 gives the **recommended** tests, with the instrument set to Type AC whatever type the RCD is. Table 2.18(b) · p.96 lists the **optional** ones: five times, the pulsed-DC tests for Types A, F and B, and the smooth-DC test for Type B. The optional tests are for fault-finding only, they are not BS 7671 requirements, and they shorten the RCD's life. The RCD type markings are Figure 2.32 · p.97.

Doing it manually, you choose which tests to run.

On auto it cycles six, because each is run at 0° and 180° — the sine wave icon on the display flips direction between them.

S type is the time-delayed one.
The 40 ms five-times figure is for **non-delayed** devices; an S-type has 150 ms.

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