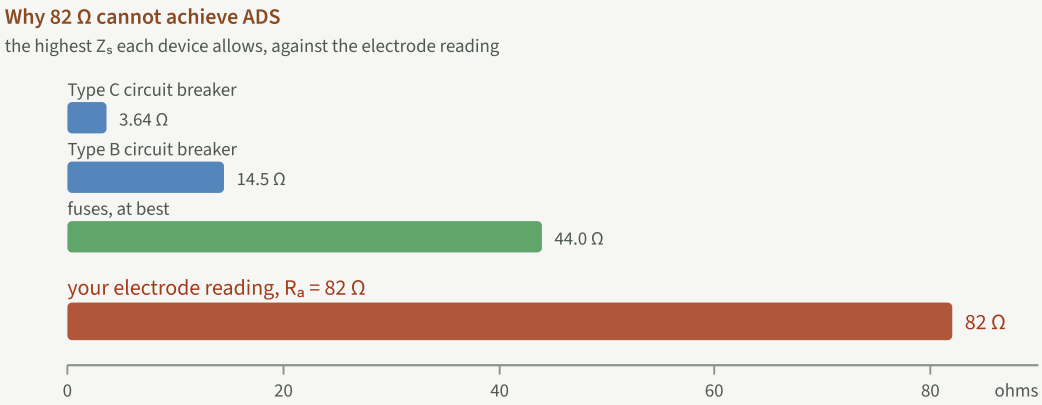
WHY 82 Ω CANNOT ACHIEVE ADS

CAN ANY BREAKER CLEAR AN 82 OHM LOOP?

Take that 82 Ω and go looking for a protective device that will disconnect in time. Check **BS 7671** · Tables 41.2 to 41.4 :

DEVICE	HIGHEST Z_S IN THE TABLE
Fuses	around **44 Ω**, dropping as the rating rises
Type B circuit breakers	around **14.5 Ω**
Type C	around **3.64 Ω**



Nothing in BS 7671 Tables 41.2 to 41.4 comes anywhere near 82 Ω, so no fuse and no circuit breaker will disconnect in time. And the electrode reading is only the start — a circuit's own R_1+R_2 still has to be added on top of it. That is why an installation on an electrode this poor needs an RCD, not a bigger fuse.

> Nothing in those tables goes anywhere near 82 Ω

So with an R_A that high, **no fuse and no circuit breaker will achieve automatic disconnection of supply**. And remember your R_A is only the start — add a circuit's R_1 + R_2 and Z_s is higher still.

✋ **Which means the RCD is doing a different job.** On a TT system like this the RCD is not there for **additional** protection — it is there for **fault** protection, because nothing else can provide it. On an EICR there are separate boxes for the two, and this is the distinction they are asking about.

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