

Guidance for Testing RCCB

**** Please note:** This guidance applies to RCCB products rated >80A and 4P RCBO's

The new range of Hager Type A RCCBs and RCBOs conform to EN 61008-1 (RCCB) and EN 61009-1(RCBO). This standard recognises RCCBs not exceeding 30 mA as providing additional protection against electric shock.

Table 1 of EN 61008-1 specifies the manufacturer's option of a maximum break time (commonly referred to as tripping) for a 30 mA RCCB as 40 ms at a test current of 250 mA. This is aligned to IEC TS 60479 which relates to the effects of electric current on humans and which recognises 250 mA disconnecting within 40 ms.

Unfortunately, the acceptable test parameter of a maximum trip time of 40 ms at 250 mA has not yet been transferred to industry guidance which still describes a single test option i.e. disconnect within 40 ms at $5I\Delta n$ and is therefore still the recognised practice in Ireland.

Test Readings

The product standard EN 61008-1 allows the manufacturer to select characteristics of $5I\Delta n$ or 0.25 A / 250 mA. The Hager RCCB is set to 0.25 A / 250 mA which allows conformity to the product standard.

Test Procedure

Market feedback indicates that there may be a general issue around how to correctly test 30 mA RCCBs set to 0.25 A.

Verification is made by visual inspection and testing. The test could be carried out using either the 'Auto' function of the installation test meter or manually selecting each test in turn. We recommend the RCCB test is carried out in 'manual mode'. The test should be carried out at the device itself with all loads disconnected.

The test equipment should be selected to the type of RCCB corresponding to the type of RCCB within the installation.

Should you wish to carry out a test at 250mA, where the required disconnection time is within 40 ms, a variable RCCB test instrument can be set to 50 mA and tested at X5, which is in effect carrying out the test at 250 mA, as permitted by the product standard

Also should your particular test instrument not have a variable facility then it is acceptable to carry out the test at a higher value of 300mA (set machine to 300mA and x1) to achieve a time within 40ms.

Further Support

We are fully committed to supporting our customers and should you require any further clarification or support please contact our Hager Technical Support line on +353 1 5180844

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