

# AFDDs: Testing devices

An AFDD can include either manual or automatic testing – if manual then the AFDD itself would need to have a test button to verify the arc fault operation. If combined with an RCBO or RCCB then a test button would be required for the RCD element, even if the AFDD has automatic testing. AFDDs including an RCD function need a test device according to the relevant product standard.

- When tested manually, the AFDD should trip. For AFDDs without an automatic test function, the test button should be pressed every **six** months.
- An automatic test function that checks the arc detection circuit.

The automatic test function consists of a test at 'switch-on' and at intervals not exceeding at least once a day. During this automatic testing, the AFDD does not trip unless a malfunction is detected. In case a malfunction is detected during automatic testing, the AFDD shall trip and indicate the result.

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For AFDDs with both a test button and automatic test function, manufacturer's instructions shall be followed with respect to test button operation.

BS 7671:2018+A2:2022 appendix 6 (Condition Report – Guidance for recipients) refers: "Where the installation includes an arc fault detection device (AFDD) having a manual test facility it should be tested six-monthly by pressing the test button. Where an AFDD has both a test button and automatic test function, manufacturer's instructions shall be followed with respect to test button operation".

## Installation testing:

There is no requirement in BS EN (IEC) 62606 or in BS 7671 to test an AFDD in the electrical installation with an external test instrument.

BEAMA recommends disconnecting AFDDs during fixed installation insulation resistance testing at 500 V DC. If this is not practical, the DC voltage can be reduced to 250 V but specific manufacturer's guidance shall be followed.



Contact a BEAMA member  
for more information.

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