

AFDDs

AFDD is a generic term for arc fault detection devices designed to EN 62606. In addition to arc default detection, the device may include MCB and RCD protection.

For use in single phase final distribution circuits 240V AC, where particular fire risks exist e.g. Bedrooms, Nursing Homes, Schools, Rooms containing valuable / historic items.

Selecting AFDDs

Doepke's DAFDD combines the functions of RCBO + AFD in one unit, and is selected using the same parameters as an RCBO:

- ✓ MCB curve "B" or "C"
- ✓ MCB Load current "in"
- ✓ RCD characteristic 30 mA Type "A" or "AKV"
- ✓ Breaking capacity 10kA / Limiting class 3

Connect the supply to terminals 2 and 4.



Types of Arc Fault

Arc faults can develop in series or in parallel with the load
- see diagram.

Series Arc Fault

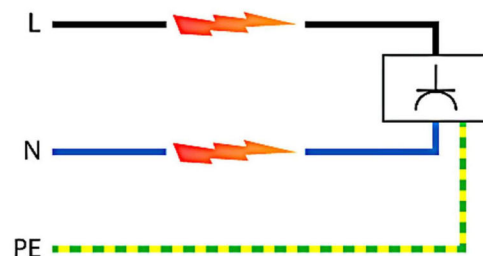
The current is limited by the resistance of the load and the arc. Consequently series arc faults cannot be detected by standard protection devices e.g. MCB, RCD, Fuse.

Parallel Arc Fault

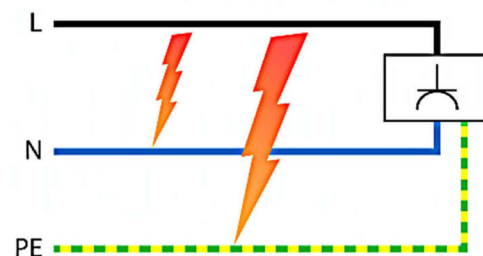
The current is limited by the resistance of the arc. A fault that develops across the line conductors is unlikely to be detected by an MCB or Fuse. A fault between a line conductor and earth, may be detected by an RCD, if : $\text{Line voltage} / \text{Arc resistance} > 1.6n$.

Note : AFDDs to EN62606 are designed for use in domestic and similar applications. The arc fault analysis (software) is generally based on common domestic loads.

Series Arc Fault



Parallel Arc Fault



Fault Code Display



Colour



Flashing

Continuous Green

1 x yellow

2 x yellow

3 x yellow

4 x yellow

5 x yellow

6 x yellow
+ continuously yellow/red

Meaning

Normal operation

Series arc fault

Dimmer fault

Parallel arc fault

Overvoltage (> 270 V)

Temperature (> 115° C)

Internal fault

Have a question? Please **contact us today**

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Doepke UK Ltd