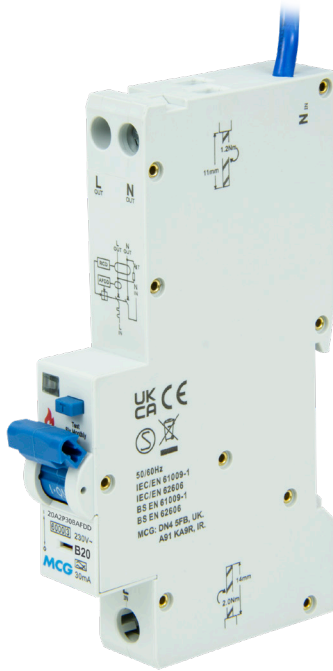


## 20A 1P+N Arc Fault Detection Device Bidirectional 1 Module 6kA B Curve Type A 30mA

Product Ref: **20A2P30BAFDD**



### Series arcing faults:

These are typically caused by a loose connection or a damaged conductor. In this arc fault condition current flow is always lower than the operational load current.

Miniature Circuit Breakers and Residual Current protective devices will not detect these electrical faults.

However AFDDs are extremely sensitive and will disconnect series faults from 2.5A

### Parallel arcing faults between conductors:

These are caused by electric arcs resulting from damage to the insulation that permits minimum contact between the two live conductors, MCBs or RCBOs may trip if the fault current is high enough.

### Parallel arcing faults between phase (or neutral) and protective conductor:

AFDDs will detect arcing faults against the protective conductor and provide adequate fire protection where no RCD is used.

However MCG AFDDs are combined with 30mA Miniature RCBOs that reliably detect and shut down this type of parallel arc fault.

### Test Button

Perform test every 6 months

## Product Specification

|  |   |
|--|---|
| Bidirectional                          | Yes   |
| Rated Voltage                          | 230V  |
| RCD Type                               | A   |
| Rated Current                          | 20A   |
| Frequency                              | 50/60Hz   |
| IP Rating                              | IP20  |
| Weight                                 | 0.191kg   |
| Number of Modules                      | 1   |
| Number of Poles                        | Single Pole & Neutral (Switched)  |
| Rated Tripping Current $I_{\Delta n}$  | 30mA  |
| Rated peak withstand voltage $U_{imp}$ | 4kV   |
| Mounting                               | DIN Rail  |
| Terminal Capacity                      | 1 - 25mm <sup>2</sup>   |
| Torque Setting                         | 1.2(L/N out)/2 (L in)   |
| Rated Breaking Capacity                | 6kA   |
| Electrical endurance                   | ≥4000 switching operations  |
| Mechanical endurance                   | ≥10000 switching operations   |
| Tripping Characteristics               | B Curve   |
| Busbar thickness                       | 0.8 - 2mm   |
| Colour                                 | Grey/Blue   |
| Tripping temperature                   | -25°C to +40°C  |
| Material                               | Plastic   |
| Compliance                             | UKCA, CE  |
| Guarantee                              | 1 Year  |
| Supplied With                          | 350mm Neutral cable<br>Test 'T' operating test button on the front panel<br>Fault tripping indicator window<br>Insulated DIN rail clips |
| Standards                              | EN 62606, EN 61009-1  |
| Depth                                  | 70mm  |
| Height                                 | 118mm   |
| Width                                  | 18mm  |

Errors and omissions excepted (E&OE). All information is subject to change without notice and is correct at the time of print. Refer to issue number and date below.

## 20A 1P+N Arc Fault Detection Device

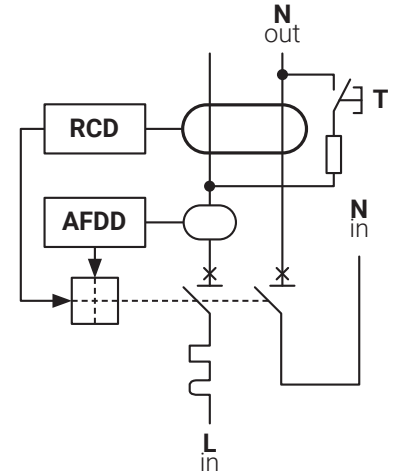
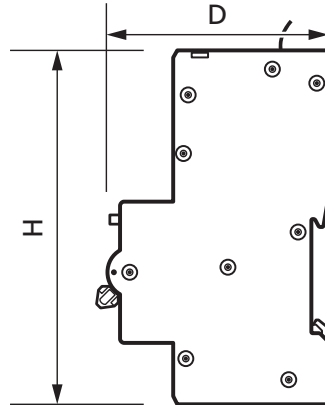
Bidirectional 1 Module 6kA B Curve Type A  
30mA

Product Ref: **20A2P30BAFDD**

### Protective area

Combines integrated AFD, MCB and RCD devices. This allows to provide the highest protection level.

| Protective Area             |                        |
|-----------------------------|------------------------|
| FAULT TYPE                  | DETECTED BY INTEGRATED |
| Short circuit               | MCB                    |
| Overload                    | MCB                    |
| Residual current            | RCD                    |
| Series Arcing Fault         | AFD                    |
| Parallel Arcing Fault       | AFD                    |
| Parallel Arcing Fault to PE | RCD                    |



### AFDD Part Operating Criteria

| Series Arcing Fault |                                  |
|---------------------|----------------------------------|
| TEST CURRENT (A)    | Maximum allowed tripping time(s) |
| 2.5                 | 1                                |
| 5                   | 0.5                              |
| 10                  | 0.25                             |
| 16                  | 0.15                             |
| 32                  | 0.12                             |
| 40                  | 0.12                             |

| Parallel Arcing Fault |   |
|-----------------------|---|
| TEST CURRENT (A)      | Maximum allowed number of arcing half-waves within 0.5s (N) |
| 75                    | 12  |
| 100                   | 10  |
| 150                   | 8   |
| 200                   | 8   |
| 300                   | 8   |
| 500                   | 8   |

| LED Indication after tripping and re-closing                  | Description   |
|---|---|
| <p>Steady Red Light</p>                                       | <p>Overcurrent Fault or Residual Current Fault</p>  |
| <p>1 blink per second (total 10 sec)</p>                      | <p>Series Arcing Fault</p>                          |
| <p>2 blinks per second (continuous blinking) total 10 sec</p> | <p>Parallel Arcing Fault</p>                        |
| <p>5 blinks per second (continuous blinking)</p>              | <p>Overvoltage Fault (<math>U \geq 275V</math>)</p> |
| <p>Internal Self - Test Fault</p>                             | <p>Internal Self - Test Fault</p>                   |