

-PowerBreaker-

Arc Fault Detection Device (AFDD)- Information Sheet Type B & Type C Curve

The PowerBreaker range of combined AFDD/RCBO range are designed and tested for use with PowerBreaker Consumer Units.

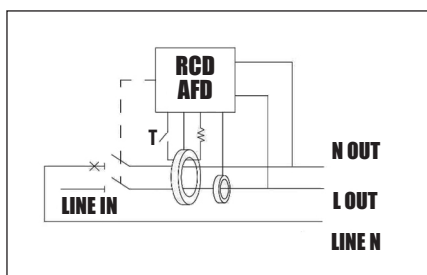
These devices **MUST** be installed and tested by a qualified electrician in accordance with the latest Wiring Regulations (BS7671).

Part No's - B Curve	PBA06BA	PBA10BA	PBA16BA	PBA20BA	PBA25BA	PBA32BA	PBA40BA
Rated Residual Current	6A	10A	16A	20A	25A	32A	40A

Part No's - C Curve	PBA06CA	PBA10CA	PBA16CA	PBA20CA	PBA25CA	PBA32CA	PBA40CA
Rated Residual Current	6A	10A	16A	20A	25A	32A	40A

INSTALLATION

1. Clip securely on to the din rail making sure the din rail clip at the bottom is pushed in, locking the AFDD onto the din rail, ensure lever is in the OFF position.
2. Cut & dress wires as per diagram on unit and connect cables as shown in the diagram.



- a. 'Line IN' terminal connects to the bus bar.
 - b. Neutral flying lead to the neutral terminal bar (this can be cut to size to suit).
 - c. Connect the load to the 'L'OUT and the 'N'OUT terminals at the top of the AFDD.
3. Before powering up the circuit check all connections are at the correct torque - 2.5Nm.

TESTING

NOTE: Connections to the AFDD do not require to be disconnected if the lever is in the 'OFF' position for Insulation Resistance Test (IR test).

To test the AFDD Press the 'TEST' button.

When newly fitted systems do NOT trip on the TEST button or using the Multifunction Tester (MFT) the problem is normally caused by an Earth to Neutral fault on the circuit (PME supply).

Installers can easily check the AFDD by removing the LOAD connections on the device and applying power. If the TEST button works the fault is in the circuit.

RCBO Test

Combined AFDD/RCBOs are manufactured in accordance with IEC 61009-1 and must be tested to this specification using a calibrated test meter.

0.5Δ _n	RCBO will NOT Trip
1Δ _n	RCBO MUST Trip within 300ms

AFDD Self-Test function

The combined AFDD-RCBO has a self-test feature which is initiated when the device is switched **ON**.

- The self-test feature performs a regular test at 1 hour intervals.
- If a self-test failure is detected, the AFDD will trip after 5 seconds.
- When the toggle switch is moved to the ON position, the LED will start flashing 5 times per second to signal a self-test failure.

TROUBLE SHOOTING FOR END USER

What if the combined AFDD/RCBO Trips:-

1. Reset tripped AFDD/RCBO to '**ON**' position.
2. If AFDD/RCBO trips again then disconnect all appliances connected to this circuit.
3. Switch AFDD/RCBO to '**ON**' position and connect **1 appliance** at a time to see which one trips the device.
4. Once faulty appliance has been identified **DO NOT USE** until it has been checked.
5. Switch AFDD/RCBO to '**ON**' position.
6. If fault does not clear contact a qualified electrician to check the installation.

TECHNICAL INFORMATION	
Arc Fault Detection	Yes
Number of Poles	1 Pole + switched Neutral
Rated Voltage (Un)	240VAC
Rated Residual Current	30mA
Type of Residual Current	Type A
Rated Non-tripping Current	0.5
Rated Frequency	50/60Hz
Rated Short-Circuit Capacity	6kA
Tripping Characteristics	Type B & C (please see part no list overleaf)
Energy Limiting Class	3
Index of Protection	IP20
Terminals	Pillar type 1 –25mm ²
Mechanical Endurance	>10,000 times
Electrical Endurance	>4,000 times
Bus Bar Thickness	0.8 to 2mm
Ambient Temperature	- 25°C to +45°C
Storage Temperature	- 35°C to +60°C
Torque (Recommended minimum tightening)	2.5 Nm
Dielectric strength	2500V
Din Rail Mounting	Yes
Guarantee	3 Years
Conforms To	BS EN 61009-1 BS EN 62606

AFDD RCBO: Red LED Status Indication	
Constant Lit	Device Operational
1 Flash/Sec ► 10 Sec	Series or Parallel Arc Fault
2 Flash/Sec ► 10 Sec	Over Voltage >275V
5 Flash/Sec	Self-Test Failure
Not Lit	No Supply Voltage

Please keep this information
for future reference



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GUARANTEE
Your PowerBreaker AFDD
is guaranteed for 3 years from
the date of purchase.
This is in addition to your statutory rights