

AFDD

- Prevents fires •
- Fits in new and existing installations •
- Switched neutral •
- 4 in 1 protection •

OVERLOAD

Test current: I_n : 6-40A

$1.13 \times I_n$ No tripping within an hour

$1.45 \times I_n$ Tripping within an hour

ARC FAULT

Serial Arcing Fault

Parallel Arcing Fault

Grounding Arc Fault

SHORT CIRCUIT

B,C Tripping Characteristics

B: $(3-5) \times I_n$

C: $(5-10) \times I_n$

EARTH LEAKAGE

$I_{\Delta n}$: 10,30,100,300mA

Type A & AC



EPBR2-40AFD Series

Arc Fault Detection Device

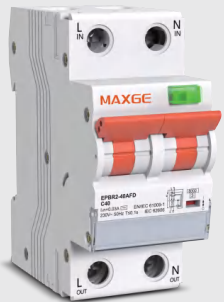
Standard		IEC/EN 62606,IEC/EN 61009-1
Rated conditional short-circuit current(kA)		6,10
Rated current(A),I _n		6,10,16,20,25,32,40
Number of poles		1P+N
Rated sensitivity currents(mA),I _{Δn}		10,30,100,300
Tripping curve		B,C
Rated residual non-operating current		0.5XI _{Δn}
Rated impulse withstand voltage U _{imp} (kV)		4
Rated voltage(V)		AC 230/240
Ambient temperature (°C)		-25~+40,Max.95%humidity
Residual current off time		≤0.1s
Type of trip	Ground fault	Electronic
	Over current	Thermal-magnetic
	Arc fault	Serial Arcing Fault,Parallel Arcing Fault,Grounding Arc Fault
	Power supply failure	Over voltage protection
Electrical endurance		2000
Mechanical endurance		10000
Terminal capacity		16mm ² flexible/25mm ² rigid
Protection degree		IP20
Installation		35mm DIN rail



EPBR2-40AFD

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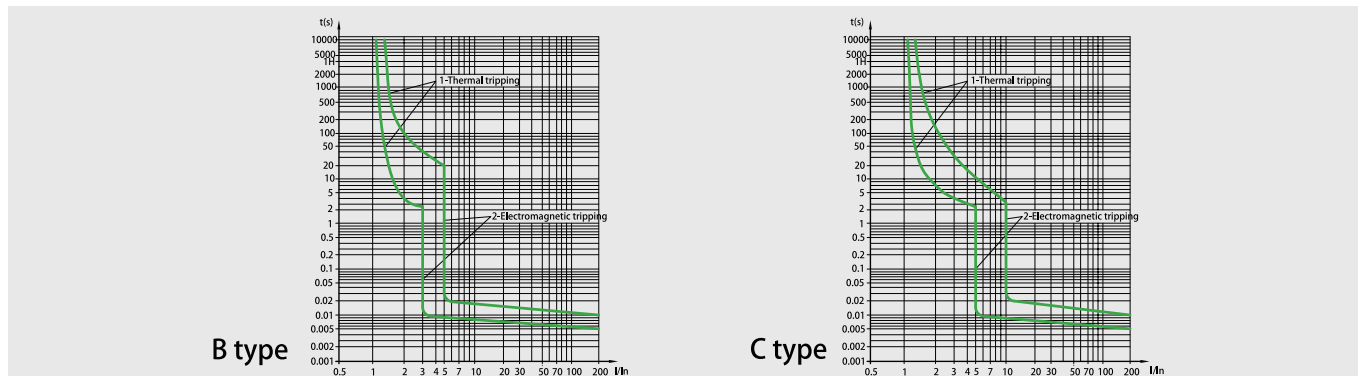
Arc Fault Detection Device

	Rated current(A)	$I_{\Delta n}$	Type AC 		Type A 		Packing unit
			B curve	C curve	B curve	C curve	
 Type AC 	6	10mA	EPBR2-40AFD-B6/10	EPBR2-40AFD-C6/10	EPBR2-40AFD-B6/10-A	EPBR2-40AFD-C6/10-A	6
	10		EPBR2-40AFD-B10/10	EPBR2-40AFD-C10/10	EPBR2-40AFD-B10/10-A	EPBR2-40AFD-C10/10-A	
	16		EPBR2-40AFD-B16/10	EPBR2-40AFD-C16/10	EPBR2-40AFD-B16/10-A	EPBR2-40AFD-C16/10-A	
	20		EPBR2-40AFD-B20/10	EPBR2-40AFD-C20/10	EPBR2-40AFD-B20/10-A	EPBR2-40AFD-C20/10-A	
	25		EPBR2-40AFD-B25/10	EPBR2-40AFD-C25/10	EPBR2-40AFD-B25/10-A	EPBR2-40AFD-C25/10-A	
	32		EPBR2-40AFD-B32/10	EPBR2-40AFD-C32/10	EPBR2-40AFD-B32/10-A	EPBR2-40AFD-C32/10-A	
	40		EPBR2-40AFD-B40/10	EPBR2-40AFD-C40/10	EPBR2-40AFD-B40/10-A	EPBR2-40AFD-C40/10-A	
	6	30mA	EPBR2-40AFD-B6/30	EPBR2-40AFD-C6/30	EPBR2-40AFD-B6/30-A	EPBR2-40AFD-C6/30-A	
	10		EPBR2-40AFD-B10/30	EPBR2-40AFD-C10/30	EPBR2-40AFD-B10/30-A	EPBR2-40AFD-C10/30-A	
	16		EPBR2-40AFD-B16/30	EPBR2-40AFD-C16/30	EPBR2-40AFD-B16/30-A	EPBR2-40AFD-C16/30-A	
	20		EPBR2-40AFD-B20/30	EPBR2-40AFD-C20/30	EPBR2-40AFD-B20/30-A	EPBR2-40AFD-C20/30-A	
	25		EPBR2-40AFD-B25/30	EPBR2-40AFD-C25/30	EPBR2-40AFD-B25/30-A	EPBR2-40AFD-C25/30-A	
	32		EPBR2-40AFD-B32/30	EPBR2-40AFD-C32/30	EPBR2-40AFD-B32/30-A	EPBR2-40AFD-C32/30-A	
	40		EPBR2-40AFD-B40/30	EPBR2-40AFD-C40/30	EPBR2-40AFD-B40/30-A	EPBR2-40AFD-C40/30-A	
 Type A 	6	100mA	EPBR2-40AFD-B6/100	EPBR2-40AFD-C6/100	EPBR2-40AFD-B6/100-A	EPBR2-40AFD-C6/100-A	
	10		EPBR2-40AFD-B10/100	EPBR2-40AFD-C10/100	EPBR2-40AFD-B10/100-A	EPBR2-40AFD-C10/100-A	
	16		EPBR2-40AFD-B16/100	EPBR2-40AFD-C16/100	EPBR2-40AFD-B16/100-A	EPBR2-40AFD-C16/100-A	
	20		EPBR2-40AFD-B20/100	EPBR2-40AFD-C20/100	EPBR2-40AFD-B20/100-A	EPBR2-40AFD-C20/100-A	
	25		EPBR2-40AFD-B25/100	EPBR2-40AFD-C25/100	EPBR2-40AFD-B25/100-A	EPBR2-40AFD-C25/100-A	
	32		EPBR2-40AFD-B32/100	EPBR2-40AFD-C32/100	EPBR2-40AFD-B32/100-A	EPBR2-40AFD-C32/100-A	
	40		EPBR2-40AFD-B40/100	EPBR2-40AFD-C40/100	EPBR2-40AFD-B40/100-A	EPBR2-40AFD-C40/100-A	
	6	300mA	EPBR2-40AFD-B6/300	EPBR2-40AFD-C6/300	EPBR2-40AFD-B6/300-A	EPBR2-40AFD-C6/300-A	
	10		EPBR2-40AFD-B10/300	EPBR2-40AFD-C10/300	EPBR2-40AFD-B10/300-A	EPBR2-40AFD-C10/300-A	
	16		EPBR2-40AFD-B16/300	EPBR2-40AFD-C16/300	EPBR2-40AFD-B16/300-A	EPBR2-40AFD-C16/300-A	
	20		EPBR2-40AFD-B20/300	EPBR2-40AFD-C20/300	EPBR2-40AFD-B20/300-A	EPBR2-40AFD-C20/300-A	
	25		EPBR2-40AFD-B25/300	EPBR2-40AFD-C25/300	EPBR2-40AFD-B25/300-A	EPBR2-40AFD-C25/300-A	
	32		EPBR2-40AFD-B32/300	EPBR2-40AFD-C32/300	EPBR2-40AFD-B32/300-A	EPBR2-40AFD-C32/300-A	
	40		EPBR2-40AFD-B40/300	EPBR2-40AFD-C40/300	EPBR2-40AFD-B40/300-A	EPBR2-40AFD-C40/300-A	

EPBR2-40AFD Series

Arc Fault Detection Device

Curves



Breaking time of residual current

Max.breaking time					
$I_n(A)$	$I_{\Delta n}(A)$	$I_{\Delta n}$	$2 I_{\Delta n}$	$5 I_{\Delta n}$	5-500A
6-40	0.01,0.03,0.1,0.3	0.1s	0.08s	0.04s	0.04s

Wiring (The suitable conductors should be used for connection,see table below for relative parameters)

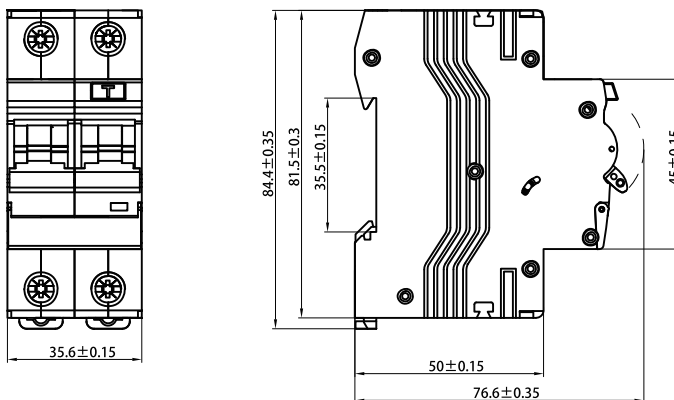
Rated current $I_n(A)$	Cross section area $s(mm^2)$	Tightening torque(N.m)
6	1	2.0
10	1.5	
13	1.5	
16-20	2.5	
25	4	
32	6	
40	10	

AFDD For The Consumer Unit

The 18th edition wiring regulations (BS7671) sets out requirements for electrical installations in the UK, including requirements for protection of persons, livestock & property against the risk from fires that may be generated & propagated in electrical installations.

Designers & installers are required to ensure that installations are arranged so that the risk of ignition from high temperatures or electric arc is minimised, Protection requirements include protecting against the risk of fire from insulation faults, arcs & sparks & high temperatures. Installing arc fault detection devices is recommended in the 18th Edition as a method for mitigating the risk from fire in final AC circuits from arc faults.

Overall and mounting dimensions



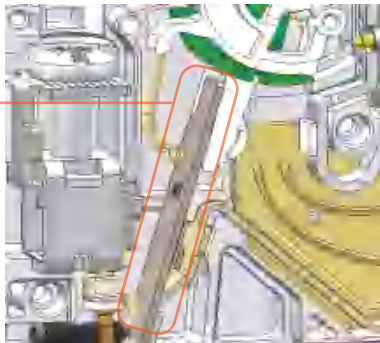
EPBR2-40AFD

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Arc Fault Detection Device

Overload Operation

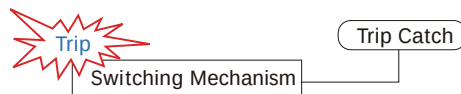
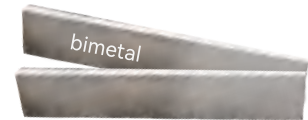
Bimetal Metal Alloy



Overload Protection:Through

Consists of 2 different metals bonded together

Different metals have different coefficient of expansion



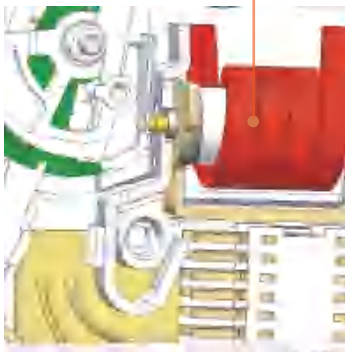
On heating—it bends towards tripping

Pushes the trip catch lever

Switching mechanism actuated

Short Circuit Operation

Solenoid



Trip Catch

Switching Mechanism



High current flows

Solenoid gets magnetized

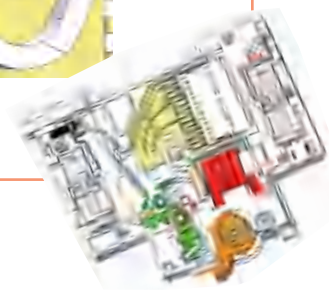
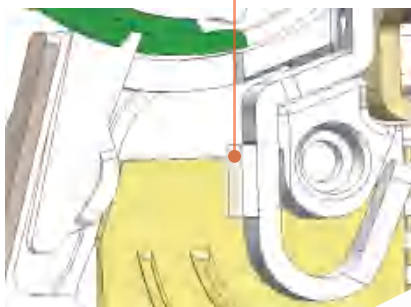
Attracts tripping plunger

Switching mechanism actuated

Lower portion of plunger pushes trip catch lever

Features & Benefits

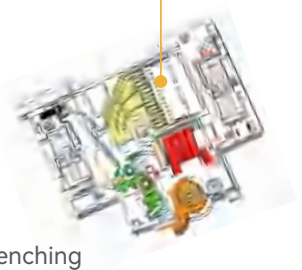
Real Silver Graphite,AGC anti-weld contact tips



Energy Limiting
Class 3



13 Plates Arc Chamber



Highest Electrical Life

Maximum Safety against Contact welding

Rare possibility of AFDD replacement

Quick & Efficient Arc Quenching

Very low let through energy,class 3

Increases life of Installation & equipment