

AFDD Series Arc Fault Detection Device

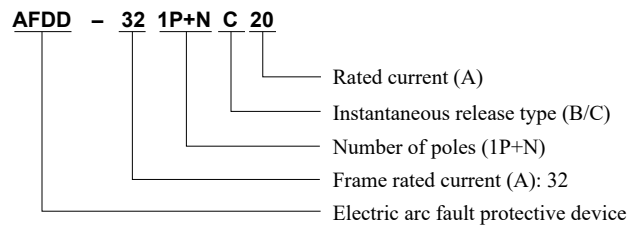


1 Overview

AFDD-32 series arc fault protection circuit breakers are widely used in household and similar AC circuits with rated voltage of 230V, rated current of 32A and below.

The arc fault protection unit of AFDD-32 series arc fault protection circuit breakers can detect and identify the arc fault, parallel arc extension fault and grounding arc fault in the line. For example, aging and damage of the line insulation layer and moist air are easy to cause arc fault. When AFDD-32 series arc fault protection circuit breakers detect that there is an arc fault in the line, it will automatically trip and cut off the power supply.

2 Type Designation



3 Technical Parameters

3.1 Technical Parameters

Product name	AFDD-32
Standard	IEC62606
Electrical characteristics	
Rated voltage (Ue)	AC230V
Rated frequency	50Hz
Rated current (Ie)	6, 10, 16, 20, 25, 32A
Number of poles	1P+N (N pole cannot be open and closed)
Rated insulation voltage (Ui)	400V
Rated impulse withstand voltage (Uimp)	4kV
Rated ultimate short circuit breaking capacity (Icn)	6kA
Rated run short circuit breaking capacity (Ics)	6kA
Instantaneous trip feature	B/C type
Pollution degree	2
Mechanical characteristics	
Mechanical life	10,000 times
Electrical life	6,000 times
Protection grade	IP20
Other characteristics	
Ambient temperature	-5°C~+40°C
Installation altitude	Not exceed 2000m
Wiring terminal	Pressed with screw
Max. wiring capacity	6mm ²

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Max. ultimate torque	1.5N.m
Installation category	Class III
Installation method	TH35-7.5(1.0) standard rail
Inlet method	Top inlet

3.2 Electric arc fault action requirements

Test arc current (effective value)	3A	6A	13A	20A	40A	63A
Max. breaking time	1S	0.5S	0.25S	0.15S	0.12S	0.12S

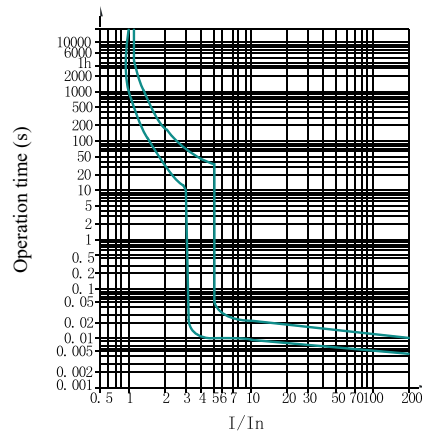
The test arc current is the expected current before the combustion in the test circuit

3.3 Overcurrent release protection characteristics

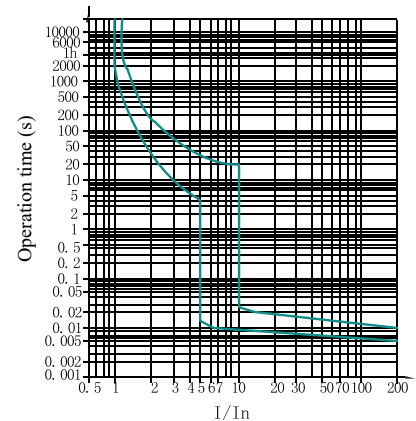
B type C type	3In	Cold state	$t \leq 0.1S$	Non-trip	Power on the current by turning off the aux. switch
	5In	Cold state	$t < 0.1S$	Trip	
B type	5In	Cold state	$t \leq 0.1S$	Non-trip	Power on the current by turning off the aux. switch
	10In	Cold state	$t < 0.1S$	Trip	

Note: "Cold state" refers to no load before test under the reference temperature +30°C

3.4 Protection Characteristics Curve



B type protection characteristic curve



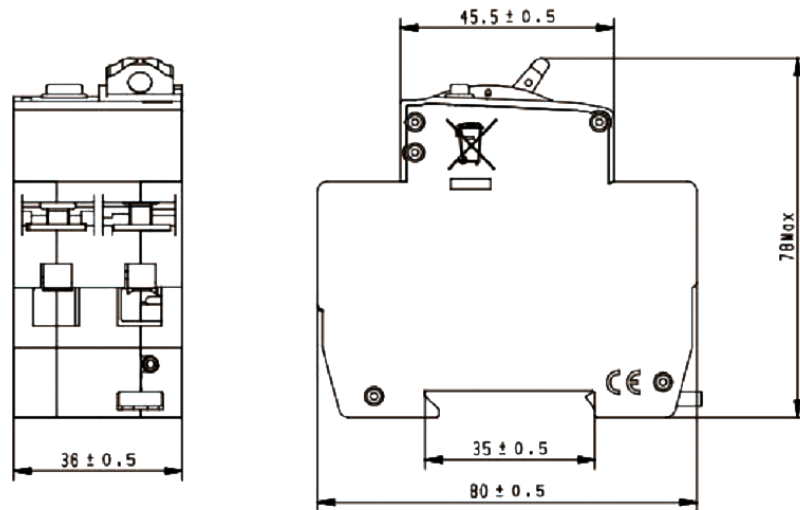
C type protection characteristic curve

3.5 Wiring: Suitable for the connection of 6mm² and below wire, the screw tightening torque is 1.5N.m.

Rated current (A)	Nominal sectional area of copper wire (mm ²)
6	1
10	1.5
16~20	2.5
25	4
32	6

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4 Outline and Installation Dimensions



5 Ordering Notice

- 5.1 Product name and model, such as AFDD-32 electric arc fault protective device;
- 5.2 Number of poles, such as 1P+N;
- 5.3 Product instantaneous trip type, such as C type;
- 5.4 Rated current, such as 20A;
- 5.5 Product qty., such as 100 units
- 5.6 Order example, AFDD-32 1P+N C20, 100 units.