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# MINIATURE CIRCUIT BREAKER

## FX47(S)/FXB5/FXB4/FXB4/FX47-63

 Lightning

 Easy to install

 Parameter

 Complete

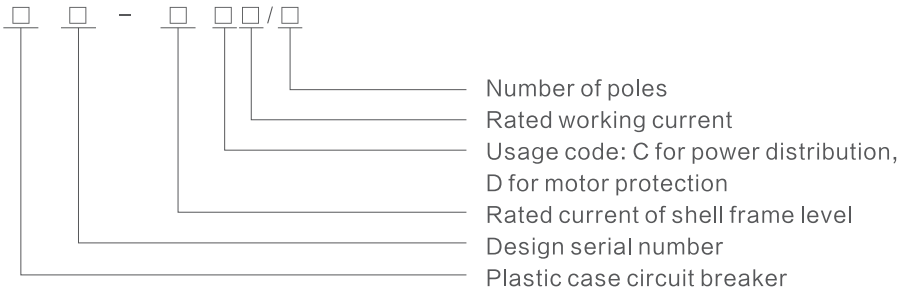


### Scope of application

The small circuit breaker has the characteristics of advanced and reasonable structure, reliable performance, high breaking capacity, and beautiful and compact appearance. The shell and other components are made of impact resistant and high flame retardant materials. Suitable for places with AC 50Hz or 60Hz, rated working voltage below 400V, and rated current ranging from 1A to 63A. Mainly used for lighting, overload and short circuit protection of distribution lines and equipment in office buildings, residential and similar buildings, and can also be used for infrequent line switching under normal circumstances.

### Model and meaning

This product meets the standards of IEC60898.1 and GB10963-1.





Miniature circuit breaker

Main parameters and technical performance

Rated operation Voltage (V)	number of poles	Rated current	Rated short-circuit breaking capacity	
			Expected current of the test line (A)	Power factor
230	1,2	1,2,3,4,5,6,	6000	0.65~0.70
230/400	1,2	10,16,20,	6000	0.65~0.70
400	2,3,4	25,32,40	6000	0.65~0.70
230	1,2	50,63	4500, [DZ47(S) L7 6000]	0.75~0.80
230/400	1,2		4500, [DZ47(S) L7 6000]	0.75~0.80
400	2,3,4		4500, [DZ47(S) L7 6000]	0.75~0.80

Note:  
Mechanical life: 20000 times (one connection disconnected)  
Electrical life: 5000 times  
Damp heat resistance: Class 2 (temperature 55 °C, relative humidity 95%) The wiring adopts terminal blocks with clamps, and the cable carrying capacity can reach 25mm2

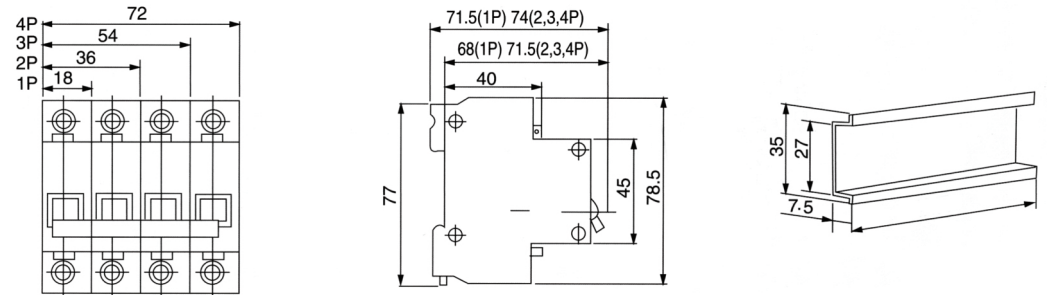
Overcurrent tripping table

type	Test current (A)	Rated current (In)	Rated time	Expected results	Initial state	annotations
C D	1.13In	all values	t 1h	No tripping	cold state	The current is stable within 5 seconds Ground rise to the specified value
	1.45In	all values	t 1h	trip	Hot state	
	2.55In	In 32A	1s t 60s	trip	cold state	
		In 32A	1s t 120s	trip	cold state	
C	5In	all values	t 0.1s	No tripping	cold state	Closing auxiliary switch turn on electricity
	10In	all values	t 01s	trip	cold state	
D	10In	all values	0.1s	No tripping	cold state	
	15In	all values	t 0.1s	trip	cold state	

Structural features

The small circuit breaker consists of a plastic casing, operating mechanism, contact arc extinguishing system, tripping mechanism, etc. The shell is made of high flame retardant and high-strength special plastic, with strong impact resistance and light weight. The components of the circuit breaker operating mechanism are made of high-strength plastic products, which ensure sensitivity and reliability while obtaining the lowest rotational inertia, making the time from the start of a short circuit fault to the action of the tripping mechanism very short. The release mechanism consists of two parts: a bimetallic overload inverse time release mechanism and a short-circuit instantaneous electromagnetic mechanism. The contact arc extinguishing system adopts a special arc angle and arc extinguishing chamber, which has significant current limiting characteristics.

Overall dimensions



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# SERIES HIGH BREAK MINI CIRCUIT BREAKER

## FX30



Lightning



Easy to install



Parameter



Complete



### Scope of application

**FX30** series high-break small circuit breaker is suitable for AC 50Hz, rated voltage 230V and below single-phase residential lines, to protect the overload and short circuit of electrical lines. The product has high breaking capacity, small size and a width of only 18mm. Zero and live line are cut off at the same time, which eliminates the personal and fire danger caused by the ground potential caused by the reverse connection of the neutral line or the neutral line. It is the most ideal distribution protection switch used in the residential field at present.

This product conforms to the standards: IEC60898.1 and GB10993-1.

### Model and meaning

FX   30   -   32



Bracket rating current

Design sequence number

Plastic case type circuit breaker

# FX30

## High break mini circuit breaker

### Main parameters and technical performance

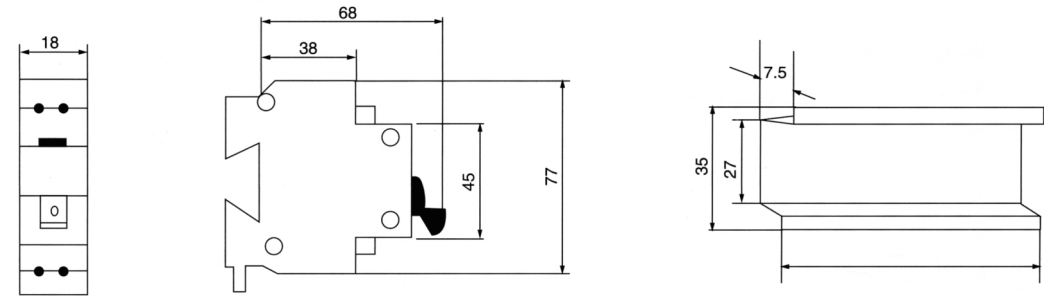
Rated current(A)	poles	Rated oltage V	Rated current(A)	Breaking capacity A	Power factor	Mechanical life(s)
6,10,16 20,25,32	1+N	230	32	3000	0.65~0.70	20000

Note:  
Humidity and heat resistance type: Class 2 (temperature 55℃, relative humidity of 95%).  
The connection is made using the terminal with the clamp, using the hard wire of 10mm2 and below.

### Overcurrent tripping table

Test current(A)	Rated current□In□	Rated time	Expected result	Initial state	note
1.13In	All values	t 1h	non-trip	Cold state	
1.45In	All values	t 1h	trip	Hot state	The current is stable within 5S Ground rise to specified value
2.55In	All values	1s t 60s	trip	Cold state	
5In	All values	t 0.1s	non-trip	Cold state	Closing auxiliary switch Power on
10In	All values	t 0.1s	trip	Cold state	

### Overall dimensions



Installation: Can be installed in all distribution boxes suitable for multi9 components

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# SERIES HIGH BREAK MINI CIRCUIT BREAKER

## FXB2



Lightning



Easy to install



Parameter



Complete

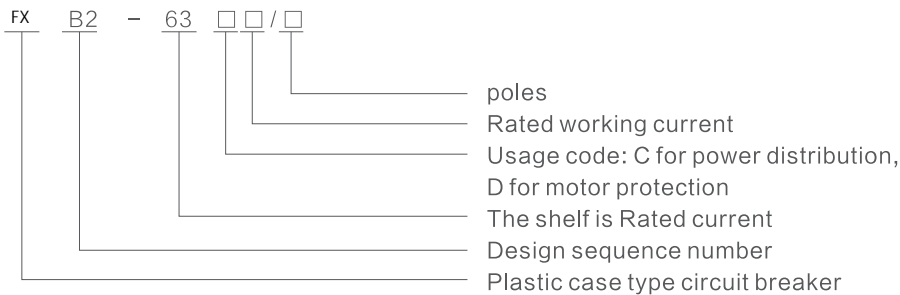


### Scope of application

FXB2 high-break miniature circuit breaker has the characteristics of advanced structure, reliable performance, high Breaking capacity, beautiful and small appearance, etc. The plastic parts such as the shell are made of impact-resistant and high-flame retardant materials. Suitable for AC 50Hz or 60Hz, Rated operating voltage below 400V, Rated current automatic 6A to 63A below the place. It is mainly used for lighting of office buildings, residential buildings and similar buildings, overload and short circuit protection of distribution lines and equipment, and can also be used as an infrequent conversion of lines under normal circumstances.

This product conforms to the standards: IEC60898 and GB10963.

### Model and meaning



# FXB2 高分断小型断路器

High break mini circuit breaker

Main parameters and technical performance

Rated current(A)	poles	Rated voltage V	Breaking capacity (A)	Mechanical life (cut off a call)	Electrical life
6~40	1,2P	230	10,000	20,000	10000
	2,3,4,P	400	10,000	20,000	
50~63	1,2P	230	10,000	20,000	
	2,3,4P	400	10,000	20,000	

Overcurrent tripping table

Test current(A)	Rated current	In Rated time	Expected result	Initial state	note
1.13In	All values	t 1h	non-trip	Cold state	
1.45In	All values	t 1h	trip	Hot state	The current is stable within 5S Ground rise to specified value
2.55In	In≤32A	1s t 60s	trip	Cold state	
2.55In	In≤32A	1s t 120s	trip	Cold state	
5In(C型)	All values	t 0.1s	non-trip	Cold state	
10In(C型)	All values	t 0.1s	trip	Cold state	Closing auxiliary switch Power on
10In(C型)	All values	t 0.1s	non-trip	Cold state	
14In(C型)	All values	t 0.1s	trip	Cold state	

function

The circuit breaker has the following functions: short circuit protection, overload protection, control, isolation.

Current limit level: 3.

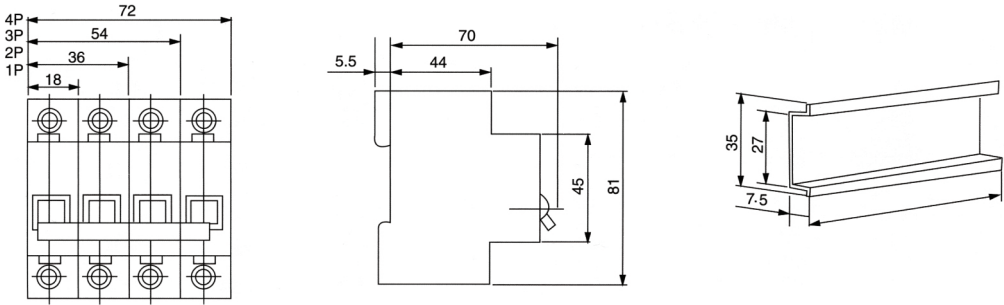
Fast closing: Ensure the reliable operation of the impact load and extend the electrical life of the circuit breaker.

Terminal area: Under 25A can be connected to 16mm2 multiple strands of flexible wire, or 25mm2 single strand of hard wire;

32A to 63A can be connected to 25mm2 multiple strands of flexible cable, or 35mm2 single strand of hard cable.

## 外形尺寸

Overall dimensions



Note: The installation rail adopts SN6525-92 "Electrical installation rail" TH35 steel installation rail.

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# MINIATURE CIRCUIT BREAKER

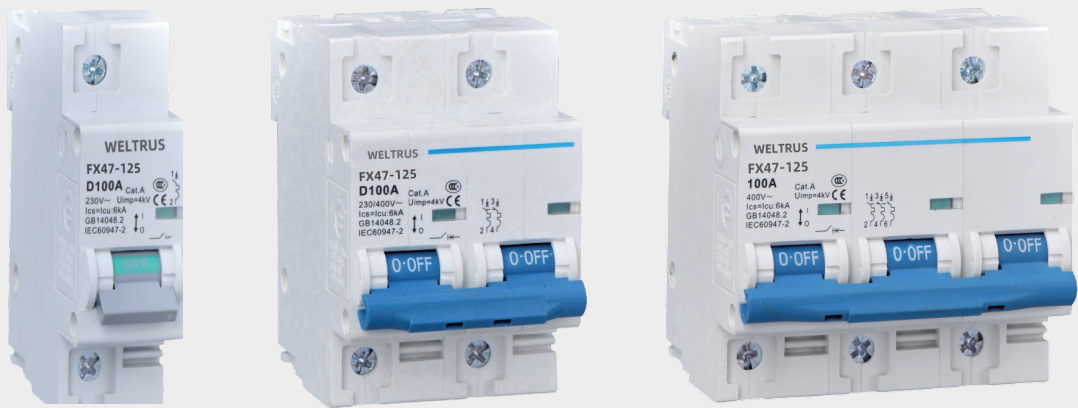
## FX47-125



Lightning



Easy to install   Parameter   Complete

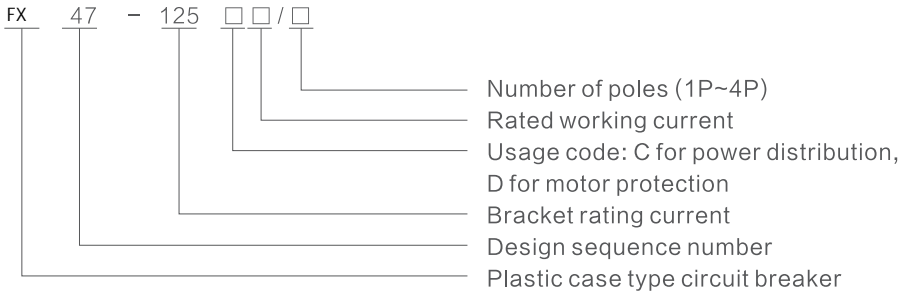


### Scope of application

FX47-63-125 series miniature circuit breaker is suitable for AC 50/60Hz, rated voltage 400V and single-phase 230V, rated current 125A and below the line, used for short circuit and overload protection of buildings and electrical equipment, can also be used under normal circumstances, as the line infrequent conversion. Also suitable for isolating switches and as line undervoltage protection and remote disconnect. The product has beautiful appearance, small size, light weight, accurate current trip setting, reliable action, high breaking ability, quick trip, guide rail installation, combination mode design can be combined with auxiliary contact, alarm indicating contact, undervoltage release, shingle release and other accessories to meet the needs of different users. The shell and parts are made of high flame retardant and impact resistant plastic, long service life.

This product conforms to the standards: IEC60947-2, GB14048.2.

### Model and meaning



# FX47-125 Miniature circuit breaker

## Main parameters and technical performance

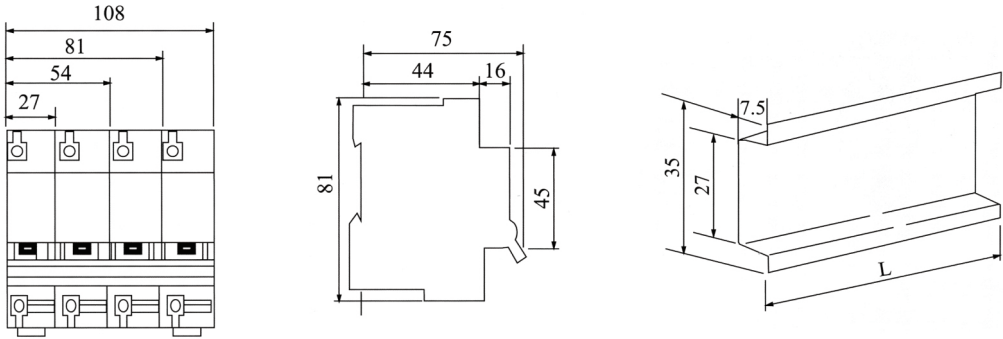
- Main type
- The rated current of the circuit breaker is 63A, 80A, 100A, 125A
  - The number of poles of the circuit breaker is divided into: single pole, two pole, three pole and four pole
  - The circuit breaker is installed on a 35 x 7.5 standard mounting rail
  - The main circuit rating of the circuit breaker is shown in Table 1
  - The overcurrent trip characteristics are shown in Table 2

Rated current (A)	poles	Rated voltage (V)	Rated short-circuit breaking capacity	
			Expected current of test line (A)	Power factor
63,80,100,125	1,2,3,4	230/400	6000	0.45~0.50

Ambient air humidity	I/In	Test time Expected results		Initial state
		In 63A	In 63A	
30 2℃	1.05	Do not trip within 1 hour	No trip within 2 hours	Cold start
	1.30	Trip within 1 hour	Trip within 2 hours	Hot start
	3.0	Returnable time > 3s	Acceptable time > 5s	Hot start
-5~45℃	5.0~10.0(C)	0.1s operation		Cold start
	10.0~20.0(D)	0.1s operation		

- Power frequency voltage: After the humidity and heat resistance, the circuit breaker should withstand the 2500V power frequency voltage test for 1 minute without flicker and breakdown.
- Mechanical electrical life: the electrical life of the circuit breaker is 10000 times, of which the electrical life is 1500 times.

## Overall dimensions





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# ISOLATING SWITCH

## FX30



Lightning



Easy to install



Parameter



Complete



### Scope of application

FX30 isolation switch has high dynamic and thermal stability, mainly used as the main switch in terminal combined electrical appliances, suitable for AC 50Hz or 60Hz, Rated voltage400V and below distribution and control circuits, can also be used to control motors, small power appliances and lighting. Widely used in industrial and mining enterprises, high-rise buildings, commercial and family places.

This product conforms to the standards: IEC60947-3, GB14048.3.

### Model and meaning



### Main parameters and technical performance

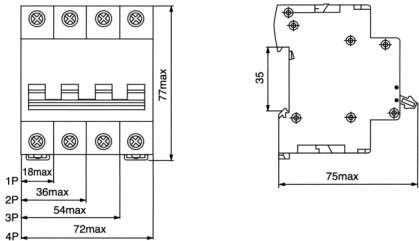
Conform to IEC60947-3、GB140483  
Rated voltage: AC230/400V  
Rated current: 32、40、63、80、100A

Electrical life: 1000, 2000, 3000 times  
Short-circuit current carrying capacity: 20In/1s

### Structural characteristics of

- Small size, long life;
- The opening and closing of the contact are displayed with an eye-catching color label, which can prevent misoperation;
- Adopts "frame type" wiring structure, safe and reliable wiring;
- Adopt high flame retardant, high temperature resistant, impact resistant shell;
- Modular for quick installation and replacement;
- The switch should be installed vertically, with the upper end connecting to the power supply and the lower end connecting to the cable. Push up the handle to connect and display red, pull down to disconnect and display green. Cannot be reversed. Before power, manual operation several times, the mechanism action should be flexible and reliable, no blocking phenomenon.

### Overall dimensions



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# LEAKAGE CIRCUIT BREAKER

## FXB6LE-63/FXB3LE-63/FX30LE-32



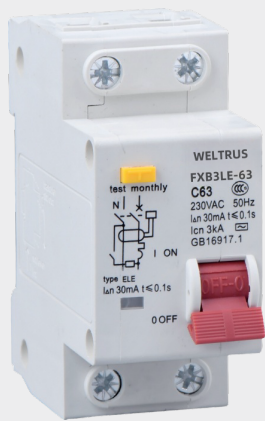
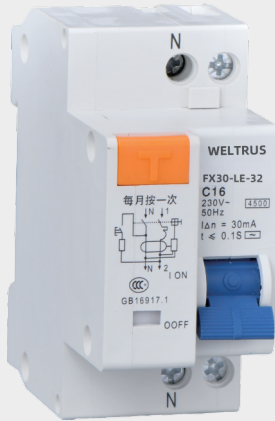
Lightning Easy to install



Parameter



Complete

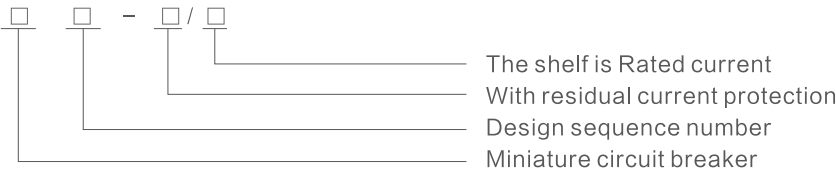


### Scope of application

The leakage protection circuit breaker is suitable for single-phase residential lines with AC 50Hz or 60Hz and Rated voltage up to 230V, for personal shock protection, and for overload and short circuit protection of civil electrical lines. The product has small size and high Breaking capacity; Zero and fire line are cut off at the same time, and in the case of fire line connection, it can still protect the person from electric shock. This product can also add overvoltage protection function according to user requirements.

Products meet the standards: IEC61009-1, GB16917.1.

### Model and meaning



### Main parameters and technical performance

Rated current (A)	poles	Rated voltage V	Rated current(A)	Rated leakage current Acting current (mA)	Rated leakage does not move Acting current (mA)	Rated leakage Breaking time	Breaking capacityA
6,10,16 20,25,32	1+N	230	32	30	15	0.1s	3000

Note: The wiring uses the terminal with the clamp, the use of 10mm2 and less hard wire.

### Overcurrent tripping table

Test current(A)	Rated current	In Rated time	Expected result	Initial state	note
1.13In	All values	t 1h	non-trip	Cold state	
1.45In	All values	t 1h	trip	Hot state	The current is stable within 5S Ground rise to specified value
2.55In	All values	1s t 60s	trip	Cold state	
5In	All values	t 0.1s	non-trip	Cold state	
10In	All values	t 0.1s	trip	Cold state	Closing auxiliary switch Power on

Note: The filter device in the leakage protection circuit breaker can prevent the misoperation trip caused by the instantaneous voltage (lighting, line interference of other equipment) and the instantaneous current (such as the capacitive load line).  
In addition, the electronic surge overvoltage protection circuit breaker overvoltage trip value is 280V±5%.

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# RESIDUAL CURRENT OPERATING CIRCUIT BREAKER

## FX-RCCB/ID



Lightning



Easy to install



Parameter



Complete



### Scope of application

RCCB residual current circuit breaker is suitable for AC 50/60Hz, Rated voltage to 415V, Rated current to 63A circuit, when the personal shock or power grid leakage current exceeds the specified value, the residual current circuit breaker can quickly cut off the fault power in a very short time. To protect the safety of people and electrical equipment, it can also be used for the infrequent conversion of lines and the infrequent starting of motors.

The product is suitable for industrial, commercial and high-rise residential and other places.

### Model and meaning

The upper limit of ambient air temperature is not more than +40°C, the lower limit is not less than -5°C, and the average value within 24h is not more than +35°C.

The elevation of the installation site does not exceed 2000m.

The relative humidity of the atmosphere does not exceed 50% at the maximum ambient temperature of +40 °C, and can have a higher relative humidity at lower temperatures, such as up to 90% at +25 °C and taking into account the condensation that occurs on the surface of the product due to temperature changes.

The installation category is Class III.

The pollution level is level 2.

Install vertically, and the inclination of the mounting surface in any direction shall not exceed 2°.

The external magnetic field of the installation site should not exceed 5 times of the earth magnetic field in any direction.

There should be no significant shock and vibration at the installation site.

It is installed with TH35-7.5 steel mounting rail.

Tighten the cable with a screw, and tighten the torque of the cable screw from 2.5N·m to 4.0N·m.

The section of the connecting wire shall be selected according to Table 1.

Residual current operating circuit breaker

table 1

Rated currentIn(A)	Nominal cross-sectional area of conductor mm²
10及以下	1.5
10 20	2.5
20 25	4
25 32	6
32 50	10
50 63	16

Main parameters and technical performance

Divided by poles:  
Bipolar residual current operating circuit breaker;  
Four pole residual current operating circuit breaker.  
According to the working condition of DC component:  
Ac type residual current operating circuit breaker  
Type A residual current operating circuit breaker

Rated voltage Un(V)	Rated current In(A)	Rated surplus Inactive current IΔno (A)	Rated surplus Operating current IΔn	Breaking capacityIm (A)	Rated limit Short-circuit current Inc	Rated limit Residual short circuit The current IΔc
two poles240V Quadrupole 415V	16,25, 32,40 50,63	0.5I n	0.03A 0.1A 0.3A	630A	6000A	6000A

Overall dimensions

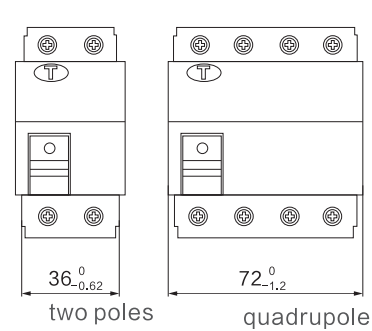


Figure 1 Overall dimensions

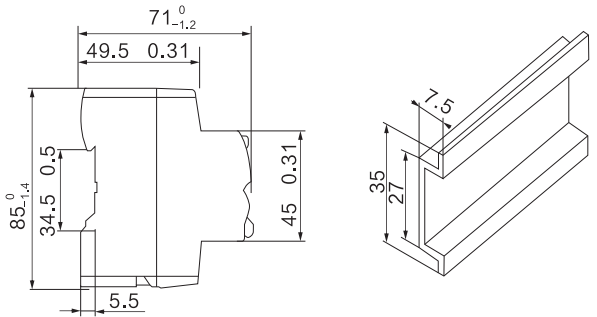


Figure 2 TH35-7.5 steel mounting rail

Safety warning

- 1, this product must be professionally qualified personnel for wiring installation;
2. It is strictly forbidden to operate the product with wet hands, otherwise an electric shock accident may occur;
- 3, protection level IP20 does not have dust-proof function, when used in dusty occasions, please install in a better sealed terminal box;
- 4, this product can not protect the danger of electric shock caused by contact with two lines of the protected circuit at the same time.
5. The remaining action current protection characteristics of this product are set by the manufacturer and cannot be adjusted at will in use.
6. When the product is installed according to the position in Figure 1, the incoming line is connected from the top, and the outgoing line is connected from the bottom; When wiring polyphase circuits, pay attention to the phase sequence. After the wire is inserted into the wiring hole, tighten the wire screw. The torque of tightening the wire is 2.5N m ~ 4.0N m, so that the wire is not loosened or pulled out, and the bare copper wire head is not exposed outside the wiring end.
- 7, this product in the use or storage, transportation process, are not affected by rain and fall.

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# ELECTRONIC RESIDUAL CURRENT ACTION CIRCUIT BREAKER

## FX47LE



Lightning Easy to install Parameter Complete

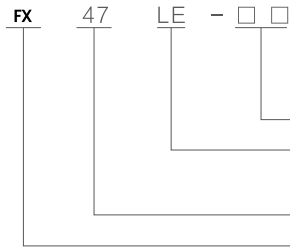


### Scope of application

FX47LE leakage circuit breaker is suitable for AC 50Hz(or 60Hz, Rated voltage400V and single-phase 230V), Rated voltage400V and single-phase 230V), Rated current from 6A to 63A lines, With leakage electric shock, overload, short circuit and other protection functions, but also according to user needs, increase the overvoltage protection function, to ensure personal safety and prevent equipment caused by leakage current accidents, well can be used to protect the overload and short circuit of the line, under normal circumstances as the line is not frequently broken and converted for use. The leakage circuit breaker with rated residual operating current of 30mA can provide direct protection against personal shock.

This product conforms to the standards: GB16917.1, IEC61009.1.

### Model and meaning



The chassis is Rated current32A/63A  
Function code (Electronic residual  
current circuit breaker)  
Design sequence number  
Plastic case type circuit breaker



# FX47LE Residual Current Operating Circuit Breaker

### Main parameters and technical performance

Rated voltageV	Rated current Inm(A)	poles	Rated current In(A)	Rated leakage action Current IΔn(mA)	Rated leakage does not work Current IΔno(mA)	Rated leakage Action time (s)
230	32	1P+N	6, 10, 16	30.(50), (100),(300)	15.(25), (50),(150)	0.1
230/400	32	2P/3P/3P+N/4P	20, 25, 32			0.1
230	63	1P+N	40, 50, 63	30.(50), (100),(300)	15.(25), (50),(150)	0.1
230/400	63	2P/3P/3P+N/4P				0.1

Note:

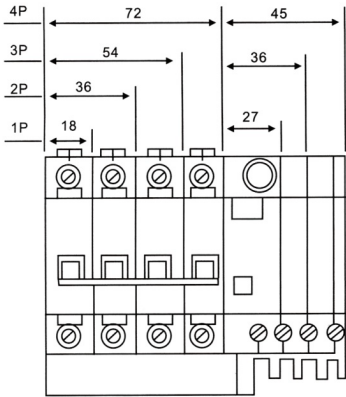
Use the wiring terminal of the clamp to connect cables of 25mm<sup>2</sup> or less.

Warning users: the rated leakage action current can be below 30mA with the function of protecting personal safety.

### Structural features

FX47LE leakage circuit breaker is composed of DZ47-63 miniature circuit breaker and leakage trip device. Leakage circuit breaker is a current action type electronic leakage circuit breaker, which is mainly composed of zero sequence current transformer, electronic component board, leakage trip circuit breaker and circuit breaker with overload and short circuit protection.

### Overall dimensions

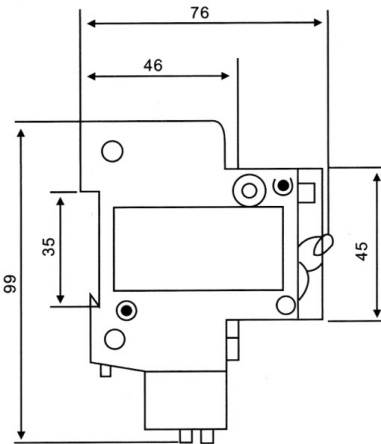
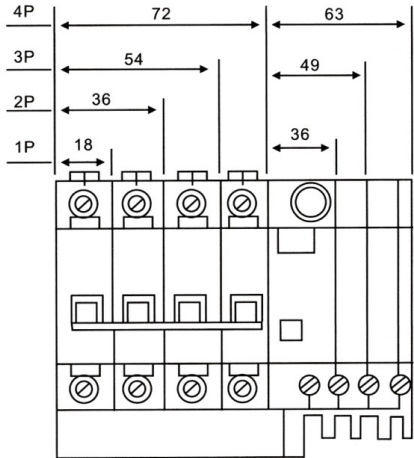


**FX47LE-63**  
IP+N:18+36  
2P: 36+36  
3P: 54+49  
3P+N:54+63  
4P: 72+63

**FX47LE-32**  
IP+N:18+27  
2P: 36+27  
3P: 54+36  
3P+N:54+45  
4P: 72+45

**FX47LE-63**  
IP+N:18+36  
2P: 36+36  
3P: 54+49  
3P+N:54+63  
4P: 72+63

**FX47LE-32**  
IP+N:18+27  
2P: 36+27  
3P: 54+36  
3P+N:54+45  
4P: 72+45





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