

2011.05

MINIATURE CIRCUIT BREAKER



MINIATURE CIRCUIT BREAKER

BHA Series | 4.5kA/ 6kA/ 10kA

Applications:

Applicable to the residential, industrial and commercial power distribution systems, provide circuit-control and protection on equipments against any impacts of overload and short-circuit.

Catalogue designation:

BHA	2	2	C	32
↓	↓	↓	↓	↓
Type	Rated short-circuit breaking capacity (kA) 230 / 400V	Number of poles (P)	Tripping characteristics	Rated current In (A)
BHA	4.5 / 6 / 10 (2: 4.5kA; 3: 6kA; 4: 10kA)	1 / 2 / 3 / 4	C / D	1 / 2 / 3 / 4 / 5 / 6 / 10 / 16 / 20 / 25 / 32 / 40 / 50 / 63

Standard: IEC 60898 / GB 10963

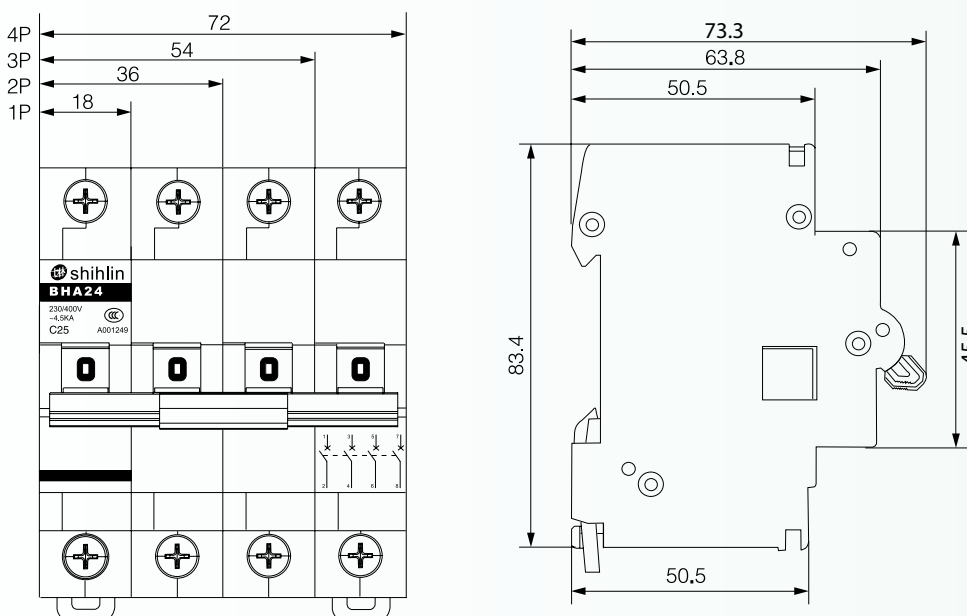
Technical specification:

- Rated voltage: AC 230/400V
- Rated current: 1~63A
- Rated short-circuit breaking capacity: 4,500/ 6,000/ 10,000A
- Tripping characteristics:
C type: Instantaneous tripping current: 5~10In
D type: Instantaneous tripping current: 10~15In
- Mechanical life: 20,000 operations
- Terminal wiring capabilities: Stranded wire-16mm² / Rigid wire-25mm²
- Ambient temperature: -5°C ~ +40°C

Features:

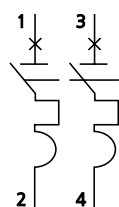
- Provide circuit protections –
Good choice for overload and short-circuit protections.
- Variable accessories available –
Easy to realize the variety of the circuit control by using the selectable accessories - shunt trip (SHT), under-voltage trip (UVT), over-voltage trip (OVT), auxiliary switch (AX), alarm switch (AL) etc.
- Easy installation –
Modularized structure design can be tool-free installed on standard DIN-rail TH35mm.

Dimensions:

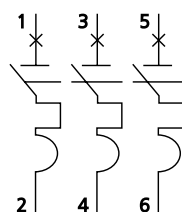




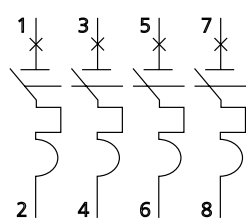
Number of poles (P)	Rated current (A)	Width (mm)	Weight (g)
1P	1	18	113
	2	18	113
	3	18	113
	4	18	113
	5	18	113
	6	18	113
	10	18	113
	16	18	113
	20	18	113
	25	18	113
	32	18	113
	40	18	113
	50	18	113
	63	18	113



2P	1	36	228
	2	36	228
	3	36	228
	4	36	228
	5	36	228
	6	36	228
	10	36	228
	16	36	228
	20	36	228
	25	36	228
	32	36	228
	40	36	228
	50	36	228
	63	36	228



3P	1	54	341
	2	54	341
	3	54	341
	4	54	341
	5	54	341
	6	54	341
	10	54	341
	16	54	341
	20	54	341
	25	54	341
	32	54	341
	40	54	341
	50	54	341
	63	54	341



4P	1	72	456
	2	72	456
	3	72	456
	4	72	456
	5	72	456
	6	72	456
	10	72	456
	16	72	456
	20	72	456
	25	72	456
	32	72	456
	40	72	456
	50	72	456
	63	72	456

MINIATURE CIRCUIT BREAKER

BHA Series | 100AF

Applications:

Applicable to the residential, industrial and commercial power distribution systems, such as high-rise buildings, residential apartment and etc., providing circuit-control and protection on equipment against any impacts of overload and short-circuit. It also can be used for any of the application with low switching operation and can be used for circuit changeover.

Catalogue designation:

BHA	4	3	C	80
↓	↓	↓	↓	↓
Type	Rated short-circuit breaking capacity (kA) 230/400V	Number of poles (P)	Tripping characteristics	Rated current In (A)
BHA	10	1 / 2 / 3 / 4	C / D	80 / 100

Standard: IEC 60947-2 / GB 14048.2

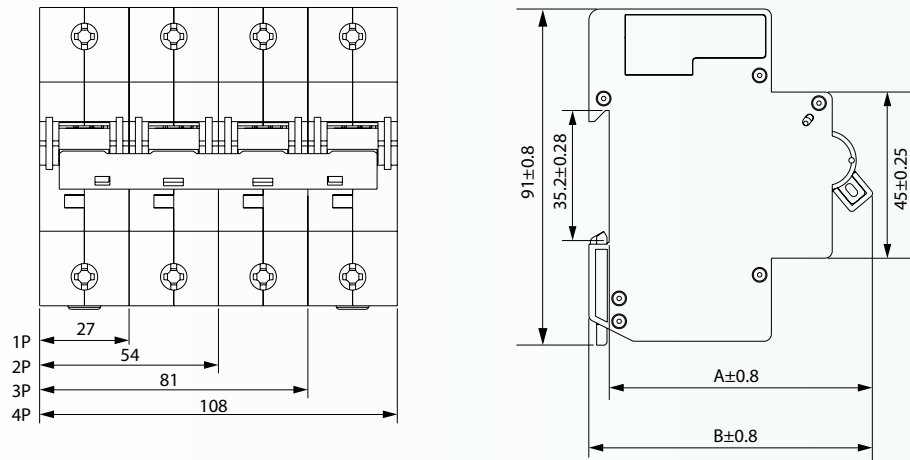
Technical Specification:

- Rated voltage: AC 230/400V
- Rated current: 80/100A
- Rated short-circuit breaking capacity: 10,000A
- Tripping characteristics:
C type: Instantaneous tripping current: 8~10In
D type: Instantaneous tripping current: 10~12In
- Mechanical life: 10,000 operations
- Terminal wiring capabilities: Cable cross section max. 50mm²
- Ambient temperature: -5°C ~ +40°C




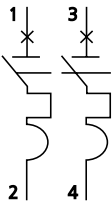

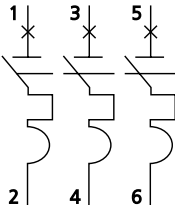

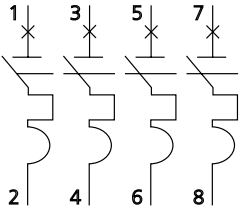
Features:

- Provide overload and short-circuit protections.
- Adoption of innovative new materials and manufacturing process with compact size, light weight and excellent appearance.
- Great capabilities in insulation, breaking capacity, arc-extinguishing, faster tripping with long service life and excellent reliabilities.
- Easy installation with the application of standard DIN-rail TH35mm.

Dimensions:



Pole	A	B
1P	70	75.5
2P-4P	71.5	77

Number of poles (P)	Rated current (A)	Width (mm)	Weight (g)
 	80	27	156
	100	27	156
 	80	54	315
	100	54	315
 	80	81	471
	100	81	471
 	80	108	630
	100	108	630

MINIATURE CIRCUIT BREAKER BHA DC Series | 10kA

Applications:

Applicable to the residential, industrial and commercial power distribution systems, providing circuit-control and protection on equipment against any impacts of overload and short-circuit.

Catalogue designation:

BHA	4	1	DC	32
↓	↓	↓	↓	↓
Type	Rated short-circuit breaking capacity (kA)	Number of poles (P)	Voltage (AC/ DC)	Rated current In (A)
BHA	DC 125V (1P), DC 250 (2P)	1/2	DC	1 / 2 / 3 / 4 / 5 / 6 / 10 / 16 / 20 / 25 / 32 / 40 / 50 / 63

Standard: IEC 60947-2 / GB 14048.2

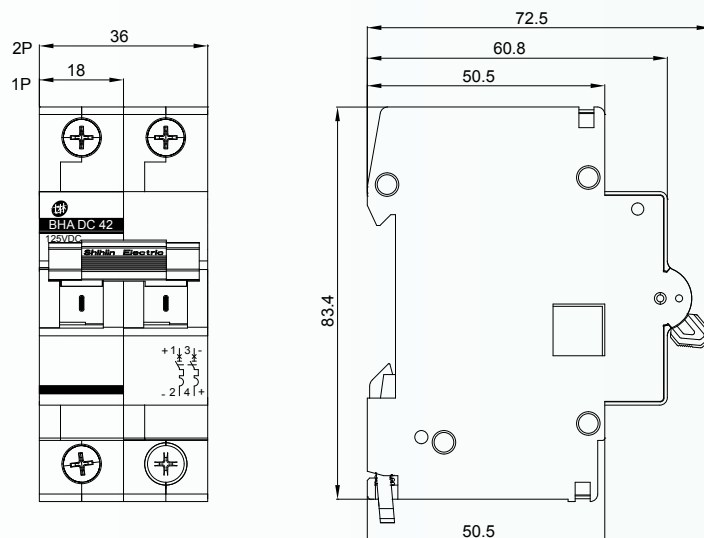
Technical Specification:

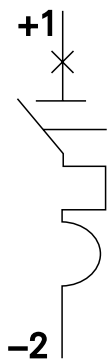
- Rated voltage: DC 125V (1P) / DC 250V (2P)
- Rated current: 1~63A
- Rated short-circuit breaking capacity: 10,000A
- Rated impulse voltage: 4kV
- Mechanical life: 20,000 operations
- Terminal wiring capabilities: Stranded wire-16mm² / Rigid wire-25mm²
- Ambient temperature: -5°C ~ +40°C

Features:

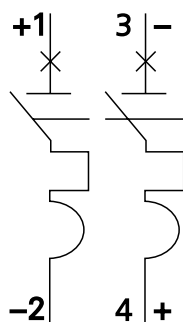
- Provide circuit protections - Good choice for overload and short-circuit protections.
- Variable accessories available - Easy to realize the variety of the circuit control by using the selectable accessories - shunt trip (SHT), under-voltage trip (UVT), over-voltage trip (OVT), auxiliary switch (AX), alarm switch (AL) etc.
- Easy installation - Modularized structure design can be tool-free installed on standard DIN-rail TH35mm.

Dimensions:





Number of poles (P)	Rated current (A)	Width (mm)	Weight (g)
1P	1	18	113
	2	18	113
	3	18	113
	4	18	113
	5	18	113
	6	18	113
	10	18	113
	16	18	113
	20	18	113
	25	18	113
	32	18	113
	40	18	113
	50	18	113
	63	18	113



2P	1	36	228
	2	36	228
	3	36	228
	4	36	228
	5	36	228
	6	36	228
	10	36	228
	16	36	228
	20	36	228
	25	36	228
	32	36	228
	40	36	228
	50	36	228
	63	36	228

MINIATURE CIRCUIT BREAKER

BHN Series | Used in the "phase+neutral" circuit, single-phase or three-phase power system

Applications:

In the residential power distribution system with neutral wire circuit, when the tripping occur, it breaks the phase wire and the neutral wire simultaneously, isolate the circuit to avoid the electrical shock on the neutral wire even after tripping.

Catalogue designation:

BHN	2	1	C	32
↓	↓	↓	↓	↓
Type	Rated short-circuit breaking capacity (kA)	Number of poles (P)	Tripping characteristics	Rated current In (A)
BHN	230V 4.5 / 6 (2: 4.5kA; 3: 6kA)	1P+N	C	6 / 10 / 16 / 20 / 25 / 32

Standard: IEC 60898 / GB 10963

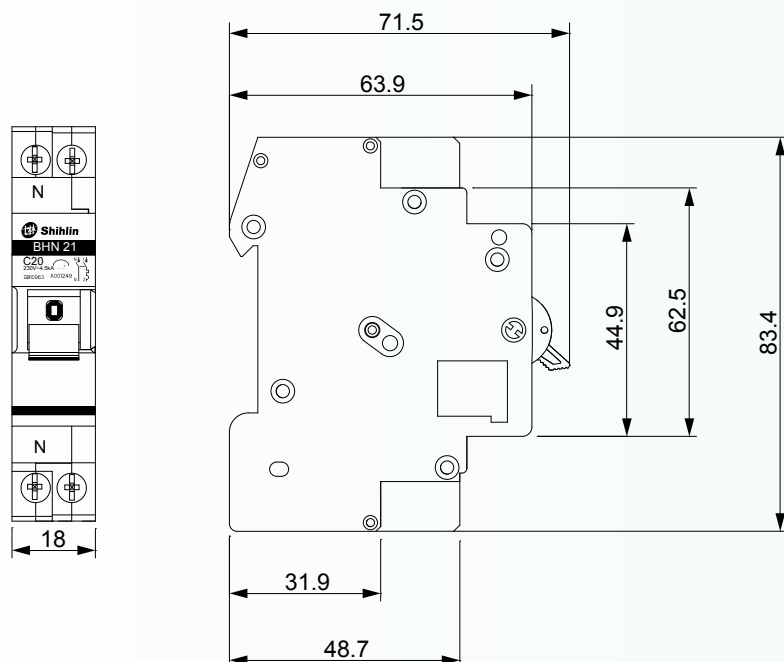
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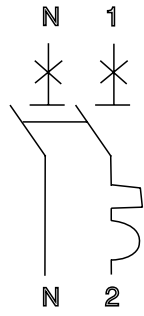
- Rated voltage: AC 230V
- Rated current: 6~32A
- Rated short-circuit breaking capacity: 4,500 / 6,000A
- Tripping characteristics:
C type: Instantaneous tripping current: 5~10In
- Mechanical life: 20,000 operations
- Terminal wiring capabilities: Stranded wire-10mm² / Rigid wire-16mm²
- Ambient temperature: -5°C~ +40°C

Features:

- Adoption of innovative new materials and manufacturing process with compact size, light weight and excellent appearance.
- Breaking the phase wire and the neutral wire simultaneously.
- Great capabilities in insulation, breaking capacity, arc-extinguishing, faster tripping with long service life and excellent reliabilities.
- Bus bar wiring kit available for connection, easy and time-saving for wiring.
- Tool-free installation with the application of standard DIN-rail TH35mm, makes installation easy and convenient.

Dimensions:





Number of poles (P)	Rated current (A)	Width (mm)	Weight (g)
1P+N	6	18	108
	10	18	108
	16	18	108
	20	18	108
	25	18	108
	32	18	108

RESIDUAL CURRENT CIRCUIT BREAKER

BHL Series | Used in the "phase+neutral" circuit, single-phase or three-phase power system

Applications:

Applicable to the residential, industrial and commercial power distribution systems.

Compact size, provide with short-circuit, overload, earth-leakage and overvoltage protection. Phase wire is short-circuit and overload protected, which is capable of breaking the phase wire and the neutral wire simultaneously.

Catalogue designation:

BHL	3	1	C	32	G
Type	Rated short-circuit breaking capacity (kA) 230V	Number of poles (P)	Tripping characteristics	Rated current I _n (A)	Optional function
BHL	4.5 / 6 (2: 4.5kA; 3: 6kA)	1P+N	C / D	6 / 10 / 16 / 20 / 25 / 32 / 40	over-voltage protection (230V, internal built)

Standard: IEC 61009 / GB 16917

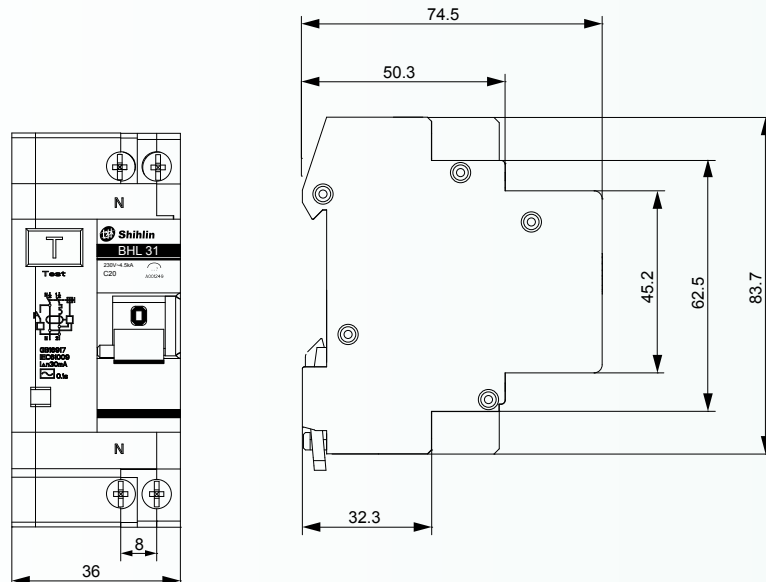
Technical specification:

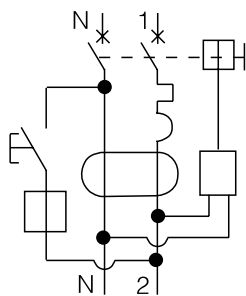
- Rated voltage: AC 230V
- Rated current: 6~40A
- Rated sensitivity current: 30mA
- Rated short-circuit breaking capacity: 4,500 / 6,000A
- Tripping characteristics:
C type: Instantaneous tripping current: 5~10I_n
D type: Instantaneous tripping current: 10~15I_n
- Mechanical life: 20,000 operations
- Terminal wiring capabilities: Stranded wire-10mm² / Rigid wire-16mm²
- Ambient temperature: -5°C ~ +40°C

Features:

- Electronic type earth-leakage tripping protection.
- Excellent anti-electromagnetic interference capability which avoid the faulty trip caused by a transient over-voltage.
- Tripping indication: Red- indicates earth-leakage tripped; white- no earth-leakage tripping
- Test button (yellow) is provided for earth-leakage testing during the regular maintenance.
- Unique installation design, tool-free installation is realized.

Dimensions:





Number of poles (P)	Rated current (A)	Width (mm)	Weight (g)
1P+N	6	36	160
	10	36	160
	16	36	162
	20	36	162
	25	36	166
	32	36	166
	40	36	166

RESIDUAL CURRENT CIRCUIT BREAKER

BHL Series

Applications:

Applicable to the residential, industrial and commercial power distribution systems provided with short-circuit, overload and earth-leakage protection.

Catalogue designation:

Type	Rated short-circuit breaking capacity (kA) 230/400V	Number of poles (P)	Tripping characteristics	Rated current In (A)	Optional function
BHL	4.5 / 6 (2: 4.5kA; 3: 6kA)	2 / 3 / 4	C / D	1 / 2 / 3 / 4 / 5 / 6 / 10 / 16 / 20 / 25 / 32 / 40 / 50 / 63	over-voltage protection (230V, internal built)

Standard: IEC 61009 / GB 16917

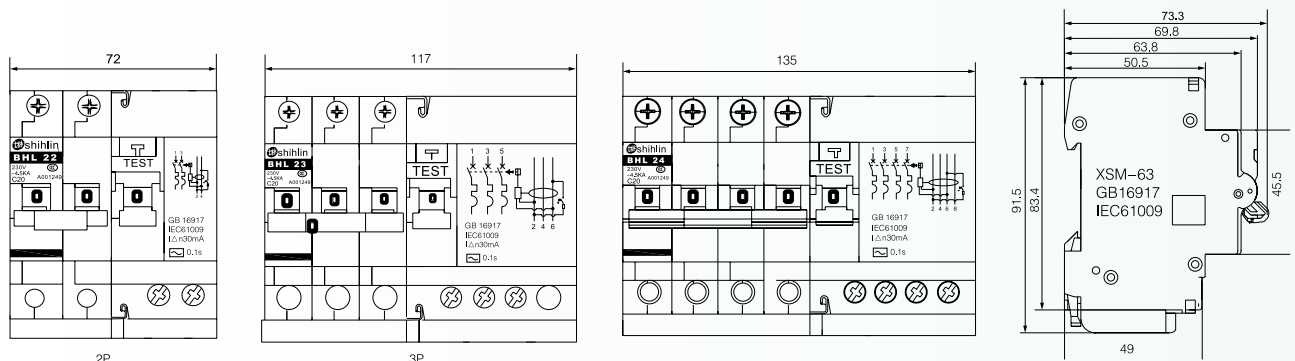
Technical Specification:

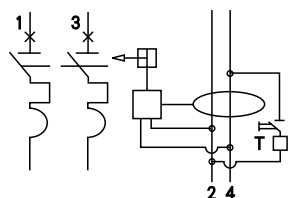
- Rated voltage: AC 230V (2P) 、 AC 400V (3P/4P)
- Rated current: 1~63A
- Rated sensitivity current: 30mA
- Rated short-circuit breaking capacity: 4,500/6,000A
- Tripping characteristics:
C type: Instantaneous tripping current: 5~10In
D type: Instantaneous tripping current: 10~15In
- Mechanical life: 20,000 operations
- Terminal wiring capabilities: Stranded wire-16mm² / Rigid wire-25mm²
- Ambient temperature: -5°C ~ +40°C

Features:

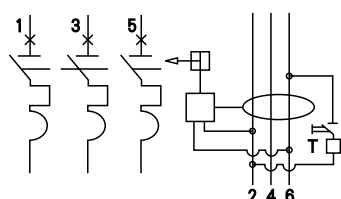
- Excellent anti-electromagnetic interference capability which avoid the faulty trip caused by a transient over-voltage.
- Tripping indication: Red- indicates earth-leakage tripped; white- no earth-leakage tripping.
- Test button (yellow) is provided for earth-leakage testing during the regular maintenance.
- Unique installation design, tool-free installation is realized.

Dimensions:

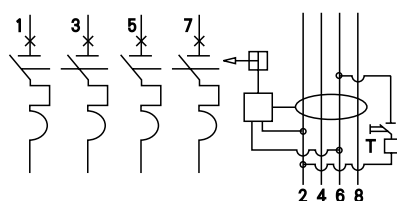




Number of poles (P)	Rated current (A)	Width (mm)	Weight (g)
2P	1	72	423
	2	72	423
	3	72	423
	4	72	423
	5	72	423
	6	72	423
	10	72	423
	16	72	423
	20	72	423
	25	72	423
	32	72	423
	40	72	423



3P	1	117	630
	2	117	630
	3	117	630
	4	117	630
	5	117	630
	6	117	630
	10	117	630
	16	117	630
	20	117	630
	25	117	630
	32	117	630
	40	117	630



4P	1	135	770
	2	135	770
	3	135	770
	4	135	770
	5	135	770
	6	135	770
	10	135	770
	16	135	770
	20	135	770
	25	135	770
	32	135	770
	40	135	770

ISOLATION SWITCH

BHG Series

Applications:

Applicable to the residential, industrial and commercial power distribution systems which provided with the protection and control of the circuit, mainly used as a main switch for the subsidiary circuits. It also can be used in the application with low switching and low consumption electrical appliances and illumination, providing making/breaking and isolation of the circuit.




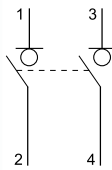

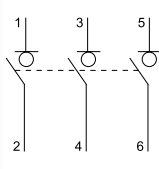

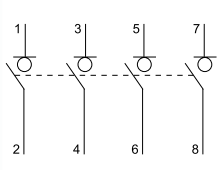
Catalogue designation:

BHG	4P	32A
↓	↓	↓
Type	Number of poles (P)	Rated current In (A)
BHG	1 / 2 / 3 / 4	32 / 40 / 63 / 80 / 100

Standard: IEC 60947-3 / GB 14048.3

Technical Specification:

- Rated voltage: AC 230/400V
- Rated current: 32~100A
- Mechanical life: 50,000 operations
- Terminal wiring capabilities: Stranded wire-16mm² / Rigid wire-25mm²
- Ambient temperature: -5°C~ +40°C

	Number of poles (P)	Rated current (V)	Rated current (A)	Width (mm)	Weight (g)
		230	32	18	85
		230	40	18	85
		230	63	18	85
		230	80	18	85
		230	100	18	85
		400	32	36	172
		400	40	36	172
		400	63	36	172
		400	80	36	172
		400	100	36	172
		400	32	54	259
		400	40	54	259
		400	63	54	259
		400	80	54	259
		400	100	54	259
		400	32	72	346
		400	40	72	346
		400	63	72	346
		400	80	72	346
		400	100	72	346

Accessories:

Features:

Tool-free, left-mounted on the MCBs.

For one circuit breaker, maximum three (3) auxiliary accessories can be installed. And, one circuit breaker, two (2) auxiliary switch (AX) can be installed.

Catalogue designation:

BHK	2					1	
↓	↓					↓	
Type	Accessories					Special requirement	
	1	2	3	4	5	1	2
BHK	AL	AX	SHT	UVT	OVT	Standard	Optional

Note:

1: Standard: Left side mounted on MCB.

2: Optional: Left side mounted on accessory.



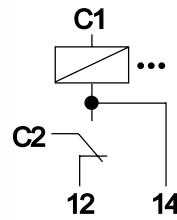
Type	Auxiliary contact AC/12	Width (mm)
AL - Alarm switch 	1NO.1NC 230V 6A 440V 3A	9
AX - Auxiliary switch 	1NO.1NC 230V 6A 440V 3A	9





Type	Control voltage		Auxiliary contact AC/12	Width (mm)
	VAC	VDC		

SHT - Shunt trip



12	12	1NO. 1NC.	18
24~48	12~48	230V 6A	
230~415	110~130	440V 3A	

UVT - Under-voltage trip

220~240	48	1NO. 1NC.	18
		230V 6A	
		440V 3A	

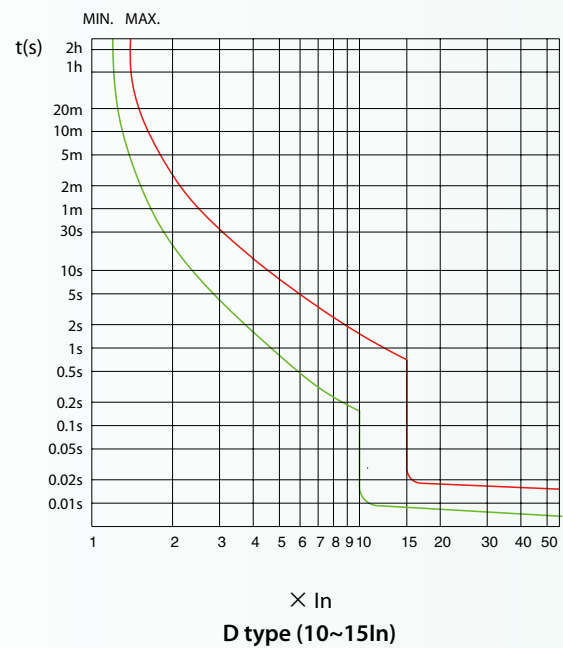
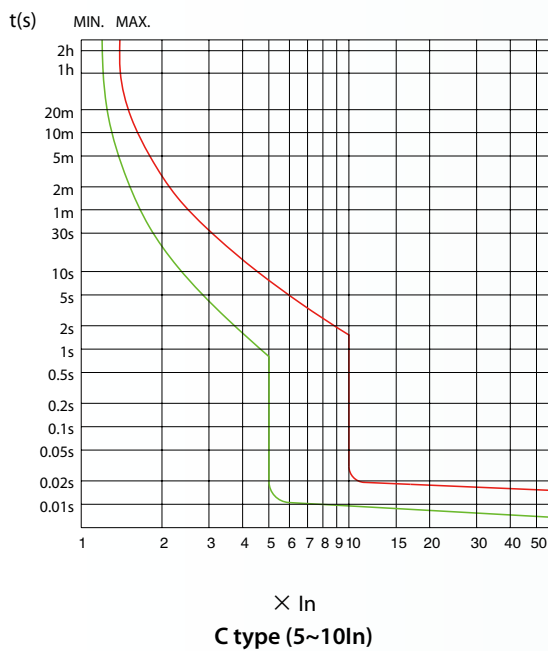
Type	Rated voltage	Sustained current rating	Overtoltage trip value	Tripping time
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OVT - Overtoltage trip

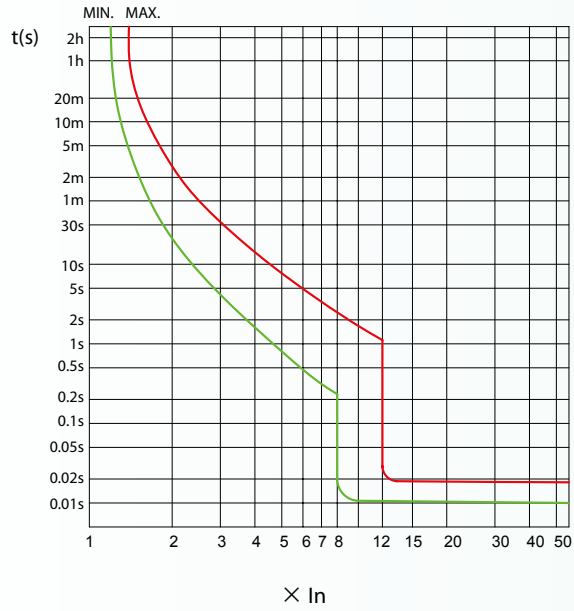
230V	15mA	280V ± 5%	≤0.2s
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Over-current protection characteristic

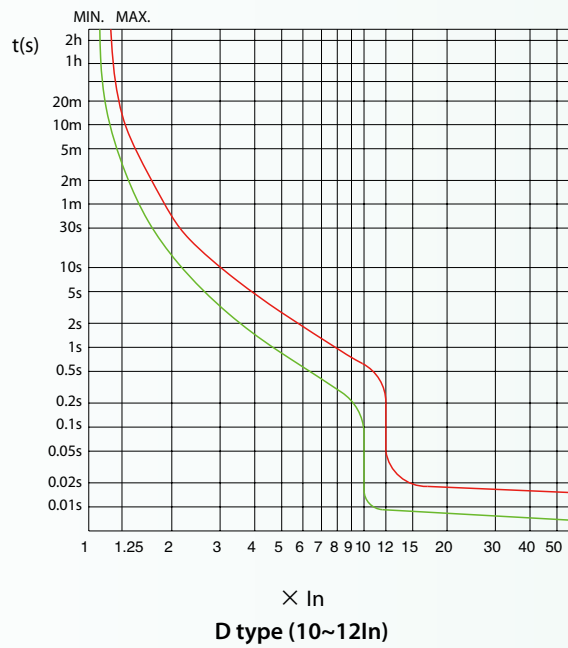
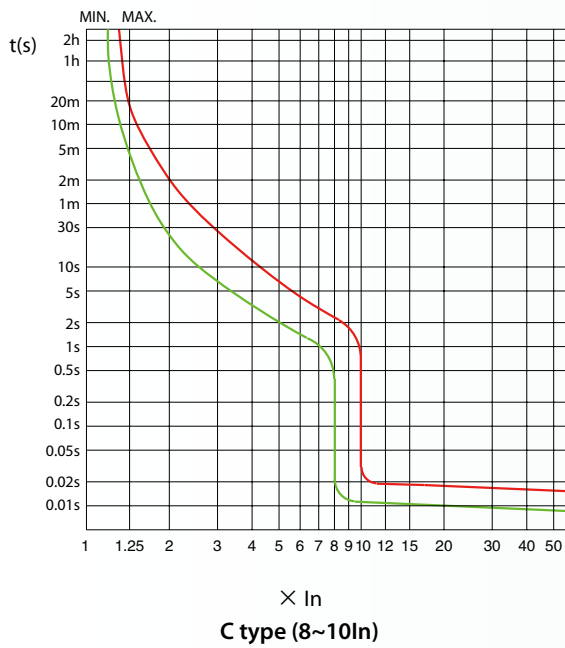
BHA series (4.5/ 6/ 10kA) 、 BHN series 、 BHL series (4.5/ 6kA)



BHA DC series



BHA series (100AF)





Molded Case Circuit Breaker/
Earth Leakage Circuit Breaker

Breaker & Switchgear System



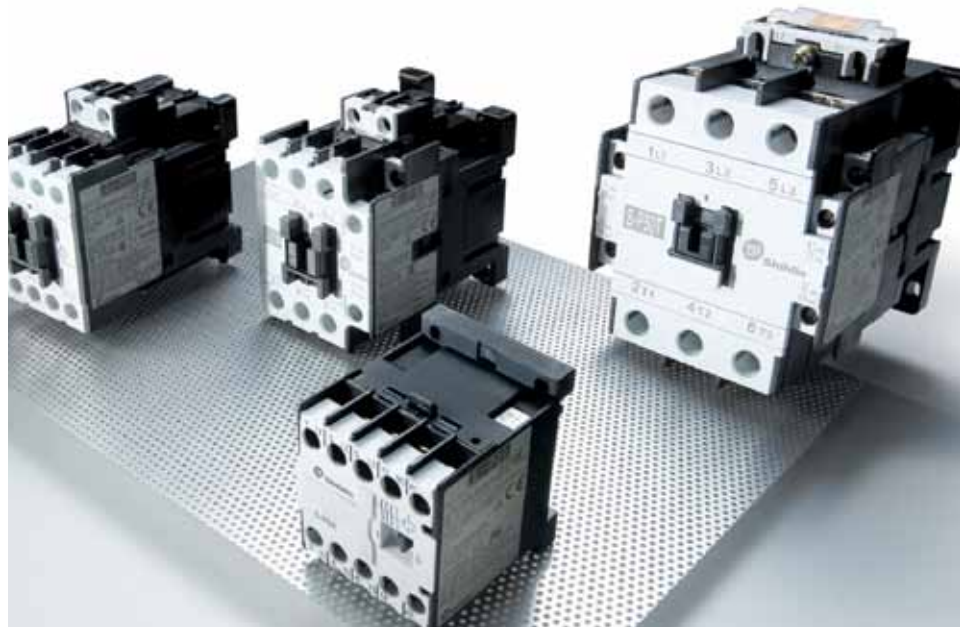
Air Circuit Breaker



Automatic Transfer
Switches



Miniature Circuit
Breaker



Magnetic Switch / Contactor



Surge Protective
Device



Digital multi-meter



Inverter



Capacitor

SHIHLIN ELECTRIC & ENGINEERING

Air Circuit Breaker, Molded Case Circuit Breaker, Earth-Leakage Circuit Breaker, Electronic Molded Case Circuit Breaker, Miniature Circuit Breaker, Residual Current Circuit Breaker, Automatic Transfer Switches, Magnetic Switch, Surge Protective Device, High / Low Voltage Power Capacitors, Digital Multi-Meter, Inverter



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