

MCB SERIES

Miniature Circuit Breaker

- Full-series Family Design
- Rated Ultimate Short-circuit Breaking Capacity up.to.25kA
- Compatible with More Than 10 Types of Accessories
- Ultra-wide Temperature Range Operation



Product Overview

Miniature Circuit Breaker

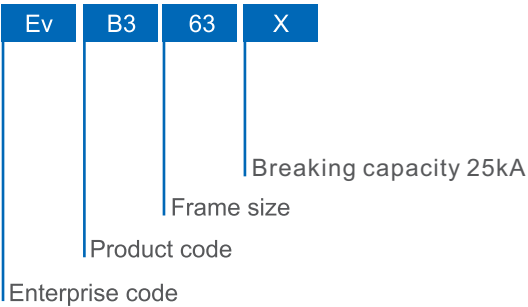
Product model		EvB3-63S	EvB3-63N
Compliant standards		IEC/EN60898-1	IEC/EN60898-1
Rated current (A)		1,2,3,4,6,10,16,20,25, 32,40,50,63	1,2,3,4,6,10,16,20,25, 32,40,50,63
Rated voltage (V~)		240/415	240/415
Rated frequency(Hz)		50/60	50/60
Number of poles		1P, 1P+N, 2P, 3P, 3P+N, 4P	1P,1P+N, 2P, 3P, 3P+N, 4P
Mechanical life (cycles)		20000	20000
Electrical life (cycles)		10000	10000
Rated short-circuit breaking capacity		4500	6000
Rated impulse withstand voltage (1.2/50)(kV)		6	6
Dielectric test voltage(V)		(Power frequency 1 minute)2000	(Power frequency 1 minute)2000
Anti-humid and heat properties (IEC60068-2-30:55°C/90~96%,25°C/95~100%)		28 cycles	28 cycles
Reference temperature for setting of thermal element (°C)		30	30
Operating ambient temperature(°C)		-25~+55	-25~+55
Ambient temperature (Customized) (°C)		-40~+70	-40~+70
Ambient storage temperature (°C)		-40~+85	-40~+85
Applicable altitude(m)		2000	2000
Thermo-magnetic release characteristic	Type B (3In~5In)	■	■
	Type C (5In~10In)	■	■
	Type D (10In~14In)	■	■
	Type Z (3.2In~4.8In)	■	■
	Type L (6.4In~9.6In)	■	■
	Type K (9.6In~14.4In)	■	■
	Type B (5.5In ± 20%)		
	Type C (8.5In ± 20%)		
	Type D (12In ± 20%)		
	Type Z (4In ± 20%)		
	Type L (8In ± 20%)		
	Type K (12In ± 20%)		
Derating factor with multipleproducts side by side (recommended value)	<=3	(0.9~0.95)In	(0.9~0.95)In
	4~6	(0.86~0.80)In	(0.86~0.80)In
	7~9	(0.78~0.76)In	(0.78~0.76)In
	>9	0.76In	0.76In
Cable entry		Top or bottom entry	Top or bottom entry
Mounting		TH35-7.5-rail mounting	TH35-7.5-rail mounting
Pollution degree		Pollution degree II	Pollution degree II
Protection degree	Direct mounting	IP20	IP20
	Mounted in the distribution box	IP40	IP40

EvB3-63H	EvB3-63T	EvB3-63X
IEC/EN60898-1	IEC/EN60898-1	IEC/EN60947-2
1,2,3,4,6,10,16,20,25,32,40,50,63	1,2,3,4,6,10,16,20,25, 32,40,50,63	1,2,3,4,6,10,16,20,25, 32,40,50,63
240/415	240/415	240/415
50/60	50/60	50/60
1P,1P+N, 2P, 3P, 3P+N, 4P	1P,1P+N, 2P, 3P, 3P+N, 4P	1P,1P+N, 2P, 3P, 3P+N, 4P
20000	20000	20000
20000	20000	20000
10000	15000	25000
6	6	6
(Power frequency 1 minute)2000	(Power frequency 1 minute)2000	(Power frequency 1 minute)2000
28 cycles	28 cycles	28 cycles
30	30	30
-25~+55	-25~+55	-25~+55
-40~+70	-40~+70	-40~+70
-40~+85	-40~+85	-40~+85
2000	2000	2000
■	■	
■	■	
■	■	
■	■	
■	■	
■	■	
		■
		■
		■
		■
		■
		■
(0.9~0.95)In	(0.9~0.95)In	(0.9~0.95)In
(0.86~0.80)In	(0.86~0.80)In	(0.86~0.80)In
(0.78~0.76)In	(0.78~0.76)In	(0.78~0.76)In
0.76In	0.76In	0.76In
Top or bottom entry	Top or bottom entry	Top or bottom entry
TH35-7.5-rail mounting	TH35-7.5-rail mounting	TH35-7.5-rail mounting
Pollution degree II	Pollution degree II	Pollution degree II
IP20	IP20	IP20
IP40	IP40	IP40



EvB3-63X-1P

Type designation



Function

- Short circuit protection
- Overload protection
- Positive isolation

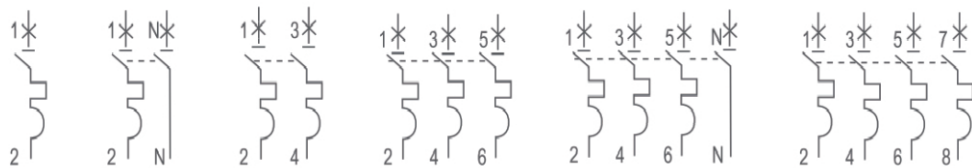
Features

- The state-of-art design, elegant appearance, cover and handle in arc shape make comfortable operation
- Family design and high short-circuit capacity 25kA for whole range
- Long electrical endurance up to 20000 cycles thanks to quick making mechanism
- The lock device prevents unwanted or casual dismounting of connected terminals

Technical parameters

- Compliant standards: IEC/EN60947-2
- Number of poles: 1P,1P+N,2P,3P,3P+N,4P
- Rated Current(A): 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated Voltage(V): AC 240/415V
- Thermal magnetic release: B,C,D,Z,L,K
- Rated short-circuit making capacity(Icu):25KA
- Frequency: 50/60Hz
- Mechanical life(cycles): 20000
- Electrical life(cycles): 20000
- Rated impulse withstand voltage(kV): 6
- Protection degree: IP20
- Terminal capacity: 16mm² flexible or 25mm² rigid

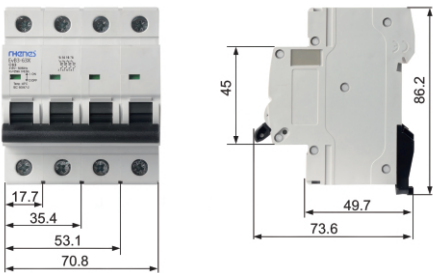
Wiring Diagram



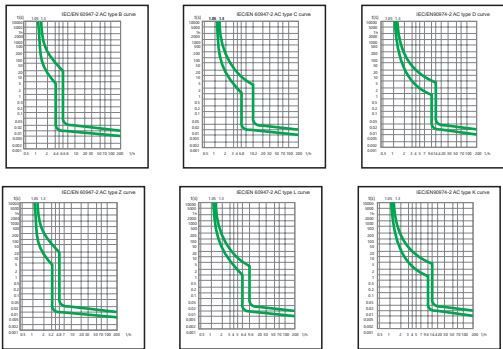
Dimensions and installation sizes



EvB3-63X-4P



Characteristic Curve



Overload current protection features

Test	Trip type	Test current	Initial state	Trip or non-trip time limit	Expected result
a	delay	1.05In	cooling	t≤1h (In ≤63A) t<2h (In>63A)	non-trip
b	delay	1.30In	Aftertest a	t≤1h (In ≤63A) t<2h (In>63A)	trip
c	delay	2In	cooling	10s<t<60s (In ≤63A) 20s<t<120s (In>63A)	trip

Temperature derating

When the ambient temperature is greater than or less than the calibrated temperature value, the rated current value of MCB shall be adjusted according to the provided temperature and current carrying capacity correction curve.

Temperature Derating Table												
Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Current coefficient at different altitudes

Altitude(m)	2000	3000	4000	5000
Dielectric strength(V)	3000	2500	2000	1800
Max. Ue(V)	440	440	440	440
In(A) under 30°C	1xIn	0.95xIn	0.93xIn	0.9xIn



EvB3-63T-1P

Type designation

Ev	B3	63	T
			Breaking capacity 15kA
			Frame size
			Product code
			Enterprise code



EvB3-63T-2P

Function

- Short circuit protection
- Overload protection
- Positive isolation

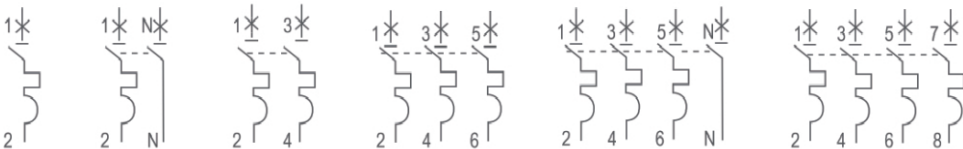
Features

- The state-of-art design, elegant appearance, cover and handle in arc shape make comfortable operation
- Family design and high short-circuit capacity 15kA for whole range
- Long electrical endurance up to 20000 cycles thanks to quick making mechanism
- The lock device prevents unwanted or casual dismounting of connected terminals

Technical parameters

- Compliant standards: IEC/EN60898-1
- Number of poles: 1P,1P+N,2P,3P,3P+N,4P
- Rated Current(A): 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated Voltage(V): AC 240/415V
- Thermal magnetic release: B,C,D,Z,L,K
- Rated short-circuit making capacity(Icn): 15KA
- Frequency: 50/60Hz
- Mechanical life(cycles): 20000
- Electrical life(cycles): 20000
- Rated impulse withstand voltage(kV): 6
- Protection degree: IP20
- Terminal capacity: 16mm² flexible or 25mm² rigid
- Energy Class: 3

Wiring Diagram

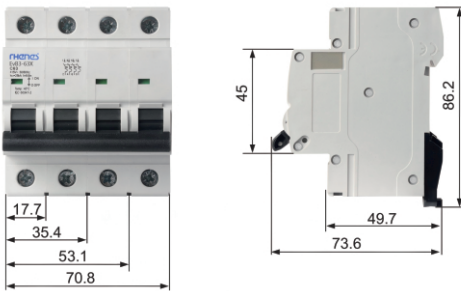


EvB3-63T-3P

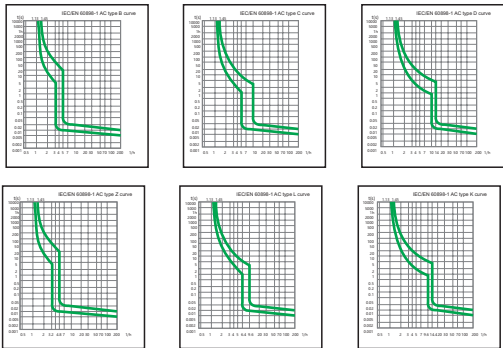


EvB3-63T-4P

Dimensions and installation sizes



Characteristic Curve



Overload current protection features

Test	Trip type	Test current	Initial state	Trip or non-trip time limit	Expected result	Remark
a	delay	1.13In	Cold	t≤1h	non-trip	
b	delay	1.45In	after testa	t≤1h	trip	Current in the 5 s the in crease of stability
c	delay	2.55In	Cold	1s<t<60s(In≤32A) 1s<t<120s(In>32A)	trip	

Temperature derating

When the ambient temperature is greater than or less than the calibrated temperature value, the rated curent value of MCB shall be adiusted according to the provided temperature and current carrying capacity correction curve.

Temperature Derating Table												
Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Current coefficient at different altitudes

Altitude(m)	2000	3000	4000	5000
Dielectric strength(V)	3000	2500	2000	1800
Max. Ue(V)	440	440	440	440
In(A) under 30°C	1xIn	0.95xIn	0.93xIn	0.9xIn

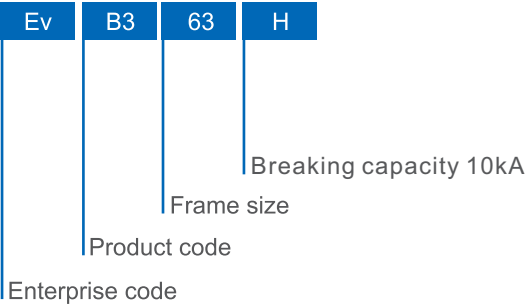
EvB3 Series

EvB3 Series



EvB3-63H-1P

Type designation



Function

- Short circuit protection
- Overload protection
- Positive isolation

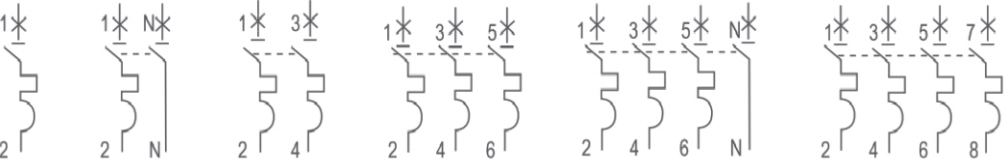
Features

- The state-of-art design, elegant appearance, cover and handle in arc shape make comfortable operation
- Family design and high short-circuit capacity 10kA for whole range
- Long electrical endurance up to 20000 cycles thanks to quick making mechanism
- The lock device prevents unwanted or casual dismounting of connected terminals

Technical parameters

- Compliant standards: IEC/EN60898-1
- Number of poles: 1P,1P+N,2P,3P,3P+N,4P
- Rated Current(A): 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated Voltage(V): AC 240/415V
- Thermal magnetic release: B,C,D,Z,L,K
- Rated short-circuit making capacity (Ics):10KA
- Frequency: 50/60Hz
- Mechanical life(cycles): 20000
- Electrical life(cycles): 20000
- Rated impulse withstand voltage(kV): 6
- Protection degree: IP20
- Terminal capacity: 16mm² flexible or 25mm² rigid
- Energy Class: 3

Wiring Diagram



EvB3-63H-2P

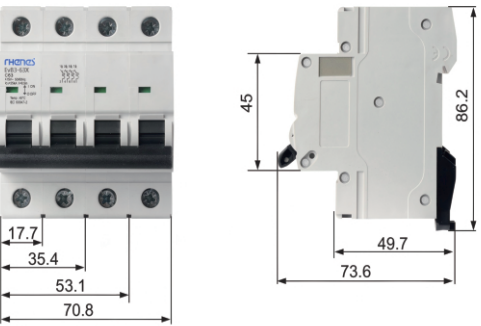


EvB3-63H-3P

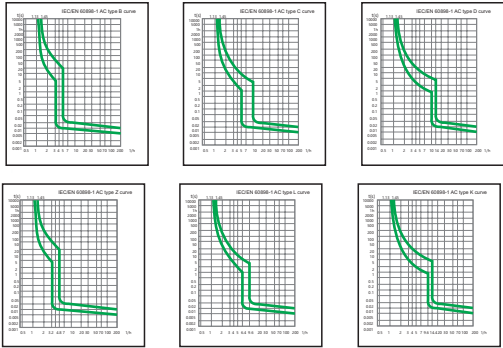


EvB3-63H-4P

Dimensions and installation sizes



Characteristic Curve



Overload current protection features

Test	Trip type	Test current	Initial state	Trip or non-trip time limit	Expected result	Remark
a	delay	1.13In	Cold	t≤1h	non-trip	
b	delay	1.45In	after testa	t≤1h	trip	Current in the 5 s the in crease of stability
c	delay	2.55In	Cold	1s<t<60s(In≤32A) 1s<t<120s(In>32A)	trip	

Temperature derating

When the ambient temperature is greater than or less than the calibrated temperature value,

carrying capacity correction curve.

Temperature Derating Table												
Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Current coefficient at different altitudes

Altitude(m)	2000	3000	4000	5000
Dielectric strength(V)	3000	2500	2000	1800
Max. Ue(V)	440	440	440	440
In(A) under 30°C	1xIn	0.95xIn	0.93xIn	0.9xIn

EvB3-63N
MCB (Miniature Circuit Breaker)



EvB3-63N-1P

Type designation

Ev	B3	63	N

Breaking capacity 6kA

Frame size

Product code

Enterprise code

Function

- Short circuit protection
- Overload protection
- Positive isolation

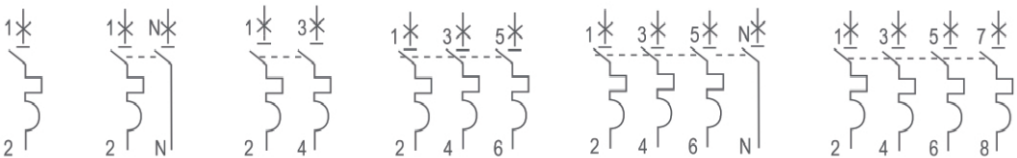
Features

- The state-of-art design, elegant appearance, cover and handle in arc shape make comfortable operation
- Family design and high short-circuit capacity 6kA for whole range
- Long electrical endurance up to 10000 cycles thanks to quick making mechanism
- The lock device prevents unwanted or casual dismounting of connected terminals

Technical parameters

- Compliant standards: IEC/EN60898-1
- Number of poles: 1P,1P+N,2P,3P,3P+N,4P
- Rated Current(A): 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated Voltage(V): AC 240/415V
- Thermal magnetic release: B,C,D,Z,L,K
- Rated short-circuit making capacity(Ics):6KA
- Frequency: 50/60Hz
- Mechanical life(cycles): 20000
- Electrical life(cycles): 10000
- Rated impulse withstand voltage(kV): 6
- Protection degree: IP20
- Terminal capacity: 16mm² flexible or 25mm² rigid
- Energy Class: 3

Wiring Diagram



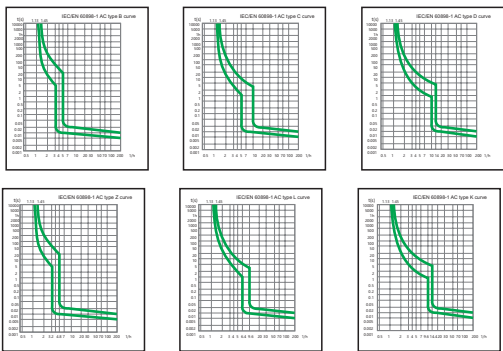
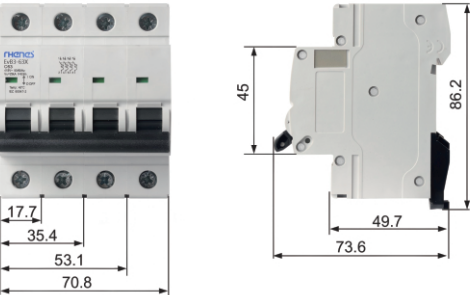
EvB3-63N-3P

Dimensions and installation sizes

Characteristic Curve



EvB3-63N-4P



Overload current protection features

Test	Trip type	Test current	Initial state	Trip or non-trip time limit	Expected result	Remark
a	delay	1.13In	Cold	t≤1h	non-trip	
b	delay	1.45In	after testa	t≤1h	trip	Current in the 5 s the in crease of stability
c	delay	2.55In	Cold	1s<t<60s(In≤32A) 1s<t<120s(In>32A)	trip	

Temperature derating

When the ambient temperature is greater than or less than the calibrated temperature value, the rated current value of MCB shall be adjusted according to the provided temperature and current carrying capacity correction curve.

Temperature Derating Table												
Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Current coefficient at different altitudes

Altitude(m)	2000	3000	4000	5000
Dielectric strength(V)	3000	2500	2000	1800
Max. Ue(V)	440	440	440	440
In(A) under 30°C	1xIn	0.95xIn	0.93xIn	0.9xIn



EvB3-63S-1P

Type designation

Ev	B3	63	S
			Breaking capacity 4.5kA
			Frame size
			Product code
			Enterprise code

Function

- Short circuit protection
- Overload protection
- Positive isolation

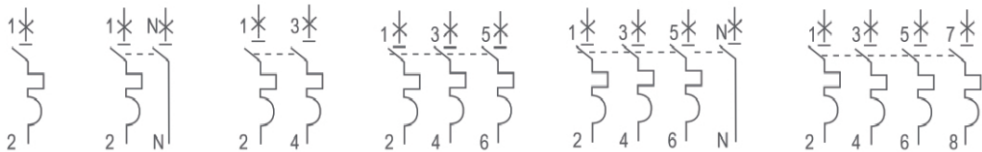
Features

- The state-of-art design, elegant appearance, cover and handle in arc shape make comfortable operation
- Family design and high short-circuit capacity 4.5kA for whole range
- Long electrical endurance up to 10000 cycles thanks to quick making mechanism
- The lock device prevents unwanted or casual dismounting of connected terminals

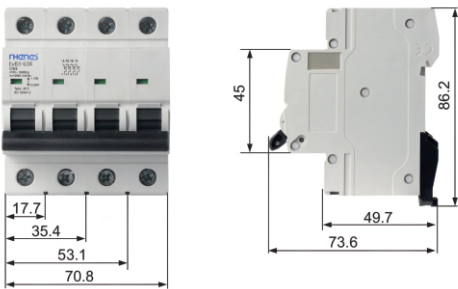
Technical parameters

- Compliant standards: IEC/EN60898-1
- Number of poles: 1P,1P+N,2P,3P,3P+N,4P
- Rated Current(A): 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated Voltage(V): AC 240/415V
- Thermal magnetic release: B,C,D,Z,L,K
- Rated short-circuit making capacity(Ics):4.5KA
- Frequency: 50/60Hz
- Mechanical life(cycles): 20000
- Electrical life(cycles): 10000
- Rated impulse withstand voltage(kV): 6
- Protection degree: IP20
- Terminal capacity: 16mm² flexible or 25mm² rigid
- Energy Class: 3

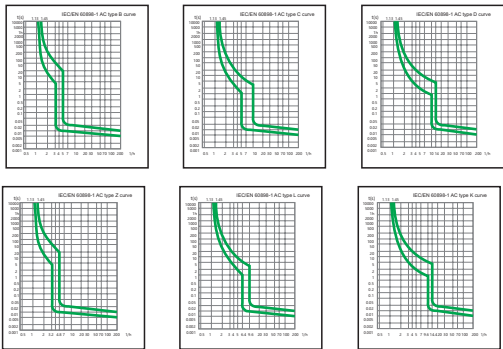
Wiring Diagram



Dimensions and installation sizes



Characteristic Curve



Overload current protection features

Test	Trip type	Test current	Initial state	Trip or non-trip time limit	Expected result	Remark
a	delay	1.13In	Cold	$t \leq 1h$	non-trip	
b	delay	1.45In	after testa	$t \leq 1h$	trip	Current in the 5 s the in crease of stability
c	delay	2.55In	Cold	$1s < t < 60s (In \leq 32A)$ $1s < t < 120s (In > 32A)$	trip	

Temperature derating

When the ambient temperature is greater than or less than the calibrated temperature value, the rated current value of MCB shall be adjusted according to the provided temperature and current carrying capacity correction curve.

Temperature Derating Table												
Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Current coefficient at different altitudes

Altitude(m)	2000	3000	4000	5000
Dielectric strength(V)	3000	2500	2000	1800
Max. Ue(V)	440	440	440	440
In(A) under 30°C	1xIn	0.95xIn	0.93xIn	0.9xIn