



DZ158 Moulded Case Circuit Breaker

1. General

1.1 Function

protection of circuits against short-circuit currents,
protection of circuits against overload currents,
switch,
isolation.

1.2 Selection

Technical data of the network at the point considered:
the earthing systems (TNS, TNC),
short-circuit current at the circuit-breaker installation point,
which must always be less than the breaking capacity of
this device,
Network normal voltage.

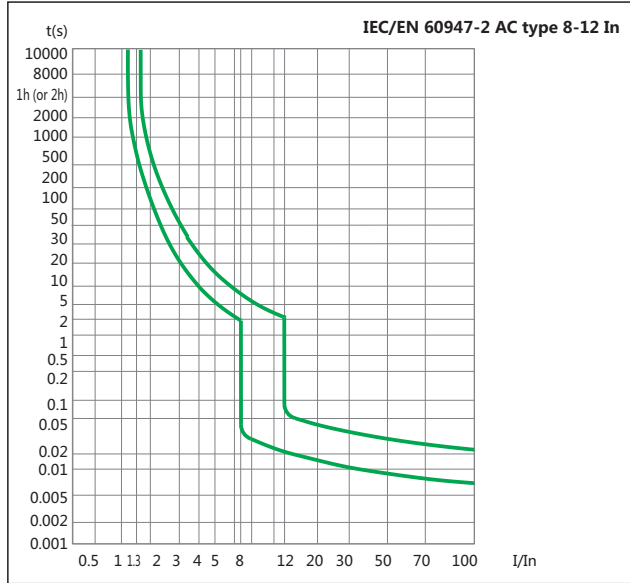
1.3 Approvals and certificates

Detailed information, please refer to Certificates Table
on the last page.



2. Technical data

2.1 Curves



2.2

	Standard		IEC/EN 60947-2
Electrical features	Rated current In	A	63, 80, 100, 125
	Poles		1P, 2P, 3P, 4P
	Rated voltage Ue	V	230/400~240/415
	Insulation voltage Ui	V	500
	Rated frequency	Hz	50
	Rated breaking capacity	kA	6/10
	Rated impulse withstand voltage(1.2/50) Uimp	V	4000
	Dielectric test voltage at ind. Freq. for 1 min	kV	1.89
	Pollution degree		3
Thermo-magnetic release characteristic			8-12In
Mechanical features	Electrical life		1,500 (In=63A, 80A, 100A) 1,000 (In=125A)
	Mechanical life		8,500 (In=63A, 80A, 100A) 7,000 (In=125A)
	Contact position indicator		Yes
	Protection degree		IP20
	Reference temperature for setting of thermal element	°C	30
	Ambient temperature (with daily average ≤ 35°C)	°C	-5...+40
	Storage temperature	°C	-25...+70
Installation	Terminal connection type		Cable/Pin-type busbar
	Terminal size top/bottom for cable	mm ²	16~50
		AWG	6-0
	Terminal size top/bottom for busbar	mm ²	16~35
		AWG	6-2
	Tightening torque	N·m	3.5
	In-lbs.	31	
Mounting			On DIN rail EN 60715 (35mm) by means of fast clip device
Connection			From top and bottom
Combination with accessories	Auxiliary contact		Yes

P-033 Modular DIN Rail Products | MCCB

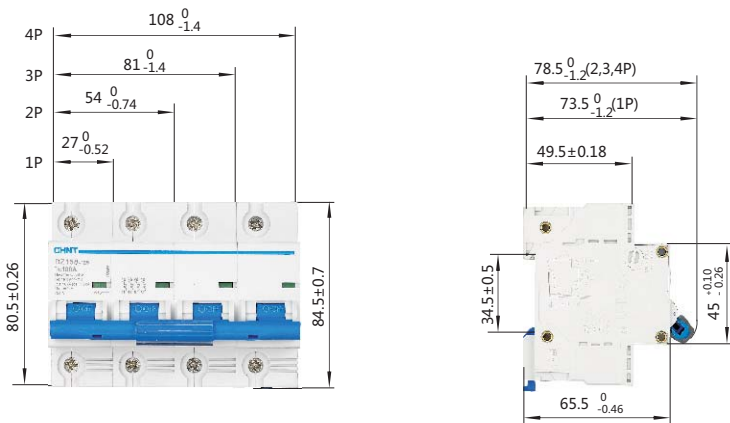
2.3 Temperature derating

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.

The reference temperature is 30°C

Rated current In (A)	Temperature compensation coefficient under various operational temperature							
	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
63	1.275	1.215	1.15	1.075	1.00	0.915	0.825	0.735
80	1.27	1.205	1.135	1.07	1.00	0.925	0.845	0.755
100	1.275	1.21	1.135	1.075	1.00	0.925	0.845	0.755
125	1.25	1.19	1.125	1.08	1.00	0.93	0.86	0.78

3. Overall and mounting dimensions (mm)





eBC eB eBG Miniature Circuit Breaker

1. General

1.1 Function

protection of circuits against short-circuit currents,
protection of circuits against overload currents,
switch,
isolation.

1.2 Selection

Technical data of the network at the point considered:
the earthing systems (TNS, TNC),
short-circuit current at the circuit-breaker installation point,
which must always be less than the breaking capacity of
this device,
Network normal voltage.

Tripping curves:

B curve (3-5In)

protection for people and big length cables in TN and IT
systems.

C curve (5-10In)

protection for resistive and inductive loads with low inrush
current.

D curve(10-20In)

protection for circuits which supply loads with high inrush
current at the circuit closing
(LV/LV transformers, breakdown lamps).

1.3 Approvals and certificates

Detailed information, please refer to Certificates Table
on the last page.



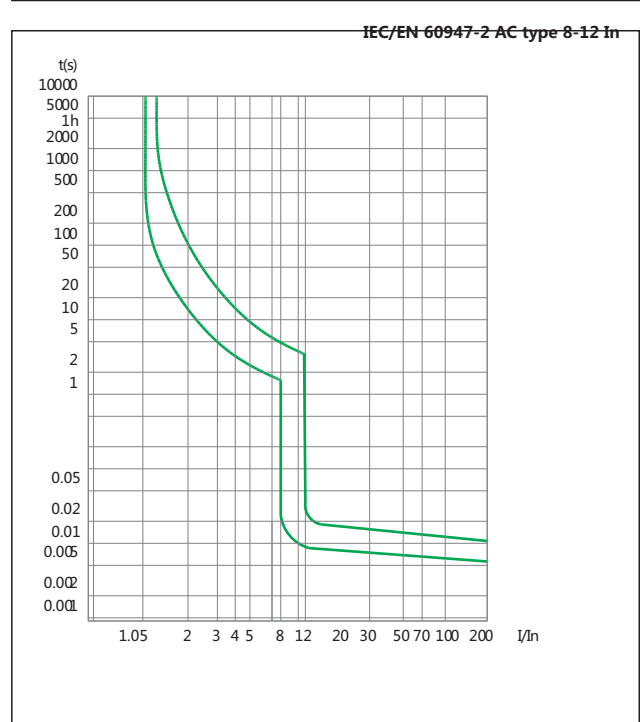
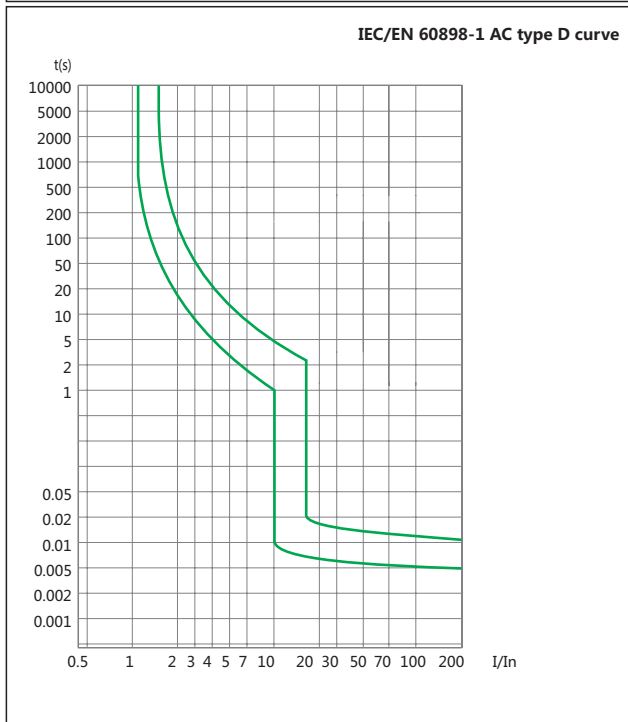
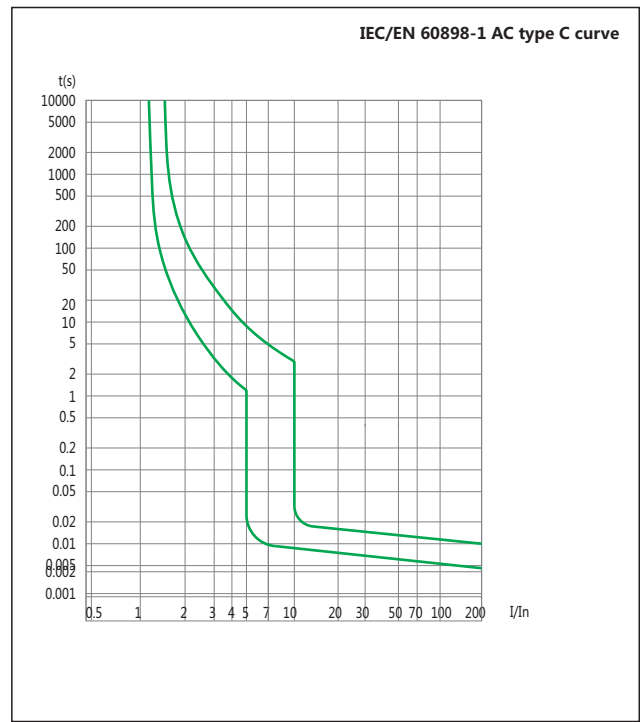
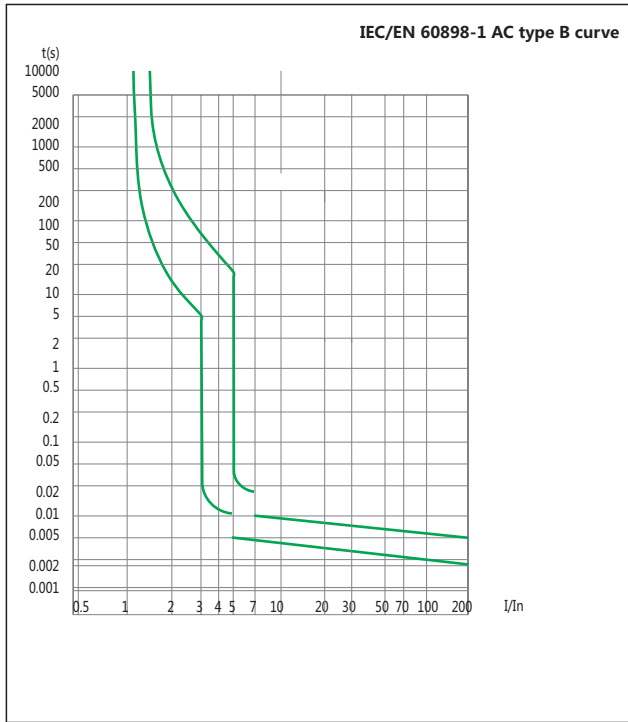
Segurança

P-017 Modular DIN Rail Products | MCB

2. Technical data

2.1 Curves

MCB type B, C, D is of high current limiting performance to limit the destruction energy due to short circuit to the greatest extent.



	Standard		IEC/EN 60898-1	IEC/EN 60947-2
Electrical features	Rated current In	A	1, 2, 3, 4, 5, 6, 10, 15, 16, 20, 25, 32, 40, 50, 60, 63	
	Poles		1P, 2P, 3P, 4P	
	Rated voltage Ue	V	230/400~240/415	
	Insulation voltage Ui		500	
	Rated frequency	Hz	50/60	
	Rated breaking capacity	kA	3 (1~63A) eBC 4.5 (1~63A) eB 6 (B,C 1~40A) eBG	
	Rated impulse withstand voltage(1.2/50) Uimp	V	4000	
	Dielectric test voltage at ind. Freq. for 1 min		2	
	Pollution degree		2	
Thermo-magnetic release characteristic		B, C, D	8-12In	
Mechanical features	Electrical life		4,000	
	Mechanical life		10,000	
	Protection degree		IP20	
	Reference temperature for setting of thermal element	°C	30	
	Ambient temperature (with daily average ≤35°C)	°C	-5...+40	
	Storage temperature	°C	-25...+70	
Installation	Terminal connection type		Cable/Pin-type busbar	
	Terminal size top/bottom for cable	mm ²	1~25	
		AWG	17~3	
	Terminal size top/bottom for busbar	mm ²	1~10	
		AWG	17~7	
	Tightening torque	N·m	2	
		In-lbs.	18	
Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device		
Connection		From top and bottom		

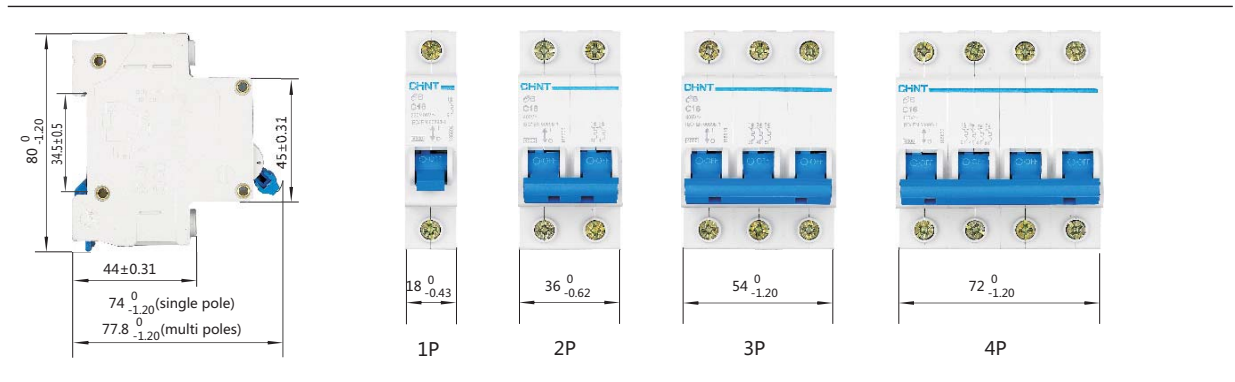
2.3 Temperature derating

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.

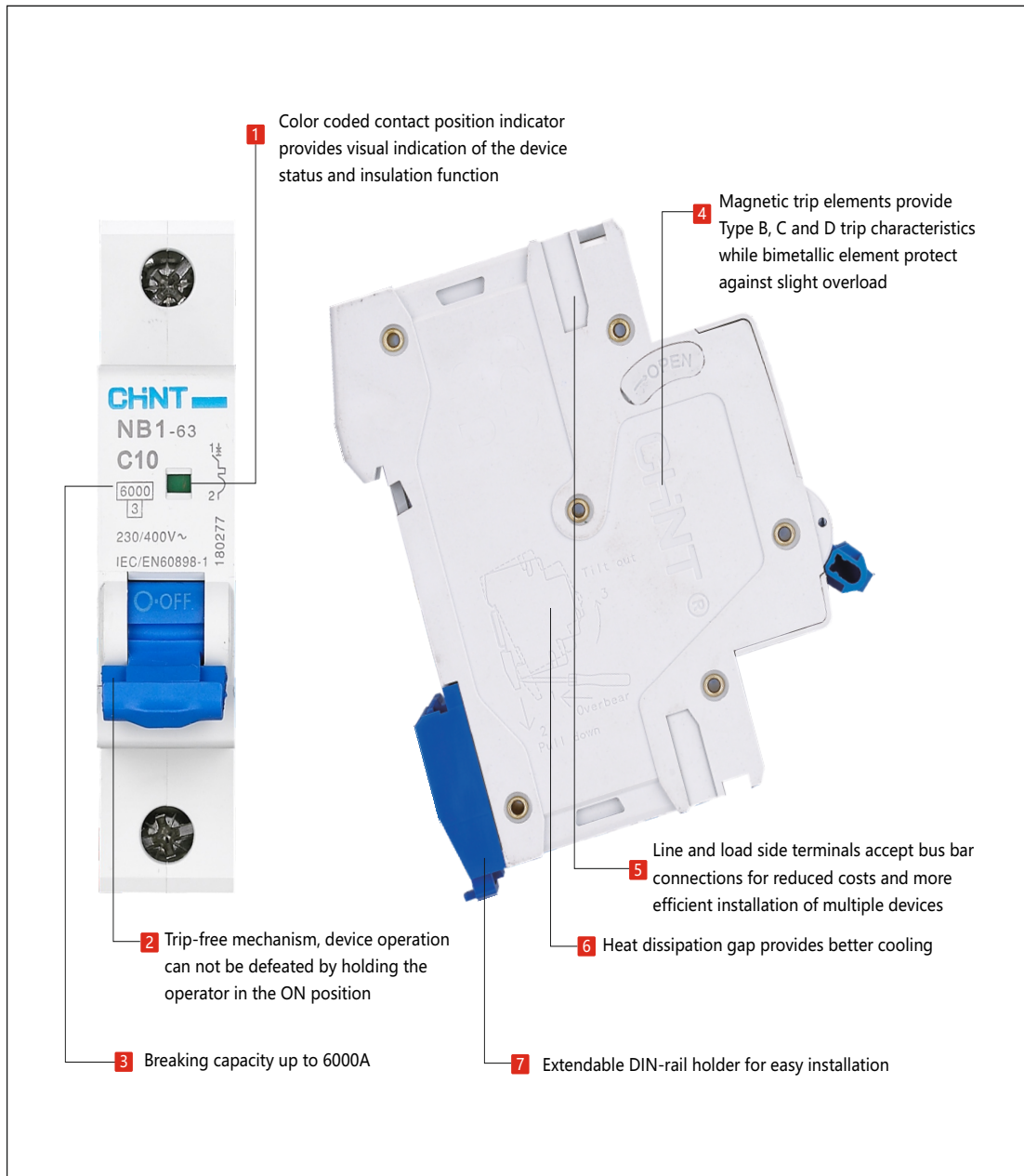
The reference temperature is 30°C

Rated current In (A)	Temperature compensation coefficient under various operational temperature									
	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	55°C	60°C	
1~6	1.20	1.14	1.09	1.05	1.00	0.96	0.80	0.75	0.70	
10~32	1.18	1.12	1.08	1.04	1.00	0.96	0.92	0.88	0.84	
40~60	1.16	1.12	1.07	1.03	1.00	0.97	0.87	0.83	0.80	

3. Overall and mounting dimensions (mm)



NB1 Miniature Circuit Breaker



NB1 -63 Miniature Circuit Breaker

1. General

1.1 Function

protection of circuits against short-circuit currents,
protection of circuits against overload currents,
switch, isolation.

NB1 circuit-breakers are used in domestic installation,
as well as in commercial and industry electrical
distribution systems.

1.2 Selection

Technical data of the network at the point considered:
short-circuit current at the circuit-breaker installation point,
which must always be less than the breaking capacity of
this device, network normal voltage.

Tripping curves:

B curve (3-5In)

protection for people and big length cables in TN and IT
systems.

C curve (5-10In)

protection for resistive and inductive loads with low inrush
current.

D curve(10-14In)

protection for circuits which supply loads with high inrush
current at the circuit closing
(LV/LV transformers, breakdown lamps).

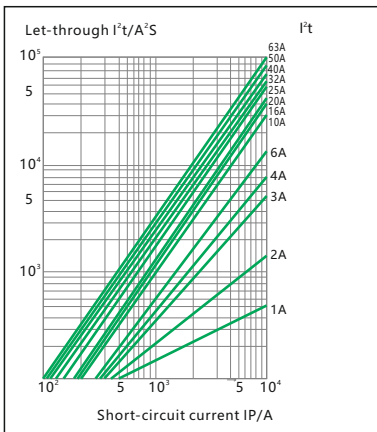
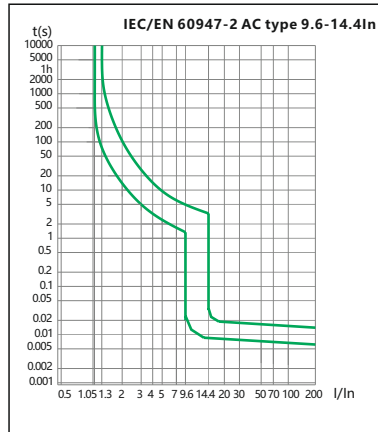
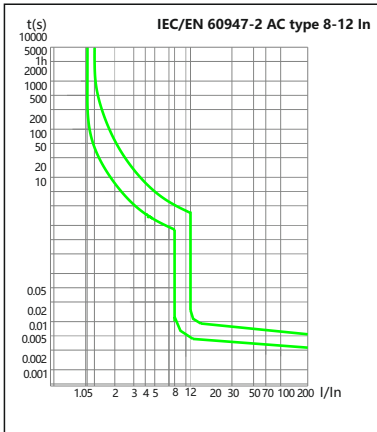
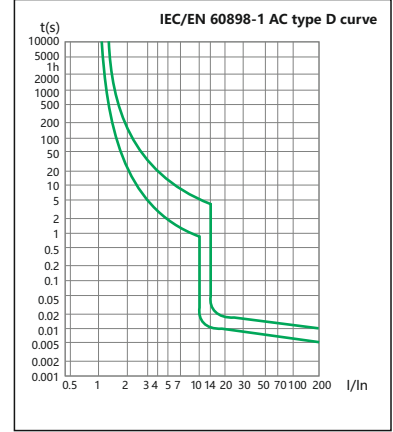
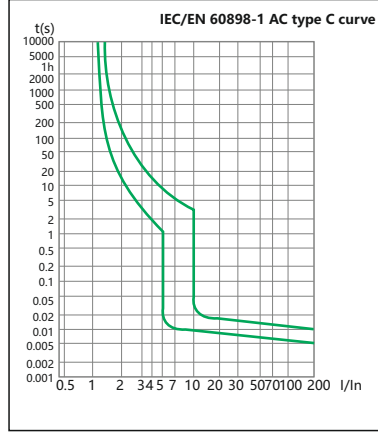
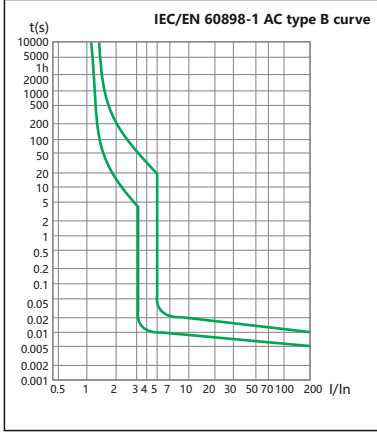
1.3 Approvals and certificates

Detailed information, please refer to Certificates Table
on the last page.



2. Technical data

2.1 Curves





2.2

	Standard		IEC/EN 60898-1	IEC/EN 60947-2	UL1077	
Electrical features	Rated current In	A	1, 2, 3, 4, 6, 10, 13, 16, 20, 25, 32, 40, 50, 63		1, 2, 3, 4, 6, 10, 13, 16, 20, 25, 32, 40, 50, 63	
	Poles		1P, 1P+N, 2P, 3P, 3P+N, 4P	1P, 2P, 3P, 4P	1P, 2P, 3P, 4P 1P, 2P	
	Rated voltage Ue	V	230/400~240/415		277/480 110/125	
	Insulation voltage Ui	V	500			
	Rated frequency		50/60Hz		DC	
	Rated breaking capacity	A	6000	6000	5000 10000	
	Energy limiting class		3			
	Rated impulse withstand voltage(1.2/50) Uimp	V	4000			
	Dielectric test voltage at ind. Freq. for 1 min	kV	2	1.890	2	
	Pollution degree		2			
	Power loss per pole			Rated current (A)		Max power loss per pole (W)
				1, 2, 3, 4, 6, 10		2
			16, 20, 25, 32		3.5	
			40, 50, 63		5	
Thermo-magnetic release characteristic		B, C, D	(8-12)In	B, C, D		
Mechanical features	Electrical life		4,000			
	Mechanical life		20,000			
	Contact position indicator		Yes			
	Protection degree		IP20			
	Reference temperature for setting of thermal element	°C	30			
	Ambient temperature (with daily average ≤ 35°C)	°C	-5...+40			
	Storage temperature	°C	-25...+70			
Installation	Terminal connection type		Cable/U-type busbar/Pin-type busbar			
	Terminal size top/bottom for cable	mm ²	25			
		AWG	18-4			
	Terminal size top/bottom for busbar	mm ²	10			
		AWG	18-8			
	Tightening torque	N-m	2.5			
		In-lbs.	22			
Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device				
Connection		From top and bottom				
Combination with accessories	Auxiliary contact		Yes			
	Shunt release		Yes			
	Under voltage release		Yes			
	Alarm contact		Yes			

P-005 Modular DIN Rail Products MCB

2.3 Selectivity

In (A)	Power supply side: RT36-00 (fuse)								
	20	25	36	50	63	80	100	125	160
	Is (kA)								
≤2	1.2	4	> 12	> 12	> 12	> 12	> 12	> 12	> 12
3	0.7	1.2	3.8	5.3	6	6	6	6	6
4	0.6	0.9	2.5	3.8	6	6	6	6	6
6	0.5	0.8	1.9	2.5	4.5	5	6	6	6
10		0.7	1.4	2.2	3.2	3.6	6	6	6
16			1.2	1.8	2.6	3	5.6	6	6
20				1.5	2.2	2.5	4.6	6	6
25				1.3	2	2.2	4.1	5.5	6
32					1.7	1.9	3.8	4.5	6
40						1.7	3	4	5
50						1.5	2.6	3.5	4.5
63							2.4	3.3	4.5

Load side: NB1-63,
NB1-63H
Curve B, C

In (A)	Power supply side: NM8-100S/H/R								
	16	20	25	32	40	50	63	80	100
	Is (kA)								
≤10	0.19	0.19	0.3	0.4	0.5	0.5	0.5	0.63	0.8
16			0.3	0.4	0.5	0.5	0.5	0.63	0.8
20					0.5	0.5	0.5	0.63	0.8
25						0.5	0.5	0.63	0.8
32							0.5	0.63	0.8
40								0.63	0.8
50									0.8
63									

Load side: NB1-63,
NB1-63H
Curve B, C

2.4 Backup protection

In (A)	Power supply side: RT16 series						
	40	50	63	80	100	125	160
	Is (kA)						
1~6	40	40	40	40	40	40	40
8~10	40	40	40	40	40	40	40
13	40	40	40	40	35	35	35
16	40	40	40	40	30	30	30
20	40	40	40	40	30	30	30
25	40	40	40	40	30	30	30
32	40	40	40	40	30	30	30
40	40	40	40	40	30	30	30
50	30	30	30	30	30	30	30
63	20	20	20	20	15	15	15

Load side: NB1-63,
NB1-63H
Curve B, C

In (A)	Power supply side: NM8					
	NM8-125S	NM8-125H	NM8-125R	NM8-250S	NM8-250H	NM8-250R
	Is (kA)					
1~6	15	18	18	15	15	15
10~20	12	15	15	12	12	12
32~40	12	15	15	12	12	12
50~60	12	15	15	12	12	12

Load side: NB1-63,
NB1-63H
Curve B, C

2.5 Temperature derating

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.

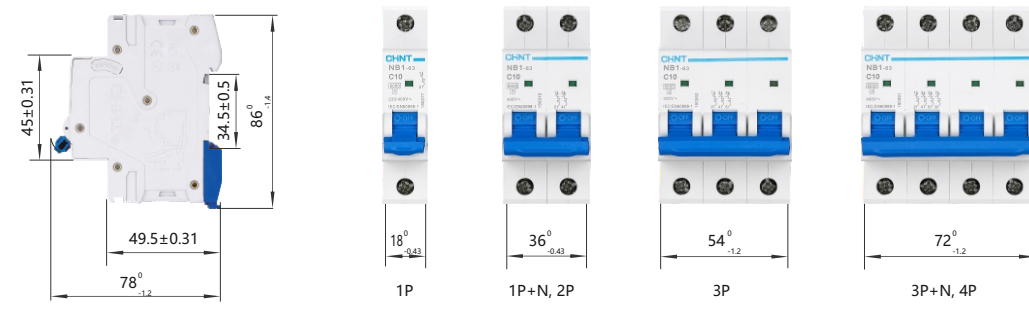
The reference temperature is 30°C

Ambient temperature Rated current(A)	-35°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.30	1.26	1.23	1.19	1.15	1.11	1.05	1.00	0.96	0.93	0.88	0.83
2	2.60	2.52	2.46	2.38	2.28	2.20	2.08	2.00	1.92	1.86	1.76	1.66
3	3.90	3.78	3.69	3.57	3.42	3.30	3.12	3.00	2.88	2.79	2.64	2.49
4	5.20	5.04	4.92	4.76	4.56	4.40	4.16	4.00	3.84	3.76	3.52	3.32
6	7.80	7.56	7.38	7.14	6.84	6.60	6.24	6.00	5.76	5.64	5.28	4.98
10	13.20	12.70	12.50	12.00	11.50	11.10	10.60	10.00	9.60	9.30	8.90	8.40
16	21.12	20.48	20.00	19.20	18.40	17.76	16.96	16.00	15.36	14.88	14.24	13.44
20	26.40	25.60	25.00	24.00	23.00	22.20	21.20	20.00	19.20	18.60	17.80	16.8
25	33.00	32.00	31.25	30.00	28.75	27.75	26.50	25.00	24.00	23.25	22.25	21.00
32	42.56	41.28	40.00	38.72	37.12	35.52	33.92	32.00	30.72	29.76	28.16	26.88
40	53.20	51.20	50.00	48.00	46.40	44.80	42.40	40.00	38.40	37.20	35.60	33.6
50	67.00	65.50	63.00	60.50	58.00	56.00	53.00	50.00	48.00	46.50	44.00	41.50
63	83.79	81.90	80.01	76.86	73.71	70.56	66.78	63.00	60.48	58.90	55.44	52.29

When several simultaneously operating circuit breakers are mounted side by side in a small enclosure, the temperature rise inside the enclosure causes a reduction in current rating.

You must then assign the rating (already derated if necessary according to ambient temperature) a downrating factor of 0.8.

3. Overall and mounting dimensions (mm)





NB7 Miniature Circuit Breaker

1. General

The NB7 series miniature circuit breaker is applicable to the circuit with an alternating current of 50Hz/60Hz, rated voltage of 240/415V, and rated current up to 63A for overload protection and short circuit protection, and also for not-frequent operational transformation in the circuit under normal condition.

This product can be applied to various places such as industrial, commercial, and tall buildings, and residential houses.

The product meets the standards of IEC60898-1.



2. Type designation

N B 7
 |
 | Design number
 |
 | Miniature circuit breaker
 |
 | Company code

3. Technical data

3.1 Main specifications

- 3.1.1 Graded according to the rated current I_n : 1A, 2A, 3A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A;
- 3.1.2 Classified as follows according to the type of instantaneous release: type B (3-5) I_n , type C (5-10) I_n , type D ((10-16) I_n ;
- 3.1.3 Categorized as follows according to the number of poles:
- Single pole
 - Two poles
 - Three poles
 - Four poles

3.2 Technical parameters

3.2.1 For the rated short circuit breaking capacity, see Table 1

Table 1

Rated current I_n (A)	Number of poles	Rated voltage U_e (V)	Rated short circuit capacity I_{cn} (A)
B, C type: 1~40	1	240/415	6000
	2, 3, 4	415	
B, C type: 50-63	1	240/415	4500
	2, 3, 4	415	
D type: 1~63	1	240/415	4500
	2, 3, 4	415	

3.2.2 Mechanical/electrical Life

- Electrical life: not less than 4,000 times
- Mechanical life: not less than 10,000 times

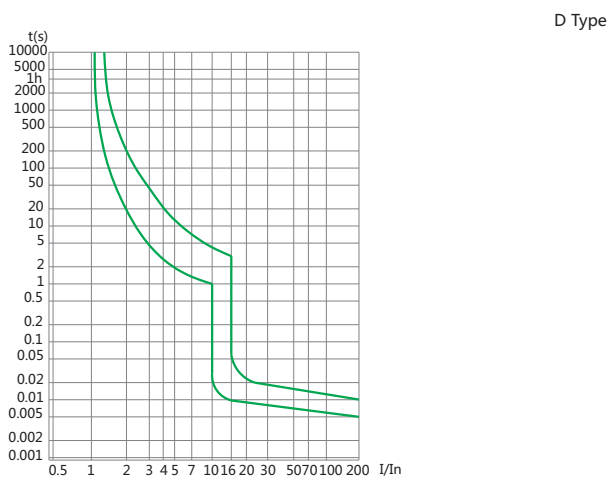
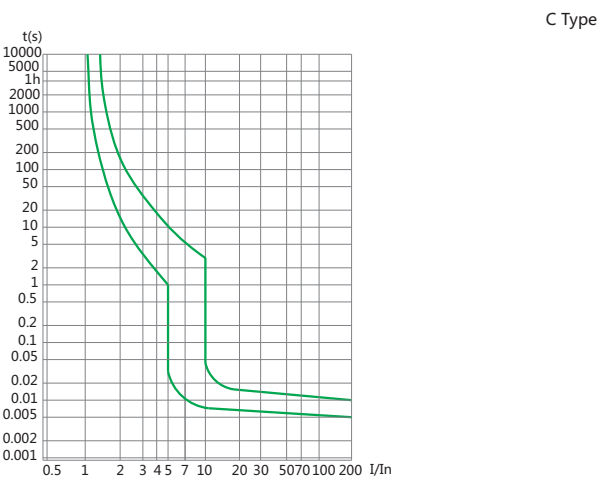
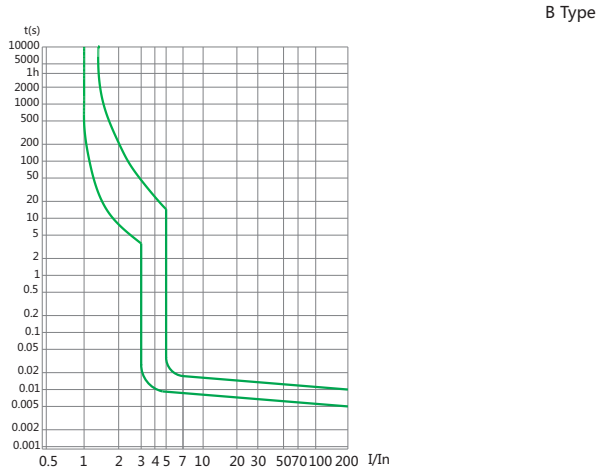
3.2.3 For the over current protection characteristics, see Table 2

Table 2

Test	Type	Test current	Initial state	Time limit for tripping or not tripping	Expected result	Test environment temperature	Remarks
a	B, C, D	1.13 I_n	Cold state	$t \leq 1h$	Not tripping	30°C~35°C	The current is rising within 5s
b	B, C, D	1.45 I_n	Right after test number 1	$t < 1h$	Tripping		
c	B, C, D	2.55 I_n	Cold state	$1s < t < 60s$ ($I_n \leq 32A$) $1s < t < 120s$ ($I_n > 32A$)	Tripping		
d	B	3 I_n	Cold state	$t \leq 0.1s$	Not tripping		The power supply is turned on by closing the auxiliary switch
	C	5 I_n					
	D	10 I_n					
e	B	5 I_n	Cold state	$t < 0.1s$	Tripping	The power supply is turned on by closing the auxiliary switch	
	C	10 I_n					
	D	16 I_n					

Note: The terminology "Cold state" means that the test is performed at the base calibration temperature with no load prior to the test.

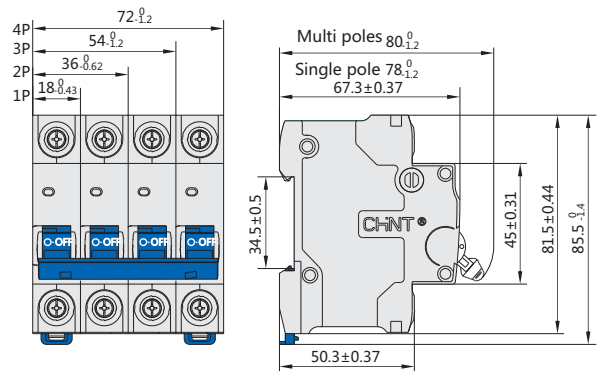
3.2.4 For the tripping performance diagram, see Fig 1



3.2.5 Wiring: good for connection of leads of less than 25mm² (see Table 3); wiring method: screw hold-down with a torque of 2N·m

Rated current In (A)	Nominal cross-sectional area of the copper conductor (mm ²)
1~6	1
10	1.5
16,20	2.5
25	4
32	6
40,50	10
63	16

4. Overall and mounting dimensions (mm)



5. Ordering information

5.1 When ordering the goods, the user shall indicate the following items:

- 5.1.1 Types and names of products, for example, NB7 miniature circuit breaker;
- 5.1.2 Instantaneous tripping type and rated current, for example, C25;
- 5.1.3 Number of poles: for example, 2P;
- 5.1.4 Amount on order, for example, 50 units;

5.2 Example for ordering: 50 units of the NB7 series miniature circuit breakers, 2P, C25.



NB1-63DC DC Circuit Breaker

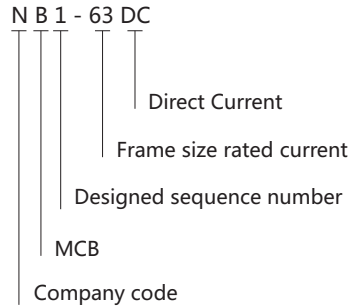
1. General

- 1.1 Certificates: CCC,CE,CB,TUV;
- 1.2 Standard: IEC/EN 60947-2 ,RoHS;
- 1.3 Rated voltage up to 1000V, Rated current up to 63A;
- 1.4 Protection of circuits against overload currents;
- 1.5 Protection of circuits against short-circuit currents;
- 1.6 NB1-63 DC circuit-breakers are used in communication systems and PV DC systems.

2. Features

- 2.1 Excellent breaking capacity
- 2.2 Double connection function of lead wire and bus bar
- 2.3 Stored energy operation, fast closing, long service life
- 2.4 Convenient installation, disassembly
- 2.5 Contact on-off indication, higher security
- 2.6 Green environmental protection and energy saving

3. Type designation



4. Operating conditions

- 4.1 Ambient temperature: -35°C~+70°C(Refer to 5.3)
- 4.2 The atmosphere condition: ≤95%
- 4.3 Pollution degree: II
- 4.4 Altitude: ≤2000m(if exceed 2000m, Refer to 5.4)

5. Technical data

- 5.1 Classification
 - 5.1.1 Rate Current In: 1A,2A,3A,4A,6A,10A,13A,16A,20A,25A,32A,40A,50A,63A
 - 5.1.2 Number of poles: 1P,2P,4P
 - 5.1.3 Tripping curves: C Type,(7~10)In
- 5.2 Parameters
 - 5.2.1 Rated breaking capacity Icu



Rated current In (A)	Number of poles	Rated voltage Ue (V)	Rated breaking capacity Icu (A)
1~63	1	250	6000
	2	500	6000
	4	1000	6000

5.2.2 Electrical and mechanical life

- a. Electrical life: > 1500
- b. Mechanical life: > 20,000

5.2.3 Rated impulse withstand voltage Uimp:4KV

5.2.4 (28-32)°C ambient temperature over-current protection features.

Test	Test current	Initial state	Time limit for tripping or not tripping	Expected result	Remarks
a	1.05In	Cold state	t ≤ 1h	Not tripping	
b	1.30In	Right after test number a	t < 1h	Tripping	The current is rising within 5s
c	7In	Cold state	t ≤ 0.2s	Not tripping	
d	10In	Cold state	t < 0.1s	Tripping	

Note: The terminology "Cold state" means that the test is performed at the base calibration temperature with no load prior to the test.

5.3 Temperature derating

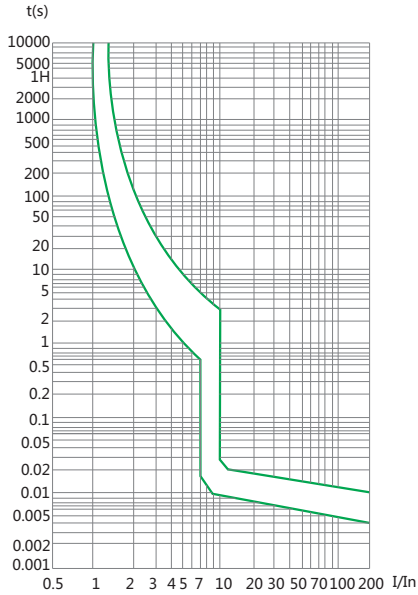
Rated current (A)	Temperature compensation coefficient under various operational temperature.											
	-35°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.3	1.26	1.23	1.19	1.15	1.11	1.05	1	0.96	0.93	0.88	0.83
2	2.6	2.52	2.46	2.38	2.28	2.2	2.08	2	1.92	1.86	1.76	1.66
3	3.9	3.78	3.69	3.57	3.42	3.3	3.12	3	2.88	2.79	2.64	2.49
4	5.2	5.04	4.92	4.76	4.56	4.4	4.16	4	3.84	3.76	3.52	3.32
6	7.8	7.56	7.38	7.14	6.84	6.6	6.24	6	5.76	5.64	5.28	4.98
10	13.2	12.7	12.5	12	11.5	11.1	10.6	10	9.6	9.3	8.9	8.4
13	17.16	16.51	16.25	15.6	14.95	14.43	13.78	13	12.48	12.09	11.57	10.92
16	21.12	20.48	20	19.2	18.4	17.76	16.96	16	15.36	14.88	14.24	13.44
20	26.4	25.6	25	24	23	22.2	21.2	20	19.2	18.6	17.8	16.8
25	33	32	31.25	30	28.75	27.75	26.5	25	24	23.25	22.25	21
32	42.56	41.28	40	38.72	37.12	35.52	33.93	32	30.72	29.76	28.16	26.88
40	53.2	51.2	50	48	46.4	44.8	42.4	40	38.4	37.2	35.6	33.6
50	67	65.5	63	60.5	58	56	53	50	48	46.5	44	41.5
63	83.79	81.9	80.01	76.86	73.71	70.56	66.78	63	60.48	58.9	55.44	52.29

5.4 Altitude derating

Tripping type	Rated current In (A)	Current correction factor			For example
		≤2000	2000~3000m	≥3000m	
C	1,2,3,4,6,10,13,16,20,32,40,50,63	1	0.9	0.8	Rated current of 10A products rated current derating 2500m: 0.9 × 10 = 9A

P-013 Modular DIN Rail Products | MCB

5.5 Curves shown in Figure 1



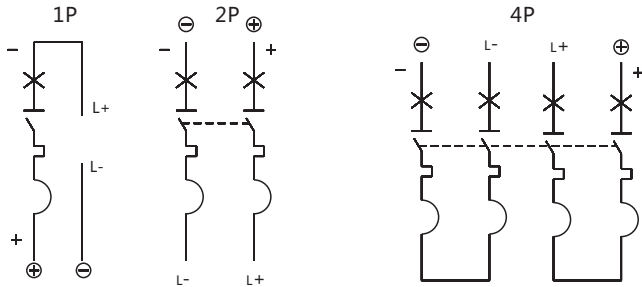
5.6 Wiring: Apply to 25 mm² wire connection terminals
Tightening torque 2.5N·m

Rated current In (A)	Copper wire nominal cross sectional area(mm ²)
1~6	1
10	1.5
13,16,20	2.5
25	4
32	6
40,50	10
63	16

5.7 Each pole power consumption of the circuit breaker

Rated current In (A)	Each pole maximum power consumption(W)
1~10	2
13~32	3.5
40~63	5

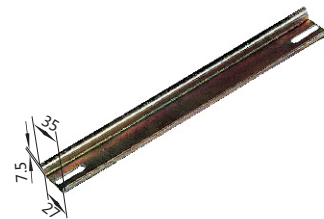
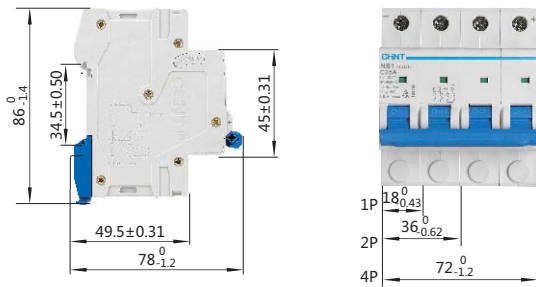
5.8 DC application wiring diagram shown in Figure 2



Wiring diagram description:

- ⊕ Positive ⊖ Negative
- L+ Load positive L- Load negative
- Prohibit power reversed
- Rated voltage: 1P:250V, 2P:500V, 4P:1000V
- Strictly forbidden to remove the four poles products of sealing plug wiring operation.

6. Overall and mounting dimensions (mm)





NB1-63H Miniature Circuit Breaker

1. General

1.1 Function

protection of circuits against short-circuit currents,
protection of circuits against overload currents,
switch, isolation.

NB1-63H circuit-breakers are used in domestic installation,
as well as in commercial and industry electrical
distribution systems.

1.2 Selection

Technical data of the network at the point considered:
short-circuit current at the circuit-breaker installation point,
which must always be less than the breaking capacity of
this device, network normal voltage.

Tripping curves:

B curve (3-5In)

protection for people and big length cables in TN and IT
systems.

C curve (5-10In)

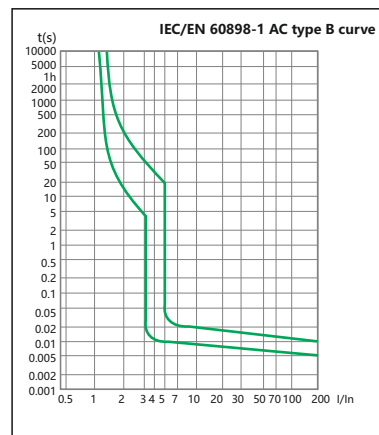
protection for resistive and inductive loads with low inrush
current.

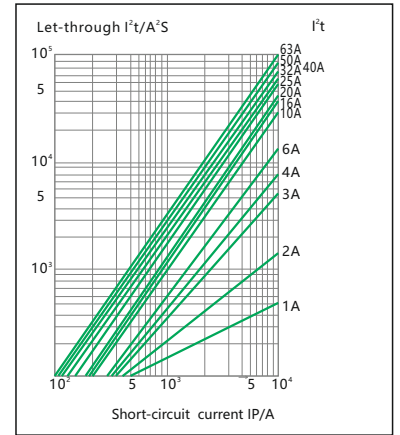
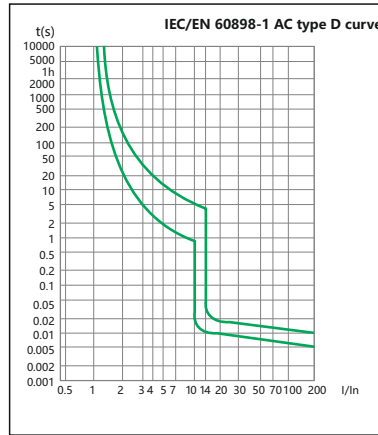
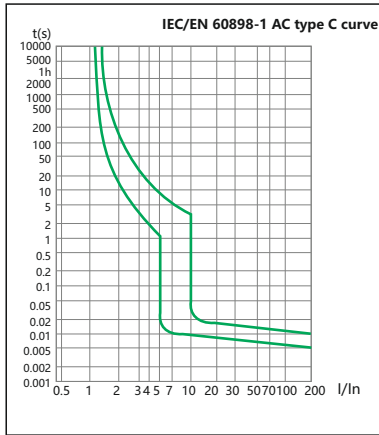
D curve (10-14In)

protection for circuits which supply loads with high inrush
current at the circuit closing
(LV/LV transformers, breakdown lamps).

2. Technical data

2.1 curves





2.2

	Standard	IEC/EN 60898-1	
Electrical features	Rated current In	A	1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
	Poles		1P, 1P+N, 2P, 3P, 3P+N, 4P
	Rated voltage Ue	V	230/400~240/415
	Insulation voltage Ui	V	500
	Rated frequency		50/60Hz
	Rated breaking capacity	A	10000
	Energy limiting class		3
	Rated impulse withstand voltage(1.2/50) Uimp	V	6000
	Dielectric test voltage at ind. Freq. for 1 min	kV	2
	Pollution degree		2
Power loss per pole		Rated current (A)	Max power loss per pole (W)
		1, 2, 3, 4, 5, 6, 10	2
		13, 16, 20, 25, 32	3.5
		40, 50, 63	5
Thermo-magnetic release characteristic		B, C, D	
Mechanical features	Electrical life		4, 000
	Mechanical life		20, 000
	Contact position indicator		Yes
	Protection degree		IP20
	Reference temperature for setting of thermal element	°C	30
	Ambient temperature (with daily average ≤ 35°C)	°C	-5...+40(Special application please refer to P14 for temperature compensation correction)
Storage temperature	°C	-25...+70	
Installation	Terminal connection type		Cable/U-type busbar/Pin-type busbar
	Terminal size top/bottom for cable	mm²	25
		AWG	18-4
	Terminal size top/bottom for busbar	mm²	10
		AWG	18-8
	Tightening torque	N-m	2.5
	In-lbs.	22	
Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device	
Connection		From top and bottom	
Combination with accessories	Auxiliary contact		Yes
	Shunt release		Yes
	Under voltage release		Yes
	Alarm contact		Yes

2.3 Selectivity

In (A)	Power supply side: RT36-00 (fuse)								
	20	25	36	50	63	80	100	125	160
	Is (kA)								
≤2	1.2	4	> 12	> 12	> 12	> 12	> 12	> 12	> 12
3	0.7	1.2	3.8	5.3	6	6	6	6	6
4	0.6	0.9	2.5	3.8	6	6	6	6	6
6	0.5	0.8	1.9	2.5	4.5	5	6	6	6
10		0.7	1.4	2.2	3.2	3.6	6	6	6
16			1.2	1.8	2.6	3	5.6	6	6
20				1.5	2.2	2.5	4.6	6	6
25				1.3	2	2.2	4.1	5.5	6
32					1.7	1.9	3.8	4.5	6
40						1.7	3	4	5
50						1.5	2.6	3.5	4.5
63							2.4	3.3	4.5

In (A)	Power supply side: NM8-100S/H/R								
	16	20	25	32	40	50	63	80	100
	Is (kA)								
≤10	0.19	0.19	0.3	0.4	0.5	0.5	0.5	0.63	0.8
16			0.3	0.4	0.5	0.5	0.5	0.63	0.8
20					0.5	0.5	0.5	0.63	0.8
25						0.5	0.5	0.63	0.8
32							0.5	0.63	0.8
40								0.63	0.8
50									0.8
63									

2.4 Backup protection

In (A)	Power supply side: RT16 series							
	40	50	63	80	100	125	160	
	Is (kA)							
1~6	40	40	40	40	40	40	40	
8~10	40	40	40	40	40	40	40	
13	40	40	40	40	35	35	35	
16	40	40	40	40	30	30	30	
20	40	40	40	40	30	30	30	
25	40	40	40	40	30	30	30	
32	40	40	40	40	30	30	30	
40	40	40	40	40	30	30	30	
50	30	30	30	30	30	30	30	
63	20	20	20	20	15	15	15	

In (A)	Power supply side: NM8					
	NM8-125S	NM8-125H	NM8-125R	NM8-250S	NM8-250H	NM8-250R
	Is (kA)					
1~6	15	18	18	15	15	15
10~20	12	15	15	12	12	12
32~40	12	15	15	12	12	12
50~60	12	15	15	12	12	12

2.5 Temperature derating

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.

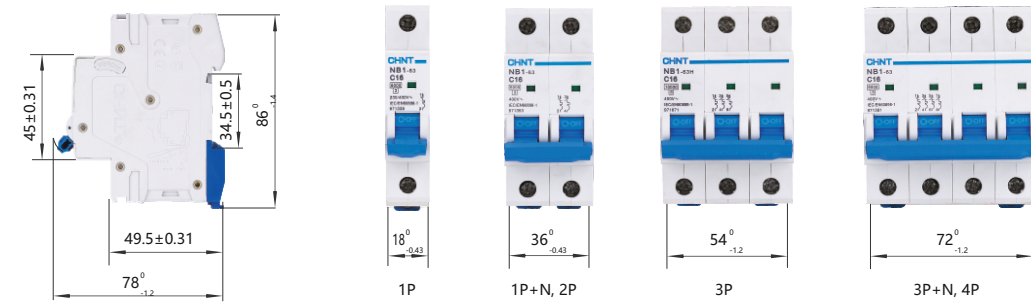
The reference temperature is 30°C

Ambient temperature	-35°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
Rated current(A)												
1	1.30	1.26	1.23	1.19	1.15	1.11	1.05	1.00	0.96	0.93	0.88	0.83
2	2.60	2.52	2.46	2.38	2.28	2.20	2.08	2.00	1.92	1.86	1.76	1.66
3	3.90	3.78	3.69	3.57	3.42	3.30	3.12	3.00	2.88	2.79	2.64	2.49
4	5.20	5.04	4.92	4.76	4.56	4.40	4.16	4.00	3.84	3.76	3.52	3.32
6	7.80	7.56	7.38	7.14	6.84	6.60	6.24	6.00	5.76	5.64	5.28	4.98
10	13.20	12.70	12.50	12.00	11.50	11.10	10.60	10.00	9.60	9.30	8.90	8.40
16	21.12	20.48	20.00	19.20	18.40	17.76	16.96	16.00	15.36	14.88	14.24	13.44
20	26.40	25.60	25.00	24.00	23.00	22.20	21.20	20.00	19.20	18.60	17.80	16.8
25	33.00	32.00	31.25	30.00	28.75	27.75	26.50	25.00	24.00	23.25	22.25	21.00
32	42.56	41.28	40.00	38.72	37.12	35.52	33.92	32.00	30.72	29.76	28.16	26.88
40	53.20	51.20	50.00	48.00	46.40	44.80	42.40	40.00	38.40	37.20	35.60	33.6
50	67.00	65.50	63.00	60.50	58.00	56.00	53.00	50.00	48.00	46.50	44.00	41.50
63	83.79	81.90	80.01	76.86	73.71	70.56	66.78	63.00	60.48	58.90	55.44	52.29

When several simultaneously operating circuit breakers are mounted side by side in a small enclosure, the temperature rise inside the enclosure causes a reduction in current rating.

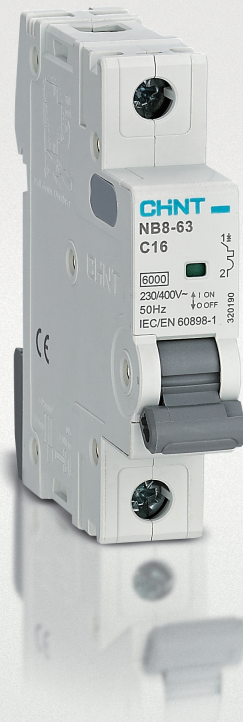
You must then assign the rating (already derated if necessary according to ambient temperature) a downrating factor of 0.8.

3. Overall and mounting dimensions (mm)



NB8 -63

Miniature Circuit Breaker



1. GENERAL

NB8 -63

1.1 Function

protection of circuits against short-circuit currents,
protection of circuits against overload currents,
switch, isolation.

NB8 -63 circuit-breakers are used in domestic installation,
as well as in commercial and industry electrical
distribution systems.

1.2 Selection

Technical data of the network at the point considered:
short-circuit current at the circuit-breaker installation point,
which must always be less than the breaking capacity of
this device, network normal voltage.

Tripping curves:

B curve (3-5In)

protection for people and big length cables in TN and IT
systems.

C curve (5-10In)

protection for resistive and inductive loads with low inrush
current.

D curve(10-16In)

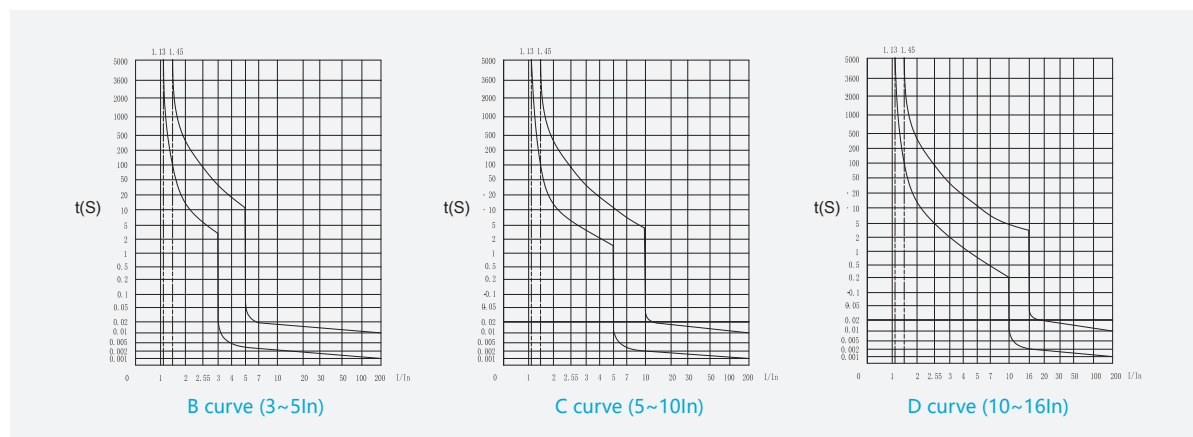
protection for circuits which supply loads with high inrush
current at the circuit closing
(LV/LV transformers, breakdown lamps).

1.3 Certificates

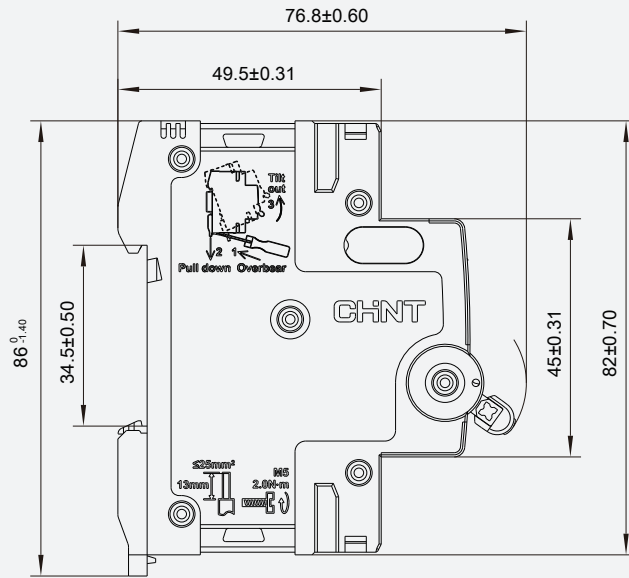
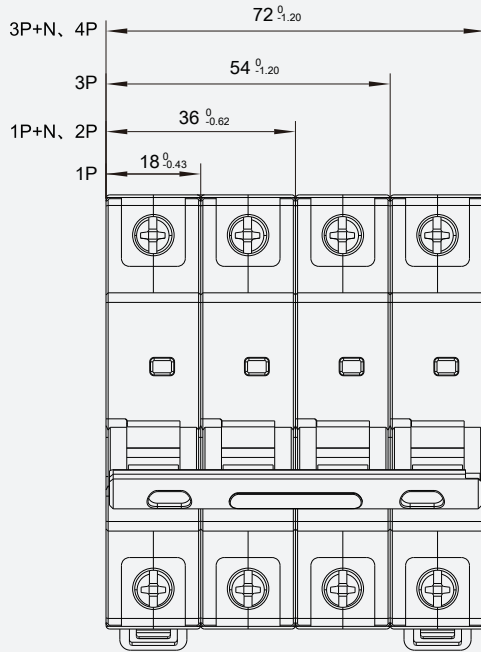
CE

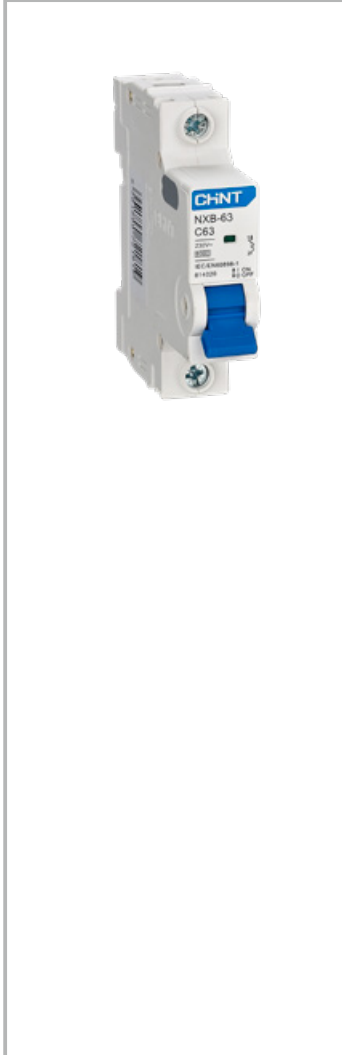
2. TECHNICAL DATA

Standard		IEC 60898-1	
Rated current I_n	A	1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63	
Rated voltage U_e	V	230 / 400	
Rated frequency	Hz	50	
Poles		1P, 1P+N, 2P, 3P, 3P+N, 4P	
Thermo-magnetic release characteristic		B(3-5In), C(5-10In), D(10-16In),	
Mechanical life		20,000	
Electrical life		10,000	
Rated breaking capacity	A	6000	
Insulation voltage U_i	V	500	
Rated impulse withstand voltage (1.2/50) U_{imp}	KV	6	
Installation	Terminal connection type	Cable/ U-type/Pin-type busbar	
	Terminal size top/bottom for busbar	mm ²	25
		AWG	18-4
	Terminal size top/bottom for cable	mm ²	10
		AWG	18-8
	Tightening torque	N·m	2.0
		In-lbs.	22
Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device	
Connection		From top and bottom	
Reference temperature for setting of thermal element	°C	30	
Ambient temperature (with daily average $\leq 35^\circ\text{C}$)	°C	-35...+70	
Storage temperature	°C	-35...+70	
Protection degree		IP20	
Pollution degree		3	
Combination with accessories		S9, V9, XF9, XF9J, OVT-1, OUVT-1	



3. OVERALL AND MOUNTING DIMENSIONS (MM)





NXB-63 Miniature circuit breaker

1. Compliant standards

IEC/EN60898-1

2. Compliant certification

CE, SNI, NOM, EAC, SII

3. Major function

Overload protection, short circuit protection, positive isolation

4. Technical parameters

Rated current: 1A, 2A, 3A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A;

Rated voltage: 220V~/230V~/240V ~ (1P, 1P+N, 2P), 380V~/400V~/415V ~ (2 ~ 4P, 3P+N);

Frequency: 50/60Hz;

Thermal magnetic release: B, C, D;

Number of poles: 1P, 1P+N, 2P, 3P, 3P+N, 4P;

Mechanical life: 20000 cycles;

Electrical life: 10000 cycles;

Rated short-circuit breaking capacity (Icn): 6000A, 10000A(2P, 220V/230V/240V);

Short-circuit breaking capacity (Ics): 6000A, 7500A(2P, 220V/230V/240V);

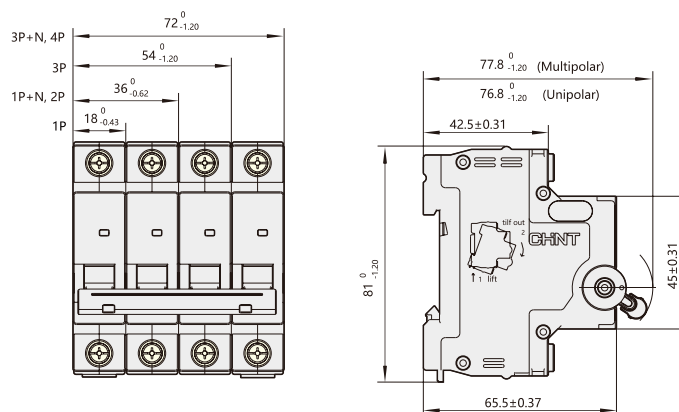
Rated impulse withstand voltage (Uimp): 4kV;

Power consumption on each pole of the circuit breaker: see Table 1.

Table 1

Rated current In (A)	Maximum power consumption per pole (W)
1~10	3
16	3.5
20~25	4.5
32	6
40	7.5
50	9
63	13

5. Dimensions and installation sizes





NXB-40 Miniature circuit breaker

1. Compliant standards

IEC/EN60898-1

2. Compliant certification

CE

3. Major function

Overload protection, short circuit protection, positive isolation

4. Technical parameters

Rated current: 6A, 10A, 16A, 20A, 25A, 32A, 40A;

Rated voltage: 230V;

Frequency: 50/60Hz;

Thermal magnetic release: C, D;

Number of poles: 1P+N;

Mechanical life: 20000 cycles;

Electrical life: 10000 cycles;

Rated short-circuit breaking capacity(Icu): 4500A;

Short-circuit breaking capacity(Ics): 4500A;

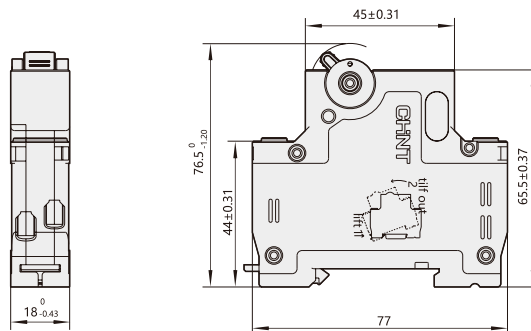
Rated impulse withstand voltage(Uimp): 4kV;

Power consumption on each pole of the circuit breaker: see Table 1.

Table 1

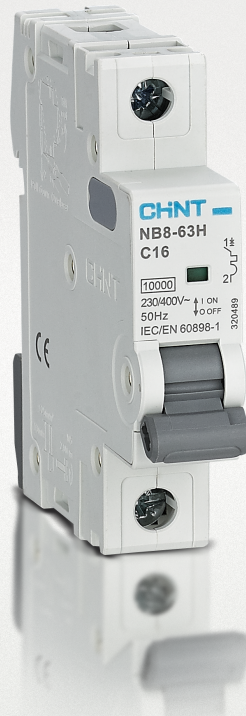
Rated current In (A)	Maximum power consumption per pole (W)
6~10	2
16~32	3.5
40	5

5. Dimensions and installation sizes



NB8 -63H

Miniature Circuit Breaker



NB8 -63H

1. GENERAL

1.1 Function

protection of circuits against short-circuit currents,
protection of circuits against overload currents,
switch, isolation.

NB8 -63H circuit-breakers are used in domestic installation,
as well as in commercial and industry electrical
distribution systems.

1.2 Selection

Technical data of the network at the point considered:
short-circuit current at the circuit-breaker installation point,
which must always be less than the breaking capacity of
this device, network normal voltage.

Tripping curves:

B curve (3-5In)

protection for people and big length cables in TN and IT
systems.

C curve (5-10In)

protection for resistive and inductive loads with low inrush
current.

D curve(10-16In)

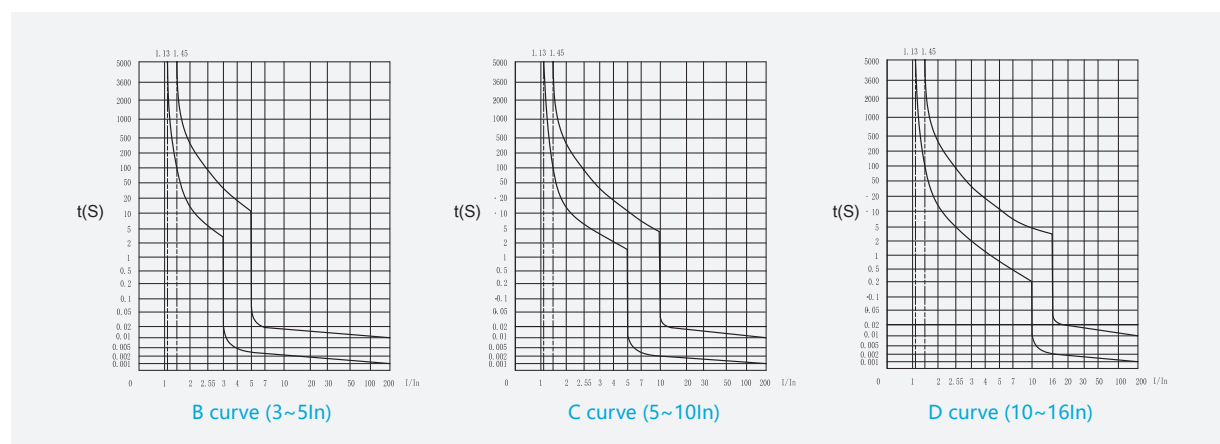
protection for circuits which supply loads with high inrush
current at the circuit closing
(LV/LV transformers, breakdown lamps).

1.3 Certificates

CE

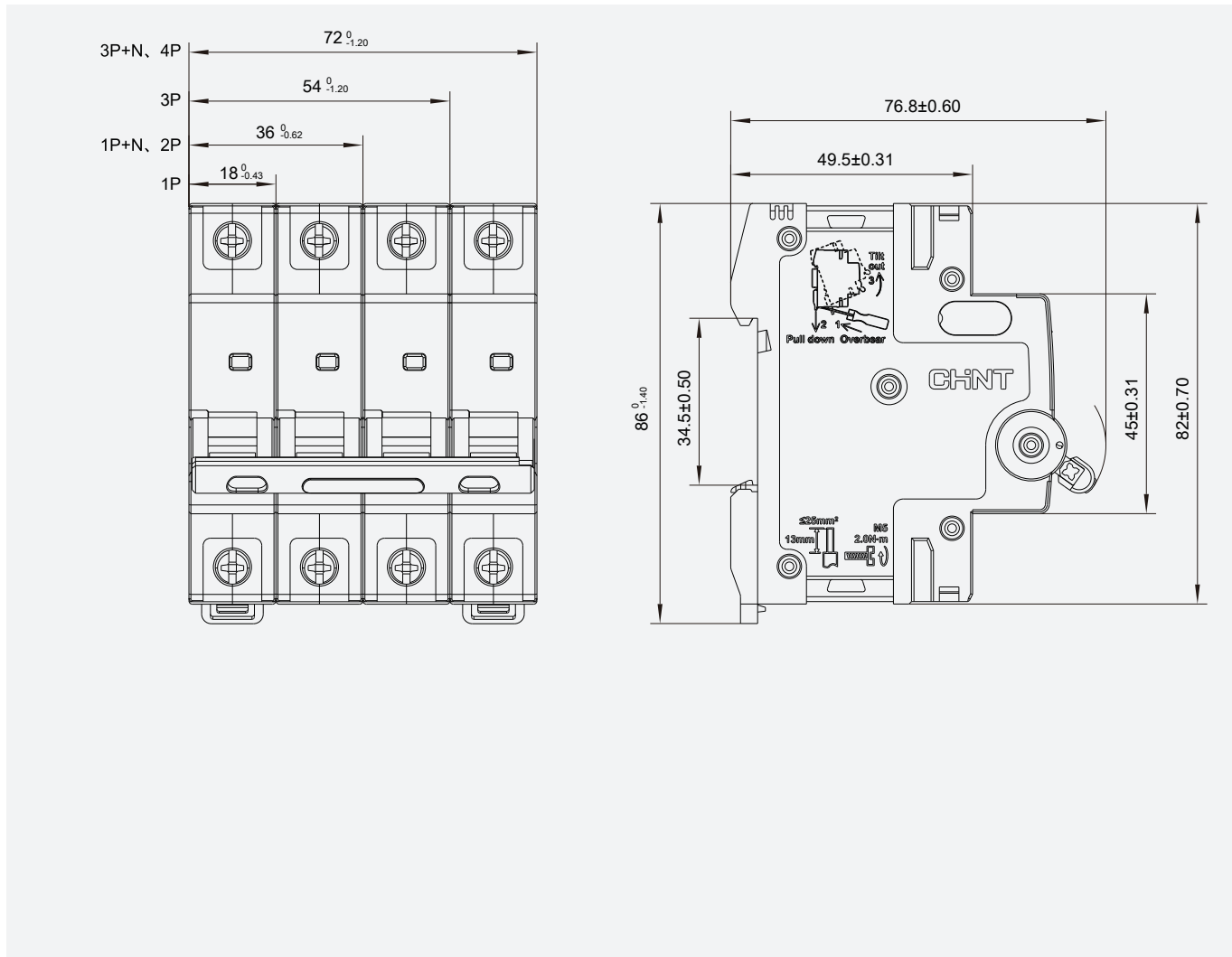
2. TECHNICAL DATA

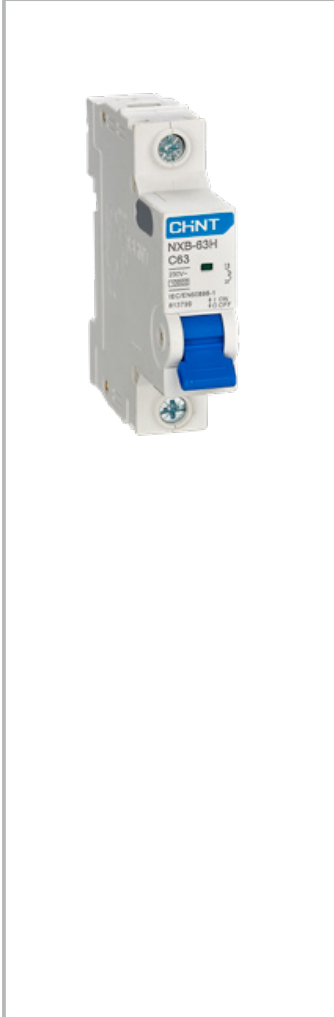
Standard		IEC 60898-1	
Rated current In	A	1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63	
Rated voltage Ue	V	230 / 400	
Rated frequency	Hz	50	
Poles		1P, 1P+N, 2P, 3P, 3P+N, 4P	
Thermo-magnetic release characteristic		B(3-5In), C(5-10In), D(10-16In),	
Mechanical life		20,000	
Electrical life		10,000	
Rated breaking capacity	A	10,000	
Insulation voltage Ui	V	500	
Rated impulse withstand voltage (1.2/50) Uimp	KV	6	
Installation	Terminal connection type	Cable/ U-type/Pin-type busbar	
	Terminal size top / bottom for busbar	mm ²	25
		AWG	18-4
	Terminal size top / bottom for cable	mm ²	10
		AWG	18-8
	Tightening torque	N·m	2.0
		In-lbs.	22
Mounting		On DIN rail EN 60715 (35mm) by means of fast clip device	
Connection		From top and bottom	
Reference temperature for setting of thermal element	°C	30	
Ambient temperature (with daily average ≤35°C)	°C	-35...+70	
Storage temperature	°C	-35...+70	
Protection degree		IP20	
Pollution degree		3	
Combination with accessories		S9, V9, XF9, XF9J, OVT-1, OUVT-1	



NB8 -63H Miniature Circuit Breaker

3. OVERALL AND MOUNTING DIMENSIONS (MM)





NXB-63H Miniature circuit breaker

1. Compliant standards

IEC/EN60898-1

2. Compliant certification

CE, SII, SI

3. Major function

Overload protection, short circuit protection , positive isolation

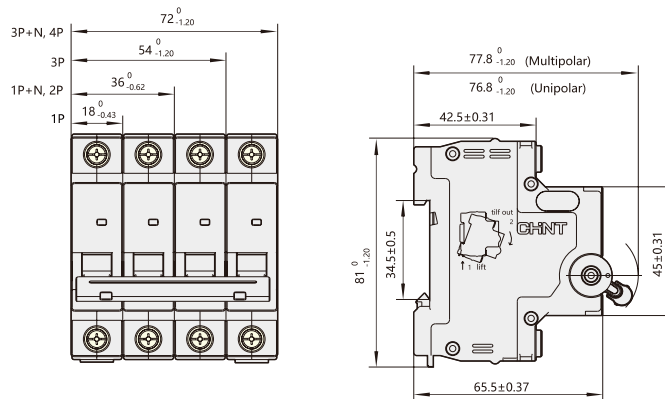
4. Technical parameters

Rated current: 1A, 2A, 3A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A;
 Rated voltage: 220V~/230V~/240V~(1P, 1P+N) 380V~/400V~/415V~(2~4P, 3P+N);
 Frequency: 50/60Hz;
 Thermal magnetic release: B, C, D;
 Number of poles: 1P, 1P+N, 2P, 3P, 3P+N, 4P;
 Mechanical life: 20000 cycles;
 Electrical life: 10000 cycles;
 Rated short-circuit breaking capacity: 10000A;
 Short-circuit breaking capacity: 7500A;
 Rated impulse withstand voltage: 4kV;
 Power consumption on each pole of the circuit breaker: see Table 1.

Table 1

Rated current In (A)	Maximum power consumption per pole (W)
1~10	3
16	3.5
20~25	4.5
32	6
40	7.5
50	9
63	13

5. Dimensions and installation sizes





NXB-125G Miniature circuit breaker

1. Compliant standards

IEC/EN60898-1

2. Compliant certification

CE

3. Major function

Overload protection, short circuit protection, positive isolation

4. Technical parameters

Rated current: 63A, 80A, 100A(1P, 2P, 3P, 4P), 125A(1P, 2P) ;

Rated voltage: 230V ~ (1P), 400V~ (2P, 3P, 4P);

Frequency: 50/60Hz

Thermal magnetic release: B, C, D;

Number of poles: 1P, 2P, 3P, 4P;

Mechanical life: 20000 cycles;

Electrical life: 6000 cycles (In ≤ 100A); 4000 cycles (In > 100A);

Rated short-circuit breaking capacity(Icn): 10kA;

Short-circuit breaking capacity(Ics): 7.5kA;

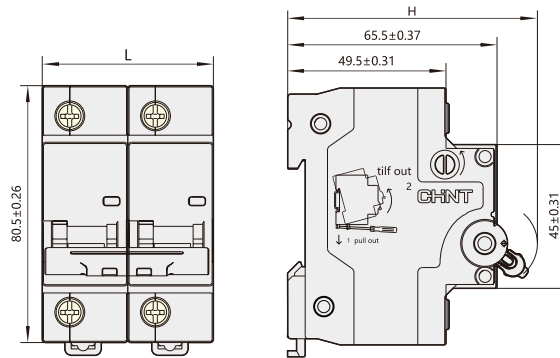
Rated impulse withstand voltage(Uimp): 4kV;

Power consumption on each pole of the circuit breaker: see Table 1.

Table 1

Rated current In (A)	Maximum power consumption per pole (W)
63	3.5
80	5.5
100	7.5
125	11.5

5. Dimensions and installation sizes



	1P	2P	3P	4P
L(mm)	27 ⁰ _{-0.52}	54 ⁰ _{-0.74}	81 ⁰ _{-1.40}	108 ⁰ _{-1.40}
H(mm)	75.5 ⁰ _{-1.20}	78.5 ⁰ _{-1.20}	78.5 ⁰ _{-1.20}	78.5 ⁰ _{-1.20}