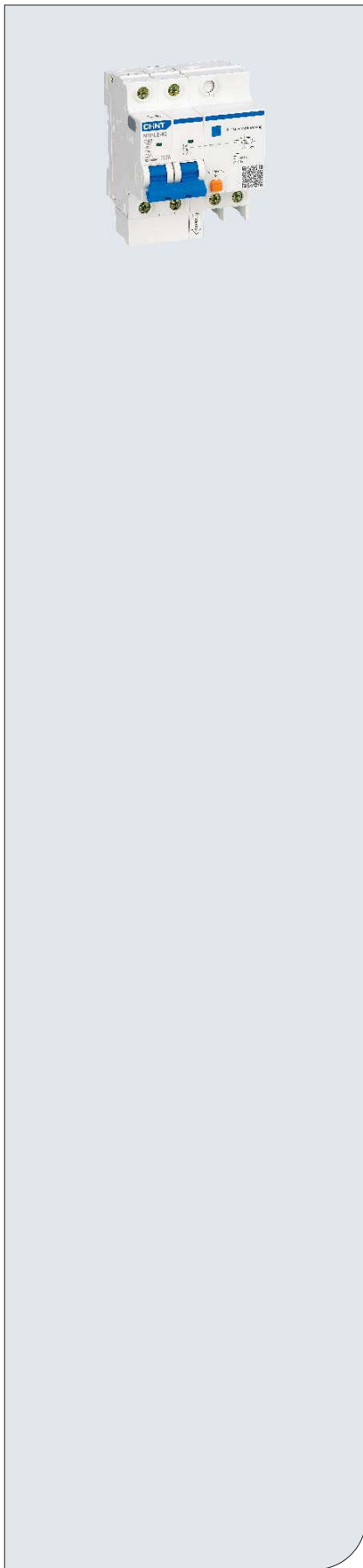


NXBLE-63 Residual current operated circuit breaker (RCBO)



NXBLE-63 Residual current operated circuit breaker (RCBO)

Compliant standards

1EC61009-1

Compliant certification

CE

Major function

Overload protection, short circuit protection, isolation, residual current operation

Technical parameters

Rated current: 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A;

Rated residual operating current: 0.03A, 0.05A, 0.075A, 0.1A, 0.3A;

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

Frequency: 50/60Hz;

Electromagnetic release type: B, C, D;

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

Mechanical life: 20000 cycles;

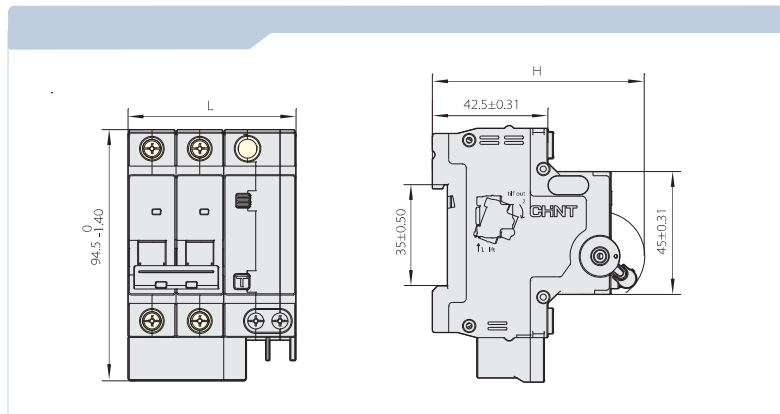
Electrical life: 10000 cycles;

Rated short-circuit breaking capacity(Icu): 6000A;

Short-circuit breaking capacity(Ics): 6000A;

Rated impulse withstand voltage(Uimp): 4kV;

Dimensions and installation sizes



	1P+N	2P	3P	3P+N	4P
L(mm)	54 ⁰ _{-0.74}	72 ⁰ _{-0.74}	103.5 ⁰ _{-1.40}	117 ⁰ _{-1.40}	135 ⁰ _{-1.60}
H(mm)	76.8 ⁰ _{-1.20}	77.8 ⁰ _{-1.20}	77.8 ⁰ _{-1.20}	77.8 ⁰ _{-1.20}	77.8 ⁰ _{-1.20}

Modular DIN Rail Products

● Residual current operated circuit breaker parameter

Product model		NXBLE-40	NXBLE-63Y
Compliant standards		IEC61009-1	IEC61009-1
Rated current (A)		6~40	6~63
Rated residual operating current (A)		0.01, 0.03	0.01, 0.03
Leakage protection type		AC	AC
Rated voltage (V~)		230	230
Rated frequency (Hz)		50/60	50/60
Number of poles		1P+N	1P+N
Mechanical life (cycles)		20000	20000
Electrical life (cycles)		10000	10000
Rated short-circuit breaking capacity (A)		4500	4500
Short-circuit breaking capacity (A)		4500	4500
Rated impulse withstand voltage (1.2 / 50)(kV)		4	4
Dielectric test voltage (V)		(Power frequency 1 minute) 2000	(Power frequency 1 minute) 2000
Anti-humid and heat properties (GB/T2423.4:55°C/90~96%,25°C/95~100%)		28 cycles	28 cycles
Terminals	Minimum cross section (mm ²)	1	1
	Maximum cross section (mm ²)	16	25
	Standard connection torque (N·m)	1.5	2
	Maximum withstand torque (N·m)	2	2.5
	Wire insertion depth (mm)	10	12.5
Reference temperature for setting of thermal element (°C)		30	30
Ambient working temperature (°C)		-35~+70	-35~+70
Ambient storage temperature (°C)		-35~+85	-35~+85
Applicable altitude (m)		5000	5000
Electromagnetic trip type	Type B (3In ~ 5In)		
	Type C (3In ~ 5In)	■	■
	Type D (3In ~ 5In)	■	■
	Type C (6.4In ~ 9.6In)		
	Type D (9.6In~14.4In)		
Electromagnetic tripping current correction factor under different power frequency (recommended value)	50 ~ 60Hz	1In	1In
	100Hz	1.1In	1.1In
	200Hz	1.2In	1.2In
	400Hz	1.5In	1.5In
	DC	1.5In	1.5In
Derating factor with multiple products 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
Temperature compensation coefficient (recommended value)	Change for every 10°C increase from the reference temp	-(0.03~0.050)In	-(0.03~0.050)In
	Change for every 10°C decrease from the reference temp	-(0.04~0.07)In	-(0.04~0.07)In
Rated current correction factor for high altitude use (recommended value)	≤2000m	In	In
	3000m	0.96In	0.96In
	4000m	0.94In	0.94In
	5000m	0.92In	0.92In
Rated voltage correction factor for high altitude use (recommended value)	≤2000m	Ue	Ue
	3000m	0.89Ue	0.89Ue
	4000m	0.78Ue	0.78Ue
	5000m	0.68Ue	0.68Ue
Cable entry		Top-in, Bottom-out	Top-in, Bottom-out
Mounting		TH35-7.5-rail mounting	TH35-7.5-rail mounting
Pollution degree		Pollution degree II	Pollution degree II
Protection class	Direct mounting	IP20	IP20
	Mounted in the distribution box	IP40	IP40
Accessories that can be assembled		AX-X1, AL-X1, SHT-X1, OVT-X1, UVT-X1, OUVT-X1	AX-X1, AL-X1, SHT-X1, OVT-X1, UVT-X1, OUVT-X1

Modular DIN Rail Products

NXBLE-32	NXBLE-63	NXBLE-125	NXBLE-125G
IEC61009-1	IEC61009-1	IEC60947-2	IEC61009-1
6~32	40~63	63~125	63~125
0.03, 0.05, 0.075, 0.1, 0.3	0.03, 0.05, 0.075, 0.1, 0.3	0.03, 0.05, 0.075, 0.1, 0.3	0.03, 0.05, 0.075, 0.1, 0.3
AC	AC	AC	AC
230/400	230/400	230/400	230/400
50/60	50/60	50/60	50/60
1P+N, 2P, 3P, 3P+N, 4P	1P+N, 2P, 3P, 3P+N, 4P	1P+N, 2P, 3P, 3P+N, 4P	1P+N, 2P, 3P, 3P+N, 4P
20000	20000	20000	20000
10000	10000	6000(In≤100A), 4000(In>100A)	6000(In≤100A), 4000(In>100A)
4500	6000	10000	10000
4500	6000	7500	7500
4	4	4	4
(Power frequency 1 minute) 2000	(Power frequency 1 minute) 2000	(Power frequency 1 minute) 1890	(Power frequency 1 minute) 2000
28 cycles	28 cycles	28 cycles	28 cycles
1	1	6	6
25	25	50	50
2	2	3.5	3.5
2.5	2.5	4	4
12.5	12.5	15	15
30	30	30	30
-35~+70	-35~+70	-35~+70	-35~+70
-35~+85	-35~+85	-35~+85	-35~+85
5000	5000	5000	5000
■	■		■
■	■		■
■	■		■
		■	
		■	
1In	1In	1In	1In
1.1In	1.1In	1.1In	1.1In
1.2In	1.2In	1.2In	1.2In
1.5In	1.5In	1.5In	1.5In
1.5In	1.5In	1.5In	1.5In
(0.9~0.95) In	(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	(0.86~0.80)In
(0.78~0.76)In	(0.78~0.76)In	(0.78~0.76)In	(0.78~0.76)In
0.76In	0.76In	0.76In	0.76In
-(0.03~0.050)In	-(0.03~0.050)In	-(0.03~0.050)In	-(0.03~0.050)In
-(0.04~0.07)In	-(0.04~0.07)In	-(0.04~0.07)In	-(0.04~0.07)In
In	In	In	In
0.96In	0.96In	0.96In	0.96In
0.94In	0.94In	0.94In	0.94In
0.92In	0.92In	0.92In	0.92In
Ue	Ue	Ue	Ue
0.89Ue	0.89Ue	0.89Ue	0.89Ue
0.78Ue	0.78Ue	0.78Ue	0.78Ue
0.68Ue	0.68Ue	0.68Ue	0.68Ue
Top-in, Bottom-out	Top-in, Bottom-out	Top-in, Bottom-out	Top-in, Bottom-out
TH35-7.5-rail mounting	TH35-7.5-rail mounting	TH35-7.5-rail mounting	TH35-7.5-rail mounting
Pollution degree II	Pollution degree II	Pollution degree III	Pollution degree III
IP20	IP20	IP20	IP20
IP40	IP40	IP40	IP40
AX-X1, AL-X1, SHT-X1, OVT-X1, UVT-X1, OUVT-X1	AX-X1, AL-X1, SHT-X1, OVT-X1, UVT-X1, OUVT-X1	AX-X3, AL-X3	AX-X3, AL-X3

Modular DIN Rail Products

Tripping characteristics

- Tripping characteristics are in compliant with standard IEC60898-1 and IEC61009-1

Test	Type	Test current	Starting state	Trip/Not trip time limit	Expected outcome	Notes
a	B,C,D	1.13In	Cold	$t \leq 1$ h (for $I_n \leq 63A$) $t < 2$ h (for $I_n > 63A$)	Not trip	
b	B,C,D	1.45In	Right after test	$t < 1$ h (for $I_n \leq 63A$) $t < 2$ h (for $I_n > 63A$)	Trip	Current increase steadily within 5s
c	B,C,D	2.55In	Right after test	$1s < t < 60s$ (for $I_n \leq 32A$) $1s < t < 120s$ (for $I_n > 32A$)	Trip	
d	B	3In	Cold	$t \leq 0.1s$	Not trip	Connect the current by closing the auxiliary switch
	C	5In				
	D	10In				
e	B	5In	Cold	$t < 0.1s$	Trip	Connect the current by closing the auxiliary switch
	C	10In				
	D	20In				

- Tripping characteristics are in compliant with standard IEC60947-2

Release type	Test current	Starting state	Trip/Not trip time limit	Expected outcome	Notes
C,D	1.05In	Cold	$t \leq 1$ h (for $I_n \leq 63A$) $t \leq 2$ h (for $I_n > 63A$)	Not trip	
C,D	1.3In	Right after test	$t < 1$ h (for $I_n \leq 63A$) $t < 2$ h (for $I_n > 63A$)	Trip	Current increase steadily within 5s
C,D	2In	Cold	$t < 900s$	Trip	
C	6.4In	Cold	$t \leq 0.2s$	Not trip	Connect the current by closing the auxiliary switch
D	9.6In				
C	9.6In				
D	14.4In	Cold	$t < 0.2s$	Trip	

- Tripping curve

