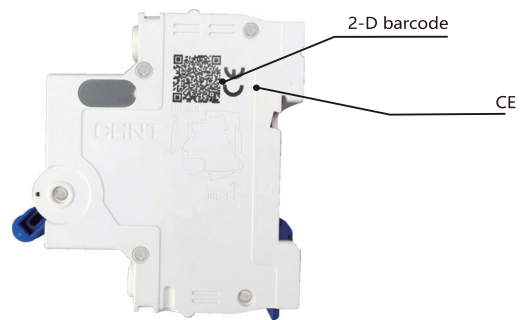
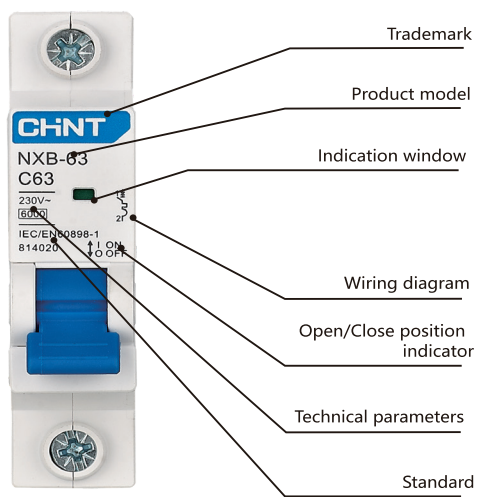
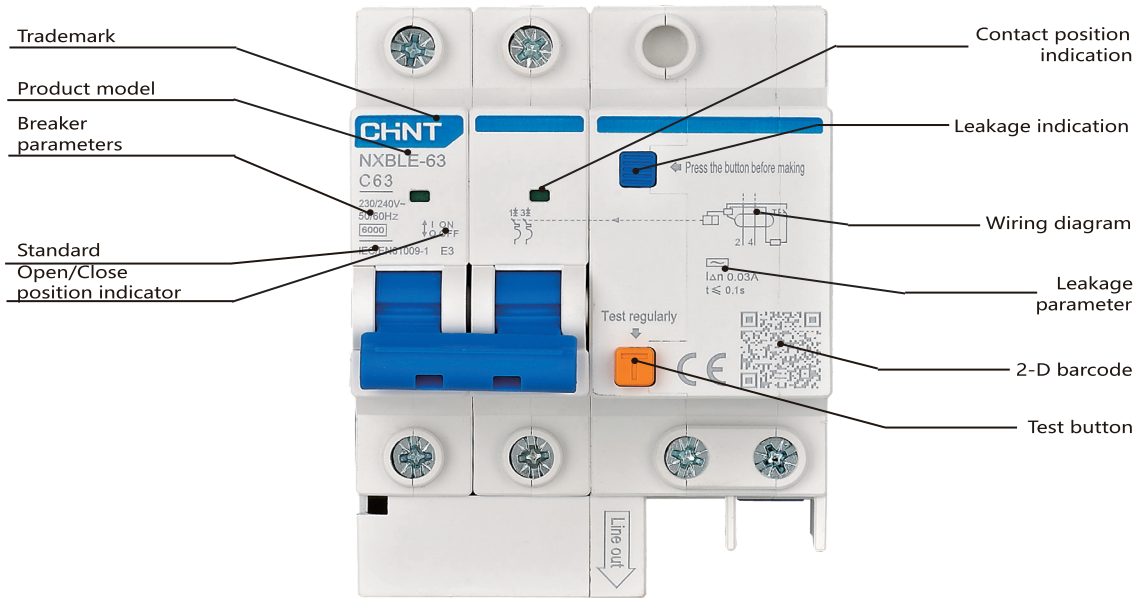


1. General description

NXB-63 Miniature circuit breaker



NXB-63 Miniature circuit breaker



2. Technical data

Circuit breaker and switch parameters

Product model		NXB-40	NXB-63	NXB-63H	NXB-63G
Compliant standards		IEC/EN60898-1	IEC/EN60898-1	IEC/EN60898-1	IEC/EN 60947-2、VC8036、SANS 556-1、SANS 60947-2
Rated current (A)		6~40	1~63	1~63	1~63
Rated voltage (V~)		230	240/415	240/415	240/415
Rated frequency (Hz)		50/60	50/60	50/60	50/60
Number of poles		1P+N	1P, 1P+N, 2P, 3P, 3P+N, 4P	1P, 1P+N, 2P, 3P, 3P+N, 4P	1P, 2P, 3P, 4P
Mechanical life (cycles)		20000	20000	20000	20000
Electrical life (cycles)		10000	10000	10000	10000
Rated short-circuit breaking capacity I _{cu} (A)		4500	6000	10000	6000
Short-circuit breaking capacity I _{cs} (A)		4500	6000	7500	6000
Rated impulse withstand voltage (1.2/50)(kV)		4	4	4	4
Dielectric test voltage (V)		(Power frequency 1 minute) 2000	(Power frequency 1 minute) 2000	(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	28 cycles	28 cycles
Terminals	Minimum cross section (mm ²)	1	1	1	1
	Maximum cross section (mm ²)	10	25	25	25
	Standard connection torque (N·m)	1.5	2	2	2
	Maximum withstand torque (N·m)	2.0	2.5	2.5	2.5
	Wire insertion depth (mm)	10	12.5	11	12.5
Reference temperature for setting of thermal element (°C)		30	30	30	40
Operating ambient temperature (°C)		-35~+70	-35~+70	-35~+70	-35~+70
Ambient storage temperature (°C)		-35~+85	-35~+85	-35~+85	-35~+85
Applicable altitude (m)		2000	2000	2000	2000
Thermal magnetic release	Type B (3I _n ~5I _n)		■	■	
	Type C (5I _n ~10I _n)	■	■	■	
	Type D (10I _n ~16I _n)	■	■	■	
	Type C (6.4I _n ~9.6I _n)				
	Type D (9.6I _n ~14.4I _n)				
	li=10I _n (8I _n ~12I _n)				■
	li=14.2I _n (11.36I _n ~17.04I _n)				■
Derating factor with multiple products side by side (recommended value)	<=3	(0.9~0.95)I _n	(0.9~0.95)I _n	(0.9~0.95)I _n	(0.9~0.95)I _n
	4~6	(0.86~0.80)I _n	(0.86~0.80)I _n	(0.86~0.80)I _n	(0.86~0.80)I _n
	7~9	(0.78~0.76)I _n	(0.78~0.76)I _n	(0.78~0.76)I _n	(0.78~0.76)I _n
	>9	0.76I _n	0.76I _n	0.76I _n	0.76I _n
Temperature compensation coefficient (recommended value)	Change for every 10°C increase from the reference temp	-(0.03~0.07)I _n	-(0.03~0.05)I _n	-(0.03~0.06)I _n	-(0.02~0.07)I _n
	Change for every 10°C decrease from the reference temp	+(0.03~0.07)I _n	+(0.03~0.08)I _n	+(0.02~0.07)I _n	+(0.02~0.08)I _n
Cable entry		Top or bottom entry	Top or bottom entry	Top or bottom entry	Top or bottom entry
Mounting		TH35-7.5-rail mounting	TH35-7.5-rail mounting	TH35-7.5-rail mounting	TH35-7.5-rail mounting
Pollution degree		Pollution degree II	Pollution degree II	Pollution degree II	Pollution degree II
Protection degree	Direct mounting	IP20	IP20	IP20	IP20
	Mounted in the distribution box	IP40	IP40	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	AX-X1, AL-X1, SHT-X1 OVT-X1, UVT-X1, OUVT-X1	AX-X1, AL-X1, SHT-X1 OVT-X1, UVT-X1, OUVT-X1

	NXB-63S	NXB-80	NXB-125	NXB-125G	NXHB-125
	IEC/EN60898-1	IEC/EN60898-1	IEC60947-2	IEC60898-1	IEC60947-3
	1~63	70A, 80A	63~125	63、80、100(1P、2P、3P、4P),125(1P、2P)	63~125
	240/415	230/400	230/400	230/400	230/400
	50/60	50/60	50/60	50/60	50
	1P, 1P+N, 2P, 3P, 3P+N, 4P	1P, 1P+N, 2P, 3P, 3P+N, 4P	1P, 2P, 3P, 4P	1P, 2P, 3P, 4P	1P, 2P, 3P, 4P
	20000	20000	20000	20000	10000
	10000	6000	6000(In≤100A), 4000(In>100A)	6000(In≤100A), 4000(In>100A)	3000
	4500	6000	10000	10000	20Ie
	4500	6000	7500	7500	3Ie
	4	4	4	4	6
	(Power frequency 1 minute) 2000	(Power frequency 1 minute) 2000	(Power frequency 1 minute) 1890	(Power frequency 1 minute) 2000	(Power frequency 1 minute) 1890
	28 cycles	28 cycles	28 cycles	28 cycles	28 cycles
	1	25	16	16	1
	25	25	50	50	50
	2	3.5	3.5	3.5	3.5
	2.5	4	4	4	4
	12.5	15	15	15	15
	30	30	30	30	30
	-35~+70	-35~+70	-35~+70	-35~+70	-35~+70
	-35~+85	-35~+85	-35~+85	-35~+85	-35~+85
	2000	2000	2000	2000	2000
	■	■		■	
	■	■		■	
	■	■	■	■	
			■		
			■		
	(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	(0.8~0.9)In	(0.8~0.9)In	
	(0.78~0.76)In	(0.78~0.76)In	(0.7~0.8)In	(0.7~0.8)In	
	0.76In	0.76In	0.7In	0.7In	
	-(0.03~0.05)In	-(0.02~0.08)In	-(0.03~0.08)In	-(0.03~0.08)In	
	+(0.03~0.08)In	+(0.02~0.08)In	+(0.03~0.08)In	+(0.03~0.08)In	
	Top or bottom entry	Top or bottom entry	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	TH35-7.5-rail mounting	TH35-7.5-rail mounting
	Pollution degree II	Pollution degree II	Pollution degree II	Pollution degree II	Pollution degree II
	IP20	IP20	IP20	IP20	IP20
	IP40	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, SHT-X3 OVT-X3, UVT-X3, OUVT-X3	AX-X3, AL-X3, SHT-X3 OVT-X3, UVT-X3, OUVT-X3	

Residual current operated circuit breaker parameter

Product model		NXBLE-40	NXBLE-63Y
Compliant standards		IEC/EN61009-1	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	240
Rated frequency (Hz)		50/60	50
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 (IEC60068-2-30:55°C /90~96%,25°C /95~100%)		28 cycles	28 cycles
Terminals	Minimum cross section (mm ²)	1	1
	Maximum cross section (mm ²)	10	25
	Standard connection torque (N·m)	1.5	2
	Maximum withstand torque (N·m)	2.0	2.5
	Wire insertion depth (mm)	10	10
Reference temperature for setting of thermal element (°C)		30	30
Operating ambient temperature (°C)		-35~+70	-35~+70
Ambient storage temperature (°C)		-35~+85	-35~+85
Applicable altitude (m)		2000	2000
Thermal magnetic release	Type B (3In~5In)		
	Type C (5In~10In)	■	■
	Type D (10In~16In)	■	■
	Type C (6.4In~9.6In)		
	Type D (9.6In~14.4In)		
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	-(0.03~0.07)In	-(0.03~0.050)In
	Change for every 10°C decrease from the reference temp	+(0.03~0.07)In	+(0.04~0.07)In
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 degree	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

	NXBLE-32	NXBLE-63	NXBLE-125	NXBLE-125G
	IEC61009-1	IEC61009-1	IEC60947-2	IEC61009-1
	6~32	6~63	63、80、100(1P+N、2P、3P、3P+N、4P)125(1P+N、2P)	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
	AC	AC, A	AC, A	AC
	230/400	230/400	230/400	400
	50	50/60	50/60	50
	1P+N, 2P, 3P, 3P+N, 4P	1P+N, 2P, 3P, 3P+N, 4P	1P+N, 2P, 3P, 3P+N, 4P	3P+N, 4P
	20000	20000	20000	20000
	10000	10000	6000(In≤100A), 4000(In>100A)	6000(In≤100A), 4000(In>100A)
	6000	6000	10000	10000
	6000	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	16	16
	6	16	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
	2000	2000	2000	2000
	■	■		■
	■	■		■
	■	■	■	■
			■	
			■	
	(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	(0.8~0.9)In	(0.8~0.9)In
	(0.78~0.76)In	(0.78~0.76)In	(0.7~0.8)In	(0.7~0.8)In
	0.76In	0.76In	0.7In	0.7In
	-(0.03~0.050)In	-(0.03~0.050)In	-(0.03~0.08)In	-(0.03~0.08)In
	+(0.04~0.07)In	+(0.04~0.08)In	+(0.03~0.08)In	+(0.03~0.08)In
	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 II	Pollution degree II
	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

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

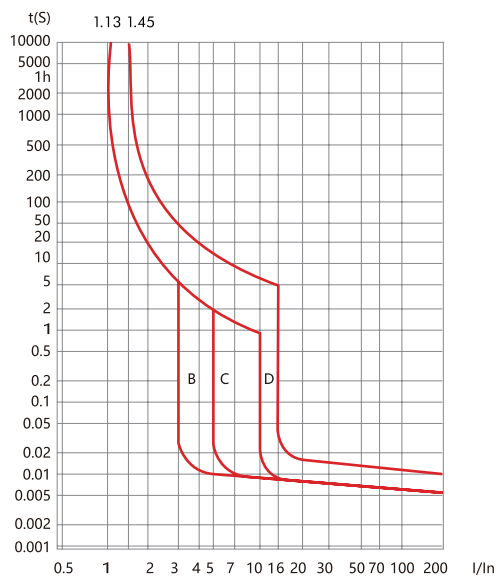
Test	Type	Test current	Starting state	Trip/Not trip time limit	Expected outcome	Notes
a	B,C,D	1.13In	Cold	$t \leq 1$ h (for $I_n \leq 63A$) $t < 2$ h (for $I_n > 63A$)	Not trip	
b	B,C,D	1.45In	Right after test	$t < 1$ h (for $I_n \leq 63A$) $t < 2$ h (for $I_n > 63A$)	Trip	Current increase steadily within 5s
c	B,C,D	2.55In	Cold	$1s < t < 60s$ (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

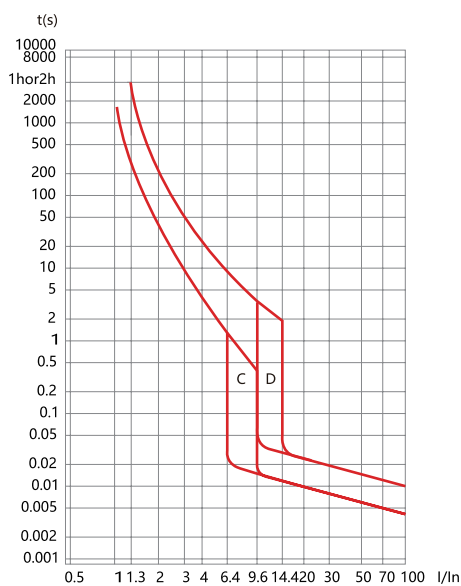
Release type	Test current	Starting state	Trip/Not trip time limit	Expected outcome	Notes
C,D	1.05In	Cold	$t \leq 1$ h (for $I_n \leq 63A$)	Cold	
			$t \leq 2$ h (for $I_n > 63A$)		
C,D	1.3In	Right after test	$t < 1$ h (for $I_n \leq 63A$)	Right after test	Current increase steadily within 5s
			$t < 2$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

Tripping curve

Compliant with standard IEC60898-1 and IEC61009-1



Compliant with standard IEC60947-2



The following table shows the cross-sectional area of the copper wire corresponding to the rated current (recommended value):

Copper wire cross-sectional area Smm ²	Rated current I _n (A)
1	I _n ≤ 6
1.5	6 < I _n ≤ 13
2.5	13 < I _n ≤ 20
4	20 < I _n ≤ 25
6	25 < I _n ≤ 32
10	32 < I _n ≤ 50
16	50 < I _n ≤ 63
25	63 < I _n ≤ 80
35	80 < I _n ≤ 100
50	100 < I _n ≤ 125

Circuit breakers

Product model	Number of poles	Electromagnetic release type	Rated current	Rated residual operating current
NXB-40	1P+N	C, D	6A, 10A, 16A, 20A, 25A, 32A, 40A	0.01A, 0.03A
NXBLE-40				
NXB-63	1P, 1P+N, 2P, 3P, 3P+N, 4P	B, C, D	1A, 2A, 3A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A	
NXBLE-32	1P+N, 2P, 3P, 3P+N, 4P	B, C, D	6A, 10A, 16A, 20A, 25A, 32A	0.03A, 0.05A, 0.075A, 0.1A, 0.3A
NXBLE-63			6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A	
NXBLE-63Y	1P+N	C, D	6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A	0.01A, 0.03A
NXB-80	1P, 1P+N, 2P	B, C, D	80A	
NXB-125	1P, 2P	C, D	63A, 80A, 100A, 125A	
NXB-125G	3P, 4P	B, C, D	63A, 80A, 100A	
NXBLE-125	1P+N, 2P	C, D	63A, 80A, 100A, 125A	0.03A, 0.05A, 0.075A, 0.1A, 0.3A
NXBLE-125G	3P, 3P+N, 4P	B, C, D	63A, 80A, 100A	
NXL-63	2P, 4P	/	16A, 25A, 32A, 40A, 63A	0.01A(only 2P 16/25A) 0.03A, 0.3A

Ordering example: NXB-40 C16 50 units

NXB-63 3P D63 50 units

NXBLE-63 1P+N C63 0.03A 30 units

NXL-63 2P 63A 0.03A 90 units

Product model	Auxiliary contact	Number of poles	Maximum discharge current I _{max} (8/20us)(kA)	Max.continuousoperationaloperational voltage U _c (V~)	Maximum impulse current(10/350us) I _{imp} (kA)
NXU-IIG	Default:NO /F:YES	1P, 1P+N, 2P, 3P, 3P+N, 4P	40,65	255,275,320,385,440	/
NXU-I+II	Default:NO /F:YES	1P, 1P+N, 2P, 3P, 3P+N, 4P	/	255,275,385	12.5

Ordering example: NXU-IIG/F 40kA/385V 2P 50 units

NXU-I+II/F12.5kA/275V 2P 50 units

3. Datasheet



NXB-40 Miniature circuit breaker

1. Compliant standards

IEC/EN60898-1

2. Compliant certification

CE, RoHS

3. Major function

Overload protection, short circuit protection, positive isolation

4. Technical data

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;

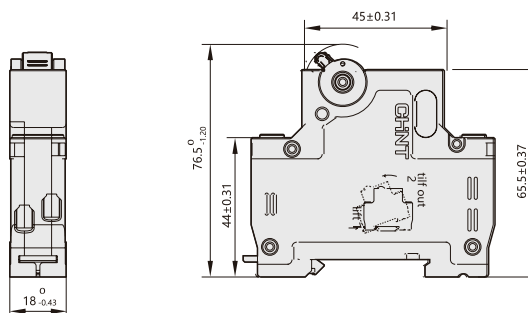
Weight(kg): 0.09;

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



NXB-40		1P+N	C	16	4.5kA
↓	↓	↓	↓	↓	↓
Frame	Breaking capacity Code	Poles	Curve	Current(In)	Breaking capacity
NXB-40	Blank:4.5kA	1P+N	C D	6A~40A	4.5kA

Diagram	Curve	Poles	In(A)	Icu(kA)	Ue(V)	Description	Code
	C	1P+N	6	4.5	AC230	NXB-40 1P+N C6 4.5kA	817015
	C	1P+N	10	4.5	AC230	NXB-40 1P+N C10 4.5kA	817016
	C	1P+N	16	4.5	AC230	NXB-40 1P+N C16 4.5kA	817017
	C	1P+N	20	4.5	AC230	NXB-40 1P+N C20 4.5kA	817018
	C	1P+N	25	4.5	AC230	NXB-40 1P+N C25 4.5kA	817019
	C	1P+N	32	4.5	AC230	NXB-40 1P+N C32 4.5kA	817020
	C	1P+N	40	4.5	AC230	NXB-40 1P+N C40 4.5kA	817021
	D	1P+N	6	4.5	AC230	NXB-40 1P+N D6 4.5kA	817022
	D	1P+N	10	4.5	AC230	NXB-40 1P+N D10 4.5kA	817023
	D	1P+N	16	4.5	AC230	NXB-40 1P+N D16 4.5kA	817024
	D	1P+N	20	4.5	AC230	NXB-40 1P+N D20 4.5kA	817025
	D	1P+N	25	4.5	AC230	NXB-40 1P+N D25 4.5kA	817026
	D	1P+N	32	4.5	AC230	NXB-40 1P+N D32 4.5kA	817027
	D	1P+N	40	4.5	AC230	NXB-40 1P+N D40 4.5kA	817028