GACIA

N8 Product Information

GACIA

GACIA ELECTRICAL APPLIANCE CO., LTD.

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Pacemaker
of circuit breakers

GACIA

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Gacia Electrical Appliance Co., Ltd

is an export-oriented company, focus on R&D, manufacturing, and sales of circuit breakers. Through 16 years of rapid growth, Gacia has 1700 employees, including 100 technical talents, and 3 manufacturing bases around China. Gacia's headquarter located in Wenzhou, the Shanghai campus focus on R&D and high-end manufacturing, and the Jiang xi campus provide OEM manufacturing services for customers all over the world. Meanwhile, Gacia's products export to over 100 countries and regions, and 80% of them are independent developed by Gacia. A majority of Gacia's products authenticated by many international professional certifications including German TUV, VDE certifications, Dutch KEMA certification and ISO 9001 international quality system.

After more than a decade of development, Gacia adhere to business principle referring to "customer-centric, Altruism and Win-win". Besides, Gacia devoted to utilize innovation to drive production improvement, take advantage of lean production to upgrade products quality and committed to become the pacemaker of the global circuit breaker industrial.

CONTENTS

Core Manufacturing Advantages

GACIA

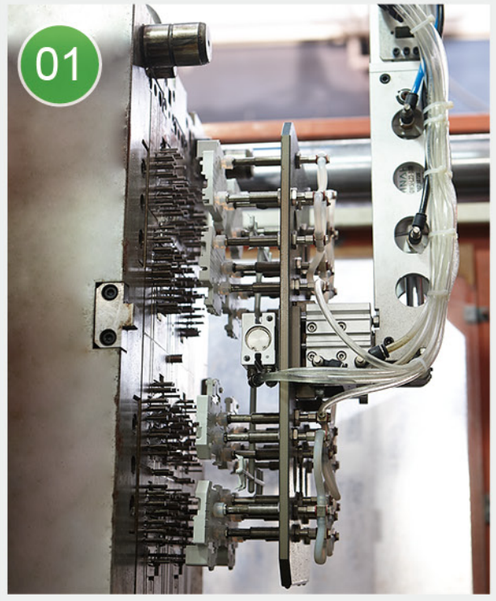
01 Independent Research and develop hot runner mold which can drop 8 pcs shells one time.

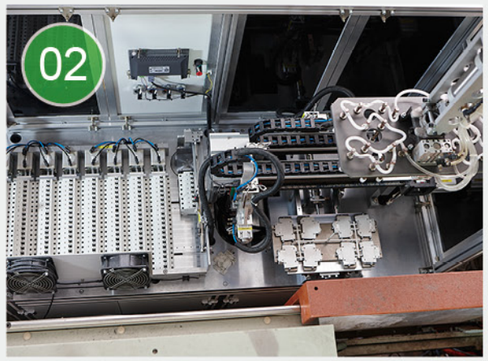
02 Injection closing unit device with automatic clamping and shaping process instead of traditional labour.

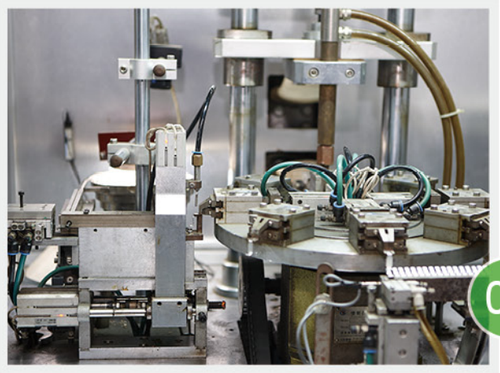
03 High-speed Punch Press Machine & Auto Welding Machine. The integration of stamping and welding process could reduce components damage and increase the qualification rate significantly for the metal parts.

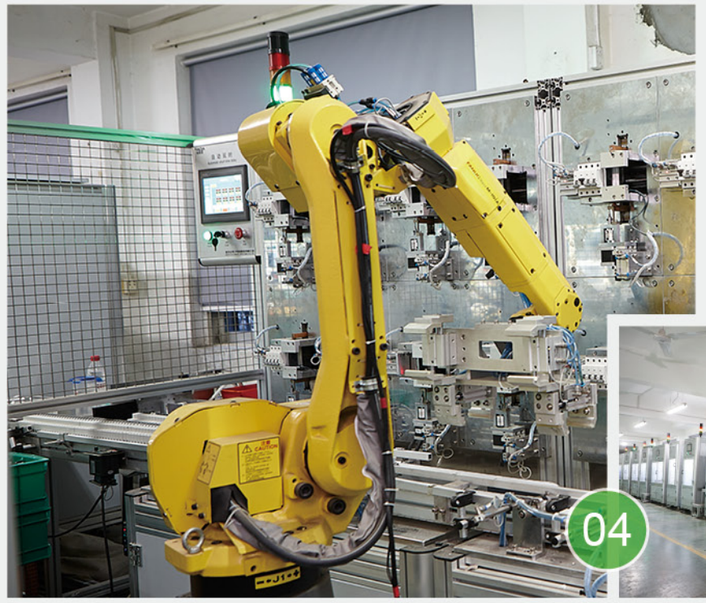
04 Intelligent Manufacturing with quality auto monitoring pack and data interconnection pack could avoid artificial errors and improve product reliability.

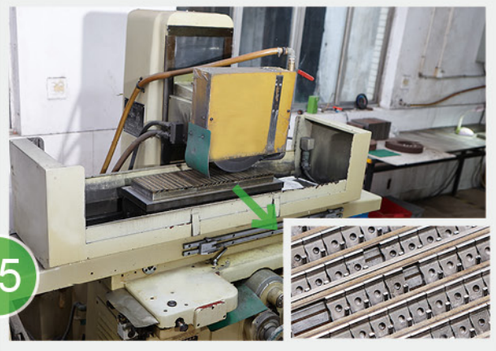
05 Operating Mechanism plant and Tripper plant.
The most important parts of RCD are produced by GACIA to insure quality warranty.











Quality Warranty:

- Complete Manufacturing System for Components&Parts
- Precise Manufacturing Process
- Selecting High-class Raw Material
- Strict Detecting System

Using Occasions:
Residential,Commercial,Industrial,Tender,Projects Uses | ★★★★★

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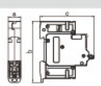
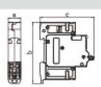
Model			UB7N	N8DN	N8DH
IEC/EN 60898-1 IEC/EN 60947-2					
Poles			1P, 2P, 3P, 4P	1P+N	1P+N
Certification			CE	CE	CE
Electrical Specifiction					
Rated current(A)	In		1-63	6-40	6-40
Rated frequency(Hz)			50/60	50/60	50/60
Rated working voltage(V)	Ue		1P:230/400~,2/3/4P:400~	230~	230~
Rated insulated voltage(V)	Ui		500	400	400
Impulse withstand voltage(kV)	Uimp		4	4	4
Rated short-circuit breaking capacity(KA)	Icn		6	6	10
Instantaneous tripping type			B,C,D	B,C,D	B,C,D
Maximum working voltage	Umax		1P:240,2/3/4P:440	240	240
Dielectric test voltage(kV)			2	2	2
Service life	Mechanical	Standard value	10000	10000	10000
(O-C)	Electrical	Standard value	6000	6000	6000
Contorl And Indication					
Shunt release(SHT)				□	
Undervoltage release(UVT)				□	
Auxiliary contact(AUX)				□	
Alarm contact(ALT)				□	
Contact position indicator				□	
Fault indication				□	
Connection And Installation					
Ambient temperature(with daily average≤35℃)				-5℃ ~+40℃	
Protection degree		ALL Sides		IP40	
		Connection Terminal		IP20	
Wire(mm^2)			1-16	1-10	1-10
busbar(mm^2)			16	-	-
Mounting			On DIN rail	On DIN rail	On DIN rail
Pollution degree				2	
Reference temperature for setting of thermal element(℃)				30	
Storage temperature(℃)				-25℃ ~+70℃	
Tightening torque			3.0	2	2
Connection				Top and Bottom	
Dimensions(mm) (WxHxL)		a(1P/2P/3P/4P)	18/36/54/72	18	
		b(1P/2P/3P/4P)	87/87/87/87	87	
		c(1P/2P/3P/4P)	78/78/78/78	77	
Weight(kg)		1P	0.13	0.19	
		2P	0.26	0.38	
		3P	0.39	0.57	
		4P	0.52	0.76	

■ Default □ Optional – None

N8BN	N8BH	N8G
		
1P, 2P, 3P, 4P	1P, 2P, 3P, 4P	1P, 2P, 3P, 4P
CE	CE	CE
1-63A	1-63A	63-125
50/60	50/60	50/60
1P:230/400~,2/3/4P:400~	1P:230/400~,2/3/4P:400~	1P:230/400~,2/3/4P:400~
500	500	500
4	4	4
6	10	15
B,C,D	B,C,D	C,D
1P:240,2/3/4P:440	1P:240,2/3/4P:440	1P:240,2/3/4P:440
2	2	2
10000	10000	20000
6000	6000	10000
	□	
	□	
	□	
	□	
	□	
	□	
	-5℃ ~+40℃	
	IP40	
	IP20	
1-16	1-16	25-50
16	16	-
On DIN rail	On DIN rail	On DIN rail
	2	
	30	
	-25℃ ~+70℃	
3.0	3.0	3.5
	Top and Bottom	
18/36/54/72	27/54/81/108	
87/87/87/87	87/87/87/87	
78/78/78/78	78/78/78/78	
0.13	0.18	
0.26	0.36	
0.39	0.54	
0.52	0.72	

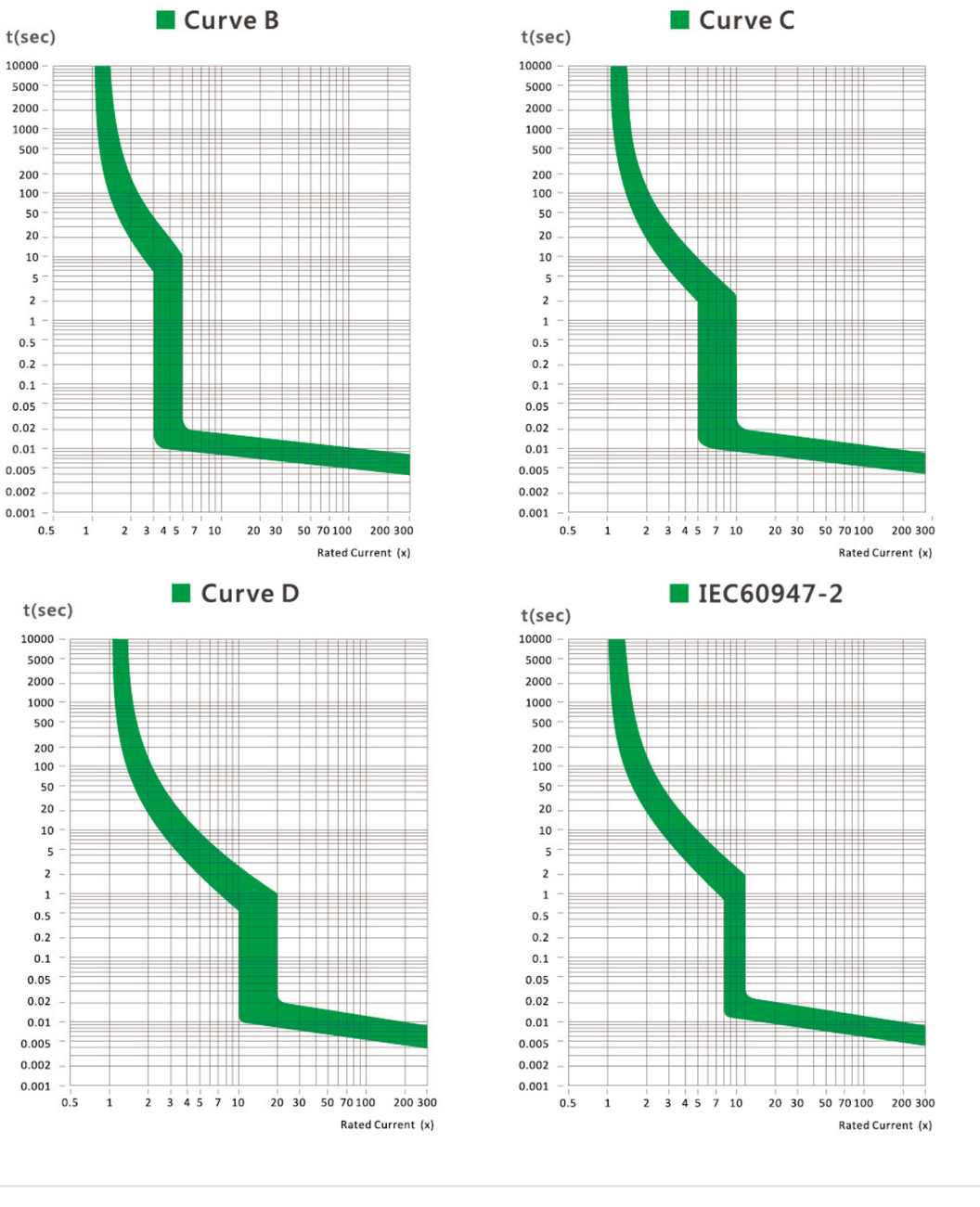
Model			N8SG
IEC/EN 60947-3			
Poles			1P, 2P, 3P, 4P
Certification			CE
Electrical Specifiction			
Rated current(A)		In	16-125
Rated frequency(Hz)			50/60
Rated working voltage(V)		Ue	1P:230/400~,2/3/4P:400~
Rated insulated voltage(V)		Ui	500
Impulse withstand voltage(kV)		Uimp	4
Rated short-time withstand current(KA)		Icw	1.5
Instantaneous tripping type			-
Maximum working voltage		Umax	1P:240,2/3/4P:440
Dielectric test voltage(kV)			2.5
Service life	Mechanical	Standard value	8500
(O-C)	Electrical	Standard value	1500
Contorl And Indication			
Shunt release(SHT)			-
Undervoltage release(UVT)			-
Auxiliary contact(AUX)			-
Alarm contact(ALT)			-
Contact position indicator			-
Fault indication			-
Connection And Installation			
Ambient temperature(with daily average≤35℃)			-5℃ ~+40℃
Protection degree		ALL Sides	IP40
		Connection Terminal	IP20
Wire(mm^2)			1-50
busbar(mm^2)			-
Mounting			On DIN rail
Pollution degree			3
Reference temperature for setting of thermal element(℃)			30
Storage temperature(℃)			-25℃ ~+70℃
Tightening torque			3.5
Connection			Top and Bottom
Dimensions(mm) (WxHxL)		a(1P/2P/3P/4P)	18/36/54/72
		b(1P/2P/3P/4P)	87/87/87/87
		c(1P/2P/3P/4P)	78/78/78/78
Weight(kg)		1P	0.08
		2P	0.16
		3P	0.24
		4P	0.32

■ Default □ Optional – None

Normal Working Conditions and Installation Conditions:

- Ambient Temperature: -5℃ ~+40℃ , it's average over a period of 24 hours does not exceed +35℃ .
- Height above Sea Level: ≤ 2000m.
- Atmospheric Condition:
  - When the maximum temperature is +40℃ , the relative humidity of the air is not exceed 50%, and it has higher humidity at lower temperature. The maximum monthly relative humidity is90%, and the lowest temperature is +20 ℃ . Additionally, a frost might be present, with the temperature change.
  - Pollution Degree: UB7N,N8DN/H,N8BN/H,N8G:2;N8SG:3.
- Installation Conditions:
  - Installation Category and Type: Installation category is II or III, and the installation type adopts standard steel guide rail installation (TH35-7.5).
  - The circuit breaker shall be installed vertically, and the upward position of the handle shall be connected to the power.
  - The installation should be free from obvious impact and vibration, corrosive and explosive gases.

Characteristics Curve



Time-current operating characteristics

Test	Type	Test current	Inital condition	Limits of tripping or non-tripping time	Result to be obtained	Remarks
a	B, C, D	$1.13I_n$	Cold[a]	$t \le 1h$(for $I_n \le 63A$) $t \le 2h$(for $I_n > 63A$)	No tripping	
b	B, C, D	$1.45I_n$	Immediately following test	$t < 1h$(for $I_n \le 63A$) $t < 2h$(for $I_n > 63A$)	Tripping	Current steadily increased within 5s
c	B, C, D	$2.55I_n$	Cold[a]	$1s < t < 60s$ (for In ≤ 32A) $1s < t < 120s$ (for In > 32A)	Tripping	
d	B C D	$3I_n$ $5I_n$ $10I_n$	Cold[a]	$t \le 0.1s$	Tripping	Current established by closing an auxiliary switch
e	B C D	$5I_n$ $10I_n$ $20I_n$[b]	Cold[a]	$t < 0.1s$	Tripping	Current established by closing an auxiliary switch

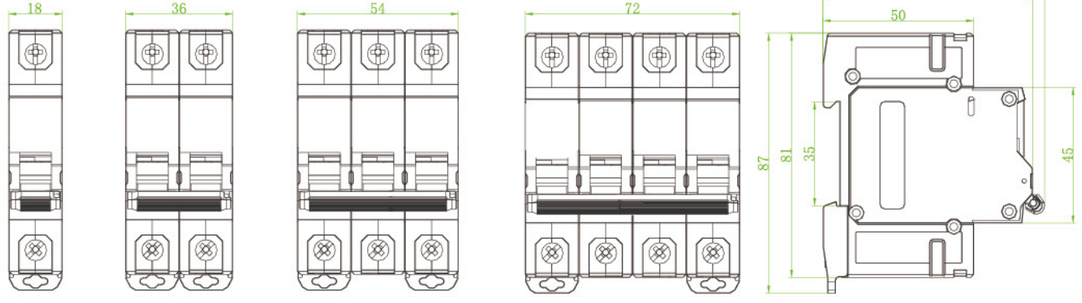
NOTE An additional test, intermediate between c and d, is under consideration for circuit-breakers of type D.

[a] The term "cold" means without previous loading, at the reference calibration temperature.

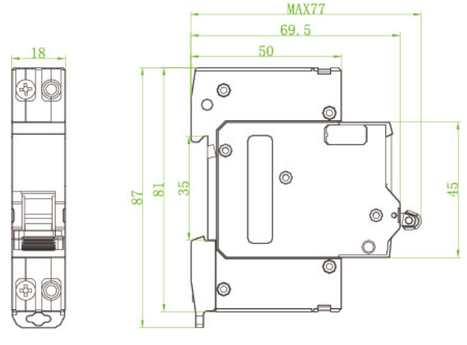
[b] 50 /n for special cases.

Dimensions

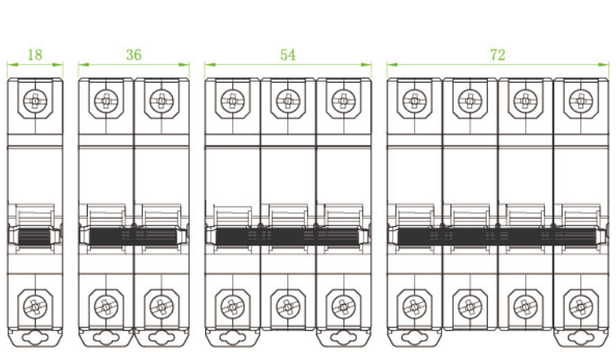
◆ UB7N

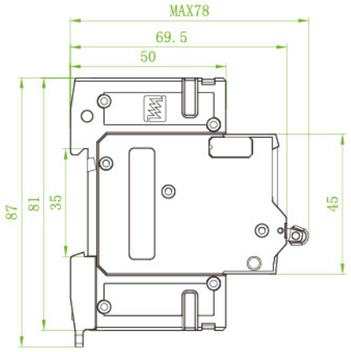


◆ N8DN/N8DH

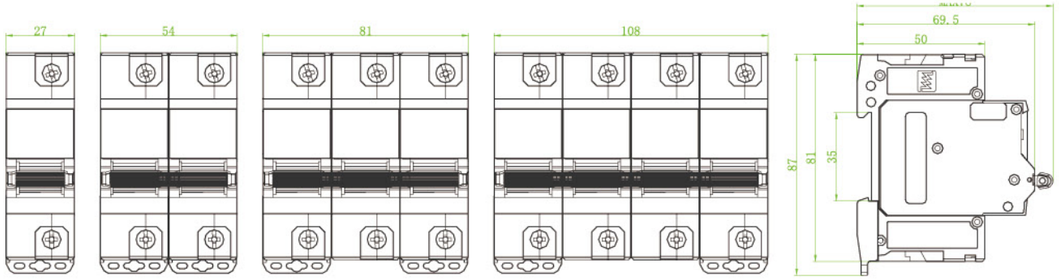


◆ N8BN/N8BH

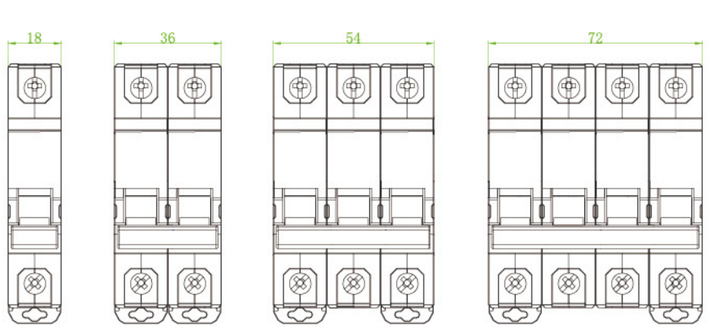


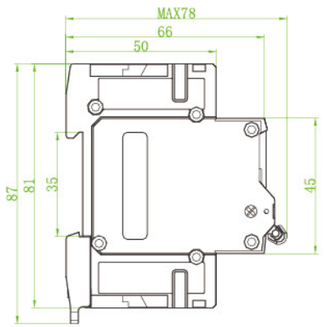


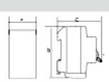
◆ N8G



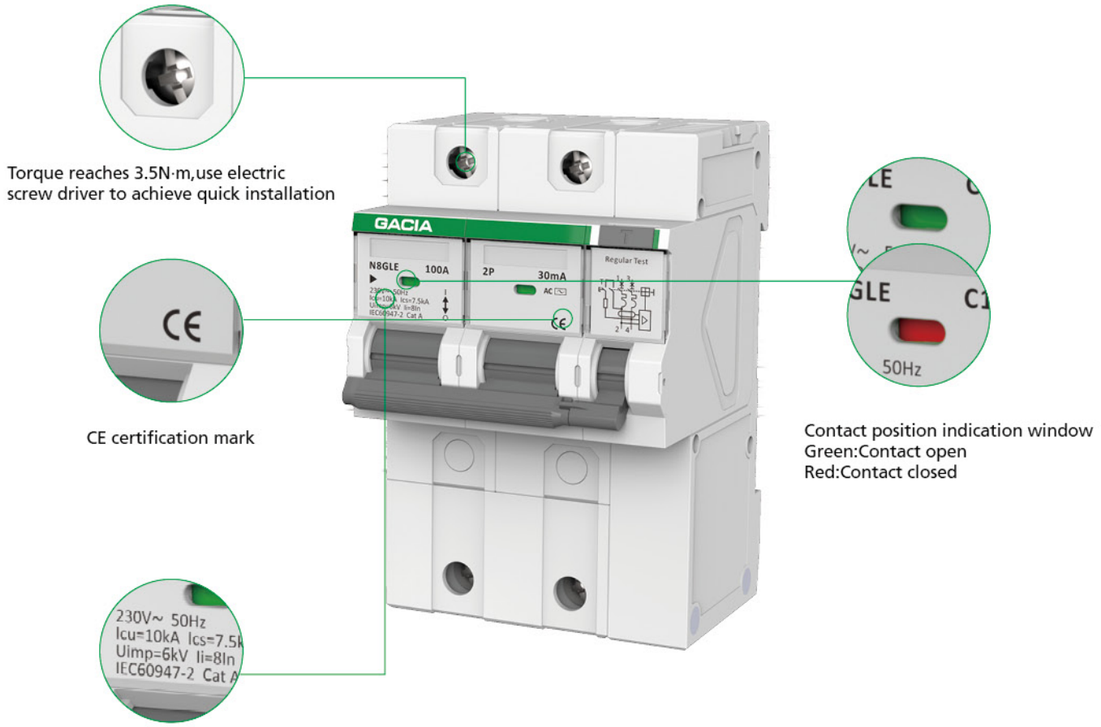
◆ N8SG





Model		N8GNLE	N8GLE
IEC/EN60947-2 GB/T 14048.2			
Poles		1P+N, 2P, 3P, 3P+N, 4P	1P+N, 2P, 3P, 3P+N, 4P
Certification		CQC CE	
Electrical Specifiction			
Rated current(A)	In	1P+N/2P:63-125A,3P/3P+N/4P:63-100A	1P+N/2P:63-125A,3P/3P+N/4P:63-100A
Rated frequency(Hz)		50/60	50/60
Rated working voltage(V)	Ue	1P+N/2P:230~,3P/3P+N/4P:400~	1P+N/2P:230~,3P/3P+N/4P:400~
Rated insulated voltage(V)	Ui	500	500
Impulse withstand voltage(kV)	Uimp	6	6
Rated conditional short-circuit current	Ics	6	10
Rated Residual current(mA)	I △ n	30,100,300	30,100,300
Thermo-magnetic release characteristic		C,D	C,D
Residual current protection type		Electronic	
Residual current working type		AC/A	
Rated residual making and breaking capacity	Im/ △ m	10In	
Dielectric test voltage(kV)		2.5	
Service life Mechanical Standard value		10000	
(O-C) Electrical Standard value		5000	
Contorl And Indication			
Shunt release(SHT)		-	
Undervoltage release(UVT)		-	
Auxiliary contact(AUX)		-	
Alarm contact(ALT)		-	
Contact position indicator		■	
Fault indication		■	
Connection And Installation			
Ambient temperature(with daily average≤35℃)		-5℃ ~+40℃	
Protection degree	ALL Sides	IP40	
	Connection Terminal	IP20	
Wire(mm^2)		50	
busbar(mm^2)		50	
Mounting		Cable/Busbar	
Pollution degree		3	
Reference temperature for setting of thermal element(℃)		30	
Storage temperature(℃)		-25℃ ~+70℃	
Tightening torque		3.5	
Connection		Top	
Dimensions(mm) (WxHxL) 	a(1P+N)	72	
	b(1P+N)	116	
	c(1P+N)	77	
Weight(kg)	1P+N	/	

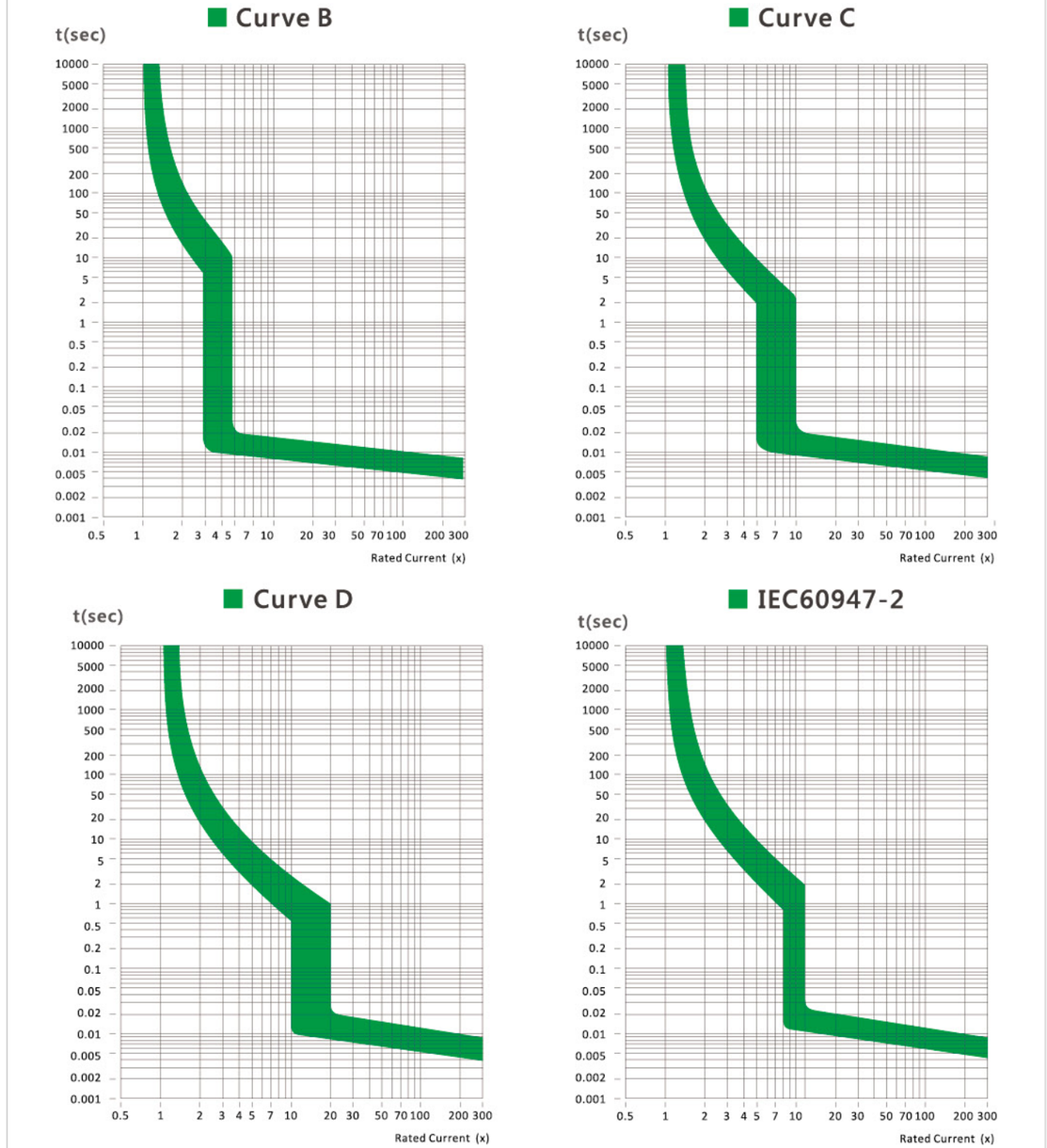
■ Default □ Optional – None



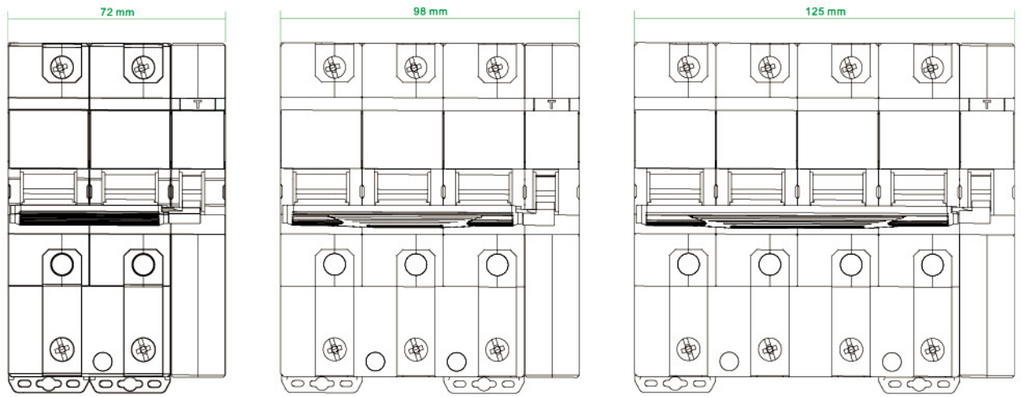
Normal Working Conditions and Installation Conditions:

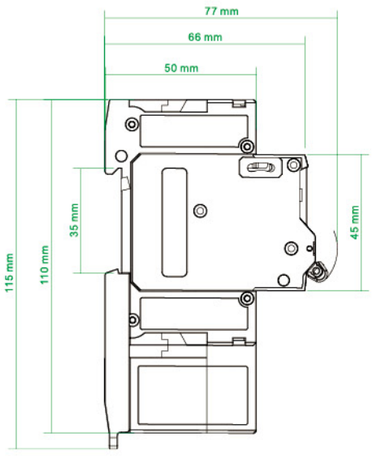
- Ambient Temperature: -5℃ ~+40℃
- Height above Sea Level: ≤ 2000m.
- Installation Category: III
- Pollution Degree: 3
- The installation type adopts standard steel guide rail installation (TH35-7.5).
- Installation Conditions: The external magnetic field of the installation site shall not exceed 5 -times of the earth's magnetic field in any direction. When over voltage residual current moves, the circuit breaker shall be installed vertically, and the upward position of the handle shall be connected to the power. The installation should be free from obvious impact and vibration.
- Mode of Connection: Use screws to press the wiring.

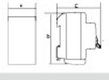
Characteristics Curve



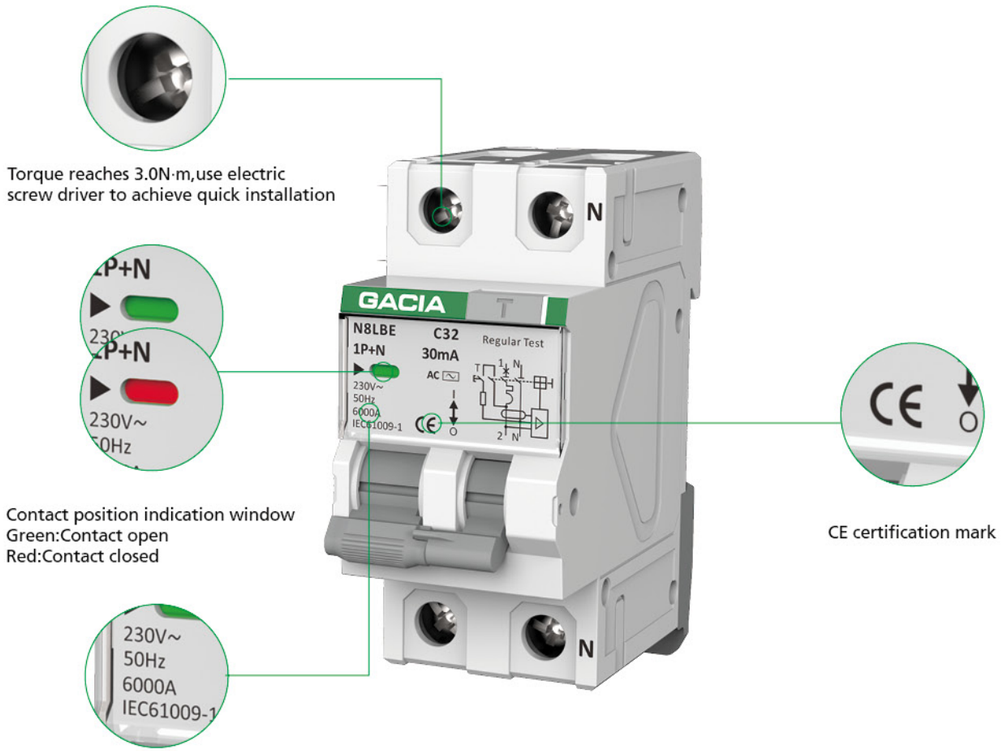
◆ N8GNLE/N8GLE 63-125A





Model		N8LBE
IEC/EN 61009-1		
Poles		1P+N
Certification		
Electrical Specifiction		
Rated current(A)	In	6-63A
Rated frequency(Hz)		50/60
Rated working voltage(V)	Ue	230~
Rated insulated voltage(V)	Ui	400
Rated impulse withstand voltage(kV)	Uimp	4
Rated conditional short-circuit current	Ics	6(50、63=4.5)
Rated Residual current(mA)	I △ n	30,100,300
Thermo-magnetic release characteristic		B,C,D
Residual current protection type		Electronic
Residual current working type		AC、A
Rated residual making and breaking capacity	Im/ △ m	500A
Dielectric test voltage(kV)		2.5
Service life Mechanical Standard value		10000
(O-C) Electrical Standard value		4000
Contorl And Indication		
Shunt release(SHT)		-
Undervoltage release(UVT)		-
Auxiliary contact(AUX)		-
Alarm contact(ALT)		-
Contact position indicator		-
Fault indication		-
Connection And Installation		
Ambient temperature(with daily average≤35℃)		-5℃ ~+40℃
Protection degree	ALL Sides	IP40
	Connection Terminal	IP20
Wire(mm^2)		6
busbar(mm^2)		16
Mounting		Cable/Busbar
Pollution degree		2
Reference temperature for setting of thermal element(℃)		30
Storage temperature(℃)		-25℃ ~+70℃
Tightening torque		3.0
Connection		Top
Dimensions(mm) (WxHxL) 	a(1P+N)	36
	b(1P+N)	81
	c(1P+N)	75
Weight(kg)	1P+N	0.20

■ Default □ Optional – None

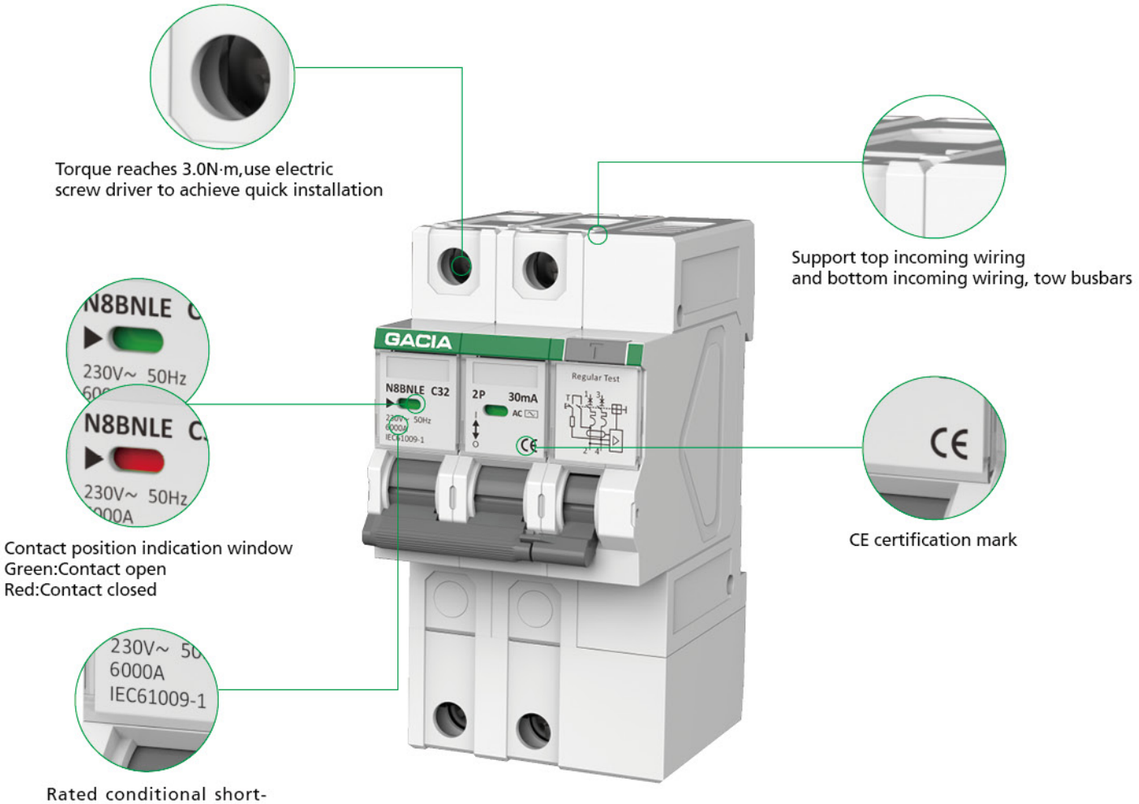


Normal Working Conditions and Installation Conditions:

- Ambient Temperature: -5℃ ~+40℃
- Height above Sea Level: ≤ 2000m.
- Installation Category: II, III
- Pollution Degree: 2
- The installation type adopts standard steel guide rail installation (TH35-7.5).
- Installation Conditions: The external magnetic field of the installation site shall not exceed 5 -times of the earth's magnetic field in any direction. When over voltage residual current moves, the circuit breaker shall be installed vertically, and the upward position of the handle shall be connected to the power. The installation should be free from obvious impact and vibration.
- Mode of Connection: Use screws to press the wiring.

Model		N8BNLE	N8BLE
GB/T 16917.1 IEC/EN 61009-1			
Poles		1P+N, 2P, 3P, 3P+N, 4P	1P+N, 2P, 3P, 3P+N, 4P
Certification		CE	CE
Electrical Specifiction			
Rated current(A)	In	6-63A	6-63A
Rated frequency(Hz)		50/60	50/60
Rated working voltage(V)	Ue	1P+N/2P:230~,3/3P+N/4P:400~	1P+N/2P:230~,3/3P+N/4P:400~
Rated insulated voltage(V)	Ui	400	400
Rated impulse withstand voltage(kV)	Uimp	4	4
Rated conditional short-circuit current	Ics	6	10
Rated Residual current(mA)	I △ n	30,50,100,300,500	30,50,100,300,500
Thermo-magnetic release characteristic		B,C,D	B,C,D
Residual current protection type		Electronic	
Residual current working type		AC	
Rated residual making and breaking capacity	Im/ △ m	2000A	
Dielectric test voltage(kV)		2.5	
Service life Mechanical Standard value		10000	
(O-C) Electrical Standard value		4000	
Contorl And Indication			
Shunt release(SHT)		-	
Undervoltage release(UVT)		-	
Auxiliary contact(AUX)		-	
Alarm contact(ALT)		-	
Contact position indicator		■	
Fault indication		■	
Connection And Installation			
Ambient temperature(with daily average≤35℃)		-5℃ ~+40℃	
Protection degree	ALL Sides	IP40	
	Connection Terminal	IP20	
Wire(mm^2)		16	
busbar(mm^2)		16	
Mounting		Cable/Busbar	
Pollution degree		2	
Reference temperature for setting of thermal element(℃)		30	
Storage temperature(℃)		-25℃ ~+70℃	
Tightening torque		3.0	
Connection		Top	
Dimensions(mm) (WxHxL) 	a(1P+N)	54	54
	b(1P+N)	77.5	77.5
	c(1P+N)	105.5	105.5
Weight(kg)	1P+N	323	323

■ Default □ Optional – None

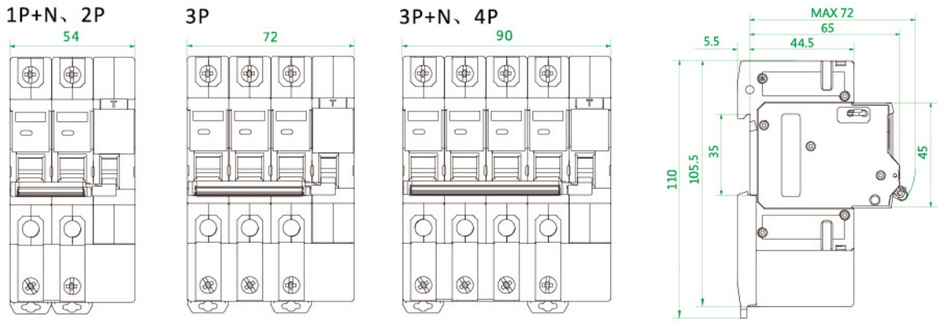


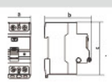
Normal Working Conditions and Installation Conditions:

- Ambient Temperature: -5℃ ~+40℃
- Height above Sea Level: ≤ 2000m.
- Installation Category: II, III
- Pollution Degree: 2
- The installation type adopts standard steel guide rail installation (TH35-7.5).
- Installation Conditions: The external magnetic field of the installation site shall not exceed 5 -times of the earth's magnetic field in any direction. When over voltage residual current moves, the circuit breaker shall be installed vertically, and the upward position of the handle shall be connected to the power. The installation should be free from obvious impact and vibration.
- Mode of Connection: Use screws to press the wiring.

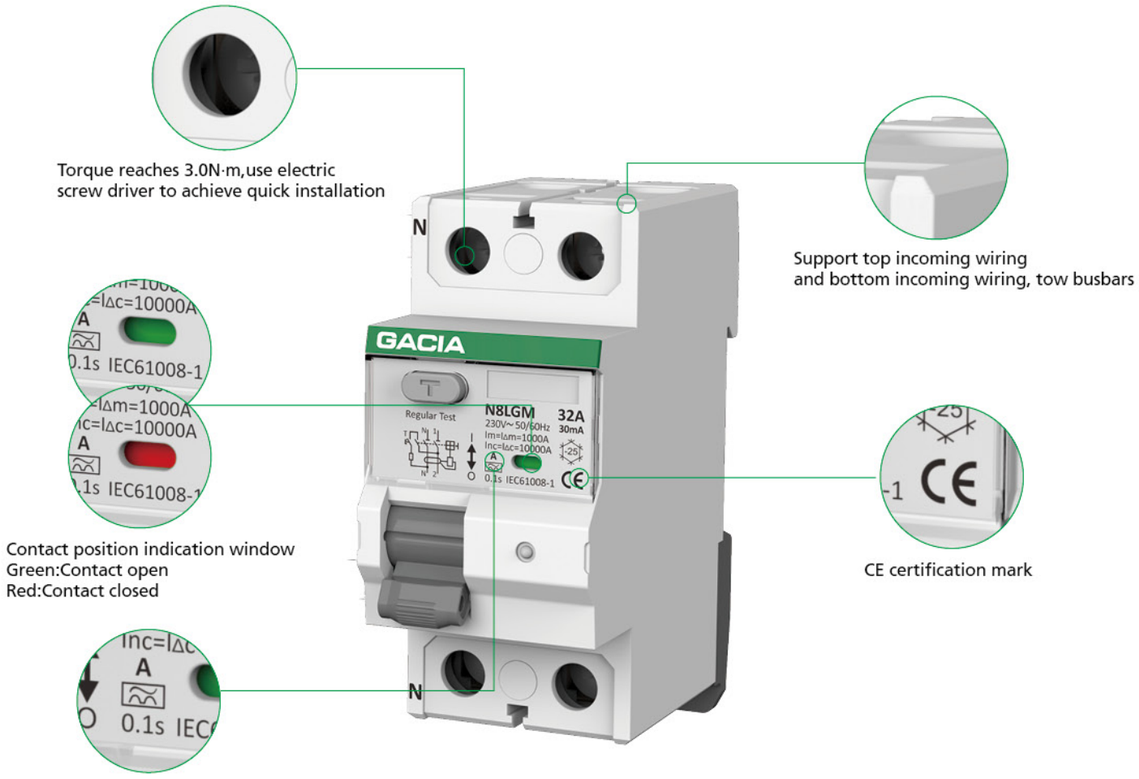
Characteristics Curve

◆ N8BNLE/N8BLE



Model		N8LGM
IEC/EN 61008-1		
Poles		2P, 4P
Certification		CE
Electrical Specifiction		
Rated current(A)	In	16-100
Rated working voltage(V)	Ue	2P:230,4P:400
Rated insulated voltage(V)	Ui	500
Impulse withstand voltage(kV)	Uimp	6
Rated conditional short-circuit current	Inc	10
Rated Residual current(mA)	I △ n	10,30,100,300
Rated Residual making and breaking capacity	I △ m	1000
Residual current working type		AC,A
Residual current Protection type		Electromagnetic
Dielectric test voltage(kV)		2.5
Service life Mechanical Standard value		4000
(O-C) Electrical Standard value		2000
Contorl And Indication		
Shunt release(SHT)		-
Undervoltage release(UVT)		-
Auxiliary contact(AUX)		-
Alarm contact(ALT)		-
Contact position indicator		■
Fault indication		■
Connection And Installation		
Ambient temperature(with daily average≤35℃)		-5℃ ~+40℃
Protection degree	ALL Sides	IP40
	Connection Terminal	IP20
Wire(mm^2)		35
busbar(mm^2)		35
Mounting		Cable/Busbar
Reference temperature for setting of thermal element		30
Pollution degree		2
Storage temperature (℃)		-25℃ ~+70℃
Connection		Top and bottom
Dimensions(mm) (WxHxL) 	a(1P+N)	36/72
	b(1P+N)	77.5/77.5
	c(1P+N)	81/81
Weight(kg)	2P	0.213
	4P	0.34

■ Default □ Optional – None



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◆ N8LGM