



GACIA



H Product Information

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.

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RCCB

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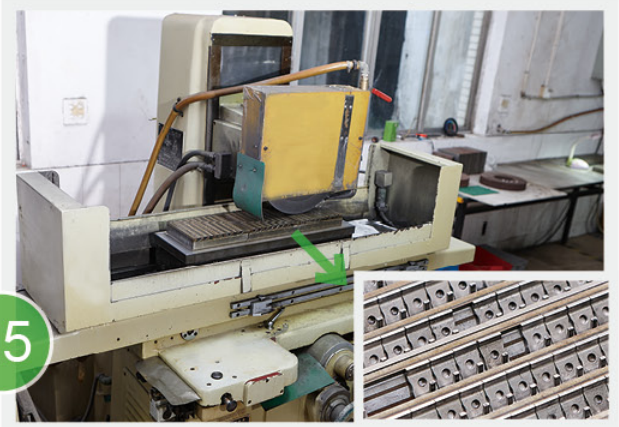
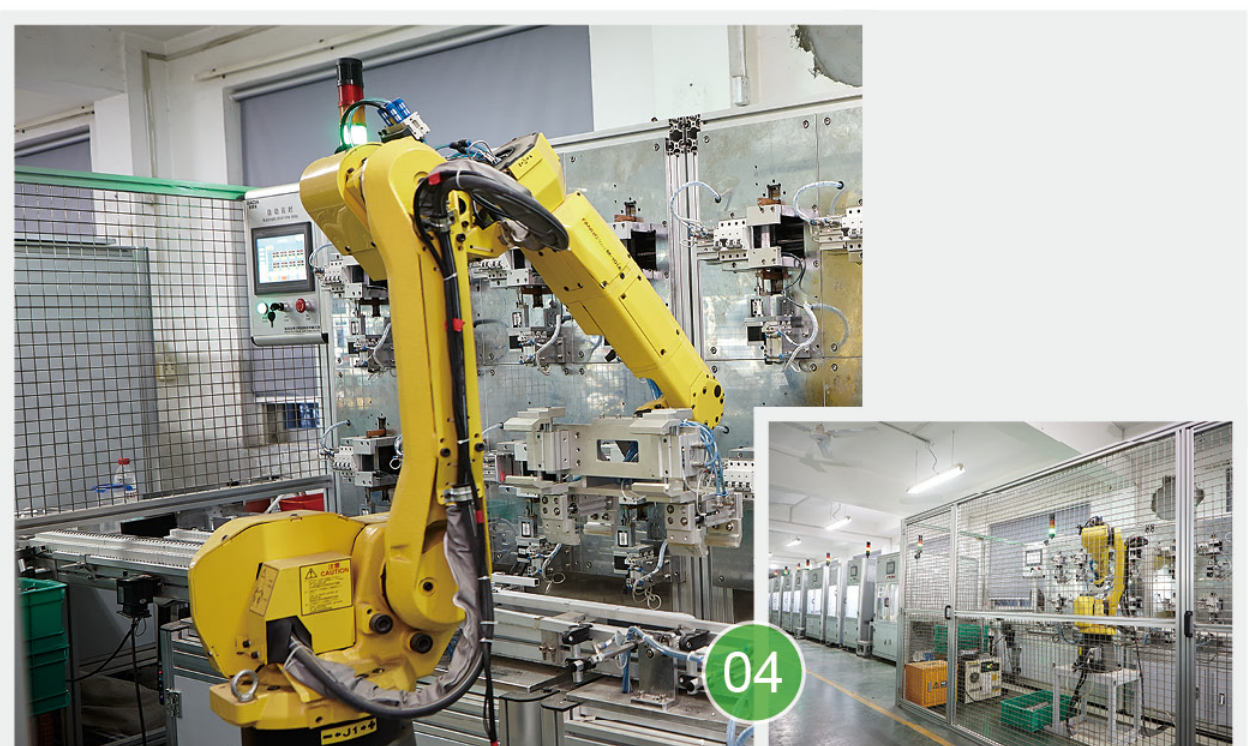
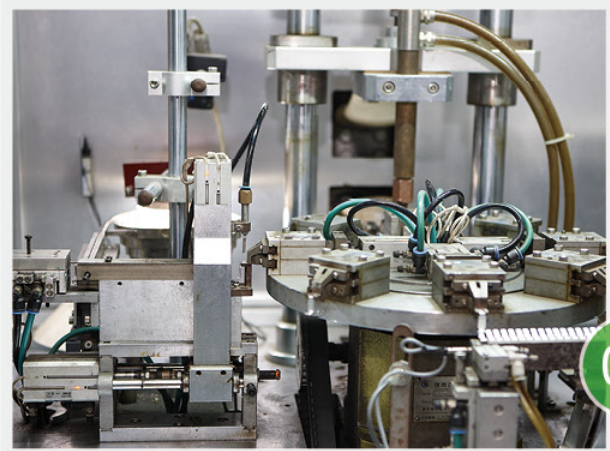
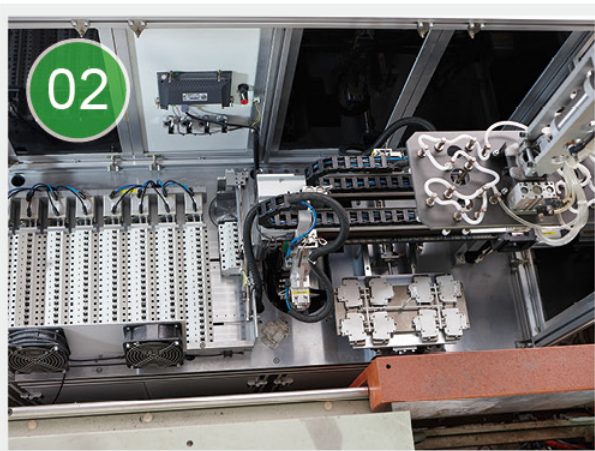
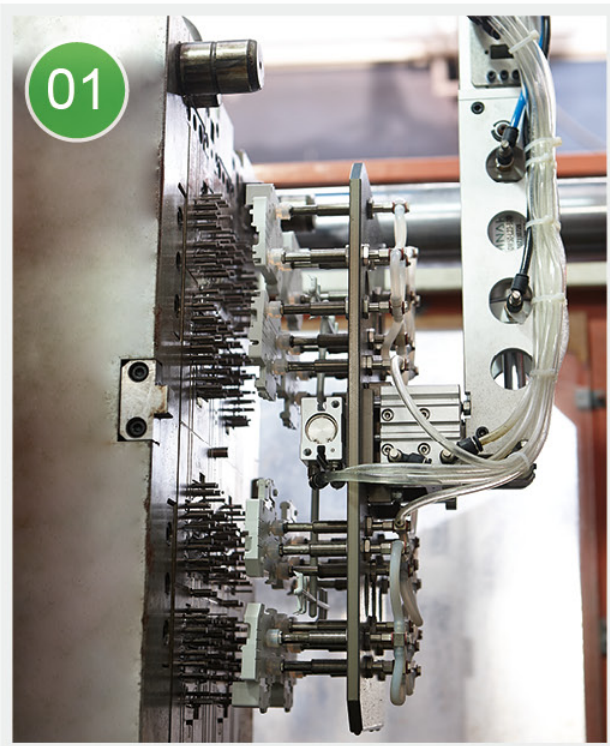


Core Manufacturing Advantages

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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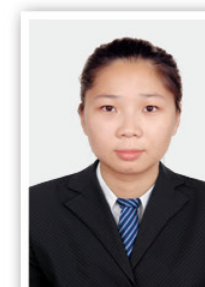
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Model	HB9C	HB9L
		
Product Standard	IEC/EN 60898-1	
Functions	Short circuit protection, Overload protection, Switch , Isolation	
Certification		
Electrical Features		
Poles	1P, 1P+N, 2P, 3P, 3P+N, 4P	
Thermo-magnetic tripping curves	B, C, D	
Rated current	In	1A, 2A, 3A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A
Rated voltage	Ue	1P: 230/400V; 2P/3P/4P: 400V
Insulation voltage	Ui	500V
Rated impulse withstand voltage	Uimp	6kV
Dielectric test voltage		2.5kV
Rated frequency		50/60Hz
Rated short-circuit breaking capacity	Icn	3/4.5kA(1-63A), 6kA(1-40A) 6kA
Pollution degree		2
Electrical life		4000
Mechanical life		10000
Contact position indicator		Yes
Connection and Installation		
Protection degree MCB body	IP20	
Protection degree Installed in distribution box	IP40	
Reference temperature for setting of thermal element	30℃	
Ambient temperature (with daily average≤35℃)	-5 ~ +40℃	
Storage temperature	-25 ~ +70℃	
Maximum altitude	2000m	
Mounting	Din rail 35mm	
Connection	Top and Bottom	
Terminal connection type	Cable	
Wire	1-25mm ²	
Rated torque capacity	2.5N·m	
Combination with Accessories		
Auxiliary contact	AUX	No Yes
Alarm contact	ALT	No Yes
Shunt release	SHT	No Yes
Under voltage release	UVT	No Yes
Overvoltage release	OVT	No Yes
Shunt release + AUX	SHTA	No Yes
Over & under - voltage release	OUVT	No Yes

HB9N	HB9H
	
IEC/EN 60898-1	IEC/EN 60898-1
Short circuit protection, Overload protection, Switch , Isolation	
	
Electrical Features	
1P, 1P+N, 2P, 3P, 3P+N, 4P	1P, 2P, 3P, 4P
B, C, D	B, C, D
1A, 2A, 3A, 4A, 6A, 10A,16A, 20A, 25A, 32A, 40A, 50A, 63A	
1P: 230/400V; 2P/3P/4P: 400V	1P: 230/400V; 2P/3P/4P: 400V
500V	500V
6kV	6kV
2.5kV	2.5kV
50/60Hz	50/60Hz
10kA	10kA
2	2
4000	4000
10000	10000
Yes	Yes
Connection and Installation	
IP20	IP20
IP40	IP40
30℃	30℃
-5 ~ +40℃	-5 ~ +40℃
-25 ~ +70℃	-25 ~ +70℃
2000m	2000m
Din rail 35mm	Din rail 35mm
Top and Bottom	Top and Bottom
Cable/Busbar	Cable/Busbar
1-25 mm ²	1-25mm ²
2.5N·m	2.5N·m
Combination with Accessories	
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes
Yes	Yes

Model		HB9-DC	
			
Product Standard		IEC/EN 60947-2	
Functions		Short circuit protection, Overload protection, Switch , Isolation	
Certification			
Electrical Features			
Poles		1P, 2P	
Thermo-magnetic tripping curves		C (8.5In), D (12.5In)	
Rated current	In	1A, 2A, 3A, 4A, 6A, 10A,16A, 20A, 25A, 32A, 40A, 50A, 63A	
Rated voltage	Ue	1P: 220V, 2P: 440V	
Insulation voltage	Ui	500V	
Rated impulse withstand voltage	Uimp	6kV	
Dielectric test voltage		2.5kV	
Rated frequency		\	
Rated short-circuit breaking capacity	Icn	Icu=6kA, Ics=100%Icu	
Pollution degree		2	
Electrical life		1500	
Mechanical life		8500	
Contact position indicator		Yes	
Connection and Installation			
Protection degree	MCB body	IP20	
Protection degree	Installed in distribution box	IP40	
Reference temperature for setting of thermal element		30℃	
Ambient temperature (with daily average≤35℃)		-5 ~ +40℃	
Storage temperature		-25 ~ +70℃	
Maximum altitude		2000m	
Mounting		Din rail 35mm	
Connection		\	
Terminal connection type		Cable	
Wire		1-25mm ²	
Rated torque capacity		2.5N·m	
Combination with Accessories			
Auxiliary contact	AUX	Yes	
Alarm contact	ALT	Yes	
Shunt release	SHT	Yes	
Under voltage release	UVT	Yes	
Overvoltage release	OVT	Yes	
Shunt release + AUX	SHTA	Yes	
Over & under - voltage release	OUVT	Yes	

		HB9-DC	
			
		IEC/EN 60947-2	
		Short circuit protection, Overload protection, Switch , Isolation	
			
		3P, 4P	
		C (8.5In), D (12.5In)	
		1A, 2A, 3A, 4A, 6A, 10A,16A, 20A, 25A, 32A, 40A, 50A, 63A	
		3P: 630V, 4P: 800V	
		500V	
		6kV	
		2.5kV	
		\	
		Icu=6kA, Ics=100%Icu	
		2	
		1500	
		8500	
		Yes	
		IP20	
		IP40	
		30℃	
		-5 ~ +40℃	
		-25 ~ +70℃	
		2000m	
		Din rail 35mm	
		\	
		Cable	
		1-25mm ²	
		2.5N·m	
		Yes	
		Yes	
		Yes	
		Yes	
		Yes	
		Yes	
		Yes	

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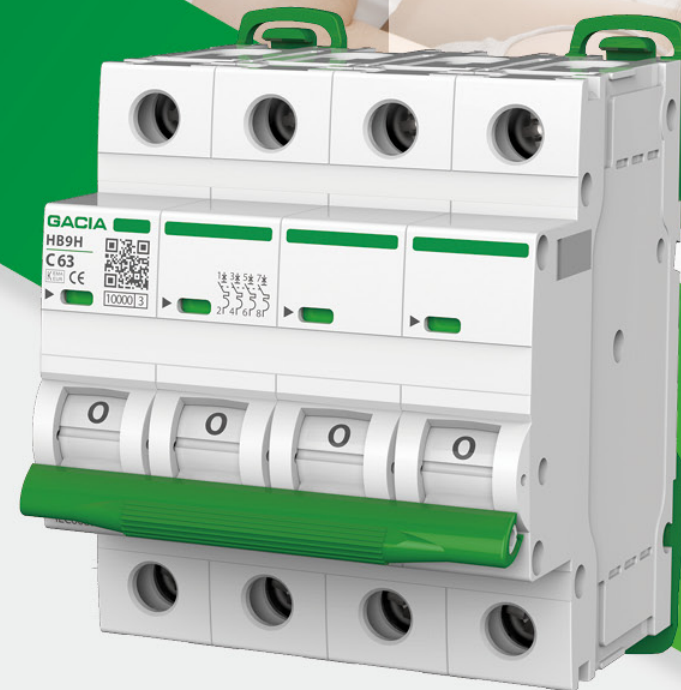
MCB

H Series

PRODUCT INFORMATION

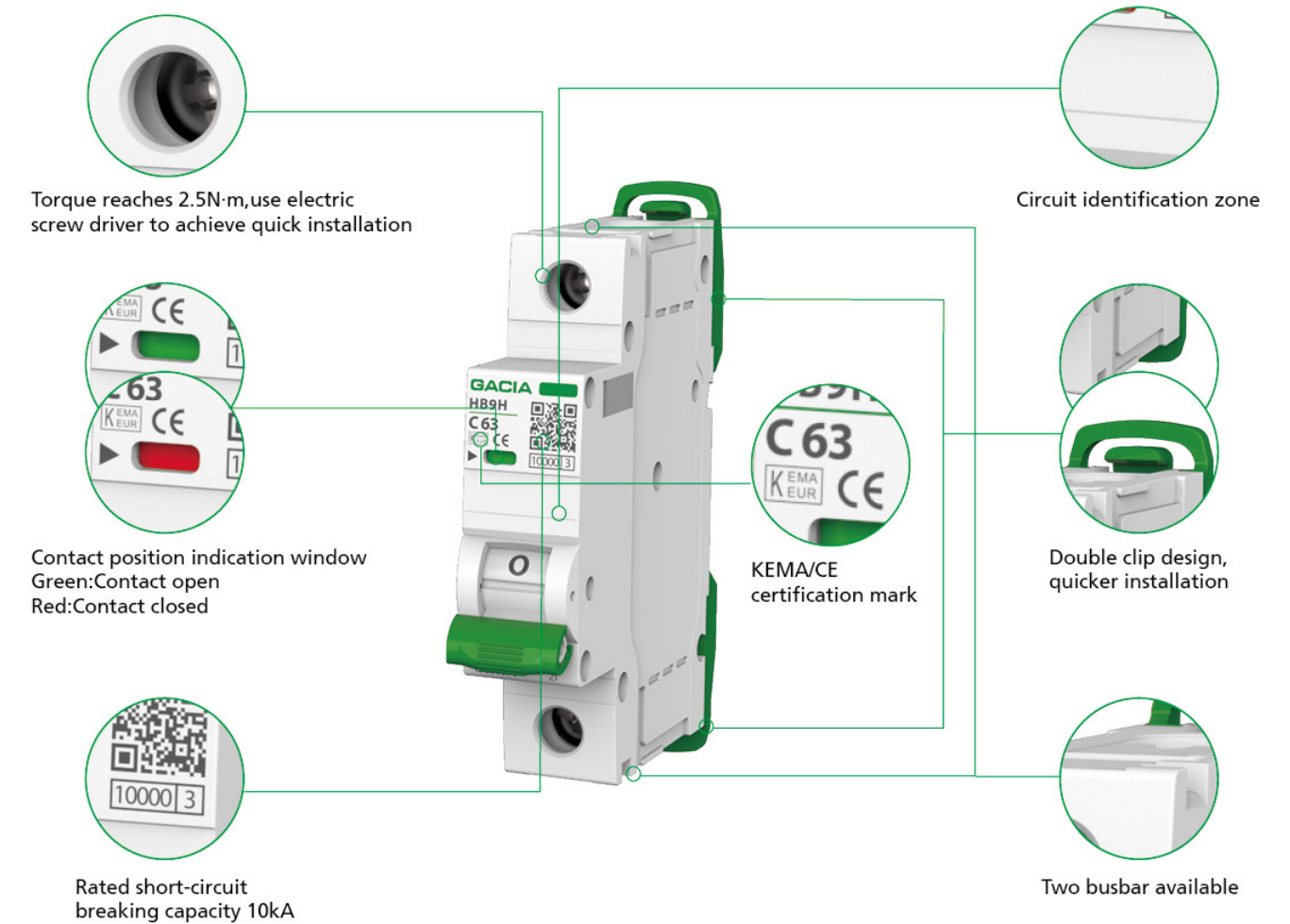
Performance Upgrade

Flame Retardant Materials



H Series

- ◆ Have the strongest competitive abilities: cool appearance, better performance, much lower price.
- ◆ Is fully independent design with three patents.
- ◆ Have the same structure among items of 3kA, 4.5kA, 6kA, 10kA with good compatibility, strong standardization and lower cost.
- ◆ Novel appearance brings strong visual impact, with more functions.
- ◆ Consisting of 4 module systems, conducive to automatic assembly



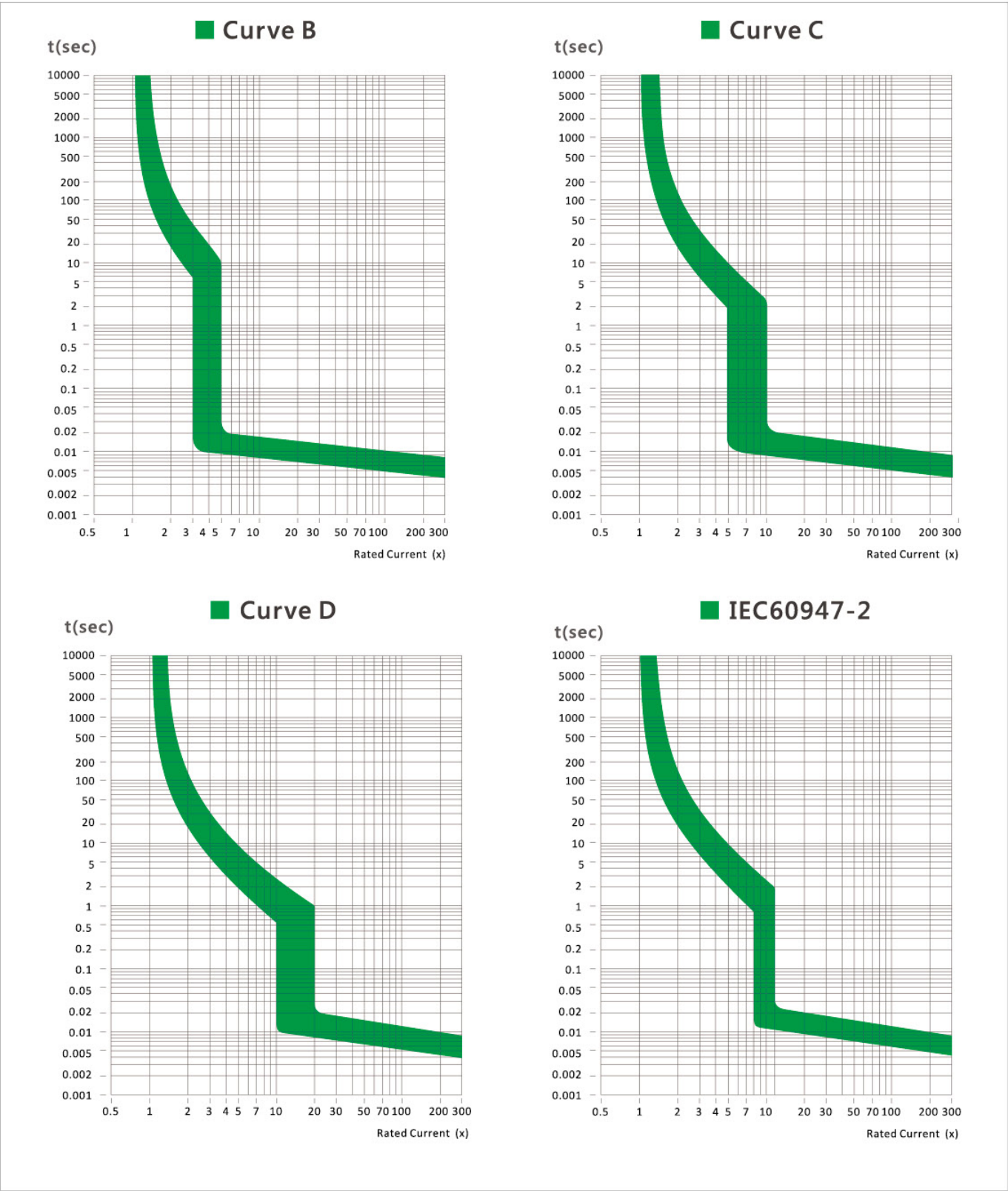
Test	Type	Test current	Initial condition	Limits of tripping or non-tripping time	Result to be obtained	Remarks
a	B, C, D	1,13 I_n	Cold ^a	$t \leq 1h$ (for $I_n \leq 63A$) $t \leq 2h$ (for $I_n > 63A$)	No tripping	
b	B, C, D	1,45 I_n	Immediately following test a	$t < 1h$ (for $I_n \leq 63A$) $t < 2h$ (for $I_n > 63A$)	Tripping	Current steadily increased within 5 s
c	B, C, D	2,55 I_n	Cold ^a	$1s < t < 60s$ (for $I_n \leq 32A$) $1s < t < 120s$ (for $I_n > 32A$)	Tripping	
d	B C D	3 I_n 5 I_n 10 I_n	Cold ^a	$t \leq 0,1s$	No Tripping	Current established by closing an auxiliary switch
e	B C D	5 I_n 10 I_n 20 I_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.

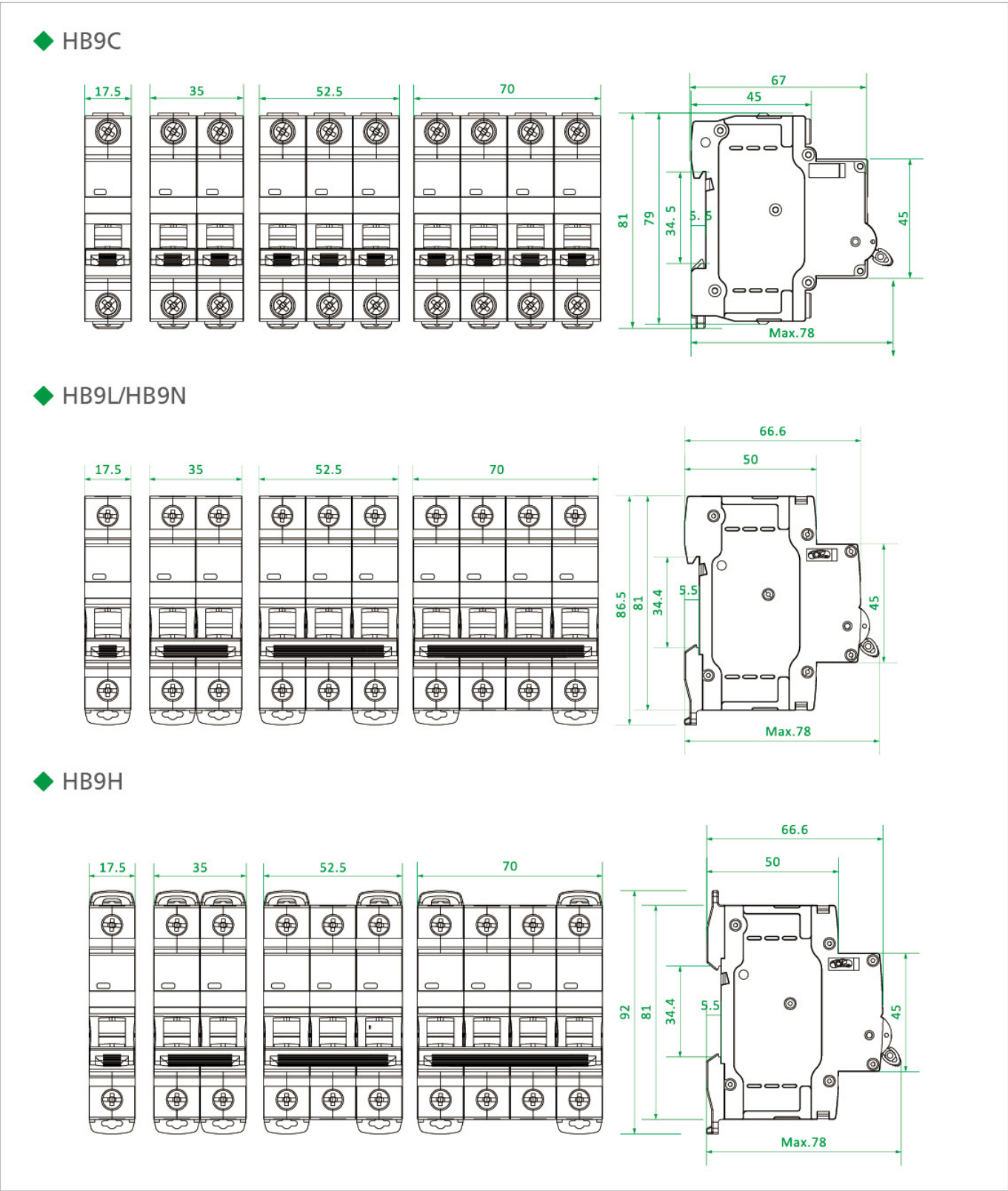
^a The term "cold" means without previous loading, at the reference calibration temperature.

^b 50 I_n for special cases.

Characteristics Curve








Dimensions



Performance
Upgrade

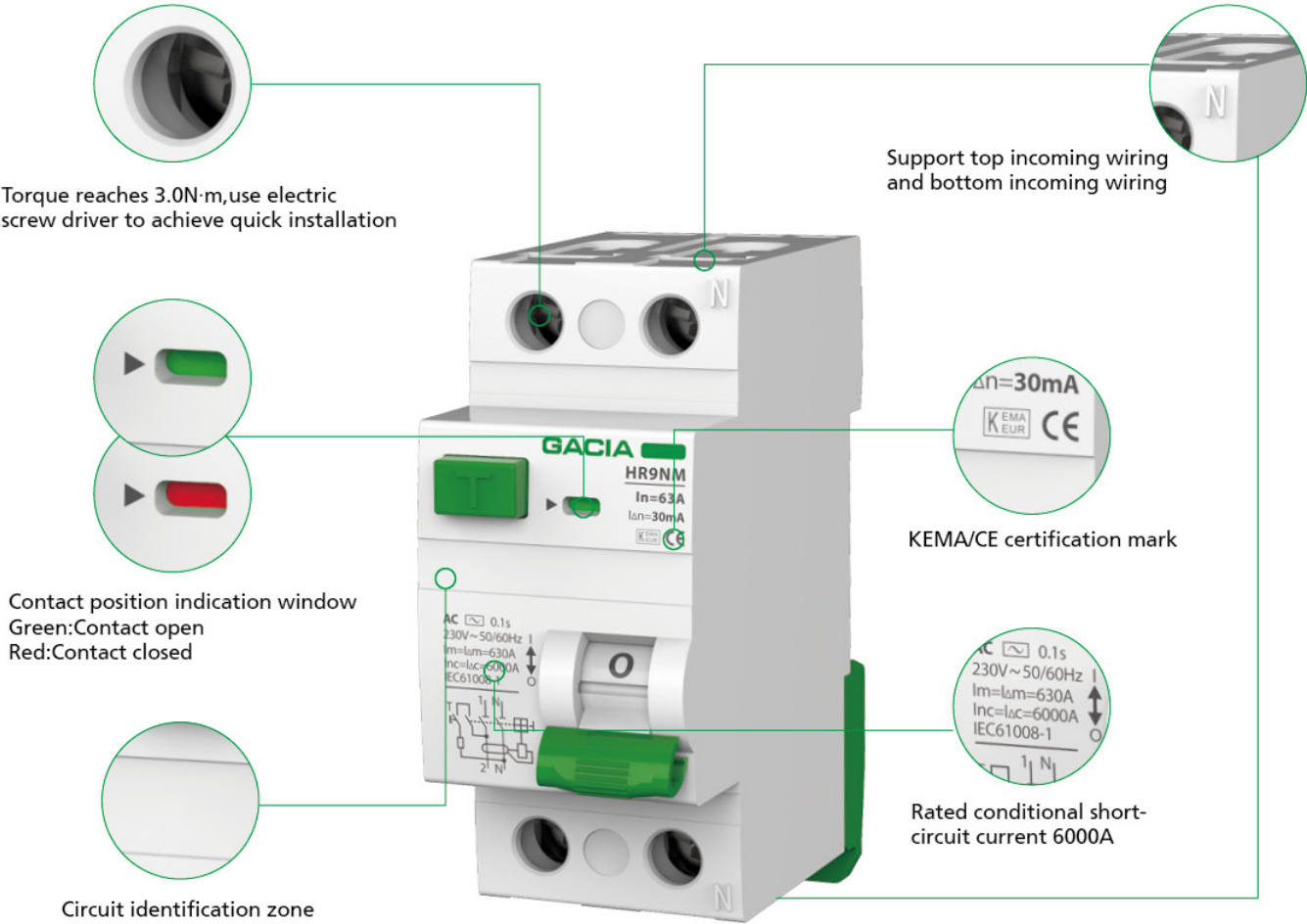
Flame Retardant
Materials



Model	HR9NM	
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Product Standard	IEC/EN 61008-1	
Functions	Leakage Protection, Switch, Isolation	
Certification		
Electrical Features		
Poles	2P, 4P	
Residual current protection type	Electromagnetic/Electronic	
Residual current working type	AC, A, AC+S	
Rated current	I_n	16A, 25A, 40A, 63A
Rated residual current	$I_{\Delta n}$	10mA, 30mA, 100mA, 300mA
Rated voltage	U_e	2P: 230V; 4P: 400V
Insulation voltage	U_i	500V
Rated impulse withstand voltage	U_{imp}	6kV
Dielectric test voltage		2.5kV
Rated frequency		50/60Hz
Rated conditional short-circuit current I_{nc}		6kA
SCPD fuse	 	
Rated residual making and breaking capacity $I_m/I_{\Delta m}$	500 ($\leq 50A$), 630 (63A)	
Pollution degree	2	
Electrical life	2000	
Mechanical life	10000	
Contact position indicator	Yes	
Fault indication	No	
Connection and Installation		
Protection degree	RCCB body	IP20
Protection degree	Installed in distribution box	IP40
Reference temperature for setting of thermal element	30℃	
Ambient temperature (with daily average $\leq 35^{\circ}\text{C}$)	-5~+40℃	
Storage temperature	-25~+70℃	
Maximum altitude	2000m	
Mounting	Din rail 35mm	
Connection	Top and Bottom/Top	
Terminal connection type	Cable/Busbar	
Wire	1-25mm ²	
Rated torque capacity	3.0N·m	

H Series

- ◆ Have the strongest competitive abilities: cool appearance, better performance, much lower price.
- ◆ Is fully independent design with three patents.
- ◆ Have the same structure among items of 3kA, 4.5kA, 6kA, 10kA with good compatibility, strong standardization and lower cost.
- ◆ Novel appearance brings strong visual impact, with more functions.
- ◆ Consisting of 4 module systems, conducive to automatic assembly



Dimensions

◆ HR9NM

