

AT/F Series

Installation Devices

www.gacia.com.cn



GACIA

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GACIA ELECTRICAL APPLIANCE CO., LTD.

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Company Profile

Gacia Electrical Appliance Co., Ltd is an export-oriented high-tech enterprise specializing in R&D, production and sales of various low-voltage circuit breakers. The company was established in August 2002 and is headquartered in Wenzhou. After 20 years of development, it has formed a three-in-one strategic layout of Zhejiang, Jiangxi, and Shanghai. The plant area is 160,000 square meters, the company has 1,200 employees and has an annual output of 100,000,000 poles of MCB, 4,000,000 pcs of RCCB/RCBO, and 300,000 pcs of MCCB.

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. The products are sold best in more than 60 countries and regions in all of the world. Long-term cooperative relations have been established with three enterprises of the world's top 500. The annual R & D investment on new products is not less than 5% of the annual sales, and has won more than 130 national patents, including 12 invention patents, and participated in the formulation of a number of industry standards that applied for the registration of international trademarks in 123 countries and regions. Overseas independent brand agents were set up in 38 countries and more than 80 international product certifications were obtained. The "GACIA" trademark was recognized as the "recommended brand of China's export products by the Ministry of Commerce".

GACIA

Smart Factory

- Make manufacturing more transparent
- Make delivery faster
- Make decisions smarter



Residual Current Circuit Breaker

FR8NM,6kA

- Residual Current Circuit Breaker according to IEC/EN 61008-1
- Electromagnetic type
- Cond. rated short circuit strength I_{nc} 6kA
- 2 and 4-pole versions
- Rated residual current 10, 30, 100, 300 and 500mA
- Rated current up to 100A
- Rated operational voltage 230/400V AC
- AC, A , S and G types



FR8NM residual current circuit breaker is a safety device that quickly breaks an electrical circuit to protect equipment, they are designed to disconnect the conducting wires ("trip") quickly enough to potentially prevent serious injury to humans, and to prevent damage to electrical devices.

They are common in domestic, commercial and industrial application.

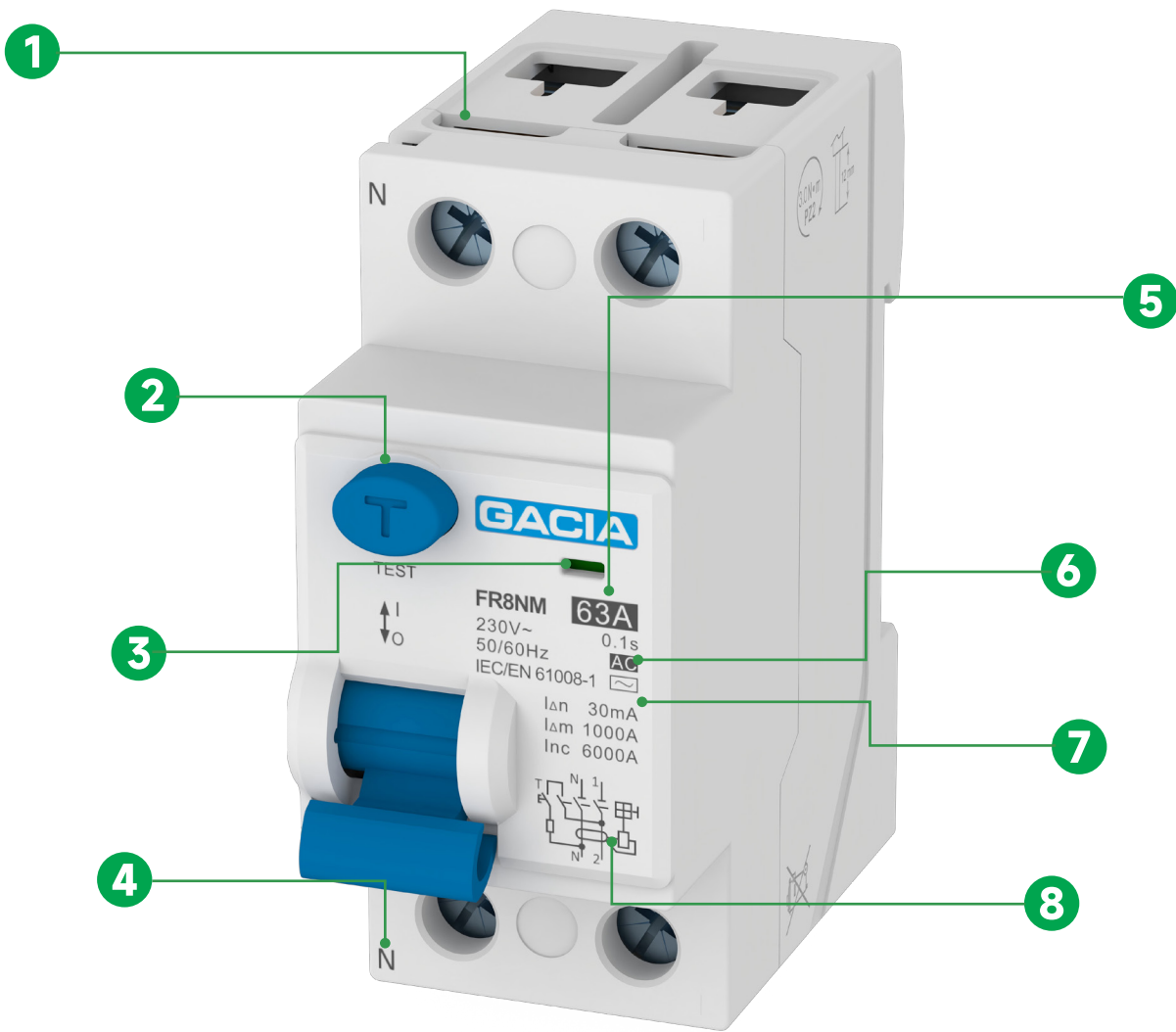
Type Key

F	R	8	N	M	2P	25A	30mA
Product series	Product category	Design code	Conditional short circuit strength	Structure code	Poles	Rated current	Rated residual current
Forward	RCCB	8	6kA	Electromagnetic	2P, 4P	25-100A	10-500mA

Certification Marks



Product Tips



- 1

Busbar interface
- 2

Test button
- 3

Contacts position indication window
- 4

Neutral line interface
- 5

Rated current up to 100A
- 6

Sensitivity to residual current AC
- 7

Variants from 10 to 500mA $I_{\Delta n}$ available
- 8

Electromagnetic circuit diagram

Residual Current Circuit Breaker

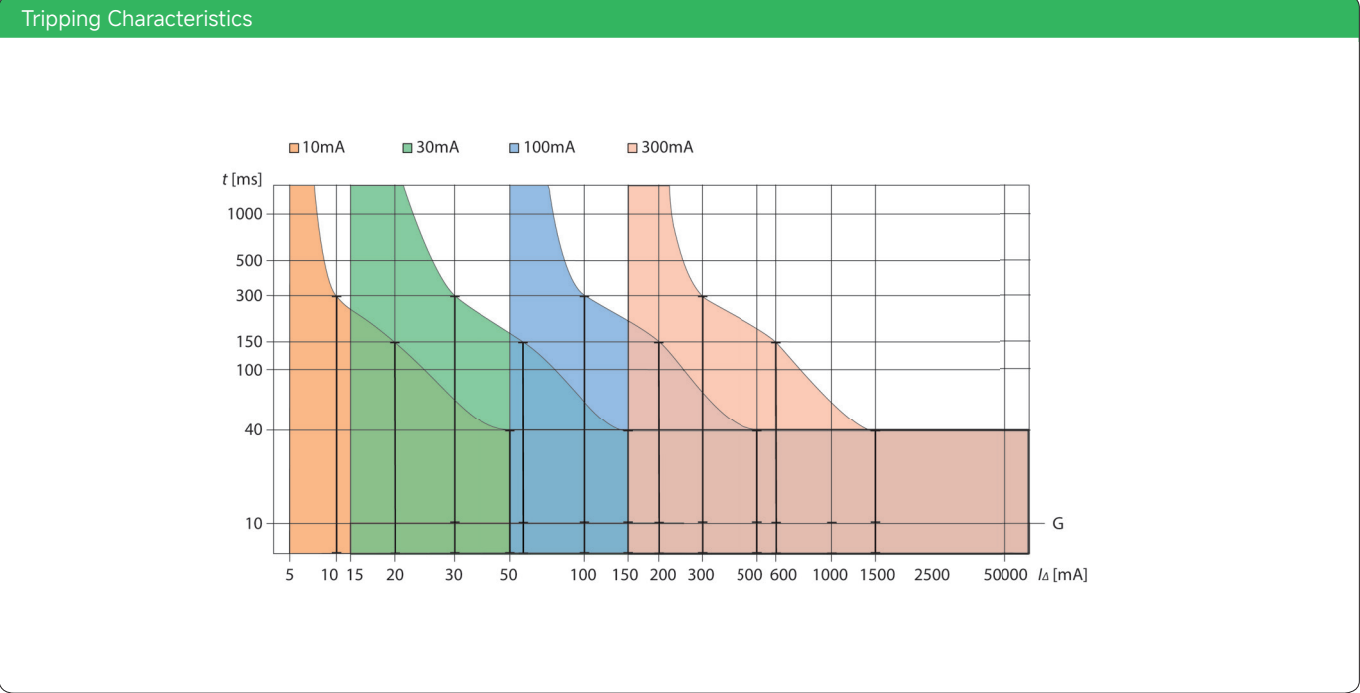
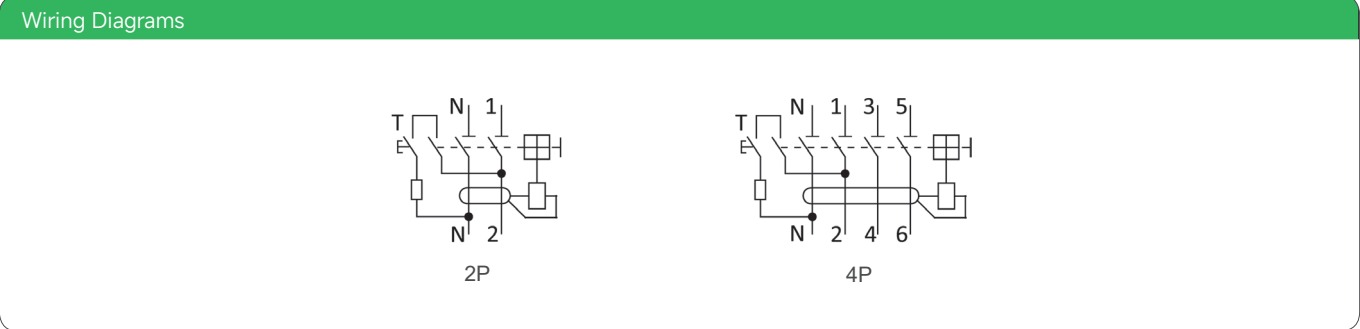
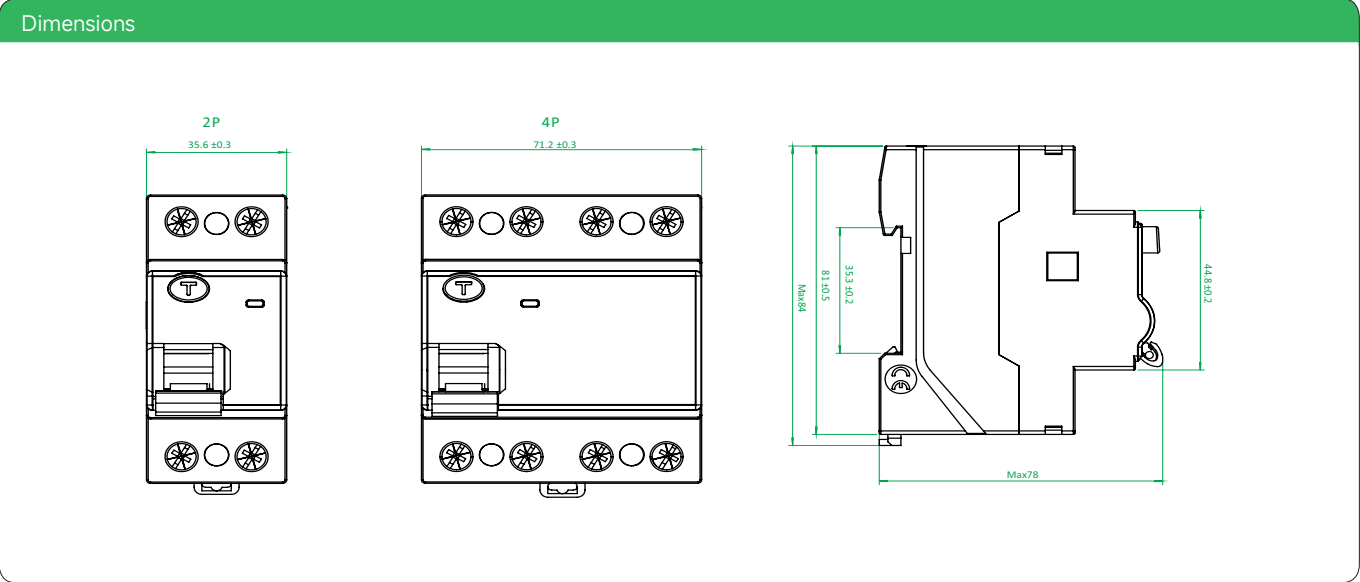
FR8NM,6kA

Technical Data

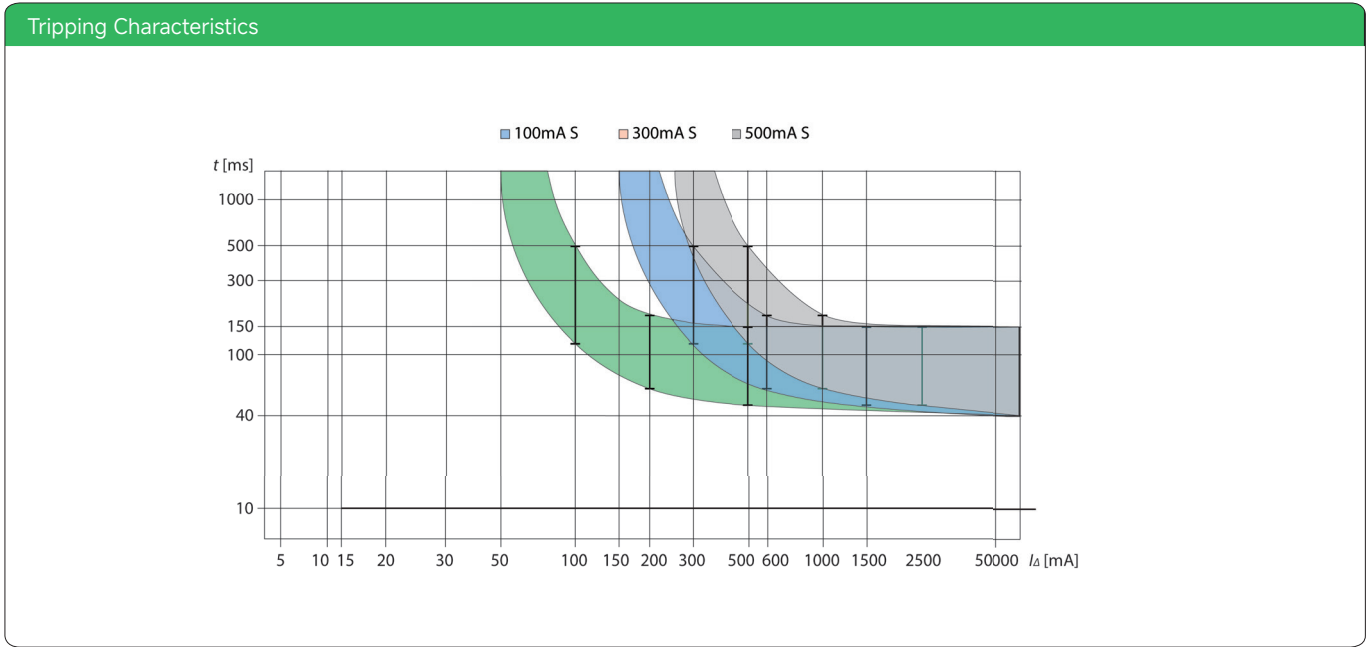
Electrical Features	
International standard	IEC/EN 61008-1
Poles	2P, 4P
Rated current	25, 40, 63, 80, 100A
Rated residual current $I_{\Delta n}$	10, 30, 100, 300, 500mA
Residual current protection type	Electromagnetic
Conditional short circuit strength I_{nc}	6kA
Rated operational voltage U_e	230/400V AC
Min.voltage for RCD function	Independent of voltage
Voltage range of the test button T	150 - 253V AC (2P) / 150 - 440V AC (4P)
Sensitivity to residual current	AC type - AC residual current SI type-residual AC and pulsating DC current Can withstand an 8/20 μ s surge of 3000 A A type - residual AC and pulsating DC current
Time characteristic	AC, A - Undelayed type G - delay (insensitivity) 10 - 300 ms S - delay (insensitivity) 130 - 500 ms
Rated frequency	50/60Hz
Rated insulated voltage U_i	500V AC
Rated impulse withstand voltage U_{imp}	6kV
Dielectric test voltage	2.5kV
Mechanical service life	10000 operation cycles
Electrical service life	4000 operation cycles
Back-up fuse for overload	
$I_n=25A$	max, 25AgG
$I_n=40A$	max, 32AgG
$I_n=63A$	max, 50AgG
$I_n=80A$	max, 80AgG
$I_n=100A$	max, 100AgG
Back-up fuse for short circuit	
$I_n=25A$	max, 63AgG
$I_n=40A$	max, 63AgG
$I_n=63A$	max, 63AgG
$I_n=80A$	max, 80AgG
$I_n=100A$	max, 100AgG
Rated residual making and breaking capacity $I_m / I_{\Delta m}$	
$I_n=25A$	500A
$I_n=40A$	500A
$I_n=63A$	630A
$I_n=80A$	800A
$I_n=100A$	1000A
Line voltage connection	Arbitrary above or below

Installation Parameters	
Degree of protection (IP)	IP20, IP40 (when fitted)
Operating ambient temperature	-25°C ~+70°C
Terminal connection type	Cable/Busbar
Connectable conductor cross section	1-35mm ²
Mounting	IEC/EN 60715 top-hat rail 35mm
Fastening torque of terminals	≤ 63A, 2.5N.m, ≥ 80 A, 3.0N.m,
Pollution degree	2
Altitude	≤ 2000m
Relative humidity	≤ 95%

Technical Data



Technical Data



Power Loss

I_n	I_{Δ}	2P	4P
25A	10mA	3.4W	7.2W
	30mA	3.4W	7.2W
	100mA	3.4W	7.2W
	300mA	3.4W	7.2W
	500mA	3.4W	7.2W
40A	30mA	7.2W	15.3W
	100mA	7.2W	15.3W
	300mA	7.2W	15.3W
	500mA	7.2W	15.3W
63A	30mA	15W	24W
	100mA	15W	24W
	300mA	15W	24W
	500mA	15W	24W