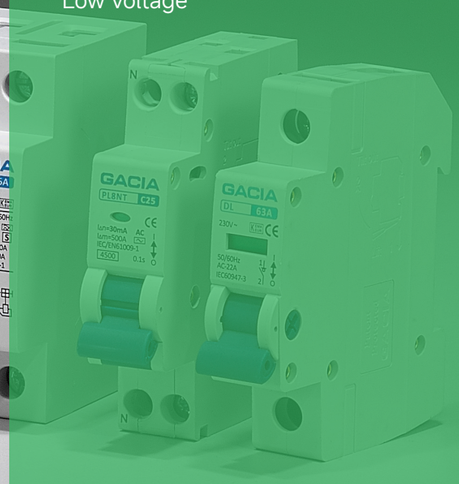
P Series Installation Devices

Low voltage



GACIA ELECTRICAL APPLIANCE CO., LTD.

GACIA

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GACIA

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

ISO9001 ISO14001 ISO45001 CB RoHS

Residual Current Circuit Breaker with Overload Protection

PL8HM,6kA

- Residual Current Circuit Breaker with Overload Protection according to IEC/EN 61009-1
- Electromagnetic type
- Rated short circuit breaking capacity 6kA
- 1+N pole version
- N-pole on the right
- Rated residual current 30, 100, 300mA
- Rated current up to 40A
- 2-module width
- AC and A types

PL8HM residual current circuit breaker are based on combination of residual current device with permanent magnet principle and circuit breaker with thermal overload release and magnetic short circuit current release. It brings the advantage of voltage independent function of the residual current device.

They are common in domestic, commercial and industrial application.

Type Key

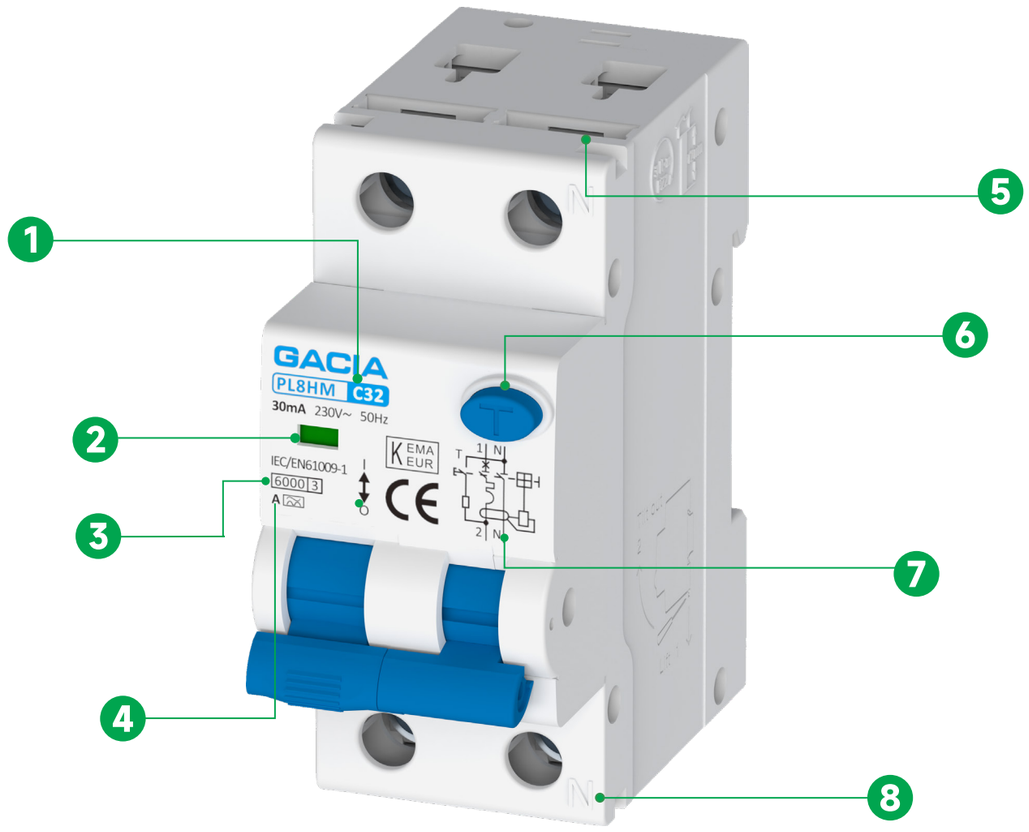
P	L	8	H	M	16A	30mA
Product series	Product category	Design code	Breaking capacity	Structure code	Rated current	Rated residual current
Professional	RCBO	8	6kA	Electromagnetic	6-40A	30-300mA

Certification Marks

Residual Current Circuit Breaker with Overload Protection
PL8HM,6kA

GACIA PL8HM 6kA Residual Current Devices

Product Tips



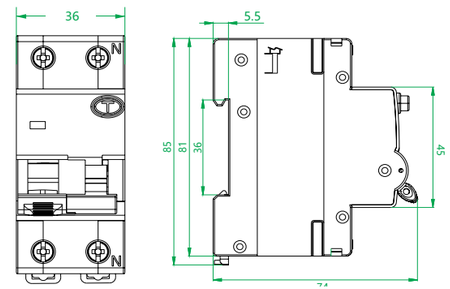
1. Rated current up to 40A
2. Contacts position indication window
3. Rated short circuit breaking capacity 6000A
4. Sensitivity to residual current A
5. Busbar interface
6. Test button
7. Electromagnetic circuit diagram with overload protection
8. Neutral line interface

Technical Data

Electrical Features		
International standard		IEC/EN 61009-1
Poles		1P+N
Tripping characteristics of MCB		B, C
Rated current		6-40A
Rated residual current	$I_{\triangle n}$	30, 100, 300mA
Residual current protection type		Electromagnetic
Rated breaking capacity	I_{cn}	6kA
Rated operational voltage	U_e	230/400V AC
Voltage range of the test button T		195.5 - 253V AC
Sensitivity to residual current		AC type - AC residual current A type - residual AC and pulsating DC current
Rated frequency		50/60Hz
Rated insulated voltage	U_i	400V AC
Rated impulse withstand voltage	U_{imp}	4kV
Dielectric test voltage		2.5kV
Mechanical service life		10000 operation cycles
Electrical service life		4000 operation cycles
Time characteristic of RCD		Undelayed type
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	1-25mm^2
Mounting	IEC/EN 60715 top-hat rail 35mm
Fastening torque of terminals	2-3.0N.m
Pollution degree	2
Reference temperature for setting of thermal element	30°C
Altitude	≤ 2000m
Relative humidity	≤ 95%
Resistance to humidity and heat	Class 2
Installation class	III

Dimensions

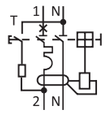


Residual Current Circuit Breaker with Overload Protection

PL8HM,6kA

Technical Data

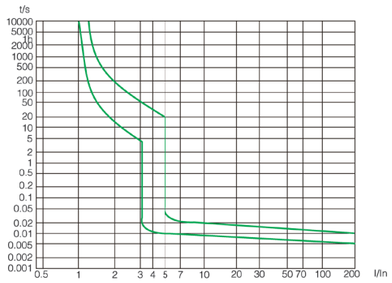
Wiring Diagrams



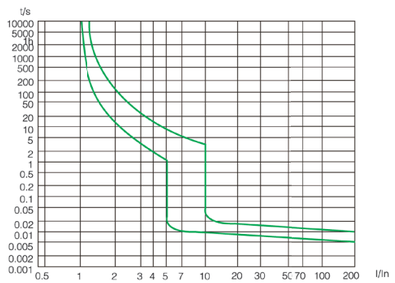
1P+N

Tripping Characteristics of MCB

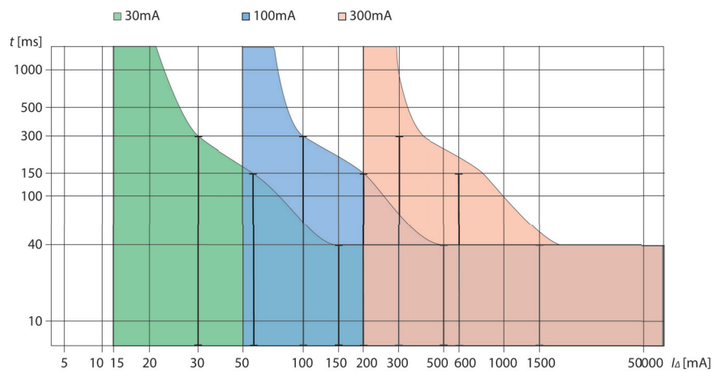
Characteristic B



Characteristic C



Tripping Characteristics of RCD



Technical Data

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	In (T) [A]							
	6 A	10 A	13 A	16 A	20 A	25 A	32 A	40 A
-20	8	13.5	17	20	24.5	29.8	39.5	50.5
-15	7.8	13.3	16.8	19.8	24.3	29.7	39.3	50.4
-10	7.6	13	16.5	19.5	24	29.5	39	50.2
-5	7.3	12.7	16.1	19.2	23.8	29.3	38.8	50
0	7.2	12.5	15.8	19.1	23.7	29.2	38.6	48.8
5	7	12.3	15.5	18.8	23.5	29	38.4	48.6
10	6.8	12.1	15.2	18.6	23.3	28.8	38.2	48.4
15	6.6	12	14.9	18.5	23.1	28.6	38	48.1
20	6.4	11.8	14.7	18.3	22.8	28.4	37.8	47.8
25	6.2	11.5	14.1	18	22.6	28.2	37.5	47
30	6	10	13	16	20	25	32	40
35	6	9.9	12.8	15.7	19.7	24.6	31.5	39.2
40	5.9	9.8	12.5	15.4	19.3	24.3	31.1	38.8
45	5.83	9.8	12.2	15.1	18.8	24	30.8	38.3
50	5.72	9.6	11.7	14.9	18.5	23.8	30.1	38
55	5.65	9.5	11.5	14.7	18.2	23.5	29.5	36.5
60	5.5	9	11.2	14.5	17.8	23	28.5	35
65	5.4	8.6	11	14	17.5	22	27.5	34
70	5.2	8	10.8	13.8	17.3	21.5	27	32.5

Power Loss

In [A]	6 A	10 A	13 A	16 A	20 A	25 A	32 A	40 A
P[W]	1.8	2.5	3.5	4	5	5.8	6.5	7.8