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smart for life

GEYA
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GEYA®
GEYA ELECTRICAL

MCB RCCB RCBO

LOW VOLTAGE ELECTRICAL COMPREHENSIVE CATALOG



01

COMPANY PROFILE

ZHEJIANG GEYA ELECTRICAL CO.,LTD

Zhejiang Geya Electrical Co., Ltd. [hereinafter referred to as: Geya Electrical GEYA. GEYA Electrical was established in February 2007 and is located in Wenzhou City, China. It is a scientific and technological private enterprise integrating R&D, production, sales and service, focusing on the independent research and development of low-voltage electrical appliances and automation control products. After years of operation, the company's annual turnover has exceeded CNY 200 million.

The company's product series involve a variety of low-voltage electrical appliances and automation control products, including miniature circuit breakers, molded case circuit breakers, leakage circuit breakers, isolating switches, contactors, relays, timers, distribution boxes and other products and related accessories . With a wide range of products and a wide range of applications, it is widely recognized and praised by customers at home and abroad. The company currently has a comprehensive and mature online sales platform system. The four major sales regions of the products cover six continents in the world. More than 40 foreign companies choose and trust GEYA Electrical products.

Since the establishment of the company, GEYA Electrical has always adhered to the corporate motto of "Getting what you need, knowing what you are doing", adhering to the development concept of quality first and continuous innovation, and adhering to the product concept of high standards and high quality. Since then, a number of national patents have been obtained, and the GEYA brand has been deployed in most countries around the world. In addition, according to industry standards and certification requirements, the company has obtained authoritative EU certifications including CCC, CE, SAA, SEMKO, TUV, etc., and its products fully comply with European and American product quality standards. In addition to providing OEM and ODM services to global customers, GEYA Electrical has established cooperative relationships with many internationally renowned brand companies. At the same time, the company's experienced sales team is gradually promoting GEYA Electric's products to larger domestic and overseas markets, making more contributions to the world's low-voltage electrical appliances and automation control product industries and customers.



GEYA

GEYA Electrical sincerely welcomes customers to act as agents to promote the GEYA brand in domestic and overseas markets. We will provide our customers with better products, better services and more competitive sales policies.

GEYA Electrical looks forward to creating a better future with you!

Founded in
2007 Year

Sales Revenue
200 million RMB

Employees
300 +



Product Catalog Index

MCB

GYM10
3/4.5/6KA
Page 01/02


GYM10H-DC
4.5KA
Page 03/04


GYM9H
6/10KA
Page 05/06


GYM9H-125
10KA
Page 07/08


GYM9H-DC
6KA
Page 09/10


GYM9H-Z
6KA
Page 11/12


GYM9N
3/4.5/6KA
Page 13/14


GYM9H-63-zw
6KA
Page 15/16


GYM9H-125-zw
6KA
Page 17/18


RCCB

GYL8
0.03A、0.1A、0.3A
Page 15/16


GYL10
0.03A、0.1A、0.3A
Page 17/18


GYL9
0.03A、0.1A、0.3A
Page 19/20


GYL9-EV
0.03A、0.1A、0.3A
Page 21/22


GYL9-F/B
0.03A、0.1A、0.3A
Page 23/24


RCBO

GYR9N
Page 29/30


GYR9NE-F/B
Page 31/32


GYR9LE
Page 33/34


GYR10
Page 35/36


AFDD

GYR9NE-ARC
0.03A
Page 37/38


Isolator

GYH8
Page 39/40


Automatic reclosing

GRD9L-C/D
Controlled by Switch
Page 41/42


GRD9L-R
Auto Rexlosing
Page 43/44


GRD9L-S
RS485
Page 45/46


GRD9L-W
WIFI
Page 47/48


WIFI MCB

GWS9
TUYA wifi
Page 51/52


GWS9-W1
TUYA wifi
53/54页


IoT MCB

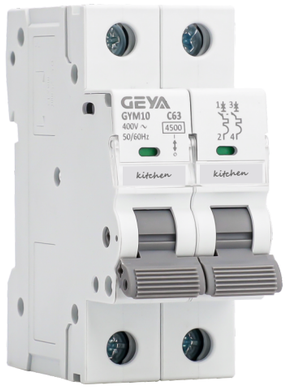
GRD9S-F100
Page 55-64


3/4.5/6KA Breaking capacity

Miniature Circuit Breaker

IEC/EN 60898-1, GB/T 10963.1.

GYM10



GYM10 miniature circuit breaker is suitable for AC 50/60Hz rated voltage 240/415V, rated current to 63A line, for overload and short circuit protection, can also be used as the line infrequent operation conversion.
Circuit breakers are suitable for industrial, commercial, high-rise and residential and other places.

- Standard: RoHS 2.0
- Double busbar, Single Busbar Wiring Function Is Optional
- With Transparent Identification Function
- Contact Position Indication Function
- Wiring Capacity 0.5-25mm²





Product Model And Implication

GYM10	□
Product model	
MCB	T: Single busbar H: Double flow discharge

Technical Specification

Rated current (In):	1、2、3、4、6、10、16、20、25、32、40、50、63A	Rated impulse withstand voltage (Uimp):	4kV
Rated voltage (Ue):	240/415V~;230/400V~	Mechanical life:	20000次
Rated Frequency:	50/60Hz	Electrical life:	10000次
Tripping Curves:	B、C、D	Tightening moment:	2.0N.m
Rated short-circuit capacity:	3000A;4500A;6000A	Class of protection:	Ip20
Poles:	1P、2P、3P、4P		
Rated insulation voltage (Ui):	500V		

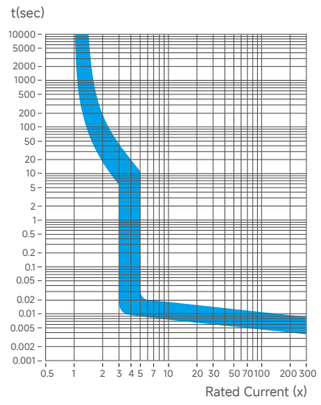
Temperature Compensation

When the ambient temperature is not the baseline temperature of 30°C, the reference Correction coefficientis as follows:

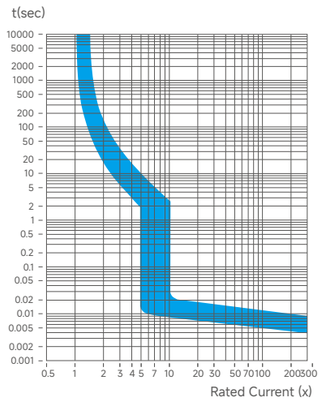
Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Factor	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	0.85

Tripping Curves

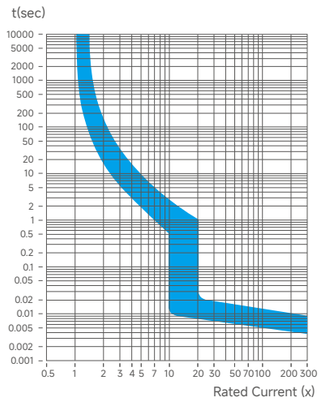
Curve B



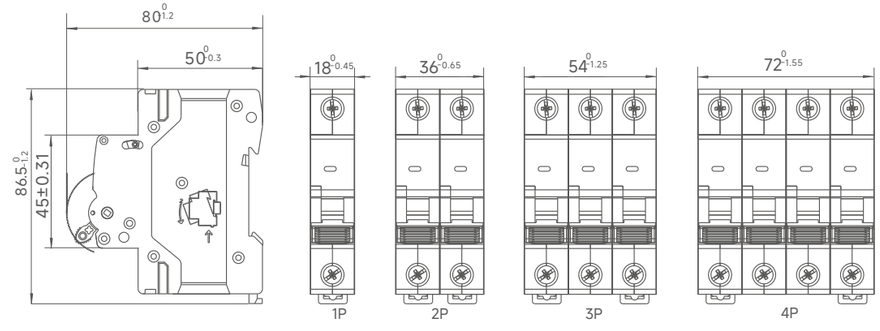
Curve C



Curve D



Outline Overall And Installing Dimensions



GYM10H-DC
Miniature Circuit Breaker

4.5KA Breaking capacity

Miniature Circuit Breaker

IEC/EN 60947-2, GB/T 14048.2

CE

GYM10H-DC



The GYM10H DC circuit breaker is designed for DC circuits with rated voltage up to 1000V and rated current up to 63A, providing overload and short-circuit protection, and can also be used for infrequent circuit switching operations.

This breaker is suitable for DC system applications such as telecommunications and photovoltaic (PV) systems.

- Compliant with environmental RoHS 2.0
- Dual flow discharge wiring function
- Contact position indication function
- Wiring capacity: (0.5-25) mm²





Product Model And Implication

GYM10H	-	DC
Product model		
MCB		Direct-Current

Technical Specification

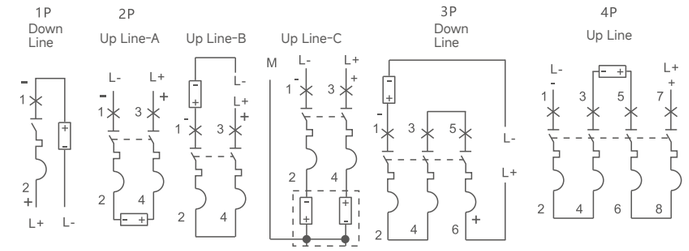
- Rated Current(In): 6、10、16、20、25、32、40、50、63A
- Rated Voltage(Ue): 1P:250VDC;2P:500VDC; 3P:750VDC;4P:1000VDC
- Rated insulation voltage(Ui): 500V
- Rated impulse withstand voltage (Uimp): 4KV
- Tripping Curves: B:(6±20%)In、C:(8.5±20%)In、D:(12±20%)In
- Rated short-circuit capacity: 4.5kA
- Poles: 1P、2P、3P、4P
- Mechanical life: 20000 times
- Electrical life: 4000 times
- Tightening moment: 2.0N.m
- Class of protection: IP20

Temperature Compensation

When the ambient temperature is not the baseline temperature of 30°C, the reference Correction coefficientis as follows:

Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Factor	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	0.85

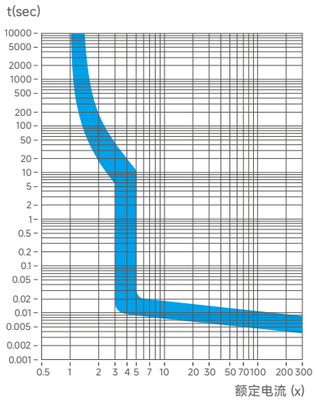
Wiring diagram



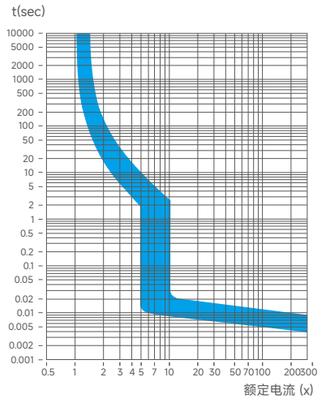
Remark:
1 L+:Positive Pole, L-:Negative Pole;
2 +:MCB of positive pole, -: MCB of negative pole;
3 —[+ -]— : Load;
4 DC power supply usually "L-" ground lead, Neutral pole of positive and negative power supply system"M"ground lead;

Tripping Curves

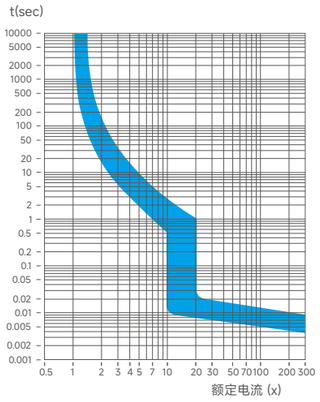
B Type



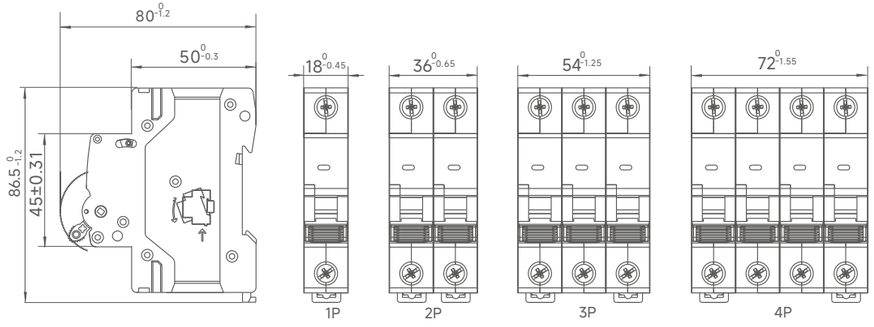
C Type



D Type



Outline Overall And Installing Dimensions



GYM9H
Miniature Circuit Breaker

6/10KA Breaking capacity

Miniature Circuit Breaker

IEC/EN 60898-1, GB/T 10963.1

CE CB NF SAA

GYM9（H）



The GYM9H miniature circuit breaker (MCB) is designed for AC 50/60Hz circuits with rated voltage 240/415V and rated current up to 63A, providing reliable overload and short-circuit protection. It also serves for infrequent circuit switching operations.

This breaker is suitable for various installations including industrial facilities, commercial buildings, high-rise structures, and residential applications.

- RoHS 2.0 compliant
- Dual busbar connection
- Transparent ID window
- Contact position indicator
- Wire size:（0.5-25）mm²
- TH35-7.5din-rail-mounting







Product Model And Implication

GYM9	H
Product model	
MCB	H: 10000 None: 6000

Technical Specification

Rated current (In):	1、2、3、4、6、10、16、20、25、32、40、50、63A	Rated frequency:	50/60Hz
Rated voltage (Ue):	240/415V~;230/400V~	Rated short-circuit capacity:	6kA、10kA
Rated insulation voltage (Ui):	500V	Mechanical life:	20000 times
Rated impulse withstand voltage (Uimp):	4kA	Electrical life:	10000 times
Number of poles:	1P、2P、3P、4P	Tightening moment:	2.0N.m
Tripping curve:	B、C、D	Class of protection:	IP20

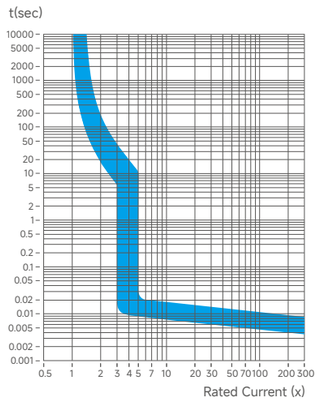
Temperature Compensation

When the ambient temperature is not the baseline temperature of 30°C, the reference Correction coefficientis as follows:

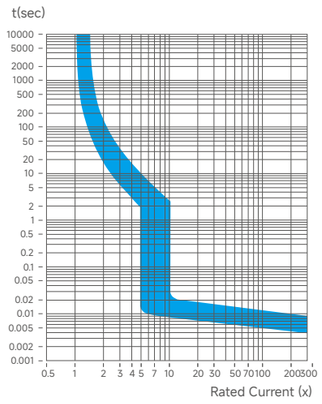
Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Factor	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	0.85

Tripping Curves

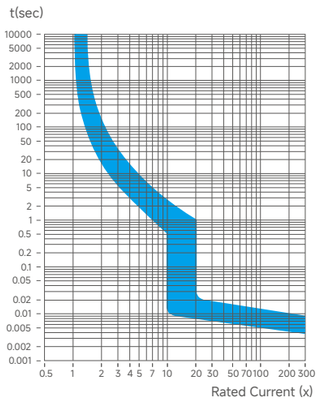
Curve B



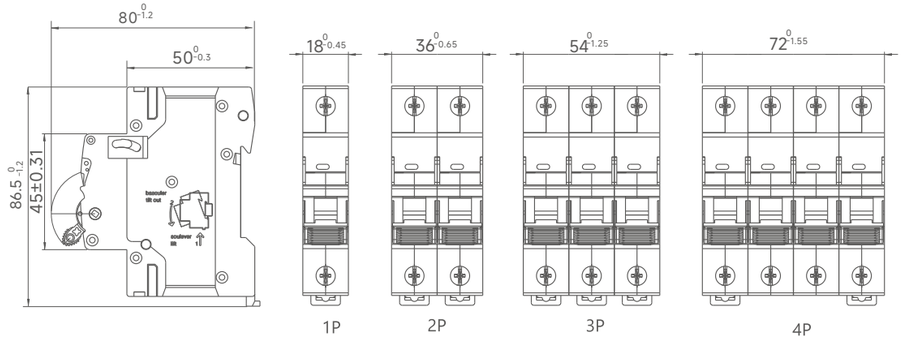
Curve C



Curve D



Outline Overall And Installing Dimensions



10KA
Breaking capacity

Miniature Circuit Breaker

IEC/EN 60947-2、GB/T 14048.2

GYM9H-125



GYM9H-125 Miniature Circuit Breaker is designed for circuits with AC 50/60Hz, rated voltage of 240/415V, and rated current up to 63A. It provides overload and short-circuit protection and is suitable for infrequent switching operations of circuits under normal conditions.

This circuit breaker is widely applicable in industrial, commercial, high-rise buildings, and residential installations.

- RoHS 2.0 compliant
- Dual busbar wiring function
- Contact position indicator
- Wiring Capacity 6-50mm²





Product Model And Implication

GYM9H	125
Product model	
MCB	125A

Technical Specification

Rated Current(In):	80、100、125	Rated short-circuit capacity:	10000A
Rated Voltage(Ue):	240/415V~;230/400V	Rated insulation voltage (Ui):	500V
Rated Frequency:	50/60Hz	Rated impulse withstand voltage (Uimp):	4KV
Poles:	1P、2P、3P、4P	Mechanical life:	20000 times
Tripping Curves:	B、C、D	Electrical life:	10000 times

Performance Characteristic

Tripping Curves	Current（A）	Initial Condition	Time(30°C)	Result
B、C、D	1.13In	Cold state	t≥1h(In≤63),t≥2h(63<In≤125)	No tripping
	1.45In	Thermal state	t≥1h(In≤63),t≥2h(63<In≤125)	Tripping
	2.55In	Cold state	1s<t<120s	Tripping

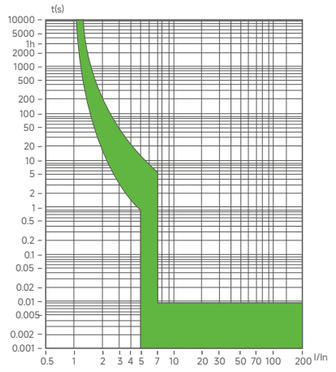
Temperature Compensation

When the ambient temperature is not the baseline temperature of 30°C, the reference Correction coefficientis as follows:

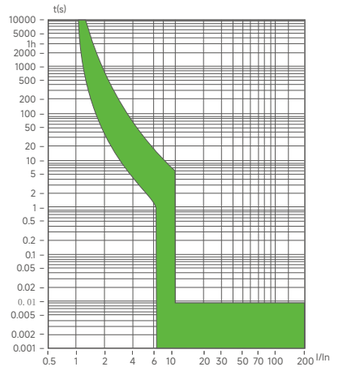
Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Factor	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	0.85

Tripping Curves

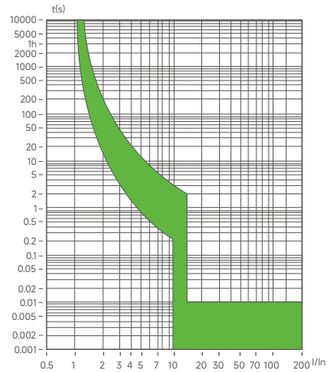
Curve B



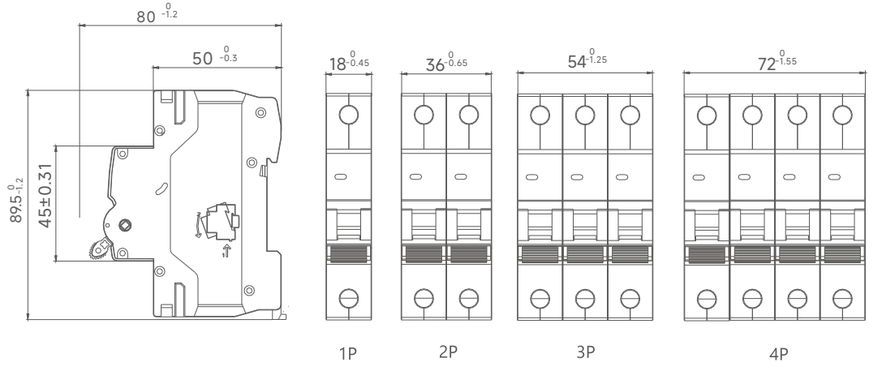
Curve C



Curve D



Outline Overall And Installing Dimensions



6KA
Breaking capacity

Miniature Circuit Breaker

IEC/EN 60947-2 GB/T 14048.2

CE CB

GYM9H DC



GYM9H DC Circuit Breaker is designed for DC circuits with a rated voltage up to 1000V and a rated current up to 63A. It provides overload and short-circuit protection and can also be used for infrequent switching operations of circuits.
This circuit breaker is suitable for DC system applications, such as communications and photovoltaic (PV) systems.

- RoHS 2.0 compliant
- Dual busbar wiring function
- Transparent marking feature
- Contact position indicator
- Wire capacity: 0.5-25mm²



Product Model And Implication

GYM9H	-	DC
Product model		
MCB		Direct-Current

Technical Specification

- Rated Current(In): 1-63A
- Rated Voltage(Ue): 1P:250VDC;2P:500VDC; 3P:750VDC;4P:1000VDC
- Tripping Curves: B、C
- Rated insulation voltage (Ui) 500V
- Rated short-circuit capacity: 6kA
- Poles: 1P、2P、3P、4P
- Mechanical Life: 20000 times
- Electrical Life: 4000 times
- Tightening moment: 2.0N.m
- Class of protection: IP20

Temperature Compensation

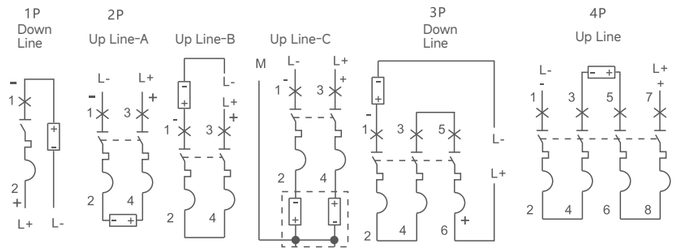
When the ambient temperature is not the baseline temperature of 30°C, the reference Correction coefficientis as follows:

Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Factor	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	0.85

Performance Characteristic

Tripping Curves	Current（A）	Initial Condition	Time(30°C)	Result
B、C、D	1.13In	Cold state	t≥1h(In≤63),t≥2h(63<In≤125)	No tripping
	1.45In	Thermal state	t≥1h(In≤63),t≥2h(63<In≤125)	Tripping
	2.55In	Cold state	1s<t<120s	Tripping

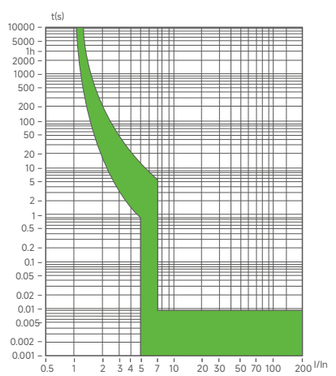
Wiring diagram



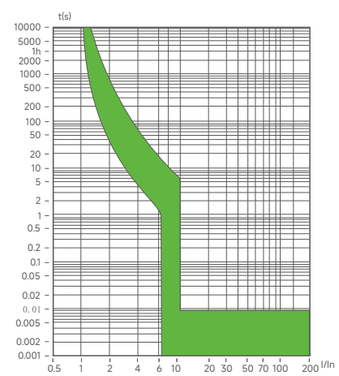
Remark:
1 L+:Positive Pole, L-:Negative Pole;
2 +:MCB of positive pole，-: MCB of negative pole;
3 —[+ -]— : Load;
4 DC power supply usually “L-” ground lead, Neutral pole of positive and negative power supply system“M”ground lead;

Tripping Curves

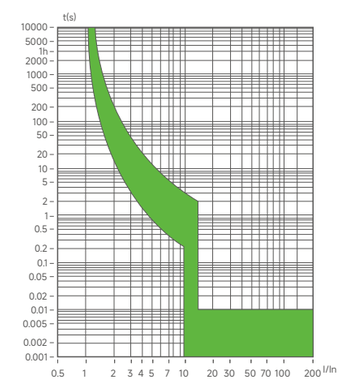
B Type：6In±20%



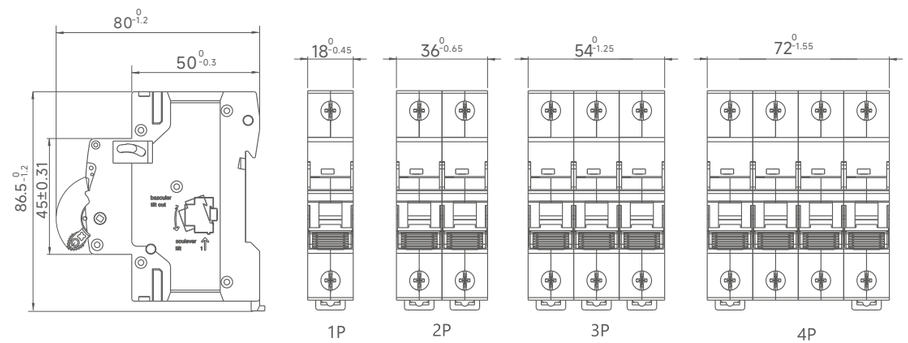
C Type：8.5In±20%



D Type：12In±20%



Outline Overall And Installing Dimensions



6KA
Breaking capacity

Miniature Circuit Breaker

IEC/EN 60947-2 GB/T 14048.2

CE CB

GYM9H-Z AC/DC



GYM9H-Z Miniature Circuit Breaker is designed for both AC and DC circuits:
AC applications: 50/60Hz, rated voltage 230/400V, rated current up to 63A.
DC applications: Rated voltage 220V, rated current up to 63A.
It provides overload and short-circuit protection and is suitable for infrequent switching operations of circuits under normal conditions.
This circuit breaker is widely applicable in industrial, commercial, high-rise buildings, and residential installations.

- RoHS 2.0 compliant
- Double Sink Flow Bar Wiring
- With Transparent Identification Function
- Contact Position Indication Function
- Wiring Capacity 0.5-25mm²





Product Model And Implication

GYM9H	-	Z
Product model		
MCB		AC/DC

Technical Specification

- Rated Current (In): 1、2、3、4、6、10、16、20、25、32、40、50、63A
- Rated Voltage (Ue): 1P:230/400VAC，150VDC;2P:230/400VAC，300VDC; 3P:230/400VAC，450VDC;4P:230/400VAC，600VDC.
- Tripping Curves: B:(6±20%)In、C:(8.5±20%)In、D:(12±20%)In
- Rated short-circuit capacity: 6kA
- Poles: 1P、2P、3P、4P
- Mechanical Life: 20000 times
- Electrical Life: 10000 times
- Rated insulation voltage (Ui): 500V
- Rated impulse withstand voltage (Uimp): 4KV
- Tightening moment: 2.0N.m
- Class of protection: Ip20

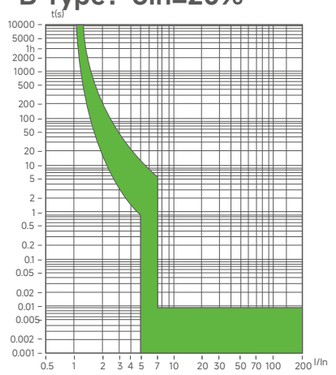
Temperature Compensation

When the ambient temperature is not the baseline temperature of 30°C, the reference Correction coefficientis as follows:

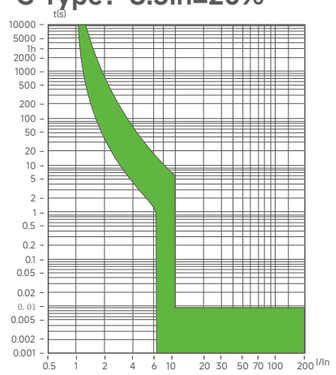
Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Factor	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	0.85

Tripping Curves

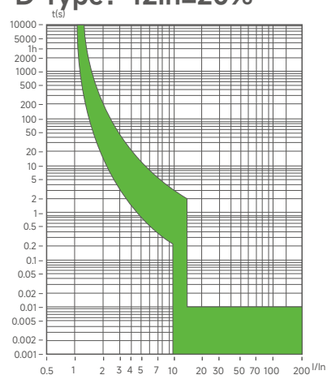
B Type: 6In±20%



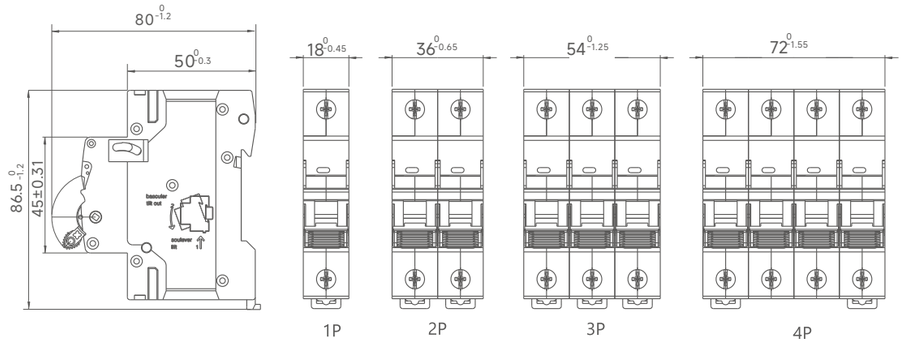
C Type: 8.5In±20%



D Type: 12In±20%



Outline Overall And Installing Dimensions



3/4.5KA
Breaking capacity

Miniature Circuit Breaker

IEC/EN 60898-1、GB/T 10963.1

CE CB

GYM9N



GYM9N miniature circuit breaker is mainly used for overload and short circuit protection in AC 50/60Hz, rated working voltage up to 230V, and rated current up to 40A lines, and can also be used for infrequent operation and conversion of lines.Suitable for various places such as industry, commerce, high-rise buildings, and residential buildings

- RoHS 2.0 Compliant
- Connect the N line first and then disconnect it
- Contact Position Indicator
- Compact 18mm Width Design
- Wiring Capacity 0.5-10mm²







Product Model And Implication

GYM9	N
Product model	
MCB	With N Poles

Technical Specification

- Rated Current (In): 1、2、3、4、6、10、16、20、25、32、40A
- Rated Voltage (Ue): 230V~
- Rated Frequency: 50/60Hz
- Tripping Curves: B、C、D
- Rated short-circuit capacity: 3/4.5kA
- Poles: 1P+N
- Mechanical Life: 20000 times
- Electrical Life: 4000 times
- Rated insulation voltage (Ui): 500V
- Rated impulse withstand voltage (Uimp): 4KV
- Tightening moment: 2.0N.m
- Class of protection: Ip20

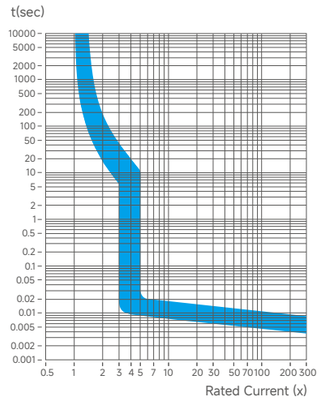
Temperature Compensation

When the ambient temperature is not the baseline temperature of 30°C, the reference Correction coefficientis as follows:

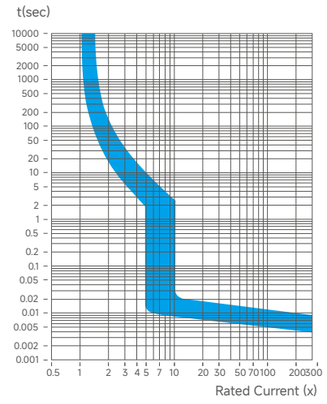
Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Factor	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	0.85

Tripping Curves

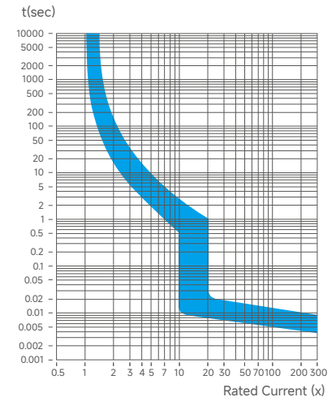
Curve B



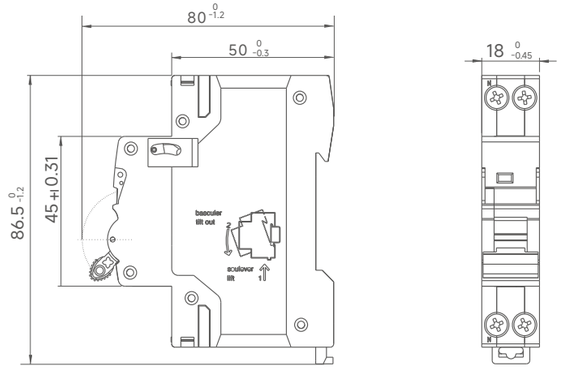
Curve C



Curve D



Outline Overall And Installing Dimensions



10KA Breaking Capacity

DC Circuit Breaker

Compliant with standards: IEC/EN 60947-2 GB/T 14048.2

GYM9H-63-zw



The GYM9H-63-zw DC circuit breaker is suitable for DC lines with a rated voltage up to 1200V and a rated current up to 63A. It is used for overload and short-circuit protection, and can also be used for infrequent operation and conversion of lines. It is applicable to DC system application scenarios such as communications and photovoltaics.

- Compliant with RoHS 2.0 environmental standards
- Built-in shorting bar connection
- DC non-polarity
- Contact position indication function
- Wiring capacity: (0.5-16)mm²



Product Model and Its Meanings

GYM9H-63-	zw
Product Model	
Miniature Circuit Breaker (MCB)	Non-polar DC

Technical Parameters

Technical Parameters	Parameter Value
Rated Current (In)	1、2、3、4、6、10、16、20、25、32、40、50、63A
Rated Voltage (Ue)	1P:300VDC;2P:600VDC;3P:900VDC;4P:1200VDC
Rated Insulation Voltage (Ui)	1200V
Number of Poles	1P、2P、3P、4P
Tripping Curve	B、C、D
Breaking Capacity	6kA、10kA
Mechanical Life	20000次
Electrical Life	1500次
Tightening Torque	2.0N.m
Protection Class	Ip20
Mounting Method	TH35-7.5 Type Standard Guide Rail

Temperature Compensation

When the ambient temperature is not the reference temperature of 30°C, the reference correction coefficients are as follows:

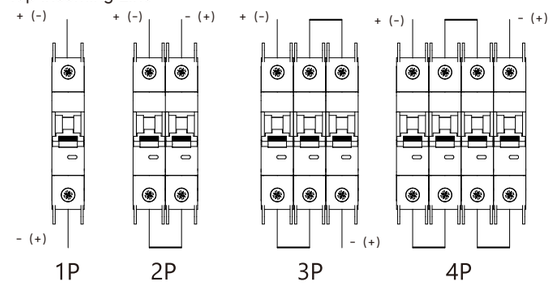
Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Coefficient	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	0.85

Tripping Characteristics

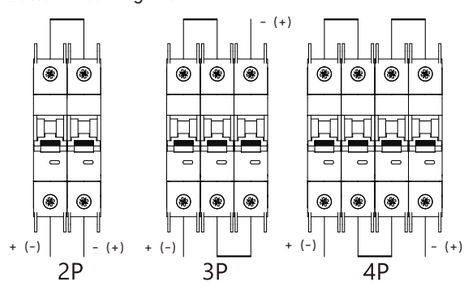
Tripping Type	Current (A)	Initial state	Start Time	Expected Result	Reference Temperature
B、C、D	1.05In	Cold state	t≥1h(In≤63)	No tripping	30°C
	1.3In	Hot state	t≤1h(In≤63)	Tripping	
	2.55In	Cold state	1s<t<120s	Tripping	

Wiring Diagram

Top Incoming Line

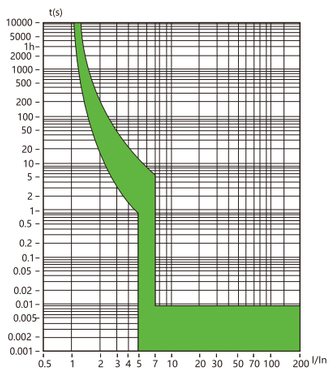


Bottom incoming line

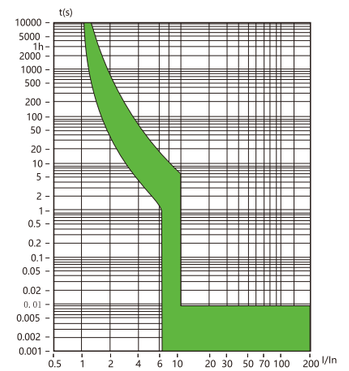


Tripping Curve

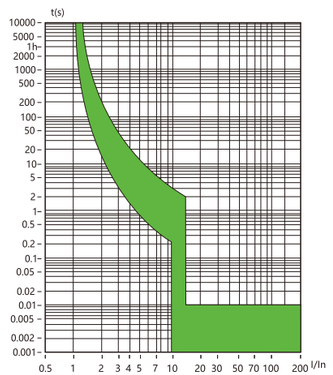
Type B: 6In±20%



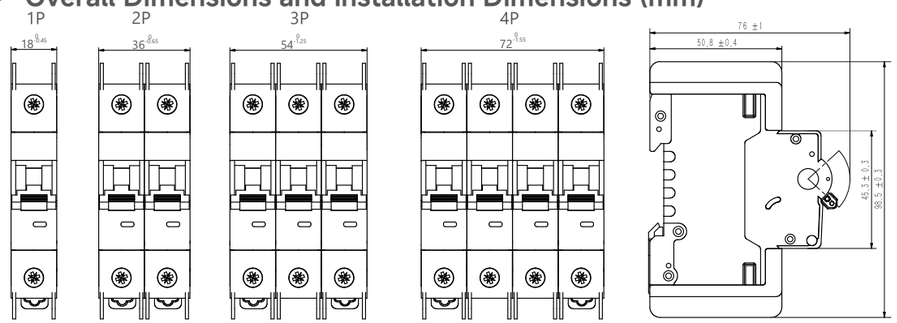
Type C: 8.5In±20%



Type D: 12In±20%



Overall Dimensions and Installation Dimensions (mm)



10KA Breaking Capacity

DC Circuit Breaker

Compliant with standards: IEC/EN 60947-2 GB/T 14048.2

GYM9H-125-zw



The GYM9H-125-zw DC circuit breaker is suitable for DC lines with a rated voltage up to 1000V and a rated current up to 125A. It is used for overload and short-circuit protection, and can also be used for infrequent operation and conversion of lines. It is applicable to DC system application scenarios such as communications and photovoltaics.

- Compliant with RoHS 2.0 environmental standards
- DC non-polarity
- Contact position indication function
- Wiring capacity: (0.5-16)mm²





Product Model and Its Meanings

GYM9H-125-	zw
Product Model	
Miniature Circuit Breaker (MCB)	Non-polar DC

Technical Parameters

Technical Parameters	Parameter Value
Rated Current (In)	63、80、100、125A
Rated Voltage (Ue)	1P:250VDC;2P:500VDC;3P:750VDC;4P:1000VDC
Rated Insulation Voltage (Ui)	1000V
Number of Poles	1P、2P、3P、4P
Tripping Curve	B、C、D
Breaking Capacity	10kA
Mechanical Life	20000次
Electrical Life	1500次
Tightening Torque	2.0N.m
Protection Class	Ip20
Mounting Method	TH35-7.5 Type Standard Guide Rail

Temperature Compensation

When the ambient temperature is not the reference temperature of 30°C, the reference correction coefficients are as follows:

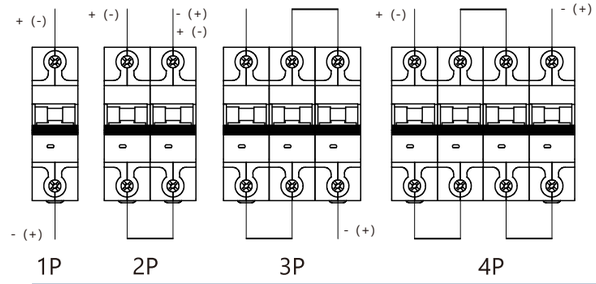
Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Coefficient	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	0.85

Tripping Characteristics

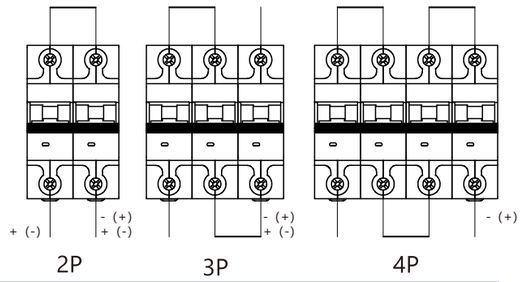
Tripping Type	Current (A)	Initial state	Start Time	Expected Result	Reference Temperature
B、C、D	1.05In	Cold state	t≥1h(In≤63),t≥2h(63<In≤125)	No tripping	30°C
	1.3In	Hot state	t≤1h(In≤63),t≤2h(63<In≤125)	Tripping	
	2.55In	Cold state	1s<t<120s	Tripping	

Wiring Diagram

Top Incoming Line

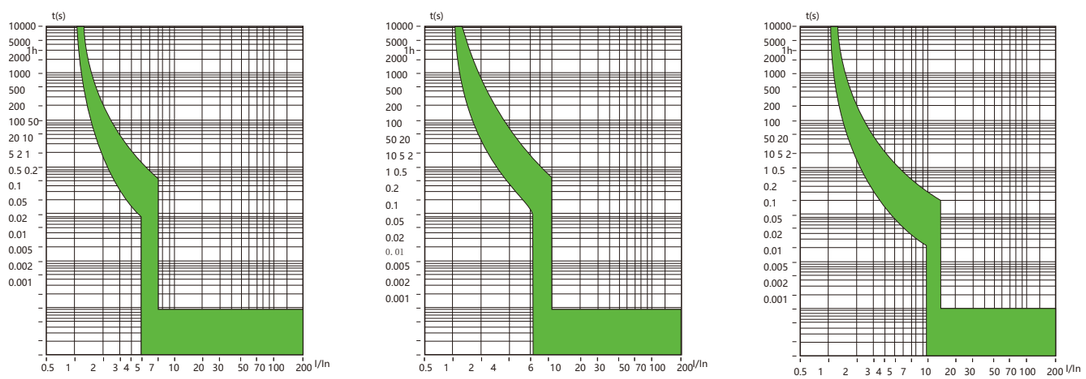


Bottom incoming line

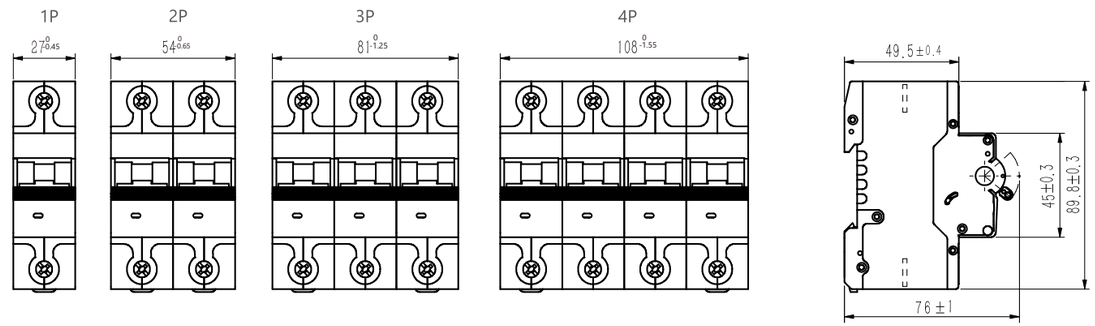


Tripping Curve

B 型：6In±20%　C 型：8.5In±20%　D 型：12In±20%



Overall Dimensions and Installation Dimensions (mm)



GYL8
Residual Current Circuit Breaker

0.03A、0.1A、0.3A
Rated residual action current

RCCB
IEC/EN 61008-1 GB/T 16916.1

CE CB

GYL8







The GYL8 Residual Current Operated Circuit Breaker is designed for AC circuits with 50/60Hz frequency, rated voltage up to 415V, and rated current up to 63A. When electric shock to a person occurs or when grid leakage current exceeds preset values, the circuit breaker can rapidly cut off the fault power supply within an extremely short time to protect personal safety and electrical equipment. It may also serve for infrequent switching operations of circuits under normal conditions.

- RoHS 2.0 compliant
- Double busbar wiring function
- Wiring Capacity1-35mm²

Technical Specification

Rated Voltage (Un)	230/240V、240/415V
Rated Current (In)	16A、20A、25A、32A、40A、50A、63A
Rated insulation voltage (Ui)	500V
Rated impact tolerance voltage (Uimp)	4kV
Rated residual action current (I△n)	0.03A、0.1A、0.3A
Poles	1P+N、3P+N
Residual current action type	AC、A、AC-S、A-S、A-Si、AC-Si
Rated Frequency	50/60Hz
Rated limit short circuit current (Inc)	6000A、10000A
Rated limit Remaining short circuit current (I△c)	6000A、10000A
Rated on and off capacity (Im)	500A(In≤50A),or 10In(In=63A)
Rated residual switching and breaking capacity (I△m)	500A(Ins50A).or 10In(In=63A)
Tightening moment:	2.5N·m
Class of protection:	IP20
Installation :	TH35-7.5 standard guide rail
Mechanical life:	10000 times
Electrical life:	4000 times

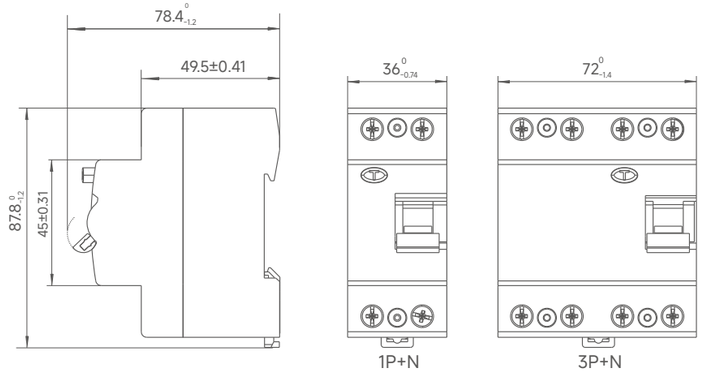
Product Model And Implication

GYL8	□
Product model	Protection type
RCCB	M (electromagnetic type) E (electronic)

Residual leakage current breaking time

Tripping Type	Rated current In(A)	Rated residual action current I△n(A)	Residual current breaking time (s)				
			I△n	2I△n	5I△n	5A~200A	500A
General Type	16~63	0.03、0.1、0.3	≤0.1	≤0.08	≤0.04	≤0.04	≤0.04
Type S			0.13~0.5	0.06~0.2	0.05~0.15	0.04~0.15	0.04~0.15
Type si			0.09~0.13	0.05~0.15	0.04~0.15	0.04~0.15	0.04~0.15

Outline Overall And Installing Dimensions



0.03A、0.1A、0.3A
Rated residual action current

RCCB
IEC/EN 61008-1 GB/T 16916.1

CE CB

GYL10



The GYL10 residual current operated circuit breaker is designed for AC circuits with a frequency of 50/60Hz, rated voltage up to 415V, and rated current up to 63A. In the event of electric shock or when grid leakage current exceeds the specified threshold, the breaker can rapidly disconnect the faulty circuit within an extremely short time to ensure personal safety and protect electrical equipment. It can also be used for infrequent switching operations under normal conditions.
This circuit breaker is suitable for various applications, including industrial, commercial, high-rise buildings, and residential installations.

- RoHS 2.0 compliant
- Double busbar wiring function
- With Transparent Identification Function
- Wiring Capacity 1-35mm²





Product Model And Implication

GYL10	□
Product model	Protection type
RCCB	M (electromagnetic type) E (electronic)

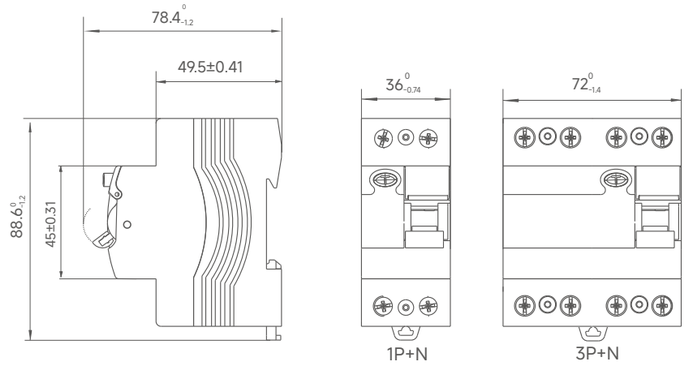
Residual leakage current breaking time

Tripping Type	Rated current In(A)	Rated residual action current I△n(A)	Residual current breaking time (s)				
			I△n	2I△n	5I△n	5A~200A	500A
General Type	16~63	0.03、0.1、0.3	≤0.1	≤0.08	≤0.04	≤0.04	≤0.04
Type S			0.13~0.5	0.06~0.2	0.05~0.15	0.04~0.15	0.04~0.15
Type si			0.09~0.13	0.05~0.15	0.04~0.15	0.04~0.15	0.04~0.15

Technical Specification

Rated Voltage (Un)	230/240V、240/415V
Rated Current (In)	16A、20A、25A、32A、40A、50A、63A
Rated insulation voltage (Ui)	500V
Rated impact tolerance voltage (Uimp)	4kV
Rated residual action current (I△n)	0.03A、0.1A、0.3A
Poles	1P+N、3P+N
Residual current action type	AC、A、AC-S、A-S、A-Si、AC-Si
Rated Frequency	50/60Hz
Rated limit short circuit current (Inc)	6000A、10000A
Rated limit Remaining short circuit current (I△c)	6000A、10000A
Rated on and off capacity (Im)	500A(In≤50A),or 10In(In=63A)
Rated residual switching and breaking capacity (I△m)	500A(Ins50A).or 10In(In=63A)
Tightening moment:	2.5N·m
Class of protection:	IP20
Installation :	TH35-7.5 standard guide rail
Mechanical life:	10000 times
Electrical life:	4000 times

Outline Overall And Installing Dimensions



0.03A、0.1A、0.3A
Rated residual action current

RCCB
IEC/EN 61008-1

CE CB SAA URAC
GB/T 16916.1

GYL9







GYL9 residual current operated circuit breaker is suitable for AC 50/60Hz, rated voltage two poles 240V, four poles 415V, rated current up to 100A lines. When a person is electrocuted or the leakage current of the power grid exceeds the specified value, the circuit breaker can quickly cut off the faulty power supply in a very short time, protecting the safety of people and electrical equipment. It can also be used for infrequent on/off operations of the line under normal conditions.
Circuit breakers are suitable for various occasions such as industrial, commercial, high-rise, and residential use.

- RoHS 2.0 compliant
- Double busbar wiring function
- With leakage fault indication
- Wiring Capacity 1-35mm²

Product Model And Implication

GYL9	□
Product model	Protection type
RCCB	M (electromagnetic type) E (electronic)

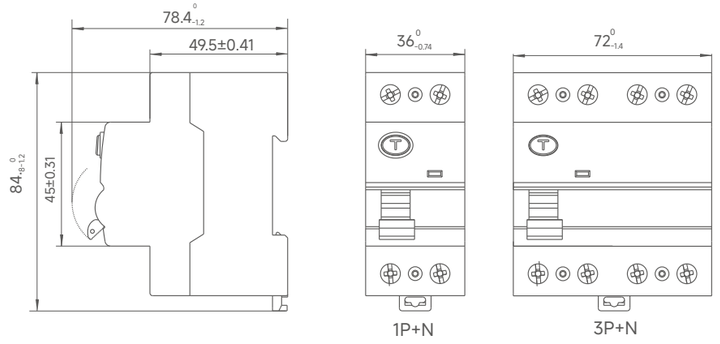
Residual leakage current breaking time

Tripping Type	Rated current In(A)	Rated residual action current I△n(A)	Residual current breaking time (s)				
			I△n	2I△n	5I△n	5A~200A	500A
General Type	16~100	0.03、0.1、0.3	≤0.1	≤0.08	≤0.04	≤0.04	≤0.04
Type S			0.15~0.5	0.06~0.2	0.05~0.15	0.04~0.15	0.04~0.15
Type si			0.09~0.15	0.05~0.15	0.04~0.15	0.04~0.15	0.04~0.15

Technical Specification

Rated Voltage (Un)	230/240V、400/415V
Rated Current (In)	16A、20A、25A、32A、40A、50A、63A、80A、100A
Rated insulation voltage (Ui)	500V
Rated impact tolerance voltage (Uimp)	4kV
Rated residual action current (I△n)	0.03A、0.1A、0.3A
Poles	1P+N、3P+N
Residual current action type	AC、A、AC-S、A-S、A-Si、AC-Si
Rated Frequency	50/60Hz
Rated limit short circuit current (Inc)	6000A、10000A
Rated limit Remaining short circuit current (I△c)	6000A、10000A
Rated on and off capacity (Im)	500A(In≤50A),or 10In(In=63A)
Rated residual switching and breaking capacity (I△m)	500A(Ins50A).or 10In(In=63A)
Tightening moment:	2.5N·m
Class of protection:	IP20
Installation :	TH35-7.5 standard guide rail
Mechanical life:	10000 times
Electrical life:	4000 times

Outline Overall And Installing Dimensions



0.03A、0.1A、0.3A
Rated residual action current

RCCB
IEC/EN 61008-1, IEC/EN 62955, GB/T 40820, GB/T 16916.1.

GYL9-EV







GYL9-EV residual current operated circuit breaker is suitable for AC 50/60Hz, rated voltage two poles 240V, four poles 415V, and rated current up to 100A lines. Used to detect AC leakage, pulsating DC leakage, composite wave leakage, and high-frequency leakage up to 1kHz, while disconnecting or triggering the disconnection of electric vehicle charging when a smooth DC residual current greater than or equal to 6mA is detected. When a person is electrocuted or the leakage current of the power grid exceeds the specified value, the circuit breaker can quickly cut off the faulty power supply in a very short time, protecting the safety of people and electrical equipment. It can also be used for infrequent on/off operations of the line under normal conditions.
This circuit breaker is suitable for various applications, including industrial, commercial, high-rise buildings, and residential environments.

- Equipped with AC leakage, pulsating DC leakage, smooth DC leakage, composite wave leakage, and high-frequency leakage protection devices up to 1kHz - with complete protection functions
- A protective device designed specifically for electric vehicles and charging facilities that can detect smooth DC residual current greater than or equal to 6mA
- Compliant with environmental RoHS 2.0
- Double busbar wiring function
- The product has a leakage fault indicator

Product Model And Implication

GYL9	EV
Product model	Protection type
RCCB	M (electromagnetic type) E (electronic)

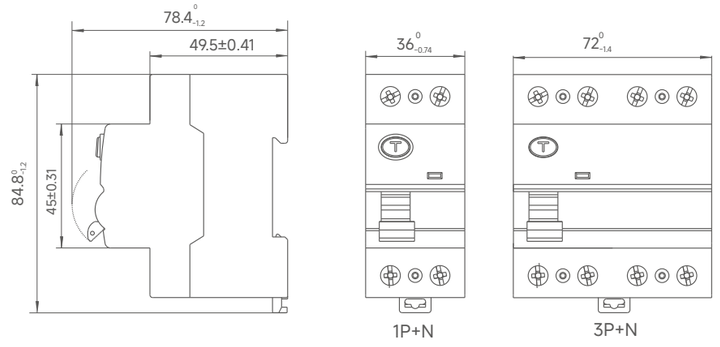
Residual leakage current breaking time

Rated current In(A)	Rated residual action current I△n(mA)	Residual current breaking time (s)				
		I△n	2I△n	5I△n	5A~200A	500A
16~100	30、100、300	≤0.1	≤0.08	≤0.04	≤0.04	≤0.04

Technical Specification

Rated Voltage (Un)	230/240V、400/415V
Rated Current (In)	16A、20A、25A、40A、50A、63A、80A、100A
Rated insulation voltage (Ui)	500V
Rated impact tolerance voltage (Uimp)	4kV
Rated residual action current (I△n)	0.03A、0.1A、0.3A
Poles	1P+N、3P+N
Residual current action type	Type EV
Rated Frequency	50/60Hz
Rated limit short circuit current (Inc)	6000A、10000A
Rated limit Remaining short circuit current (I△c)	6000A、10000A
Rated on and off capacity (Im)	500A(In≤50A),or 10In(In=63A)
Rated residual switching and breaking capacity (I△m)	500A(Ins50A).or 10In(In=63A)
Tightening moment:	2.5N·m
Class of protection:	IP20
Installation :	TH35-7.5 standard guide rail
Mechanical life:	10000 times
Electrical life:	4000 times

Outline Overall And Installing Dimensions



GYL9-B
Residual Current Circuit Breaker

0.03A、0.1A、0.3A
Rated residual action current

RCCB

IEC/EN 61008-1, IEC/EN 62423, GB/T 22794, GB/T 16916.1

GYL9-F/B





GYL9-F/B residual current operated circuit breaker is suitable for AC 50/60Hz, rated voltage two poles 240V, four poles 415V, rated current up to 100A lines. Used for detecting AC leakage, pulsating DC leakage, smooth DC leakage, composite wave leakage, and high-frequency leakage up to 1kHz. When personal electric shock or circuit leakage current exceeds the specified value, the circuit breaker automatically cuts off the faulty power supply in a very short time, protecting the safety of personnel and electrical equipment. The circuit breaker can also be used for infrequent on/off operations of the line under normal circumstances.
The circuit breaker is suitable for various applications, including industrial, commercial, high-rise buildings, and residential use.

- Equipped with AC leakage, pulsating DC leakage, smooth DC leakage, composite wave leakage, and high-frequency leakage protection devices up to 1kHz - with complete protection functions
- Compliant with environmental RoHS 2.0
- Double busbar wiring function
- The product has a leakage fault indicator
- Wiring capacity: (1~35) mm²

F-type:
Type B:

Product Model And Implication

GYL9	B
Product model	Residual current action type
RCCB	F type B type

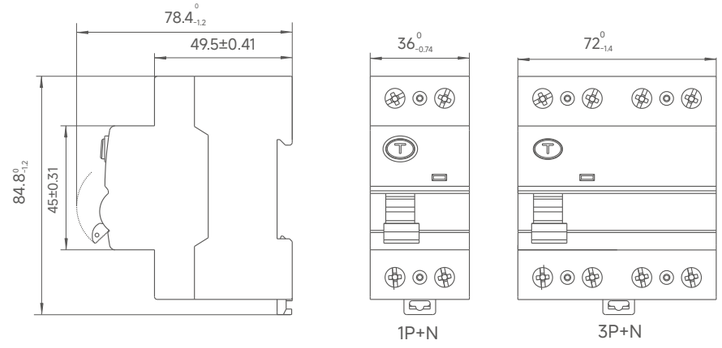
Residual leakage current breaking time

Rated current In(A)	Rated residual action current I△n(mA)	Residual current breaking time (s)				
		I△n	2I△n	5I△n	5A~200A	500A
16~100	30、100、300	≤0.1	≤0.08	≤0.04	≤0.04	≤0.04

Technical Specification

Rated Voltage (Un)	230/240V、400/415V
Rated Current (In)	16A、20A、25A、32A、40A、50A、63A、80A、100A
Rated insulation voltage (Ui)	500V
Rated impact tolerance voltage (Uimp)	4kV
Rated residual action current (I△n)	0.03A、0.1A、0.3A
Poles	1P+N、3P+N
Residual current action type	Type B Type F
Rated Frequency	50/60Hz
Rated limit short circuit current (Inc)	6000A、10000A
Rated limit Remaining short circuit current (I△c)	6000A、10000A
Rated on and off capacity (Im)	500A(In≤50A),or 10In(In=63A)
Rated residual switching and breaking capacity (I△m)	500A(Ins50A).or 10In(In=63A)
Tightening moment:	2.5N·m
Class of protection:	IP20
Installation :	TH35-7.5 standard guide rail
Mechanical life:	10000 times
Electrical life:	4000 times

Outline Overall And Installing Dimensions



GYR9N
RCBO

0.03A、0.1A、0.3A
Rated residual action current

RCBO
IEC/EN 61009-1、GB/T 16917.1

CE CB SAA

GYR9N







GYR9N residual current operated circuit breaker is suitable for AC 50/60Hz, rated voltage up to 415V, and rated current up to 40A lines. When a person is electrocuted or the leakage current of the power grid exceeds the specified value, the circuit breaker can quickly cut off the faulty power supply in a very short time, protecting the safety of people and electrical equipment. It can also be used for overload and short circuit protection of the line, and for infrequent on-off operation under normal circumstances.

Circuit breakers are suitable for various occasions such as industrial, commercial, high-rise, and residential use.

- RoHS 2.0 compliant
- With leakage fault indication
- Wiring Capacity 1-25mm^2

Product Model And Implication

GYR9	N	□
Product model		Protection type
RCBO	With N poles	M (electromagnetic type) E (electronic)

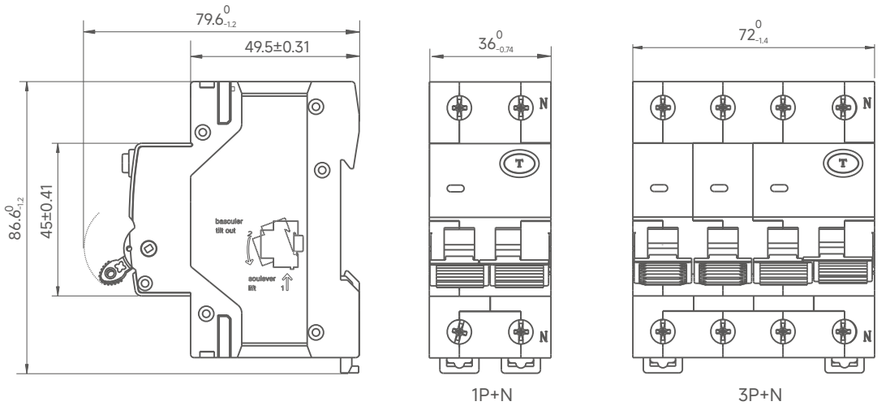
Residual leakage current breaking time

Rated current In(A)	Rated residual action current I△n(mA)	Residual current breaking time (s)				
		I△n	2I△n	5I△n	5A~200A	500A
6~40	30、100、300	≤0.1	≤0.08	≤0.04	≤0.04	≤0.04

Technical Specification

Rated Voltage (Un)	230/240V、240/415V
Rated Current (In)	6A、10A、16A、20A、25A、32A、40A
Rated insulation voltage (Ui)	500V
Rated impact tolerance voltage (Uimp)	4kV
Rated residual action current (I△n)	0.03A、0.1A、0.3A
Poles	1P+N、3P+N
Residual current action type	Type A、Type AC
Rated Frequency	50/60Hz
Rated short-circuit capacity(Icn)	6000A
Rated residual switching and breaking capacity (I△m)	500A
Tightening moment:	2.0N·m
Class of protection:	IP20
Trip Curve	B、C、D
Mechanical life:	20000 times
Electrical life:	4000 times

Outline Overall And Installing Dimensions



0.03A、0.1A、0.3A
Rated residual action current

Type B RCBO

IEC/EN 61009-1, IEC/EN 62423, GB/T 22794, GB/T 16917.1.

GYR9NE-F/B







The GYR9NE-F/B Residual Current Operated Circuit Breaker is suitable for circuits with an AC frequency of 50/60Hz, rated voltage up to 240V, and rated current up to 40A. It is designed to detect AC leakage, pulsating DC leakage, smooth DC leakage, composite waveform leakage, and high-frequency leakage up to 1kHz.
The device can rapidly cut off faulty power within an extremely short time to protect personal safety and electrical equipment. It also serves as overload and short-circuit protection for circuits, as well as for infrequent switching operations under normal conditions.
This circuit breaker is suitable for various applications, including industrial, commercial, high-rise buildings, and residential use.

- Equipped with AC leakage, pulsating DC leakage, smooth DC leakage, composite wave leakage, and high-frequency leakage protection devices up to 1kHz - with complete protection functions
- The product has a leakage control handle opening function
- Wiring capacity: (1-25) mm^2
- Compliant with environmental RoHS 2.0
- F-type:
- Type B:

Product Model And Implication

GYR9	N	E	-B
Product model			
AFDD	Integral type	Electronic	Residual current action type: Type B

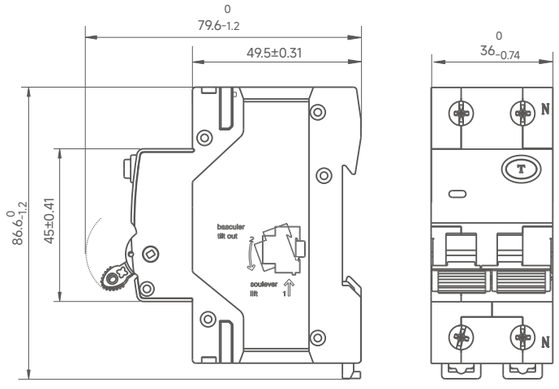
Residual leakage current breaking time

Rated current In(A)	Rated residual action current I△n(mA)	Residual current breaking time (s)				
		I△n	2I△n	5I△n	5A~200A	500A
6~40	30、100、300	≤0.1	≤0.08	≤0.04	≤0.04	≤0.04

Technical Specification

Rated Voltage (Un)	230/240V、240/415V
Rated Current (In)	6A、10A、16A、20A、25A、32A、40A
Rated insulation voltage (Ui)	500V
Rated impact tolerance voltage (Uimp)	4kV
Rated residual action current (I△n)	0.03A
Poles	1P+N
Residual current action type	Type F、Type B
Rated Frequency	50/60Hz
Rated short-circuit capacity(Icn)	6000A
Rated residual switching and breaking capacity (I△m)	500A
Tightening moment:	2.0N·m
Class of protection:	IP20
Trip Curve	B、C、D
Installation	TH35-7.5 standard guide rail
Mechanical life	20000 times
Electrical life	4000 times

Outline Overall And Installing Dimensions



GYR9LE
RCBO

0.03A、0.1A、0.3A
Rated residual Operating current

带过载保护的剩余电流动作断路器

Complies with the following standards: IEC/EN 61009-1, GB/T 16917.1

GYR9LE









The GYR9 LE residual current circuit breaker is designed for AC 50/60Hz power systems with rated voltages of 240V (two-pole) and 415V (four-pole), supporting rated currents up to 40A. When a person experiences electric shock or grid leakage current exceeds specified thresholds, the breaker instantly disconnects faulty circuits to ensure safety for both personnel and electrical equipment. It also provides overload and short-circuit protection for power lines while enabling low-frequency switching operations under normal conditions.
The circuit breaker is suitable for various applications including industrial, commercial, high-rise, and residential settings.

- The product features a leakage current handle for circuit breaker tripping function.
- Wiring capacity: (1-25) mm^2
- Complies with the RoHS 2.0 environmental standards
- Supports both positive and negative wiring

Product model and meaning

GYR9L	E
Product model	
Residual current circuit breaker with overload protection	Electronic

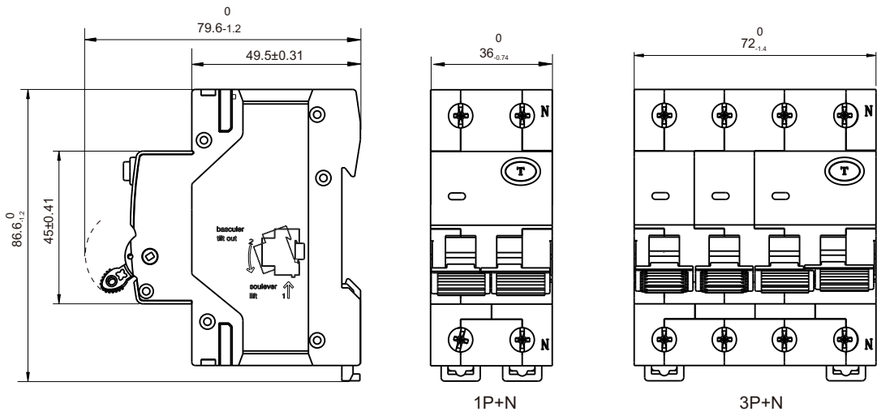
Remaining action current interruption time

Rated current In (A)	Rated residual operating current I△n (A)	Residual current interruption time (s)				
		I△n	2I△n	5I△n	5A~200A	500A
6~40	0.03、0.1、0.3	≤0.1	≤0.08	≤0.04	≤0.04	≤0.04

Technical parameter

技术参数	参数值
Rated voltage （Un）	230/400V、240/415V
Rated current （In）	6A、10A、16A、20A、25A、32A、40A
Rated insulation voltage (Ui)	500V
Rated impulse withstand voltage (Uimp)	4kV
Rated residual operating current (I△n)	0.03A、0.1A、0.3A
Polar Order	1P+N、3P+N
Residual Current Operation Type	Type AC, Type A, Type B
Rated frequency	50/60Hz
Rated short-circuit capacity(Icn)	6000A
Rated remaining closing and breaking capacity (I△m)	500A
Tightening torque	2.0N·m
Levels of protection	IP20
Trip curve	B、C、D
Way to install	TH35-7.5 Standard Guide Rail
Mechanical life	20,000 times
Electrical life	10,000 times

Dimensions (mm)



GYR10 RCBO

0.03A、0.1A、0.3A
Rated residual action current

RCBO
IEC/EN 61009-1、GB/T 16917.1

GYR10



GYR10N residual current operated circuit breaker is suitable for AC 50/60Hz, rated voltage up to 240V, and rated current up to 40A lines. When personal electric shock or power grid leakage current exceeds the specified value, the circuit breaker can quickly cut off the faulty power supply in a very short time, protecting the safety of personnel and electrical equipment. It can also be used for overload and short circuit protection of the line, and for infrequent on-off operation under normal circumstances.
Circuit breakers are suitable for various occasions such as industrial, commercial, high-rise, and residential use.

- Contact position indication function
- Wiring capacity: (0.5-16) mm^2
- Connect the N line first and then disconnect it
- Compliant with environmental ROHS 2.0
- 18mm wide, small volume, compact structure
- Handle with anti slip strip for comfortable operation
- Can be wired in both directions





Product Model And Implication

GYR10	N	E
Product model		
Enterprise code	With N poles	electronic type

Residual leakage current breaking time

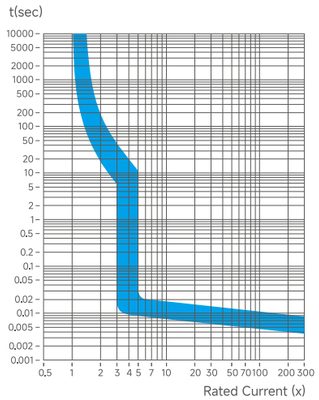
Rated current In(A)	Rated residual action current I△n(mA)	Residual current breaking time (s)				
		I△n	2I△n	5I△n	5A~200A	500A
6~40	30、100、300	≤0.1	≤0.08	≤0.04	≤0.04	≤0.04

Technical Specification

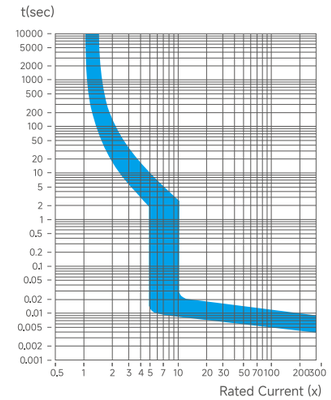
Rated Voltage (Un)	230/240V
Rated Current (In)	6A、10A、16A、20A、25A、32A、40A
Rated insulation voltage (Ui)	500V
Rated impact tolerance voltage (Uimp)	4kV
Rated residual action current (I△n)	0.03A、0.1A、0.3A
Poles	1P+N
Residual current action type	Type A、Type AC
Rated Frequency	50/60Hz
Rated short-circuit capacity(Icn)	4500A/6000A
Rated residual switching and breaking capacity (I△m)	500A
Tightening moment:	1.2N·m
Class of protection:	IP20
Trip Curve	B、C、

Tripping Curves

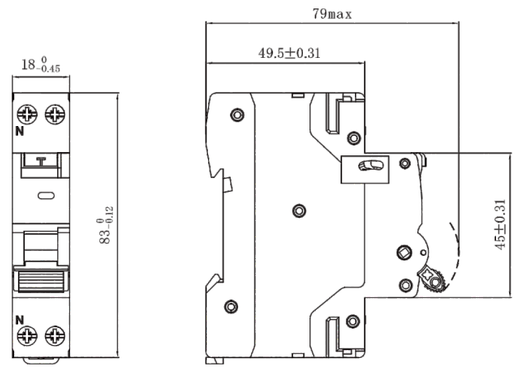
■ B



■ C



Outline Overall And Installing Dimensions



GYR9NE-ARC
Arc Fault Detection Device

0.03A
Rated residual action current

AFDD
IEC/EN62606、IEC/EN61009-1、GB/T31143、GB16917.1

CE

GYR9NE-ARC



GYR9NE-ARC series arc fault circuit breaker is suitable for household and similar AC circuits with AC 50/60Hz, rated voltage of 240V at both poles, and rated current of 40A and below. The product has an arc fault protection unit that can detect and identify series arc faults, parallel arc faults, and grounding arc faults in the line; For example, aging, damage, and humid air in the insulation layer of the line can easily cause arcing faults. When the arcing fault circuit breaker detects the presence of a faulty arc in the line, it will automatically trip and cut off the power supply;

- Equipped with arc fault detection and overvoltage protection functions
- Wiring capacity: (1-25) mm^2
- Compliant with environmental RoHS 2.0







Product Model And Implication

GYR9	N	E	-ARC
Product model			
AFDD	Integral type	Electronic	Circuit breaker with fault arc detection function

Features

GYR9NE-ARC series arc fault circuit breaker proetct from arc fault, overvoltage(275±5%), overload, short circuit, and electrical leakage.

Breaking limit value (63A and below) of rated voltage 230V GYR9NE-ARC

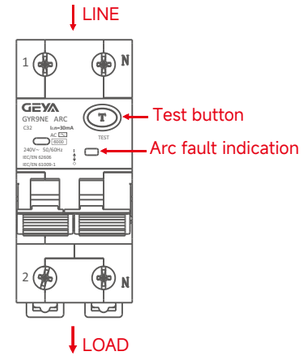
RMS value of test arc current	3A	6A	13A	20A	40A	63A
Max breaking time	1s	0.5s	0.25s	0.15s	0.12s	0.12s
The test arc current is the expected current before burning occurs in the test circuit;						

Technical Specification

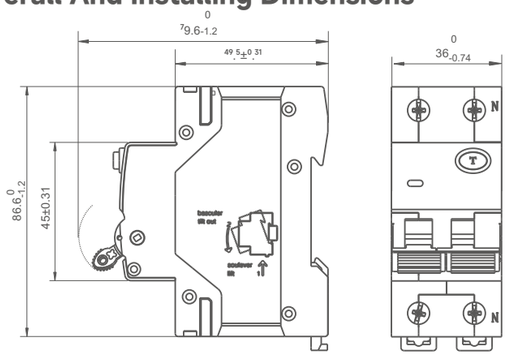
Rated voltage (Un)	230/240V
Rated current (In)	6A、10A、16A、20A、25A、32A、40A
Rated insulation voltage (Ui)	500V
Rated impulse withstand voltage (Uimp)	4kV
Rated residual operating current (I △ n)	0.03A、0.1A、0.3A
Polar number	1P+N
Residual current action type	AC Type、A Type
Rated frequency	50/60Hz
Rated short-circuit capacity(Icn)	6000A
Rated residual connection and disconnection capacity (I △ m)	500A
Tightening torque	2.0N·m
Protection level	IP20
Release curve	B、C、D
Installation method	TH35-7.5
Mechanical life	20000 times
Electrical life	4000 times

Wiring indication

Operating Instructions
After completing installation in accordance with the product wiring diagram, connect the power supply to the incoming terminals of the product. The LED indicator will turn off when the product is in the tripped position.
Product Closing Operation
The green LED indicator lights up continuously, indicating that the product is ready for normal operation. If the indicator remains off or the red LED indicator lights up continuously, the product is faulty and should be returned to the manufacturer for replacement.
If the product trips during operation, troubleshoot the cause by following these steps:
a. If only the left handle trips while the right handle remains closed, the trip is caused by an overload or short-circuit fault.
b. If both the left and right handles trip simultaneously, first disconnect the loads at the outgoing terminals (switch off all electrical equipment), then close the product again and observe the indicator status to determine the cause of the previous trip:
Rapid flashing of the red LED indicator: The previous trip was triggered by a fault arc.
Rapid flashing of the green LED indicator: The previous trip was triggered by an overvoltage fault.
Continuous lighting of the green LED indicator: The previous trip was triggered by a residual current (leakage) fault.



Outline Overall And Installing Dimensions



GYH8
Isolator

16-125A Rated current

Isolator

IEC60947-3, GB14048.3

GYH8



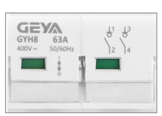
GYH8 isolation switch is mainly suitable for distribution and control circuits with AC 50Hz, rated voltage up to 400V, rated current 125A and below. It is mainly used as the main switch in terminal combination appliances and can also be used to control various low-power appliances and lighting infrequently.

Widely used in industrial and mining enterprises, high-rise buildings, commercial and household places, etc

- The product has a transparent identification function
- Wiring capacity 2.5-50m m²
- Contact position indication function
- Compliant with environmental ROHS 2.0







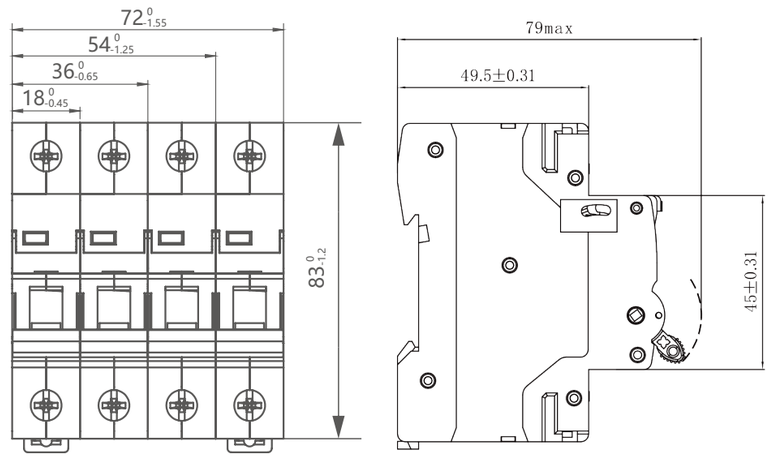
Product Model And Implication

GY	H8
Product Model	
GEYA Electrical	Isolator

Technical Specification

Rated voltage (Un)	1P:230/240 2P-4P:400/415
Rated current (In)	16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A, 125A
Operating frequency	50/60Hz
Rated insulation voltage (Ui)	690V
Rated impulse withstand voltage (Uimp)	6kV
Polar number	1P/2P/3P/4P
Rated short-time withstand current (Icw)	12Ie, power on time 1s
Rated short-circuit making capacity (Icm)	20Ie, power on time 0.1s
Mechanical life	10000 times
Electrical life	63A and below: 2,500 times; 63A and above: 1,500 times
Installation method	TH35-7.5 standard guide rail

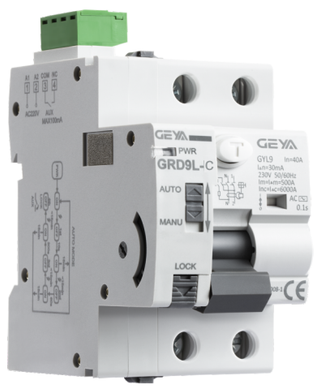
Outline Overall And Installing Dimensions



Controlled by Switch
Control mode

MCB/RCCB/RCBO Controlled by Switch

GRD9L-C/D



Can be widely used in power grid terminal line, such as meter box, new energy circuit management, PV solar control box, smart electricity, smart home, new energy vehicle charging pile, and so on.

-It can be matched with MCB /RCCB to remotely close and open MCB/RCCB
-MCB / RCCB controlled by switch, type D has auto reclosing function.
-With manual/automatic selector switch.
-With mechanical /electronic double locking function.
-The shaft transmission mode is more stable and reliable.
-Can match other accessories.
-Work status is indicated by LED
-1-MODULE.





Product model and definition

GRD9L — □ / □		
	Function	Rated control supply voltage
	C:Controlled by switch D:Controlled by switch+ Auto Reclosing	D12:DC12V A220:AC220V

Note: The matching MCB /RCCB /RCBO specification and model shall be indicated when ordering.
Example 1: GRD9L-C/D +GYM9 2P C40
Example 2:GRD9L-C/D +GYL9 2P 40A 30mA

Technical Specification

	GRD9L-C	GRD9L-D
Control mode	Controlled by switch	Controlled by switch+Auto Reclosing
Supply terminals	A1-A2	
Voltage range	DC12V,DC24V~48V	
Power input	DC max.1W(standby) max.20W(action)	
Supply voltage tolerance	-10%; +10%	
Voltage range	AC 220V(50-60Hz)	
Power input	DC max.1W(standby) max.20W(action)	
Supply voltage tolerance	-10%;+10%	
Supply indication	red LED	
Action time	≤1s	
Auto reclosing times	-	3 times
Auto reclosing time interval	-	10s-60s-300s
Reset the closing times	-	No trip or manual reset within 15 minutes after successful closing
Mechanical life	10000 times	
Electrical life(AC1)	4000 times	
Operating temperature	-20℃ to +55℃	
Storage temperature	-35℃ to +75℃	

	GRD9L-C	GRD9L-D
Mounting/DIN rail	Din rail EN/IEC 60715	
Protection degree	IP20	
Operating position	any	
Overvoltage cathegory	III.	
Pollution degree	2	
Max. cable size(mm²)	82X18X78mm	
Dimensions	1X2.5mm² or 2X1.5mm²	
Weight	80g	

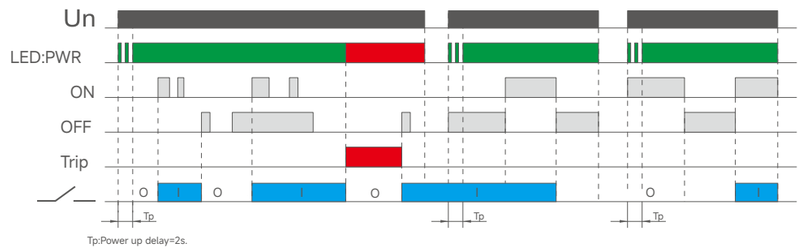
Combination with accessories

	GRD9L-C/D
Auxillary contact	Yes
Alarm contact	Yes
Shunt release	Yes
Under voltage release	Yes

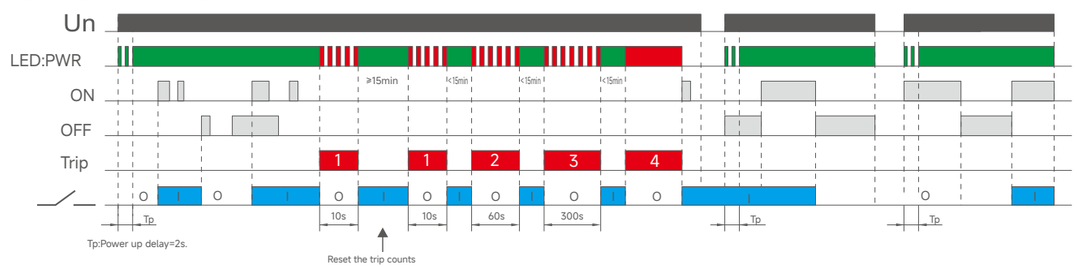
GRD9L-C/D
MCB/RCCB/RCBO Controlled by Switch

Functions Diagram

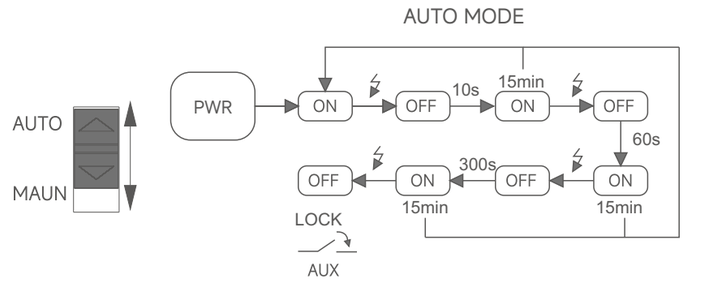
GRD9L-C(Auto Mode)

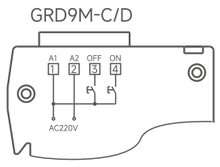


GRD9L-D(Auto Mode)



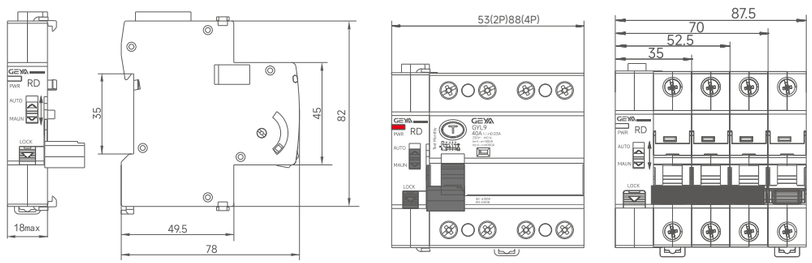
GRD9L-D has automatic closing function, The closing logic is shown in the figure below:





Wiring Diagram

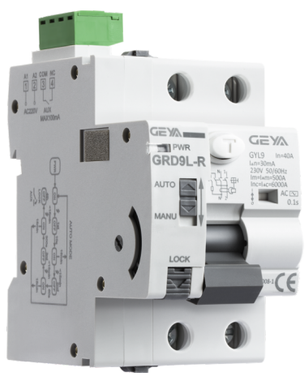
Outline Overall And Installing Dimensions



Auto Rexlosing
Control mode

MCB/RCCB/RCBO with Auto Reclosing

GRD9L-R



Can be widely used in power grid terminal line, such as meter box, new energy circuit management, PV solar control box, smart electricity, smart home, new energy vehicle charging pile, and so on.

-It can be matched with MCB /RCD and automatically reclose when MCB /RCCB trips unexpectedly, No need for manual closing, reduce the cost of manual maintenance, and eliminate faults in time to improve efficiency.
-built in 3 reclosing times, continuous closing failure within 15 minutes can send alarm through auxiliary contact.
-With manual/automatic selector switch.
-With mechanical/electronic double locking function.
-The shaft transmission mode is more stable and reliable.
-Can match other accessories. -Work status is indicated by LED.
-1-MODULE





Product model and definition

GRD9L	—	R	/	□
		Function		Rated control supply voltage
		R: Auto Reclosing +AUX		D12:DC12V A220:AC220V

Note: The matching MCB /RCCB /RCBO specification and model shall be indicated when ordering.
Example 1: GRD9L-R +GYM9 2P C40
Example 2:GRD9L-R +GYL9 2P 40A 30mA

Technical Specification

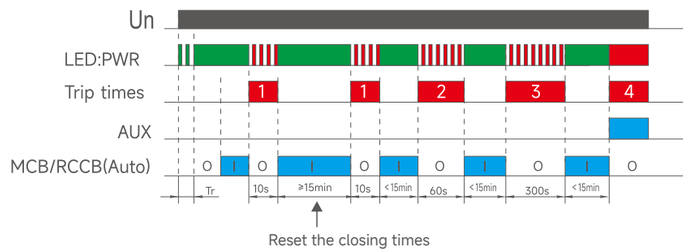
	GRD9L-R
Control mode	Auto Rexlosing
Supply terminals	A1-A2
Voltage range	DC12V,DC24V~48V
Power input	DC max.1W(standby) max.20W(action)
Supply voltage tolerance	-10%; +10%
Voltage range	AC 220V(50-60Hz)
Power input	DC max.1W(standby) max.20W(action)
Supply voltage tolerance	-10%;+10%
Supply indication	red LED
Action time	≤1s
Auto reclosing times	3 times
Auto reclosing time interval	10s-60s-300s
Reset the closing times	No trip or manual reset within 15 minutes after successful closing
Mechanical life	10000
Electrical life(AC1)	4000
Operating temperature	-20℃ to +55℃
Storage temperature	-35℃ to +75℃

	GRD9L-R
Mounting/DIN rail	Din rail EN/IEC 60715
Protection degree	IP20
Operating position	any
Overvoltage cathegory	III.
Pollution degree	2
Max. cable size(mm²)	1X2.5mm² or 2X1.5mm²
Dimensions	82X18X78mm
Weight	80g

Combination with accessories

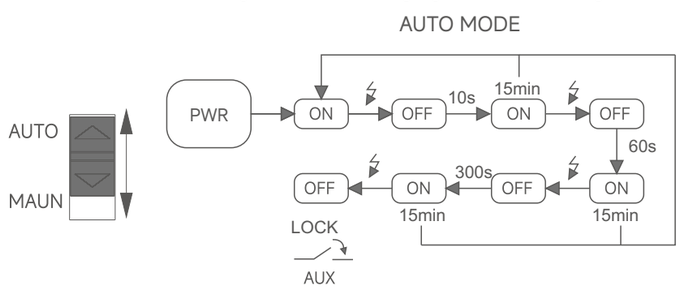
	GRD9L-R
Auxillary contact	Yes
Alarm contact	Yes
Shunt release	Yes
Under voltage release	Yes

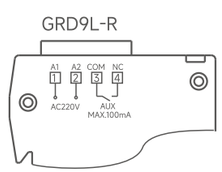
Functions Diagram



Tr:Power delay=2s.

GRD9L-D has automatic closing function,The closing logic is shown in the figure below:

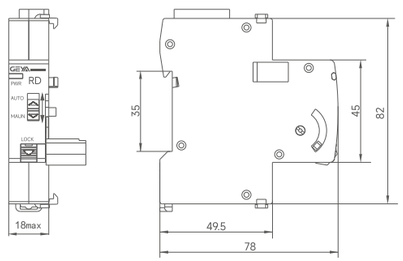




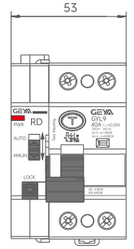
Wiring Diagram

Note: if the closing times and delay time need to be customized, please contact our company.

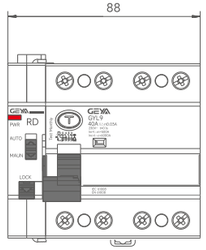
Outline Overall And Installing Dimensions



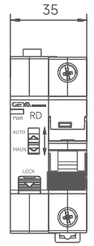
GRD9L+GYL9 2P



GRD9L+GYL9 4P



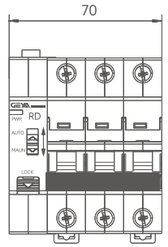
GRD9L+GYM9 1P



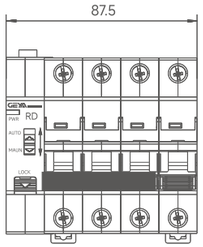
GRD9L+GYM9 2P



GRD9L+GYM9 3P



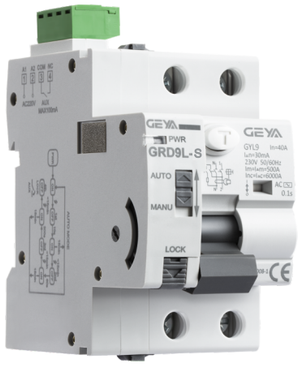
GRD9L+GYM9 4P



RS485 Control mode

MCB/RCCB/RCBO with RS485 Interface

GRD9L-S



Can be widely used in power grid terminal line, such as meter box, new energy circuit management, PV solar control box, smart electricity, smart home, new energy vehicle charging pile, and so on.

-Can be matched with MCB/RCCB,remote switching and splitting of MCB/RCCB
-Remote monitoring and control of MCB/RCCB through RS485 interface
-With manual/ automatic selector switch.
-With mechanical/electronic double locking function.
-The shaft transmission mode is more stable and reliable.
-Can match other accessories.
-Work status is indicated by LED
-1-MODULE.





Product model and definition

GRD9L	—	S	/	□
	Function		Rated control supply voltage	
	S: Control through RS485 interface		D12:DC12V A220:AC220V	

Note: The matching MCB /RCCB /RCBO specification and model shall be indicated when ordering.
Example 1: GRD9L-S +GYM9 2P C40
Example 2:GRD9L-S +GYL9 2P 40A 30mA

Technical Specification

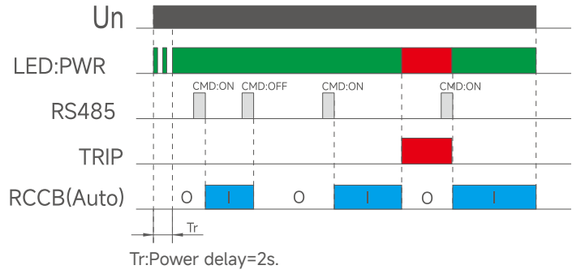
	GRD9L-S
Control mode	RS485
Supply terminals	A1-A2
Voltage range	DC12V,DC24V~48V
Power input	DC max.1W(standby) max.20W(action)
Supply voltage tolerance	-10%; +10%
Voltage range	AC 220V(50-60Hz)
Power input	DC max.1W(standby) max.20W(action)
Supply voltage tolerance	-10%;+10%
Supply indication	red LED
Action time	≤1s
Auto reclosing times	3 times
Auto reclosing time interval	10s-60s-300s
Reset the closing times	No trip or manual reset within 15 minutes after successful closing
Mechanical life	10000
Electrical life(AC1)	4000
Operating temperature	-20℃ to +55℃
Storage temperature	-35℃ to +75℃

	GRD9L-S
Mounting/DIN rail	Din rail EN/IEC 60715
Protection degree	IP20
Operating position	any
Overvoltage cathegory	III.
Pollution degree	2
Max. cable size(mm^2)	1X2.5mm^2 or 2X1.5mm^2
Dimensions	82X18X78mm
Weight	80g

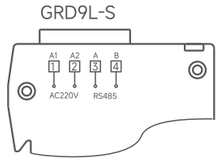
Combination with accessories

	GRD9L-S
Auxillary contact	Yes
Alarm contact	Yes
Shunt release	Yes
Under voltage release	Yes

Functions Diagram



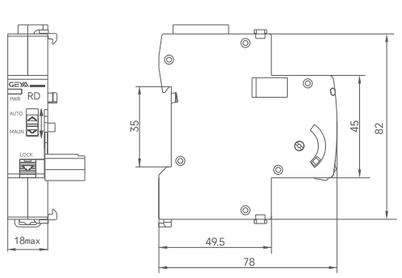
Tr:Power delay=2s.



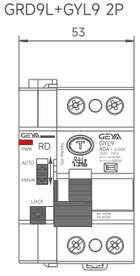
Wiring Diagram

Note: If you need a communication protocol, please contactus.

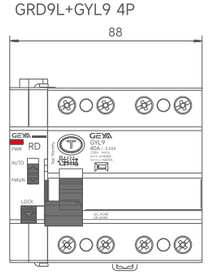
Outline Overall And Installing Dimensions



GRD9L+GYL9 2P



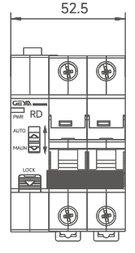
GRD9L+GYL9 4P



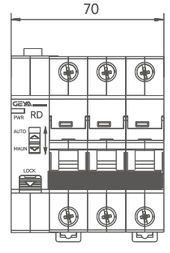
GRD9L+GYM9 1P



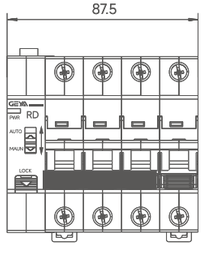
GRD9L+GYM9 2P



GRD9L+GYM9 3P



GRD9L+GYM9 4P



WIFI Control mode

MCB/RCCB/RCBO Controlled by WiFi

GRD9L-W



-It can be used for intelligent household electricity management and photovoltaic distribution systems.
-It can be matched with MCB/RCCB/RCBO and remotely controlled for closing and opening through the APP.
-RCCB/MCB/RCBO (timing switch function) can be set to be turned ON/OFF at any time through the APP.
-With manual / automatic selector switch.
-With mechanical / electronic double locking function.
-The shaft transmission mode is more stable and reliable.
-Can match other accessories.
- Work status is indicated by LED.
- 1-MODULE(RD).





Product model and definition

GRD9L	—	W	/	□
	Function		Rated control supply voltage	
	Control through WiFi		A220:AC220V	

Note: The matching MCB /RCCB /RCBO specification and model shall be indicated when ordering.
Example 1: GRD9L-W +GYM9 2P C40
Example 2:GRD9L-W +GYL9 2P 40A 30mA

Technical Specification

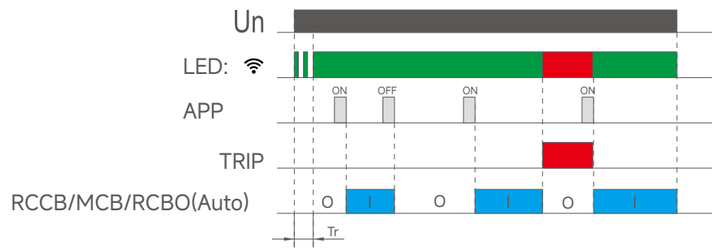
	GRD9L-W
Control mode	WIFI
Supply terminals	A1-A2
Voltage range	AC 220V(50/60Hz)
Power input	AC max.1VA(standby) max.20VA(action)
Supply voltage tolerance	-10%; +10%
Supply indication	red LED
Action time	≤1s
WIFI connectivity	802.11 b/g/n 2.4GHz
Mechanical life	10000
Electrical life(AC1)	Refer to MCB / RCCB /RCBO catalogue
Operating temperature	-20℃ to +55℃
Storage temperature	-35℃ to +75℃
Max.cable size(mm^2)	Solid wire max 1x2.5 or 2x1.5/ with sleeve max.1x2.5(Awg 12)

	GRD9L-W
Mounting/DIN rail	Din rail EN/IEC 60715
Protection degree	IP20
Operating position	any
Overvoltage cathegory	III.
Pollution degree	2
Dimensions	82X18X78mm
Weight	80g

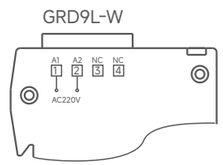
Combination with accessories

	GRD9L-W
Auxillary contact	Yes
Alarm contact	Yes
Shunt release	Yes
Under voltage release	Yes

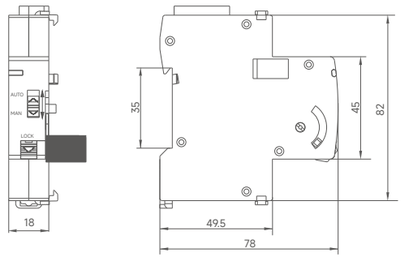
Functions Diagram



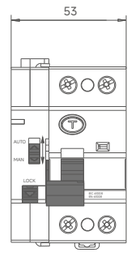
Tr:Power up delay=2s.



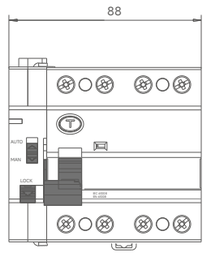
Outline Overall And Installing Dimensions



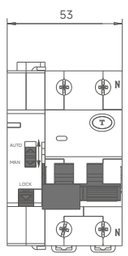
GRD9L+GYL9 2P



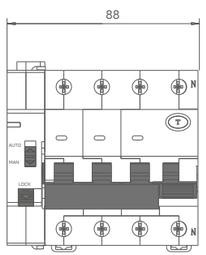
GRD9L+GYL9 4P



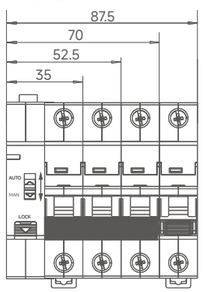
GRD9L+GYR9NM 1P+N



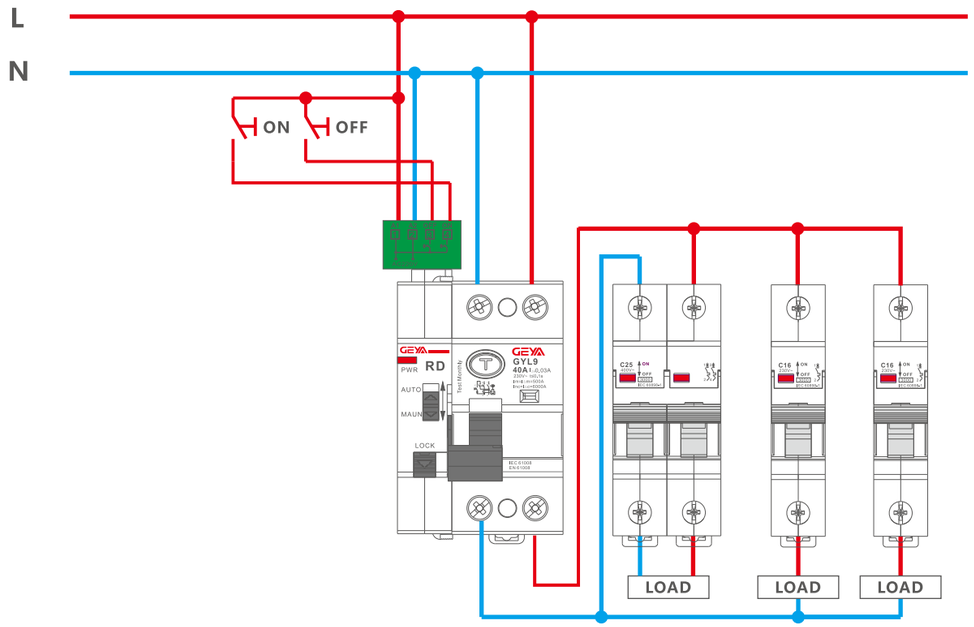
GRD9L+GYR9NM 3P+N



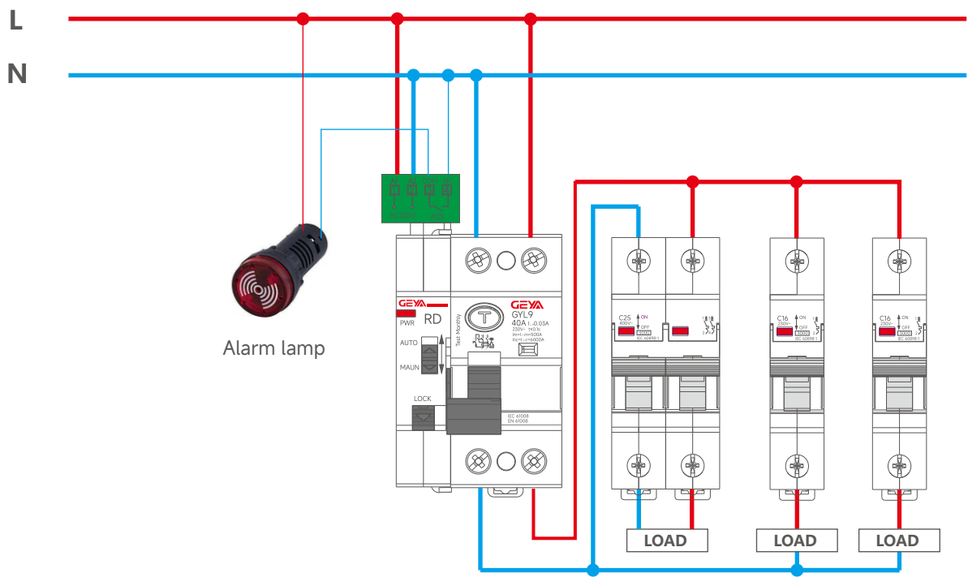
GRD9L+GYM9 1P~4P



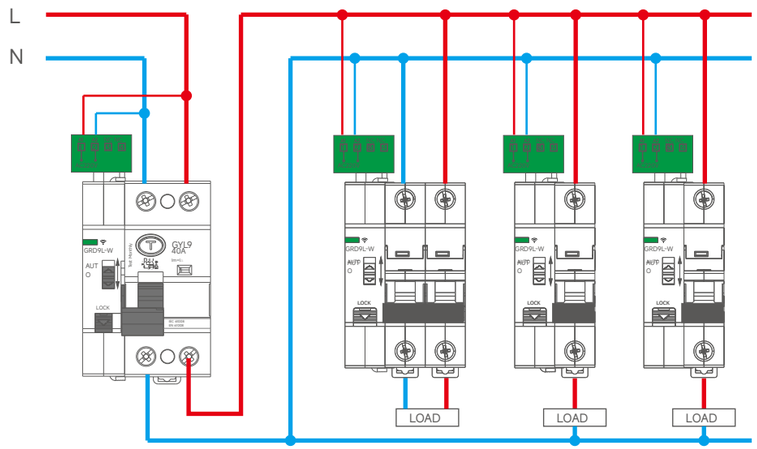
GRD9L-C



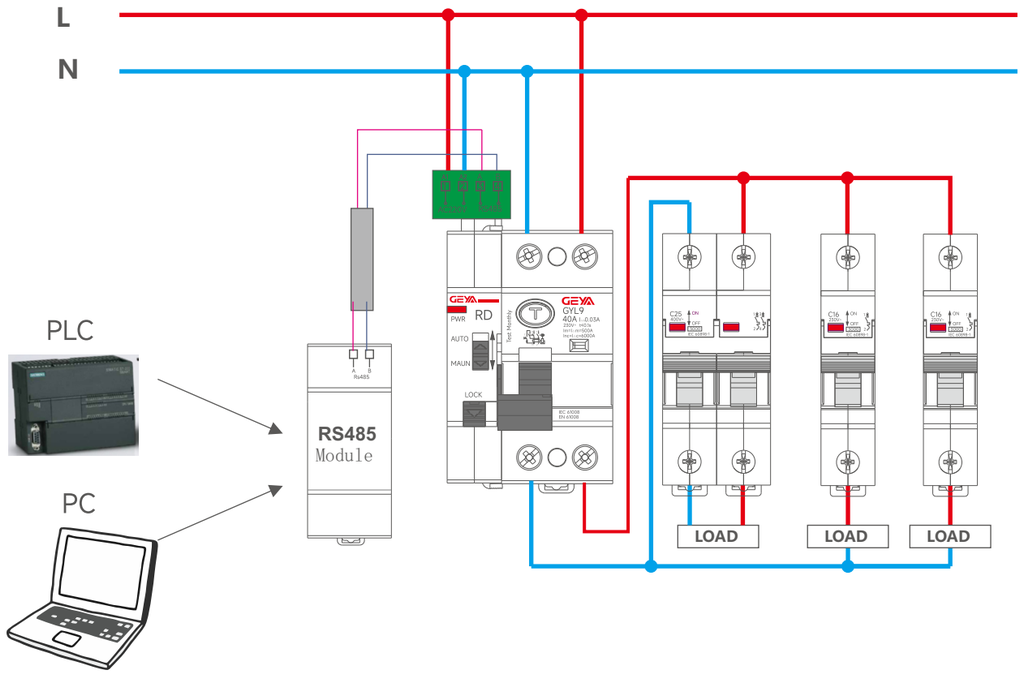
GRD9L-R



GRD9L-W



GRD9L-S



TUYA wifi
Communication methods

WIFI circuit breaker

IEC/EN 61009-1、GB/T 16917.1

GWS9



GWS9 intelligent WIFI circuit breaker is suitable for real-time monitoring of voltage, current, power rate, temperature, etc. in lines with a rated working voltage range of 90-240V and a rated current up to 40A. It has metering function, remote control, timing control, prepayment, as well as overvoltage, undervoltage, overload, overtemperature, and overpower protection functions. Suitable for various places such as industry, commerce, high-rise buildings, and residential buildings

- Mobile remote control Tuya APP Operation.
- High quality materials such as copper connectors, flame-retardant PA66 shells, and high-performance chip modules are durable and reliable.
- Silicone rubber button, comfortable to operate, stylish design.





Product Model And Implication

GWS9	□
Product Model	Product Type
WIFI MCB	W: Button DW: LCD display

Technical Specification

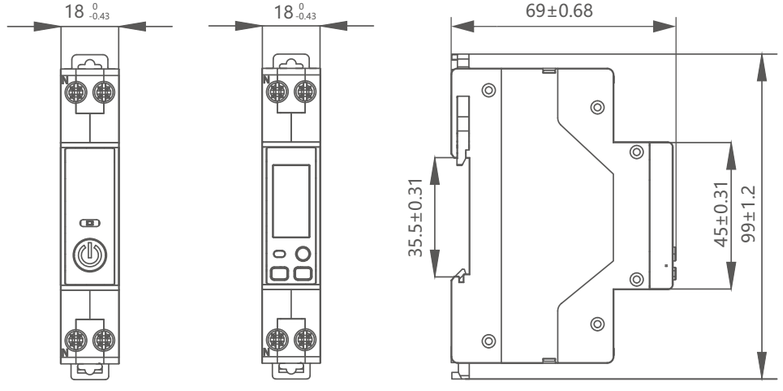
Project	Product model	
	GWS9-W	GWS9-DW
Rated working voltage range	90V~240V	90V~240V
Number of poles	1P+N	1P+N
Max over current	63A(3~10)s	63A(3~10)s
Rated current	1~40A current adjustable	1~40A current adjustable
Communication methods	TUYA wifi	TUYA wifi
Operating ambient temperature	-25°C~70°C	-25°C~70°C
Ultimate short-circuit capacity	500A	500A
Electrical lifespan	≥10000	≥10000
Mechanical lifespan	≥100000	≥100000
Closing time	<20ms	<20ms
Opening time	<20ms	<20ms
Display screen	/	LCD

Functional parameters

No.	Protection function	trip type	Parameter settings	Settings	factory default
1	Overvoltage protection	Turn off/ Alarm/Trip	Overvoltage adjustment	250~300V	280V
			Overvoltage delay	0~10s	
2	Undervoltage protection	Turn off/ Alarm/Trip	Undervoltage adjustment	80~200V	165V
			Under voltage delay	0~10s	
3	Overload protection	Turn off/ Alarm/Trip	Overload adjustment	1~63A	50A
			Overload delay	3~10s	
4	High temperature protection	Turn off/ Alarm/Trip	high temperature adjustment	0~120°C	80°C
			High temperature delay	0~10s	
5	Over power protection	Turn off/ Alarm/Trip	Overpower value	50W~11Kw	off
			Over power delay	0~10s	

Outline Overall And Installing Dimensions

GWS9-W GWS9-DW



TUYA wifi
Communication methods

WIFI circuit breaker

IEC/EN 61009-1、GB/T 16917.1

GWS9-W1



GWS9-W1 intelligent WIFI circuit breaker is suitable for circuits with a rated working voltage range of 90~240V and a rated current of 40A. It can remotely control the circuit switch and has functions such as timing control, countdown closing, cycle timing, sunrise timing, and sunset timing Suitable for various places such as industry, commerce, high-rise buildings, and residential buildings.

- Mobile remote control Tuya APP Operation.
- High quality materials such as copper connectors, flame-retardant PA66 shells, and high-performance chip modules are durable and reliable.
- Silicone rubber button, comfortable to operate, stylish design.





Product Model And Implication

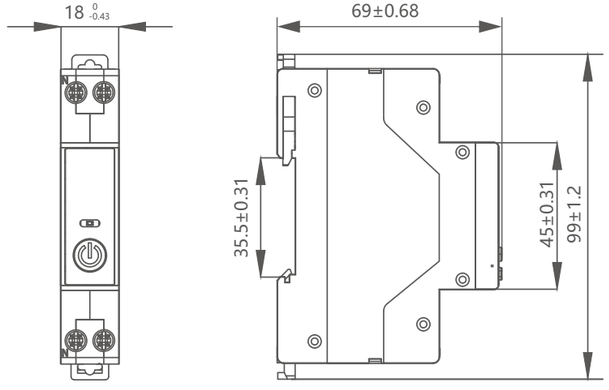
GWS9	W1
Product Model	Product Type
WIFI MCB	Button on/off switching

Technical Specification

Project	Product model
	GWS9-W1
Rated working voltage range	90V~240V
Number of poles	1P+N
Max over current	63A(3~10)s
Rated current	1~40A current adjustable
Communication methods	TUYA wifi
Operating ambient temperature	-25°C~70°C
Ultimate short-circuit capacity	500A
Electrical lifespan	≥10000
Mechanical lifespan	≥100000
Closing time	<20ms
Opening time	<20ms
Display screen	/

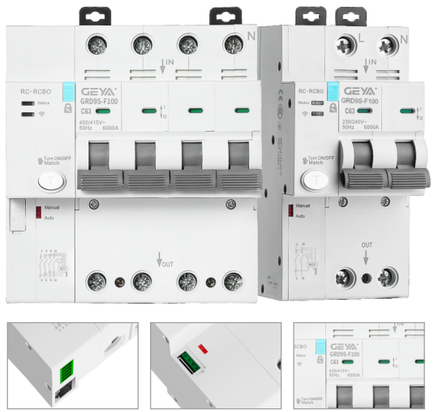
Outline Overall And Installing Dimensions

GWS9-W



IoT Miniature Circuit Breaker

GRD9S-F100



The GRD9S-F100 IoT circuit breaker combines magnetic modulation technology with microcontroller-based digital processing, offering a wide frequency range, compact detection unit, strong anti-interference capability, high detection sensitivity, and consistent operating characteristics. Built upon traditional circuit breaker design, it integrates built-in sensor technology, remote on/off control technology, and meter-class metrology into a single unit, forming a new-generation intelligent IoT circuit breaker with advanced protection features. It can collect data on current, voltage, temperature, electrical energy, circuit breaker switching status, faults, and alarms.

This series is designed for low-voltage terminal distribution networks in indoor buildings and similar settings, including industrial, commercial, residential buildings, and infrastructure applications. When used with a smart gateway or independently, the IoT earth-leakage circuit breaker provides real-time monitoring of key electrical parameters of the power line, such as voltage, current, power, temperature, leakage, and energy consumption. It also supports remote control, manual switching, arcing protection, abnormal warnings, trip alerts for fault events, energy metering and statistics, and fault location.

Product Main Features of The Product

- Controlled by a high-performance 32-bit MCU for real-time signal processing and intelligent control.
  Integrated manual/automatic control – supports both remote and local switching operations.
- Built-in timer function allows free setting of the opening and closing times for each circuit.
  Residual current (earth leakage) protection with online adjustable leakage current levels and auto-reclosing capability.
- Continuously monitors and tracks line residual current to ensure high commissioning reliability and operational availability.
  Provides over-voltage, under-voltage, phase-loss, phase-sequence, unbalance, and over-power protection.
- Real-time monitoring of line residual current, three-phase supply voltage, and load current.
  All protection functions and parameters can be set and modified online.
- Trip cause identification (including residual current, lockout, overload, under-voltage, over-voltage, phase-loss, neutral-loss, over-power, short-circuit, arcing/sparking, voltage THD, current THD) with storage, query, and deletion capabilities.
- Real-time measurement of active power, reactive power, apparent power, power factor, and voltage-current phase angle.
  Cumulative three-phase active energy, reactive energy, and apparent energy with Class 1 accuracy.
- Real-time temperature monitoring of the outgoing terminal busbars.
  Total Harmonic Distortion (THD) statistics for both voltage and current.
- Equipped with a mechanical maintenance lock – when pulled, the device trips immediately and disables both remote and local closing to ensure the safety of maintenance personnel.
  Integrated arc fault detection (sparking detection).
  Versatile communication options: standard RS485, with optional 4G/Wi-Fi modules.

Product Model Explanation

GRD9S - F 100 W L 2P 63A - TUYA
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

NO.	Meaning	NO.	Meaning
①	GEYA high-end recloser	⑤	None: without leakage; L: With leakage; N: With zero line current monitoring R: with leakage+with zero line current monitoring
②	Code		
③	Shell level	⑥	Pole
④	None: RS485 ; W: WiFi+RS485 ; G: 4G +RS485 ; Z: Zigbee+RS485	⑦	Rated Current
		⑧	ESP / TUYA IOT

Table 1: IoT Circuit Breaker Functional Specifications

NO.	Model	Basic Model Functional Description
1	GRD9S-F100 (Basic Model)	This model provides real-time monitoring of voltage, current, power, power factor, energy, and temperature. It offers comprehensive protection against overvoltage, undervoltage, overload, short circuit, and overcurrent. Control options include local manual/electric operation, remote control, and timed scheduling. The device is designed for DIN-rail mounting and is available in 1P, 2P, 3P, or 4P versions. Trip curves B, C, and D are optional. It comes standard with an RS-485 communication port supporting the MODBUS protocol.
2	GRD9S-F100W	Basic model + WiFi communication
3	GRD9S-F100G	Basic model + 4G (LTE) full-network communication
4	GRD9S-F100Z	Basic model + Zigbee communication
5	GRD9S-F100N	Basic model + neutral current detection
6	GRD9S-F100WN	Basic model + WiFi + neutral current detection
7	GRD9S-F100GN	Basic model + 4G (LTE) + neutral current detection

NO.	Model	Leakage Model Functional Description
1	GRD9S-F100L (Leakage Model)	This model provides real-time monitoring of voltage, current, power, power factor, energy, and temperature. It offers comprehensive protection against overvoltage, undervoltage, overload, short circuit, and overcurrent. Control options include local manual/electric operation, remote control, timed scheduling, residual current detection, and leakage protection. The device is designed for DIN-rail mounting and is available in 2P, 3P, or 4P versions. Trip curves B, C, and D are optional. It comes standard with an RS-485 communication port supporting the MODBUS protocol.
2	GRD9S-F100WL	Leakage model + WiFi communication
3	GRD9S-F100GL	Leakage model + 4G (LTE) full-network communication
4	GRD9S-100ZL	Leakage model + Zigbee communication
5	GRD9S-F100R	Leakage model + neutral current detection
6	GRD9S-F100WR	Leakage model + WiFi + neutral current detection
7	GRD9S-F100GR	Leakage model + 4G (LTE) + neutral current detection

Neutral current detection – Real-time monitoring of the current on the neutral (N) line, with alarm and trip protection triggered by user-set thresholds.

Table 1 – Functional Description of Smart Communication Functions

NO.	Commu-nication Type	Functional description	Concrete operations
1	RS485	Equipped with RS485 communication capabilities, it enables real-time monitoring of operational data including voltage, current, power, energy consumption, temperature, and leakage current across circuits. The system displays real-time fault status and alarms for each circuit while supporting remote control of switch states (RS485/switching signals). It allows parameter configuration for individual circuits and features rail-mounted installation with event logging functionality.(Industrial-grade wired communication offering strong anti-interference performance and up to 1200-meter transmission range, ideal for stable data transfer in fixed equipment rooms. However, requires wiring installation and has limited scalability.)	Connect all A and B communication lines of the circuit breakers in parallel (refer to the wiring diagram on page 11) and connect them to the concentrator/touchscreen/computer/back-end host. View voltage, current, leakage current, temperature, faults, alarms, and switch status in the backend software; perform remote switching and parameter settings (local operation only, no remote mobile phone control).
2	4G	Building upon the existing RS485 protocol, the system incorporates 4G functionality:4G: Wireless, full-network remote access, available with any mobile signal(Based on cellular networks, it offers wide coverage and supports mobile devices, making it suitable for remote monitoring and big data transmission. However, it has higher power consumption and requires continuous data traffic costs.)	A SIM card must be inserted into the device; the cloud platform/App can be accessed via mobile phone or computer in areas with cellular signal; remote data viewing, remote circuit switching, and alarm reception are directly available; no wiring required and no distance restrictions.
3	Wifi	Building upon the existing Rs485 protocol, the system incorporates WiFi functionality:WiFi: Wireless, remote access across the entire network, available with any mobile signal (Wireless communication offers high speed and low cost, making it suitable for short-range, high-speed scenarios (e.g., smart homes). However, it relies on network coverage and is prone to environmental interference, leading to unstable performance.)	The product/phone connects to the on-site router via WiFi (2.4GHz). Within the same network, the graffiti version can be paired using the graffiti app. Successful pairing enables data viewing and remote control (operations remain possible even when the phone is not connected to the same WiFi network).
4	Zigbee	Building upon the existing RS485 protocol, the system incorporates Zigbee functionality: Zigbee: Wireless, low-power, and short-range networking, ideal for small devices (extremely low power consumption ensures long battery life, unlike WiFi's high power consumption; strong anti-interference capability and high stability make it suitable for environments with multiple electrical devices and high interference, such as distribution boxes. A single gateway can support dozens of devices, offering low centralized networking costs and minimal cabling requirements.)	The product itself does not connect directly to the phone and requires gateway control: First configure a Zigbee gateway as a relay station; The product establishes a network through closerange wireless pairing with a Zigbee gateway. The Zigbee gateway then connects to the internet and cloud servers via WiFi or Ethernet cables. Finally, the product is monitored and controlled via cloud servers on mobile devices or computers.

Selection recommendations: RS-485 is recommended for industrial fixed equipment; WiFi for short-range high-speed applications like smart homes; 4G for remote mobility or wide-area coverage; and Zigbee for low-power, short-range networking with multiple nodes.

Technical Parameter

NO.	Project	Basic Model	Leakage current type
1	Meet a criterion	GB/T 10963	GB/T 16917.1 CQC1149
2	Rated voltage	AC230V(1P/2P) AC400V(3P/4P) 50/60Hz	AC230V(1P/2P) AC400V(3P/4P) 50/60Hz
3	Number of poles	1P/2P/3P/4P	2P/3P/4P
4	Rated current	Preferred models include 20A,32A, and 63A; other shell frames are available for customization.	
5	Tripping type	Type B, Type C, Type D	Type B, Type C, Type D
6	Ambient temperature	-5℃~70℃	-5℃~70℃
7	Short circuit breaking capacity	Standard type: Icu=Ics=6000A	Standard type: Icu=Ics=6000A, H type
8	Mechanical life	More than 15,000 times	More than 15,000 times
9	Electrical life	More than 6000 times	More than 6000 times
10	Closing time	<1.5s	<1.5s
11	Opening time	<1.0s	<1.0s
12	Measuring accuracy	1	1
13	Communication mode	RS485/4G/Wifi/Zigbee optional	RS485/4G/Wifi/Zigbee optional
14	Way to install	Guide rail installation	Guide rail installation
15	Leakage current threshold	/	Adjustable range: 30mA to 500mA

Functional Parameter

No.	Defencive function	Trip type	Basic type	Leakage current type	Parameter setting	Set value	Windows default
1	Overvoltage crowbar	Close/Alarm/Trip	Trip	Trip	Overvoltage setting	250-350V	280V
					Over rolling delay	0-10S	3s
2	Undervoltage protection	Close/Alarm/Trip	Alarm	Alarm	Under-voltage setting	110-200V	165V
					Undervoltage delay	0-10S	3s
3	Overload protection	Close/Alarm/Trip	Trip	Trip	Overload setting	0.6In-In	In
					Overload delay	0-10s	3s
4	High-temperature protection	Close/Alarm/Trip	Trip	Trip	High temperature setting	60-100°C	80°C
					High temperature delay	0-10s	5s
5	Overpower protection	Close/Alarm/Trip	Close	Close	Overpower value	50W-50Kw	2Kw
					Overpower delay	0-10s	5s
6	Phase loss protection (3 P/4P)	Close/Alarm/Trip	Close	Close	Phase lag tuning	10-100V	30V
					Phase lag delay	0-10s	5s
7	Earth leakage protection	Close/Alarm/Trip	—	Trip	Leakage current level	30~500mA	100mA
					Leakage current delay	Non-delay 0.06/0.1/0.2	Non-delay
8	Allow alarm	Turn off/turn on	Open	Open	---	---	---
9	Automatic closing	Turn off/turn on	Close	Close	---	---	---
10	On state	Opening/closing/memory	Memory	Memory	---	---	---
11	Power outage trip	Turn off/turn on	Close	Close	---	---	---
12	Zero loss protection	Close/Alarm/Trip	Close	Close	---	---	---
13	Manual and Automatic Integrated Control	/	Have	Have	---	---	---
14	Mechanical maintenance lock	/	Have	Have	---	---	---

Note: "-----" indicates no such parameter
Trip type annotation:
Off: Disable this feature. When the real-time value reaches the protection threshold, the product will not provide protection. Alarm: When the real-time value reaches the protection threshold, the product will only trigger an alarm without taking any action.
Trip: When the real-time value reaches the protection action threshold, the device trips.

GRD9S-F100
IoT Miniature Circuit Breaker

Tripping characteristics

NO.	Tripping type	Test current	Start stare	Trip/Non-trip Time Limit	Result
1	B、C、D	1.13In	Cold position	t≤1h（In≤63A）t≤2h（In＞63A）	No tripping
2	B、C、D	1.45In	Next test	t≤1h（In≤63A）t≤2h（In＞63A）	Trip
3	B、C、D	2.55In	Cold position	1＜t＜60s（In≤32A）1＜t＜120s（In＞32A）	Trip
4	B、C、D	3In/5In/10In	Cold position	t≤0.1s	No tripping
5	B、C、D	5In/10In/20In	Cold position	t＜0.1s	Trip

Residual Current Operation Characteristics

Parameter	Characteristic			
Rated non-operating current	0.7 IΔn			
Rated operating current	≥0.8 IΔn			
Performance characteristic	Break-time			
	IΔn	2 IΔn	5 IΔn	10 IΔn
	≤0.1s	≤0.1s	≤0.04s	≤0.04s

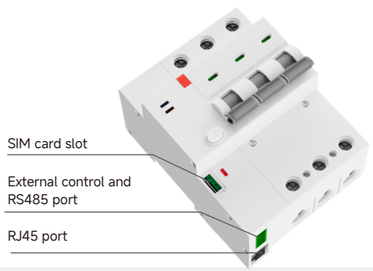
Overvoltage/Undervoltage Protection Characteristics

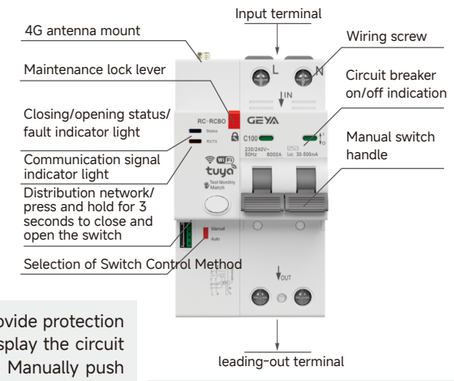
When the line phase voltage exceeds the overvoltage protection set value, the circuit breaker protection trips. Once the line voltage returns to normal levels, the circuit breaker can automatically close and resume operation. The overvoltage protection set value ranges from 253V to 300V, with a factory default setting of 280V. Users may configure or disable the protection as needed.
When the line phase voltage falls below the undervoltage protection set point, the circuit breaker protection trips. Once the line voltage recovers to normal levels, the circuit breaker can automatically close and resume operation. The undervoltage protection set point ranges from 110V to 200V, with a factory default setting of 165V. Users may configure or disable the protection as needed.

Other protective features

Phase loss protection: When a phase is lost at the line power supply terminal, the circuit breaker trips. Upon restoration of normal voltage to the line, automatic reclosing and operation can be initiated. Users may configure or disable the protection as needed.
Overpower protection: The circuit breaker trips when the single-phase power on the line exceeds the set value of overpower protection. The set value range for overpower protection is 50W to 50kW, with a factory default setting of 2000W. Users may adjust or disable the protection as needed.
High-temperature protection: When the line temperature exceeds the over-power protection set point, the circuit breaker protection trips. The high-temperature protection set point range is 60°C to 100°C, with a factory default setting of 80°C. Users may adjust or disable the protection as needed.
Zero-line loss protection: The circuit breaker will trip when the neutral line is absent. Users can configure or disable this protection function. 4 P products are equipped with this feature.
Power failure protection: When a power outage occurs on the supply side, the circuit breaker protection trips. Users can configure or disable the protection as needed.

Operation Chart





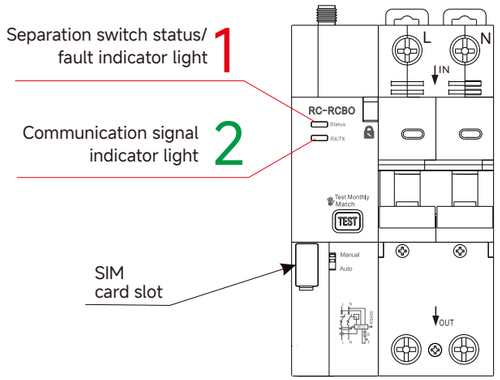
Circuit breaker body: serves to interrupt current flow and provide protection against short circuits and overloads;Operation indicators: Display the circuit breaker status. Red: Closed; Green: Open.Operating handle: Manually push the handle to control the circuit breaker's on/off status.4G gain antenna: Enhances 4G signal strength to ensure stable network connectivity for devices; Manual/automatic switching: Auto mode allows remote or local button operation for automatic power on/off.Manual: Manual mode, only manual operation for switching on/off; SIM card and programming port: Port for SIM card installation and replacement, as well as program programming; RS485/ external control interface: RS485 communication interface and external control switch interface

Action button:
Click to check if the leakage current detection function is disabled. It is recommended to perform self-inspection once per month.
Double-click: Perform open/close operation;
Long press: Wi-Fi device enters distribution network mode.



Action button:

Click to check if the leakage current detection function is disabled.
It is recommended to perform self-inspection once per month.
Double-click: Perform open/close operation;
Long press: Wi-Fi device enters distribution network mode.



Status indicator light:
- Persistent blue light: Product tripping;
- Red light always on: Product closed

Signal indicator light:

Communi-cation mode	Product status	Status Light 2
RS485	No communication	Not bright
	Communication	The blue light is blinking

Communi-cation mode	Product status	Status Light 2
Wifi Zigbee	Unconnected network	Red light flashing slowly
	In the distribution network	Red light flashing fast
	Distribution network completed	The blue light is blinking
	485 Communication	Purple light flashing

Communication mode	Product status	Status Light 1
RS485 Wifi 4G Zigbee	Tripping	Blue light on steady
	Closing	Red light on steady
	Maintenance Lock	Purple light on steady
	Hardware Fault485	Purple light blinking
	RS485 Address Configuration*	Blue light blinking

Communi-cation mode	Product status	Status Light 2
4G	No SIM card	Purple light on steady
	No service	Red light blinking
	Failed to connect to service	Red light fast blinking
	Platform connected successfully	Blue light blinking
	RS485 communication	Purple light blinking

*Red light stays on after configuration.

Product Installation

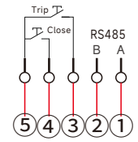
1.This device is designed for standard 35mm rail-mounted installation. During installation, simply insert the device into the rail and secure it with the snap-fit mechanism.
2.Select and use IoT modules and electrical cabinet specifications that meet actual distribution management and line installation design requirements, and install them according to the diagrams.
3.The circuit breaker shall be installed vertically. When the handle is in the "OFF" position, the contacts are in an open state. As the handle moves upward, the contacts move toward the closed position.
4.The nominal cross-sectional area of connecting copper wires matching the circuit breaker's rated current is listed in the table below:

Rated current（A）	10	16~20	25	32	40~50	63	80	100
Wire cross-sectional area(mm²)	1.5	2.5	4	6	10	16	25	35
Torque(N.m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5

Card Installation Instructions (4G Communication Products)

1.Locate the SIM card slot
Locate the SIM card installation position on the front of the circuit breaker and remove the adhesive label from the installation area.
2.Confirm SIM card orientation
Place the SIM card with its metal chip side facing left and the angled edge facing the inside of the slot.
3.Insert SIM card
Gently push it into the card slot until you hear a 'click' sound indicating proper installation.
4.Check installation status
Ensure the SIM card is fully inserted without any protrusion, then reinsert the card slot sticker.
5.Matters need attention：
Disconnect the circuit breaker power supply before installation.
Use a standard Nano SIM card.
Avoid excessive force to prevent damage to the card slot contacts.
If the device cannot recognize the SIM card, check whether the SIM card orientation is correct.
If the network connection fails, check if the SIM card is functioning properly and contact your local carrier to determine if APN settings are required.

6、External control port:



Ports 1 and 2 are RS485 communication interfaces.
Shorting Ports 3 and 5 will trip the circuit breaker; these are passive nodes.
Shorting Ports 4 and 5 will trip the circuit breaker; these are passive nodes.
Note: Long-term shorting of Ports 5 and 3 will keep the device in a tripped state continuously.

7. Product Usage and Precautions:

1)This product is equipped with a standard RS485 communication port, which can be connected to a computer and various other communication devices via an RS485 to USB converter to realize information exchange and control.
2)The default baud rate of the device is 9600 bps. The required baud rate can be viewed and set through a PC.
3)Installation and commissioning of the product must be carried out by a professional electrician.
4)After the product is put into normal operation, a test shall be performed monthly with proper test records kept.
5)This product can be customized according to user requirements. Please contact relevant technical personnel for details.
6)For overseas use of 4G products, communication shall be made in advance, and local carrier APN information shall be provided; otherwise, network connection failure may occur.
7)The device supports Tuya API docking service. Please contact Tuya staff or our sales personnel for specific costs.
8)In addition to the Tuya platform, the product can be connected to third-party platforms via the MQTT protocol. Please consult our sales staff before purchase for details.

Connection Note:

1.Wi-Fi Product Networking Instructions
Note: Before configuring the network, turn on Bluetooth on your phone and connect it to Wi-Fi on the 2.4 GHz band.

01 Product wiring



Connect the power cord properly to the product's incoming terminal and power on. Press and hold the network configuration button for 5 seconds, then release. Wait for the red light to flash rapidly to enter network configuration mode.

02 Install Graffiti Intelligence

1. For Android phones, search for the "Tuya Smart" app in major app stores and click to download and install.
2. For iPhones, search for the "Tuya Smart" app in the App Store and click to download and install. (Open the app after downloading completes.)



03 Sign in to Graffiti AI

Please operate in the following order:
1.Register an account
2.Enter the registered account
3.Enter the registered password
4.Login successful



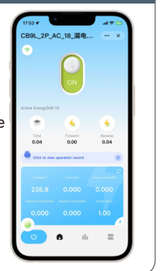
04 Add device

Click “+” to add a device.After the device is found, tap “Add”.Enter the current Wi-Fi password.Wait for the device to be added successfully.



05 Control Equipment

After the device has been successfully added, enter the control interface. You can control the device to trip or close, view real-time device data, and perform parameter settings.



06 Schedule Settings

Enter cloud timing, you can freely set the device turn-on and turn-off time.



2 4. Product Networking Guide for 4G Devices

Note: Before configuring the network, ensure the SIM card is inserted and the device has a stable network connection.

01 Product wiring



Connect the power cord properly to the product's incoming terminal and power on. Press and hold the network configuration button for 5 seconds, then release. Wait for the red light to flash rapidly to enter network configuration mode.

02 Install Graffiti Intelligence

1. For Android phones, search for the "Tuya Smart" app in major app stores and click to download and install.
2. For iPhones, search for the "Tuya Smart" app in the App Store and click to download and install. (Open the app after downloading completes.)



03 Sign in to Graffiti AI

Please operate in the following order:
1.Register an account
2.Enter the registered account
3.Enter the registered password
4.Login successful



04 Add device

Click “+”, select "Scan",and scan the networking QR code on the device.



05 Control Equipment

After the device has been successfully added, enter the control interface. You can control the device to trip or close, view real-time device data, and perform parameter settings.



06 Schedule Settings

Enter cloud timing, you can freely set the device turn-on and turn-off time.



Graffiti APP Interface Operation Guide

1 Main interface



Main operation interface

Trip/Close Control Button
Total Electricity Statistics
Fault Event Log
Voltage, Current & Power Display
Menu Options

2 Power Usage Interface



Data Statistics Function

Hourly, Daily, Monthly and Yearly Electricity Statistics & Electricity Data Export

3 Delay parameter settings interface



Delay parameter configuration

Overvoltage Delay, Undervoltage Delay, Overpower Delay, and Overtemperature Delay Time Settings

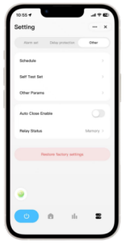
4 Function threshold settings interface



Protection feature configuration

Residual current, over-temperature protection, over-power protection, overload protection and other functions as well as threshold setting.

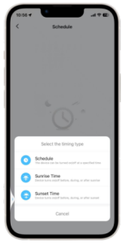
5 Other settings interface



System Settings

Timer setting, leakage self-test setting, automatic closing function setting, and restore factory parameters.

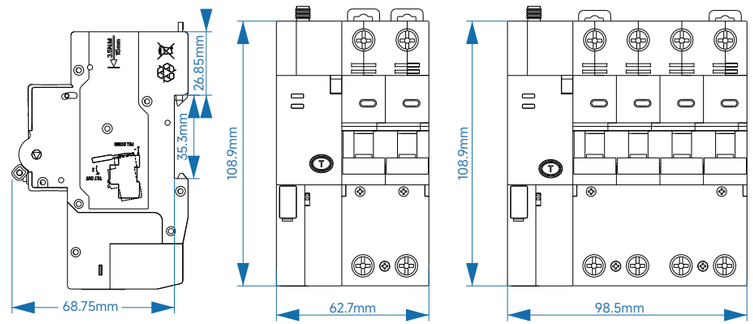
6 Timer settings interface



Schedule Task Configuration

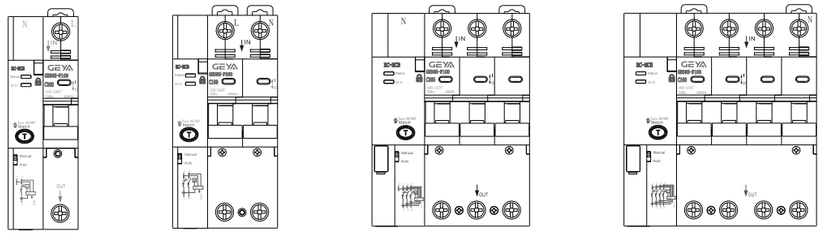
Timer control function setting

Product Dimensions and Shape Diagram (unit: mm)



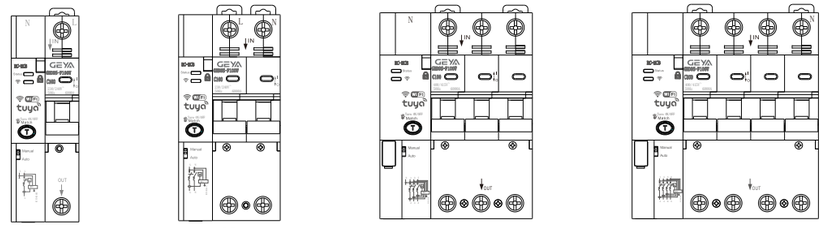
Standard Version

RS485 GRD9S-F100



1P 2P 3P 4P

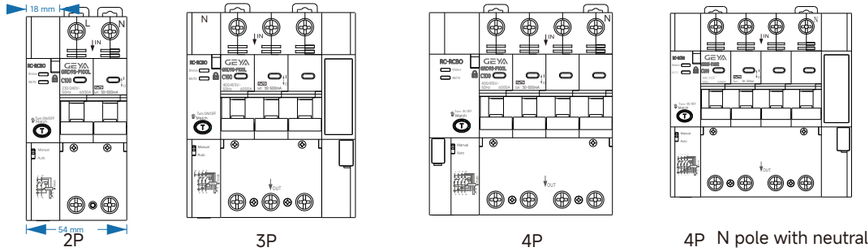
WIFI+RS485 GRD9S-F100W



1P 2P 3P 4P

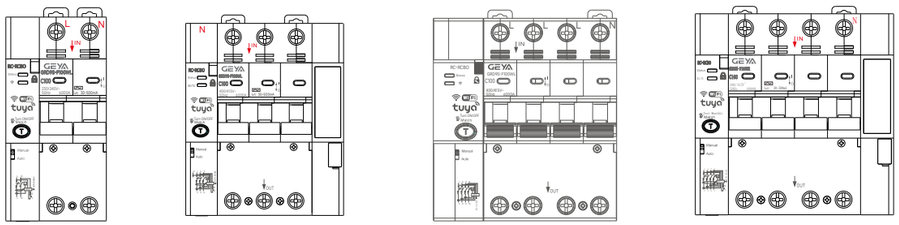
Leakage Protection Version

RS485 GRD9S-F100L



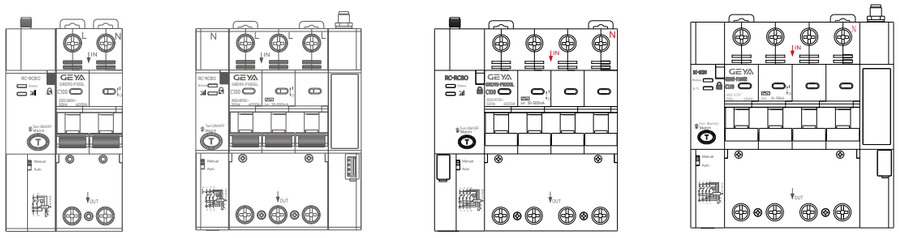
2P 3P 4P 4P N pole with neutral current monitoring

WIFI+RS485 GRD9S-F100WL



2P 3P 4P 4P N pole with neutral current monitoring

4G+RS485 GRD9S-F100GL



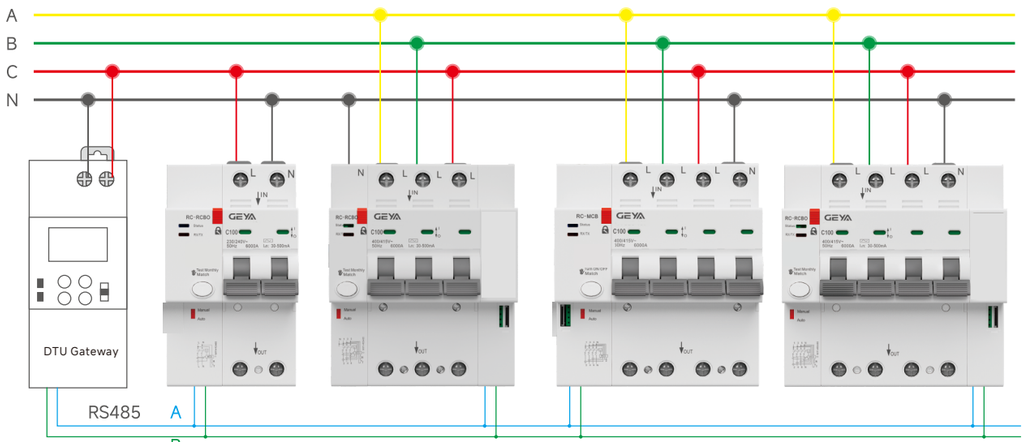
2P 3P 4P 4P N pole with neutral current monitoring

Note: Other communication methods such as Zigbee, RJ45, LoRa, etc. can be customized. The actual appearance shall be subject to the final design.

Product Installation Wiring and Distribution Network Instructions

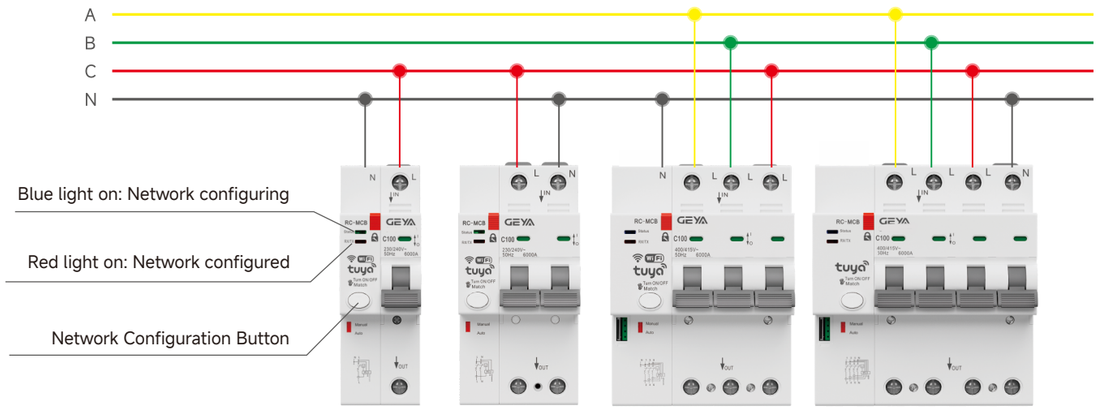
Wire Harnessing and Distribution Network for RS485 Products

⚠ Note: The gateway can pair up to 16 sub-devices!



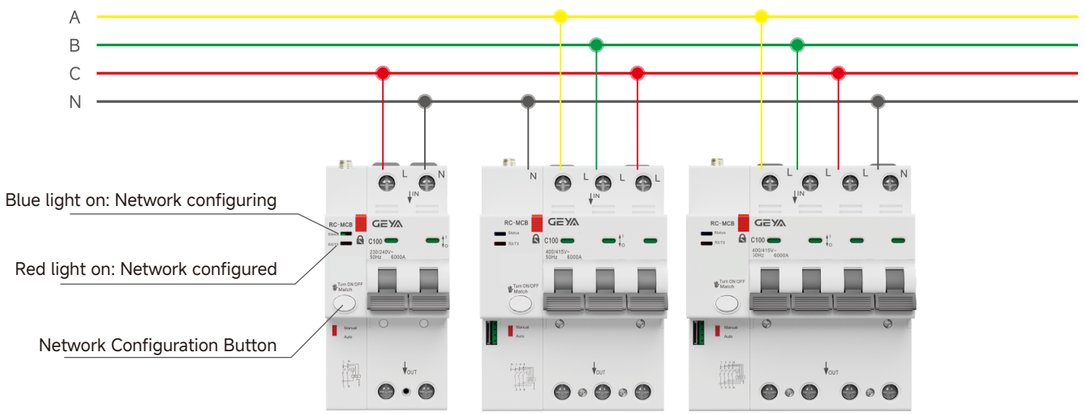
1.When entering gateway distribution mode (host mode), the RX/TX indicator light of the sub-device remains blue, signaling the device has entered distribution mode.
2.Select the sub-device pairing network button to configure the network. The sub-device RX/ TX indicator light remains red after successful pairing.
3.Pair sub-devices sequentially;
4.After all subdevices are paired, press the "Menu" button on the gateway to confirm, exit the pairing mode, and complete the network configuration.
5.Scan the QR code to add a device

WIFI Product Wiring and Network Configuration



Note: Do not connect more than 20 devices on the same router network, as this may cause disconnections.
1.Hold the distribution network button for 3 seconds until the RX/TX indicator light turns blue and remains on, indicating the device has entered distribution network mode.
2.Turn on Bluetooth on your phone, then open the app to search for devices. Once you find the current device, tap Connect.
3.After successful connection, the device's RX/TX indicator light remains red, indicating successful network pairing.
4.Access the APP menu to control the device or view its parameters.

4G Product Wiring and Distribution Network



1.Open the mobile app, scan the QR code on the device, and add the device;
2.After successful connection, the device's RX/TX indicator light stays red, confirming network connectivity.
3.Access the APP menu to control the device or view its parameters.