GYRC-ZN01
IOT Smart circuit breaker

Compact design、High breaking capacity；Remote monitoring for better safety ； 4G、WIFI、RS485

Remote control | GPRS connection | International standard | High breaking capacity | Flame retardant materials

Product model and definition

GYRC	ZN	01	— 100	AP	/ 2P	/ 63A	/ 4G+RS485
			Frame grade		Pole	Rated curren	Communication method
Product number	smart circuit breaker	Design Number	100A	AP: fully automatic reclosing; APE:With PE ground fault protection	2P 4P	32 63 100	RS485 4G+RS485 WIFI+RS485 RJ45+RS485

Main functions

Item	Product number	
	GYRC-ZN01-100AP	GYRC-ZN01-100APE
Compliant with	GBT 16917 CQC1149	
pole number	2P/4P	
Rated voltage	Single-phase AC230V/three-phase AC400V 50Hz	
Rated current	32A、63A、100A	
Trip type	C type (other types can be customized)	
Short circuit breaking capacity	Icu=Ics=6KA	
Mechanical life	More than 12000 times	
Electrical life	More than 6000 times	
Closing time	Less than 1.5s	
Opening time	Less than 0.1s	
Measuring accuracy	1.0	
Leakage action value	30、50、100、200、300、500mA Optional	

Main functions

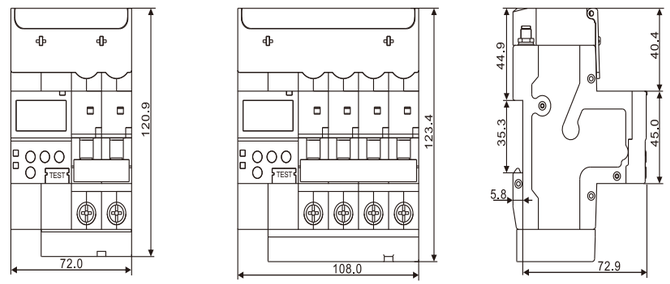
No.	Protection function	trip type	GYRC-ZN01-100AP		GYRC-ZN01-100APE		parameter settings	Settings	factory default	Remark
			2P	4P	2P	4P				
1	Overvoltage protection	Turn off/ Alarm/Trip	Trip	Trip	Trip	Trip	overvoltage adjustment	250~350V	280V	
							Overvoltage delay	0-10s	3s	
2	Under voltage protection	Turn off/ Alarm/Trip	Alarm	Alarm	Alarm	Alarm	Undervoltage adjustment	110~200V	165V	
							Under voltage delay	0-10s	3s	
3	Phase loss protection	Turn off/ Alarm/Trip	---	Turn off	---	Turn off	Phase loss adjustment	10~100V	30V	
							Phase delay	0-10s	3s	
4	overload protection	Turn off/ Alarm/Trip	Trip	Trip	Trip	Trip	Overload adjustment	0.6In~In	In	
							Phase delay	0-10s	3s	
5	High temperature protection	Turn off/ Alarm/Trip	Alarm	Alarm	Alarm	Alarm	high temperature adjustment	60~100°C	80°C	
							High temperature delay	0-10s	5s	
6	Early warning function	off/on	turn on	turn on	turn on	turn on	Warning ratio	90~100%	95%	
7	Alarm allowed	off/on	turn on	turn on	turn on	turn on	---	---	---	
8	Underload protection	Turn off/ Alarm/Trip	Turn off	Turn off	Turn off	Turn off	Underload ratio	1-90%	5%	
							Underload delay	0-10s	5s	
9	Over power protection	off/on	Turn off	Turn off	Turn off	Turn off	Overpower value	50-50KW	2KW	
							Over power delay	0-10s	5s	
10	Under power protection	off/on	Turn off	Turn off	Turn off	Turn off	Under power value	50-50KW	2KW	
							Under power delay	0-10s	5s	
11	Timing control	Setting/off	Turn off	Turn off	Turn off	Turn off	---	---	---	
12	Leakage Protection	Turn off/ Alarm/Trip	Trip	Trip	Trip	Trip	Leakage setting value	30-500mA	100mA	30/50/100/200/ 300/500mA
							no driving time	-/0.06/0.1/0.2s	-	
13	mutation protection	Turn off/Alarm/Trip	Turn off	Turn off	Turn off	Turn off	Leakage mutation value	30-100mA	30mA	
14	Automatic reclosing	off/on	Turn off	Turn off	Turn off	Turn off	---	-----	---	
15	power failure protection	Turn off/Trip	Turn off	Turn off	Turn off	Turn off	Power-off voltage value	0-100V	80V	
							Power off delay	0-5s	2s	
16	Phase failure protection	Turn off/Alarm/Trip	---	Turn off	---	Turn off	Phase failure delay	0-5s	2s	
17	Voltage Unbalance Protection	Turn off/ Alarm/Trip	---	Turn off	---	Turn off	Voltage imbalance	5%-30%	20%	
							voltage imbalance delay	0-10s	5s	
18	Current imbalance protection	Turn off/ Alarm/Trip	---	Turn off	---	Turn off	Current imbalance	5%-30%	20%	
							Current imbalance delay	0-10s	5s	
19	Timed trial trip	off/on	Turn off	Turn off	Turn off	Turn off	Trial trip-day		20	
							Trial trip-hour		23	
							Trial trip-minute		30	
20	gear return	off/on	turn on	turn on	turn on	turn on				Leakage Protection
21	Open protection	Turn off/Alarm/Trip	Turn off	Turn off	Turn off	Turn off				
22	Remote control allowed	off/on	turn on	turn on	turn on	turn on				
23	Location display	off/on	Turn off	Turn off	Turn off	Turn off		5-600s	60s	
24	PE open circuit alarm	Turn off/Alarm/Trip	---	---	Alarm	Alarm	Open circuit delay	5-600s	60s	
25	PE fault alarm	Turn off/Alarm/Trip	---	---	Alarm	Alarm	Failure delay	3-20s	3s	
26	Power-on delay	off/on	turn on	turn on	turn on	turn on		0-9	0	
27	Leakage reclosing									
28	Manual and automatic controltage		yes	yes	yes	yes				
29	Mechanical inspection lock		yes	yes	yes	yes				

Product appearance

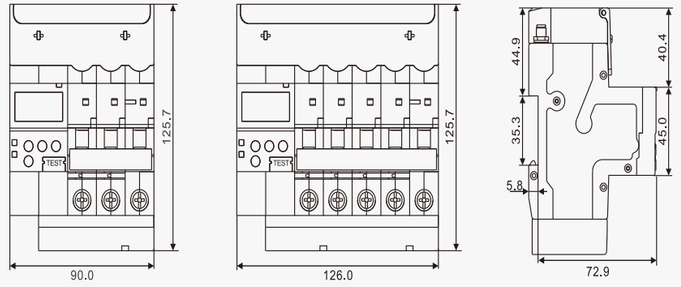
GYRC-ZN01-100AP	GYRC-ZN01-100APE
4G+RS485/WIFI+RS485/RJ45+RS485/RS485	4G+RS485/WIFI+RS485/RJ45+RS485/RS485
	

Product Dimensions

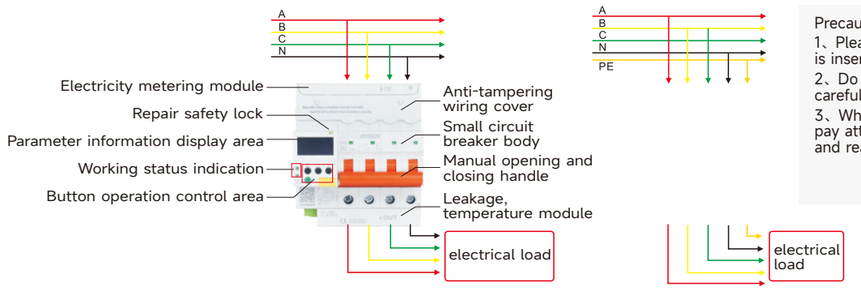
GYRC-ZN01-100AP



GYRC-ZN01-100APE



Product wiring and panel instructions



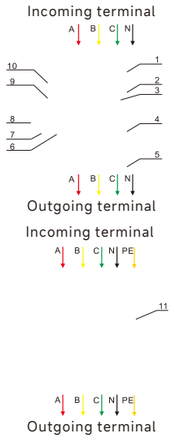
Precautions

1、Please check whether the SIM card is inserted before installation

2、Do not install with power on, be careful with wiring

3、When tightening screws for wiring, pay attention to whether the front and rear modules are loose.

Introduction to product modules and button functions



1、Cover; main function is to prevent random wiring

2、The circuit breaker body functions as current switching, short circuit, and overload protection;

3、Circuit breaker contact indication; indicates circuit breaker status, red: open, green: closed;

4、Operating handle; manually push the handle to control the closing and opening of the circuit breaker;

5、Measurement, leakage detection module, mainly detects current, voltage sampling, leakage signals and terminal temperature signals, etc;

6、Leakage test button; mainly detects whether the leakage function has failed. It needs to be pressed once a month for self-test. The switch can open normally and the leakage function of the front switch is normal;

7、Local settings and check button:

Press this to enter the menu. After parameter setting, press this key again to confirm the input;

Press this once and the cursor will jump up one line to enter the setting state. Each time you press it, the number will increase upwards.;

Press this once and the cursor will jump down one line and enter the setting state. Each time you press it, the number will decrease downwards;

In the setting or viewing state, press this button once to return to the upper menu; if the switch is in the fault alarm state, press this button to eliminate the alarm sound;

8、Status indication; mainly indicates product closing and opening status, communication status, fault, whether the SIM card is inserted correctly, etc.

9、LCD display; mainly provides human-machine operation interface, and relevant information can be displayed on the display;

10、Control body: mainly controls the closing and opening of circuit breakers and the collection and processing of various electrical parameters, etc;

11、PE indication: If the front-end PE is connected normally, the indication will stay green; if it is not connected, the indication will not light up, and there will be an audible alarm, and "PE line disconnection alarm" will be displayed on the display.

Menu Function Operation Instructions

1、Menu Function Operation Instructions

2、Press to enter the menu, and you will be prompted to enter a password. The initial password of this product is "0000". If you need to change the password, press according to the cursor prompt to confirm the number you need to enter, and then press OK to set the next few digits with same operation.;

3、After entering the confirmation password, enter the menu, which has sub-menus such as parameters, records, functions, maintenance and about. Then press to select the menu you want to enter, and then press the key to enter the lower-level menu. You can set or view relevant parameters according to your needs;

4、After setting or viewing parameters, you need to exit, just press

5、Press directly to view the electrical parameters;

6、Long press the green button to control the switch opening and closing , short press the button to return to the upper menu;

7、Menu Description:

Parameters: After entering this menu, you can set parameter values, such as over and under voltage values, leakage, current, temperature, power, etc;

Record: After entering this menu, you can view the switching time record, such as the cause of the fault, operation, etc;

Communication: After entering this menu, you can set the communication method, such as WIFI, MOTT, RS485, etc. or communication baud rate, device type;

Function: After entering this menu, the switch protection function can be set to off, alarm and trip;

Display: After entering this menu, you can set the display to Chinese or English;

Number of times: After entering this menu, you can query the number of times the switch has been run in each state;

Maintenance: After entering this menu, you can perform maintenance on the switch, such as restoring factory settings, networking mode, restarting the device, etc;

About: After entering this menu, you can view the product software version number, communication module IEMI code and SIM card code, etc.

Product installation precautions

1 Reverse connection of product incoming and outgoing lines is absolutely not allowed;

2 After the product is installed, check whether the wiring is correct. Pay special attention to the fact that N and PE cannot be connected wrongly

3 The leakage function of FSZN01-PE product is not allowed to be turned off. Set the leakage parameter value to 30mA (recommended). It can be set to 30mA according to the actual application scenario;

4 For online version products, please download and install the APP and scan the QR code on the product;

5 The RS485 communication terminal of this product is a standard configuration. It can be connected to computers and various communication devices through an RS485 to USB converter to achieve information exchange and control;

6 The default baud rate of the device is 9600bps. You can view and set the required baud rate in the settings menu;

7 For 7.4G version products, the SIM card must be inserted before use to achieve remote information interactive control;

8 Product installation and debugging must be carried out by professional electricians;

9 This product can be customized according to user needs. Please contact us for details;

10 For special purposes, please consult us.

Basic debugging

1、The remote control does not respond:

Check that the two-way arrow is not displayed on the main interface. The SIM card may be in arrears, loose or damaged. Enter the menu "About" and check the SIM code (20-digit code); if you can check it, means that the card is in arrears, operation method: recharge the data according to the operator to activate it. If you can't see it, open the cover of the SIM card insertion area, take it out again (push the SIM card inward gently and release it, and the card will pop out) and then put it back in. You can see the card number, which means that the card is loose and has poor contact; if you cannot check it, it means that the card is broken, please replace the SIM card.

Check whether the 485 symbol is displayed on the main interface. If not, check whether the RS485 interface is loose.

2、The sub-device under control does not respond. Check whether the device is online? If it is offline, re-configure the network. If the network configuration is unsuccessful, there may be a problem with the device and it may need to be disassembled for inspection or repair.