

YCB9NZF-40AP

Smart Circuit Breaker

OPERATION INSTRUCTION

CNC

Deliver
PowerFor Better Life

-  Before installing and using this product, please read this manual carefully and pay more attention to safety.

1. General

YCB9NZF-40 series IoT miniature circuit breakers are used in low-voltage terminal distribution networks in industrial, commercial, civil buildings and infrastructure in indoor buildings and similar places. IoT miniature circuit breakers are used in conjunction with intelligent gateways to monitor key electrical parameters of power lines, such as voltage, current, power, temperature, leakage, energy consumption, etc. In real time, and have functions such as remote control, abnormal warning, accident tripping alarm, power metering statistics, and fault location.

2. Type designation

YC B 9N ZF - 40 AP 1P+N 20A RS485 AC

YC	B	9N	ZF	40
Company code	Category Code	Design Serial Number	Smart Circuit Breaker	Frame Rating
YC	B	9N	ZF	40
AP	1P+N	20A	RS485	AC
Auxiliary Code	Number of poles	Rated Current	Communication Method	Residual Current Protection Type
AP: Automatic Reclosing; BZ: Semi - automatic; APE: With PE Line	1P+N	Preferred: 20, 40; (Other specifications can be customized)	1.RS485 2.Wifi	AC Type, A Type, B Type

3. Function parameters

Protection Function	Tripping Type	Factory Default Value	Parameter Setting	Setting Value	Factory Default Value for Setting
Over - voltage Protection	Off/Alarm/Trip	Trip	Over - voltage Setting	250 - 350V	280V
			Over - voltage Delay	0 - 10s	3s
Under - voltage Protection	Off/Alarm/Trip	Alarm	Under - voltage Setting	110 - 200V	165V
			Under - voltage Delay	0 - 10s	3s
Overload Protection	Off/Alarm/Trip	Trip	Overload Setting	0.6In - In	In
			Phase - failure Delay	0 - 10s	3s
High - temperature Protection	Off/Alarm/Trip	Alarm	High - temperature Setting	60 - 100°C	80°C
			High - temperature Delay	0 - 10s	5s
Pre - warning Function	Off/On	On	Pre - warning Proportion	90 - 100%	95%
Alarm Enable	Off/On	On	—	—	—
Over - power Protection	Off/Alarm/Trip	Off	Over - power Value	5 - 50KW	2KW
			Over - power Delay	0 - 10s	5s
Under - power Protection	Off/Alarm/Trip	Off	Under - power Value	5 - 50KW	2KW
			Under - power Delay	0 - 10s	5s
Timing Control	Set/Off	Off	—	—	—
Automatic Closing	Off/On	Off	—	—	—
Leakage Protection	Off/Alarm/Trip	Trip	Leakage Setting Value	30-100mA(AC type), 30mA(A type/B type)	30mA
			Non - actuation Time	~0.06s (AC type), 0-0.2s (A type/B type)	—
Leakage Self - check		Yes (A type/B type)	——		
Manual - Automatic Integrated Control		Yes	——		

- “/” means no function
- “---” means no parameter
- Trip type notes:

Off: turn off this function, when the protection action value is reached, the product does not protect; Alarm: when the protection action value is reached, the product only alarms but does not trip;

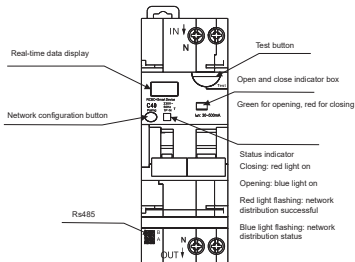
Trip: when the protection action value is reached, the product trips.

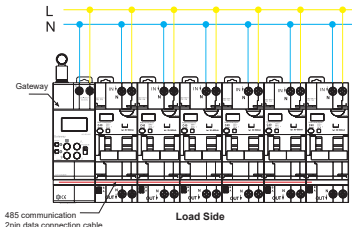
4. Technical Data

Item	Product Model
Standards Complied with	IEC/EN3024, IEC/EN61009 - 1
Number of Poles	1P+N
Rated Voltage	Single - phase AC230V, 50Hz
Rated Current	20A, 40A (Other specifications can be customized)
Tripping Type	C type (Other types can be customized)
Short - Circuit Breaking Capacity	Icu = Ics = 6kA
Mechanical Life	>15000 operations
Electrical Life	>6000 operations
Closing Time	<1.5s
Opening Time	<1.0s
Metering Accuracy	1.0
Leakage Trip Value	(30 - 100mA) AC type, 30mA (A type), 30mA (B type)

5. Operation button description

RS485 interface and network configuration description

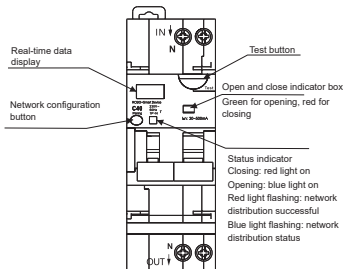




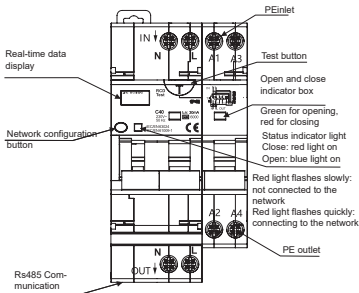
Note: The gateway can pair up to 16 sub-devices

1. Enter the gateway network configuration mode (host mode), the sub- device indicator light flashes blue, and enters the network configuration state;
2. Press the sub-device network configuration button to configure the network. The sub-device indicator light flashes red when the current sub-device is successfully paired;
3. Pair sub-devices one by one;
4. After all sub-devices are paired, press the gateway "Menu" button to confirm, exit the network configuration mode, and the network configuration is completed
5. Scan the code using APP to add a device

Wi-Fi product interface and network configuration instructions

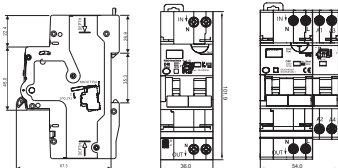


Wi-Fi products can be directly configured and added in the corresponding AP



6. Installation and wiring

Installation dimensions



7. Product Installation

1. The device is suitable for standard 35mm rail installation. When installing, just clip the device into the rail and fix it with a buckle.
2. According to the actual power distribution management and line laying design requirements, select and use the IoT module and the specifications of the electrical box that meet the needs, and install them in the order of the modules shown in the figure. Each module is connected with a 5PIN data cable specially made by the manufacturer.
3. The circuit breaker should be installed vertically. When the handle is in "OFF", the contact is in the disconnected state. When the handle moves upward, the contact moves in the closing direction;
4. The nominal cross-sectional area of the copper wire for connection that matches the rated current of the circuit breaker is shown in the table below.

Rated current(A)	10	16~20	25	32	40~50	63	80
Wire cross-sectional area (mm ²)	1.5	2.5	4	6	10	16	25
Torque(N.m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5

Transportation and storage

Transportation

During the transportation of the product, it should be prevented from the invasion and mixing of water, rain, snow or other chemical solvents, corrosive liquids and other harmful liquids; prevent strong collision and extrusion between objects; stack according to the direction indicated on the package, and the number of stacking layers can be seen from the outer box of the packaging.

Product use and precautions

Storage

- Storage environment conditions: ambient temperature -10°C+45°C;
- Relative humidity ≤90% (when the ambient temperature is +20°C);
- The storage location should be free of dust and conductive dust;
- No corrosive, flammable and explosive gases, no rain and snow invasion;
- Dry and well ventilated;
- Stack according to the direction indicated on the package, and the stacking should not be higher than the number marked on the outer box.



CERTIFICATE

Product Model: YCB9NZF-40AP

Inspector: CNC 001

Production date: Printed on the product
or package

This product is qualified according to the
delivery inspection

CNC

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