

YCB9ZF/YCB9LZF-80AP

Smart Circuit Breaker

OPERATION INSTRUCTION



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

1. General

YCB9LZF-80AP series IoT miniature circuit breakers are used in low-voltage terminal distribution networks in industrial, commercial, civil and infrastructure fields in indoor buildings and similar places. IoT miniature circuit breakers are used 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 9 L ZF - 80 AP 2P 32A DC RS485

YC	B	9	L	-	ZF	80
Company code	Category Code	Design Serial Number	Leakage Protection Function		Smart Circuit Breaker	Frame Rating
YC	B	9	With leakage protection; Absence indicates no leakage protection		ZF	Frame Rating 80A (Note: For DC or AC type products, 1P/2P can be 100A)
AP		2P	32A	DC	RS485	
Auxiliary Code		Number of poles	Frame Rating	Voltage Type	Communication Method	
AP: Automatic Reclosing; BZ: Semi - automatic			Frame Rating 80A (Note: For DC or AC type products, 1P/2P can be 100A)	AC type (can be omitted); DC type	1. S485 2. 4G 3. Wifi	

3. Function parameters

Protection Function	Trip Type	YCB9ZF-80AP				YCB9LZF-80AP				Parameter Setting	Setting Value	Factory Default Value
		1P	2P	3P	4P	2P	3P	4P				
Overvoltage Protection	Off/Alarm/Trip	Trip	Trip	Trip	Trip	Trip	Trip	Trip	Overvoltage Setting	250-350V	280V	
	Off								Overvoltage Delay	0-10S	3s	
Undervoltage Protection	Alarm/Trip	Alarm	Alarm	Alarm	Alarm	Alarm	Alarm	Alarm	Undervoltage Setting	110-200V	165V	
	Off								Undervoltage Delay	0-10S	3s	
Phase Loss Protection	Off/Alarm/Trip	/	/	Off	Off	/	Off	Off	Phase Loss Setting	10-100V	30V	
	Off								Phase Loss Delay	0-10s	5s	
Overload Protection	Off/Alarm/Trip	Trip	Trip	Trip	Trip	Trip	Trip	Trip	Overload Setting	0.6In-In	In	
	Off								Overload Delay	0-10s	3s	
High Temperature Protection	Off/Alarm/Trip	Alarm	Alarm	Alarm	Alarm	Alarm	Alarm	Alarm	High Temperature Setting	60-100℃	80℃	
	Off								High Temperature Delay	0-10s	5s	
Early Warning Function	Off/On	On	On	On	On	On	On	On	Early Warning Proportion	90-100%	95%	
Alarm Enable	Off/On	On	On	On	On	On	On	On	——	——	——	
Overpower Protection	Off/Alarm/Trip	Off	Off	Off	Off	Off	Off	Off	Overpower Value	50W-50Kw	2Kw	
	Off								Overpower Delay	0-10s	5s	
Underpower Protection	Alarm/Trip	Off	Off	Off	Off	Off	Off	Off	Underpower Value	50W-50Kw	2Kw	
	Off								Underpower Delay	0-10s	5s	
Timing Control	Off/Setting	Off	Off	Off	Off	Off	Off	Off	——	——	——	
Automatic Closing	Off/On	Off	Off	Off	Off	Off	Off	Off	——	——	——	
Leakage Protection	Off/Alarm/Trip	/	/	/	/	Trip	Trip	Trip	Leakage setting value	30-500mA	100mA	
									No driving time	0.060.10.2s	-	
Manual-automatic Integrated Control		Yes	Yes	Yes	Yes	Yes	Yes	Yes	——	——	——	
Mechanical Maintenance Lock		Yes	Yes	Yes	Yes	Yes	Yes	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;

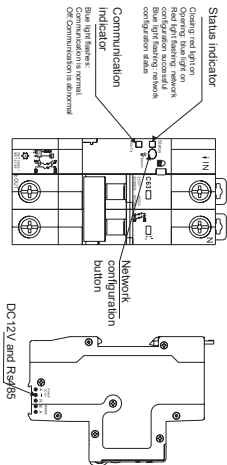
Trip: when the protection action value is reached, the product trips.

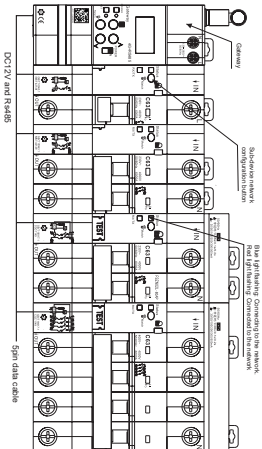
4. Technical Data

Item	Product Model	
	YCB9ZF - 80	YCB9LZF - 80
Compliance Standard	IEC/EN60898 - 1	IEC/EN60898 - 1, IEC/EN61009 - 1
Number of Poles	1P, 2P, 3P, 4P	2P, 3P, 4P
Rated Voltage	Single - phase AC230V, Three - phase AC400V 50/60Hz	Single - phase AC230V, Three - phase AC400V 50/60Hz
Rated Current	20A, 32A, 63A, 80A (1P/2P can be customized up to 100A)	20A, 32A, 63A, 80A
Tripping Type	Type C (other types can be customized)	
Short - circuit Breaking Capacity	Common type: $I_{cu} = I_{cs} = 6kA$; H type: $I_{cu} = 10kA$, $I_{cs} = 7.5kA$	
Mechanical Life	For 1P/2P > 20000 times, for 3P, 4P > 12000 times	
Electrical Life	> 6000 times	
Closing Time	< 1.5s	
Opening Time	< 1.0s	
Measurement Accuracy	1.0	
Leakage Tripping Value	-----	30, 50, 100, 200, 300, 500mA optional

5. Operation button description

RS485 interface and network configuration description

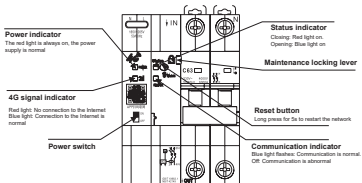




Note: The gateway can pair up to 16 sub-devices

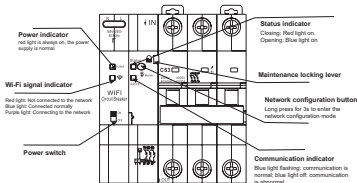
1. Enter the gateway network configuration mode (host mode), the sub-device "Status" indicator light flashes blue, and enters the network configuration state;
2. Press the sub-device network configuration button to configure the network. The current sub-device is paired successfully, and the sub-device "Status" indicator light flashes red;
3. Pair sub-devices in sequence;
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 QR code on the APP to add a device

4G interface and network configuration instructions



4G products can be added by scanning the QR code directly on the APP

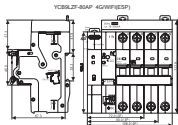
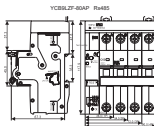
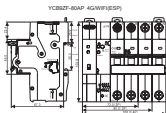
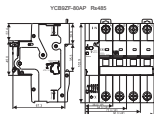
Wi-Fi product interface and network configuration instructions



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

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.
1. This product has RS485 as a standard communication port, which can be connected to computers and other communication devices through RS485 to USB converter to achieve information exchange and control.
 2. The default baud rate of the device is 9600bps, and the required baud rate can be viewed and set through the PC.
 3. Product installation and commissioning must be carried out by professional electricians.
 4. This product can be customized according to user needs, please contact relevant technicians for details.



CERTIFICATE

Product Model: YCB9ZF/YCB9LZF-80AP

Inspector: CNC 001

Production date: Printed on the product
or package

This product is qualified according to the
delivery inspection

CNC

YCB9ZF/YCB9LZF-80AP

CNC ELECTRIC

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