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NB2-80ZTM Smart Circuit Breaker Quick Guide

Version: 02
Date: 2026-04

1 Product Overview

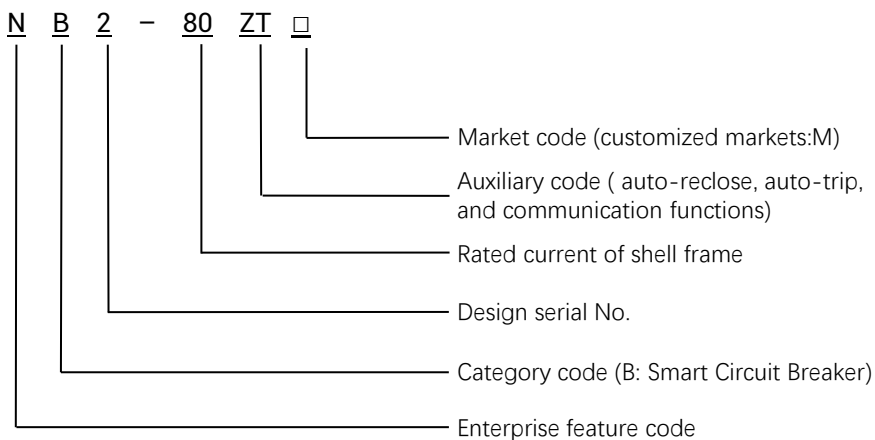
1.1 Main Purpose and Scope of Application

- This product is applicable to circuits with AC 50/60Hz ~ (Single-phase/ Three-phase), rated voltage 230V/240V~ (Single-phase), 400V/415V~ (Three-phase) and rated current 63A, providing overload, short-circuit, overvoltage and undervoltage protection, and can also be used for infrequent connection and disconnection of circuits under normal conditions.
- The product also has remote control and electrical measurement functions(voltage, current, power), and can form a network with external devices through RS485 communication interface.

1.2 Compliance with Standards

- Low Voltage Directive: 2014/35/EU
- RoHS Directive: 2011/65/EU
- RoHS Directive: 2015/863/EU
- REACH Regulation: EC 1907/2006
- BS EN 60898-1:2019+A11:2024

1.3 Model Composition and Significance

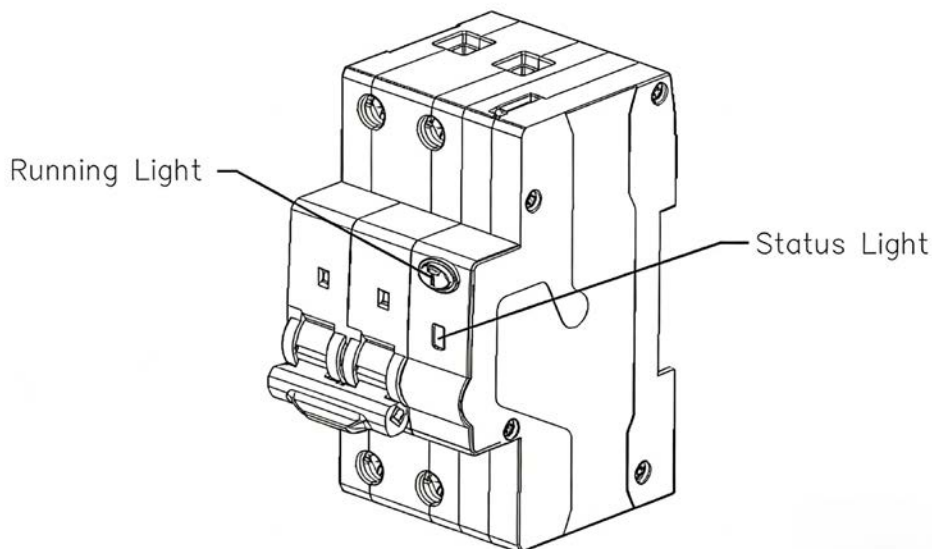


1.4 Performance Specifications

Model	NB2-80ZTM	
Number of Poles	1P+N	3P+N
Size	3P(Single-phase type)	5P(Three-phase type)
Rated Voltage (Ue)	230V/240V~	400V/415V~
Rated Current (In)	16A, 32A, 63A	
Electrical Energy Accuracy	Class B	
Baud Rates	1200bps/2400bps/4800bps/9600bps/19200bps(default: 9600bps) , 1 stop bit, 8 data bits, no parity	
Operating Temperature	-25℃~+70℃	
Rated Short-Circuit Breaking Capacity (Icn)	6000A	
Electrical Life	10000 times	
Mechanical Life	10000 times	
Closing Time	≤ 3s	
Opening Time	≤ 2s	
Certifications	CE, CB, UKCA, RoHS, REACH	

1.5 Circuit Breaker State Control

Mode Selection Switch	Phase line voltage	Control Type		State After Control	Remarks
Manual	Ue	Manual Control	Closing	Closed position	/
			Opening	Opened position	/
		Signal Control	Closing	Remains in the original position	/
			Opening	Remains in the original position	/
Automatic	Ue	Manual Control	Closing	Closed position	/
			Opening	Opened position	/
		Signal Control	Closing	Closed position	/
			Opening	Opened position	/
Manual /Automatic	≥Uvo\ ≤Uvu	Manual Control	Closing	Closed position	Overvoltage and undervoltage function enabled
			Opening	Closed position	
		Signal Control	Closing	Closed position	
			Opening	Closed position	



Status Light

Status of circuit breaker after energization	Indicator light Display
The mode selector switch is set to the "Automatic" position	Red is always on
The mode selector switch is set to the "Manual" position	Always bright green
Alarm status	Flashing red

Running Light

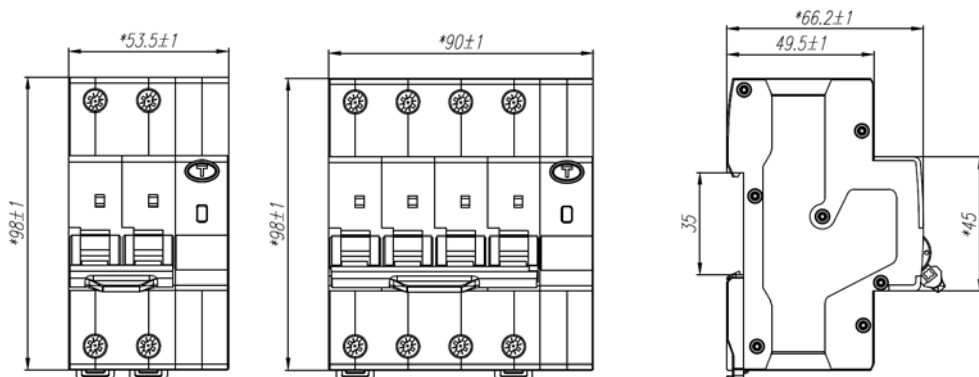
Status of circuit breaker after energization	Indicator light Display
Normal status	Always bright green
Abnormal status	The light goes out

2 Installation and Disassembly

2.1 Dimensions and Outline

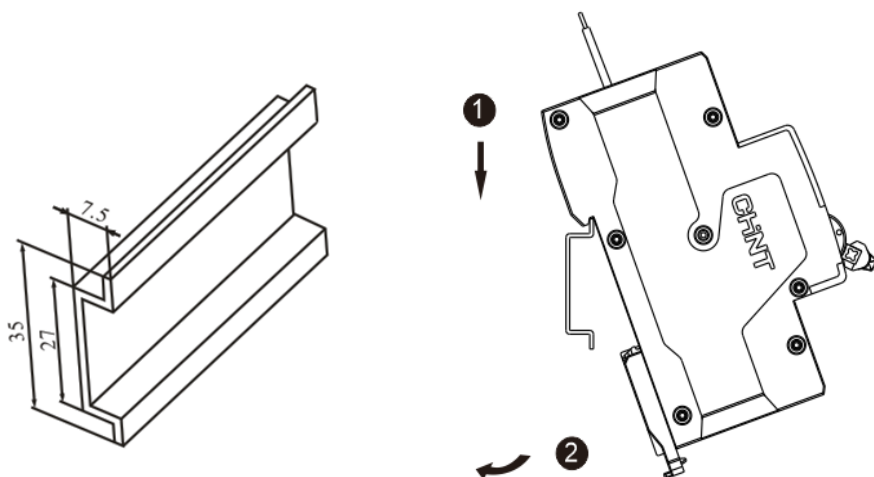
NB2-80ZTM 1P+N: 98mm (Length) × 53.5mm (Width) × 66.2mm (Height)

NB2-80ZTM 3P+N: 98mm (Length) × 90mm (Width) × 66.2mm (Height)

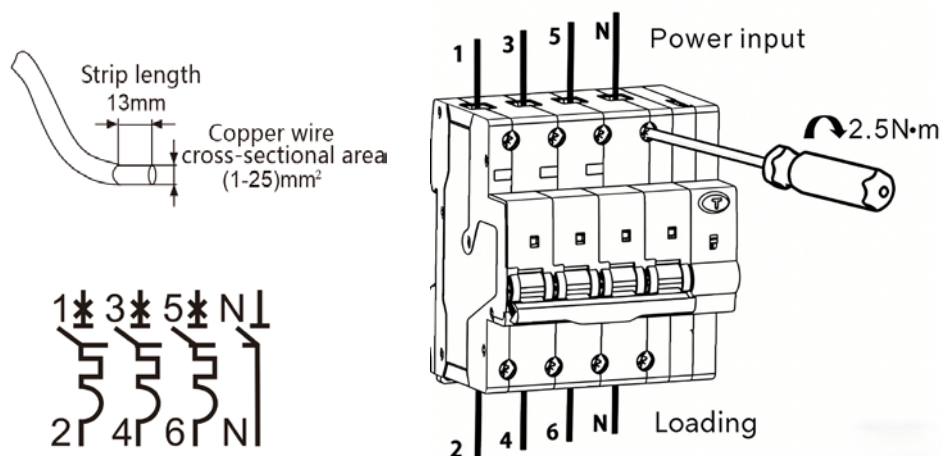


2.2 Installation Diagram

TH35-7.5 mounting rail is used for installation, as shown in Figure below

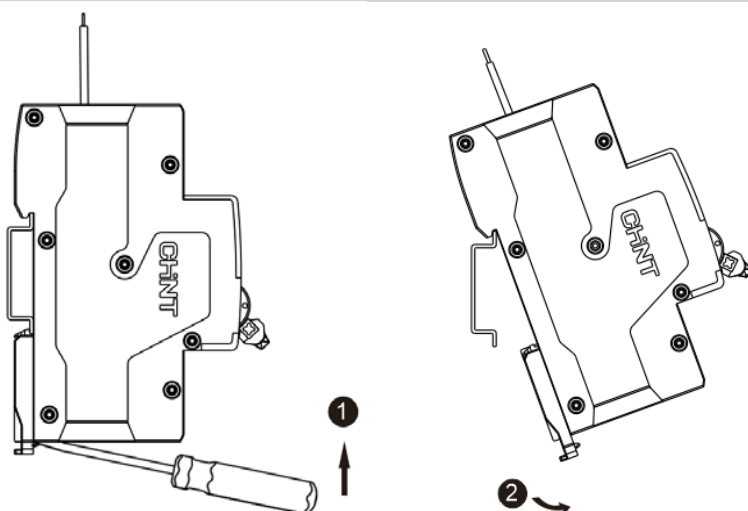


2.3 Wiring Diagram

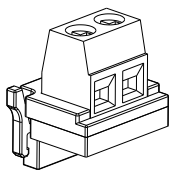


Warning: Do not perform live wiring operations; observe electrical safety regulations.

2.4 Disassembly Diagram

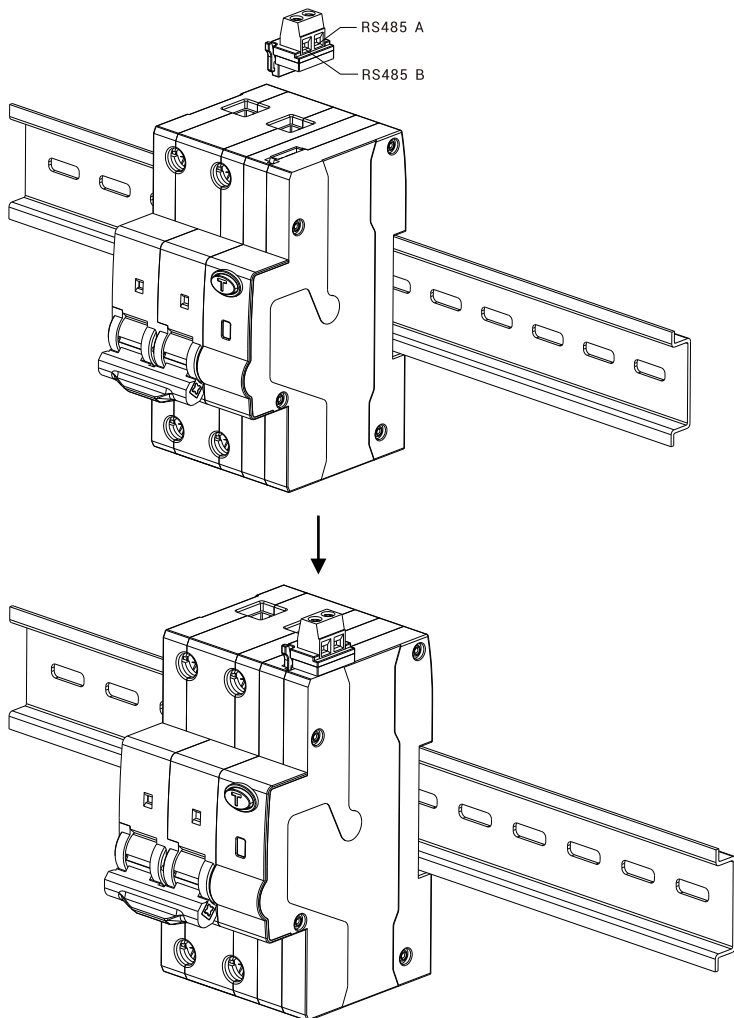


2.5 Communication Wiring Diagram (single -machine connection)

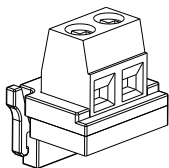


RS485 Connector

Connect the inverter RS485 communication cable

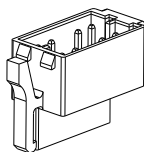


2.6 Communication Wiring Diagram (multi-machine connection)



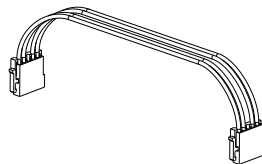
RS485 Connector

Connect the inverter RS485 communication cable



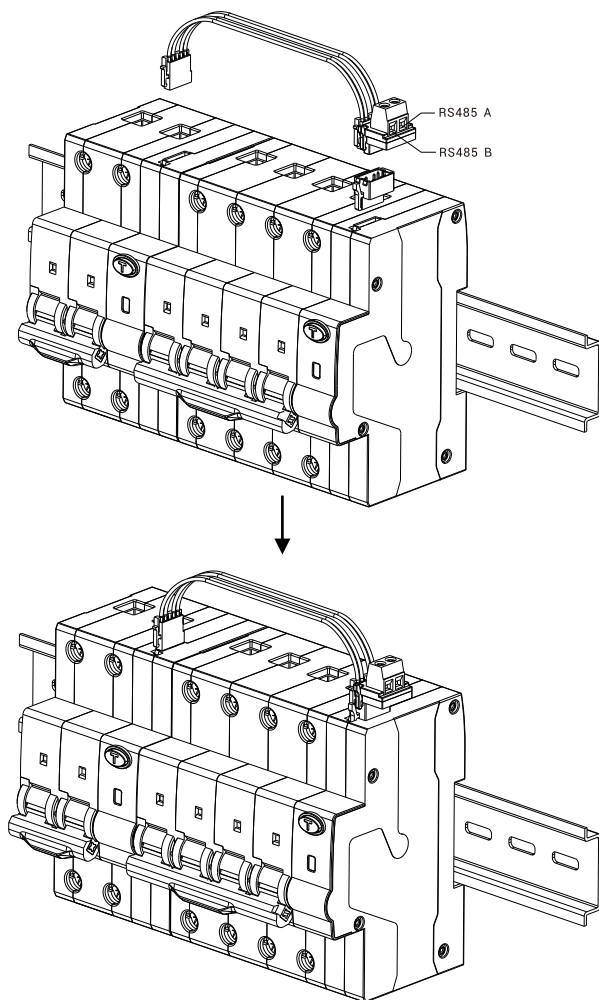
RS485 Splitter

Split one signal into multiple channels



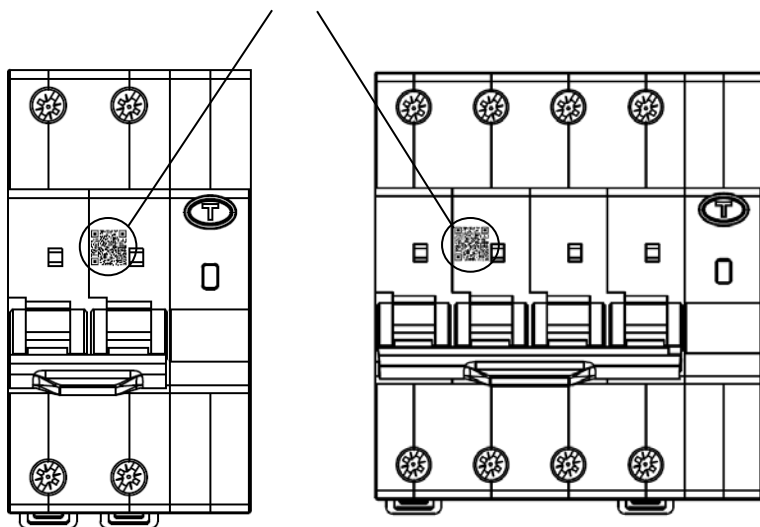
Connecting wire

Connection between circuit breakers



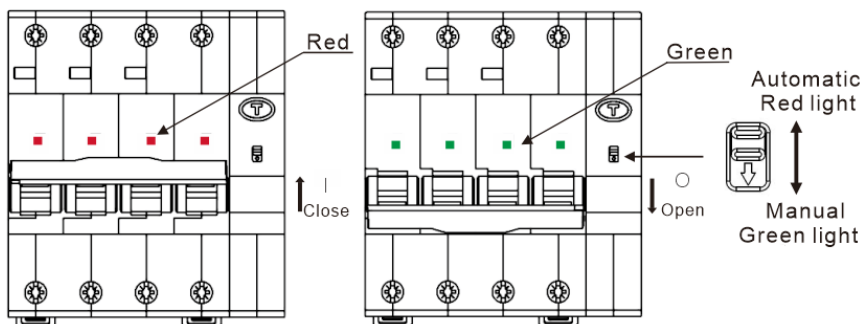
2.7 SN QR code

Scan the QR code to obtain the SN number.



2.8 Closed/Opened Status Indication

Before installation and use: check whether the circuit breaker mark is consistent with the working conditions used; Before power on, the circuit breaker shall be operated several times, and its mechanism action shall be flexible, reliable, and free of blocking. See Figure for the circuit breaker closed/opened status indication and the "Automatic"/"Manual" position of the mode selection switch.



2.9 Requirements for Cross Sectional Area of Copper Conductor

Rated current In(A)	Cross sectional area of copper conductor(mm ²)
16	2.5
32	6
63	16

2.10 Temperature Derating Factor

Rated Current Values 6A~80A	Environment Temperature (°C)										
	-25	-20	-10	0	10	20	30	40	50	60	70
Temperature Correction Coefficient	1	1	1	1	1	1	1	0.97	0.93	0.89	0.85

3 Warranty and Service

The manufacturer provides a product quality warranty in accordance with relevant regulations. Within 18 months from the date of delivery, if the user fully complies with the provisions of this manual, the factory seal remains intact, and the circuit breaker is found to be defective during use, our company shall be responsible for free repair or replacement.

4 Environmental Protection

Dear customer :

To protect the environment, please ensure the proper recycling of this product and its components when it reaches the end of its service life. Please also dispose of all non-recyclable materials in accordance with local environmental regulations. Thank you very much for your cooperation and support.

5 Statement

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6 Manufacturer Information

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