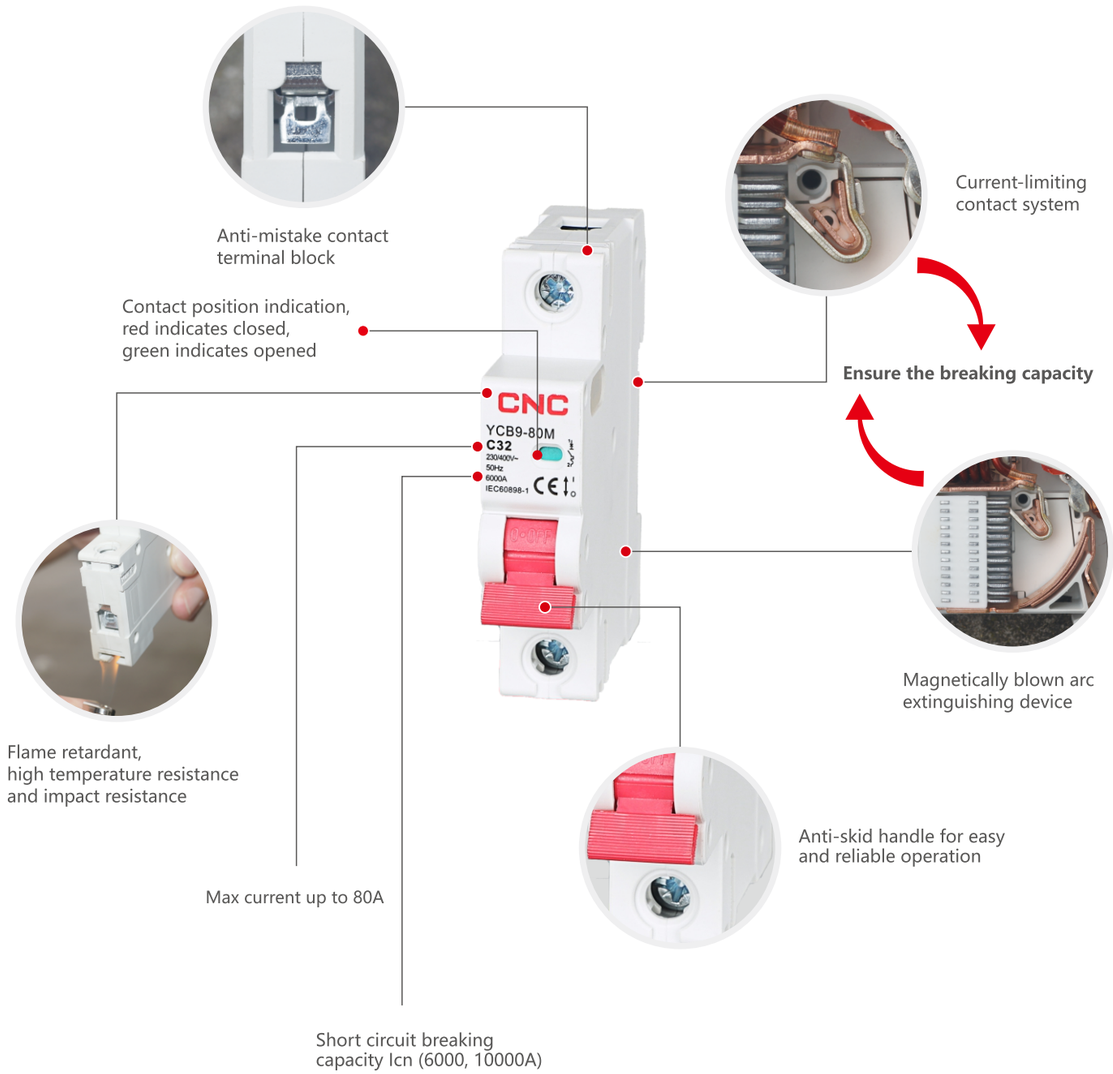
YCB9 Series

- High breaking capacity up to 10kA
- Miniature Circuit Breaker Rated current up to 80A
- Leakage function can be selected in various places

CNC ELECTRIC

YCB9 Series MCB

Overview



YCB9-80M/H MCB

General

The YCB9-80 series miniature circuit breaker are suitable for overcurrent protection of building line facilities and similar purposes in AC 50/60Hz, rated voltage 230V/400V, rated current up to 80A circuits. They have isolation, overload, and short circuit protection functions, and can also be used for infrequent operation and switching of lines under normal circumstances. Circuit breakers are suitable for various places such as industry, commerce, high-rise buildings, and residential buildings.
Standard: IEC/EN 60898-1

Selection

YCB9	—	80	M	1P	C	16	Double busbar
Model		Shell grade current	Breaking capacity	Number of poles	Tripping characteristics	Rated current	Others
Miniature circuit breaker		80	M:6kA H:10kA	1P 2P 3P 4P	B C D	1 2 4 6 10 16 20 25 32 40 50 63 80	/:Single busbar DB:Double busbar

Note: This product can be assembled with accessories（YCB9-80 OF/SD/OF+SD/MX/MVMN/MX+OF, etc）

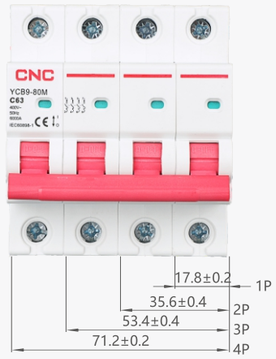
YCB9-80M/H MCB

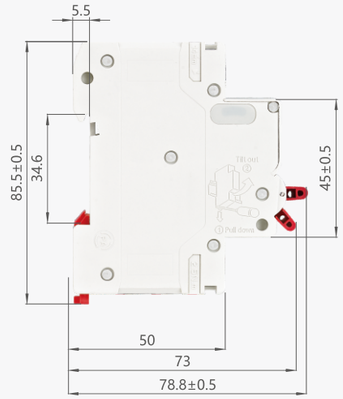
Technical data

Type	Standard			
Comprehensive data	Function			Overload, Short circuit, Isolation
	Number of poles			1P,2P,3P ,4P
	Rated current In		A	1-80A
	Rated frequency		Hz	50/60Hz
Electrical features	Rated voltage Ue		V	230/400
	Rated insulation voltage Ui		V	500
	Rated breaking capacity Icn		A	M:6000 H:10000
	Rated impulse withstand voltage Uimp(1.2/50)		kA	4
	Pollution degree			2
	Use category			II、III
	Trip type			Thermal magnetic release
	Thermal magnetic tripping characteristics			B,C,D
	Electrical and mechanical accessories			□
Mechanical features	Mechanical life		Times	20000
	Electrical life		Times	10000
	Protection degree			IP20
	Antihumidity and heat resistance			The relative humidity of the air is not more than 50% when the ambient air temperature is +40°C, and it can have a higher relative humidity at a lower temperature
	Reference ambient temperature		°C	30
	Ambient temperature		°C	-5°C-+40°C, the average value of 24h does not exceed +35°C
	Height		m	Not exceeding 2000
Installation	Busbar connection type			Single or Double bus bar Anti-mistake contact terminal block
	Terminal connection type			Cable/U-type busbar/Pin-type busbar
	Maximum wire capacity	Terminal size top/bottom for cable	mm²	25
			AWG	18-3
		Terminal size top/bottom for busbar	mm²	25
			AWG	18-3
	Torque		N*m	2
			In-lbs	18
	Tool		18	Phillips screwdriver or flat-blade screwdriver
	Installation			On DIN rail EN 60715 (35mm) by means of fast clip device
	Wiring method			From top or bottom

YCB9-80M/H MCB

Overall and mounting dimensions(mm)



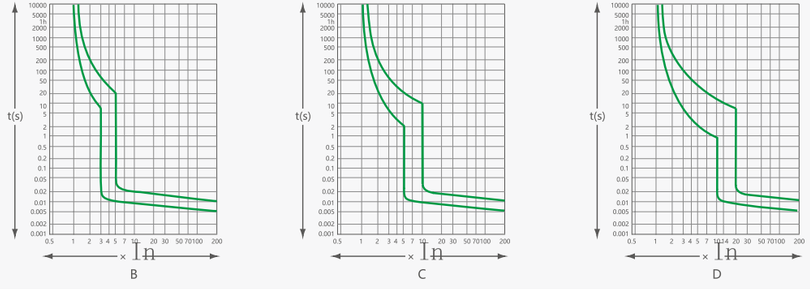


Tripping characteristic

Type	Test current	Tripping time	Expected result
B,C,D	1.13In	t≤1h(In≤63A)	Not tripping
	1.13In	t≤2h(In＞63A)	
B,C,D	1.45In	t＜1h(In≤63A)	Tripping
	1.45In	t＜2h(In＞63A)	
B,C,D	2.55In	1s＜t＜60s(In≤32A)	Tripping
	2.55In	1s＜t＜120s(In＞32A)	

Type	Test current	Tripping time	Expected result
B	3In	t≤0.1s	Not tripping
C	5In	t≤0.1s	
D	10In	t≤0.1s	
B	5In	t＜0.1s	Tripping
C	10In	t＜0.1s	
D	20In	t＜0.1s	

Curve



YCB9 Series MCB Accessories

General

This series circuit breaker accessories are used in household, building and other electrical circuits, cooperated with YCB9 series circuit breaker to select different accessories according to the needs, so as to realize the remote control of circuit breaker, provide auxiliary signal, opening and closing status indication, provide alarm signal function for better protect the circuit, personal and property safety.

Standard: IEC60947-5-1

Type designation

OF SD MV+MN MX MX+OF

- MX+OF: Shunt release + Auxiliary contact
- MX: Shunt release
- MV+MN: Under-voltage and over-voltage release
- SD: Alarm contact
- OF: Auxiliary contact

Function

Accessory name	Code	Function
Auxiliary contact	OF	Provide auxiliary signal and control auxiliary circuit
Alarm contact	SD	When the circuit breaker is disconnected due to the fault, the alarm signal shall be provided.
Shunt release	MX	Over the range of 70% ~ 110% of the rated control supply voltage, the release should trip the circuit breaker to protect the circuit.
Shunt release + Auxiliary contact	MX+OF	Remote control of circuit and control the auxiliary circuit by auxiliary contact.
Over-voltage and under-voltage release	MV+MN	When the rated voltage 230V increase to 270V+/-5% or reduce to 170V+/-5%, the circuit breaker should trip for over-voltage and under-voltage protection.

Installation

All the electrical accessories should install in the side of circuit breaker. Details as the figure below. (Remark: each MCB max install with 3 indicate accessories(OF or SD), 2 release accessories.)

Auxiliary contact + Alarm contact + Shunt release + Shunt release + Auxiliary contact + Over-voltage and under-voltage release + Circuit breaker

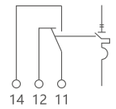
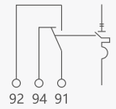
Operating conditions

- Ambient temperature: -5℃~+40℃;
- Altitude: Below 2000m;
- Environment: The medium should be no risk of blasting and can't corrode the metal and damage insulating gas as well as conductive dust;
- Installation: 35mm standard din rail.

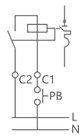
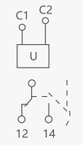
YCB9 Series MCB Accessories

Technical data

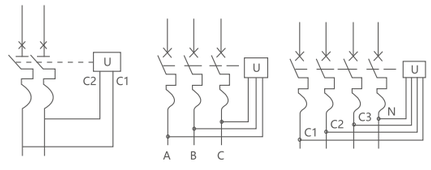
Auxiliary contact and Alarm contact technical parameters

Accessory name	Rated current(A)			Number of contacts	Diagram
	AC 380V	AC 220V	AC 110V		
Auxiliary contact OF	3	6	1	1NO 1NC	
Alarm contact SD	3	6	1	1NO 1NC	

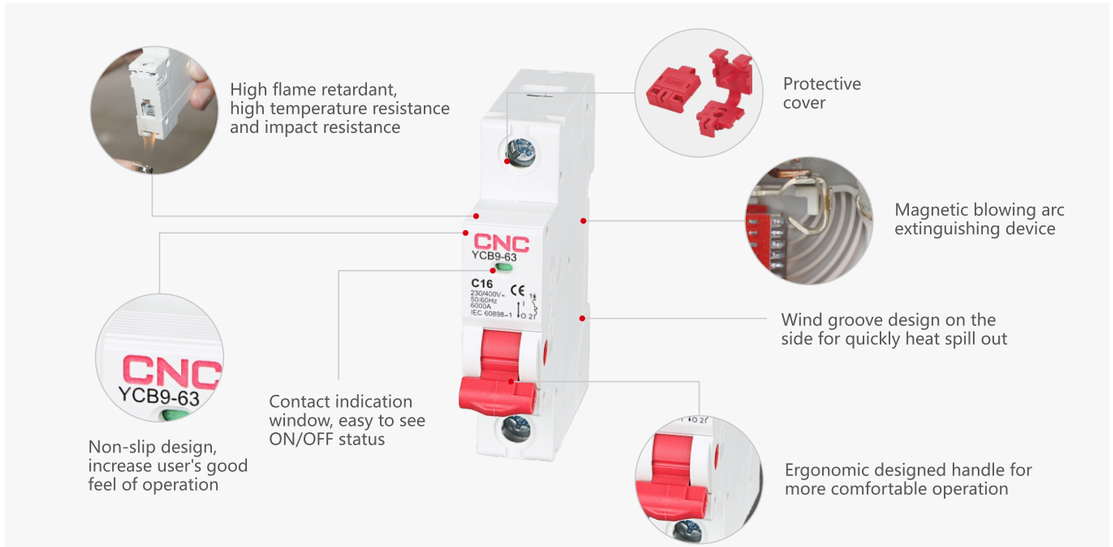
Shunt release, Shunt release + Auxiliary contact technical parameters

Accessory name	Rated insulation voltage Ui	Rated control voltage Us	Tripping power consumption (W or VA)	Operation voltage Us	Diagram
Shunt release MX	415V	AC/DC: 220~380V 110~220V	240	0.7~1.1	
		AC/DC: 24~48V	120		
Shunt release + Auxiliary contact MX+OF	415V	AC/DC: 220~380V 110~220V	240	0.7~1.1	
		AC/DC: 24~48V	120		

Under-voltage & Over-voltage Release technical parameters

Accessory name	Rated working voltage Ue	Trip voltage	Diagram
Over-voltage and under-voltage release MV+MN	AC230V	Under-voltage: 170V±5% Over-voltage: 270V±5%	
	AC380V	Under-voltage: 300V±5% Over-voltage: 460V±5%	

YCB9-63 MCB



General

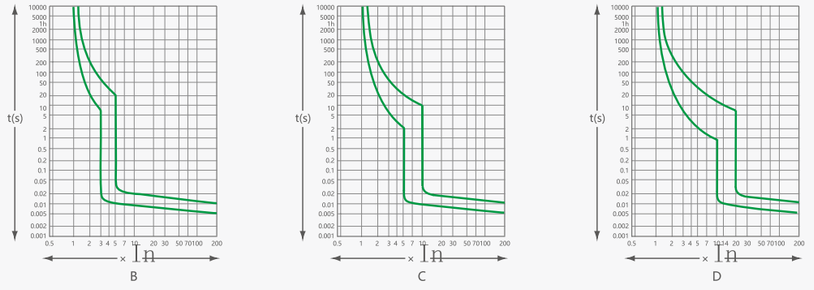
1. Overload protection
2. Short circuit protection
3. Controlling
4. Used in residential building, non-residential building, energy source industry and infrastructure
5. According to the type of instantaneous release classified as follows : type B(3-5)In, type C(5-10)In, type D(10-20)In

Selection

Type	Test current	Tripping time	Expected result
B,C,D	1.13In	t≤1h(In≤63A)	Not tripping
	1.13In	t≤2h(In > 63A)	
B,C,D	1.45In	t < 1h(In≤63A)	Tripping
	1.45In	t < 2h(In > 63A)	
B,C,D	2.55In	1s < t < 60s(In≤32A)	Tripping
	2.55In	1s < t < 120s(In > 32A)	

Type	Test current	Tripping time	Expected result
B	3In	t≤0.1s	Not tripping
C	5In	t≤0.1s	
D	10In	t≤0.1s	
B	5In	t < 0.1s	Tripping
C	10In	t < 0.1s	
D	20In	t < 0.1s	

Curve



YCB9-63 MCB

Technical data

Type	Standard		IEC/EN 60898-1
Electrical features	Rated current In	A	1, 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
	Poles	P	1, 2, 3, 4
	Rated voltage Ue	V	230/400
	Insulation voltage Ui	V	500
	Rated frequency	Hz	50/60
	Rated breaking capacity	A	4500,6000
	Rated impulse withstand voltage(1.2/50)Uimp	V	4500(80A) / 6000(1-63A)
	Dielectric test voltage at ind. Freq. for 1min	kV	2
	Pollution degree		2
	Thermo-magnetic release characteristic		B, C, D
Mechanical features	Electrical life	t	8000
	Mechanical life	t	20000
	Protection degree		IP20
	Reference temperature for setting of thermal element	℃	30
	Ambient temperature (with daily average≤35℃)	℃	-5~+40
	Storage temperature	℃	-25~+70
Installation	Terminal connection type		Cable/Pin-type busbar
	Terminal size top / bottom for cable	mm²	25
		AWG	18-3
	Terminal size top / bottom for busbar	mm²	25
		AWG	18-3
	Tightening torque	N*m	2
		In-lbs	18
	Mounting		On DIN rail EN 60715(35mm)by means of fast clip
	Connection		From top or bottom

Overall and mounting dimensions(mm)