

YCB7RL-100 Series


RESIDUAL CURRENT OPERATED
CIRCUIT BREAKER

OPERATION INSTRUCTION

Standard: IEC 61008-1

CNC

Deliver
Power For Better Life

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

YCB7RL-100 Series

Residual Current Operated Circuit Breaker

Instruction

1 General

YCB7RL-100 residual current operated circuit breaker without over-current protection (hereinafter referred to as RCCB) is suitable for AC 50Hz/60Hz, rated voltage up to 415V, rated current up to 100A, for residual current protection. When the human body gets an electric shock or the network leak current exceeds the specified value, the residual current operated circuit breaker can rapidly cut off the human body and the powered equipment. It is used in housing, tertiary sector and industry.

The product meets the standards of IEC 61008-1.

2 Operating conditions

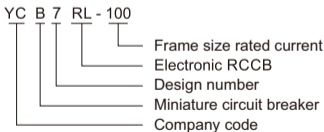
2.1 Ambient temperature: $-5^{\circ}\text{C}\sim+40^{\circ}\text{C}$.

Air conditions: At mounting site, relative humidity not exceed 50% at the maximum temperature of $+40^{\circ}\text{C}$. For the wettest month, the maximum relative humidity averaged shall be 90% while the lowest temperature averaged in that month is $+20^{\circ}\text{C}$, special measures should be taken to occurrence of condensation.

- 2.2 Altitude: $\leq 2000\text{m}$.
- 2.3 The installation category is III.
- 2.4 The circuit breaker shall be installed on DIN rail EN 60715(35mm), which shall meet the A1.1 TH 35-7.5 steel mounting rail requirements.
- 2.5 Pollution grade: 2
- 2.6 Mounting conditions: inclination between mounting plane and vertical plane not exceed $\pm 5^\circ$
- 2.7 The external magnetic field of the installation site should not exceed 5 times of the geomagnetic field in any direction.
- 2.8 The product should locate in the places where there are no obvious impact and shake.

3 Basic parameters

- 3.1 The model and meaning of the circuit breaker are as follows:



3.2 The basic specifications and technical parameters of the circuit breaker are shown in Table 1, breaking time of the AC type residual current operating is shown in Table 2, breaking time of the A type half-wave residual current operating is shown in Table 3.

Table 1

Poles	Rated residual operating current $I_{\Delta n}$	Frequency Hz	Rated voltage U_e/V	Rated current I_n/A	Detectable wave form	Rated residual Making and Breaking capacity $I_{\Delta m}$	Rated short circuit capacity I_{cn}
1P+N	0.03A /0.1A /0.3A	50/60	AC240	16A, 25A, 32A, 40A, 50A, 63A, 80A, 100A	AC type	500 ($I_n \leq 40A$); 630 ($I_n = 50A/63A$); 1000 ($I_n = 80A/100A$);	6kA
3P+N			AC415		A type		

Table 2

In(A)	IΔn(A)	Breaking time when the residual current is the following values (s)			
		IΔn	2IΔn	2IΔn ²	5A, 10A, 20A, 50A, 100A, 200A, 500A
16, 25, 32, 40, 50, 63, 80, 100,	0.03, 0.1, 0.3	0.3	0.15	0.04	0.04

Note a: For general RCCB with $I\Delta n \leq 0.03A$, $0.25A$ can be used instead of $5I\Delta n$

Table 3

In(A)	IΔn(A)	Breaking time when the residual current is the following values (s)								
		1.4 IΔn	2 IΔn	2.8 IΔn	4 IΔn	7 IΔn	0.35 A	0.5 A	350 A	
16, 25, 32, 40, 50, 63, 80, 100,	0.03, 0.1, 0.3	0.3	0.3	0.15	0.15	0.04	0.04	0.04	0.04	

3.3 Wiring

Before installation, check whether technical parameter of the circuit breaker is in conformity with user's requirement.

The conductor of power supply shall be connected to the up terminal of circuit breaker. During

installation, the tightening torque is max 2.5 N·m~ 4.0N·m. The sectional area of connecting wire can refer to Table 4.

Table 4

Rated Current $I_n(A)$	Conductor cross-sectional area $S(mm^2)$
10 and below	1.5
10~20	2.5
20~25	4
25~32	6
32~50	10
50~63	16
80~100	25

Leakage protection type

Type	Explain
AC	For residual sinusoidal alternating currents
A	For residual sinusoidal alternating currents and residual pulsating direct currents
S	For selectivity, with time delay

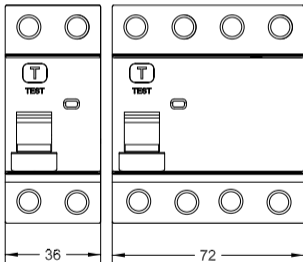
Rated residual operating current $I_{\Delta n}$	Application scenarios
30mA	For personnel, material and fire protection, as well as for protection against direct contact
100mA	For providing protection against indirect contacts
300mA	For providing fire protection in case of insulation faults

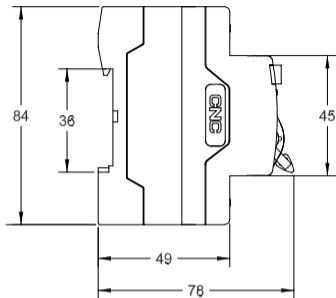
4 Ordering instructions

4.1 When ordering, the customer shall indicate: the product name of RCCB, model, rated current, rated residual operating current, number of poles, quantity. For example: YCB7RL-100 1P+N 100A AC Type 30mA 880 units

4.2 Special requirements of customers can be negotiated separately.

5 Overall and mounting dimensions(mm)







CERTIFICATE

Product Model: YCB7RL-100 series

Standard: IEC 61008-1

Inspector : **CNC 006**

Production date: Printed on the product
or package.

This product is qualified according
to the delivery inspection

A vertical red bar containing the white text 'CNC' in a bold, sans-serif font.

YCB7RL-100 series

CNC ELECTRIC

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