

YCB9L-40


Residual Current Operated Circuit Breaker

OPERATION INSTRUCTION

Standard: IEC/EN 61009-1

CNC

Deliver
Power For Better Life

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

YCB9L-40 Series RCBO instruction

1 General

YCB9L-40 residual current operated circuit breaker with over-current protection(hereinafter referred to as RCBO) is suitable for AC 50Hz/60Hz, rated voltage up to 400v, rated load to 40A, for residual current protection, overload and short circuit 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. With the function of overload and short circuit protection, the residual current operated circuit breaker can be used to protect the circuit or motor from being damaged by overload and short circuit, and can also be used for not-frequent operational transformation in the circuit under normal condition.

The product meets the standards of IEC 61009-1.

2 Operating conditions

2.1 Ambient temperature: $-25^{\circ}\text{C}\sim+60^{\circ}\text{C}$.

2.2 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.

2.3 Altitude: $\leq 2000\text{m}$.

2.4 The installation category is II and III.

2.5 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.

2.6 Pollution grade: 2

2.7 Mounting conditions: inclination between

mounting plane and vertical plane not exceed $\pm 5^{\circ}$

2.8 The external magnetic field of the installation site should not exceed 5 times of the geomagnetic field in any direction.

2.9 The product should locate in the places where there are no obvious impact and shake.

3 Basic parameters

3.1 The basic specifications and technical parameters of the circuit breaker are shown in Table 1, and breaking time of the residual current operating is shown in Table 2.

Table 1

Ui	Number of poles	Rated frequency Hz	Rated voltage Ue	Rated current In	Thermo-magnetic release characteristic	Rated short breaking capacity Ion	Rated residual operating current I Δ n
500V	1P+N(1P with protection)	50/60	AC230V	6A, 10A, 16A, 20A, 25A, 32A, 40A	B, C type	6kA	0.03A/ 0.05A/ 0.1A I Δ n0= 0.5I Δ n

Table 2

Test	Type	Testing current	Initial state	Time limit for tripping or not tripping	Expected result	Testing environment temperature	Rrmarks
a	B/C	1.13I _n	Cold state	t≤1h	Not tripping	30°C~35°C	Current increase steadily within 5s
b	B/C	1.45I _n	Right after test a	t<1h	Tripping		
c	B/C	2.55I _n	Cold state	1s<t<60s (I _n ≤32A)	Tripping		
d	B C	3I _n 5I _n	Cold state	t≤0.1s	Not tripping		Turn on the power supply by closing the auxiliary switch
e	B C	5I _n 10I _n	Cold state	t<0.1s	Tripping		
Note: The terminology "Cold state" means that the test is performed at the base calibration temperature with no load prior to the test.							

3.2 Mechanical and electrical life is shown in Table 3.

Table 3

Item	Times	Operating frequency (times/hour)	Power factor
Electrical life	4000	240 times per hour (I _n ≤25A)	CosΦ= 0.85~0.9
Mechanical life	10000	120 times per hour (I _n >25A)	

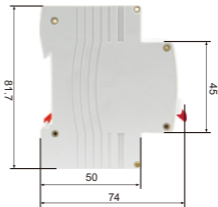
3.3 Wiring

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 max2.5N·m. The sectional area of connecting wire can refer to Table 4.

Rated current I_n (A)	Conductor cross-sectional area S (mm ²)
6	1
10	1.5
16,20	2.5
25	4
32	6
40	10

4 Overall and mounting dimensions(mm)



6 Ordering instructions

6.1 When ordering, the customer shall indicate: the product name of RCBO, model, rated current, rated residual operating current, instantaneous tripping type, number of poles, quantity. For example: YCB9L-40 AC type C 40 1P+N0.03A

6.2 Special requirements of customers can be negotiated separately.



CERTIFICATE

Product Model: YCB9L-40

Standard: IEC/EN 61009-1

Inspector : **CNC003**

Production date: Printed on the product
or package.

This product is qualified according
to the delivery inspection

CNC

YCB9L-40

CNC ELECTRIC

Tel: 0086-577-61989999 Fax: 0086-577-61891122

www.cncele.com E-mail: cncele@cncele.com