

**1. General**

**1.1 Range of Appliance**

SAFE series magnetic earth leakage circuit breaker (RCCB) is one kind of miniature earth leakage circuit breaker which has leakage isolating power. It is suitable to the circuit of AC or DC50/60Hz. rated electrical shock and stop the fire happen caused by current leakage due to the defective insulator. The circuit breaker is suitable to industry, current protection, electric shock protection, and also has electrical voltage 230V /400V , and rated current to 63A. It also can be used in the infrequent starting of the circuit. It can protect the people from the commerce, high-rise building, household ,hotel and other kinds of places. This product meets the Standard of IEC/EN61008-1.

**1.2 Normal operational circumstance.**

**1.2.1 Ambient temperature:** 5℃~+40℃, Average not more than +35℃ within 24 hours.

**1.2.2 Attitude:** Not more than 2000.

**1.2.3 Air Condition:** When the highest temperature is +4℃ , the air relative humidity should not be higher than 50%.The higher relative humidity should be allowed at the lower temperature, for instance,90% humidity when +20 ℃ .Specialmeasures should be taken when condense state dew happens occasionally due to temperature changes (Provision of drainage holes).

**1.2.4 Installation Condition:** The earth leakage circuit breaker should be Installed in a non - explosive medium. Without enough to corrode metal and destroy the

insulation of gas and dust in the media. Installation site by an external magnetic field in any direction should not exceed 5 times the magnetic field.

**1.2.5 Installation category:** class III

**1.2.6 Pollution degree:** class 2

**1.2.7 Mounting:** On DIN steel mounting rail TH35-7.5 by means of fast clip device.

**1.2.8 Connection:** Clamp screws for wiring.

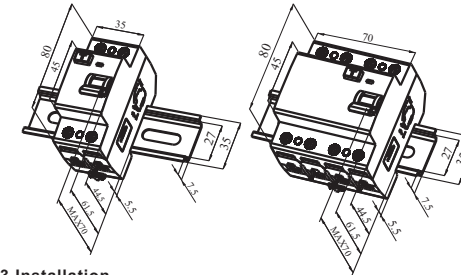
**1.3 Structure**

**1.3.1** This series leakage circuit breaker are mainly made of operating mechanism , zero sequence current transformer, release , circuit board, contact system , test button , etc.

**1.4 Working Principle**

**1.4.1** The leakage circuit breaker main contact by closing the manual operating handle,When the main contact is closed, Trip-free locked in a closed position on the main contacts, When the circuit is working, Zero-sequence current mutualinductor is equal to Zero, Attached side have no voltage output,so them ccb have no operation; When come across the circuit leakage current or the electric shock, Zero-sequence current induction vector difference, By the transformer output voltage signal, When get to the products of fixed value, triggering controlled silicon connecting which promote the release device act,andthen leakage circuit breaker to cut off the power within 0.1s, so as to achieve leakage protection function.

**2. Appearance dimensions**

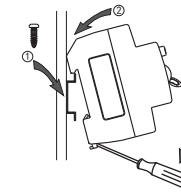


**3.Installation**

**3.1 Fixed rail installation**

**3.2 Put one side of rail into the fixed installation side.**

**3.3 Put the moved installation side to block another side of rail.**



**4. Installation instruction**

**4.1** This series RCCB is terminal protection electrical appliance. Their technical data have set by the manufacturer. The user is not allowed to adjust theproduct freely. It is suitable for the laypeople to operate. But it had better the expert to choose the type and to install the product, then the product can work well to protect the people.

**4.2 Open-package inspection.**

**4.2.1** Please to check the technical data whether to satisfy the using requirement before installing.

**4.2.2** Put the handle off-ons several times to check the handle can work smoothly.

**4.3** This series RCCB shall be installed vertically,and in a place with no rain, no snow and no clear shock.

**4.4** Generally, this series RCCB are used with the over current protective devices(the device shall be at the front of the RCCB), or the circuit will not be overload protected and short-circuit protected.

**4.5** This series RCCB are connected as the wiring diagram in the mark( the close direction are connected with service entrance; open direction are connected with load end)

**4.6** When used the RCCB, the phase failure and neutral line break-off are not allow in the service entrance.Less connection, wrong connection, and more-time earthing will cause the RCCB does not work.

**4.7** The section surface of Electrical conductor which

connect the RCCB shall not be less than the copper section surface under given rated current like in following form.

In	In<6	6<In	13<In	20<In	25<In	32<In	50<In	63<In	80<In	100<In
A	<13	<20	<25	<32	<50	<63	<80	<100	<125	
S	1	1.5	2.5	4	6	10	16	25	35	50
mm										

**4.8** This series RCCB just have electric shock protection and residual current protection for the load side. and can not stop the shock caused by two or more lines.

**5. Operation and maintenance**

**5.1** Because of this series RCCB involved the protection of electric shock and fire; in use, the user shall test its operation periodically, inspect the product whether the product are in a reliable running condition. Generally press the test button once a month ,see the products if do the reliable motion; if it can not do the reliable motion, user shall replace it in time.

**5.2** When this series product are in off condition for protection, it should rule out the faults, close the product.



**EN  
RESIDUAL CURRENT CIRCUIT BREAKER  
INSTRUCTION**

**Family Name:** SAFE

**Model:** 114-003-2025, 114-003-2040, 114-003-4025, 114-003-4040, 114-003-4063, 114-003-4080, 114-003-4100

