MB2 SERIES SPARK

ELECTRONIC CIRCUIT BREAKER

Please read complete instructions prior to installation and operation of the device.

SAFETY PRECAUTIONS

1. The device must be installed by a qualified person,
2. Disconnect all power before working on the device. Don't touch any terminal when the power is ON.
3. Verify correct terminal connection when wiring.
4. Don't dismantle or repair the device whether it operates normally, otherwise no responsibility is assumed by producer and seller.
5. Never use the device at the site which can be invaded by corrode gas, strong sunshine light and rain.
6. Clean the device with a dry cloth.
7. Fail to follow these instructions will result in serious injury or death.

FEATURES

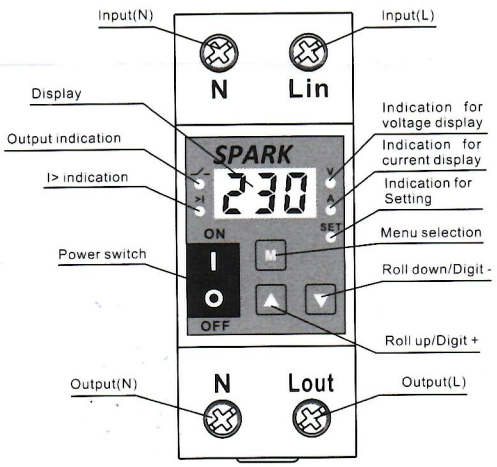
- Microcontroller based
- 3 digit display for operating voltage and current value
- Protect electrical device against over/under voltage,overcurrent and short circuit faults
- Password settable by user
- Operating current setting by keys
- LEDs indication for output and faults state.
- 2 Module, DIN Rail mounting

TECHNICAL DATA

Models	MB2-22A	MB2-63A
Rated current	2A-22A	16A-63A
Rated supply voltage	AC 220V, 50Hz	
Operation voltage range	AC 100V~400V	
Overvoltage(U>) trip value	220V~300V	
Undervoltage(U<) trip value	140V~210V	
Start delay	5~100s	
Recovery time for overload fault	1~100s	
Overvoltage trip time	0.5s	
Undervoltage trip time	0.5s	
Rated insulation voltage	400V	
Output contact	1NO	
Protection degree	IP20	
Altitude	≤2000m	
Operating temperature	-20°C~55°C	
Storage temperature	-30°C~70°C	

Parameter		Setting range		Step	Default setting
CUr	Overcurrent(I>) trip value A	MB2-22 2A-22A	MB2-63 16A-63A	0.2	20A(MB2-22) 50A(MB2-63)
UrH	U> trip value V	220V~300V		1	250
UrL	U< trip value V	140V~210V		1	170
ton	Start delay	5~100		1	5
tR	Recovery time for overload fault	1~100		1	90
PAS	Password setting	000~999			111

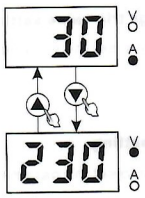
FRONT-FACE PANEL



Faults code

-U-	Overvoltage fault: input voltage is higher setting value
_U_	Undervoltage fault: input voltage is lower than setting value
o-L	Overload fault: input current is higher than 1.1xIset
---	Short circuit fault: input current is higher than short circuit current value.
Err	Continuous faults: If three continuous overload or short circuit faults occured, the relay need to reset with power switch after eliminated the faults.

Display for operating voltage and current

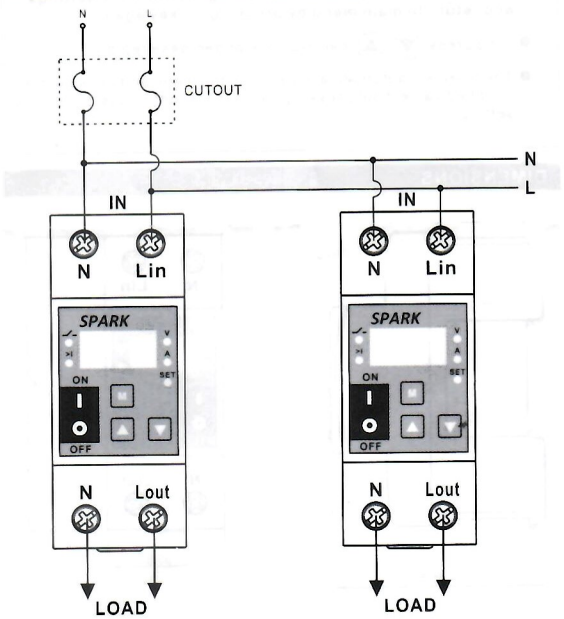


- Display operating current
- Display operating voltage
- Press ▼ ▲ keys to check operating voltage and current.
- After checked operating voltage and not press any keys for 5s, the device will exit automatically and display operating current. The display for operating current value is prior.

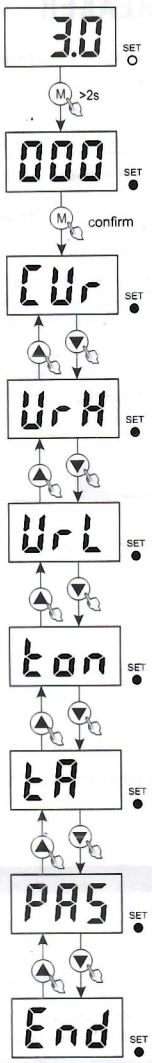
OPERATION

1. Turn power switch on and start the device, setting current value displays.
2. User can input the password and enter setting.
3. If no faults are detected after energization, the contact closes and output indication LED lights up.
4. When overload fault is detected, overcurrent indication LED flashes and the display will show corresponding faults code.

WIRING DIAGRAM



● Main menu setting



● Main display

● **Input password and enter setting menu.**
Press (M) key to set the parameters.

● **Overcurrent trip value setting**
Press (M) key to set the parameters.

● **Overvoltage trip value setting**
Press (M) key to set the parameters.

● **Undervoltage trip value setting**
Press (M) key to set the parameters.

● **Start delay setting**
Press (M) key to set the parameters

● **Recovery time(for overload fault) setting**
Press (M) key to set the parameters

● **Password setting**
Press (M) key to set the parameters

● **Finish settings and press (M) to exit**

● **Press (M) to enter parameters setting. Confirm the settings and return to main menu by pressing (M) key again.**

● Long press (▼) (▲) can increase or decrease repidly.

● The relay will automatically exit from the menu and not save the modified value if not pressing the keys for continuous 60s during setting.

DIMENSIONS