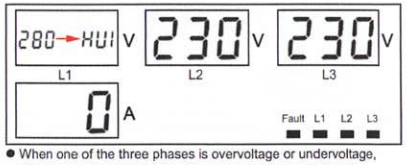
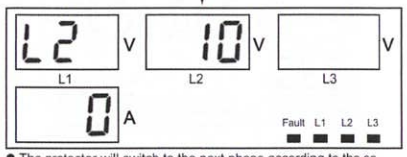
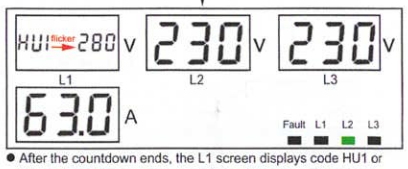
## Phase switching display



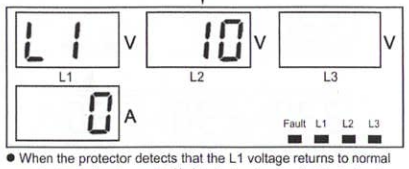

- When one of the three phases is overvoltage or undervoltage, this phase will automatically disconnect and flash to display HU1/2/3 or LU1/2/3.Here is an example of L1 overvoltage.



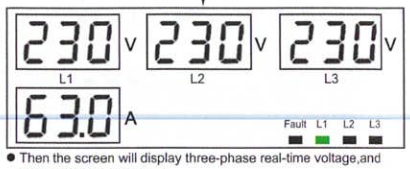

- The protector will switch to the next phase according to the sequence set in Pr, after the countdown set in bCt.




- After the countdown ends, the L1 screen displays code HU1 or LU1 and real-time voltage, the L2 and L3 screens display real-time voltage, and the L2 indicator light is on.

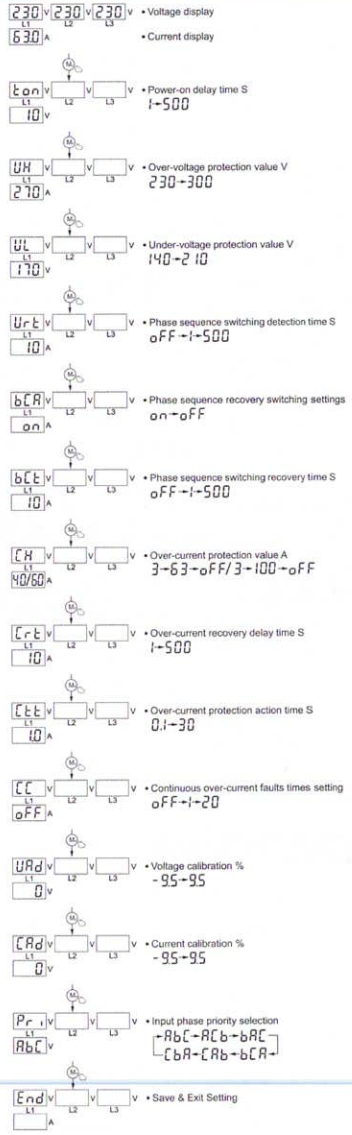



- When the protector detects that the L1 voltage returns to normal and waits for the time set in Urt in the background without showing countdown,L2 automatically disconnects,and L1 automatically resets after the countdown set in bCt.

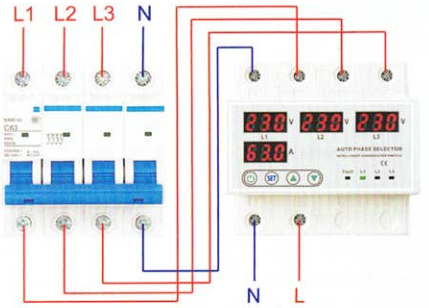



- Then the screen will display three-phase real-time voltage,and the L1 indicator light is on.

## MAIN MENU SETTING




## WIRING DIAGRAM




# Auto Phase Selector With Over/Under Voltage & Over Current Protection

# Instruction Manual



## 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.

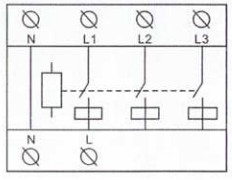
## FEATURES

- Microcontroller based
- Digit display for operating voltage and current value
- Protect electrical device against over/under voltage and over current
- Voltage measurement accuracy ≤1%
- Parameters setting by keys
- LEDs indication for over/under voltage and over current faults
- DIN Rail mounting

## TECHNICAL DATA

| | |
|---|---|
| Rated supply voltage | AC220V |
| Operation voltage range | AC140V-300V |
| Rated frequency | 50/60Hz |
| Hysteresis | Over voltage:5V |
| | Under voltage:5V |
| Voltage measurement accuracy | ≤1%(over the whole range) |
| Rated insulation voltage | 450V |
| Output contact | 1NO |
| Electrical life | $10^5$ |
| Mechanical life | $10^5$ |
| Protection degree | IP20 |
| Pollution degree | 3 |
| Altitude | ≤2000m |
| Operating temperature | -5℃-40℃ |
| Humidity | ≤50% at 40℃(without condensation) |
| Storage temperature | -25℃-55℃ |

## SYMBOL

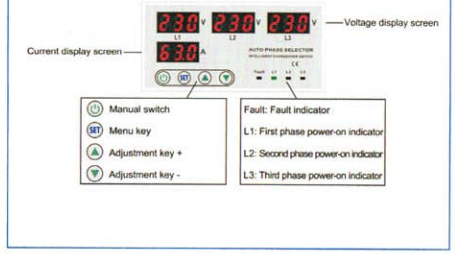



## OPERATING RANGE

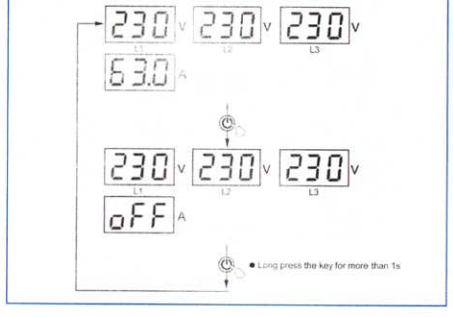
| Technical parameter | setting range | Factory setting | Step | Function description |
|---|---|---|---|---|
| Power-on delay time | 1S-500S | 10S | 1S | After external power cut,the time needed for power-on when power recovery. |
| Over-voltage protection value | 230V-300V | 270V | 1V | When the voltage of one phase is over the set value, the protector will cut off this phase and switch to the next phase according to the sequence set in Pr1. When all three phases' voltage is over the set value, the protector will cut off all lines |
| Over-voltage recovery value | 225V-295V | 265V | / | When the voltage is 5V or more than 5V lower than the over-voltage protection value, the protector will automatically reset.This parameter automatically changes with the change of over-voltage protection value and does not need to be set. |
| Under-voltage protection value | 140V-210V | 170V | 1V | When the voltage of one phase is under the set value, the protector will cut off this phase and switch to the next phase according to the sequence set in Pr1. When all three phases' voltage is under the set value, the protector will cut off all lines |
| Under-voltage recovery value | 145V-215V | 175V | / | When the voltage is 5V or more than 5V higher than the under-voltage protection value, the protector will automatically reset.This parameter automatically changes with the change of over-voltage protection value and does not need to be set. |
| Over-current protection value | 3A-63A-OFF<br>3A-100A-OFF | 40A<br>60A | 1A | When the current is higher than the set value, the protector will cut off the line.When setting OFF,the protector will turn off over-current protection function. |
| Times of continuous over current protection | OFF-1-20 | OFF | 1 | When The times of continuous over-current protection exceeds the set value,the protector will cut off the line,then it needs to be opened manually. |
| Phase sequence switching detection time | OFF-1S-500S | 10S | 1S | The time required to detect whether the voltage of the priority phase is stable before disconnect. OFF means that there is no need to wait for detection and switch directly to the priority phase. |
| Phase sequence recovery switching settings | ON | ON-OFF | / | ON means that when the priority phase returns to normal, it will switch to the priority phase. OFF means that even if the priority phase returns to normal, the protector will not switch to that phase. |
| Phase sequence switching recovery time | OFF-1S-500S | 10S | 1S | Time required to switch to priority phase. |
| Over-current protection action time | 0.1S-30S | 1.0S | 0.1S | When over current,the time needed for protection action. |
| Voltage calibration | -9.5%-9.5% | 0 | 0.5 | Correct the voltage error. |
| Current calibration | -9.5%-9.5% | 0 | 0.5 | Correct the current error. |
| Input phase priority selection | ABC-ACB-BAC-BCA-CAB-CBA | ABC | / | Set the input priority of each phase. A:L1, B:L2, C:L3 |

## SCREEN DISPLAY DESCRIPTION

### Front-face panel




### Switch on/off manually



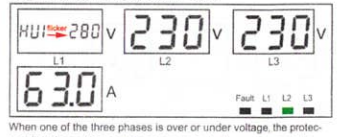

### Reset/start delay display




- During power-on delay, L1,L2 and L3 display the real time voltage.The second row screen displays code PUP and count-down time flickeringly.

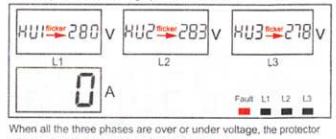
### Over-voltage protection status

- One phase over-voltage protection status




When one of the three phases is over or under voltage, the protector will switch to the next phase according to the sequence set in code Pr1.

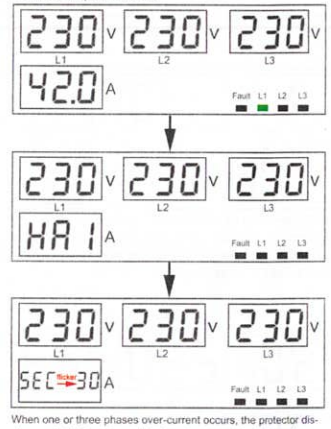
- Three phases over-voltage protection status




When all the three phases are over or under voltage, the protector will cut off the line,and the fault indicator light is on.

### Over-current protection status

- Over-current protection status




When one or three phases over-current occurs, the protector displays code HA1 and immediately enters a countdown based on the time set in code Crt. If the current does not recover at the end of the countdown, the protector will continue to protect and enter the next countdown. When the number of continuous protection times exceeds the number set in code CC, the protector will cut off the power supply, and at this time, the protector needs to be manually reset.