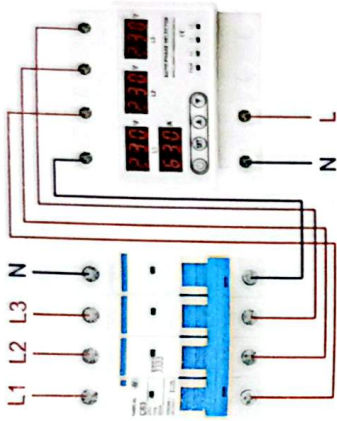


# WIRING DIAGRAM



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



## MAIN MENU SETTING

- 230V 230V 230V • Voltage display
- 630A • Current display
- [EOn] [0] • Power-on delay time S 1-500
- [UHV] [230] • Over-voltage protection value V 230-300
- [UL] [140] • Under-voltage protection value V 140-210
- [UrL] [off] • Phase sequence switching detection time S off-1-500
- [bCr] [on] • Phase sequence recovery switching settings on-off
- [bCL] [off] • Phase sequence switching recovery time S off-1-500
- [CH] [3-03] • Over-current protection value A 3-03-off/3-100-off
- [CEV] [1-500] • Over-current recovery delay time S 1-500
- [CEE] [01-30] • Over-current protection action time S 01-30
- [CC] [off] • Continuous over-current fault times setting off-1-20
- [URd] [95] • Voltage calibration % 95-95
- [CRd] [95] • Current calibration % 95-95
- [Pr] [RLC-RLC-bRC] • Load phase priority selection [CbR-CbB-bCR]
- [End] [ ] • Save & Exit Setting

• When one of the three phases is overvoltage or undervoltage, this phase will automatically disconnect and flash to display HU1/2/3 or LV1/2/3. 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 bCL.

• After the countdown ends, the L1 screen displays code HU1 or LV1 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 Ur-L in the background without showing countdown, L2 automatically disconnects, and L1 automatically resets after the countdown set in bCL.

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

• Long press [ ] to increase or decrease reply

### 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 corrosive 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.

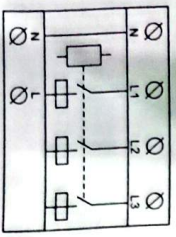
### FEATURES

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

### TECHNICAL DATA

Rated supply voltage	AC220V
Rated voltage range	AC140V-300V
Rated frequency	50/60Hz
Hysteresis	Over voltage: 5V Under voltage: 5V
Voltage measurement accuracy	$\leq 1\%$ (over the whole range)
Rated insulation voltage	450V
Output contact	1NO
Electrical life	10 <sup>7</sup>
Mechanical life	10 <sup>7</sup>
Protection degree	IP20
Pollution degree	3
Altitude	$\leq 2000m$
Operating temperature	$-5^{\circ}C \sim 40^{\circ}C$
Humidity	$\leq 50\%$ at $40^{\circ}C$ (without condensation)
Storage temperature	$-25^{\circ}C \sim 55^{\circ}C$

### 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	220V-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 P1. 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 P1. 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 3A-100A-OFF	40A 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. When it needs to be operated manually.
Phase sequence switching	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.

### SCREEN DISPLAY DESCRIPTION

● Front-face panel

Current display screen: **0.00 A**

Voltage display screen: **220 V**

Manual switch: **OFF**

Menu key: **0**

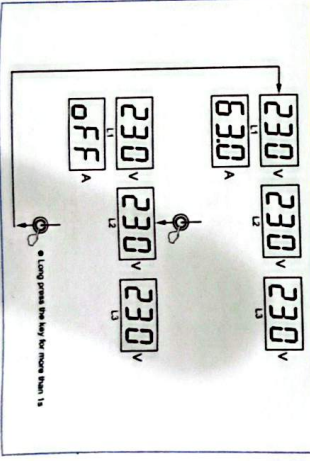
Adjustment key: **+**

Adjustment key: **-**

LED indicators: L1, L2, L3

L1: First phase power-on indicator  
L2: Second phase power-on indicator  
L3: Third phase power-on indicator

### Switch on/off manually



### Residual display

### Over-voltage protection status

### Over-current protection status