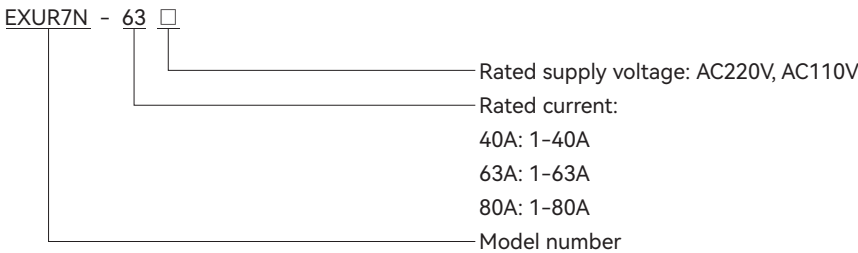




EXUR7N Overvoltage and Undervoltage Protector



Model and Meaning



General

EXUR7N Series Intelligent Over/Under Voltage Protector is a DIN-rail mounted intelligent protection device that integrates real-time dual parameter monitoring of voltage and current, multiple protection logic, and automatic fault self-resetting. Featuring a standard 2-pole (2P) modular design, it can be directly mounted on a 35mm DIN rail and is suitable for terminal protection in single-phase AC distribution systems, providing reliable, precise, and intelligent electrical safety protection for connected loads.

Operating Condition

1. Ambient temperature: -25°C~+50°C
2. Relative humidity: <50% at 40°C (without condensation)
3. Altitude: ≤2000m
4. Environmental conditions: no harmful gases and vapors, no conductive or explosive dust, no severe mechanical vibration.

Feature

Voltage and current display relay used in administrative, industrial and residential buildings and has the function of protecting single-phase lines:

- Working under voltmeter mode;
- Undervoltage protection;
- Overvoltage protection;
- Overcurrent protection.

Technical Data

Supply terminals	N,L
Rated supply voltage	AC 220V; DC 80-300V
Rated frequency	40/50/60/70Hz
> U setting range	AC130-300V; DC130-300V
< U setting range	AC80-210V; DC80-210V
Voltage hysteresis	5V
Overvoltage trip delay	0.5s
Voltage accuracy	<1%
Max. operating phase voltage	350V
Max.operating current	40A/63A
Altitude	<2000m
Ambient temperature	-25°C~+50°C
Permissible relative humidity	<50% at 40°C(without condensation)
Storage temperature	-25°C~+55°C
Size	85*36*66mm

EXUR7N Overvoltage and Undervoltage Protector

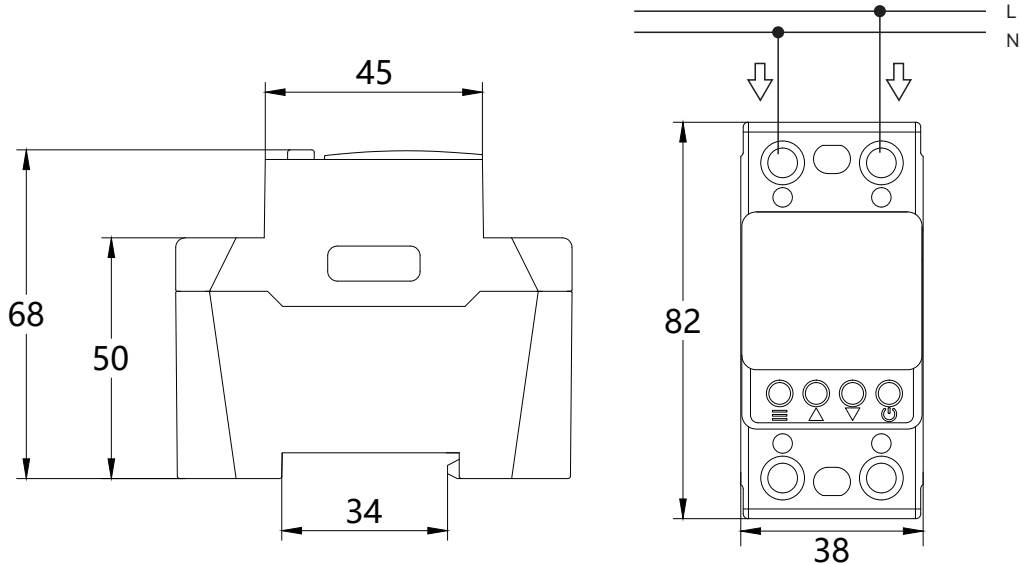


Technical Data

No.	Option	max	min	Default	Step	Unit	Description
P1	Power-on delay	999	1	5	1/10	S	Close overvoltage if greater than 300
P2	Recovery delay	999	1	30	1/10	S	Skip this setting when overvoltage is tuned off
P3	Overvoltage	300	130	270	1/10	V	Close undervoltage if below 80
P4	Overvoltage recovery value	295	125	265	1/10	V	Skip this setting when undervoltage is tuned off
P5	Undervoltage	210	80	170	1/10	V	Long press setting is not recommended
P6	Undervoltage recovery value	215	85	175	1/10	V	Close overcurrent if greater than 63.0
P7	Overvoltage action delay	10.0	0.1	0.5	0.1/1.0	S	0:Turn off counting
P8	Voltage correction	+10%	-10%	0	0.5%	V	Long press setting is not recommended
P9	Overcurrent	63.0	1.0	63.0	0.1/1.0	A	Modifying this value will affect the accuracy of the timer
P10	Overflow as delay	10.0	0.1	1.0	0.1/1.0	S	1: Standards
P11	Continuous overcurrent counting	20	0	0	1	Times	2:Manual switch
P12	Current correction	+10%	-10%	0	0.5%	A	3: Automatic switch
P13	Frequency correction	+2.5%	-2.5%	0	0.1%	Hz	on: Self-recovery
P14	Rapid power failure protection	on	off	on		MS	off: Manual recovery
P15	Display mode	3	1	1	1		on: Protector working properly
P16	Automatic reset	on	off	on			off: knife mode
P17	Action/knife mode	on	off	on			on: Open
P18	Energy saving mode	on	off	off			off: Close
P19	Setup lock password	999	000	112	1/10		When this value is not 112, you can onlyview the parameter and cannot set it

1. In case of over-voltage fault, under-voltage fault or over-current fault in single phase line, the product can power line over a time delay after voltage or current of the line is recovered to normal condition.
2. In case of transient over voltage in line, the product can protect the equipment from false operation.
3. In case that the line subjects to unstable Voltage connection and other fault, the product will disconnect the line.
4. When fault voltage of the line reaches the peak, the product itself will not be damaged.

Wiring Diagram / Dimensional Drawing



Front-face Panel

>V: Overvoltage Indicator

<V: Underage Voltage

>A: Overcurrent Indicator

POWER : Normal Working Indicator

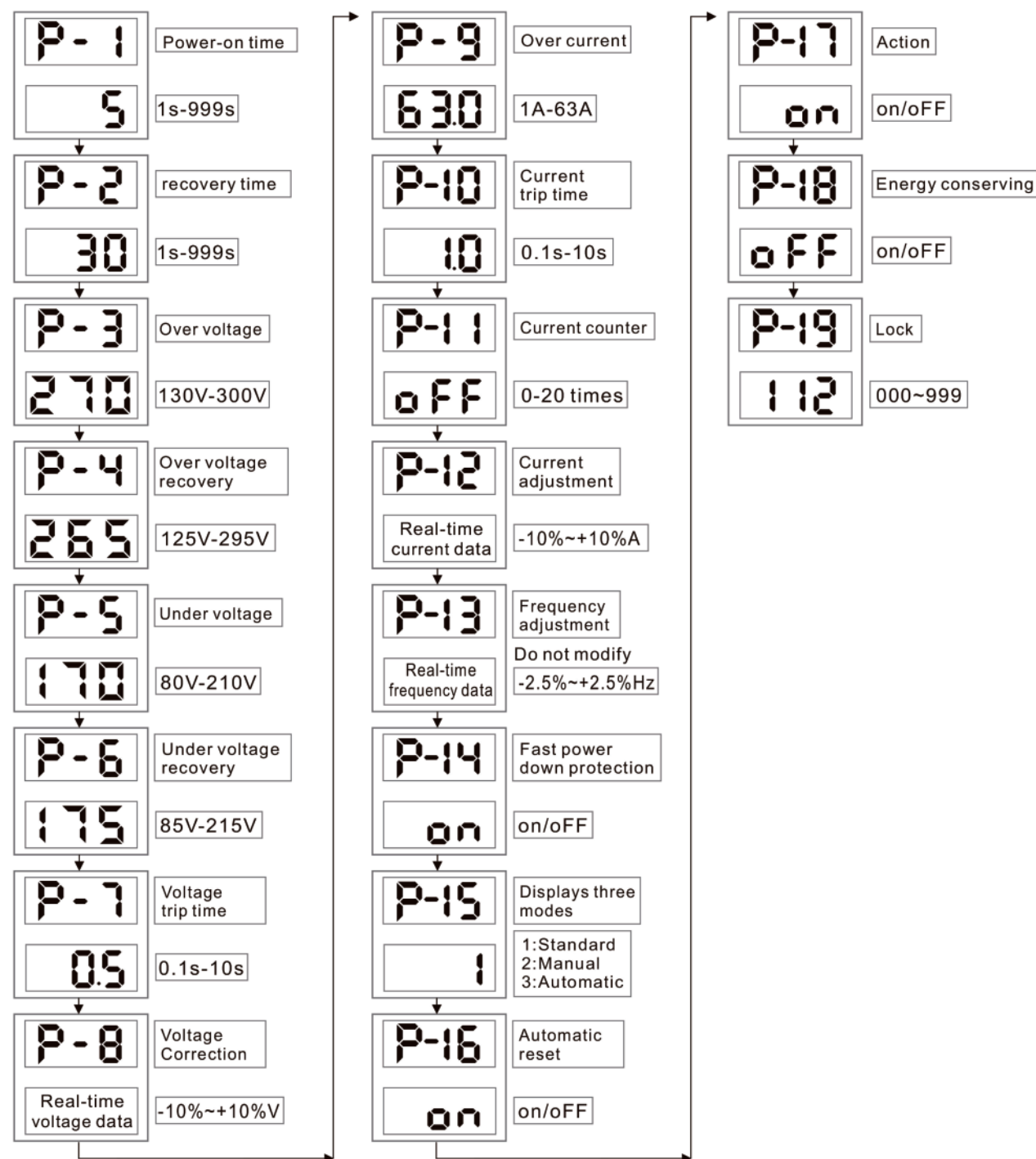
Menu selection

Digit+

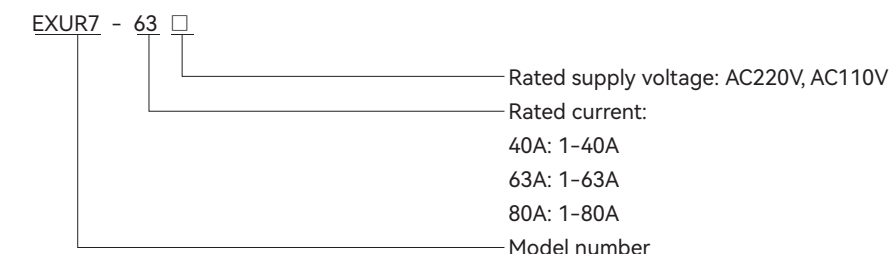
Digit-

ON/OFF

Setup Menu



Model and Meaning



General

EXUR7 Series Intelligent Over/Under Voltage Protector is a DIN-rail mounted intelligent protection device that integrates real-time dual parameter monitoring of voltage and current, multiple protection logic, and automatic fault self-resetting. Featuring a standard 2-pole (2P) modular design, it can be directly mounted on a 35mm DIN rail and is suitable for terminal protection in single-phase AC distribution systems, providing reliable, precise, and intelligent electrical safety protection for connected loads.

Operating Condition

1. Ambient temperature: -25°C~+50°C
2. Relative humidity: <50% at 40°C (without condensation)
3. Altitude: ≤2000m
4. Environmental conditions: no harmful gases and vapors, no conductive or explosive dust, no severe mechanical vibration.

Feature

Voltage and current display relay used in administrative, industrial and residential buildings and has the function of protecting single-phase lines:

- Working under voltmeter mode;
- Undervoltage protection;
- Overvoltage protection;
- Overcurrent protection.

Technical Data

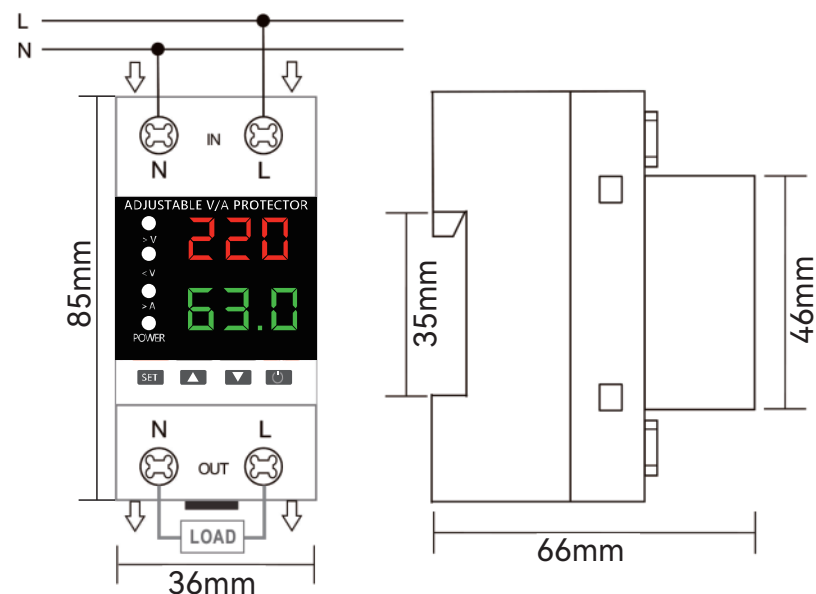
Supply terminals	N,L
Rated supply voltage	AC 220V; DC 80-300V
Rated frequency	40/50/60/70Hz
> U setting range	AC130-300V; DC130-300V
< U setting range	AC80-210V; DC80-210V
Voltage hysteresis	5V
Overvoltage trip delay	0.5s
Voltage accuracy	<1%
Max. operating phase voltage	350V
Max.operating current	40A/63A
Altitude	<2000m
Ambient temperature	-25°C~+50°C
Permissible relative humidity	<50% at 40°C(without condensation)
Storage temperature	-25°C~+55°C
Size	85*36*66mm

Technical Data

No.	Option	max	min	Default	Step	Unit	Description
P1	Power-on delay	999	1	5	1/10	S	Close overvoltage if greater than 300
P2	Recovery delay	999	1	30	1/10	S	Skip this setting when overvoltage is tuned off
P3	Overvoltage	300	130	270	1/10	V	Close undervoltage if below 80
P4	Overvoltage recovery value	295	125	265	1/10	V	Skip this setting when undervoltage is tuned off
P5	Undervoltage	210	80	170	1/10	V	Long press setting is not recommended
P6	Undervoltage recovery value	215	85	175	1/10	V	Close overcurrent if greater than 63.0
P7	Overvoltage action delay	10.0	0.1	0.5	0.1/1.0	S	0: Turn off counting
P8	Voltage correction	+10%	-10%	0	0.5%	V	Long press setting is not recommended
P9	Overcurrent	63.0	1.0	63.0	0.1/1.0	A	Modifying this value will affect the accuracy of the timer
P10	Overflow as delay	10.0	0.1	1.0	0.1/1.0	S	1: Standards
P11	Continuous overcurrent counting	20	0	0	1	Times	2: Manual switch
P12	Current correction	+10%	-10%	0	0.5%	A	3: Automatic switch
P13	Frequency correction	+2.5%	-2.5%	0	0.1%	Hz	on: Self-recovery
P14	Rapid power failure protection	on	off	on		MS	off: Manual recovery
P15	Display mode	3	1	1	1		on: Protector working properly
P16	Automatic reset	on	off	on			off: knife mode
P17	Action/knife mode	on	off	on			on: Open
P18	Energy saving mode	on	off	off			off: Close
P19	Setup lock password	999	000	112	1/10		When this value is not 112, you can only view the parameter and cannot set it

1. In case of over-voltage fault, under-voltage fault or over-current fault in single phase line, the product can power line over a time delay after voltage or current of the line is recovered to normal condition.
2. In case of transient over voltage in line, the product can protect the equipment from false operation.
3. In case that the line subjects to unstable voltage connection and other fault, the product will disconnect the line.
4. When fault voltage of the line reaches the peak, the product itself will not be damaged.

Wiring Diagram / Dimensional Drawing

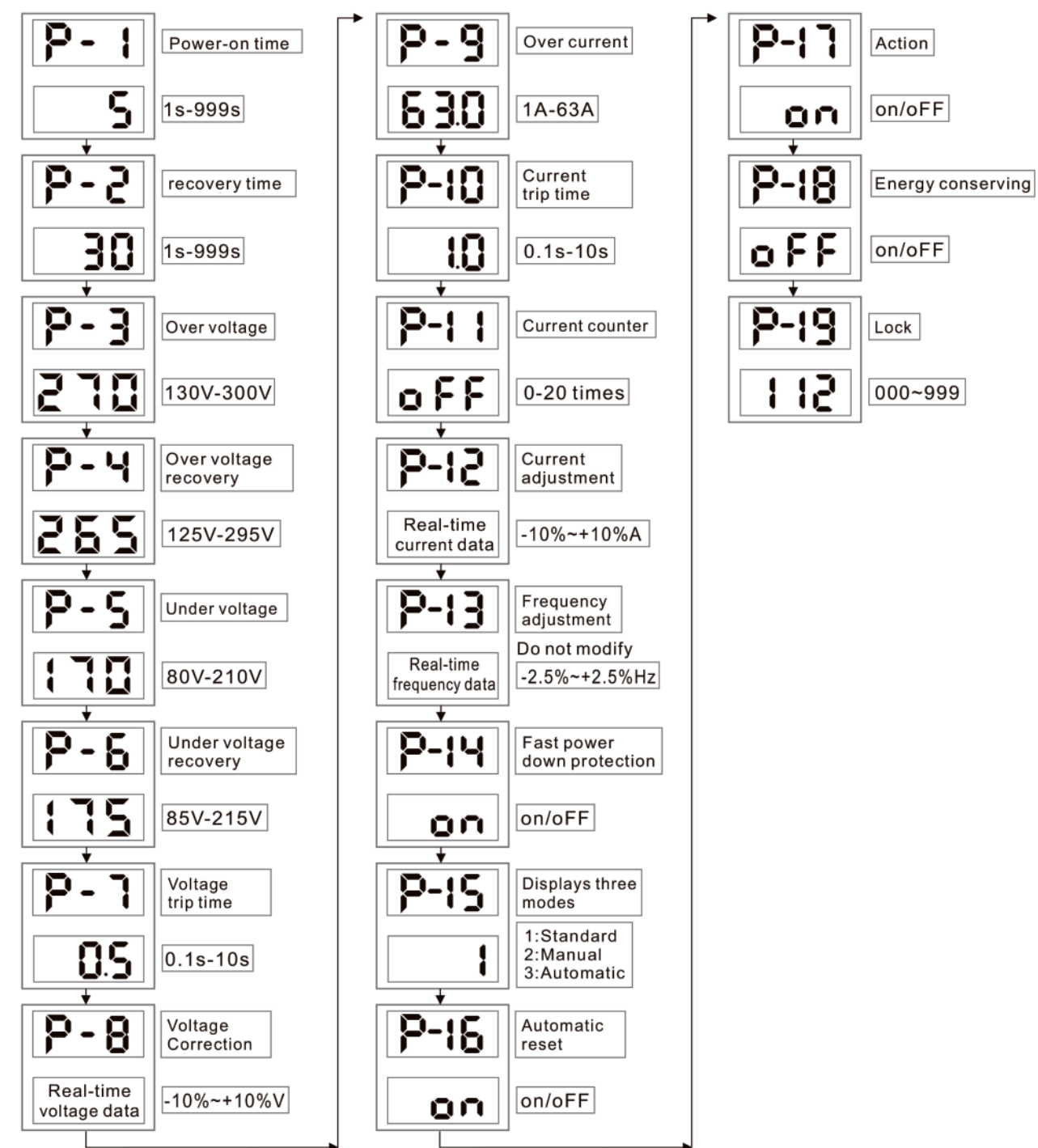


Front-face Panel

>V: Overvoltage Indicator
<V: Underage Voltage
>A: Overcurrent Indicator
POWER: Normal Working Indicator

M Menu selection
▲ Digit+
▼ Digit-
⏻ ON/OFF

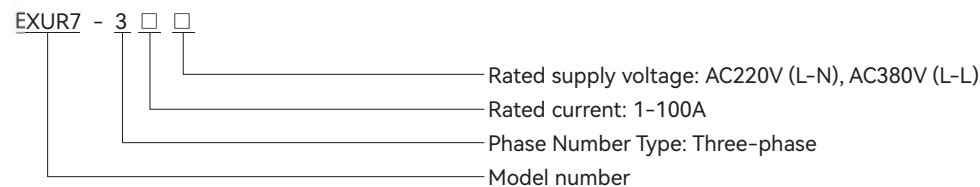
Setup Menu



EXUR7-3 Overvoltage and Undervoltage Protector



Model and Meaning



General

The EXUR7-3 is a high-performance three-phase line protection device. It continuously monitors the effective values of three-phase voltage and current, and can quickly disconnect the circuit when preset overvoltage or undervoltage faults are detected, effectively preventing electrical equipment damage and safety accidents caused by power grid abnormalities or equipment malfunctions. After the fault is eliminated, the device supports automatic reset to restore power supply.

Feature

Voltage and current display relay used in administrative, industrial and residential buildings and has the function of protecting single-phase lines:

- Working under voltmeter mode;
- Undervoltage protection;
- Overvoltage protection;
- Overcurrent protection.
- Phase-sequence protection;
- Three-phase unbalance protection;

Technical Data

Item	AC220V(Three-phase four-wire)	AC380V(Three-phase three-wire)
Rated supply voltage	Phase Voltage AC220V(L-N)	Line Voltage AC380V(L-L)
Operating voltage range	AC80_400V(Three phase)	AC140-400V(Three phase)
Rated frequency	50/60Hz	50/60Hz
Electric current adjusting range	1-100A	1-100A
Over-voltage setting range	120-300V(220V)	400-520V(380V)
Under-voltage setting range	80-210V(220V)	140-360V(380V)
Rated current	63A/80A/100A	63A/80A/100A
U< and U> trip delay	0.1-10s	0.1-10s
Reset/start delay	1-999s	1-999s
Voltage measurement accuracy	±2%	±2%
Rated insulation voltage	400V	700V
Output contact	1NO	1NO
Electrical life	10 ⁵	10 ⁵
Mechanical life	10 ⁶	10 ⁶
Protection degree	IP20	IP20
Pollution degree	3	3
Altitude	≤2000m	≤2000m
Operating temperature	-5°C~+55°C	-5°C~+55°C
Humidity	≤50% at 40°C(without condensation)	≤50% at 40°C(without condensation)
Storage temperature	-30°C~+70°C	-30°C~+70°C

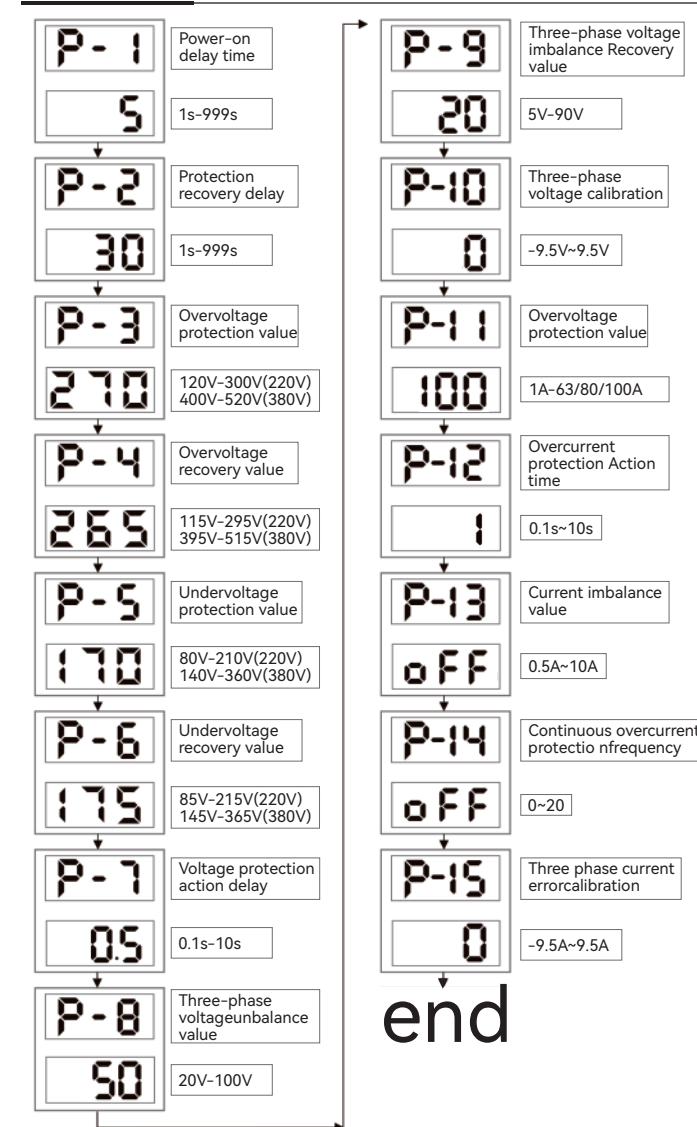
EXUR7-3 Overvoltage and Undervoltage Protector



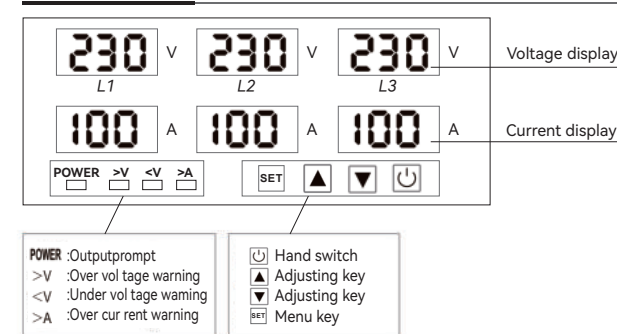
Default Setting

Technical parameter	Setting range	Step	Factory setting
Power-on delay time	1-999s	1s	5s
Over-voltage protection value	120-300V/400-520V	1V	270V/430V
Over-voltage recovery value	115-295V/395-515V	1V	265V/425V
Over-voltage recovery delay time	1-999s	1s	30s
Over-voltage protection action time	0.1-10s	0.1s	0.5s
Under-voltage protection value	80-210V/140-360V	1V	170V/300V
Under-voltage recovery value	85-215V/145-365V	1V	175V/315V
Under-voltage recovery delay time	1-999s	1s	30s
Under-voltage protection action time	0.1-10s	0.1s	0.5s
Three-phase voltage error value	-9.5V~9.5V	0.5V	0
Three-phase voltage unbalance value	20-100V	1V	50V
Three-phase voltage unbalance protection switch	OFF/ON	-	ON
Phase sequence protection	OFF/ON	-	ON
Over-current protection value	1-63A/80A/100A	1A	100A
Over-current recovery delay time	1-999s	1s	30s
Over-current protection action time	0.1-10s	0.1s	0.5s
Three-phase current error	-9.5A~9.5A	0.5V	0
Continuous over-current protection times	0-20/OFF	1	OFF

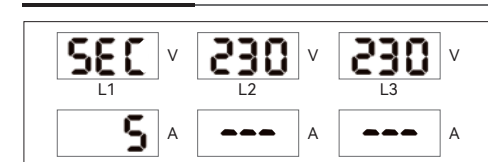
Setup Menu



Display Panel

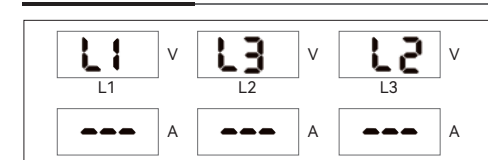


Reset / Start Delay Display



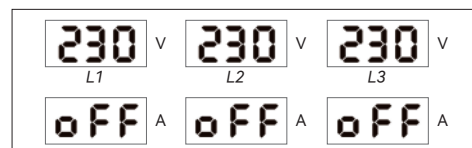
Voltage operating values are shown on L1-L2-L3 and on current during the start of delay counting on L2 Value display; After the delay is over, the output relays close and they will open normally

Phase Sequence Error Indication



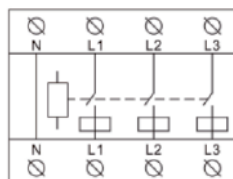
When a phase fault occurs, L1-L3-L2 is displayed, and the protector is disconnected from the output power supply

Indication of Continuous Over Current Faults



Continuous over current fault indicationDisconnect overload deviceStart the relay after manual reset

Electrical Symbol

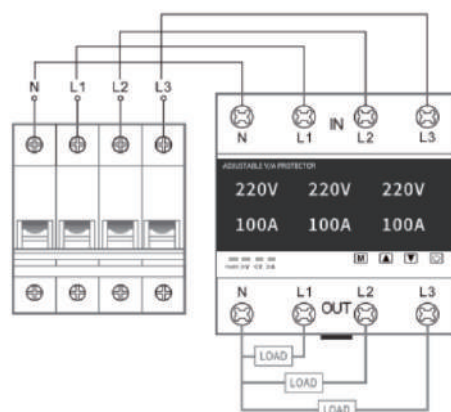


Product Status Description

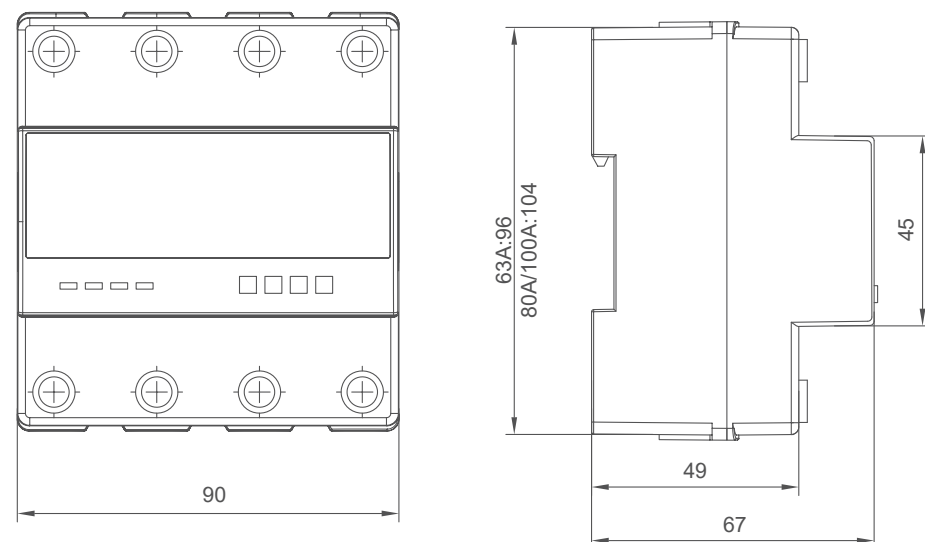
- If a voltage fault is detected during the reset/start-up delay period, the output relay will energize and the fault indicator will light up.
- During normal operation, the screen displays the operating voltage and current values; if a voltage or current fault is detected, the output relay energizes and the fault indicator lights up.
- Voltage Fault: After a voltage fault occurs, if the input voltage is detected to have returned to within the hysteresis (Hys) range, the relay will automatically reset once the reset/start-up delay period concludes; the fault indicator will turn off, and the screen will display the operating voltage and current values.
- Current Fault: When the relay trips due to a current fault, it will automatically reset; during the reset/start-up delay period, the fault indicator turns off, and the screen displays the operating voltage and current values.

Wiring Diagram

(The wiring diagram is for reference only; please refer to the actual wiring.)



Overall and mounting dimensions (mm)



Adjustable voltage, current, with leakage detection and kilowatt-hour meter

Application

The adjustable voltage, current and leakage detection protection device, with a kilowatt-hour meter, is an intelligent protector that integrates overvoltage protector, undervoltage protector, overcurrent protector and leakage detection. In the event of an overvoltage fault, undervoltage fault, or overcurrent fault, the product can immediately cut off the power supply to avoid damage to electrical equipment. The overvoltage, undervoltage, overcurrent and leakage detection switches of the product can be set by the user and adjusted according to local actual conditions.

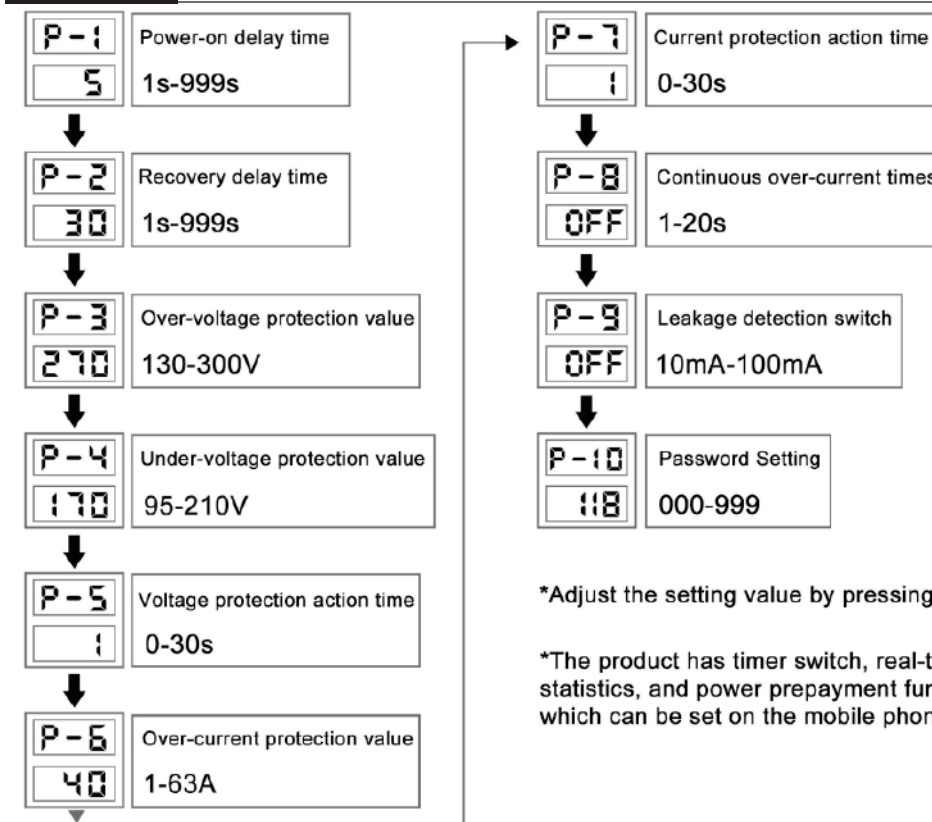
Product Features

1. In the case of overvoltage fault, undervoltage fault, overcurrent fault in the single-phase line, the product can disconnect the line power supply and automatically restore the line connection after a delay time after the line voltage or current returns to normal.
2. In the case of instantaneous overvoltage in the line, the product can protect the equipment from misoperation.
3. If the leakage detection switch is turned on, when the line is affected by unstable voltage or sudden power failure and power on due to loose connection and other faults, the product will disconnect the line after three seconds.
4. When the line fault voltage reaches the peak, the product itself will not be damaged.
5. The protector can display kilowatt-hours, KW and power factor.

Main Technical Parameter

Function	Technical Parameter	Function	Technical Parameter
Input voltage	AC 95-300V	Power-on delay time	1-999s default 5s
Over-voltage protection value	130-300V default 270V	Over-voltage recovery value	125-295V default 265V
Under-voltage protection value	95-210V default 170V	Under-voltage recovery value	100-215V default 175V
Over-current protection value	63A:1-63A default 40A	Continuous over-current times	1-20 times default OFF
Leakage protection value	10-100mA default OFF	Voltage protection action time	0-30s times default 1s
Recovery delay time	1-999s default 30s	Current protection action time	0-30s times default 1s
Mechanical life	≥100000 cycles	Power consumption	≤2W
Password Setting	000-999 default 118	Size	85*37*69mm

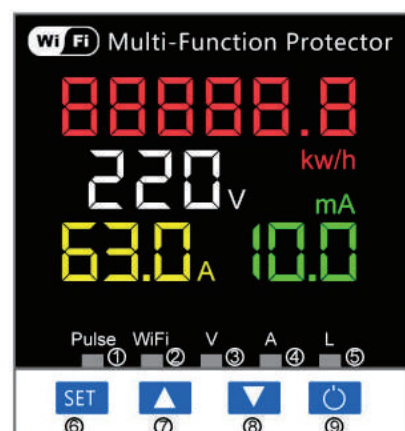
Setup Menu



*Adjust the setting value by pressing ▲ ▼ keys

*The product has timer switch, real-time power statistics, and power prepayment functions, which can be set on the mobile phone.

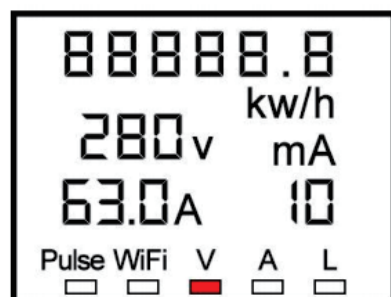
Panel indicator lamps and keys instructions



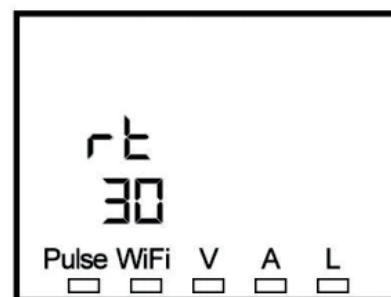
- ① Kilo-watt hour meter pulse indicator
 - ② WiFi indicator
 - ③ Over/under voltage alarm indicator
 - ④ Over-current alarm indicator
 - ⑤ Leakage alarm indicator
 - ⑥ Set: Menu setting key
 - ⑦ Adjustment key +
 - ⑧ Adjustment key -
 - ⑨ Manual switch
- Press for 5 seconds and the battery power will be cleared
- Press and hold for 5 seconds, the WiFi indicator lightflashes and the device enters pairing mode.
- Press the power button to OFF, then press and hold the power button for 5-10 seconds until it restarts to restore to factory settings.

Screen Display Description

Over Voltage Protection Status

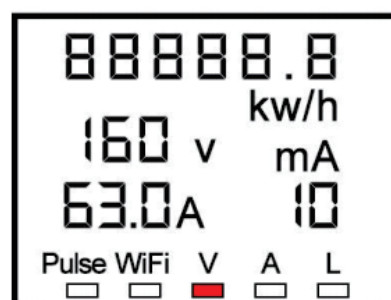


When over-voltage, the protector automatically disconnects, the over-voltage alarm indicator on, and the screen shows the over-voltage value.

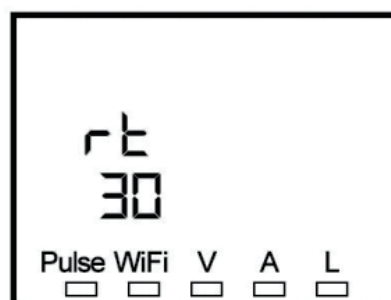


When the voltage turns normal, the over-voltage alarm indicator off, and the protector resets automatically within the set recovery time.

Under Voltage Protection Status

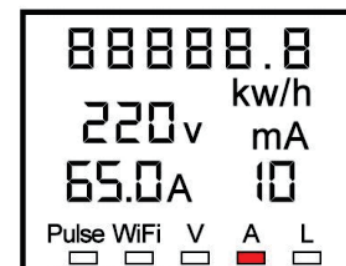


When under-voltage, the protector automatically disconnects, the under-voltage alarm indicator on, and the screen shows the under-voltage value.

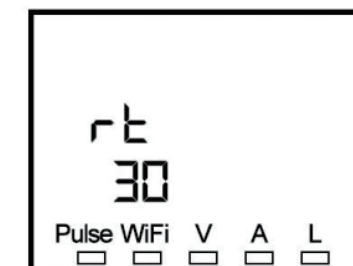


When the voltage turns normal, the under-voltage alarm indicator off, and the protector resets automatically within the set recovery time.

Over Current Protection Status



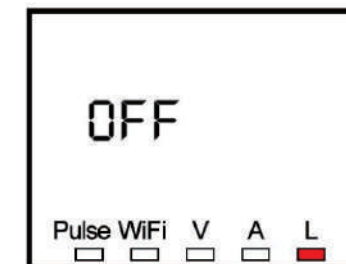
When an overcurrent condition occurs, the protection device automatically disconnects, the overcurrent alarm indicator lights up, and the screen displays the overcurrent value.



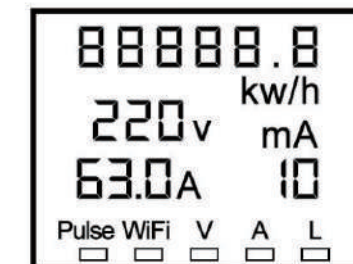
When the current returns to normal, the overcurrent alarm indicator turns off, and the protector automatically resets within the set recovery time.

When continuous over current faults times reaches the set value, the protector will not reset automatically, it needs to be reset manually by pressing key.

Leakage Detection Status



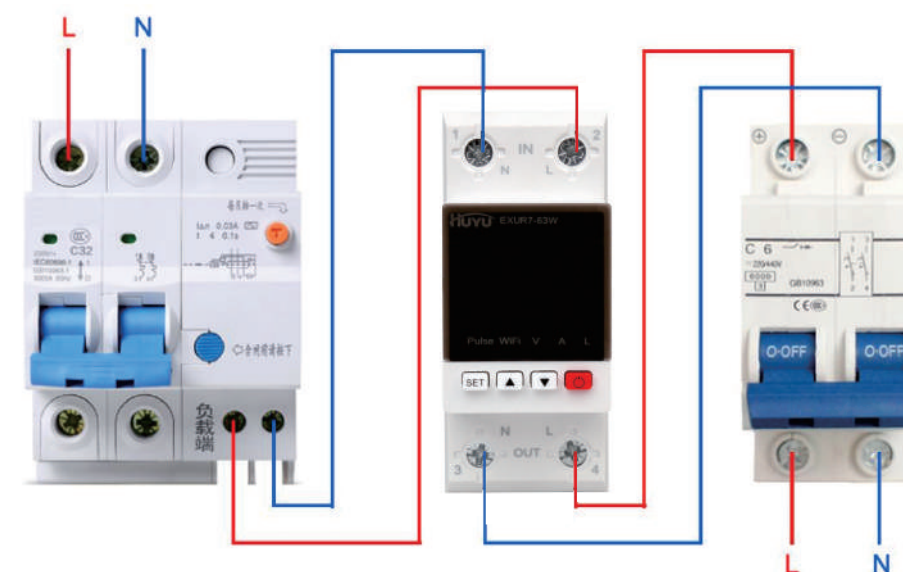
When the leakage detection switch is closed, if leakage occurs, the protector will automatically disconnect, the leakage alarm indicator will light up.



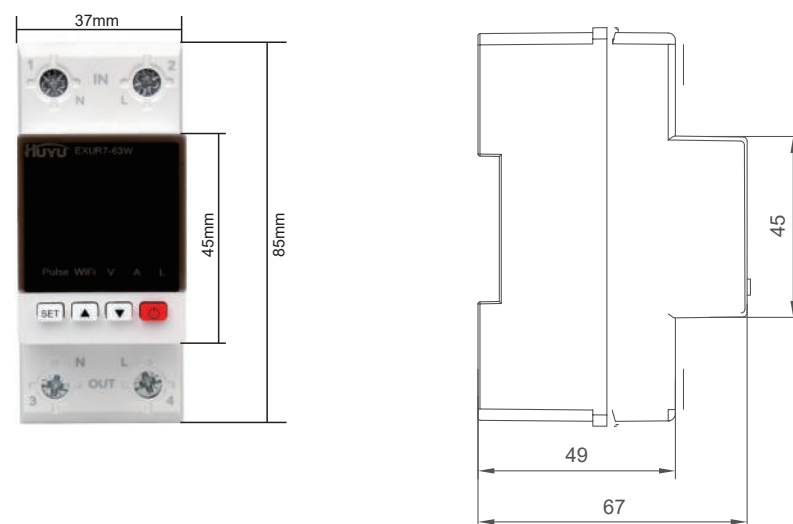
After the leakage protection, you need to press the manual switch to restart to return to normal.

Leakage detection switch, Default OFF

Wiring Diagram



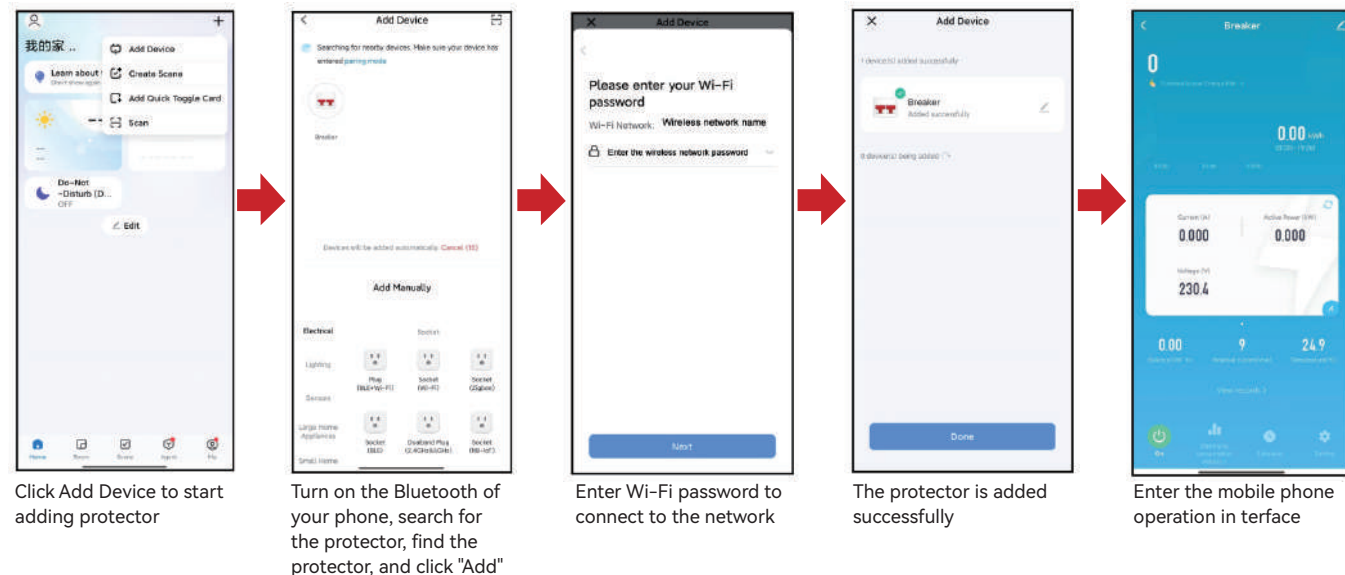
Installation Dimension



Protector Networking Steps



Scan the QR code or search for "smart life App" in the App Store and download it



Note:

- 1.This product is only used for leakage detection and provides only a reference for leakage values. It cannot replace the leakage protector.
- 2.Leakage detection switch, closed by default, if you need the detection function, you need to turn it on manually
- 3.The WiFi indicator light flashes and is in network configuration state
- 4.The WiFi indicator light is always on, indicating that the mobile device has been connected
- 5.To ensure service life,it is recommended to set the current parameter to 70%.



Model and Meaning

EXUR7P-2	63A	AC220V
Rated supply voltage: AC220V, AC110V		
Rated current: 63A, 80A, 100A		
Model number		

General

The EXUR7P-2 series products are applicable to rated currents of 100A and below, supporting intelligent switching between dual power supplies of mains-to-mains and mains-to-generator. The two input circuits adopt a physical isolation design, fully complying with electrical safety specifications and standards.

It features dual modes of automatic circuit switching and manual free switching for flexible and convenient use. The overvoltage and undervoltage protection thresholds can be customized; automatic power-off protection is triggered immediately when the voltage exceeds the set range. A built-in delayed restart mechanism enables automatic closing and power supply restoration after the grid voltage stabilizes. Meanwhile, it allows independent setting of the current limiting value, with automatic power-off upon overcurrent and self-recovery after fault elimination.

The complete machine integrates multiple safety protections including neutral loss, overvoltage, undervoltage and overload, comprehensively preventing hidden risks such as grid voltage fluctuations and current abnormalities. It effectively ensures the long-term stable operation of rear-end electrical equipment and avoids fault damage.

Operating Conditions

1. When installing the product, the input terminal must be connected to a circuit breaker.
2. After receiving the product, first connect only one power source to check if the display is normal.
3. The equipment must be installed by qualified professionals.
4. Before operating the device, disconnect all power supplies and do not touch any terminal when the power supply is connected.
5. Verify that terminals are properly connected.
6. Do not use the equipment in places that may be corroded by gas, strong sunlight and rain.
7. Clean equipment with a dry cloth.
8. Failure to comply with these instructions will result in serious injury or serious accident.

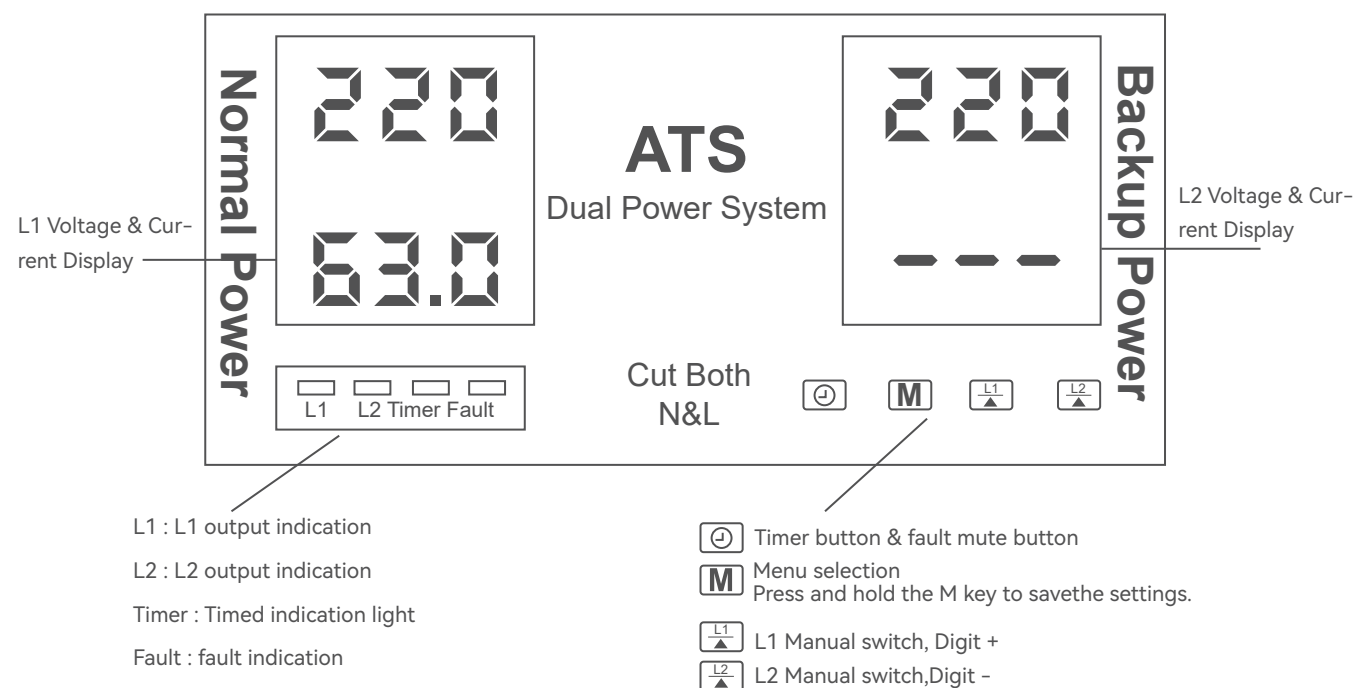
Feature

1. Automatic Transfer Switch: with "priority" phase
2. Microcontroller-based
3. Digital display of working voltage, current
4. Measurement accuracy is 0.5 class
5. Key setting parameter
6. Can set the priority phase sequence
7. DIN rail mounting

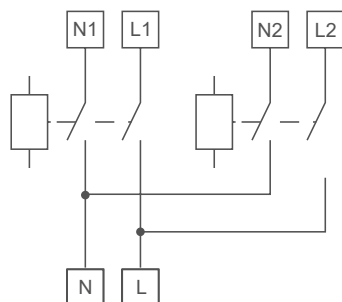
Technical Data

Rated supply voltage	AC 2*110V/220V
Operating voltage range	AC 80-300V
Rated frequency	50/60Hz
Hysteresis	Overvoltage:5V ; Undervoltage:5V
Measurement accuracy	0.5 class
Rated insulation voltage	450V
Output contact	1NO
Electrical life	10 ⁵
Switch delay to reserve phases	>0.2s
Overvoltage trip delay	0.1s;≥350V;0.02s
Undervoltage trip delay	0.1s;≥350V;0.02s
Mechanical life	10 ⁶
Protection class	IP20
Pollution degree	3
Altitude	<2000m
Operating temperature	-5°C~40°C
Humidity	≤50% or 40°C
Storage temperature	-10°C~55°C
Product size	63A:90*96*67mm; 80A/100A:90*103*67mm
Voltage accuracy	<1%
Rated operating current	63A/80A/100A
Max. operating current	63A/100A

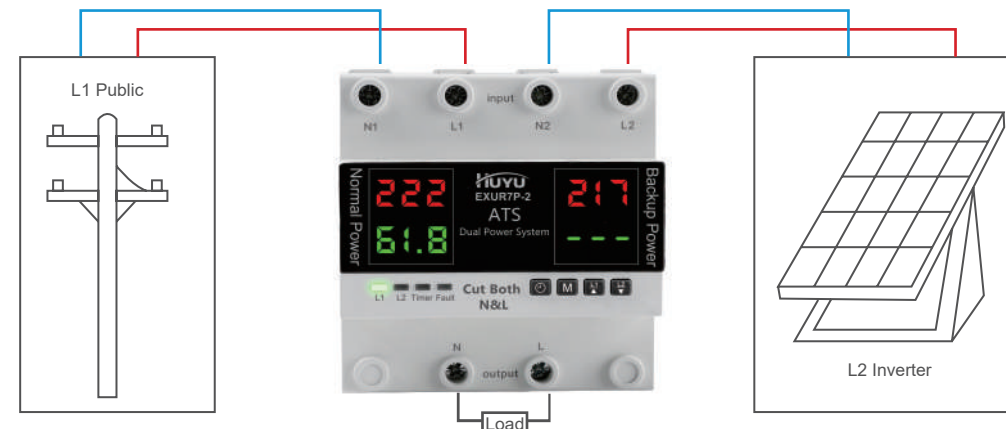
Display Panel



Electrical Symbol Diagram



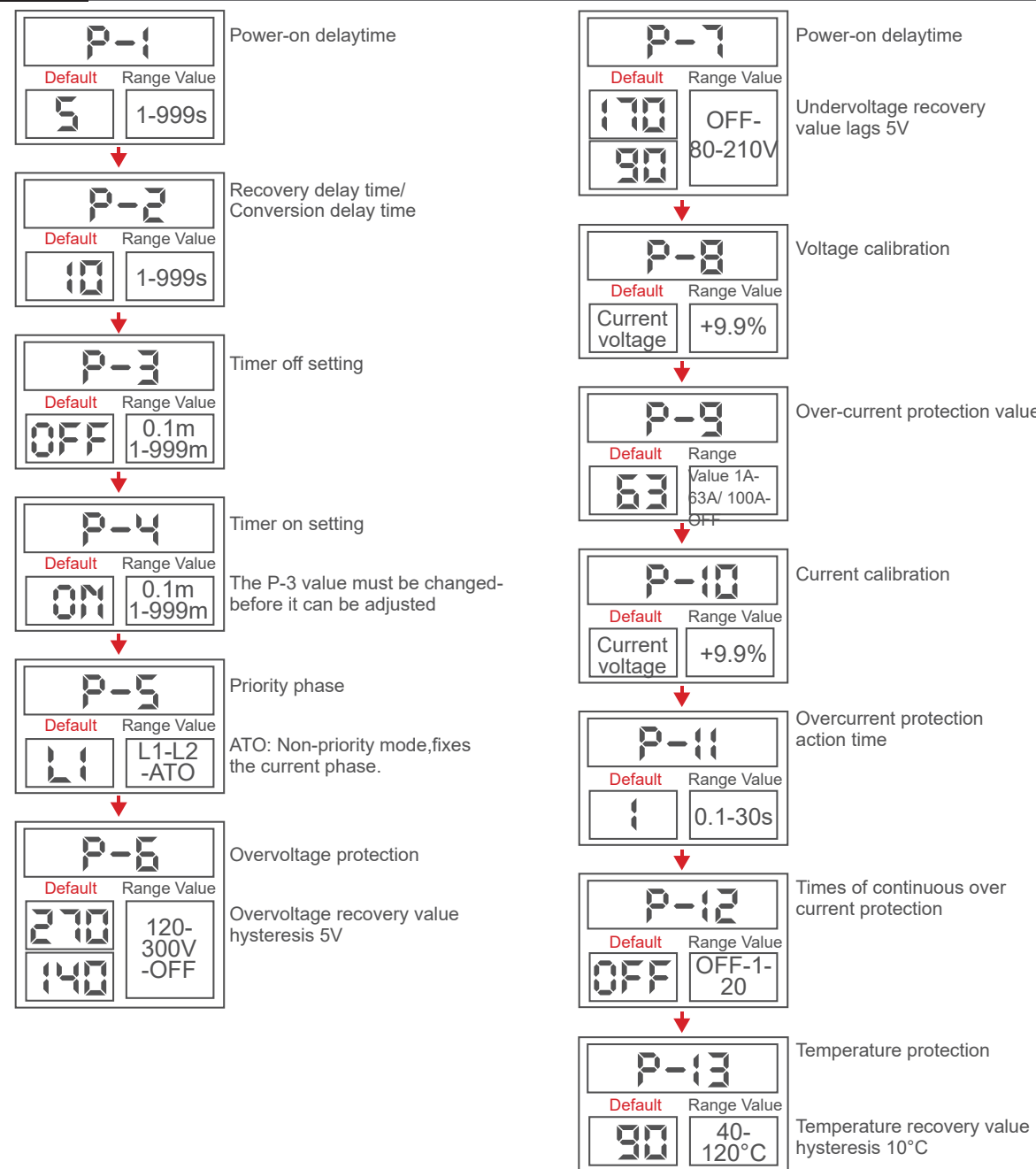
Wiring Diagram



Program Description

Set character	Technical parameter	Set range	Default value	Step forward	Function description
P-1	Power-on delay time	1s-999s	5s	1s	After external power cut, the time needed for power-on when power recovery.
P-2	Recovery/Switch Time	1s-999s	10s	1s	Is the time required for the line to return to normal or switch to a working line.
P-3	Timed off	OFF-0.1m-999m	OFF	0.1m	Can be used to time off the device
P-4	Timed on	ON-0.1m-999m	ON	0.1m	The P-3 timer off parameters must be changed before the timer on parameters can be adjusted.
P-5	Input phase priority selection	L1-L2 -ATO	L1	1	Operating mode: When L1 or L2 is selected, it's a priority phase selection; ATO: Non-priority mode, fixed to the current phase.
P-6	Over-voltage protection value	120V-300V -OFF	270V 140V	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 P5. When all voltage is over the set value, the protector will cut off all lines.
P-7	Under-voltage protection value	OFF-80V-210V	170V 90V	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 P5. When all voltage is under the set value, the protector will cut off all lines.
P-8	Voltage calibration	±9.9%	0	0.10%	Correct the voltage error.
P-9	Over-current protection value	1A-63A/100A - OFF	63A 80A	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.
P-10	Current calibration	±9.9%	0	0.10%	Calibrate current current value
P-11	Overcurrent protection action time	0.1s-30s	1s	0.1s	When over current, the time needed for protection action.
P-12	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.
P-13	Temperature protection	40°C-120°C	90°C	1°C	After temperature protection, the hysteresis value is restored to 10°C.

Setup Menu



END

Fault Description

Display	illustrate
OC	Overcurrent
HT	high temperature
TIM	Timed

Overall and Mounting Dimensions (mm)

