



OUVR-1 Self-recovery Overvoltage and Undervoltage Protector

1. Product Features

- 1.1 Preventing misoperation: Where sudden transient or temporary overvoltage occurs in the line, the protector will not generate misoperation; when the line suffers instable voltage or sudden power recovery after sudden power disruption due to loose contact or other fault, the protector will not close the circuit;
- 1.2 Reliable operation: Protection is characterized by inverse time lag operation with operating time $\leq 1s$;
- 1.3 Wide scope of voltage protection: 0~450V; in case of maximum fault voltage upon line fault, the protector itself will not be damaged;
- 1.4 Safer, impulse withstand voltage: 4kV (conforming to the safety standard of category III electrical apparatus);
- 1.5 Condition indication: The protector has the LED to indicate the operating state, where green is normal voltage indication, and red is overvoltage or undervoltage indication;
- 1.6 External modular design, guiderail DIN rail mounting.

2. Scope of Application

OUVR-1 self-recovery overvoltage and undervoltage protector is a new type of intelligent protection apparatus. With the modular standard design, in case of the overvoltage or undervoltage of power supply line, the protector can quickly and safely break the circuit under continuous high voltage surge, avoiding the happening of an accident due to abnormal voltage entry into the terminal apparatus; when voltage resumes normal value, the protector will automatically close the circuit within the specified time to ensure the terminal apparatus can operate normally in an unattended way.

OUVR-1 self-recovery overvoltage and undervoltage protector is applied for the users or loads of AC 230/400V, 50Hz and rated operating current 80A and below. It is mainly used in the household distribution box or other distribution line requiring protection.

3. Model and Meanings

OUVR-	1	80A	3P+N	bottom entry and upper exit
				Mode of connection: upper entry and lower bottom exit, lower bottom entry and upper exit
				Number of poles: 1P+N, 3P+N
				Rated current: 32A, 40A, 50A, 63A, 80A
				Design No.
Self-recovery overvoltage and undervoltage protector				

4. Normal Operating Conditions and Mounting Conditions

- 4.1 Ambient temperature: $-20^{\circ}\text{C}\sim+65^{\circ}\text{C}$
- 4.2 Altitude: $\leq 3000\text{M}$
- 4.3 Atmospheric conditions: The atmospheric relative humidity is not more than 50% when the ambient air temperature is $+40^{\circ}\text{C}$; high relative humidity is permitted under low temperature. For example, it may be up to 90% at $+20^{\circ}\text{C}$; special measures should be taken in case of occasional condensation due to temperature variation;
- 4.4 Pollution degree: level 2;
- 4.5 Mounting category: category II or III.
- 4.6 Mounting form: It is installed using the TH35-7.5 section steel mounting rail. The inclination of installing surface and vertical plane cannot exceed 5° .

5. Points for Attention

- 5.1 When the protector is energized for the first time, it needs a time delay of $30\pm 10\text{s}$ before normal power supply of loads.
- 5.2 Protector conductor N is neutral line, L is live line; connection cannot be done in a wrong way;
- 5.3 Mode of connection is upper entry and bottom exit;
- 5.4 Before use, please tighten the clamping screws to prevent the damage of the product due to loose contact.
- 5.5 LED indication: green lamp normally on–normal
Red lamp normally on–overvoltage or undervoltage
- 5.6 neutral line must be connected. When the neutral line or any phase of live conductor is disconnected in the line, the protector will play a role of protection.
- 5.7 After overvoltage or undervoltage of a 3P+N product, it can only resume normal operation when the voltage of three phases to neutral line is within the range of recovery value.

6. Main Parameters and Technical Indices

- 6.1 Rated voltage: AC230V/400V, 50Hz
- 6.2 Rated operating current: 32A, 40A, 50A, 63A, 80A
- 6.3 Overvoltage operation cutoff value: $270\text{V}\pm 5\text{V}$
- 6.4 Overvoltage recovery value: 240~260V
- 6.5 Undervoltage operation cutoff value: $170\pm 5\text{V}$
- 6.6 Undervoltage recovery value: 185~195V
- 6.7 Time delay close time: $30\pm 10\text{s}$
- 6.8 Electric mechanical life: >50,000 operations
- 6.9 Power consumption: <2W
- 6.10 Connection capacity: <25mm²
- 6.11 Number of poles: 1P+N, 3P+N
- 6.12 Mode of connection: upper entry and lower bottom exit, lower bottom entry and upper exit

7. Installation and Connection

- 7.1 Before installation, it should first check whether the product mark conforms to the use conditions.
- 7.2 Connection should be done according to the product marked entry and exit (The load current cannot be higher than the product rated current).
- 7.3 Pole N cannot be connected in a wrong way, and it must be reliably connected; otherwise, the protector cannot operate normally.
- 7.4 For the connecting conductor section area, refer to Table 1.

Table 1 Section Area and Rated Current of Connecting Conductor

Rated current A	32	40	50	63	80
Conductor section area mm ²	6	10	10	16	25