

General

AVR Current & voltage protection relay is designed to protect devices with sensitive operating voltage & current values from errors that may arise from mains voltage and Overload.

Device Usage and Principle of Operation

Make the connections of the device according to the connection type. Otherwise, the device may be damaged. Adjust the over-current and high & low voltage settings of the according to the current and voltage values of the load you will use.

**Over-current Error state:** If the current value is under the current set values (when the device is not in error), the current value rises above the current set value, the device waits for the set error waiting time, then the device de-energizes the relay, the error led turn on, the overload value displayed on the current display flashes throughout the error period.

**Voltage Error state:** If the mains (input) voltage value is between the high and Low voltage set values (when the device is not in error), the mains (input) voltage value rises above the high voltage set value or under below the low voltage set value; the device waits for the set error waiting time, then the device de-energizes the relay, the error led turn on, the mains (input) voltage value displayed on the voltage display flashes throughout the error period.

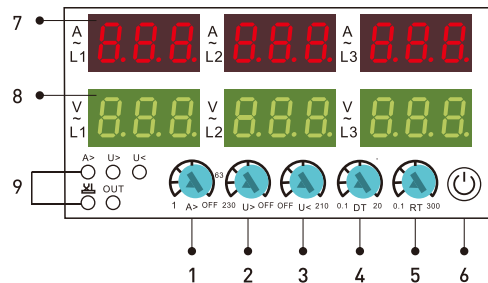
**Exit the Over-current Error state:** After eliminating the load over-current fault, Press twice the on/off key to manual reset or cut off the power supply.  
 [Note\_1: Manual reset is to avoid secondary damage to the system by automatically resetting the system without excluding over-current or short circuit.

**Exit voltage error state:** When the input voltage value returns to normal / when the reaches a value between the high and Low voltage set values the device waits for the set reset waiting time, then the device energizes the relay. the error led turns off, the out led turns on.

Phase sequence is available on AVR-XXTF.

When phase sequence is reversed, disallow output and phase range (⚡) led is lighted up.

Display and Buttons



- 1- Over current setting knob
- 2- High voltage setting knob
- 3- Low voltage setting knob
- 4- Delay time setting knob
- 5- Reset time setting knob

6- Manual On/Off Button:

For close the device output. In this state, the screen will display "off" and the device cannot be automatic reset. Press this button again to switch on the device intouse again (No failure premise).

7- Current Display

1 St Display Group: During normal operation, current value is displayed here, the screen lights up steadily when not in error state, the display flashes in case of error (Over-current).  
 During the programming process, the value of the relevant program is shown on the display (Over-current and high/low volt, delay time, reset time setting values).

8- Voltage Display

2 St Display Group: During normal operation, the input voltage value is displayed here, the screen lights up steadily when not in error state, the display flashes in case of error (high or low voltage).

9- LEDs:

A>:Light up when an over-current fault occurs.

V>:Light up when an high voltage fault occurs.

V<:Light up when an low voltage fault occurs.

⚡: Light up when an phase sequence fault occurs.

※ Only the AVR-XXTF has this feature

Out:Light up when the device starts to output.

Working

Example:Set the low voltage value (U<)to 160V,the high voltage value(U>) to 260V,the delay time of (D-T) is 5 sec,and the reset of (R-T) is 10 sec.

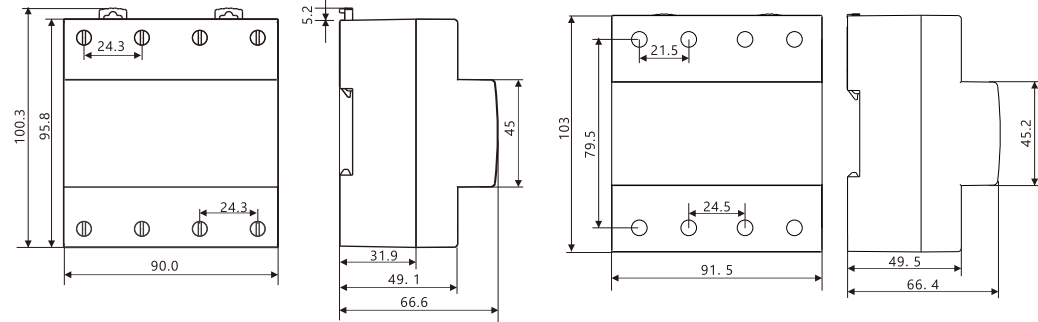
Make the connections of the device according to the connection type.

When any voltage of L1, L2, L3 to N is lower than 160V, after 5 seconds of D-T setting, L1, L2, L3 turn off the output. When the voltages of L1, L2, L3 to N return to the normal range, L1, L2, and L3 turn on the output after 10 seconds of R-T setting.

When any voltage of L1, L2, L3 to N is higher than 260V, after 5 seconds of D-T setting, L1, L2, L3 turn off the output. When the voltages of L1, L2, L3 to N return to the normal range, L1, L2, and L3 turn on the output after 10 seconds of R-T setting.

※ AVR-XXTF type doesn't work if the phase sequence is incorrect.

Dimensions



Dimension for AVR-63T

Dimension for AVR-80/100T

Warnings

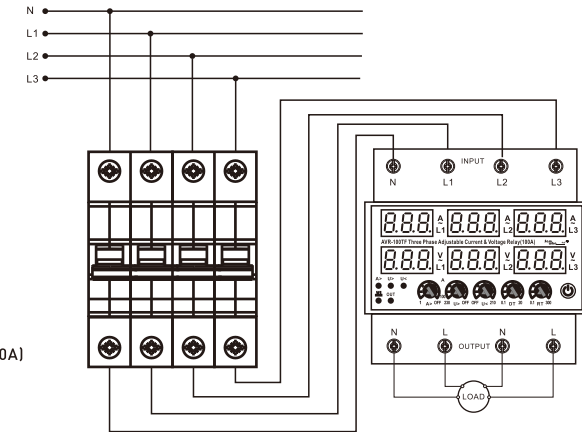
Please use the device according to the manual.

Don't use the device in wet.

Include a switch and circuit breaker in the assembly.

Put the switch and circuit breaker nearby the device, operator can reach easily.

Mark the swith and circuit breaker as releasing connection for device.



※Manual Button: Can only be operated when there is no fault

Technical specifications:

Operating Voltage(Un).....: 3x380+Neutral

Operating Frequency.....: 50/60Hz.

Operating Power.....: <6VA

Operating Temperature.: -20°C .....+55°C

Over-Current(A>).....: 1-63A(63), 1-80A(80A), 1-100A(100A)

High Voltage(U>).....: 230-300V+Off

Low Voltage(U<).....: 110-210V+Off

Low Voltage Fuse.....: 115V(Fixed)

Delay Time.....: 0.1-20sec.

Reset time.....: 0.1-300sec.

Display.....: 3x6 digit LED display 5 LEDs or 4LEDs(AVR-XXT)

Measurement Precision... : ±%1

Connection Type.....: Terminal connection

Weight.....: Max.420gr

Mounting.....: Vertical assembled in the panel or assembled on the din rail.

Operating Altitude..... : <2000meter