



# AVR

## 3-PHASE(SINGLE PHASE) VOLTAGE RELAY

### User's Manual

#### RESTRICTIONS ON USE

When using this product in applications that require particular safety or when using this product in important facilities, please pay attention to the safety of the overall system and equipment. Install fail-safe mechanisms, perform redundancy checks and periodic inspections and adopt other appropriate safety measures when it is necessary.

#### SAFETY PRECAUTION

This manual uses the following symbols to ensure safe operation of this product.

- WARNING** Warnings are indicated when mishandling this product might result in death or serious injury to user.
- CAUTION** Cautions are indicated when mishandling this product might result in minor injury to the user, or only physical damage to the timer.

#### WARNING

- Note this incorrect wiring of this product can damage it and lead to other hazards. Make sure the product has been correctly wired before turning the power ON.
- Before wiring, or removing / mounting the product, be sure to turn the power OFF. Failure to do so might cause electric shock.
- Do not touch electrically charged parts such as the power terminals. Doing so might cause electric shock.
- Do not disassemble the product. Doing so might cause electric shock or faulty operation.

#### CAUTION

- Use the product within the operating ranges recommended in the specification (temperature, humidity, voltage, shock, mounting direction, atmosphere and etc.). Failure to do so might cause fire or faulty operation.
- Make sure the product is firmly connected to the socket. Failure to do so might cause electric shock or fire.

SPECIFICATIONS		NAMES AND FUNCTIONS OF FACEPLATE	
Operating voltage	AC(V): 220, 240, 380, 415, 440	STATUS (Red) Status Indicator	
Allowable setting voltage range	±5%~±20% of rated operating voltage	Reset Reset delay time setting	
Rated frequency	50 / 60 Hz	Delay Tripping delay time setting	OVER Over voltage value setting
Rest time	AVR165: MAX 3sec fixed / AVR172: 0~10sec adjustable		UNDER Under voltage value setting
Contact rating	250VAC 5A (Resistive load)		POWER (Green) Power Indicator
Power consumption	Approx. 3VA		
Life	Mechanical : 5,000,000 times / Electrical : 100,000 times		
Ambient temperature	-10 ~ +50 °C		
Ambient humidity	MAX 85% RH		
Weight	Approx. 170g		

SETTING PROCEDURE		INDICATIONS	
<b>1. Over voltage setting</b>  Set the desired value for over voltage. This function can be turn off by turning the knob to off position.	<b>3. Reset delay setting</b>  Set the desired value for reset delay time.	<b>1. STATUS</b> <b>Normal :</b> ————— When the voltage is within the set over and under level, balance, phase sequence, and all phase are present, then the red LED starts lighting.	<b>Unbalance :</b> . . . . . If the voltage is unbalance then the red LED starts blinking three times and go out once.
<b>2. Under voltage setting</b>  Set the desired value for under voltage. This function can be turn off by turning the knob to off position.	<b>4. Tripping delay setting</b>  Set the desired value for tripping delay time.	<b>Over :</b> - - - - - If the voltage rises above the adjusted over level then the red LED starts blinking once and go out three times.	<b>Phase reverse :</b> . . . . . If the phase reverse then the red LED starts to keep blinking .
		<b>Under :</b> . . - - . . If the voltage drops below the adjusted under level then the red LED starts blinking twice and go out twice.	<b>Phase loss :</b> - - - - - If the phase loss then the red LED starts to go out.
		<b>2. POWER</b> A green LED indicates the presence of the power supply voltage.	

CONNECTION				
AVR165-11T / AVR172-11T	AVR165-11S / AVR172-11S	AVR165-8T / AVR172-8T	AVR165-8TR / AVR172-8TR	AVR165-8S / AVR172-8S

TIMING CHART		DIMENSION (mm)	
3-PHASE	SINGLE PHASE		