

# **A V R**

**A u t o V o l t a g e R e g u l a t o r**

## **Tap-Change AVR Series**

# **User's Manual**

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### **Please read and save this manual!**

Thank you for selecting this automatic electronic voltage regulator (AVR). It provides you with a perfect protection for connected equipment. The manual is a guide to install and use the AVR. It includes important safety instructions for operation and correct installation of the AVR. If you should have any problems with the AVR, please refer to this manual before calling customer service.

# 1. IMPORTANT SAFETY INSTRUCTIONS

- **WARNING (SAVE THESE INSTRUCTIONS):** This manual contains important instructions that should be followed during installation and maintenance of the AVR and batteries.
- **WARNING (Controlled Environment):** Intend for installation in a controlled environment.
- **CAUTION:** Risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
- **CAUTION:** Avoid exposing the AVR to direct sunlight, stoves or any other heat source.
- **CAUTION:** To prevent overheating, make sure that the ventilation openings of the unit are not covered.
- **CAUTION:** Keep moisture and dust away.

# 2. PRESENTATION

The AVR (Automatic Voltage Regulator) unit can provide you with microprocessor controlled Automatic Voltage Regulation function. It can supply you with pure, stable power supply and eliminating the connected loads damaged caused by power problem.

## 2.1 “OFF mode” no indicator:



The situation caused by

1. Power switch is turn-off.
2. Circuit breaker is tripped.
3. No utility power.

## 2.2 “Normal mode” indicator (Green):

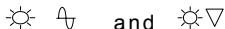
The indicator will illuminate when the utility input is normal.



Utility normal and Power indicator illuminate.

## 2.3 “AVR Buck-down mode” indicator (yellow):

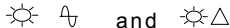
The indicator will illuminate when the Power and utility input is HIGH.



Utility input is over than limited-value; the buck-down mode of automatic voltage regulator (AVR) is enabled.

## 2.4 “AVR boost-up mode” indicator (yellow):

The indicator will illuminate when the Power and utility input is LOW.



Utility input is over than limited-value; the boost-up mode of automatic voltage regulator (AVR) is enabled.

## 3. INSTALLATION

**3.1 Inspection:** Inspect the AVR upon receipt. The packaging is recyclable; save it for reuses or disposes of it properly.

**3.2 Placement:** Install the AVR in controlled area with adequate air flowing and free of excessive dust. Do not operate the AVR at outdoor area.

**3.3 Utility Power:** Be sure the polarities and types of the receptacles match the unit. Beside this, keep the capacity of this unit is higher than protected loads. If the capacity of AVR unit is not sufficient, input circuit breaker will be opened.

## 4. OPERATION

### 4.1 Switch on:

When utility input is connected to the AVR, press “ON” button to turn on the AVR. After that, connect the electrical cords of the equipments that will be used (such as computer or monitor) to the rear panel of AVR unit.

### 4.2 Switch off:

Press the “OFF” button to turn off the AVR.

### 4.3 “Over load Protection”

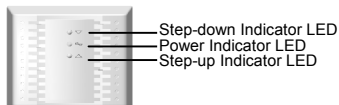
When the unit is working under over load situation, the input power breaker will be opened to protect the unit itself.

**Warning:** Once the circuit breaker is opened, please turn on the unit again after 60 sec to let the breaker be fully cooling down. This way can extend the life of switch breaker.

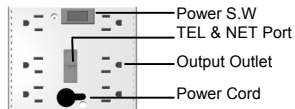
### 4.4 “Output short Protection”

When the output loads are shorted, the input power breaker will be opened to protect the unit itself.

**Warning:** Once the circuit breaker is opened, please turn on the unit again after 60 sec to let the breaker be fully cooling down. This way can extend the life of switch breaker.



TCA-1200/2000



TCA-1200/2000

## APPENDIX A. TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	ACTION TO TAKE
AVR cannot be turned on	ON/OFF SWITCH is off position	Press the ON/OFF SWITCH to on position
	Circuit breaker is opened	Turn on the circuit breaker

## APPENDIX B. SPECIFICATIONS

MODEL		TCA-1200/1200N	TCA-2000/2000N
INPUT	Capacity	600W	1000W
	Voltage	110V,115V,120V or 220V,230V,240V +/- 20%	
	Frequency	50 or 60Hz	
OUTPUT	Voltage	110V,115V,120V or 220V,230V,240V Typical +/- 7%	
	Frequency	50 or 60Hz	
PROTECTION	Spike Protection	50~1000 joules (optional)	
	Overload Protection	Input Circuit breaker protection	
	Short Circuit	Input Circuit breaker protection	
PHYSICAL	Net weight Kg (lbs)	1.6(3.52)	1.8(3.96)
	Dimension (mm) WxDxH	123*136*102	
ENVIRONMENT	Ambient operation	3,500 meters max. elevation, 0-95% humidity non-condensing, 0-40°C	
	Audible Noise	<40dBA(1 meter from surface)	
	Storage condition	15,000 meters max.	

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