

# Sollatek Wide Range Input AVR

## Three Phase AVR with extended input range

### Model:

AVR3xAAA-22-MW

AAA=Amps from 12 Amps to 150 Amps per phase

### Introduction:

The Sollatek AVR is a state of the art solid state stabiliser.

Using microprocessor and thyristor technology, the AVR will rapidly detect voltage variations and correct the output to ensure 220V (+/-4%) supply.

The Sollatek AVR-W has a very wide input range (-59% to +36%) and a voltage correction speed of 1250 Volts per second. No mechanical parts means that the AVR doesn't require maintenance and will not be affected by dusty environments as other mechanical (for example Servo type) stabilisers.

The wide range input allows the AVR to be used in places where voltage is a major concern. The Sollatek AVR-W can utilise incoming power as low as 90V and boost it to 220V; enabling complete operational capability of the BTS site.

### Features:

- **Designed for telecom applications.**
- **Designed for remote operation where a high degree of reliability is essential.**
- **For areas where excessively low voltage is a major concern.**
- **Fully electronic with no moving parts for:**
  - High reliability
  - Speed of operation
  - Immunity to dust and other environmental conditions

### The AVR is specified and used by a number of large organisations including:

- Satellite operators
- Infrastructure telecom companies
- Embassies worldwide for reliable electrification of their posts
- Medical systems for digital imaging, scanning and x-ray equipment
- Mobile phone operators
- Grid utility companies for voltage regulation to their sub-stations
- Various United Nations divisions including WHO, UNICEF and WFP

### Equipped with:

- Digital meters to monitor incoming voltage of all phases and output voltage and current



### Special features include:

- Wide input frequency tolerance between 45 to 75 Hz allowing unit to function correctly in areas of severe voltage disturbances
- High overload capability with up to 150% for 4 minutes
- Very low losses and minimal heat dissipation due to high efficiency design
- Easy access cabinet with lockable doors.
- Warranty of 2 years. Sollatek provides full back up support on all its products, with local support in over twenty countries worldwide

## Specifications

### Input

Input voltage	220 / 380V, -59%, +36%.
Frequency Range	45Hz to 75Hz (i.e 50Hz -10%, +50Hz. or 60Hz -25%, +25%).
Additional Voltage THD	<0.2% at input (tested at 100% linear load), (No PWM methods used).
Maximum Input THD	Can withstand >10% THD from the supply.

### Output

Output voltage	220 / 380V $\pm$ 4%.
Response	<20ms.
Additional Voltage THD	<0.25% at output (tested at 100% linear load), (No PWM methods used).
Crest Factor	>1: 3 permissible on load current (tested at 100% load).
Synchronization	Output synchronized to input.
Permissible Overload	1000% for 100ms, 150% for 4 minutes, 110% for 10 minutes.
Load Types	Designed to run lighting, motors, battery chargers, communications equipment, office equipment, SMPS, air- conditioners, compressors, industrial machines, medical equipment and others. Suitable for all domestic, commercial and industrial sites.

### General

Technology	All solid state (static) switching.
Efficiency	>97% average.
Control	Microcontroller based control system provides self checks, system integrity monitoring and diagnostic indicators.
Control Protection	Internal surge arrestors and filters in control circuit protect against disturbances. Filtering algorithms and fault tolerant software protect against disturbances and false measurements.
Power Connections	Supply phases and earth. Load phases, neutral and earth.
Surge Protection	Heavy duty input and output surge arrestors to protect against extreme surges and lightning on the supply.
Ambient Temperature Range	0° to +55°C.
Relative Humidity	>95%, non condensing.
Environmental Protection	IP21 (indoor).
Acoustic Noise	< 45 dB (A).
Expected Service Life	> 25 years.
Standards	Manufactured to comply with :- ISO9001:2000, CE, EN 50081-1:1992, EN 50082-1:1998, EN 55022:1998, EN 61000-4-2:1995/1998, EN 61000-4-3:1996, EN 61000-4-4:1995, EN 61000-4-5:1995, EN 61000-4-6:1996, EN 61000-4-11:1994, DD ENV 50204.



## Key

### Standard features:

M = Digital Meter

W = Wide input range

### Additional Options:

A = AVS

B = Input Circuit Breaker

C = Output Circuit breaker

I = Isolating Transformer

O = Outdoor enclosure

P = Changeover switch

S = Surge Protection Device

