

SOLLATEK AUTOMATIC VOLTAGE REGULATOR (AVR)

Three phase wide input telecom static AVR

Model:

AVR3x75-22-TT
Three phase: 50kVA

Features:

Designed for telecom applications
Designed for regions with severe low voltage supply
Designed for remote operation where a high degree of reliability is essential

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 display: input and output voltage, input and output current, frequency
- Manual bypass switch transferring the load to the utility grid.
- Low and high voltage protection
- Radio frequency interference filtering
- Audible and visual alarm

Special features include:

- Wide input frequency tolerance between 45 to 75 Hz allowing unit to function properly 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 an efficiency of over 96% at full load
- Warranty of 2 years. Sollatek provides full back up support on all its products, with local support in over twenty countries worldwide



AVR 3X75

Specifications

Input

| | |
|------------------------|---|
| Input voltage | 220/380V, -50%, +20%. |
| Maximum Input Current | 3x144 amps (at 100% load and maximum boost). |
| Frequency range | 45Hz to 75Hz (i.e 50Hz –10%, +50%. 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, +/- 4%. |
| Maximum Output Current | 3 x 75.8 amps. |
| Maximum Output Power | 50 kVA. |
| Correction time | 40 m sec (0 to 100% load). |
| 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. |

Control Aux Unit CAU *(N.B. The following items are mounted in a single separate wall box from the AVR for convenient operation)*

| | |
|--------------------|--|
| CAU type | CAU3-150-2. |
| Circuit Breakers | Input and output circuit breakers to protect against overload and short circuit to both the AVR and the load. |
| Voltage Protection | AVS Automatic over and under voltage protection and re-connect delay, c/w five status LED indicators. Protects load from extreme supply voltage and AVR malfunction. |
| Output Alarm | Visual indicator, audible alarm and volt-free contacts if AVR output fails for any reason. Mute button provided for audible alarm. |
| By-Pass Switch | By-pass switch to run load direct from utility power if AVR needs to be taken out of service for any reason. |

General

| | |
|---------------------------|---|
| Technology | All solid state (static) switching. |
| Efficiency | >96% (at 100% linear load.) |
| 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, neutral 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. Dual mode. 9600 joules total. |
| Displays | Digital display, per phase for input voltage, output voltage, input current, output current and frequency. Push button to select display mode. |
| RFI/EMI Filter | AVR is equipped with RFI/EMI filtering for proper operation of the unit. |
| Ambient Temperature Range | 0 to +55°C. |
| Relative Humidity | >95%, non condensing. |
| Environmental Protection | IP31. |
| 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.  |
| Dimensions | 835 x 500 x 1280 (D x W x H) mm. |
| Weight | 450 kg. |