

Telecom Voltage Regulator (TVR)

Voltage Stabilisation with Phase Selection

Model:

TVR-3XXX-22
XXX = kVA from 10kVA to 200kVA

Introduction:

The Telecoms Voltage Regulator (TVR) is an enhanced version of the Sollatek AVR and designed especially to provide the high level of protection and capability required for telecommunication applications.

With many telecom sites moving onto single phase power, the TVR uses the phase selector to allow for continuous voltage regulation even when 1 or 2 phases are missing. While the isolating transformer provides a clean neutral and 10:1 attenuation ratio ensuring that noise on the output is significantly reduced relative to the input.

The TVR as standard includes various additional features that would otherwise be provided as optional extras. These include a higher IP rating of 55 (to allow outdoor installation); output circuit breaker, manual by pass and automatic voltage switcher function all make this unit the preferred choice for mission critical applications.

With Sollatek's wide input range (-30% to +22%) and high degree of reliability, makes the TVR the most apt solution for today's telecom's needs; whether in remote locations or city centres.

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.
- Where loss of phase(s) is an issue.
- Fully electronic with no moving parts for:
 - High reliability
 - Speed of operation
- Immunity to dust and other environmental conditions



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.
- Provides a complete all in one solution for AC power to a site.
- 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, -30%, +22%
Frequency Range	45Hz to 75Hz (i.e. 50Hz -10%, +50% or 60Hz +/- 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	220V +/-4%
Correction Time	100msec (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)
Synchronisation Output	Synchronised to input
Permissible Overload	1000% for 100ms, 150% for 4 minutes, 110% for 10 minutes
Load Types	Designed to run lighting, battery chargers, communications equipment, office equipment, SMPS, air- conditioners, medical equipment and others.

General

Isolation Transformer	Connected at input
Circuit Breaker	Output circuit breaker to protect against overload and short circuit
Voltage Protection	AVS automatic over and under voltage protection and adjustable re-connect delay, c/w five status LED indicators. Protects AVR and load from extreme supply voltage.
Phase Selector	Continuously monitors all incoming phases to select to best plus neutral
Changeover Switch	By-pass to run load directly from utility power
Technology	All solid state (static) switching
Efficiency	>97%
Control	Micro-controller 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 phase, neutral and earth
Response time	<20ms
Ambient Temperature Range	0° to +55°C
Environmental Protection	IP55 (outdoor)
Relative Humidity	>95%, non-condensing
Acoustic Noise	<45dB (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.



Options:

Surge Protection (SPD)

This provides a high level of protection (up to 100kVA) from lightning induced voltage and other voltage surges on the mains supply.

Asset Management System (AMS)

Sollatek's Asset Management System is a remote monitoring and data logging system which allows near real time monitoring of all remote BTS sites for customers, regardless of where they are. It gives a constant indication of the status of all sites at a glance and highlights any warnings or problems as soon as they are detected.

