

# SOLLATEK AVR3LS RANGE WITH DIGITAL METERS

## THREE PHASE AUTOMATIC VOLTAGE REGULATOR 70 KVA TO 140 KVA

### DESCRIPTION

The Sollatek AVR3LS-K range is a solid-state stabiliser, micro-processor technology-controlled Voltage Regulator. At the heart of the unit is an advanced microcomputer that not only ensures very accurate control of output voltage to the load but also provides a host of advanced features.

The AVR L-Series output voltage accuracy is 3% or better exceeding the most demanding advanced utilities minimum standards around the world. This range can cope with the harshest environments yet is designed to ensure it is affordable for demanding applications where cost is also an important consideration.

### SUITABLE FOR

- 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
- Offices and factories

### FEATURES

- Wide input range of +/-20%
- Output accuracy of 3.5% exceeds the Electricity Quality and Supply Regulations (EQS) [EN50160] of 400/230 +/-10%
- Extremely fast speed of correction (>10 times faster than mechanical/ servo stabilisers)
- Solid state, no moving parts and maintenance free
- Digital Meters: Input and output voltage, output current & frequency
- USB-B interface for efficient downloading of historical data
- DSP Class II surge protection
- Wide input frequency tolerance allows the unit to function properly in areas of severe voltage disturbances
- Output circuit breaker
- High overload capability with up to 150% for 4 minutes
- Very low losses and minimal heat dissipation due to an efficiency of over 98% at full load



Actual unit may differ from shown



### AVR Display Panel

Displays Input / Output Voltage and Current

- Enclosure made from Mild Steel with High Impact resistant Powder Coat Paint
- Warranty of 2 years. Sollatek provides full back up support on all its products, with local support in over twenty countries worldwide

## TECHNICAL SPECIFICATION

## VOLTAGE TABLE

INPUT		INPUT	OUTPUT
Input Voltage	230/400 V $\pm$ 20%	105	OFF
Frequency Range	45 Hz to 75 Hz	110	134
Additional Voltage THD	<0.2% at input (tested at 100% linear load)	115	140
Maximum Input THD	Can withstand <10% THD from the supply	120	145
OUTPUT		125	152
Output Accuracy	230/400 V $\pm$ 3%	130	158
Speed of Correction	240 ms or better (from max deviation)	135	163
Additional Voltage THD	<0.25% at output (tested at 100% linear load)(No PWM methods used)	140	170
Crest Factor	>1:3 permissible on load current (tested at 100% load)	145	176
Synchronisation	Output synchronised to input	150	182
Permissible Overload at 25°C Ambient	1000% for 100 ms	155	188
	150% for 4 mins	160	194
	110% for 10 mins	165	200
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	170	206
		175	212
		180	218
		185	225
GENERAL		190	230
Technology	All solid state Silicon Controlled Rectifiers (SCR or Thyristor) switching	195	236
Efficiency	>98% (at 100% linear load)	200	232
Control	Microcontroller based control system provides self-checks, system integrity monitoring fault detection, diagnostic indicators and reporting	205	228
Control Protection	Internal surge arrestors and filters in control circuit protect against disturbances. Filtering algorithms and faulty tolerant software protect against disturbances and false measurements	210	234
		215	228
Power Connections (Cable Connection)	Supply phases, neutral and earth. Load phases, neutral and earth Input / output terminal box on the rear of the unit	220	234
Surge Protection	Heavy duty input and output surge arrestors to protect against extreme surges and lightning on the supply. Dual mode. 2880 Joules total. Class II surge 8/20us protection as standard on input and output of each phase. A total of 3780 Joules.	225	228
		230	234
		235	229
Output Circuit Breaker	Output circuit breaker	240	234
Digital Meters	Accurate measurement of the AC RMS I/P and O/P voltage currents in three-phase systems Accuracy: 0.5% + 1 digit	245	229
		250	234
Ambient Temperature	-10°C to +55°C	255	229
Relative Humidity	>95%, non-condensing	260	234
Environmental Protection	IP21	265	237
Acoustic Noise	<45 dB (A), <65 dB with fans on	270	233
Expected Service Life	>25 years	275	237
Standards	Manufactured to comply with: ISO9001:2015, CE, EN 55022, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11.	280	241
		285	246
		290	251



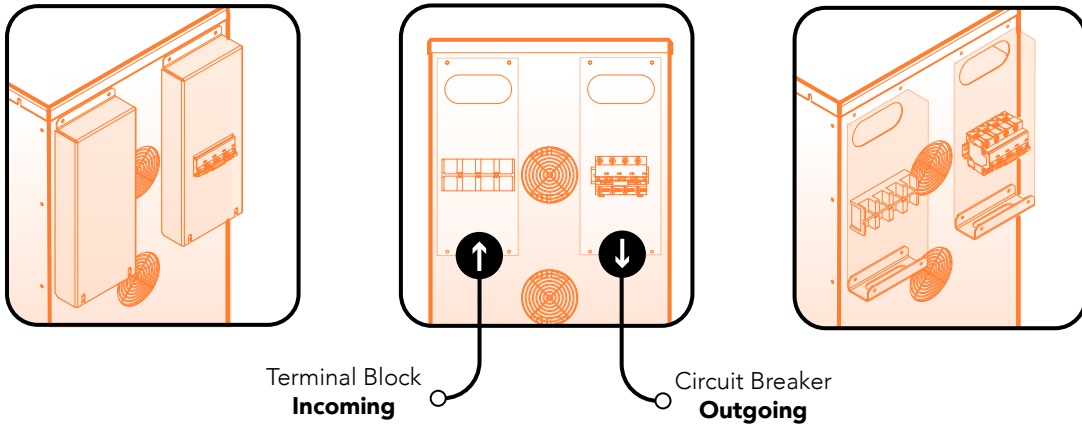
## MODEL TABLE

Part Number	Description	Output Power @ 230V	Max Output Current/Phase	Continuous Output Current*	AVR Dimension WxHxD	AVR Weight
973LS075-K	AVR3LS-70kVA 230/400V 3x100/75A M	70 kVA	100 A	75 A	511 x 1026 x 714 mm	250 kg
973LS101-K	AVR3LS-90kVA 230/400V 3x133/100A M	90 kVA	133 A	100 A	511 x 1026 x 714 mm	300 kg
973LS151-K	AVR3LS-140kVA 230/400V 3x200/150A M	140 kVA	200 A	150 A	511 x 1226 x 764 mm	400 kg

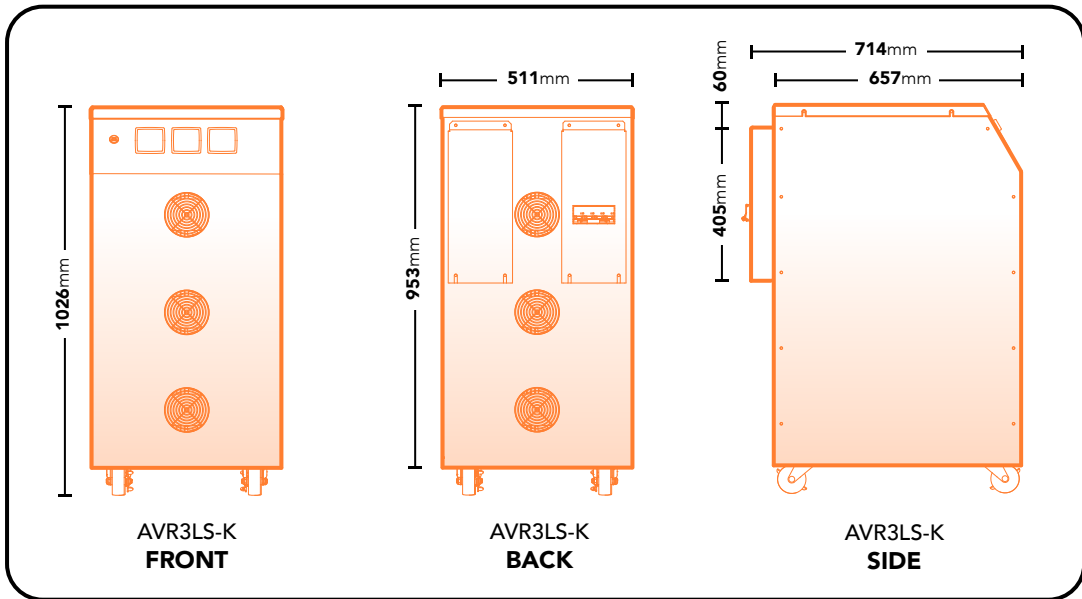
\*Continuous Output Current on Full Load, Max Boost, 55°C



**DIMENSIONAL DIAGRAM**



Terminal Block Incoming      Circuit Breaker Outgoing



AVR3LS-K FRONT

AVR3LS-K BACK

AVR3LS-K SIDE

**i** The diagrams presented are for illustrative purposes only. Detailed drawings are available upon request.

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