THE SOLLATEK
VOLTAGE STABILISER (SVS) RANGE

Microprocessor controlled Stabiliser

Instruction manual

NOW INCLUDES AVS™ (AUTOMATIC VOLTAGE SWITCHER) AND TIMESAVE™

IMPORTANT: This manual contains important safety instructions.
Keep this manual handy for reference.

CONGRATULATIONS on your choice in selecting the Sollatek Voltage Stabiliser (SVS). We trust that the unit will give you years of trouble free operation.

Contents

- **Before using the SVS please read all instructions carefully.**
- **Keep these instructions for future reference.**
- **All specifications are subject to change without prior notice.**

Safety

- All equipment designed and manufactured by Sollatek (UK) Ltd complies with the latest safety codes of practice. You should still follow all safety instructions and use caution when installing and operating electrical equipment.
- To avoid the risk of shock, DO NOT expose this equipment to rain, moisture or liquid spillage.
- Before attempting to use the SVS (Sollatek Voltage Stabiliser) ensure that the total loading of your equipment does not exceed the maximum rating of the SVS. To check the rating of your SVS, refer to the label on the back of the unit.
- For your own safety, do not insert any object into the ventilation slots.
- Do not attempt to dismantle the SVS, to do so will invalidate the guarantee. There are no user serviceable parts inside.

Description

As both high and low mains voltage can damage your electrical equipment, the Sollatek SVS is designed to monitor and correct the incoming supply continuously.

If the voltage rises or drops, the SVS will stabilise the output to ensure that the voltage reaching your equipment remains constant at 230V (+6%) or 110V (+ 6%) for US voltage systems, within the operating range of the unit. See table below.

The Sollatek SVS has a modern state of the art 7 LED display to indicate accurately the state of the input at all times and 5 LEDs to indicate the output voltage supplied to your load.

The Sollatek SVS is unique in having a built-in Sollatek AVS™ (Automatic Voltage Switcher). This adds the following protective functions;

a) Provides a start-up delay which prevents rapid switching ON and OFF of the appliance in serious fluctuations. This is especially important for loads that use compressors (e.g. Fridges, Freezers, Coolers, Air conditioners) and vital for sensitive electronic equipment like computers, photocopiers, fax machines, lab equipment, medical instruments etc. The delay varies between 10 seconds to 6 minutes depends on the model purchased. Please check with your dealer.

b) Provides a shutdown and disconnect function whereby it will disconnect switch off your equipment in cases where the fluctuations are extremely BAD and the SVS can not safely correct the voltage.

c) The Sollatek SVS has a built-in microprocessor which adds the advanced feature TimeSave™. TimeSave™ means that when the mains return to normal from a brown-out, the SVS checks the duration of the OFF time. For example for models that have 3 minute delay; If the unit has been off for more than 3 minutes then it will reconnect the mains within 30 seconds rather than the standard 3 minutes. This means the Sollatek SVS will give you more vital working time than any other stabiliser!

The SVS also protects your electrical equipment against power spikes and surges. By using the SVS you will ensure a stable, and clean voltage supply to your equipment.

Depending on the rating of the SVS, it is suitable for all electrical and electronic appliances, including:

Air conditioners	Fax Machines	Ink & Bubble Jet Printers
Fridges	Photocopiers	Domestic pumps
Freezers	Laser printers	Any electrical appliance
Coolers	Television	Satellite Equipment
Computers	Video Equipment	Hi-fi

The Sollatek range of SVS Stabilisers includes sizes from 250VA and up to 18kVA.

Specifications Table

Model	Amps	VA @ 240V	Socket	Weight	Dims	RFI Suppression	Current rating for CE approval
SVS02-22	2	480	UK, FR, SCH, UK5	2.0	193x100x124	No	1
SVS04-22	4	960	UK, FR, SCH, UK5	3.0	193x100x124	No	3
SVS08-22	8	1920	UK, FR, SCH, UK15	5.0	277x133x161	No	6
SVS12-22	12	2880	UK, FR, SCH, UK15	7.0	277x133x161	No	12.5
SVS15-22	15	3600	FR, SCH, UK15	8.0	277x133x161	No	15
SVS20-22	20	4800	Direct Wiring	14.0	336x212x161	No	16
SVS50-22	50	12000	Direct Wiring	29.0	345x330x260	No	50
SVS75-22	75	18000	Direct Wiring	38.0	345x330x260	No	75
SVS01-22ER	1	250	UK, FR, SCH	2.0	193x100x124	Yes	
SVS02-22ER	2	480	UK, FR, SCH	3.0	193x100x124	Yes	1
SVS04-22ER	4	960	UK, FR, SCH	4.0	193x100x124	Yes	3
SVS06-22ER	6	1440	UK, FR, SCH	5.0	277x133x161	Yes	
SVS08-22ER	8	1920	UK, FR, SCH	7.0	277x133x161	Yes	6
SVS12-22ER	12	2880	UK, FR, SCH	9.0	290x205x145	Yes	12.5
SVS15-22ER	15	3600	UK15, FR, SCH	12.0	336x212x179	Yes	15

ER models available while stocks last. PLease enquire for availability.

Model	Amps	VA @ 115V	Socket	Weight	Dims	RFI Suppression
SVS02-11	1	230	US	1.5	193x100x124	NO
SVS04-11	2	460	US	2.0	193x100x124	NO
SVS08-11	4	920	US	3.0	193x100x124	NO
SVS12-11	6	1380	US	4.0	277x133x161	NO
svs15-11	8	1725	US	5.0	277x133x161	NO
SVS20-11	12	2300	US	7.0	277x133x161	NO
SVS24-11	15	2760	DIRECT WIRING	8.0	336x212x179	NO

Specifications Table (cont'd)

Dual Voltage Range

Model	VA	Socket	Weight	Dims	RFI Suppression
SVS02-29	See table below	UK, US	3.0	As SVS04-22	No
SVS04-29	See table below	Sch, US	5.0	As SVS08-22	No
SVS08-29	See table below	Sch, US	9.0	As SVS08-22	No
SVS1000-28	See table below	US	5.0	As SVS08-22	No
SVS1000-27	See table below	US	4.0	As SVS08-22	No

Model	Input Voltages	Output Voltages	Output Power* @ 220V		@110V
SVS02-29	220	110 and 220	230VA	AND	230VA
or	220	110 and 220	650VA	AND	0VA
or	220	110 and 220	0VA	AND	300VA
SVS04-29	220	110 and 220	500VA		500VA
or			1000VA		0VA
or			0VA		450VA
SVS08-29	220	110 and 220	1000VA		1000VA
or			2000VA		0VA
or			0VA		900VA
SVS1000-28	110/220	110 and 220	@ 220V		@110V
	Input Voltage 220V		1000VA		0VA
or	Input Voltage 220V		0VA		400VA
or	Input Voltage 115V			Max total 400VA	
SVS1000-27	127/220	127 and 220	@ 220V		@110V
	Input Voltage 220V		1000VA		0
or	Input Voltage 220V		0VA		400VA
or	Input Voltage 127V			Max total 400VA	
SVS2000-28	110/220	110 and 220	@ 220V		@110V
	Input Voltage 220V		2000VA		0VA
or	Input Voltage 220V		0VA		800VA
or	Input Voltage 115V			Max total 800VA	
SVS2000-27	127/220	127 and 220	@ 220V		@110V
	Input Voltage 220V		2000VA		0
or	Input Voltage 220V		0VA		800VA
or	Input Voltage 127V			Max total 800VA	

* VA figures in different columns are not available simultaneously

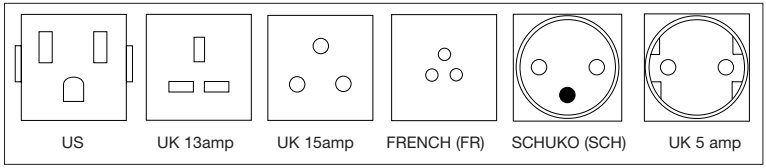
Please note that all models on this page do NOT include AVS function

Technical Specifications

The following table illustrates the technical specifications for the standard Sollatek SVS range.

Technical Specifications	230V	115V
Stabilisation Input Output	 -26% to 18% (171-272V) ±6% (216-244V)	 (86-136V) (108-122V)
Input Output	-29% to +23% (164-282V) ±10% (207-253V)	(82-136V) (104-127V)
Over voltage Disconnect* Reconnect*	 292V 149V	 72V 74V
Under voltage Disconnect* Reconnect*	 144V 149V	 72V 74V
Wait time on start up	Standard delay: 10 seconds. For a different delay refer to your dealer. For refrigeration equipment, use 3 minute delay	
Frequency	50/60Hz 45-60Hz continuous down to 30Hz for 1-2 seconds	
Response time	Within 0.1 second. Up to 764V per second	

The following diagram illustrates the various sockets available.



The input/output voltage characteristics of the SVS are illustrated in the table shown;

Input	0-144	145	155	165	175	185	195	205	210	215	225	235	240	245	255	265	275	285	290	291
Output	OFF	182	196	208	221	233	221	232	237	215	225	235	240	218	228	237	246	255	259	OFF*

SVS Input vs. Output voltage range (230V)

Input	0-72	73	78	83	88	93	98	103	105	108	113	118	120	123	128	133	138	143	145	146
Output	OFF	91	98	104	111	115	111	115	119	108	113	118	120	109	114	119	123	128	130	OFF*

SVS Input vs. Output voltage range (115V)

Input	0-79	80	86	91	97	102	108	113	116	119	124	130	133	135	141	146	152	157	164	165
Output	OFF	101	108	115	122	129	136	127	130	133	124	130	133	135	125	130	135	140	146	OFF*

*Excludes Dual Voltage Range

SVS Input vs. Output voltage range (127V)

Unpacking & Inspection

After removing the polystyrene protective packaging from the SVS unit, inspect the ventilation slots to ensure that they are free from all obstruction. Use a vacuum cleaner to dislodge any obstructions.

Retain the box and packaging material to return the SVS unit in the unlikely event of its operational failure.

Installation

WARNING: This appliance must be earthed.
Ensure the rating of the load doesn't exceed the capacity of the SVS. If in doubt consult your electrician.

SVS01-22 and up to SVS15-22
If your mains outlet only has a 2-pin socket, consult a qualified electrician.
If you are unfamiliar with installing electrical equipment consult a qualified electrician.
If a suitable electrical plug is not already fitted to the SVS unit, one should be fitted as follows. (The SVS15-22 should not be fitted with a plug due to the current requirement. The trailing input lead of the SVS15-22 should be wired directly to the mains supply) :
Do not obstruct the fan on the SVS15-22 and larger units.

- The wire coloured BLUE must be connected to the terminal marked 'N' for Neutral.
- The wire coloured BROWN must be connected to the terminal marked 'L' for Live.
- The wire coloured YELLOW and GREEN must be connected to the Terminal marked 'E' (or ) for Earth.

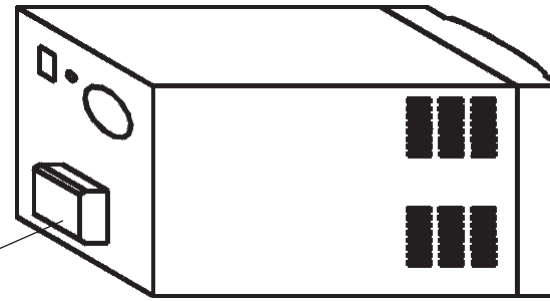
- Although the unit does not produce excessive heat, ensure that it is positioned so that a free flow of air allows the unit to cool.

- Do not install inside a closed cupboard and do not allow papers or other materials to be piled on top.

- Do not obstruct the fan on the SVS15-22 and larger units.

Connection Diagram for the SVS20-22

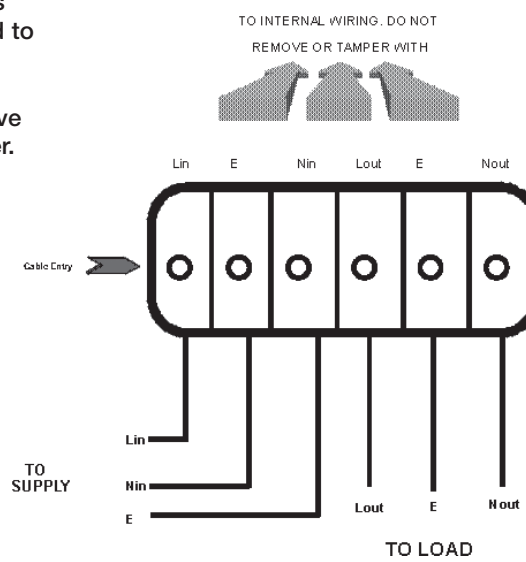
BEFORE REMOVING THE GREY PROTECTIVE COVER FROM THE BACK, ENSURE THE UNIT IS DISCONNECTED FROM THE MAINS SUPPLY.



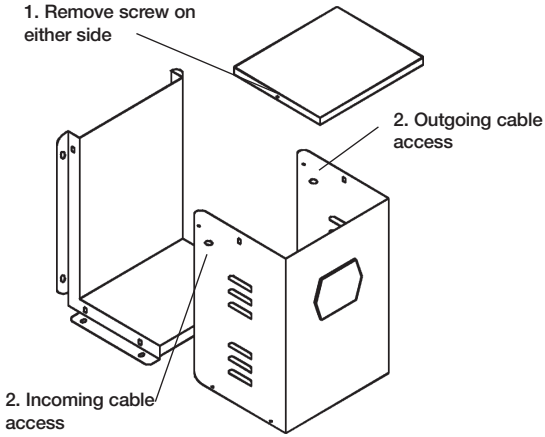
1) Remove the grey protective cover on the back.

2) Connect the mains supply to the Mains In connections on the back; Live, Earth and Neutral as marked, and connect your load to the Mains Out connections .

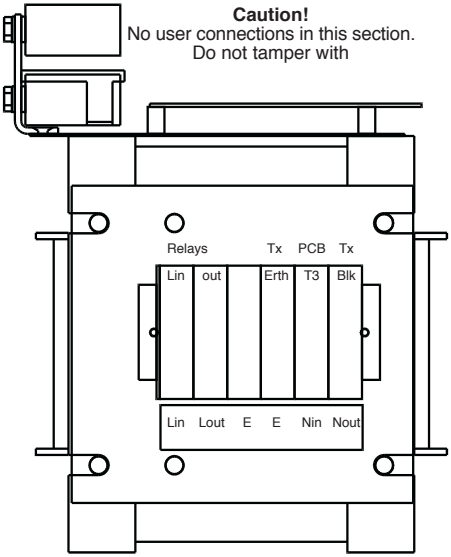
3) Always refit the grey protective cover before applying the power.



Connection diagram for SVS50-22 and upwards



SVS50-22 and SVS75-22 enclosure



Connection terminal

(1) Ensure supply is isolated before making connections.
(2) Connect Live In to the terminal indicated and take to mains supply via cable access hole in box.
(3) Connect Live Out to the terminal indictaed and take to Load via cable access hole in box.
(4) Check all connections are tight and correctly wired before switching on.

- Please ensure that you use correctly rated cable. (see table)
- Input cable should be rated at 1.5 times the output current.
- Increase the cable size for better regulation.
- This unit must be earthed.
- The unit requires a neutral.
- A suitable circuit breaker (at least 1.5times unit's rating in Amps) should be connected on the input.

3 or 4 core PVC insulated cables current carrying capacity (amperes)@30ºC ambient (conductor operating at 70ºC)	
mm^2 (cross section)	Amps
2.5	20
4	28
6	36
10	50

OPERATING INSTRUCTIONS

Please follow the procedure below to connect your SVS;

1 Turn your equipment OFF and unplug it from the wall socket.

2 Ensure that the switch on the SVS is OFF.

3 Plug the SVS into the wall socket or input and plug your equipment into the SVS.

4 Turn the power ON at the wall socket.

5 Turn the SVS switch ON.

6 Turn your equipment ON.

7 If the SVS model has a built-in AVS (Sollatek Automatic Voltage Switcher). This will ensure that that the load is not connected immediately. The delay will ensure that the mains is good before connecting the load and protects the equipment from rapid switching on and off.

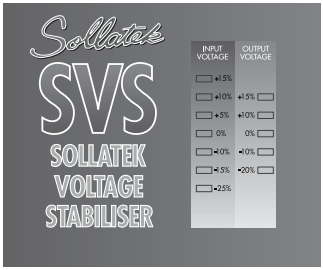
8 Once the wait period (see specifications) has passed, the SVS will relay power to your equipment.

9 The LEDs give you a visual indication of the input and output voltage.

10 If the mains voltage is 230V (ie normal) the green 0% Input voltage and green 0% Output voltage LEDs will both be lit.

11 Any variation to the input power supply, up or down, will be monitored and adjusted by the SVS. For full details refer to the Operating Sequence.

Operating Sequence



1. Input voltage increase is displayed in steps of +5%, +10% and +15% and input voltage decrease is displayed in steps of -10%, -15% and -25%.
   The SVS indicates the plus or minus voltage variation by lighting the relevant LED.
2. Within this range, the SVS will compensate by stepping up or stepping down the output voltage to maintain it's norm of 230V + 6%, which will be indicated by the green 0% LED.
3 If however the input voltage falls below -26%, the SVS will decrease the output

voltage accordingly. The amount to which the voltage is lowered will be indicated by the yellow -10% or red -20% LED.

4 Equally, if the input voltage rises above +18% (272V) the SVS will increase the output voltage, indicated by the yellow +10% or red +15% LED.

5 In the models where the AVS functions is incorporated, If the incoming voltage supply drops below the operating range of the SVS (144V or 72V for 110V unit) or above its operating (291V or 145V for 110V unit) it will shut down the output and protect your equipment against the severe incoming voltage.

6 Power will be automatically reinstated to your appliance once the input voltage comes within the operating range of the SVS and the delay period has passed.

Troubleshooting

Symptom	Possible Cause	Remedy
The unit does not switch on. None of the LEDs are lit.	1) The fuse has blown. 2) The mains switch is not on. 3) No power is available on the input.	Change the fuse for a fuse of the correct rating. Ensure that the load currentdoes not exceed the capacity of the unit. If after changing the fuse the unit is still not functioning return the unit for repair. Ensure that you are using the correct voltage (i.e. 230V or 110V)
The unit appears to be functioning normally but the load is not being switched on.	Load is not plugged in. Load is not Switched on. Load fuse has blown.	1) Check that the load is plugged in. 2) Check that the input voltage is within the input range of the SVS. 3) Check that the load is switched on.
The unit appears to be functioning but the output voltage is persistently low.	The mains input is too low; 1) Due to continuous brown-out 2) The unit is rated at 230V and the incoming supply is 110V	
The SVS continuously performs self-test. If it finds a fault the LEDs will continously light from top to bottom repeatedly in one of two patterns.	1) Possible internal fault. The fault could be temporary or permanent. 2) Very bad mains waveform or frequency.	1) Ensure that the load current does not exceed the rating of the SVS. 2) Turn the appliance off then switch SVS off. Restart the unit as per operating instructions. 3) If the above doesn't solve the problem please return the unit to a Sollatek service centre.

- Please consult the above chart before contacting your supplier. Ensure that you have followed the operating instructions carefully.
- There are no user serviceable parts internally.
- Disassembling the unit, opening the lid or tampering with the unit is unsafe for unqualified users and will render the warranty invalid.

Guarantee

Sollatek (UK) Ltd guarantee that if within 2 years of purchase this appliance fails due to faulty workmanship or materials we will repair or replace it free of charge provided that:

- The appliance has been correctly installed and used within the electrical range as specified on the appliance nameplate.
- The appliance has been used in accordance with the operating instructions.
- There has been no attempt to open the unit for any reason whatsoever.
- The unit is returned to Sollatek or Sollatek agent in good condition.
- Sollatek shall not be liable under the terms of this guarantee for any material fault or damage as a result of failure of this appliance.
- This guarantee does not affect your statutory or Common Law rights.

Warranty & Returns

Should your SVS unit need repair, the quickest and simplest way is to return it to your dealer or to a Sollatek Service Centre or direct to the nearest Sollatek office.

IMPORTANT : Before returning a unit to a Sollatek Service Centre, contact the returns department to obtain a returns number. You will be asked for the following information which you should have ready;

Your Name, Address, Telephone, Fax (If Available), Email (If Available)
Date Purchased, Where Purchased
Serial Number, model number
Local voltage and type of load.
Description of Fault

Once you have the returns number, ensure that the unit is securely packed enclosing a short note with details as above and mark the unit clearly with the returns number. Remember also to add your name and address.

Complying with the above will ensure that your unit will be treated promptly and efficiently. Without a returns number it will not be possible to trace a unit or check progress of repair of the unit.

Sollatek UK Limited
Unit 10, Poyle 14 Industrial Estate,
Newlands Drive, Poyle, Slough, Berkshire SL3 0DX
UK. SL3 0AX, England
Tel 01753 688300
Fax 01753 685306
Technical Support : support@sollatek.com
Sales : sales@sollatek.com

Sollatek SVS

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