



Sollatek SVS Range Voltage Stabilisers User Manual

IMPORTANT

Keep handy for reference.

Contains important safety information

CONTENTS

<u>Subject</u>	<u>Page(s)</u>
Safety	2
Main SVS Features	3
SVS Specification	4 - 5
Unpacking	6
Inspection	6
Installation	6 - 9
Operation	10 - 11
Troubleshooting	11
Guarantee	11
Warranty Returns	12

SAFETY

- FOLLOW all safety instructions and use caution when installing and operating any electrical equipment.
- CHECK that the voltage of the mains electricity supply is the same as the voltage of the SVS (see label on back) BEFORE connecting the SVS to the electricity supply.
- CHECK that the maximum current rating of the equipment you intend to connect does not exceed the maximum current rating of the SVS unit (see label on back plate) BEFORE connecting the SVS to the electricity supply.

[Most equipment is labeled to show the maximum current rating. If connecting more than one item of equipment calculate the total current rating by adding all of the current ratings together.]
- DO NOT expose this equipment to rain, moisture or liquid spillage.
- DO NOT insert any object into the ventilation slots.
- DO NOT attempt to dismantle the SVS, as this will invalidate the guarantee. There are no user serviceable parts inside
- The SVS was designed and is manufactured by Sollatek (UK) Ltd and complies with the safety codes of practice.

TABLE A

<u>Model</u>	<u>Code</u>	<u>Rating</u>
SVS01-22EL (UK13)	L09313111	1A @ 230VAC
SVS03-22EL (UK13)	L09325111	3A @ 230VAC
SVS06-22EL (UK13)	L09319124	6A @ 230VAC
SVS15-22EL (UK15)	L09321124	15A @ 230VAC
SVS18-22EL (TC)	L09331171	18A @ 230VAC
SVS35-22EL (TC)	L09346111	35A @ 230VAC
SVS50-22EL (TC)	L09361111	50A @ 230VAC
SVS75-22EL (TC)	L09386111	75A @ 230VAC

TABLE B

<u>Model</u>	<u>Dimensions*</u>	<u>Weight*</u>
SVS01-22EL (UK13)	193x100x124mm	2.0kg
SVS03-22EL (UK13)	193x100x124mm	3.0kg
SVS06-22EL (UK13)	277x133x161mm	5.0kg
SVS15-22EL (UK15)	277x133x161mm	8.0kg
SVS18-22EL (TC)	336x212x161mm	14.0kg
SVS35-22EL (TC)	345x330x260mm	25.0kg
SVS50-22EL (TC)	345x330x260mm	29.0kg
SVS75-22EL (TC)	345x330x260mm	38.0kg

* Unpacked.

UNPACKING

- Remove the polystyrene protective packaging.
- Ensure that the contents include the Warranty Registration Card.
- Retain the box and packaging material in case you need it for a warranty return.

INSPECTION

- Check that the unit is undamaged.
- Inspect the ventilation slots to ensure that they are free from all obstruction. Use a vacuum cleaner to dislodge any obstructions.

INSTALLATION

Installation of the SVS range models is simple and straightforward but please take time to read through these instructions before attempting to install a unit.

The SVS01-22EL (UK13) to SVS06-22EL (UK13) models can be connected to the mains electricity supply by simply plugging the SVS cable into a suitable wall socket. The protected equipment is then plugged into the SVS.

The SVS15-22EL (UK15) must be directly connected to the mains supply. The protected equipment is then plugged into the SVS using a 15A plug (supplied loose with SVS15).

The SVS18-22EL (TC), SVS35-22EL (TC), SVS50-22EL (TC) and SVS75-22EL (TC) models must be directly connected to the mains supply and the protected equipment.

WARNING: IF IN DOUBT ALWAYS CONSULT A QUALIFIED ELECTRICIAN

Models SVS01-22EL (UK13) to SVS06-22EL (UK13)

- Turn the equipment to be protected OFF and unplug it from the wall socket.
- Ensure that the SVS is switched OFF.
- Plug the cable from the SVS into the wall socket. [The SVS cable is terminated with a plug made to BS1363: 1984 13A standard and is protected by a 13A rated fuse.]
- Plug the equipment to be protected into the socket of the SVS.
- Switch the wall socket switch ON.
- Switch the SVS mains switch to ON.
- Switch the protected equipment ON.
- NOTE: The SVS will not connect the supply to the protected equipment until it has checked the voltage level and if necessary corrected it to a safe level.
- Once any delay period has passed the SVS will allow the supply to pass through to the protected equipment.

- The LED bar displays for Input Voltage and Output Voltage will light and show the various voltage levels of the incoming and outgoing supply.
- The mains supply to the protected equipment will now be stabilised.

Model SVS15-22EL (UK15)

- Turn the equipment to be protected OFF and disconnect it from the mains supply.
- Ensure that the SVS is switched OFF.
- Ensure that the incoming electricity supply is isolated before making connections.
- IMPORTANT. DO NOT CONNECT TO A 13A SUPPLY. The incoming supply must be a minimum of 20A or above.
- Connect the trailing input lead of the SVS15-22EL (UK15) directly to the mains supply as follows:-

<u>Wire Colour</u>	<u>Connects to Terminal</u>	<u>Marking</u>
BLUE		'N' (Neutral)
BROWN		'L' (Live)
YELLOW & GREEN		'E' (Earth)

- To enable connection of the protected equipment to the SVS15-22EL (UK15) a 15A plug (BS 546) is supplied loose with the unit (plugged into the output socket of SVS).
- Connect the input lead of the protected equipment to 15A plug as follows:-

<u>Wire Colour</u>	<u>Connects to Terminal</u>	<u>Marking</u>
BLUE		'N' (Neutral)
BROWN		'L' (Live)
YELLOW & GREEN		'E' (Earth)

- Switch the supply to the SVS ON.
- Switch the SVS mains switch to ON.
- Switch the protected equipment ON.
- NOTE: The SVS will not connect the supply to the protected equipment until it has checked the voltage level and if necessary corrected it to a safe level.
- Once any delay period has passed the SVS will allow the supply to pass through to the protected equipment.
- The LED bar displays for Input Voltage and Output Voltage will light and show the various voltage levels of the incoming and outgoing supply.
- The mains supply to the protected equipment will now be stabilised.

Model SVS18-22EL (TC)

- Turn the equipment to be protected OFF and disconnect it from the mains supply.
- Ensure that the SVS is switched OFF.

- Ensure that the incoming electricity supply is isolated before making connections.
- Connect the trailing lead marked 'INPUT' of the SVS18-22EL (TC) directly to the mains supply as follows:-

<u>Wire Colour</u>	<u>Connects to Terminal</u>	<u>Marking</u>
BLUE		'N' (Neutral)
BROWN		'L' (Live)
YELLOW & GREEN		'E' (Earth)

- Connect the trailing lead of the SVS18-22EL (TC) marked 'OUTPUT' directly to the mains supply as follows:-

<u>Wire Colour</u>	<u>Connects to Terminal</u>	<u>Marking</u>
BLUE		'N' (Neutral)
BROWN		'L' (Live)
YELLOW & GREEN		'E' (Earth)

- Switch the supply to the SVS ON.
- Switch the SVS mains switch to ON.
- Switch the protected equipment ON.
- NOTE: The SVS will not connect the supply to the protected equipment until it has checked the voltage level and if necessary corrected it to a safe level.
- Once any delay period has passed the SVS will allow the supply to pass through to the protected equipment.
- The LED bar displays for Input Voltage and Output Voltage will light and show the various voltage levels of the incoming and outgoing supply.
- The mains supply to the protected equipment will now be stabilised.

Models SVS35-22EL (TC) to SVS75-22EL (TC)

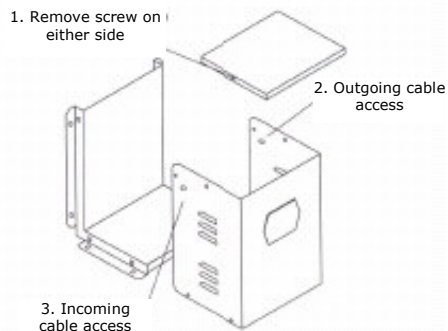
- Turn the equipment to be protected OFF and disconnect it from the mains supply.
- Ensure that the SVS is switched OFF.
- Ensure that the incoming electricity supply is isolated before making connections.
- Ensure that only correctly rated cable is used for the connections (see Table 1)

TABLE 1	<u>Cable Cross Section*</u> <u>(mm²)</u>	<u>Max. Rating</u> <u>(Amps)</u>
	2.5	20
	4.0	28
	6.0	36
	10.0	50

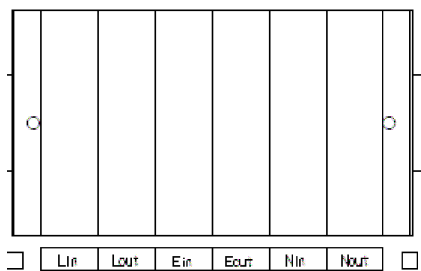
* 3 or 4 core PVC insulated cable with given current carrying capacity (amperes)@30°C ambient (conductor operating at 70°C).

- IMPORTANT. The input cable must be rated at 1.5 times the output current. (Note that the larger the cable size the better the regulation).
- IMPORTANT. The SVS must be earthed.
- IMPORTANT. The SVS must have a Neutral connection.
- IMPORTANT. An over-current protection device (fuse or circuit breaker rated at least 1.5 times the rating of the SVS) must be connected on the input to the SVS.
- Remove the screw from either side of the top cover of the SVS to gain access to the connections terminals (see Diagram A).

DIAGRAM A



- Feed the Incoming and Outgoing cables through their respective access holes.
- Connect the input cable to the terminal block as shown in Diagram B.
- Connect the output cable to the terminal block as shown in Diagram B.



- Check all connections are correctly made and are tight then screw top cover back on.
- Switch the supply to the SVS ON.
- Switch the SVS mains switch to ON.
- Switch the protected equipment ON.
- NOTE: The SVS will not connect the supply to the protected equipment until it has checked the voltage level and if necessary corrected it to a safe level.
- The LED bar displays for Input Voltage and Output Voltage will light and show the various voltage levels of the incoming and outgoing supply.
- The mains supply to the protected equipment will now be stabilised.

OPERATION

The SVS works by constantly monitoring its input voltage and when it moves outside the tolerance range set for nominal voltage level it then corrects its voltage level output to the protected equipment, ensuring that it always receives a 'safe' voltage and thereby allowing it to continue to operate unharmed.

For instance the UK nominal voltage is 230V and the tolerance range statutorily allowed by the electricity supply authorities is 10% above to 6% below this level, a range spanning about 37V with a high of 253V and a low of 216V.

If the SVS input voltage rises above the 10% level the SVS will automatically reduce ("buck") the voltage of its output to the protected equipment down to within the tolerance level. Similarly, if the input voltage to the SVS drops below the tolerance range it will 'boost' the level of its output voltage to the protected equipment.

The SVS displays the input and output voltages by two columns of LED 'bars', one column entitled 'INPUT VOLTAGE' and the other entitled 'OUTPUT VOLTAGE'. These are shown in Diagram B below.

DIAGRAM B

The legends, colour coding and status indicators are explained in Table 2 below.

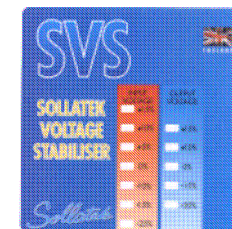


TABLE 2. The seven LED's for INPUT VOLTAGE and these indicate the following:

Legend	LED Colour	Status Indication
+ 15%	RED	Incoming voltage level 15% above nominal voltage ¹
+ 10%	YELLOW	Incoming voltage level 10% above nominal voltage
+ 5%	YELLOW	Incoming voltage level 5% above nominal voltage
0%	GREEN	Incoming voltage level at nominal voltage level
- 10%	YELLOW	Incoming voltage level 10% below nominal voltage
- 15%	YELLOW	Incoming voltage level 15% above nominal voltage
- 25%	RED	Incoming voltage level 25% above nominal voltage ²

The five LED's for OUTPUT VOLTAGE and these indicate the following:

Legend	LED Colour	Status Indication
+ 15%	RED	Output voltage level 15% above nominal voltage ¹
+ 10%	YELLOW	Output voltage level 10% above nominal voltage ¹
0%	GREEN	Output voltage level at nominal voltage level
- 10%	YELLOW	Output voltage level 10% below nominal voltage
- 20%	RED	Output voltage level 20% above nominal voltage

1. If the Input Voltage rises above +18% (272V @ 230V nominal) the SVS will respond by increasing the Output Voltage accordingly and this will be indicated on the Output Voltage indicators by the +10% Yellow or 15% Red LED's being lit.
2. If the Input Voltage falls below -26% (175V @ 230V nominal) the SVS will respond by decreasing the Output Voltage accordingly and this will be indicated on the Output Voltage indicators by the -10% Yellow or -20% Red LED's being lit.