Power switchers

Power suppressors

Power stabilisers/regulators

Uninterruptible power supplies

Solar Power systems

Protect your valuable equipment

sollatek power protection

catalogue

Edition 3

Sollatek™

the power to protect

Sollatek - a company profile

Sollatek's headquarters based in Slough, UK

Founded in 1983 to exploit the patented design for an Automatic Voltage Switcher or AVS, Sollatek (UK) Ltd has since become one of the foremost makers of specialist products to protect electrical and electronic equipment in the world. Now with offices in 14 countries and an active distribution network in 24 more, Sollatek has grown rapidly to become a truly global company.

The AVS was the first in what has become a complete family of products designed to deal effectively with the disturbances, such as under and over voltage levels, spikes and surges, that are increasingly common in the mains electricity supply and can damage or even destroy connected electrical equipment.

Fuelled by the explosive growth in the use of electronic controls within most electrically powered equipment, usually with a sensitive micro circuit at its heart, a thriving market has developed for Sollatek products, as users discover how vulnerable their equipment is to unreliable or poor quality electricity supply. As a result Sollatek has become a household name, particularly in the developing world where electrical utility suppliers still strive to provide a stable and continuous source of power.

Today the Sollatek voltage protection product range includes full lines of voltage switchers, stabilisers, conditioners and uninterruptible power supplies (UPS). So whether the need is to control the quality or continuity of electrical supply, Sollatek is sure to have a solution.

All Sollatek products are designed and manufactured at its 15,000 square feet facility at Slough, England, from where they are shipped to over 190 countries around the world.

COMMITMENT TO QUALITY

Sollatek aims to become the leading supplier in its chosen markets and acknowledges that only through the highest level of commitment to providing the best quality and the best price can this goal be achieved and maintained. Therefore to ensure that all products are manufactured to the highest standards stage by stage inspection and assessment is carried out during manufacture culminating in final and full functionality testing.

And each year a substantial proportion of revenues is invested in product research and development programs, with a highly qualified and experienced team of engineers working to enhance and improve existing products, as well as to pursue innovative new ideas.

PRINCIPAL VOLTAGE PROTECTION PRODUCTS

Sollatek's range of voltage protection and related products include: -

Voltage Switchers - Single and three-phase units for general use, specialised units for equipment such as refrigerators, facsimile, modems and phones as well as air conditioning and other motor driven systems.

Voltage Stabilisers - Single and three-phase units for general use based both on solid state and servo operated technologies, as well as specialised OEM units for refrigeration systems.

Voltage Conditioners - Protection systems for whole buildings and individual appliances.

Suppressors - Specialised units for telecommunication system protection.

Uninterruptible Power Supplies (UPS) - Off-line and line interactive systems for loads up to 3 kVA.

Transformers - Auto and double wound control and power transformers, with multiple windings and tappings, in sizes ranging from 20VA up to 50kVA.

PCB Manufacture - Single and double-sided PTH printed circuit boards in small, medium and large volumes.

SOLAR POWER PRODUCTS AND SYSTEMS

(see separate section on page 25)

In 1996, having become a major force in power protection products, Sollatek turned to the field of renewable energy and began developing solar power products and systems. Since its establishment the Sollatek Solar Products Division has become a major force in both the supply of complete turnkey solar systems and ancillary equipment.

Sollatek Solar has extensive expertise in designing and producing bespoke systems, and thousands of solar systems have now been installed around the world, many for large developments supported and financed by the World Bank.


Sollatek SunPower 6
Solar charge controller


Sollatek Lumina
Compact fluorescent lamp


Sollatek STM batteries
Long life tubular plate storage

PRINCIPAL SOLAR ENERGY PRODUCTS

Sollatek's range of solar energy products includes: -

Solar Energy Systems - Small, medium and large scale complete systems to provide energy for domestic and commercial applications.

Solar Energy Kits - Complete ready-to-use kits for indoor and street lighting as well as water pumping applications.

Solar Modules - Modules, utilising high efficiency single crystal cells, from 55Wp up to 120Wp.

Charge Controllers - Units ranging in size from 5A to 30A for both 12V and 24V applications.

Solar Lights - Lights for indoor, outdoor and street lighting applications in 12V, 24V and 48V capacities.

Batteries - Gelled electrolyte batteries (12V) from 28Ah to 210Ah capacity. Tubular plate batteries ranging from 50Ah to 2600Ah capacity for professional applications.

Glowstar - The Glowstar lantern provides simple, portable, affordable solar powered lighting designed for virtually any environment where the electricity supply is inconsistent, or unavailable. Typical uses range from remote rural households and hospitals, to camping and caravanning.


Sollatek Glowstar
Solar powered portable lantern

For more information on the Sollatek range, contact us now.

the power to protect

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SLOUGH SL3 0DX,
UNITED KINGDOM

Applications

VOLTAGE PROTECTION **The Sollatek VP range** now encompasses a wide range of power protection products for use in many different industries where clean regulated mains power is critical to their continued existence.

All Sollatek products offer the trademark Sollatek qualities of thorough design and engineering, style, and value for money.

SOLAR POWER **Sollatek Solar** designs, manufactures and supports a wide variety of solar related products. Whilst being one of the world's largest suppliers of OEM products, the company also has extensive expertise in designing and producing bespoke solar systems.

Thousands of solar systems have now been installed around the world, many for large developments supported and financed by the World Bank.

Contents

Products at a glance

Overview

Voltshield™ - Switchers

HivoltGuard
Mains over Voltage protection

Up to 5 Amps PAGE 9

FridgeGuard
Mains under Voltage protection

Up to 5 Amps PAGE 9

VoltGuard
Mains over and under Voltage protection

Up to 7 Amps PAGE 10

Automatic Voltage Switcher (AVS13 micro)
Mains over and under Voltage protection

13 Amps PAGE 10

Automatic Voltage Switcher + RFI & Lightning Protection (AVS13RL micro)
Mains over and under Voltage protection

13 Amps PAGE 10

Automatic Voltage Switcher (AVS15 micro)
Mains over and under Voltage protection

15 Amps PAGE 11

Automatic Voltage Switcher (AVS30 micro)
Mains over and under Voltage protection

30 Amps PAGE 11

Automatic Voltage Switcher (AVS100)
Mains over and under Voltage protection

100 Amps PAGE 12

LightningGuard
Over Voltage protection and data/telecom spike/surge protection

Up to 6.5 Amps PAGE 12

3 Phase Automatic Voltage Switcher (AVS303)
Over and under Voltage protection

Up to 1250 Amps PAGE 13

3 Phase Automatic Voltage Switcher control (AVS3P-0)
Over and under Voltage protection

Control 16 Amps PAGE 13

Voltsafe™ - Suppressors

MultiGuard
Mains spike/surge protection

Up to 13 Amps PAGE 14

SpikeGuard
Mains spike/surge protection

Up to 13 Amps PAGE 15

Mains filter adaptor (PureAC)
Mains spike/surge and RFI protection

Up to 13 Amps PAGE 16

Distribution Surge Protector Single & three phase (DSP1P-0 and DSP3P-0)
Mains spike/surge protection

PAGE 16

CommsGuard
Mains and data/telecom spike/surge protection

Up to 13 Amps PAGE 17

Voltright™ - Stabilisers/Regulators

Sollatek Voltage Stabiliser (SVS)

Over and under Voltage protection

Up to 16 Amps PAGE 18

Sollatek Voltage Stabiliser (SVS)

Over and under Voltage protection

Up to 75 Amps PAGE 19

Sollatek Voltage Stabiliser (SVS)

Over and under Voltage protection

PAGE 19

20 to 75 Amps per phase - 3 phase

Automatic Voltage Regulator (AVR)

Over and under Voltage protection

Up to 10 Amps PAGE 20

Automatic Voltage Regulator (AVR)

Over and under Voltage protection

PAGE 20

20 to 400 Amps single phase

Automatic Voltage Regulator (AVR)

Over and under Voltage protection

PAGE 21

20 to 700 Amps per phase - 3 phase

Voltsure™ - UPS

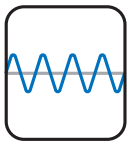
Line-interactive UPS ULTIMA

Uninterruptible power

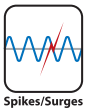
Up to 2000VA PAGE 22

Power problems and their associated causes

All electrical and electronic equipment, connected to the mains supply is at risk of being damaged from spikes, surges, lightning, power cuts, brown-outs, power-cuts (blackouts), power back surges, and over-voltage. The following is a summary of the main types of power problems, causes and how these affect electrical and electronic equipment.

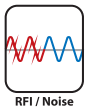


Pure, computer-grade power



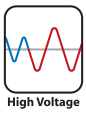
Spikes/Surges

Spikes/Surge: Very short, (one millisecond) event of very high surge in voltage to thousands of volts and amps. Spikes are common in all parts of the world and repeated exposure to spikes will damage electronic equipment and corrupt data.
What causes it? Switching on/off of nearby equipment, lightning, motors starting etc.



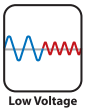
RFI / Noise

RFI (Radio Frequency Interference)/Noise: High frequency disturbances that occur within a short period of time (milliseconds). RFI & noise are very common in all parts of the world and are the main cause of data corruption.
What causes it? Generated by high frequency noise from nearby equipment like TV, radio equipment, transmitters, mobile phones, switching on/off of certain loads, fluorescent lights, motor speed controls, light dimmers.



High Voltage

High/Over-Voltage: Long duration (milliseconds, seconds, minutes, hours or days) rise in the voltage above acceptable limits. Depending on the level of the over-voltage, the damage can be instantaneous, severe and irreparable.
What causes it? On return of mains supply after power cuts, under-sized utility oscillating between periods of brown-outs and over-voltage or accidental (e.g. accidental connection between two phases).

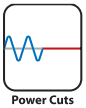


Low Voltage

Brown-Out / Under-Voltage: Long duration of low voltage (milliseconds to seconds, minutes, hours or days). Very common in parts of the world especially where the power utilities are over-stretched. Prolonged and frequent brownouts cause the equipment to malfunction or not work at all. Repeated episodes are certain to cause damage. Motors and compressors (and therefore fridges, freezers, coolers, air-conditioners and pumps) are especially at risk. In time, damage is certain.
What causes it? Most commonly an over-stretched utility, especially in areas of poor power distribution infra-structure and remote areas. Common in dry seasons where water is used for electricity generation.

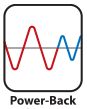
Basic Lightning

Lightning: Direct or nearby strikes can cause minor problems or severe disturbances and damage. Lightning produces spikes/surges, over-voltage or power cuts.
What causes it? The surge is generated by either a direct hit, or indirectly striking underground or overhead lines and transmitting high surges to connected equipment in nearby buildings. *For more information, see page 27.*



Power Cuts

Power-cuts: Common in every country in the world, especially in areas of frequent voltage problems. Sudden loss of power can cause damage ranging from corruption of data to mechanical faults as equipment is stopped while in operation.
What causes it? Power or sub station failure, breakdown in the distribution network, or simply a plug being pulled out accidentally.



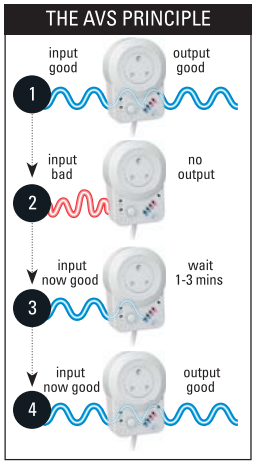
Power-Back Surges

Power-Back Surges: These typically occur when power returns after a power-cut and connected equipment receives a surge of electricity at an over-voltage level, which can be very damaging (see above).
What causes it? Power back surges are created by the utility, when it restores supply at an above normal voltage in order to compensate for the demand as connected equipment re-starts simultaneously.

Telecom Surges

Telecom surges, spikes and lightning: Short term, high voltage and current phenomena occurring on the telephone lines. Can cause irreparable damage to any piece of equipment connected to the incoming line. The telephone line itself may even be damaged or destroyed in severe cases.
What causes it? Telecom spikes are caused by lightning striking either the telephone line directly or an object near it.

For complete protection simply plug the Automatic Voltage Switchers into the mains and plug in your appliances. When the mains power supply fluctuates outside pre-set tolerances (nominally 190V and 260V) the power to your equipment is disconnected. The AVS monitors the voltage for a short period to ensure the power has stabilised before re-connecting. In addition, the start-up delay provides protection against power-back surges commonly experienced after resumption of power in a power cut situation. Surge and spike protection is also incorporated to ensure protection against these events which are very common. They are generated by lightning and nearby switching off and on of other equipment such as vacuum cleaners, pumps, motors, television, elevators etc.



Single phase up to 5 Amps

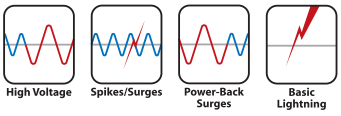
This range, also called The Guard range, is a lower specification variation of the Switcher range. It includes the FridgeGuard, HivoltGuard, VoltGuard and LightningGuard *(see page 10)*. Generally rated at 5Amps maximum (check individual unit specifications). Like the Switcher range, all models provide power-back surge protection as standard by their in-built start-up delay and voltage monitoring. Additionally all models include surge/spike protection.

HivoltGuard
Over Voltage protection

Protection against:
- High voltage
- Spikes/surges
- Power-back surges

Max power	5 amps
Wait time	30 seconds
Ideal for	TV, Video, Hi-Fi, PABX, Fax machines and all electronic equipment up to 5Amps
Tip	Especially suitable for notebook computers, as on disconnection, the notebook's internal battery takes over, effectively functioning as a uninterruptible power supply (UPS)
Weight	250gm
Dims	180 x 90 x 95mm

Model	Product Code
Hivoltguard – UK Socket	92610000
Hivoltguard – Schuko Socket	92610100
Hivoltguard – 5A Indian Socket	92610500

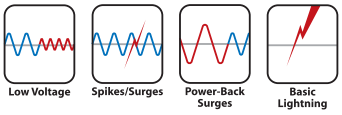


FridgeGuard
Under Voltage protection

Protection against:
- Low voltage
- Spikes/surges
- Power-back surges

Max power	5 amps
Wait time	90 seconds
Ideal for	Fridges and domestic freezers
Tip	Low voltage is particularly damaging to the compressor of fridges and freezers. 90 seconds wait for re-connection to allow for decompression of the compressor
Weight	250gm
Dims	180 x 90 x 95mm

Model	Product Code
FridgeGuard– UK Socket	92600000
FridgeGuard – Schuko Socket	92600100
FridgeGuard – 5A Indian Socket	92610500

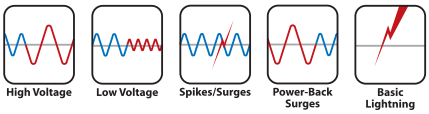


VoltGuard
Over and under Voltage protection

Protection against:
- High voltage
- Low voltage
- Spikes/surges
- Power-back surges

Max power	7 amps
Wait time	30 seconds
Ideal for	TV, Video, Hi-Fi, PABX, Fax machines, Fridges and domestic freezers and all electronic equipment up to 5Amps
Tip	Covers all applications as it has over and under voltage protection
Weight	250 gm
Dims	180 x 90 x 95 mm

Model	Product Code
Voltguard – UK13 Socket	92620000
Voltguard – Schuko Socket	92620100
Voltguard – 5A Indian Socket	92620500

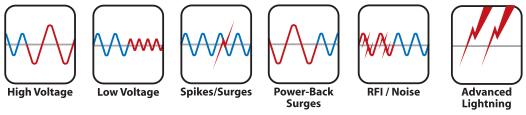


Automatic Voltage Switcher + RFI & lightning protection (AVS13RL micro)
Over and under Voltage protection

Protection against:
- High voltage
- Low voltage
- Spikes/surges
- Power-back surges
- RFI (radio frequency interference and noise
- Lightning

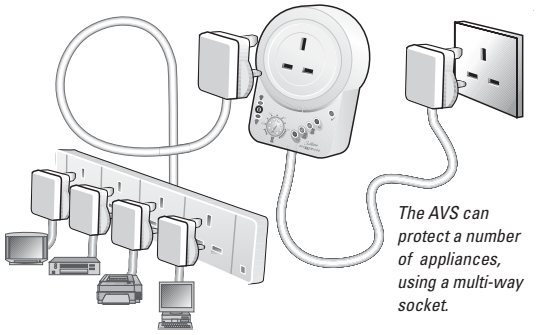
Max power	13 amps
Wait Time	User adjustable from 10 seconds to 3 mins
Ideal For	All electrical and electronic equipment
Tip	Adds RFI & noise and lightning protection to the standard AVS13. Use this product if you are in area where lighting is a serious issue, or trying to filter the power supply from RFI & noise
Weight	500 gm
Dims	205 x 135 x 55 mm

Model	Product Code
AVS13RL – UK Socket	91130413
AVS16 – Schuko Socket	available soon



Single phase 13-22 Amps

Automatic Voltage Switcher (AVS13 micro)
Over and under Voltage protection

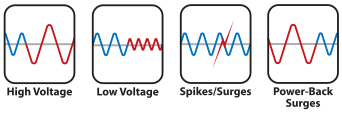


The AVS can protect a number of appliances, using a multi-way socket.

Protection against:
- High voltage
- Low voltage
- Spikes/surges
- Power-back surges

Max power	13 amps
Wait time	User adjustable from 15 seconds to 3 minutes
Ideal for	All electrical and electronic equipment
Tip	Can protect a number of appliances, using a multi-way socket
Weight	500 gm
Dims	205 x 135 x 55 mm

Model	Product Code
AVS13 – UK Socket	91135000
AVS16 – Schuko Socket	available soon



Automatic Voltage Switcher (AVS15 micro)

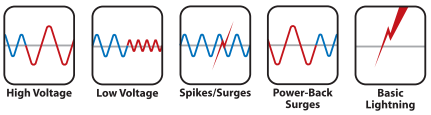
Over and under Voltage protection

Protection against:

- High voltage
- Low voltage
- Spikes/surges
- Power-back surges

Max power	15 amps
Wait time	User adjustable from 2 minutes to 5 minutes
Ideal for	Air conditioners, large fridge/freezers
Tip	Rated at 15 amps for use with air-conditioners up to 17,500 B.T.U
Weight	500 gm
Dims	205 x 135 x 55 mm

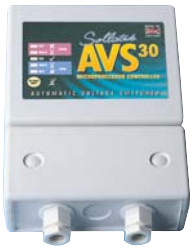
Model	Product Code
AVS15 – 3 round pin	91155000



Single phase 30-100 Amps

Automatic Voltage Switcher (AVS30 micro)

Over and under Voltage protection

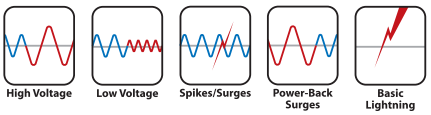


Protection against:

- High voltage
- Low voltage
- Spikes/surges
- Power-back surges

Max power	30 amps
Wait time	User adjustable from 10 secs to 10 mins
Ideal for	Air-conditioners, large fridge/freezers, whole office, and complete circuits
Tip	Rated at 30 amps for use with air-conditioners. Direct wiring adds security of installation
Weight	600 gm
Dims	205 x 135 x 55 mm

Model	Product Code
AVS30 – Direct wiring	91300000



Automatic Voltage Switcher (AVS100)

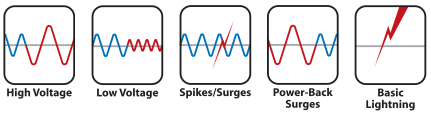
Over and under Voltage protection

Protection against:

- High voltage
- Low voltage
- Spikes/surges
- Power-back surges

Max power	100 amps
Wait time	3 mins delay
Ideal for	Air-conditioners, large fridge/freezers, whole office
Tip	Rated at 100 amps for use with a number of air-conditioners and/or whole office or factory. Direct wiring adds security of installation
Socket availability	None. Direct wiring
Weight	600 gm
Dims	205 x 135 x 55 mm

Model	Product Code
AVS100	91100000



Single phase + telecom Up to 5 Amps

LightningGuard

Over Voltage protection and data/telecom line protection

THE LIGHTNING GUARD PRINCIPLE

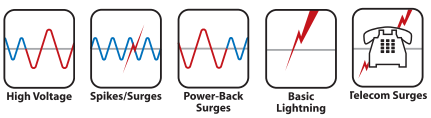
Note: The LightningGuard and CommsGuard (*Page 17*) are similar in that they both protect against spikes and surges on both data line and mains. However the LightningGuard adds over-voltage protection on the mains, by disconnecting on over-voltage, with subsequent built-in start-up delay.

Protection against:

- High voltage
- Spikes/surges
- Power-back surges
- Data line spike/surges/lightning (i.e. for telephone/modem/fax lines)

Max power	5 amps
Mains surge/ spike protection	160 Joules
Mains surge/ spike discharge	6.5kA (8/20µs)
Wait time	30 secs
Data surge/ spike discharge	>5kA
Ideal for	Modem, fax, telephone
Tip	Ideal for protection of computer data, internet, modems, fax machines and telephones. Lightning and mains surges and spikes can enter the telephones and cause damage to hardware and data. Being connected to the internet for long periods increases the risk of damage. The LightningGuard provides an effective way of preventing serious damage.
Socket availability	Mains + telephone connection (RJ11)
Weight	300 gm
Dims	180 x 90 x 95 mm

Model	Product Code
LightningGuard – UK13 Socket	92900000
LightningGuard – Schuko	92900100
LightningGuard – 5A Indian	92950500
LightningGuard – US 115v	92900200



Three phase 23-1250 Amps

3 Phase Automatic Voltage Switcher (AVS303-xx) (xx=Amps per phase)

Over and under Voltage protection

The AVS303 protects against over voltage and under voltage on any one of the three phases as well as loss of one or more phases. Indication and/or disconnection as a result of mains frequency error of phase sequence error is available as an option. The AVS303 incorporates a contactor to switch the full load current (see the AVS3P-0 if you already have switching mechanism in place). The AVS303-xx is available in different sizes ranging from 23 amps to 1250 amps (the –xx relates to the model number, i.e. AVS303-23 is a 23 amp per phase AVS303).

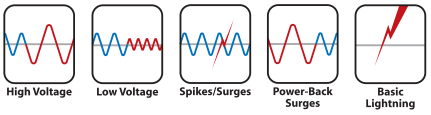
Protection against (on any or all phases):

- High voltage
- Low voltage
- Spikes/surges
- Power-back surges
- Any two phases shorting together

Max power	From 23 amps per phase and up to 1250 amps
Wait time	User adjustable from 10 secs to 10 mins
Ideal for	3 Phase air conditioning, industrial refrigeration and industrial plants and machinery
Tip	At a reasonable cost and almost a fraction of that of the equipment, the AVS303 will provide full protection
Socket availability	Direct wiring – standard 3 phase connections
Weight	Dependent on model number
Dims	Dependent on model number

Model	Product Code	Amps
AVS303-23	93023000	3 x 23
AVS303-30	93030000	3 x 30
AVS303-37	93037000	3 x 37
AVS303-43	93043000	3 x 43
AVS303-60	93060000	3 x 60

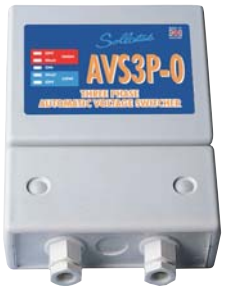
Larger sizes available. Refer to Sollatek for details

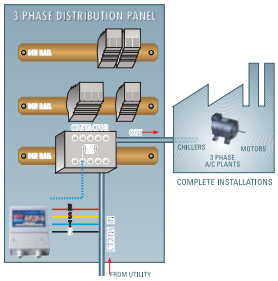


3 Phase Automatic Voltage Switcher control (AVS3P-0)

Over and under Voltage protection

Protects from over voltage and under voltage on any one of the three phases as well as loss of one or more phases. Indication and/or disconnection as a result of mains frequency error or phase sequence error is available as an option. Unlike the AVS303, The AVS3P-0 is designed to operate an external control circuit or contactor which may be part of a motor starter or other equipment. The AVS3P-0 will open the contact if it detects a voltage problem.



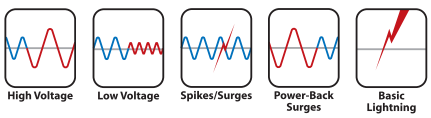


Protection against (on any or all phases):

- High voltage
- Low voltage
- Spikes/surges
- Power-back surges
- Any two phases shorting together

Max power	Controls an external 3 phase controller or contactor of any size
Wait time	User adjustable from 10 secs to 10 mins
Ideal For	3 phase air conditioning, industrial refrigeration and industrial plants and machinery
Tip	The AVS3P-0 has an uncommitted changeover relay output providing normally open and closed contacts rated at 16 amps that can be used to drive external alarms contactors and loads
Socket availability	Direct wiring – standard 3 phase connections
Weight	600 gm
Dims	205 x 135 x 55 mm

Model	Product Code
AVS3P-0	95600000



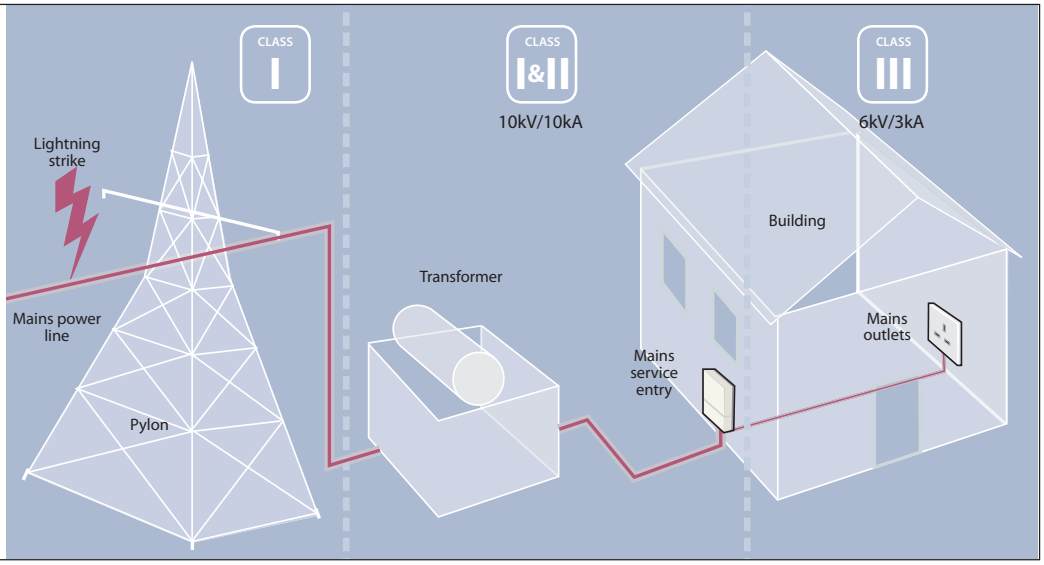
Suppressors are devices that protect against surges, spikes, lightning and in some cases RFI (Radio Frequency Interference) and Noise. Surge/Spike is a rise or peak in voltage up to thousands of volts and last for very short period of time (milliseconds). These powerful events can eventually blow out microscopic holes in electronic circuitry causing severe damage or failure. Unlike over-voltage which last for longer times (milliseconds to seconds to minutes or even hours), you do not need to switch off the mains to protect against surges and spikes. Clamping to a safe level is the method of protection. The level of protection is best measured in joules and there is no complete protection here but the more joules of protection available the less possibility of damage. A standard surge protector can absorb about 140Joules. Other factors are important, as in the speed of response, availability of earthing, etc. RFI and noise is generated by nearby equipment such as elevators, motors, radio controlled equipment, etc. Whilst surges/spike protection is incorporated in almost all of the Sollatek range of products, Sollatek in addition manufactures this range (Suppressor Range) solely for protection against these events.

KEY

CLASS I (10/350mu) Lightning arresters which can withstand a direct lightning hit.

CLASS II (8/20) Surge arresters protecting against induced surge currents nominal of 5kA and peak of 10kA.

CLASS III (8/20) Surge arresters protecting against induced surge currents nominal of 5kA



Single phase Up to 13 Amps

Surge & spike – mains supplies

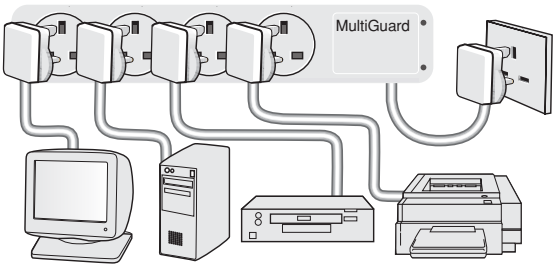
MultiGuard (MG-1 to 5)

Spike/surge protection

Protection against:
(on 4 protected outlets)

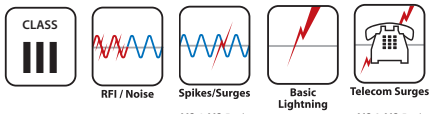
- See table below

Max power	13 amps
Ideal for	All electronic appliances
Tip	Especially useful for computers and ideal for home use with video, TV, Hi-Fi
Protective mode	L-N, L-E, N-E
Response time	<10 nanoseconds
Total energy rating	480 joules
Max surge current	4500 amps
Weight	500 gm
Dims	370 x 160 x 70 mm



Product	Neon	Spike protection	LED	Switch	Telephone line protection	RFI	Outlets UK 13A
MS-0			•				4
MG-1	•	•					4
MG-2		•	•	•			4
MG-3		•	•	•	•		4
MG-4		•	•	•		•	4
MG-5		•	•	•	•	•	4

Model	Product Code
MS-0	92640202
MG-1	92641109
MG-2	92642109
MG-5	92643109



Surge & spike – mains supplies

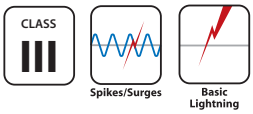
SpikeGuard
Spike/surge protection

The SpikeGuard can protect any suitably rated equipment (up to 13Amps) for instance: • Computers • Office equipment • AV equipment • Printers • Domestic appliances • Monitors • Scanners • Fax machines • Laptops • Hi-Fi equipment. The SpikeGuard is easy to fit, small, safe and maintenance free and gives cost effective protection from everyday spike and surge damage.

Protection against:
- Mains surges/spikes

Max power	13 amps
Mains surge/ spike protection	160 joules
Mains surge/ spike discharge	6.5kA (8/20µs)
Ideal for	All sensitive electronic equipment
Tip	Prevents everyday spikes and surges from reaching sensitive equipment. By simply plugging your equipment into the SpikeGuard or even in an adjacent socket, it will be protected. When a spike occurs the SpikeGuard reacts very quickly to 'clamp' the high voltage level, sending it safely away to earth. Afterwards the SpikeGuard automatically resets itself and continues protecting
Weight	300 gm
Dims	180 x 90 x 95 mm

Model	Product Code
SpikeGuard UK Socket	92630000
SpikeGuard Schuko Socket	92630100
SpikeGuard Indian Socket	92630500



Single phase + RFI Up to 13 Amps

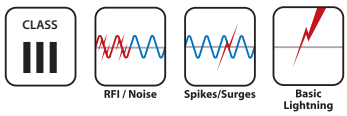
Mains filter adaptor (PureAC)
Spike/surge protection

The PureAC provides filtering against spike/surge, RFI (Radio Frequency Interference) and noise. RFI & noise commonly occur when nearby equipment switch on and off like fluorescent lights, vacuum cleaners, etc. RFI & noise can damage data in computers and telecom equipment. By filtering these out, reliability is increased and damage is prevented.

Protection against:
- Spikes/surges
- RFI (radio frequency interference) and noise

Max power	Depending on model (up to 13 amps)
Wait time	User adjustable from 1 min to 3 mins
Ideal for	All electronic appliances
Tip	Especially useful for computers and telecommunication equipment like Switchboards (PABX), telephones, modems and computers
Protective mode	L-N, L-E, N-E
Response time	<10 nanoseconds
Total energy rating	480 joules
Max surge current	6.5kA (8/20µs)
Typical attenuation	50dB @ 10Mhz
Weight	250 gm
Dims	180 x 90 x 95 mm

Model	Product Code	Amps
PureAC03 UK13	91003000	3
PureAC03 Schuko	91003100	3
PureAC06 5A Indian	91006500	5
PureAC07 UK13	91007000	7
PureAC07 Schuko	91007100	7
PureAC13 UK13	91013000	13
PureAC13 Schuko	91013100	13



Single & three phase - mains distribution systems

Surge & spike

The Sollatek DSP range - available in single and 3 phase models - is the first choice for high capacity surge protection.

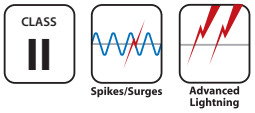
This range is ideally suited to the protection of both entire distribution boards and equipment in domestic and industrial environments. The DSP utilises Metal Oxide Varistor (MOV) technology in its highly reliable protection circuits to ensure that your house, site, facility or plant is completely protected. Fully automatic in operation, DSP is engineered to react immediately, clamping voltage surges generated either internally or externally to a safe level, improving equipment reliability and reducing overall system downtime.

Distribution Surge Protector (DSP1P-0 and DSP3P-0)

Mains spike/surge protection

Maximum surge current handling capabilities of 20KA per phase with a maximum let through voltage of 750Vac. Ideally suited to the protection of both entire distribution boards and equipment in domestic and industrial environments. Features LED indication of protection status and requires no operator intervention or maintenance. Available in single and three phase versions.

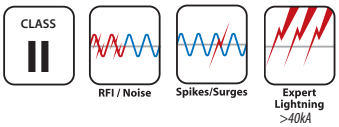
Model		Product Code
DSP1P-0	Single phase	91000200
DSP3P-0	Three phase	93000200



Distribution Surge Protector (DSP3P-D80 PRO, DSP3P-D120 PRO, DSP3P-D160 PRO) Mains spike/surge protection

Specifically designed to give high capacity protection in industrial applications, the DSP-D range offers ten-mode protection and maximum surge handling capabilities of 80kA, 120kA or 160kA per phase, depending on the model. Enclosed in a IP66 rated enclosure design, UL 1449 rating. Only available in three phase versions.

Model		Product Code
DSP3P-D80	240/415V	9M308010
DSP3P-D120	240/415V	9M312010

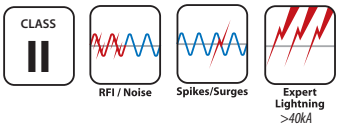


Distribution Surge Protector (DSP1P-S90, DSP3P-S90)

Mains spike/surge protection

Provides high capacity industrial surge protection at distribution boards. DSP-S range offers ten-mode protection with a maximum surge handling capacity of 90kA per phase. LED indicators for monitoring. In addition, remote monitoring is enabled by means of the unit's normally-closed remote indication contacts. The unit is IP66 rated and UL 1449 approved. Available in single and three phase versions.

Model		Product Code
DSP1P-S90	240V	9M109010
DSP3P-S90	240/415V	9M309010

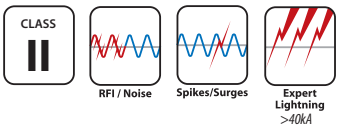


Distribution Surge Protector (DSP3P-M150, DSP3P-M150, DSP3P-M150-SD)

Mains spike/surge protection

Designed to provide primary high capacity industrial surge protection at main service entrance locations, the DSP-M range gives ten-mode protection with a maximum surge handling capacity of 150kA or 180kA per phase. With built-in redundant full varistor networks, the Sollatek DSP-M series ensure your premises are never unprotected. Visual warning or remote warning alerts the operator of the failure of one varistor network while the redundant unit keeps protecting the site thus ensuring your equipment is always protected, even after a direct strike. For even greater levels of protection, Silicon Avalanche Diode versions are available (DSP-150-SD) incorporating both SAD and MOV technology allowing for a lower limiting voltage; the worst-case voltage that will get through to the protected equipment. Remote monitoring is enabled by means of the unit's normally-closed remote indication contacts. The unit is IP66 rated and UL 1449 approved.

Model		Product Code
DSP3P-M150	240/ 415V	9M315010
DSP3P-M150-SD	240/415V	9M315015
DSP3P-M180	240/ 415V	9M318010



Model	DSP	DSP D	DSP S	DSP M
	DSP1P-0 DSP3P-0	DSP3P-D80 PRO DSP3P-D120 PRO DSP3P-D160 PRO	DSP3P-S90 DSP1P-S90	DSP3P-M150 DSP3P-M180 DSP3P-M150-SD
Max surge current (Imax) (8/20us)	20kA	80kA 120kA 160kA	90kA	150kA 180kA 150kA +SAD*
Max leakage current	<0.3mA	<0.3mA	<0.3mA	<0.3mA
Let through voltage @ 3kA 230/400V	810 @ 4kA	890	890	890
Lines protected AC	L-N, L-E, N-E	L-N, L-E, L-L, N-E	L-N, L-E, L-L, N-E	L-N, L-L, L-E, N-E
Ambient temperature limits Humidity		-40°C to 85°C (working) -40°F to 185°F (working) 95%RH (non-condensing)		
Enclosure	IP20	IP66	IP66	IP66
Terminals	6mm²	16mm² (4 AWG)	16mm² (4 AWG)	16mm² (4 AWG)
Mounting surface	mount by 4mm surface diameter holes	mount by 5mm surface diameter holes or flush mount	mount by 8mm surface diameter holes	mount by 8mm diameter holes
Indication	Green LED on: protection present Green LED off internal failure	Green LED on: protection present Green LED off internal failure	Green LED on: protection present Mechanical flag: fault warning Red LED on: high voltage neutral to earth	Green LED on: protection present Mechanical flag: fault warning Red LED on: high voltage neutral to earth
Remote contacts	No	NC 125Vac, 2A rated	No/NC 125Vac, 2A rated	No/NC 125Vac, 2A rated
Weight	DSP1P-0: 580g DSP3P-0: 680g	1.64Kg	1.8Kg	3.2Kg
Dimensions	205 x 135 x 55mm	134.5 x 134.5 x 58.4mm	162.6 x 246.2 x 88.9 mm	213.4 x 296.9 x 101.6 mm
EMC compliance		BS EN 60950: 1992 BS EN 61000-6-2: 1999		
Remote monitoring unit	No	Remote monitoring contacts available	Optional	Optional

* For even greater levels of protection, Silicon Avalanche Diode (SAD) versions are available incorporating both SAD and MOV technology. The SAD option allows for a lower limiting voltage; the worst-case voltage that will get through to the protected equipment.

Surge & spike – mains and data

CommsGuard

Spike/surge protection

Lightning and mains surges and spikes can enter the telephones and cause damage to hardware and data. Being connected to the internet for long periods increases the risk of damage. The CommsGuard provides an effective way of preventing serious damage. As adequate protection requires that surges from the data lines are dissipated to earth, the CommsGuard is ideal as it can be plugged into the mains to provide the earthing. *(See note below).*

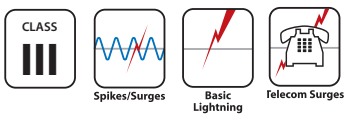
Protection against:

- Mains spikes/surges
- Data line spike/surge/ lightning protection i.e. for telephone/modem /fax lines

Max power	13 amps
Mains surge/spike protection	160 joules
Mains surge/ spike discharge	6.5kA (8/20µs)
Data surge/ spike discharge	>5kA
Max power	>10kA (8/20 s)
Ideal for	Modem, fax, telephone
Tip	Ideal for protection of computer data, internet, modems, fax machines and telephones.
Socket availability	Mains plus telephone connection
Weight	300 gm
Dims	180 x 90 x 95 mm

Model	Product Code
CommsGuard – UK13	92850000
CommsGuard – Schuko 9	92850100
CommsGuard – 5A Indian	92850500

Note: The CommsGuard and LightningGuard (*Page 12*) are similar in that they both protect against spikes and surges on both data line and mains. However the LightningGuard adds over-voltage protection on the mains, by disconnecting on over-voltage, with subsequent built-in start-up delay.



Stabilisers (also known as regulators) stabilise the incoming power supply providing constant voltage to the equipment.

Sollatek manufactures two different ranges of stabilisers:

SVS *(Sollatek Voltage Stabilisers)* Range.

AVR *(Automatic Voltage Regulators)* Range.

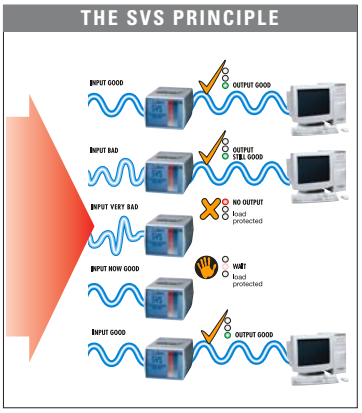
The following table opposite is a brief comparison between the two ranges.

	AVR	SVS
Control	Microprocessor	Microprocessor
Switching	Taps/Triacs	Taps/Relays
Speed of correction	1250V/S	750V/S
Input range	-30% to +22%	-26% to +19%
Output accuracy	+/-4%	+/-6%
AVS function	No	Yes. (Disconnects the mains supply if the input varies outside pre-set limits and reconnects automatically. For a 230V system these are below 145V or above 290V)
Weight (of a 2Amp unit)	About 5Kg	About 2Kg
Suitable for	All electrical and electronic equipment. However if the price doesn't justify it then use with only sensitive equipment Like HI-FI, Video, TV, Lab equipment, etc.	All electrical and electronic equipment. If wider input and more accurate output control is desired then use the AVR.

Standard Range

The Sollatek SVS monitors the mains voltage continuously. If the voltage rises or drops, the SVS will stabilise the output to ensure the voltage reaching your equipment remains constant at 230V (+/-6%), within the operating range of the unit. If the input voltage falls below 142V or rises above 295V, the SVS will disconnect the output, thereby protecting the load. Once the mains voltage returns again within acceptable limits, the SVS will reconnect the output following a start up delay.

(All above voltages are for a 220/230V system. For other voltages contact your dealer).*



Protection:

- Microprocessor controlled stabiliser
- Very wide input voltage range
- Excellent output voltage stability (+/-6%)
- Includes surge and spike suppression
- Full RFI & noise suppression (ER option only)
- Extremely fast response
- Incorporates over-voltage & under voltage disconnect
- 10 second start-up delay as standard
- Incorporates TIMESAVE™ Function. *See page 27.*

Single phase Up to 15 Amps

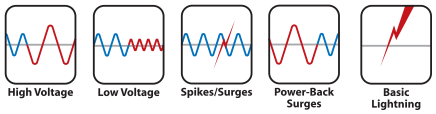
Sollatek Voltage Stabiliser (SVS)

Over and under Voltage protection

Protection against:

- High voltage
- Low voltage
- Spikes/surges
- Power-back surges

MODEL	Amps	VA@230V	Socket availability	Weight (Kg)	Dims (mm)
SVS02-22	2	460	UK FR SCH UK5	2.0	193 x 100 x 124
SVS04-22	4	920	UK FR SCH UK5	4.0	193 x 100 x 124
SVS08-22	8	1840	UK FR SCH UK15	6.0	277 x 133 x 161
SVS15-22	15	3450	UK15	9.5	277 x 133 x 161
SVS16-22	16	3680	FR SCH	8.0	277 x 133 x 161



Single phase 20 - 75 Amps

Sollatek Voltage Stabiliser (SVS)

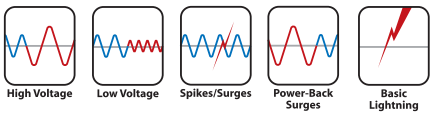
Over and under Voltage protection

Protection against:

- High voltage
- Low voltage
- Spikes/surges
- Power-back surges

MODEL	Amps	VA@230V	Socket Availability	Weight (Kg)	Dims (mm)
SVS20-22	20	4600	Cable (C)	10.5	336 x212 x 179
SVS20-22	20	4600	Terminal (T)	10.5	336 x212 x 179
SVS50-22	50	11000	Direct wiring	32.0	345 x 330 x 260
SVS75-22	75	17250	Direct wiring	45.0	345 x 330 x 260

Model	Product Code
SVS20-22 (C)	98220060
SVS20-22 (T)	98220000
SVS50-22	98250000
SVS75-22	98275000



Three Phase 20 - 75 Amps

Sollatek Voltage Stabiliser (SVS)

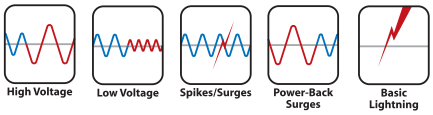
Over and under Voltage protection

Protection against:

- High voltage
- Low voltage
- Spikes/surges
- Power-back surges

MODEL	Amps	kVA@230V/400	Weight (Kg)	Dims (mm)
SVS3x20-22	3x20	13.8	30	400 x 400 x 645
SVS3x50-22	3x50	34.5	85	400 x 400 x 645
SVS3x75-22	3x75	51.7	110	550 x 600 x 750

The three phase SVS range is available on special order only



Options

A number of options is available on the Sollatek 3 Phase SVS range;

1) Automatic Voltage Switcher option (AVS™)
Provides Over & Under voltage protection and a reconnect delay after power back surges. See Page 27 for more details.

2) Input/output circuit breakers
Circuit breakers protect the load and the SVS from the harmful effects of over current. Recommended for all SVS installations.

3) RFI filter
RFI interference can cause malfunctioning of equipment, loss of data and, in some cases, component failure. Various solutions provided as an optional extra.

4) Line reactor
If harmonic interference is known to be present at your site, the line reactor option, connected at the input to the SVS, can be ordered to effectively filter out the unwanted harmonic content.

5) Digital input/output voltage and current meters
The Sollatek 3 Phase SVS can be ordered with meters to indicate the state of the input voltage to compare it with the output voltage. Current meters are useful to ensure that the load does not exceed the rating of the SVS.

6) Additional surge/spike suppression - The DSP option
Extra surge/spike suppression is available on the Sollatek SVS 3 Phase range with the DSP. This will provide a high level of protection from lightning induced voltage and other voltage surges on the mains supply.
Protection available from 20kA to 150kA. See Page16 for more details.

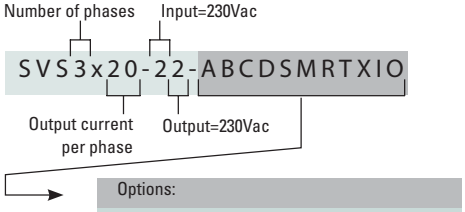
7) Manual -Bypass switch
The function of the bypass switch option is to allow the user to remove a regulator from service whilst the load remains connected to mains power.

8) Isolating Transformer Option
The Sollatek SVS can be supplied with a built in Isolating Transformer. For more details, please refer to the Sollatek SVS brochure.

8) Outdoor Enclosure
For outdoor applications especially in the supply of stable power for GSM & Telecom stations, the Sollatek SVS can be provided in an IP44 enclosure.

Ordering

The Sollatek three phase SVS range is easy to order. All units are rated by the number of AMPS per phase and the input/output range. For example:



Options:	
A	AVS
B	Input circuit breaker
C	Output circuit breaker
D	Surge & lightning protection up to 20kA
S	Hi-level lightning protection >90kA
M	Digital meters
R	RFI
T	Line reactor
X	RFI + line reactor
I	Isolating transformer
O	Outdoor enclosure

Professional Range

The Sollatek AVR is a state of the art solid state stabiliser. Using microprocessor technology, the AVR will rapidly detect voltage variations and correct the output to ensure 230V (+/-4%) supply. The Sollatek AVR has a very wide input range (-30% to +22%) and a voltage correction speed of 1250Volts per second. No mechanical parts means that the AVR doesn't require maintenance and will not be affected by dusty environments as other mechanical (for example Servo type) stabilisers.

Features:

- Microprocessor controlled – high speed response
- Stabilises output to within +/-4%
- Corrects input change of more than -30% to + 22%
- A staggering 1250V/second correction speed
- Rapid response time of within 15 milliseconds
- Sizes available: from 250VA single phase Up to 700 amps per phase - three phase
- Ideal for sensitive electronic office equipment, computers, TV & video, electronic medical and laboratory equipment, weighing machines, etc
- Suitable for all applications for domestic and office use
- Built into an attractive housing to blend with modern equipment
- LED display – shows Input voltage level, output voltage level, Load current and overload
- Overload protection – by measuring the load current, the AVR will switch the unit off if the current exceeds the AVR's rating

Single phase Up to 10 Amps

Automatic Voltage Regulator (AVR)

Over and under Voltage protection

The Sollatek single phase AVRs are suitable for all applications for domestic and small office use. This range of AVRs is built into an attractive and modern enclosure to suit and blend with modern equipment.
Sollatek AVRs from 250VA up to 1600VA are built into a plastic enclosure (see table below for dimensions). The larger units are built into a metal enclosure with a plastic facia, again providing a smart unit that will blend well with other equipment.

Features:

- Suitable for large applications covering a small office to an entire apartment or house or even a small workshop
- LCD display *(optional on certain models)* – shows Input voltage level, output voltage level, load current and overload

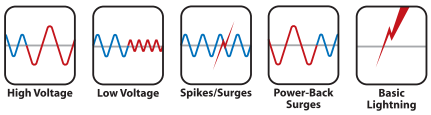
Protection against:

- High voltage
- Low voltage
- Spikes/surges

Model	Amps	Voltage	VA	Weight (Kg)	Dims (mm)	Socket availability
AVR01-22	1	230	230	4	193 x 100 x 124	UK,FR,SCH,UK5
AVR02-22	2	230	460	5	193 x 100 x 124	UK,FR,SCH,UK5
AVR05-22	5	230	1150	12	277 x 133 x 161	UK,FR,SCH,UK15
AVR10-22	10	230	2300	15	336 x 212 x 179	UK,FR,SCH,UK15

For full specifications and part numbers please refer to the Sollatek AVR Range brochure.

Single phase 20 to 400 Amps



Automatic Voltage Regulator (AVR)

Over and under Voltage protection

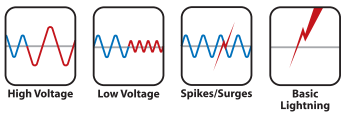
Protection against:

- High voltage
- Low voltage
- Spikes/surges

Model	Amps	Voltage	VA	Weight (Kg)	Dims (mm)
AVR20-22	20	230	4.6	40	347 x 215 x 520
AVR30-22	30	230	6.9	55	347 x 215 x 520
AVR40-22	40	230	9.2	60	347 x 215 x 520
AVR50-22	50	230	11.5	82	350 x 350 x 585
AVR75-22	75	230	17.2	100	350 x 350 x 585
AVR100-22	100	230	23.0	114	350 x 350 x 585
AVR300-22	300	230	69.0	382	1200 x 680 x 1030

For full specifications and part numbers please refer to the Sollatek AVR Range brochure.

Other sizes available. Refer to Sollatek for details



Three phase 20 Amps up to 1250 Amps per phase

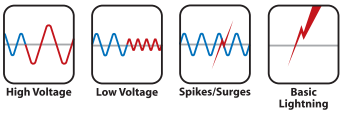
Automatic Voltage Regulator (AVR)

Over and under Voltage protection

The Sollatek three phase AVR is made of three identical single phase regulator units providing independent control. The three phase range boasts the same standard features with one of the widest ranges as standard in the industry. A number of options are available, making the three phase range a very comprehensive source of secure, stable power.

Protection against:

- High voltage
- Low voltage
- Spikes/surges



Features:

- Input range: -30% to +22% as standard. (narrower range is available on request- +/-15%)
- AVS option provides added protection against extremes of high and low voltages *(optional). See page 27*
- Input / output voltage and current meters *(optional)*
- Additional surge / spike suppression. Up to 3 x 1280 joules
- Manual by-pass switch *(optional)*

Model	Amps	Voltage	kVA	Weight (Kg)	Dims (mm)
AVR3x20-22	20	230/400	13.8	100	450 x 635 x 850
AVR3x30-22	30	230/400	20.7	150	450 x 635 x 850
AVR3x50-22	50	230/400	34.5	210	500 x 685 x 1060
AVR3x75-22	75	230/400	51.7	285	600 x 735 x 1110
AVR3x100-22	100	230/400	69.0	400	500 x 835 x 1280
AVR3x150-22	150	230/400	103.5	450	500 x 835 x 1280
AVR3x250-22	250	230/400	172.5	675	680 x 1200 x 1990
AVR3x300-22	300	230/400	207.0	735	680 x 1200 x 1990
AVR3x400-22	400	230/400	276.0	790	680 x 1200 x 1990
AVR3x700-22	700	230/400	483.0	2200	2000 x 1200 x 1990

For full specifications and part numbers please refer to the Sollatek AVR Range brochure.

Larger sizes available. Refer to Sollatek for details

Options

A number of options is available on the Sollatek 3 Phase AVR range;

1) Automatic Voltage Switcher option (AVS™)
Provides Over & Under voltage protection and a reconnect delay after power back surges. See Page 27 for more details.

2) Input/output circuit breakers
Circuit breakers protect the load and the AVR from the harmful effects of over current. Recommended for all AVRs installations.

3) RFI filter
RFI interference can cause malfunctioning of equipment, loss of data and, in some cases, component failure. Various solutions provided as an optional extra.

4) Line reactor
If harmonic interference is known to be present at your site, the line reactor option, connected at the input to the AVR, can be ordered to effectively filter out the unwanted harmonic content.

5) Digital input/output voltage and current meters
The Sollatek 3 Phase AVR can be ordered with meters to indicate the state of the input voltage to compare it with the output voltage. Current meters are useful to ensure that the load does not exceed the rating of the AVR.

6) Additional surge/spike suppression - The DSP option
Extra surge/spike suppression is available on the Sollatek 3 Phase AVR range with the DSP. This will provide a high level of protection from lightning induced voltage and other voltage surges on the mains supply.
Protection available from 20kA to 150kA. See Page16 for more details.

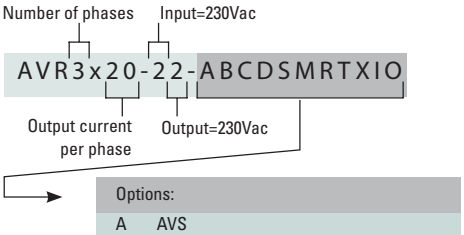
7) Manual -Bypass switch
The function of the bypass switch option is to allow the user to remove a regulator from service whilst the load remains connected to mains power.

8) Isolating Transformer Option
The Sollatek AVR can be supplied with a built in Isolating Transformer. For more details, please refer to the Sollatek AVR brochure.

8) Outdoor Enclosure
For outdoor applications especially in the supply of stable power for GSM & Telecom stations, the Sollatek AVR can be provided in an IP44 enclosure.

Ordering

The Sollatek three phase AVR range is easy to order. All units are rated by the number of AMPS per phase and the input/output range. For example:



Options:

A	AVS
B	Input circuit breaker
C	Output circuit breaker
D	Surge & lightning protection up to 20kA
S	Hi-level lightning protection >90kA
M	Digital meters
R	RFI
T	Line reactor
X	RFI + line reactor
I	Isolating transformer
O	Outdoor enclosure

Power problems - surges, brownouts and utility failures - can place your business at great risk. The busier and more complex your computing network, the greater the risk. And if power failure means productivity loss, this threatens your company's performance and profitability -and perhaps even its very existence. Yet an Uninterruptible power supply (UPS) is easy to install and its cost will be quickly recovered. Given the potential price of power failure, an effective UPS is indispensable.

Line -interactive Range 400VA to 800VA, 1000VA to 2000VA

The Sollatek Ultima - available in 400, 600, 800VA, and 1000, 1400 and 200VA ratings—is the perfect line interactive UPS for stand alone PCs and SoHo workstations. It protects your network equipment from power surges, brownouts and utility failures at a competitive cost. Its compact design features tighter output voltage and frequency regulation, RS232 and USB communications port, and modem/data line protection.

Line-interactive UPS (ULTIMA)

Uninterruptible power

Protection against:

- High voltage
- Low voltage
- Spikes/surges
- Power-back surges
- RFI (radio frequency interference and noise)
- Lightning
- Power cuts

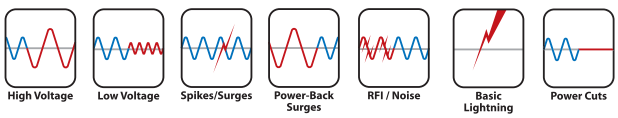
Features:

- Microprocessor controlled line interactive UPS.
- Automatic Voltage Stabiliser with two boost and one buck taps.
- RS232 and USB communications port with software for controlling the PC for safe shutdown and UPS parameter reporting via user friendly interface.
- Unique system for charging battery even during a brown out (If the load is off).
- Short circuit and overload protection.
- Cold start feature for load shedding environments.
- Bad battery detection and advance replacement notification (3 months ahead).
- Free power monitoring and PC shutdown software included.
- Green power function for energy saving.
- DC start function.
- Auto restart while AC recovery.
- Compact size and light weight.
- Provides modem/phoneline surge protection.

Ultima battery back-up times (in minutes)

	200VA	300VA	400VA	600VA	800VA	1000VA	1200VA	1400VA	1600VA	1800VA
Ultima 400	8	<3	<1							
Ultima 600	15	8	<5	<1						
Ultima 800	22	12	8	<3	<1					
Ultima1000	45	25	15	8	<5	3				
Ultima 1400	58.5	37.3	25	13.5	8.25	4.7	3	1.5		
Ultima 2000	58.5	37.3	25	13.5	8.25	4.7	3	1.5	0.5	<0.5

Model			Product Code
Ultima 400	400VA		97014401
Ultima 1000	1000VA	RJ11/USB/CD/UK Cords	97014102
Ultima 1400	1400VA	RJ11/USB/CD/UK Cords	97014142
Ultima 2000	2000VA	RJ11/USB/CD/UK Cords	97014202
Ultima 2000	2000VA	RJ11/USB/CD/UK Cords	97014202
Ultima 600	600VA	RJ11/USB/CD/UK Cords CE	97014601
Ultima 800	800VA	RJ11/USB/CD/UK Cords CE	97014801



Ultima Specifications

MODEL		Ultima 400	Ultima 600	Ultima 800
CAPACITY	VA/W	400VA/240W	600VA/360W	800VA/480W
INPUT	Voltage		120VAC or 220/230/240VAC	
	Voltage range		85-140VAC or 162-290VAC	
	Frequency		45-65 Hz (auto sensing)	
OUTPUT	Voltage		120/220/230/240VAC	
	Voltage regulation (batt. mode)		+/-10%	
	Frequency		50Hz or 60Hz	
	Frequency regulation (batt. mode)		+/-1 Hz	
	Output waveform		modified sinewave	
BATTERY	Battery type	12V 4.5Ah x 1	12V7Ah x 1	12V9Ah x 1
	Recharge time		8 hours to 90% after complete discharge	
TRANSFER TIME	Typical		2-6 ms	
INDICATOR	AC mode		green lighting	
	Backup mode		green flashing	
AUDIBLE ALARM	Backup mode		sounding every 10 seconds	
	Low battery		sounding every second	
	Overload		sounding every 0.5 second	
	Battery replacement		sounding every 2 seconds	
	Fault		continuously sounding	
PROTECTION	Full protection		discharge, overcharge, and overload protection	
PHYSICAL	Dimension (mm), D x W x H		330 x 100 x 140	
WEIGHT	Net weight	5kgs	6kgs	6.5kgs
ENVIRONMENT	Operating environment		0- 40°C, 0-90 % relative humidity (non-condensing)	
	Noise level		Less than 40dB	
INTERFACE	RS-232 USB		Windows, Sun Solaris, IBM Aix, Compaq True64, UnixWare, FreeBSD, HP-UX, Linux, MAC Windows 98/2000/ME/XP	

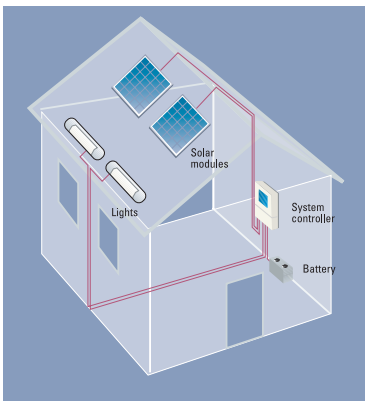
MODEL		Ultima 1000	Ultima 1400	Ultima 2000
CAPACITY	VA/W	1000VA/600W	1400VA/840W	2000VA/1080W
INPUT	Voltage	220/230/240VAC	220/230/240VAC	220/230/240VAC
	Voltage range	89-145VAC/160-290VAC	166-280VAC	166-280VAC
	Frequency	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz
OUTPUT	Voltage	220/230/240VAC	220/230/240VAC	220/230/240VAC
	Voltage regulation (batt. mode)	+/-10% at load <50%	+/-10% at load <50%	+/-10% at load <50%
	Frequency	50Hz or 60Hz	50Hz or 60Hz	50Hz or 60Hz
	Frequency regulation (batt. mode)	+/-1 Hz	+/-1 Hz	+/-1 Hz
	Output waveform	modified sinewave	modified sinewave	modified sinewave
BATTERY	Battery type and number	12V/7AH x 2pcs	12V/9Ah x 2pcs	12V/9Ah x 2pcs
	Recharge time	10 hours	6 hours (to 90% after complete discharge)	6 hours
TRANSFER TIME	Typical	4-6 ms	4-8 ms	4-8 ms
INDICATOR	AC mode		The first green LED lighting The second to fifth green LEDs gradually lighting, indicating load level	
	Battery mode		The first green LED flashing The second to fifth green LEDs gradually lighting, indicating battery capacity	
FAULT			Red LED lighting	
AUDIBLE ALARM	Battery mode		sounding every 10 seconds	
	Low battery		sounding every second	
	Overload		sounding every 0.5 second	
	Battery replacement		sounding every 2 seconds	
	Fault		continuously sounding	
PROTECTION	Full protection		discharge, overcharge and overload protection	
PHYSICAL	Dimension (mm) D x W x H	405 x 145 x 205	405 x 145 x 205	405 x 145 x 205
WEIGHT	Net weight	9.6kgs	9.7kgs	9.8kgs
ENVIRONMENT	Operating environment		0- 40°C, 0-90 % relative humidity (non-condensing)	
	Noise level		Less than 50dB	
INTERFACE	RS-232 USB		Windows family, Sun Solaris, IBM Aix, Compaq True64, UnixWare, FreeBSD, HP-UX, Linux, MAC Windows 98/2000/ME/XP	

Solar power products and systems

SOLLATEK SOLAR designs, manufactures and supports a wide variety of solar related products. Whilst being one of the world's largest suppliers of OEM products, the company also has extensive expertise in designing and producing bespoke solar systems.

Thousands of solar systems have now been installed around the world, many for large developments supported and financed by the World Bank.

PRINCIPAL SOLAR ENERGY PRODUCTS Sollatek's range of solar energy products includes: -



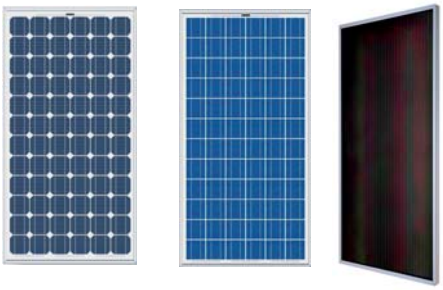
Solar Energy Systems - Small, medium and large scale complete systems to provide energy for domestic and commercial applications.

Charge Controllers - Units ranging in size from 5A to 30A for both 12V and 24V applications.

Solar Lights - Lights for indoor, outdoor and street lighting applications in 12V, 24V and 48V capacities.

Solar Lighting Kits - Complete ready-to-use kits for indoor and street lighting as well as water pumping applications.

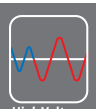
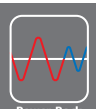
Batteries - Gelled electrolyte batteries (12V) from 28Ah to 210Ah capacity. Tubular plate batteries ranging from 50Ah to 2600Ah capacity for professional applications.



Solar Modules - Modules, utilising high efficiency single crystal cells, from 55Wp up to 120Wp.

Glowstar - The Glowstar lantern provides simple, portable, affordable solar powered lighting designed for virtually any environment where the electricity supply is inconsistent, or unavailable. Typical uses range from remote rural households and hospitals, to camping and caravanning.

Sollatek Product Range Comparison Chart

	 Spikes/Surges	 RFI / Noise	 High Voltage	 Low Voltage	 Low Voltage	 Basic Lightning	 Advanced Lightning	 Power Cuts	 Power-Back Surges	 Telecom Surges	Amps	Single Phase	Three Phase	Connection
HivoltGuard	✓		✓			✓			✓		5	✓		Plug/socket
FridgeGuard	✓			✓	✓	✓			✓		5	✓		Plug/socket
VoltGuard	✓		✓	✓	✓	✓			✓		7	✓		Plug/socket
Automatic Voltage Switcher AVS13	✓		✓	✓	✓	✓			✓		13	✓		Plug/socket
Automatic Voltage Switcher AVS13L	✓	✓	✓	✓	✓	✓	✓		✓		13	✓		Plug/socket
Automatic Voltage Switcher AVS15	✓		✓	✓	✓	✓			✓		15	✓		Plug/socket
Automatic Voltage Switcher AVS30	✓		✓	✓	✓	✓			✓		30	✓		Direct wiring
Automatic Voltage Switcher AVS100	✓		✓	✓	✓	✓			✓		100	✓		Direct wiring
LightningGuard	✓		✓			✓			✓	✓	5	✓		Plug/socket+data
Automatic Voltage Switcher AVS303	✓		✓	✓	✓	✓			✓		23 to 1250		✓	3 phase
Automatic Voltage Switcher AVS3P-03	✓		✓	✓	✓	✓			✓		unlimited		✓	3 phase
MultiGuard	✓			level of protection is dependent on model								13	✓	Plug/socket
SpikeGuard	✓					✓					13	✓		Plug/socket
PureAC	✓	✓	✓			✓					3 to 13	✓	✓	Plug/socket
Distribution Surge protector DSP	✓					✓	✓				unlimited		✓	Direct wiring
CommsGuard	✓					✓					13			Plug/socket+data
Sollatek Voltage Switcher SVS	✓		✓	✓	✓	✓			✓		1 to 75	✓	✓	Plug/socket+Direct wiring
Automatic Voltage Regulator AVR	✓		✓	✓	✓	✓					up to 700/phase	✓	✓	Plug/socket+Direct wiring
Ultima UPS	✓	✓	✓	✓	✓	✓		✓	✓	✓	1 to 20	✓		IEC

LIGHTNING - DESCRIPTION

When a lightning discharge strikes an overhead power cable it generates a short-lived impulse of hundreds of kilovolts.

Flashover and protective devices near the point of impact reduce this to tens of kilovolts but nevertheless a formidable residual spike remains and is launched out in both directions along the overhead cable. It jumps across switches and transformers and if it enters a building may be propagated throughout the interior wiring.

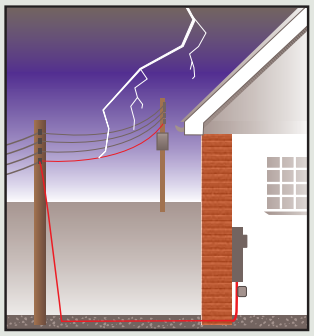
Because of their extreme amplitude spikes can cause fatal damage to vital components inside an item of equipment.

We have defined for the purpose of simplicity, to categorise our products into 3 levels of lightning protection:

1. Basic lightning
Protection up to 6.5kA

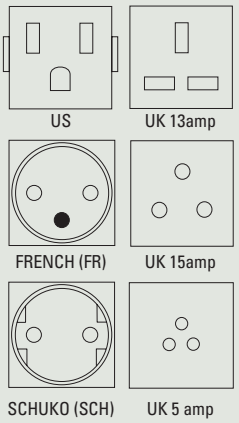
2. Advanced lightning
Protection between 6.5kA and 40kA

3. Expert lightning
Protection more than 40kA

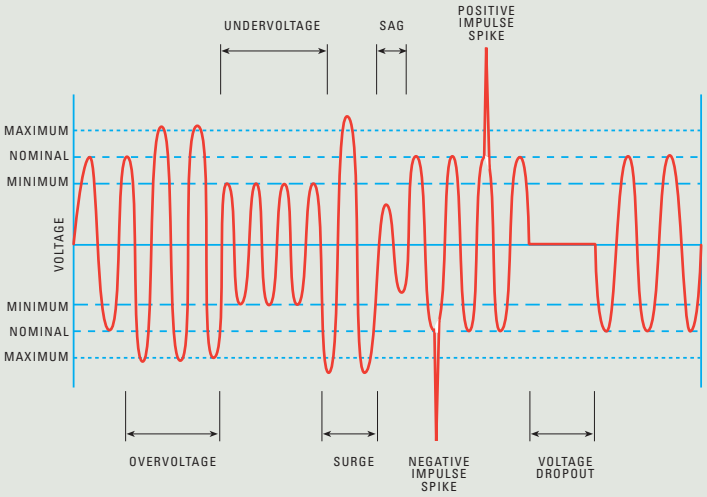


Lightning strikes affecting the power supply system

SOCKET AVAILABILITY



DISTURBANCES OF THE MAINS SUPPLY



AVS™ FUNCTION

AVS FUNCTION - DESCRIPTION

This AVS function adds the following protective functions;
a) Provides a 3 minute† 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.

b) Provides a shutdown and disconnect function whereby in cases where the fluctuations are extremely BAD, it will disconnect your equipment if it cannot safely correct the voltage.

TIMESAVE™

TIMESAVE™ FUNCTION - DESCRIPTION

The TIMESAVE™ function adds the following protective function;
The Sollatek SVS has a built-in microprocessor which adds the advanced feature TimeSave.™ TimeSave™ means that when the mains return to normal, the SVS checks the duration of the OFF time. 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 duration of the start-up delay period varies between 10 seconds and 6 minutes, depending on the model. For refrigeration and air-conditioning equipment a delay of 3 minutes is recommended. The 3 minute delay allows compressors to neutralise before re-starting.

Sollatek worldwide companies and agents

Distributors in over 50 countries including:

Algeria	Malawi	Zambia	Nepal	Yemen	United Kingdom
Angola	Mozambique	Zimbabwe	Pakistan	Australia	Mexico
Benin	Nigeria	Azerbijan	Philippines	Denmark	USA
Cameroon	Sierra Leone	Croatia	Qatar	Finland	Venezuela
Egypt	South Africa	Hong Kong	Saudi Arabia	Greece	
Ghana	Sudan	Iraq	Taiwan	Holland	
Kenya	Tanzania	Jordon	Turkey	Norway	
Libya	Uganda	Kazakhstan	UAE	Sweden	

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Internet:
www.sollatek.com

2 YEARS WORLDWIDE WARRANTY ON ALL SOLLATEK PRODUCTS

Sollatek provides you with full back up support and a two year worldwide warranty on all products, with local support in over twenty countries worldwide.

Sollatek™
the power to protect

www.sollatek.com

ISO9001: 2000 accredited company

All weights and dimensions are approximate.
Specifications are subject to change without prior notice.

Stock no. 00026311
Revision 3.0

09. 07