



THE SOLLATEK SINGLE PHASE SWITCHER RANGE

Protection for all electrical and electronic equipment



Complete protection from voltage fluctuations
for all your home and office appliances



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Protection for all electrical and electronic equipment

The Sollatek Voltshield range of Switchers prevents damage to electrical and electronic equipment / appliances from power fluctuations, specifically over and under voltage levels of long duration.



They operate by disconnecting power when voltage level exceeds set parameters. And automatically reconnect again when power returns inside parameters for a pre-set period.

For complete protection simply plug the Switcher into the mains and plug in your appliances.* Protection is automatic.

* Please note that some models in the Switcher range are directly wired.



Practical and useful features

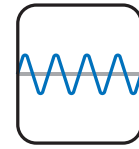
- Microprocessor controlled - high speed response.
- Solid state reliability - no moving parts.
- Fully automatic in operation - requires no user intervention.
- In-built start-up delay protects against surges.
- Includes surge and spike protection as standard.
- Includes power-back surge protection as standard.
- iSense™ function for sensitivity control
- TimeSave™ function for intelligent startup delay
- Quiet, unobtrusive operation.
- Warranty of 2 years. Sollatek provides full back up support on all its products, with local support in over thirty countries worldwide.



Ideal protection for all your home and office appliances

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, brown-outs, power-cuts (blackouts), power back surges, and over-voltage. The following is a summary of the main types of power problems, their causes, and how these affect electrical and electronic equipment.



Pure, computer-grade power



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 brown-outs 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 infrastructure and remote areas. Common in dry seasons where water is used for electricity generation.



Spikes/Surges

Spikes/Surges: Very short, (one millisecond) events 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.



Lightning Surge/Spikes
8/20 μ s

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.



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 substation 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.

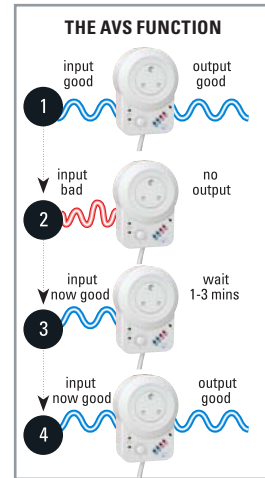


AVS™ function

The **AUTOMATIC VOLTAGE SWITCHER (AVS™)** function adds the following protective function: For complete protection, simply plug the Automatic Voltage Switchers (AVS) 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.



TIMESAVE™ function

TIMESAVE™ adds the following protective function:

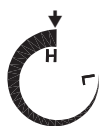
Some Sollatek units have a built-in microprocessor which adds the advanced feature TimeSave.™ TimeSave.™ means that when the mains return to normal, the unit checks the duration of the OFF time. If the unit has been off for more than the standard wait time, then it will reconnect the mains within 10 seconds. This ensures the Sollatek unit will give you more vital working time.

The duration of the start-up delay period varies between 10 seconds and 10 minutes, depending on the model. For refrigeration and air-conditioning equipment, a delay of 3-4 minutes is recommended. The 3-4 minute delay allows compressors to neutralise before re-starting.

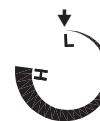


iSense™ function

The **iSense™** technology allows you to control how sensitive the VOLTSHIELD Switcher reacts to voltage problems. Using the iSense™ dial you can set the desired level of protection.

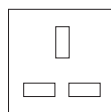


(H) High setting ensures greater protection by narrowing the acceptable voltage limits. This is ideal for users with less erratic mains supply that require better protection, typically in main cities where the power supply is fairly stable.

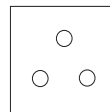


(L) Low setting ensures more working time as it will tolerate wider acceptable voltage limits. This is ideal for users with more erratic mains supply. This setting provides a wider window of acceptable voltage limits.

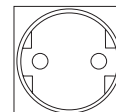
Socket availability



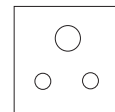
UK 13amp



UK 15amp



European (Euro)



Indian R6

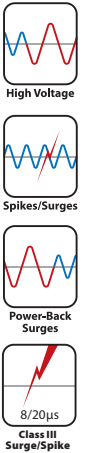


NotebookGuard Over voltage protection



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

Max current	Figure 8: 1A, Cloverleaf: 2A
Voltage range	85 to 300V AC
Frequency	50/60Hz
Wait time	10 seconds
Ideal for	Notebooks, laptops and netbooks
Tip	Disconnects the mains when it is bad, allowing the notebook's battery to take over, effectively operating as a UPS. Can be used with any equipment and not only notebooks as long as you don't exceed 3Amps
Weight	Cloverleaf: 113gm. Figure 8: 100gm
Dims	116 x 32 x 29 mm
Cable length	116 mm



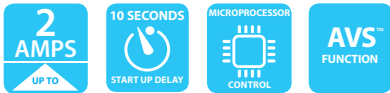
Plug/socket availability



Model
NotebookGuard Cloverleaf
NotebookGuard Figure of 8

Product code
9266C000
92668000

Features



Protection for

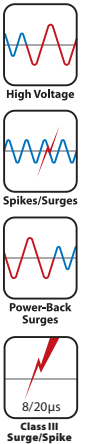


HivoltGuard Over voltage protection

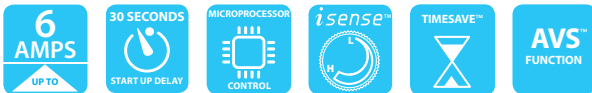


- Protection against:**
- High voltage
 - Spikes/surges
 - Power-back surges

Max current	6 amps
Wait time	30 seconds
Ideal for	TV, Video, Hi-fi, PABX, Fax machines and all electronic equipment up to 6 amps
Tip	Protects all sensitive equipment against high voltage, surges and spikes. A very useful protection for uninterruptible power supplies and inverters.
Weight	185gm
Dims	140 x 60 x 90 mm



Features



Protection for



Model
Hivoltguard – UK socket
Hivoltguard – European socket
Hivoltguard – Indian socket

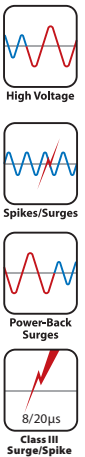
Product Code
92615000
92615100
92615300

TVGuard Over voltage protection

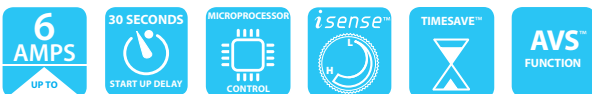


- Protection against:**
- High voltage
 - Spikes/surges
 - Power-back surges

Max current	6 amps
Wait time	30 seconds
Ideal for	TV, Video, Hi-fi, PABX, Fax machines and all electronic equipment up to 6 amps
Tip	To avoid frequent disconnection in areas of extreme fluctuation, add a stabiliser (see page 20) before the TVGuard
Weight	186 gm
Dims	140 x 60 x 90 mm



Features



Protection for



Model
TVGuard- UK socket
TVGuard- European socket
TVGuard - Indian socket

Product Code
92655000
92611010
92655300

FridgeGuard

Under voltage protection



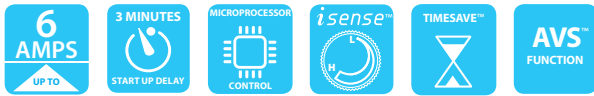
Model
 FridgeGuard – UK socket
 FridgeGuard – European socket
 FridgeGuard – Indian socket

Product Code
 92605000
 92605100
 92605300

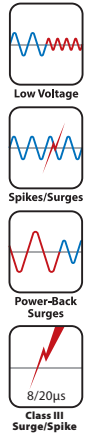
- Protection against:**
- Low voltage
 - Spikes/surges
 - Power-back surges

Max current	6 amps
Wait time	3 minutes
Ideal for	Fridges and domestic freezers
Tip	Low voltage is particularly damaging to the compressor of fridges and freezers. 3 minutes wait for re-connection to allow for decompression of the compressor
Weight	186 gm
Dims	140 x 60 x 90 mm

Features



Protection for



VoltGuard

Over and under voltage protection



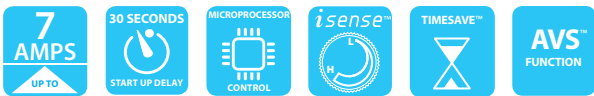
Model
 Voltguard – UK socket
 Voltguard – European socket
 Voltguard – 6A Indian socket

Product Code
 92625000
 92625100
 92625300

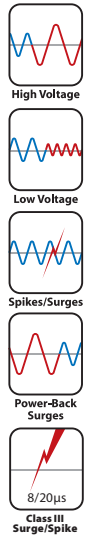
- Protection against:**
- High voltage
 - Low voltage
 - Spikes/surges
 - Power-back surges

Max current	7 amps
Wait time	User adjustable 3 minutes or 30 seconds
Ideal for	TV, Video, Hi-fi, PABX, Fax machines, Fridges and domestic freezers and all electronic equipment up to 7 amps
Tip	Covers all applications as it has over and under voltage protection
Weight	190 gm
Dims	140 x 60 x 90 mm

Features



Protection for



Single phase + telecom up to 6 amps

LightningGuard

Over voltage protection and data/telecom line protection



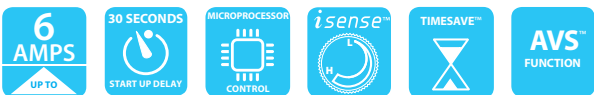
- Protection against:**
- High voltage
 - Spikes/surges
 - Power-back surges
 - Data line spike surges/lightning (i.e. for telephomodem/fax lines)

Model
 LightningGuard – UK socket
 LightningGuard – European
 LightningGuard – Indian

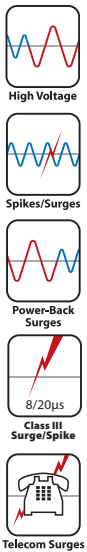
Product Code
 92905000
 92905100
 92905300

Max current	6 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, telephones, routers
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	195 gm
Dims	140 x 60 x 90 mm

Features



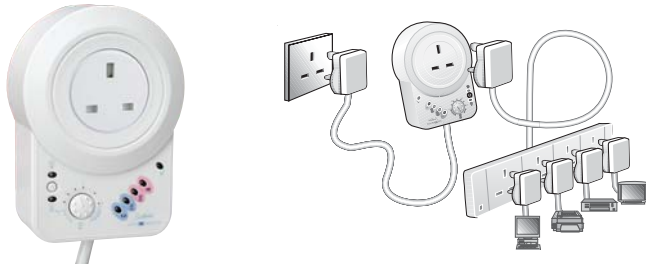
Protection for



AVS13 Appliance Guard

Automatic Voltage Switcher

Over and under voltage protection

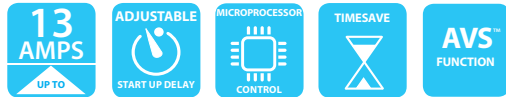


Model
AVS13 – UK socket

Product Code
91135000

The AVS can protect a number of appliances, using a multi-way socket (see page 17).

Features



Protection for



Protection against:

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

Max current	13 amps
Wait time	User adjustable from 10 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	145 x 100 x 55 mm



High Voltage



Low Voltage



Spikes/Surges



Power-Back Surges



Class III Surge/Spike

AVS13RL Appliance Guard

Automatic Voltage Switcher + RFI & lightning protection

Over and under voltage protection



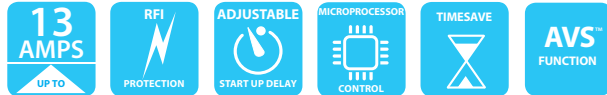
Protection against:

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

Model
AVS13RL – UK socket

Product Code
91130413

Features



Protection for



Max current	13 amps
Wait time	User adjustable from 10 seconds to 3 minutes
Attenuation(db):	20@100Khz, 50@1Mhz
Ideal for	All electrical and electronic equipment
Tip	AVS13RL adds RFI & noise and lightning protection to the standard AVS13. Use this product if you are in area where lightning is a serious issue, or you need to filter the power supply from RFI & noise.
Weight	500 gm
Dims	145 x 100 x 55 mm



High Voltage



Low Voltage



Spikes/Surges



Power-Back Surges



RFI / Noise



Advanced Class III Surge/Spike

AVS15 Aircon Guard

(Automatic Voltage Switcher)

Over and under voltage protection



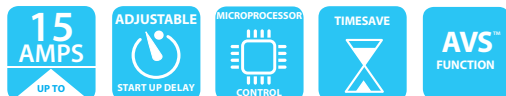
Protection against:

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

Model
AVS15 – 3 round pin

Product Code
91155000

Features



Protection for



Max current	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	145 x 100 x 55 mm



High Voltage



Low Voltage



Spikes/Surges



Power-Back Surges



Class III Surge/Spike

A/C Guard (Automatic Voltage Switcher) Over and under voltage protection



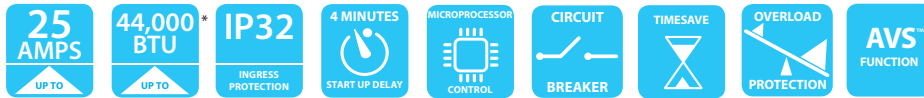
Model	Product Code
A/C Guard 16A 115V	92621610
A/C Guard 16A 220V	92621620
A/C Guard 20A 115V	92622010
A/C Guard 20A 220V	92622020
A/C Guard 25A 115V	92622510
A/C Guard 25A 220V	92622520

Protection against:

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

Max power	16, 20, or 25 amps
Wait time	4 minutes intelligent time delay
Ideal for	Air conditioners, large fridge/freezers
Tip	Rated at up to 25 amps for use with air conditioners up to 44,000 B.T.U (dependent on model)
	Direct wiring adds security of installation
Weight	400 gm
Dims	140 x 98 x 78 mm

Features



Protection for



* Dependent on model

Single phase 30-100 amps

AVS30 Appliance Guard (Automatic Voltage Switcher) Over and under voltage protection

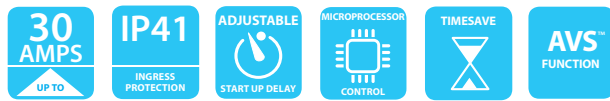


Protection against:

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

Model	Product Code
AVS30 – Direct wiring	91300000

Features



Protection for



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	500 gm
Dims	210 x 132 x 53 mm

AVS100 (Automatic Voltage Switcher) Over and under voltage protection



Protection against:

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

Model	Product Code
AVS100	91100000

Features



Protection for



Max power	100 amps
Wait time	User adjustable from 10 secs to 10 mins
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	6 kg
Dims	300 x 180 x 155mm



High Voltage



Low Voltage



Spikes/Surges



Power-Back Surges



8/20µs Class III Surge/Spike



High Voltage



Spikes/Surges



Power-Back Surges



8/20µs Class III Surge/Spike



High Voltage



Spikes/Surges



Power-Back Surges



8/20µs Class III Surge/Spike



Model	NotebookGuard	LightningGuard	FridgeGuard	HivoltGuard	TVGuard	VoltGuard
Current rating	3	6	6	6	6	7
Mains surge/spike response time	<10ns					
Mains max spike/surge discharge	6.5kA >3kA (8/20µs surges)					
Spike protection	160J					
Inrush current	34A					128A
Mains disconnect response time	<20ms					
Over-voltage						
Under-voltage	N/A	N/A	0.5 Sec	N/A	N/A	0.5 Sec
Reconnect wait	10 Secs	30 Sec	3 Min	30 Sec	30 Sec	30 Sec or 3 Min
Over voltage disconnect (iSense™ low sensitivity)	255V	255V	285V	255V	255V	255V
Over voltage disconnect (iSense™ high sensitivity)		265V	285V	265V	265V	265V
Under voltage disconnect (iSense™ low sensitivity)	N/A	N/A	180V	N/A	N/A	180V
Under voltage disconnect (iSense™ high sensitivity)	N/A	N/A	190V	N/A	N/A	190V
Dimensions	Unpacked Packed	132 x 32 x 29 mm TBC	145 x 60 x 85 mm 250 x 130 x 95 mm			
Data line protection	No	Yes	No	No	No	No
IP rating	IP20					
Socket availability	• Cloverleaf • Figure of 8	• UK13 • EU • 6A Indian • +tel (RJ11)	• UK13 • EU • 6A Indian	• UK13 • EU • 6A Indian	• UK13 • EU • 6A Indian	• UK13 • EU • 6A Indian
Data line spike response time (LightningGuard)	N/A	<10ns	N/A			
Data line discharge amps (LightningGuard)	N/A	>5kA	N/A			

For 110V models please contact Sollatek

Model	AVS13	AVS13RL	AVS15	A/C Guard	AVS30	AVS100
Nominal voltage	230V	230V	230V	230V	110V 230V	110V 230V
Watts (assuming PF=1)	2990VA	2990VA	3450VA	5750VA	3300VA 6900VA	11kVA 23kVA
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Load current (amps)	13	3/13	15	16/20/25	30	100
HVD (High Voltage Disconnect)	260V	260V	260V	264V	260V	260V
HVR (High Voltage Reconnect)	257V	257V	257V	262V	258V	258V
LVD (Low Voltage Disconnect)	185V	185V	185V	185V	180V	180V
LVR (Low Voltage Reconnect)	190V	190V	190V	190V	186V	186V
Spike / surge protection Joules	210	840	210	122	105 210	105 210
Amp	6500A (8/20us)			4500A (8/20us)	6500A (8/20us)	6500A (8/20us)
Response	<50 nsec					
Attenuation (db)	N/A	20@100Khz, 50@1Mhz	N/A	N/A	N/A	N/A

Other power protection products in the Sollatek range



Voltright™

Automatic Voltage Regulator (AVR)

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. Numerous options are available, making the three phase range a very comprehensive source of secure, stable power.



Voltright™

Fridge-Stab

The TV-Stab provides you with voltage stabilisation and protection for your domestic fridge/freezer against high and low voltage. A built in startup delay will protect against power back surges.

Voltright™

TV-Stab

The Fridge-Stab provides you with voltage stabilisation and protection for all your fridges and freezers against high and low voltage. A built in startup delay to allow motors to decompress.



Voltright™

A/C-Stab

The A/C-Stab provides you with voltage stabilisation and protection for your air conditioner. The A/C-Stab will ensure that low and high voltage is brought to a safe working level for your A/C to operate properly and to cool efficiently. A built in startup delay will protect against power back surges.



Voltsure™

PowerBack

The Sollatek PowerBack is an emergency backup system that makes it possible for homes or offices to have continued access to electrical service during power outages. The Sollatek PowerBack is a transformerless battery-based system that will provide simple and silent operation. Up to 5000VA / 4200W.



Voltsure™

ULTIMA LCD UPS

Uninterruptible power supply

The Sollatek Ultima LCD - available in 650, 850, 1000, 1500 and 2000VA 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. Up to 2000VA / 1200W.

Sollatek's **expertise** extends **worldwide** through **local networks**



Global and Local

With a customer base across the world and a local presence in more than 50 countries, Sollatek is able to provide support services wherever you are.



SOLLATEK UK LTD.

Tel: +44 (1753) 214 500

sales@sollatek.com
www.sollatek.com

Sollatek (UK) Ltd.
Sollatek House, Waterside Drive, Langley, Slough SL3 6EZ UK

ISO9001: 2008 accredited company
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