

Uninterruptible Power Supply

Spring

The SPRING series includes Tower, Rack and Dual (tower and rack) models from 500VA to 3000VA and uses sinewave digital technology. The SPRING range, with its advanced communications and connectivity options, is the ideal solution for the most demanding of customers looking for superior protection and versatility. SPRING is the best protection for network devices, rack mounted servers, conventional rack-mounted or tower servers, network storage systems.

Very High Protection

The Automatic Voltage Regulation provides stabilisation from brownouts, sag and surge voltages without making use of the batteries. Less frequent usage of the batteries means thet they will be fully charged when really needed and last longer. EMI filters then provide further protection from spikes and transients. When the mains power supply fails, the load is powered by the inverter and receives a true SINEWAVE supply for maximum power continuity and reliability. The UPS also incorporates a protection for PC and network, telephone line/modem connections (RJ45-RJ11).

High Availability

Powershare output socket provides the load-shedding of the least critical load to maximise the back up time of the most critical servers. Hot Swappable battery from the front of the UPS allows easy and no-risks maintenance of the UPS. Additional Battery Box and extended charging current are available in Spring 2200RT and 3000RT for very long back up time applications. Predictive battery testing to spot potential battery deterioration and failure. Deep discharge protection to reduce overall battery aging.

Versatility

Spring Dual (DVD1500, 2200 and 3000) can be placed directly onto the floor or mounted in 19" rack mount cabinets. The front panel digital display can be easily pulled out and rotated to suit the installation format. Spring R and RT versions includes Emergency Power Off switch, which allows to shutdown the output power in case of emergency situations. Cold start function enables Spring to start up when power network is not available.

Advance Communication

- Advanced, multi-platform communication for all operating systems and network environments: Watch&Save 3000 monitoring and shut-down software included, with SNMP agent, for Windows 95, 98, NT 4.0, Me, 2000, 2003, XP, Mac OS 9.x, X, Linux, Novell and many other popular operating systems - USB or RS232 serial port (selectable) - Slot-in SNMP network adapter card -



LCD display provides information concerning alarms, status and measure of the major electrical parameters of input, output and battery.

Applications

Personal computer, small computer networks, Local Area Networks (LAN), workstations, servers, EPOS (Electronic Point Of Sales) system.



Uninterruptible Power Supply

INPUT	S 500R	S 800R	S 1100R	S 1500RT	
Voltage	230V				
Voltage range without battery contribution		160V ±3%; 2	294V ±3%		
Frequency		50/60Hz aut	oselection		
Accepted frequency	±5%				
Input phases	1				
BATTERIES	S 500R	S 800R	S 1100R	S 1500RT	
Туре		Lead, open vase acid and	VRLA AGM / GEL ; NiCd		
Battery blocks	6V/9Ah 12V/7Ah			12V/7Ah	
Batteries number	2	3		4	
Recharge time		less than 6 ho	ours at 90%		
OUTPUT	S 500R	S 800R	S 1100R	S 1500RT	
Rated power	500 VA	800 VA	1100 VA	1500 VA	
Active power	350W	540W	740W	1050W	
Phases number		1			
Waveform	Pure sinewave				
Rated voltage (on battery opration)		230V changeable by software	are at 200/208/220/240V		
Rated voltage (on mains operation)	230 (±5%)				
Frequency	50/60Hz autoselection				
Overload	>110% for 3 minutes; >150% 800 msec.				
Output sockets	3 IEC	320 (10A) + 1 IEC 320 (10A) Powe	ershare 7 IEC 3	320 (10A) + 1 IEC 320 (10A) Powe	
SYSTEM	S 500R	S 800R	S 1100R	S 1500RT	
Transfer time		4 msec. typical;	6 msec. max.		
AC/AC officiency	98%				
AC/AC efficiency		98%	%		
AC/AC efficiency Noise		989 < 500			
•			lbA		
Noise		< 500	dbA 40°C		
Noise Operating temperature		< 50c	ibA 40°C %		
Noise Operating temperature Relative humidity		< 50c 0°C ÷ 4	dbA 40°C 9% ves 73/23/EC, 93/68/EC		
Noise Operating temperature Relative humidity Safety compliance	Excessive di	< 500 0°C ÷ 4 < 90 EN 62040-1-1 and Direction	dbA 40°C 9% ves 73/23/EC, 93/68/EC ctives 2004/108/EC	oltage-thermal	
Noise Operating temperature Relative humidity Safety compliance EMC conformance	Excessive di	< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directiv EN 62040-2 and Directiv	tbA 40°C % ves 73/23/EC, 93/68/EC ctives 2004/108/EC hort circuit-overvoltage-underv	oltage-thermal	
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections	Excessive di	< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directiv EN 62040-2 and Directives of batteries overcurrent-sl	dbA 40°C 19% ves 73/23/EC, 93/68/EC ctives 2004/108/EC hort circuit-overvoltage-underviered socket	oltage-thermal	
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection	Excessive di	< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directive EN 62040-2 and Directive ischarge of batteries-overcurrent-sl RJ45/RJ11 filt	dbA 40°C 9% ves 73/23/EC, 93/68/EC ctives 2004/108/EC hort circuit-overvoltage-undervitered socket on expansion slot, E.P.O.	oltage-thermal	
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication	Excessive di	< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directive EN 62040-2 and Directive ischarge of batteries-overcurrent-si RJ45/RJ11 filt USB, RS232, Communicative	tbA 40°C wes 73/23/EC, 93/68/EC ctives 2004/108/EC hort circuit-overvoltage-underviered socket on expansion slot, E.P.O. dark grey)	oltage-thermal	
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour	Excessive di	< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directiv EN 62040-2 and Directiv ischarge of batteries-overcurrent-sl RJ45/RJ11 filt USB, RS232, Communicativ RAL 7024 (6)	tbA 40°C wes 73/23/EC, 93/68/EC ctives 2004/108/EC hort circuit-overvoltage-underviered socket on expansion slot, E.P.O. dark grey)	oltage-thermal	
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology		< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directive EN 62040-2 and Directive EN 62040-1 and Directive EN 62040-2 and Directive EN 62040-2 and Directive EN 62040-2 and Directive EN 62040-2 and Directive EN 62040-1 and Directive EN 62040-2 and Direc	dbA 40°C 19% ves 73/23/EC, 93/68/EC ctives 2004/108/EC hort circuit-overvoltage-undervitered socket on expansion slot, E.P.O. dark grey) ractive		
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg)		< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directiv EN 62040-2 and Directiv ischarge of batteries-overcurrent-sl RJ45/RJ11 filt USB, RS232, Communicativ RAL 7024 (c) Line Inter	dbA 40°C 19% ves 73/23/EC, 93/68/EC ctives 2004/108/EC hort circuit-overvoltage-undervitered socket on expansion slot, E.P.O. dark grey) ractive	29 Kg	
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg) Dimensions (WxDxH) mm	12 Kg	< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directive EN 62040-2 and Directive ischarge of batteries-overcurrent-si RJ45/RJ11 filt USB, RS232, Communicative RAL 7024 (communicative Line Inte 13 Kg 19'x460x1U mm	dbA 40°C % ves 73/23/EC, 93/68/EC ctives 2004/108/EC hort circuit-overvoltage-underviered socket on expansion slot, E.P.O. dark grey) ractive 15 Kg \$ 1100R	29 Kg 19'x582x2U mm	
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg) Dimensions (WxDxH) mm	12 Kg	< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directiv EN 62040-2 and Directiv ischarge of batteries-overcurrent-sl RJ45/RJ11 filt USB, RS232, Communicativ RAL 7024 (c) Line Inter 13 Kg 19'x460x1U mm \$ 800R	tbA 40°C wes 73/23/EC, 93/68/EC ctives 2004/108/EC hort circuit-overvoltage-underviered socket on expansion slot, E.P.O. dark grey) ractive 15 Kg \$ 1100R min.	29 Kg 19'x582x2U mm	
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg) Dimensions (WxDxH) mm DATA Back up time at full load (min)	12 Kg	< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directiv EN 62040-2 and Directiv ischarge of batteries-overcurrent-sl RJ45/RJ11 filt USB, RS232, Communicativ RAL 7024 (c) Line Inte 13 Kg 19'x460x1U mm S 800R 6 min.	dbA 40°C 9% ves 73/23/EC, 93/68/EC ctives 2004/108/EC structive 15 Kg S 1100R min. ctive ctives 2004/108/EC structive 15 Kg	29 Kg 19'x582x2U mm	
Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg) Dimensions (WxDxH) mm DATA Back up time at full load (min) Installation	12 Kg	< 50c 0°C ÷ 4 < 90 EN 62040-1-1 and Directive EN 62040-2 and Directive ischarge of batteries-overcurrent-si RJ45/RJ11 filt USB, RS232, Communicative RAL 7024 (Line Inte 13 Kg 19'x460x1U mm \$ 800R 6 min. Tow	dbA 40°C 9% ves 73/23/EC, 93/68/EC ctives 2004/108/EC structive 15 Kg S 1100R min. ctive ctives 2004/108/EC structive 15 Kg	29 Kg 19'x582x2U mm	



LCD-based remote control panel	yes yes				
Communication software 'professional' version					
OPTIONS	S 500R	S 800R	S 1100R	S 1500RT	
MultiCom 351	X	Х	Х	Х	
MultiCom 352	Х	X	X	Х	
MultiCom 301	Х	X	Х	Х	
MultiCom 302	Х	X	Х	Х	
NetMan 101 Plus	Х	X	Х	Х	
NetMan 102 Plus	Х	X	Х	Х	
MultiCom 362	Х	X	Х	Х	
MultiCom 372	Х	X	Х	Х	
MultiCom 382	Х	Х	Х	Х	
Multi I/O	Х	X	Х	X	
IRMS Multi-Switch	Х	X	Х	Х	
AS/400 interface kit	Х	X	Х	Х	
External by-pass cabinet rack 16A	X	Х	Х	X	
Profibus DP Gateway	X	Х	X	Х	



INPUT	S 2200RT	S 3000RT	
Voltage	230V		
Voltage range without battery contribution	160V ±3%; 294V ±3%		
Frequency	50/60Hz autoselection		
Accepted frequency	±5%		
Input phases	1		
BATTERIES	S 2200RT	S 3000RT	
Туре	Lead, open vase acid and VRLA AGM / GEL; NiCd		
Battery blocks	12V/5Ah		
Batteries number	8		
Recharge time	less than 6 hours at 90%		
ОИТРИТ	S 2200RT S 3000RT		
Rated power	2200 VA	3000 VA	
Active power	1540W	2100W	
Phases number	1		
Waveform	Pure sinewave		
Rated voltage (on battery opration)	230V changeable by software at 200/208/220/240V		
Rated voltage (on mains operation)	230 (±5%)		
Frequency	50/60Hz autoselection		
Overload	>110% for 3 minutes; >150% 800 msec.		
Output sockets	1 IEC 320 (16A) + 7 IEC 320 (10A) + 1 IEC 320 (10A) Powershare		
SYSTEM	S 2200RT	S 3000RT	
	4 msec. typical; 6 msec. max.		
Transfer time	4 msec. typical; 6	msec. max.	
Transfer time AC/AC efficiency	4 msec. typical; 6 98%	msec. max.	
AC/AC efficiency	98%	A	
AC/AC efficiency Noise	98% < 50db.	A P°C	
AC/AC efficiency Noise Operating temperature	98% < 50db 0°C ÷ 40	A °C	
AC/AC efficiency Noise Operating temperature Relative humidity	98% < 50db 0°C ÷ 40 < 90%	A P°C S 73/23/EC, 93/68/EC	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive	A 0°C 50 50 50 50 50 50 50 50 50 50 50 50 50	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directive	A P°C Is 73/23/EC, 93/68/EC ives 2004/108/EC ort circuit-overvoltage-undervoltage-thermal	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directive Excessive discharge of batteries-overcurrent-shows.	A O'C OS ST3/23/EC, 93/68/EC ives 2004/108/EC ort circuit-overvoltage-undervoltage-thermal red socket	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directive Excessive discharge of batteries-overcurrent-shot RJ45/RJ11 filter	A o°C os 73/23/EC, 93/68/EC ives 2004/108/EC ort circuit-overvoltage-undervoltage-thermal red socket in expansion slot, E.P.O.	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directive Excessive discharge of batteries-overcurrent-sho RJ45/RJ11 filter USB, RS232, Communication RAL 7024 (da Line Intera	A o°C os 73/23/EC, 93/68/EC ives 2004/108/EC ort circuit-overvoltage-undervoltage-thermal red socket n expansion slot, E.P.O. ork grey) ctive	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directive Excessive discharge of batteries-overcurrent-sho RJ45/RJ11 filter USB, RS232, Communication RAL 7024 (da	A or C or S 73/23/EC, 93/68/EC or circuit-overvoltage-undervoltage-thermal ored socket or expansion slot, E.P.O.	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directive Excessive discharge of batteries-overcurrent-sho RJ45/RJ11 filter USB, RS232, Communication RAL 7024 (da Line Intera	A or C or S or	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg)	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directi Excessive discharge of batteries-overcurrent-sho RJ45/RJ11 filter USB, RS232, Communication RAL 7024 (da Line Intera	A or C or S or	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg) Dimensions (WxDxH) mm	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directi Excessive discharge of batteries-overcurrent-sho RJ45/RJ11 filter USB, RS232, Communication RAL 7024 (da Line Intera 31 Kg 19'x582x26	A o°C os 73/23/EC, 93/68/EC oves 2004/108/EC out circuit-overvoltage-undervoltage-thermal red socket in expansion slot, E.P.O. ork grey) ctive 32 Kg U mm S 3000RT	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg) Dimensions (WxDxH) mm	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directi Excessive discharge of batteries-overcurrent-sho RJ45/RJ11 filter USB, RS232, Communication RAL 7024 (da Line Intera 31 Kg 19'x582x20 S 2200RT	A O'C Is 73/23/EC, 93/68/EC ives 2004/108/EC ort circuit-overvoltage-undervoltage-thermal red socket In expansion slot, E.P.O. ork grey) ctive 32 Kg U mm S 3000RT	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg) Dimensions (WxDxH) mm DATA Back up time at full load (min)	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directi Excessive discharge of batteries-overcurrent-sho RJ45/RJ11 filter USB, RS232, Communication RAL 7024 (da Line Intera 31 Kg 19'x582x20 S 2200RT 6 min. m	A O'C OS 73/23/EC, 93/68/EC ives 2004/108/EC out circuit-overvoltage-undervoltage-thermal red socket on expansion slot, E.P.O. urk grey) ctive 32 Kg U mm S 3000RT nin.	
AC/AC efficiency Noise Operating temperature Relative humidity Safety compliance EMC conformance Protections Net/telephone line protection Communication Colour Technology Weight (kg) Dimensions (WxDxH) mm DATA Back up time at full load (min) Installation	98% < 50db. 0°C ÷ 40 < 90% EN 62040-1-1 and Directive EN 62040-2 and Directi Excessive discharge of batteries-overcurrent-sho RJ45/RJ11 filter USB, RS232, Communication RAL 7024 (da Line Intera 31 Kg 19'x582x20 S 2200RT 6 min. m Tower	A O'C OS 73/23/EC, 93/68/EC ives 2004/108/EC out circuit-overvoltage-undervoltage-thermal red socket on expansion slot, E.P.O. urk grey) ctive 32 Kg U mm S 3000RT nin.	



LCD-based remote control panel	yes			
Communication software 'professional' version	yes			
OPTIONS	S 2200RT	S 3000RT		
MultiCom 351	Х	Х		
MultiCom 352	Х	Х		
MultiCom 301	Х	X		
MultiCom 302	Х	X		
NetMan 101 Plus	Х	X		
NetMan 102 Plus	Х	X		
MultiCom 362	Х	X		
MultiCom 372	Х	X		
MultiCom 382	Х	X		
Multi I/O	Х	X		
IRMS Multi-Switch	Х	Х		
AS/400 interface kit	Х	Х		
External by-pass cabinet rack 16A	Х	Х		
Profibus DP Gateway	Х	Х		