

# **SPARK RT**



### True double-conversion online UPS

A true double conversion UPS will provide cclean power with high quality to fully protect mission-critical devices such as sensitive networks, server centers with small computers, telecom applications, as well as industrial applications.

#### Output power factor 0.9

Spark RT is a high-density UPS with output power factor 0.9 to provide higher performance and efficiency to critical applications.

### User-friendly and easy-shift LCD display The

digital display at front panel can be easily shifted through LCD setting to suit the installation format, vertical stand or horizontal wall mount.



#### Rack/Tower design

Spark RT series is designed in true universalmount case. It can be easily installed as floorstanding tower or in 19-inch rackmount bracket.



19" rack-mounting

Floor-standing Tower

### Programmable power management outlets for 1-3K models only

With programmable power management outlets, users can easily and independently control load segments. During power failure, this feature enables users to extend battery time to missioncritical devices by timely shutting down the non-critical devices.





#### 50/60 Hz frequency converter mode

Lock output frequency at 50Hz or 60Hz to suit power sensitive equipments.

### ECO and advanced ECO mode for energy saving

It allows UPS to operate in high efficiency up to 97% in energysaving ECO mode. In this operation mode, load is supplied by the mains. In the event of a mains failure, the inverter will take over the load and constantly provide supply to the connected systems. Spark RT 1-3K even offers advanced ECO mode to allow UPS to operate at higher efficiency up to 98%.

#### • Emergency Power Off Function (EPO)

This feature can secure the personnel and equipment in case of fires or other emergencies.

# • Hot-swappable battery design for 1-3K models only

This design ensures clean and uninterruptible power to protected equipment during battery replacement.



• DSP technology applied for 6K and up models A DSP controller provides an improved and cost-effective solution with high performance.

## • Active input power factor correction 0.99 for 6K and up models

This feature will save more energy and its power factor performance is more stable to meet higher environment standards.

### N+X parallel redundancy available for 6K and up models

Spark RT (6K and up models) can be used in parallel operation with up to 3 units. It increases power capacity, safety and availability.



# SPARK RT 1KVA/1.5KVA/2KVA/3KVA



## SPARK RT 1KVA/1.5KVA/2KVA/3KVA Rack/Tower Online UPS Selection Guide

MODEL		Spark '	1000 RT	Spark 1500 RT	Spark 2	2000 RT	Spark 3000 RT		
PHASE		Single phase with ground							
		1000 VA / 900W		1500 VA / 1350W	2000 VA / 1800W		3000 VA / 2700W		
INPUT				<u> </u>					
Iominal Vo	Itage			100*/110*/115*/120 /127 \	/AC or 200/208/22	0/230/240 VAC			
Voltage Range		55-150 VAC ± 5% or 110-300 VAC ± 5% @ 50% load ; 80-150 VAC ± 5% or 160-300 VAC ± 5% @ 100% load							
Frequency Range		40Hz ~ 70Hz							
Harmonic Distortion(THDi)		≤ 5% @ nominal input voltage							
Power Factor		≥ 0.99 @ Nominal Voltage (100% Load)							
OUTPUT									
Dutput Volta	age			100*/110*/115*/120/127 V	AC or 200/208/220	)/230/240 VAC			
AC Voltage Regulation (Batt. Mode)		± 1%							
Frequency Range (Synchronized Range)		57 ~ 63 Hz or 47 ~ 53 Hz							
Frequency Range (Batt. Mode)		60Hz ± 0.1Hz or 50 Hz ± 0.1Hz							
Current Crest Ratio		3:1 (max.)							
Harmonic Distortion		$\leq$ 2 % THD (Linear Load) ; $\leq$ 4 % THD (Non-linear load)							
ransfer	AC Mode to Battery Mode	Zero							
ïme	Inverter to Bypass	4 ms (Typical)							
Waveform (Batt. Mode)		Pure Sinewave							
FFICIENC	Y								
AC Mode		90	1%	90%	91	1%	91%		
ECO Mode		97%		97%	97%		97%		
Battery Mode		88%	89%	89%	88%	89%	80%		
ATTERY		·				· · · · ·			
	Battery Type	12 V / 9 Ah	12 V / 7 Ah	12 V / 9 Ah	12 V / 9 Ah	12 V / 7 Ah	12 V / 9 Ah		
	Numbers	2	3	3	4	6	6		
tanard Iodel	Typical Recharge Time	4 hours recover to 90% capacity							
louci	Charging Current (max.)	1.5 A*							
	Charging Voltage	27.4 VDC ± 1%	41.1 VDC ± 1%	41.1 VDC ± 1%	54.8 VDC ±1%	82.1 VDC ±1%	82.1 VDC ±1%		
	Battery Type	1		Depending on the c	apacity of external	batteries			
ong-run	Numbers	2	3	3	4	6	6		
Nodel	Charging Current (max.)	ĺ		1A/	2A / 4A / 8A	· · · ·			
	Charging Voltage	27.4 VDC ± 1%	41.1 VDC ± 1%	41.1 VDC ± 1%	54.8 VDC ±1%	82.1 VDC ±1%	82.1 VDC ±1%		
NDICATOR	RS								
CD Displa	у		Load leve	I, Battery level, AC mode, Ba	ttery mode, Bypas	s mode, and Fault in	ndicator		
LARM									
Battery Mod	de	Sounding every 4 seconds							
ow Battery	1	Sounding every second							
Overload		Sounding twice every second							
Fault		Continously sounding							
PHYSICAL									
Stanard	Dimension, D x W x H (mm)	410 x 438	3 x 88 [2U]	410 x 438 x 88 [2U]	510 x 438 x 88 [2U]	630 x 438 x 88 [2U]	630 x 438 x 88 [2U]		
Model	Net Weight (kgs)	11.6	14.2	14.5	19.5	26.5	27.4 10.		
Long-run Model	Dimension, D x W x H (mm)	-	3 x 88 [2U]	410 x 438 x 88 [2U]		3 x 88 [2U]	510 x 438 x 88 [2U]		
	Net Weight (kgs)	6.5		6.5		.5	10.5		
NVIRONN		0		0.0	0		10.0		
		1		00.00 % 511.0.0	4080 (New Parts				
Humidity		20-90 % RH @ 0- 40°C (Non-condensing)							
Noise Level		l		Less than	50dBA @ 1 Meter				
ANAGEM		1							
	Smart RS-232 / USB		Supports Windows <sup>®</sup> 2000/2003/XP/Vista/2008, Windows <sup>®</sup> 7/8/10, Linux, Unix, and MAC						
mart RS-2	.527050	ļ							

\* \*Derate capacity to 95% when the output voltage is adjusted to 115VAC, derate capacity to 90% when the output voltage is adjusted to 110VAC and derate capacity to 80% when the output voltage is adjusted to 100VAC/200VAC. \*If standard UPS is equipsed with additional charger, the available setting options become 2A, 3A and 4A. Product specifications are subject to change without further notice.



# SPARK RT 6KVA/10KVA



#### • True double-conversion online UPS

- Output power factor 0.9
- User-friendly and easy-shift LCD display
- Rack/Tower design
- Programmable power management outlets
- 50/60 Hz frequency converter mode
- ECO and advanced ECO mode for energy saving
- Emergency Power Off Function (EPO)
- DSP technology applied
- Active input power factor correction 0.99
- N+X parallel redundancy



### Galleon X9 6KVA/10KVA Rack/Tower Online UPS Selection Guide

MODEL		Spark 6000 RT	Spark 6000 RT ISO	Spark 10 000 RT	Spark 10 000 RT ISO				
PHASE			Single phas	e with ground					
CAPACITY		6000 VA / 5400 W 10000 VA / 9000 W							
INPUT				·					
Nominal Vo	oltage		200/208/220	230/240 VAC					
Voltage Range		110-300 VAC ± 3% at 50% load ; 176-300 VAC ± 3% at 100% load							
Frequency Range		46~54 Hz or 56~64 Hz							
Power Factor		≥ 0.99 @ 100% load							
OUTPUT				,					
Nominal Voltage		200/208/220/230/240 VAC	104 VAC x 2 / 208 VAC or 110 VAC x 2 / 220 VAC or 115 VAC x 2 / 230 VAC or 120 VAC x 2 / 240 VAC	200/208/220/230/240 VAC	104 VAC x 2 / 208 VAC or 110 VAC x 2 / 220 VAC or 115 VAC x 2 / 230 VAC or 120 VAC x 2 / 240 VAC				
AC Voltage Regulation		± 1%			± 3%				
Frequency Range(Synchronized Range)		46~54 Hz or 56~64 Hz							
Frequency Range(Batt. Mode)		50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz							
Current Crest Ratio		31 (max.)							
Harmonic Distortion		$\leq$ 2 % THD (Linear Load), $\leq$ 4 % THD (Non-linear Load)	$\leq$ 3.5 % THD (Linear Load), $\leq$ 7 % THD (Non-linear Load)	5 % THD (Linear Load), $\leq 2$ % THD (Linear Load),					
Transfer AC Mode to Battery Mode		Zero							
Time	Inverter to Bypass	Zero							
Waveform (Batt. Mode)		Pure Sinewave							
EFFICIENC	CY								
AC Mode		91%	85%	91%	85%				
ECO Mode		96%	87%	96%	87%				
Battery Mode		88%	82%	88%	82%				
BATTERY									
	Battery Type	12 V	12 V / 7 Ah 12 V / 9 Ah						
	Numbers	20 (18-20 pc		20 (18-20 pcs adjustable)*					
Standard									
Model	Typical Recharge Time	7 hours recover		9 hours recover to 90% capacity					
	Charging Current (max.)	1.1	) A	1.0 A					
	Float Charging Voltage	273 VDC (based on battery numbers at 20 pcs)							
	Battery Type and Numbers		Depending on applications						
Long Run Model	Charging Current (max.)	4.0	A	4.0 A					
Model	Float Charging Voltage		273 VDC (based on ba	ttery numbers at 20 pcs)					
INDICATO	RS	•							
LCD Displa		UPS status. L	oad level. Battery level. Input/Out	out voltage, Discharge timer, and F	ault conditions				
ALARM	· <b>J</b>			g					
Battery Mo	do		Sounding ou	on 4 cocondo					
		Sounding every 4 seconds							
Low Battery		Sounding every second							
Overload		Sounding twice every second							
Fault			Continous	ly sounding					
PHYSICAL	-								
Standard Model	Dimension, D x W x H (mm)	UPS unit: 606 x 438 x 133 [3U] Battery pack: 606 x 438 x 133 [3U]	UPS unit: 606 x 438 x 133 [3U] Battery pack: 606 x 438 x 133 [3U] ISO bank: 606 x 438 x 133 [3U]	UPS unit: 686 x 438 x 133 [3U] Battery pack: 606 x 438 x 133 [3U]	UPS unit: 686 x 438 x 133 [3U] Battery pack: 606 x 438 x 133 [3U] ISO bank: 686 x 438 x 133 [3U]				
	Net Weight (kgs)	UPS unit: 20 Battery pack: 58	UPS unit: 20 Battery pack: 58 / ISO bank: 61	UPS unit: 23.5 Battery pack: 65	UPS unit: 23.5 Battery pack: 65 / ISO bank: 90				
long-run Model	Dimension, D x W x H (mm)	606 x 438 x 133 [3U]	UPS unit: 606 x 438 x 133 [3U] ISO bank: 606 x 438 x 133 [3U]	686 x 438 x 133 [3U]	UPS unit: 686 x 438 x 133 [3U] ISO bank: 686 x 438 x 133 [3U]				
	Net Weight (kgs)	20	UPS unit: 20 / ISO bank: 61	23.5	UPS unit: 23.5 / ISO bank: 90				
ENVIRON	MENT								
Operating I	Humidity		0-95 % RH @ 0- 40	°C (Non-condensing)					
Noise Level		Less than 58dB @ 1 Meter Less than 60dB @ 1 Meter							
MANAGEN			-		-				
Smart RS-2		Suppo	nts Windows <sup>®</sup> 2000/2003/XP/Viete	2008 Windows <sup>®</sup> 7/8/10 Linux an	d MAC				
unant 10-2		Supports Windows <sup>*</sup> 2000/2003/XP/Vista/2008, Windows <sup>*</sup> 7/8/10, Linux and MAC Power management from SNMP manager and web browser							
Optional SI	MD								

\*\* If the UPS is installed or used in a place where the altitude is above 1000m, the output power must be derated one percent per 100m.

\* L means long-run mod.

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