START POWER

Power Electronics Technologies

SP1-MS3

UPS SP1 SINGLE PHASE

- True On-line Double Conversion Typology
- Advanced DSP Control Technology
- Tower or Rack / Tower Convertible
- 0.9 Output Power Factor
- Wide Input Voltage Range
- Active Harmonic Current Control
- LCD/LED display
- Patent Backup Runtime Estimation
- Multiple Operation Mode
- Remote Emergency Power Off (REPO)
- Remote On Off control (ROO)
- Optional Programmable Outlets
- Easy Firmware Flash Upgrade

The **SP1** on-line VFI-SS double conversion UPS with static By-Pass, ensure constant load and total elimination of electrical noise as it does not provide any direct network-user connection.
Fully managed by microprocessors, the **SP1** UPS power the users with a perfect sinusoidal waveform without any interruption.

Thanks to the **USB, RS232, SNMP** interfaces and to the management/control software, supplied with the UPS, it is possible to manage and control the power supply via the main operating systems.

The **SP1** UPS Tower or Rack/Tower version, guarantee the highest quality standards.

Characterized by refined and functional design, low noise level, lightness and small size, this UPS is the perfect choice for safety in offices and in every environment where users are at risk.

UPS of the series **SP1** are available with single-phase input and output voltage in a range of power from **1kVA to 10kVA**, with standard or extended autonomy.

TECHNICAL SPECIFICATIONS

MODEL			MS3 6000	MS3 10000	MS3 6000-RT	MS3 10000-RT
POWER	VA		6000 VA	10000 VA	6000 VA	10000 VA
	W		6000 W	10000 W	6000 W	10000 W
INPUT	Phase		Single phase, Line + Neutral + Ground			
	Voltage		110 – 280 Vca			
	Frequency Range		45-70Hz			
	Input Power Factor		Up to 0.99 at Linear Load			
	Current THD (100% linear load)		≤5%			
OUTPUT	Voltage	Without Transformer	200/208/220/230/240Vac, settable			
		With Transformer	120/208 or 110/220 or 115/230 or 120/240			
	Output Power Factor		1			
	Output Voltage Distortion		≤2% at 100% Linear load ≤7% at 100% non-linear load (PF=0.7)			
	Output Voltage Regulation	Without Transformer	±1%			
		With Transformer	±3%			
	Frequency Range	(Synchronized Range)	±1Hz or ±3Hz (Selectable)			
	Crest Factor		3:1			
	Output Waveform		Pure Sine Wave			
EFFICIENCY	Line Mode	Without Transformer	93%	94%	93%	94%
		With Transformer	90%	91%	90%	91%
	High Efficiency Mode	Without Transformer	98%			
		With Transformer	94%	95%	94%	95%
BATTERY	Battery Type (Sealed Lead Acid Maintenance Free)		VRLA, Sealed Maintenance Free Lead Acid			
	Number of Battery		12/14/16/18/20	16/18/20	12/14/16/18/20	16/18/20
	Battery Voltage		144/168/192/216/240Vdc	192/216/240Vdc	144/168/192/216/240Vdc	192/216/240Vdc
	Recharge Time (to 90%)		4 hours			
	Charger	12/14/16 Model	2-step (CC-CV), 1.9A (max.)	N.A.	2-step (CC-CV), 1.9A (max.)	N.A.
		16/18/20 Model	2-step (CC-CV), 1.7A (max.)			
PHYSICAL	Dimensions (W x D x H mm)		240 x 700 x 509	288 x 700 x 509	440 x 685 x 88	440 x 685 x 132
	Weight (Kg) (with batteries)		76 kg	91 kg	60 kg	/
	Weight (Kg) (without batteries)		/	/	18,5 kg	21,5 kg
CONNECTION	Input/Output Connection		Hardwired			
	External Battery Connection		Plug-in & Play			
INTERFACE	Standard		USB, EPO/ROO			
	Option		2nd RS232, USB, RS485, Dry Contact Relay, SNMP/WEB Card			
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.			
ENVIRONMENTAL	Operation Temperature		0-40°C/ 32-104°F			
	Operation Humidity		0-90% (Without condensing)			
	Altitude		1000m/3280ft without Derating			
	Noise Level		≤60dBA			
STANDARDS & CERTIFICATIONS	Markings		CE, cULus			
	EMC		IEC/EN62040-2		IEC/EN61000-3	
	Safety		IEC/EN62040-1		IEC/EN62040-2	