UNINTERRUPTIBLE POWER SUPPLY

The SR PF1 double conversion series with DSP technology, Digital Signal Processor, is the perfect solution for powering sensitive "mission critical" users who require reliability and performance from a static UPS. The correction of the input power factor, the unit power output factor and the high reliability provide a higher level of Power Quality for all sensitive electronic devices and safety devices such as IT, electromedical and industrial loads.

PRINCIPLES OF WORKING

In normal power supply conditions, the load is powered directly by the Inverter while the rectifier supplies the necessary power to the Inverter and to charge the batteries.
If one of the following conditions occurs on the power supply: interruption of the voltage, lack of a phase, voltage out of tolerance, the battery supplies the inverter with the necessary energy to supply the load without interruption. Once normal operating conditions are restored, the rectifier charges the battery and at the same time feeds the load through the inverter.
If one of the following conditions occurs: overload, Inverter output voltage out of tolerance, Inverter failure and overtemperature, the load is automatically transferred, without interruption, to the emergency network. Once normal operating conditions are restored, the load is automatically transferred back to the Inverter.

FEATURES

- ✓ ONLINE double conversion technology
- ✓ Output power factor PF 1 - kVA = kW
- ✓ Versatility of rack or tower use
- ✓ Efficiency 94%
- ✓ Sinusoidal voltage, filtered & stabilized
- ✓ Correction of the input power factor
- ✓ Wide tolerance on the input voltage without battery intervention
- ✓ Zero intervention time
- ✓ Cold start, UPS starst from battery or from mains
- ✓ GE operating compatibility thanks to the control of the active harmonic current
- ✓ Additional battery modules
- ✓ Automatic and manual battery test
- ✓ Hot-swappable batteries
- ✓ Full discharge battery protection
- ✓ Remote start / stop function
- ✓ USB communication interface
- ✓ EPO Emergency Power Off
- ✓ Multiple operating modes to maximize energy efficiency
- ✓ 50 or 60Hz converter function

Main accessory feature
- ✓ Parellability N + 1
- ✓ RS485 and SNMP interface
- ✓ CEI 0-16 version
- ✓ External manual by-pass
- ✓ Isolation transformer

CONTROL PANEL

The front panel provides all the major parameters and the operating status of the UPS, which includes complete diagnostics and a simple user interface.

PARALLELABILITY N + X

The UPS SR LCD PF 1 can be connected to other units of the same power by relying on the UPS control logics with a special accessory parallel kit, even after the first installation.

This functionality allows the UPS to work in redundancy, when the power required is less than the nominal power of the single UPS (n + 1), and the power parallel operation (2n) when, for peak current or greater power required, it exceeds the power of the single UPS. This operating selectivity is automatic and instantaneous. Up to 4 units can be connected in parallel, and are available as external manual by-pass accessories for parallel distribution up to 200A (40kVA).

INTERFACES

Each UPS of the SR LCD PF1 series is equipped in standard configuration with a USB communication port, which allow connection with the software, supplied free of charge on request, for remote monitoring of the UPS status via PC.

Several optional interface cards are available for various communication requirements, RS232, RS485, dry contacts, SNMP/WEB card. All optional communication ports can be activated and used simultaneously for monitoring the status of the UPS; UPS control can take place via only one communication interface at a time (the one with the highest priority).

Emergency Power Off, the EPO terminal, located on the back of the UPS, uses a NO contact which, if closed, starts the shutdown sequence. Through a dedicated tool it is possible to configure it NC or it can be set up for remote start and shutdown.

REAR PANEL

Slot for optional interface.
EPO
USB port
Terminal resistor for parallel function
CAN Bus connection for parallel system
Connector for external battery
External battery charger connector
Automatic circuit breaker input CB1
Input / output connection terminals

ACCESSORIES

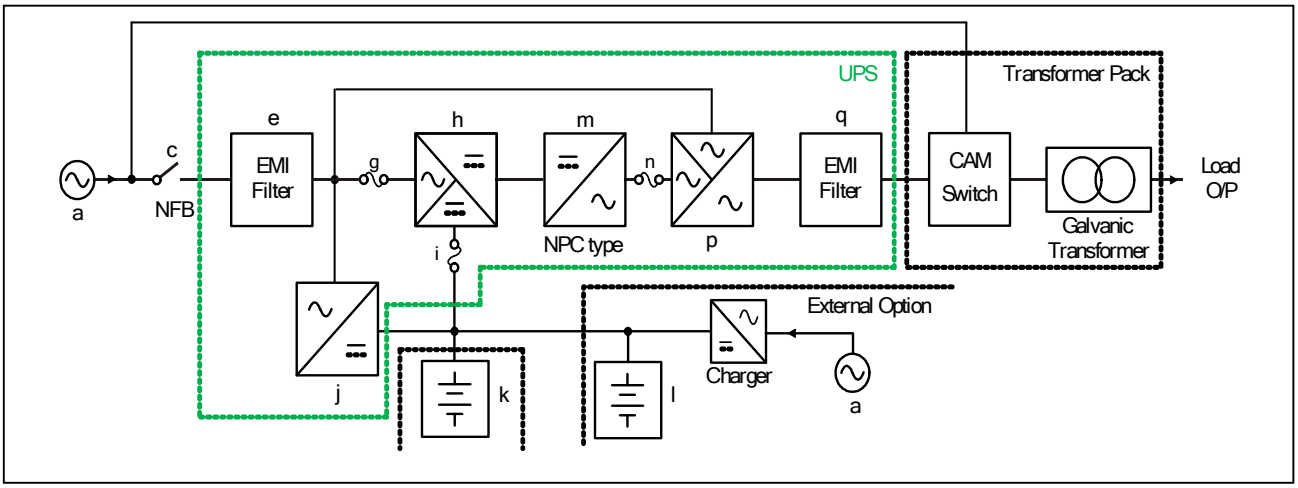
- ✓ Additional battery cabinets to extend the autonomy of the UPS, even after the first installation.

- ✓ Additional 1000W battery charger. Its independent electronic control allows the accessory to work in parallel with up to four units in continuous service. It is designed to be connected on the back of the UPS.

- ✓ PDU, external manual by-pass. In addition to the internal manual by-pass available on request on the UPS, the external MTBP external by-pass, available in sizes up to 200A, connected to a single UPS allows a possible simple disconnection of the UPS without interruption, while in a compound system from several UPSs in parallel it has the centralized by-pass function for the exclusion and disconnection of a faulty UPS.

- ✓ Guide kit for UPS support in rack cabinet. Compatible with all ELIT UPS rack series.

BLOCK DIAGRAM



MODEL	SR6000-10LCD 4U PF1	SR6000	SR10000
Rated power VA/W	6000VA/6000W	6000VA/6000W	10000VA/10000W
INPUT			
Nominal Voltage	230Vac (110~280Vac*) 1Ph+N		
Frequency window	40-70Hz (40-60Hz, 50Hz output & 50-70Hz 60Hz output)		
Power factor	Up to 0.99 @100% linear load		
Distortion (THiD)	≤ 3%		
OUPUT			
Voltage	220/230/240V ± 1% 2w, selectable		
Frequency	50Hz or 60Hz ± ±1Hz or ±3Hz (selectable)		
Waveform	Sinusoidal		
Distortion (THD)	≤2% @100% linear load; ≤3% @100% at non-linear load		
Transfer time	Zero		
Crest factor	3:1		
Efficiency	Up to 94% in on-line – up to 98% in eco-mode		
BATTERY			
Type	VRLA, Sealed maintenance free lead acid		
Recharge time	4h @ 90%		
Voltage/battery q.ty	192Vdc/16pcs 12V – 216Vdc/18pcs 12V – 240Vdc/20pcs 12V selectable		
Internal battery	20x 5Ah 12V	--	--
Std battery charger	2 levels CC-CV 2A		
External battery charger	4A		
MISCELLANEOUS			
Protections	Overload, high temperature, short-circuit, battery full discharge		
LCD meter	Input Voltage & Frequency, Output Voltage, Output Current, Output Frequency, Load Percentage, Battery Voltage, Inner Temperature, Backup time estimation		
Internal bypass	Electronic	Electronic (manual as accessory)	
Noise @ 1 mt	≤60dBA		
Self-Diagnostics	Manual and self routine test		
Audible or visual alarm	Line failure, Battery low, Transfer to bypass & System fault		
Operation Humidity	20%~95% without condensing		
Inlet and outlet	Terminal boards		
UPS Dimensions (mm)	440x685x176	440x685x88 (L version) 440x550x132	440x685x132
External battery dimensions	440x685x132	440x685x132 (L version) 440x550x176	440x685x132
Weight (kgs)	60	19	22
STANDARDS			
Safety	IEC EN 62040-1		
EMC	IEC EN 62040-2		
Performance	IEC EN 62040-3		
Marks	CE		

* Depending on load percentage: 176-280 VAC without derating; 160-176 VAC derating to 75% Load; 110-160 VAC derating to 50% Load