



ELEKTRA RACK TOWER SERIES

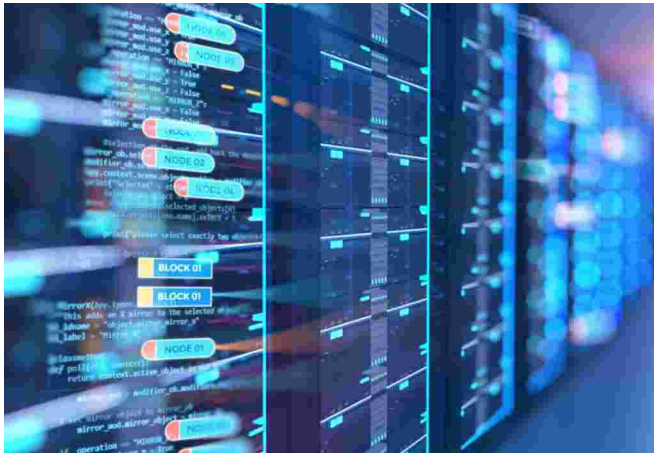
Lithium-Iron (LiFePo4) UPS

RACK - TOWER CONVERTABLE
ONLINE DOUBLE CONVERSION UPS
LITHIUM - ION (LiFePo4) COMPATIBLE
1KVA ~ 30KVA (1/1- 3/1 - 3/3)

Mission Critical &
I.T Grade UPS

ONLINE DOUBLE CONVERSION UPS (Elektra Series)

Lithium-Iron (LiFePo4) UPS



This is a green product that comply with the products pollution control management measures, the product under normal use, will not harm the environment and personals using it.

Elektra RT Series (1/1-3/1-3/3, H.F) (1KVA~30KVA)

Elektra RT Series H.F range of On Line Double Conversion UPS's uses microprocessor control technology intended in particular for users of critical systems that require reliability and high performance at the same time (telecommunications equipment, critical industrial applications, etc.).

Elektra uses technology which delivers a perfect sinusoidal output current and provides effective protection of critical devices.

Elektra Series UPS's provides an upgraded power factor reaching 1 for single phase systems, therefore offer higher performance and improved efficiency for vital applications.

UPS status can be monitored at a glance on an intuitive LCD screen. Elektra RT Series offer redundant and capacity parallel UPS, the right solution for all applications requiring a perfect and uninterrupted power supply.

- Filtered, stabilised, reliable output voltage: on-line double-conversion technology (VFI in accordance with IEC 62040-3) with built-in EMI filters.
- High overload capability up to 150%
- Programmable auto-restart when mains power returns.
- Programmable cold-start from battery
- Power factor correction (UPS input power factor close to 1).
- Possibility to extend autonomy for several hours
- Fully configurable using UPS Tools configuration software.
- High level of battery reliability (automatic and manually-activated battery tests).
- High level of UPS reliability (total micro processor control).
- Low impact on the mains (sinusoidal absorption)
- Input protection with fuse which can be reset.

Benefits of Lithium-iron (LiFePo4)



Life Span

LiFePo4 battery life span is 10-15 years in nearly all conditions. Long life batteries reduce the burden and cost of down time and maintenance.



Charge and Recharge Efficiency

Lithium iron batteries can be charged/discharged over 1000 times versus 200-400 charges/discharges for standard VRLA batteries.



Heat Tolerant

Elektra Li-Series UPS units can withstand working temperatures up to 140 °F. Where VRLA battery life is reduced by half for every 10 °F over 71F, Li-Ion battery life is unaffected.



High Power Density

Lithium batteries have over 5 times the energy density and take up about 1/3 the space of a VRLA based solution that delivers the same power.



Smaller Footprint

A smaller footprint translates to reduced cooling requirements as well as about a two thirds reduction in weight. This offers the installation flexibility needed by many IT departments.



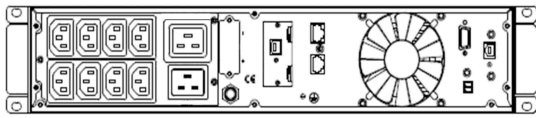
Cost Effective

LiFePo4 Batteries eliminate the cost of battery replacement, labor and maintenance due to its long life capability.

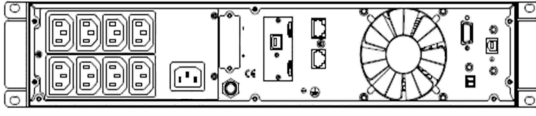
ONLINE DOUBLE CONVERSION UPS (Elektra Series)

Rear view

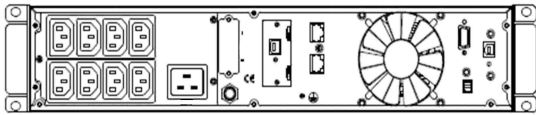
1KVA



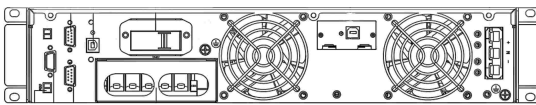
2KVA



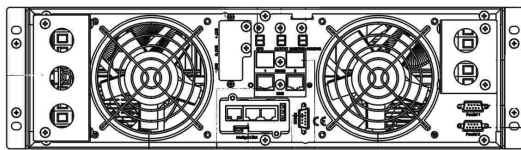
3KVA



6KVA to
10KVA



15KVA to
30KVA



Wide Input Voltage & Frequency Range

Very wide input voltage and frequency ranges, even in harsh electrical environments will work in stable mode, which reduces the number of battery discharge resulting in extended battery life.

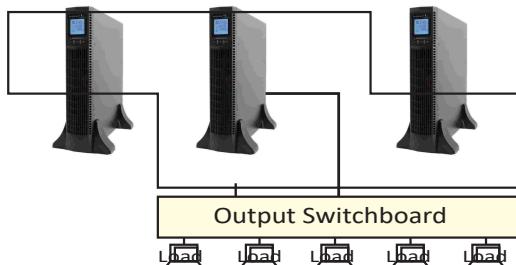
Compatible With Generators

Input voltage and frequency range is wide so can effectively works on generator sets and thus provide pure, safe and stable power.

Power Factor 1

Adapting the current most electrical devices type it enhances the ability for supporting load of the machine. 1 power factor.

Parallel Connectivity



Parallel Configuration

N+X is currently the most reliable power supply structure.

N represents the minimum required UPS number that the total load needs; X represents the redundant UPS number. The bigger the X is, the higher reliability of the power system is. For occasions where reliability is highly required, N+X is the optimal mode up to 3 of them can be connected in parallel to support output power sharing and power redundancy.

Powerful Extensibility Features

Smart slot provides rich scalable features, USB can be selected, AS400 card, SNMP card, RS485 card and environmental monitoring card.

Features

- Rack/Tower convertible design
- High power density
- Cold start
- N+X parallel redundancy, support maximum 4 units in parallel
- Online double conversion with full digital control
- Optimization battery group, the quantity of battery: $\pm 8/\pm 9/\pm 10$ pcs Settable)
- Wide input voltage range: 110~286Vac
- Wide input frequency range
- Maximum charging current up to 10A
- ECO mode operation for energy saving
- Self-testing when UPS startup
- Multiple communication interface: RS232/USB/EPO (Dry contact /SNMP card optional)
- Generator compatible
- Parallel kit default
- Multiple protection function: short-circuit, overload, overheat, battery
- Intelligent fan speed regulation

Standards

FOR UPS products comply with:

EN50081-1 / EN55022 Class B - EN50082-1 / IEC801-2 LEVEL 4 IEC801-3 LEVEL 3 - IEC801-4 LEVEL 4 - IEC801-5 LEVEL 2 (1) 1000VA, 2000VA, and 3000VA (220/230V-version) products comply with: FCC Part 15 Class A - IEEE587 Class A(2) The products of 3000VA (220/230V-version) are Class A digital devices.

Safety : Comply with GB4943-2001, IEC62040-1 and CE requirements.

Industry Standard:

Comply with EN62040, YD/T 1095-2000 requirements.

FOR UPS products comply with: EN62040-1-1 (Safety). Conducted Emission: EN50091-2: Limits for UPS which have a rated output current exceeding 25A (25~100A)

Radiated Emission: EN50091-2: Limits for UPS which have a rated output current exceeding 25A (25~100A)
EMSEN61000-4-2(ESD).....Level 4
EN61000-4-3(RS).....Level 3
EN61000-4-4(EFT).....Level 4
EN61000-4-5(Lightning Surge).....Level 4
EN61000-2-2 (Immunity to low frequency signal)

ONLINE DOUBLE CONVERSION UPS (Elektra Series)

TECHNICAL SPECIFICATION FOR SINGLE PHASE IN & SINGLE PHASE OUT

MODEL		ES101-RT-Li	ES102-RT-Li	ES103-RT-Li	ES106-RT-Li	ES110-RT-Li
RANGE	KVA	1KVA	2KVA	3KVA	6KVA	10KVA
	WATT	1000W	2000W	3000W	6000W	10000W
INPUT						
Input system		Single Phase + Neutral + Ground				
Rated Voltage		200 / 208 / 220 / 230 / 240VAC				
Voltage Range		110~300Vac (176~280Vac @ 100% load)			120VAC~285VAC	
Frequency		40~70Hz (50/60Hz Auto-Sensing)				
Power Factor		≥0.99				
Voltage Range Bypass		175~290VAC ±15%				
OUTPUT						
Output system		Single Phase & Earth ground			Single Phase + Natural + Ground	
Rated Voltage		208 / 220 / 230 / 240VAC				
Power Factor		1.0				
Voltage Precision		±1%				
Frequency Normal		1. The output frequency synchronizes with the input frequency when the input frequency is in the range of 46~54Hz or 56~64Hz				
Frequency Battery		(50/60±0.1%)Hz				
Overload Capacity		Battery Mode: 108%±5%<Load=150%±5% exceed 30s ,cut off and alarm 150%±5%<Load<200%±5% exceed 300ms, cut off and alarm Utility Mode: 108%±5%<Load=150%±5% exceed 30s transfer to bypass and alarm, 150%±5%<Load<200%±5% exceed 300ms transfer to bypass and alarm				
Transfer Time		0ms (Normal mode<----->Battery mode), <4ms (Normal mode <-----> Bypass mode)				
Crest Factor		3:1				
BATTERY		LITHIUM-IRON (LiFe Po4) Compatible				
Model		RT-BR06007-Li	RT-BR12007-Li	RT-BR12009-Li	RT-BR20007-Li	
Battery Type		Lithium-ion / Iron Phosphate Chemistery (LiFe Po4)				
Batt. DC Voltage		24/48VDC	48/72VDC	72/96VDC	±192VDC	
Battery WH		288WH	576WH	1152WH	2300WH	
Max.Charge Current		1A /2A ~ 12A Auto Sensing				
Batt.Bank Size		1U		2U	4U	
Extended batt. Bank		upto 5		upto 10		
Run time		5-10 mins. for 1 cabinet, expendable by adding cabinets reaching upto 60 mins.				
Typical Recharge Time		4 hours recover to 90% capacity				
GENERAL						
Short Circuit/Battery Low		System Freezes / Alarm and Switched Off				
Over Heat		Line Mode: Switch to bypass. Backup Mode: Shut down UPS immediately				
EPO		Shut Down Immediately				
Ambient Temp.		0°C~40°C				
Humidity		20%~90% (No condensation)				
Altitude		Lower than 1000m: no detracting: Over 1000m 1% detracting for every 100m rise				
Storage Temp.		-15°C~45°C				
Noise Level		<40dBA				
Communication Interface		Rs232, USB, (SNMP, Parallel card, Relay card and RJ45 are optional)				
Protection Class		IP20				
Audible & Visual Alarm		Line Failure, Battery low, Over Load, System Fault				
STANDARDS						
Safety		IEC/EN62040-1,IEC/EN60950-1/IEC/EN62477-1(6&10kva)				
EMC		IEC/EN62040-2,IEC61000-4-2,IEC61000-4-3,IEC61000-4-4,IEC61000-4-5,IEC61000-4-6,IEC61000-4-8				
Efficiency		92~96% (AC Mode) At output				
EMI Filter		Filter Included				
Surge Capacity		480 Joules				
Harmonic DistortionTHDi		≤3% (100% Linear load)				
Harmonic DistortionTHDv		≤2% THD(Linear load) ~ ≤4% THD (NON Linear load)				
DIMENSION UPS						
Size WxHxD		2U 440x600x86.5			2U 440x625x86.5	
Weight		10.5		11	16	18
Input Connection		IEC60320-C14			Hardwire	
Output Connection		IEC320 C13 x 8, IEC320 C19 x 1(2)			Hardwire	
External Battery Connection		Anderson like PowerPole Modular Connectors				

DP Electronics (Deutsche Power Co. Limited) has a policy of continuous product development and improvement and therefore reserve the right to vary any information without prior notice.

ONLINE DOUBLE CONVERSION UPS (Elektra Series)

TECHNICAL SPECIFICATION FOR SINGLE PHASE IN & SINGLE PHASE OUT

MODEL	ES115-RT-Li	ES120-RT-Li	ES125-RT-Li	ES130-RT-Li
	15KVA	20KVA	25KVA	30KVA
	15000W	20000W	25000W	30000W
INPUT				
Nominal voltage	220/230/240Vac (L+N+PE)* & 380/400/415Vac, (3Ph+N+PE)			
Operating voltage range	208~478Vac			
Operating frequency range	40Hz~70Hz			
Power factor	0.99 & 1			
Bypass voltage range	220Vac Max.voltage: +25%(optional +10%,+15%,+20%) 230Vac Max.voltage: +20%(optional +10%,+15%) 240Vac Max.voltage: +15%(optional +10%) Min. voltage: -45% (optional -20%,-30%) Frequency synchronize tracing range: ±10%			
Generator input	Support			
Harmonic distortion (THDi)	<3% (100% linear load)			
OUTPUT				
Output voltage	220/230/240Vac (L+N+PE)* & 380/400/415Vac (3Ph+N+PE)			
Power factor	1			
Voltage regulation	±1%			
Frequency: line mode bat.mode	Synchronize with input; when input frequency >±10% (±1%/±2%/±4%/±5% optional), (50/60±0.1)Hz.			
Crest factor	3:1			
Harmonic distortion (THD)	2% with linear load, 4% with non linear load			
Efficiency	95.60%			
BATTERY	Lithium-ion / Iron Phosphate Chemistery (LiFe Po4)			
Battery Model	RT-BR20009-Li			
Batt. DC Voltage	± 192VDC(384)			
Rack size	4Ux2			
Run time	5-30 mins. depending on the rating of the UPS			
Battery WH	4600WH			
SYSTEM FEATURES				
Transfer time	Utility to Battery : 0ms; Utility to bypass: 0ms			
Over Load	Load<110% last 60 min; <125% Last 10 min; 150% Last 1 min			
Backfeed	Support			
Alarm	Overload, utility abnormal, UPS fault, battery low, etc.			
Protection	Short circuit, overload, over temperature, battery low, fan fault alarm.			
Communication 10-30Kva	USB, RS232, RS485, Parallel port, Dry contact port, REPO port, Backfeed port, Intelligent slot, SNMP (optional) Intelligent slot, SNMP card (optional), Relay card (optional)			
ENVIRONMENTAL				
Operating temperature	0 C ~ 40 C			
Storage temperature	25 C~55 C (no battery)			
Humidity range	0~95% (non condensing)			
Altitude	< 1500m.When>1500m,lower the rated power for use			
Noise level	<55dB		<56dB	<58dB
PHYSICAL				
Dimension D x W x H (mm)	443x580x131(3U)		800x440x175(4U)	
Net Weight (kg)	29		31	32
STANDARDS				
Safety	IEC/EN62040-1 ,IEC/EN60950-1			
EMC	IEC/EN62040-2,1EC61 000-4-2,1EC61 000-4-3,1EC61 000-4-4,1EC61 000-4-5,1EC61 000-4-6,1EC61 000-4-8			

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