

30 kVA - 200 kVA



- Complete range 30-200 kVA
- Small footprint
- High efficiency up to 96,5%
- Zero impact source
- Flexibility of use
- Advanced communications

The Electa series is ideal for protecting data centres and telecommunications systems, IT networks and critical systems in general, where the risks connected with poor energy supply can compromise the continuity of activities and services. The Electa series is available in 30-40-60-80-100-125-160-200 kVA models with three-phase input and output and on-line double conversion technology in accordance with VFI-SS-111 classification (as set out in standard IEC EN 62040-3). Electa is designed and built using state-of-the-art technology and components. It has a fully controlled IGBT rectifier to minimize the impact on the grid. It is controlled by a DSP (Digital Signal Processor) microprocessor, to provide maximum protection to the powered loads with no impact on downstream systems, and optimised energy savings.

Zero impact source

Electa solves installation problems in systems where the power supply has limited power available, where the UPS is supported by a generator or where there are compatibility problems with loads that generate harmonic currents; Electa has a zero impact on its power source, whether this is the mains power supply or a generator:

- input current distortion < 2,5%
- input power factor 0,99
- power walk-in function that ensures progressive rectifier start up
- start-up delay function, to restart the rectifiers when mains power is restored if there are several UPS in the system. In addition, Electa plays a filtering and power factor correction role in the power network upstream of the UPS, as it eliminates harmonic components and reactive power generated by the power utilities.

Battery care system

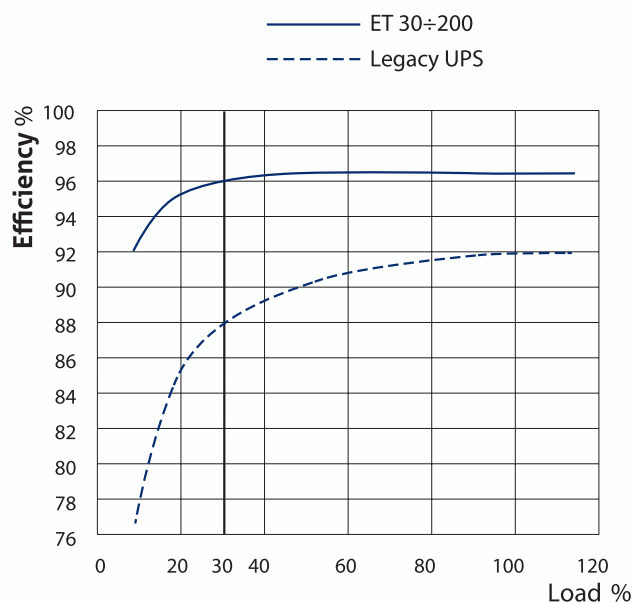
Proper battery care is critical to ensuring correct UPS operation in emergency conditions. The Lever UPS battery care system consists of a series of features and capabilities to optimise battery management and obtain the best performance and operating life possible. Battery recharging: Electa is suitable for use with hermetically sealed lead-acid (VRLA), AGM and GEL batteries and Open Vent and Nickel Cadmium batteries. Depending on the battery type, different charging methods are available:

- One-level voltage recharge, typically used for widely available VRLA AGM batteries
- Two-level voltage recharge according to IU specification
- Charge blocking system to reduce electrolyte consumption and lengthen the life of VRLA batteries. Recharge voltage compensation based on temperature in order to prevent excessive battery charges or overheating. Battery tests to diagnose in advance any reduction in performance or problems with the batteries. Deep discharge protection: during extended low-load discharges, the end-of-discharge voltage is increased - as recommended by battery manufacturers - to prevent damage or reduced battery performance. Ripple current: recharge ripple current (residual AC component) is one of the main causes of reduced reliability and battery life. Using a high frequency battery charger, Electa reduces this value to negligible levels, prolonging battery life and maintaining high performance over a long period of time. Wide voltage range: the rectifier is designed to operate within a wide input voltage range (up to - 40% at half load), reducing the need for battery discharge and thus helping to extend battery life.



High efficiency

State-of-the-art three-level NPC inverters are used across the power range (30÷200) to achieve an operating efficiency of 96,5%. This technology halves (50%) the energy dissipated in a year by traditional UPS, with an efficiency level of 92%. Its exceptional performance makes it possible to recover the capital investment cost in less than three years of operation.



Maximum reliability and availability

Distributed parallel configuration of up to 6 units per redundant (N+1) or power parallel system. The UPS continue to operate in parallel even if the connection cable is interrupted (Closed Loop).

Advanced communications

Advanced technology and use of high performance components, allows Electa to provide exceptional performance and efficiency, with a compact size:

- the smallest overall footprint is only 0,37 sqm for Electa 40 kVA with batteries
- the type of input stage (IGBT rectifier) ensures an input power factor close to 1 with low current distortion, avoiding the need for bulky and expensive filters
- unity output power factor for ET 160 – 200 make it suitable to any data centre application ensuring full power availability no matter what the utilities power factor range (typically from 0,9 lagging to 0,9 leading)
- more active power than a traditional UPS, guaranteeing a greater margin when sizing UPS for potential future load increases.
- smart ventilation principle on ET 160-200 manages the number of operating fans and their speed according to room temperature and load level. This preserves the life span of the fans and at the same time we reduce noise level and overall power consumption for unnecessary UPS ventilation.

Flexibility

With its flexible configuration, performance, accessories and options, ELECTA is suitable for use in a wide range of applications:

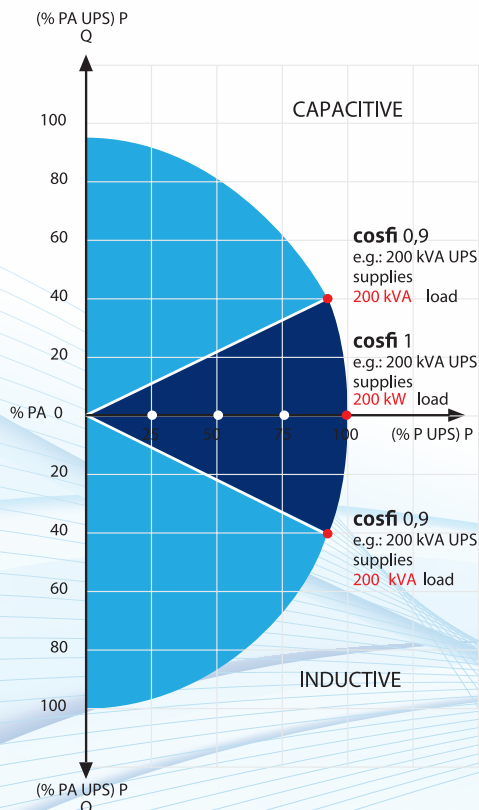
- suitable for powering capacitive loads, such as blade servers, without any reduction in active power from 0,9 lead to 0,9 lag
- On-line, Eco, Smart Active and Stand By Off operating modes - compatible with centralised power systems (CSS) applications.
- frequency converter mode
- configurable EnergyShare sockets to preserve runtime for the most critical loads or to be activated only when mains power fails
- Cold Start to switch on the UPS even when there is no mains power present
- ET 30-40 version: cabinet (1320 x 440 x 850mm HxWxD) for optimised solutions when medium to long-term runtimes are required.

ET 60-100 with Socle box (h: 1850 mm)

- optional temperature sensor for external battery cabinets, to assist recharge voltage compensation
- high power battery chargers to optimise charge time in the event of long runtimes
- optional dual input mains power supply
- isolation transformers for modifying the neutral earthing (separate power sources), or for galvanic isolation between the input and output
- 220 V three-phase IN/OUT version and 50/60 Hz frequency for 10-40 kVA power ratings
- different sized battery cabinets and capacities, for extended runtimes
- with the ET 60-100 the UPS can be raised up to 25 cm from the ground to allow the cables to pass more freely to/from the UPS terminal board
- eT 160-200 could be equipped with a side mounted top entry cabinet to arrange UPS cabling from the top.



ELECTA ET 160-200 with top cable entry

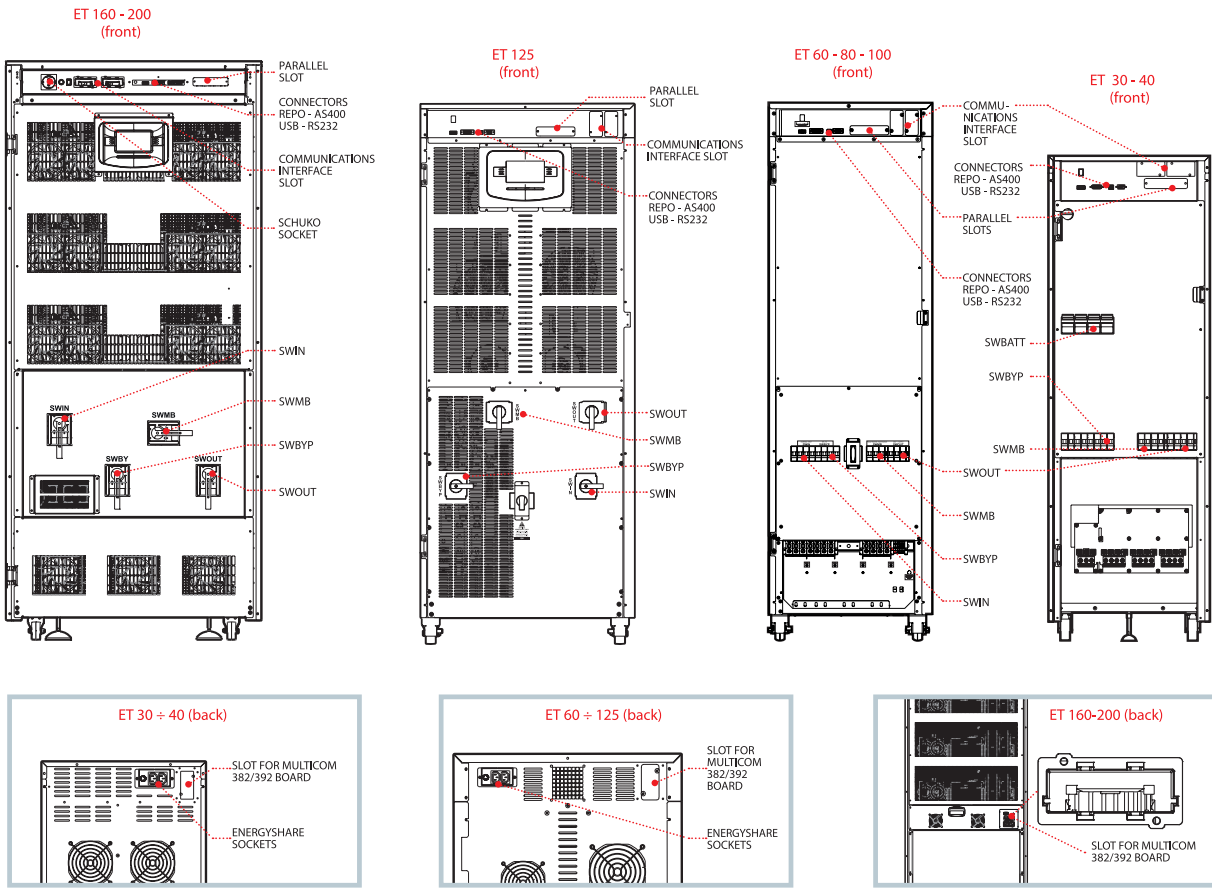


Advanced communications

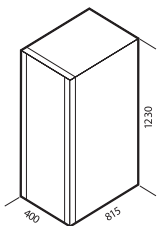
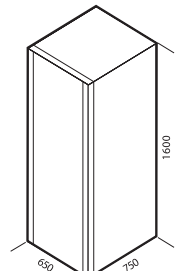
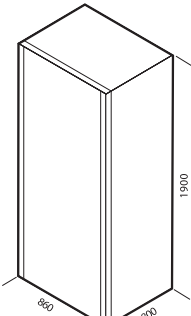
Electa is equipped with a back-lit graphic display (240x128 pixels) providing UPS information, measurements, operating states and alarms in different languages. It can also display wave forms and voltage/current forms. The default screen displays UPS status, graphically indicating the status of the various assemblies (rectifier, batteries, inverter, bypass).

- Advanced multi-platform communications for all operating UPSmon5 monitoring and shutdown software included for Windows operating systems 8, 7, Hyper-V, 2012, 2008, and previous versions, Mac OS X, Linux, VMWare ESXi, Citrix XenServer and other Unix operating systems
- RS232 serial and USB ports
- 3 slots for the installation of optional communications accessories such as network adapters, potential free contacts, etc.
- REPO Remote Emergency Power Off for switching off the UPS via a remote emergency button
- Input for the connection of the auxiliary contact of an external manual bypass
- Input for synchronisation from an external source
- Graphic display panel for remote connection.

DETAILS



BATTERY BOX

MODELS	BB12079S0	BB4040S0	BB40100B0
DIMENSIONS (mm)			

ELECTA Technical Guide

MODEL	ET30BAT	ET40BAT	ET60	ET80	ET100	ET125	ET160	ET200
	INPUT							
Nominal voltage	380-400-415 Vac three-phase + N							
Nominal frequency	50/60 Hz							
Frequency tolerance	40 - 72 Hz							
Power factor at full load	0,99							
Current distortion	THDI ≤ 3%						THDI ≤ 2,5%	
	BYPASS							
Nominal voltage	380-400-415 Vac three-phase + N							
Number of phases	3 + N							
Voltage tolerance (Ph-N)	180 - 264 V (selectable)							
Nominal frequency	50 or 60 Hz (selectable)							
Frequency tolerance	±5 (selectable)							
Bypass overload	125% for 60 minutes, 150% for 10 minute							
	OUTPUT							
Nominal power (kVA)	30	40	60	80	100	125	160	200
Active power (kW)	27	36	54	72	90	112,5	160	200
Power factor	0,9						1	
Number of phases	3 + N							
Nominal voltage (V)	380-400-415 Vac three-phase + N (selectable)							
Static variation	± 1%							
Dynamic variation	± 3%							
Crest factor	3 : 1 Ipeak/Irms							
Voltage distortion	≤ 1% with linear load / ≤ 3% with non-linear load							
Frequency	50/60 Hz							
Frequency stability during battery operation	0,01%							
	BATTERIES							
Type	VRLA AGM/GEL/NiCd/Li-ion/Supercaps							
Recharge time	6 hours							
	INFO FOR INSTALLATION							
Weight without batteries (kg)	135	145	190	200	220	250	450	460
Dimensions (WxDxH) (mm)	440x850x1320		500x850x1600		650x840x1600		850x1050x1900	
Communications	3 slots for communications interface / USB / RS232							
Operating temperature	0 °C / +40 °C							
Relative humidity	90% non-condensing							
Colour	Dark grey RAL 7016							
Noise level at 1 m [dBA ±2]	< 40 dBA		< 63 dBA				< 50 dBA	
Smart Active								
IP rating	IP20							
Smart Active efficiency	up to 99%							
Standards	European Directives: L V 2006/95/CE low voltage Directive EMC 2004/108/CE electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2 C2 Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111							
Moving the UPS	castors / transpallet (10 - 20 kVA)							

BAT Also available with internal batteries

