



L'Énergie Sans Limite !
Safe Energy for Life !



Critical, industrial and medical applications



NEW

Evolution II

From 10 to 200k VA

The E4 Evolution II TT range is the new three-phase solution designed to protect the most strategic powerful loads. It offers all the features needed to ensure maximum security, even in sensitive environments.

A range with many advantages

The E4 Evolution II TT range is equipped with On Line Double Conversion technology, controlled by microprocessor, and is intended to permanently supply the most demanding infrastructures with high-quality power. These UPSs are designed with multiple internal power modules placed in parallel which simplifies procedures and reduces maintenance costs. Their numerous possibilities of communication interfaces, configuration and backup time extension make them some of the best-performing products on the market !



Pros of the E4 Evolution II TT range from 100 to 200 kVA

- Power factor = 0.9
- Dual input
- Parallel configuration up to 2 devices with one single set of batteries
- Touch LCD screen

Pros of the E4 Evolution II + TT range from 10 to 80 kVA

- Power factor = 1
- Smart battery charger
- Parallel configuration up to 3 devices with one single set of batteries



On Line Double Conversion Technology



Redundant parallelizable



High Efficiency



Remote control software



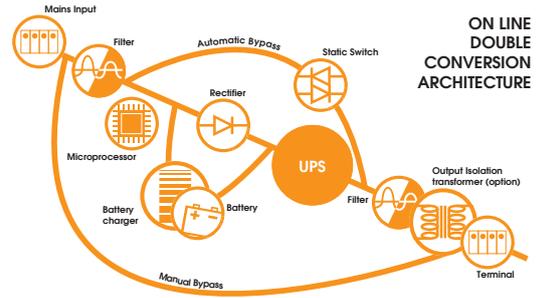
Extended backup time available

A RELEVANT ANSWER TO THE MOST DEMANDING NEEDS

On Line Double Conversion Technology

The E4 Evolution TT product range is equipped with the On Line Double Conversion with High Frequency Technology, providing the users with the highest security level. The current is constantly delivered by the UPS device, thus guaranteeing a constant voltage level with a perfect stability. Critical applications are therefore supplied with a perfect current as they are independent from the mains input. There is no commutation time and no micro-power shortage.

The output power factor is optimal, reaching 1 over the E4 Evolution II + TT range from 10 up to 80 kVA and 0.9 over the E4 Evolution II TT range from 100 up to 200 kVA. Microprocessor UPS driving provides a wide input voltage range, a high input power factor, and low harmonic distortion.



High output and performance

E4 Evolution II TT ranges combine the best UPS in terms of rectifier, filter, charger, UPS, DS controller to ensure the best possible efficiency and performance. E4 Evolution II TT UPS ensures a high overall efficiency of 94%.

Total protection of the most critical loads

E4 Evolution II TT range was designed to supply permanent high-quality power to the most demanding infrastructures. This product embeds all the useful features required to efficiently protect critical activities such as :

- Industrial production facilities
- Datacenters
- Banking
- Medical labs



Extended Backup Time

In order to get extended backup time, battery extension modules can be connected as an option to E4 Evolution II TT.

Different types of battery modules are available according to the type of battery needed, but also to the physical setting. Depending on the type of installation and equipment to protect (single UPS device or several devices connected in parallel), backup time need may vary. Large and scalable range of battery banks allows to answer most of the needs.

E4 Evolution II TT UPS are also available in S versions (for extended backup time needs). These UPS are built with a powerful charger, without internal batteries but with external battery banks connectors.

Optimum Design: Small Footprint

E4 Evolution II TT has been designed with an optimized architecture, allowing to significantly reduce the occupied space of the product. Its internal components being of a smaller size than the average UPS parts, the cabinet of E4 Evolution II TT has been minimized and is distinctly smaller than the average volume of UPS devices of equivalent power.

E4 Evolution II TT can easily adapt to the stocking constraints of small and larger businesses and all types of environment.

SECURITY AND SERVICE CONTINUITY

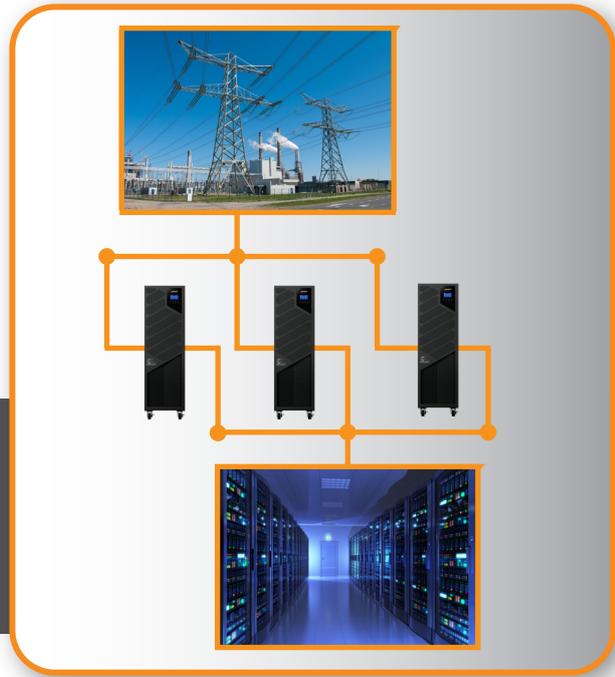
Parallel installation

To enhance system security and meet the need for system flexibility and upgradability, E4 Evolution II TT can be configured in parallel. Up to 3 units can be connected in parallel for models from 10k to 80k VA. For models from 100k to 200k VA, 2 units can be connected in parallel, increasing the power and redundancy for even greater security. The parallel feature is built into the UPS and is therefore configurable for free.

Parallel configuration of two or three E4 Evolution II TT can, at the same time, increase the power supported by the array, and maximize the security provided to the connected equipment.

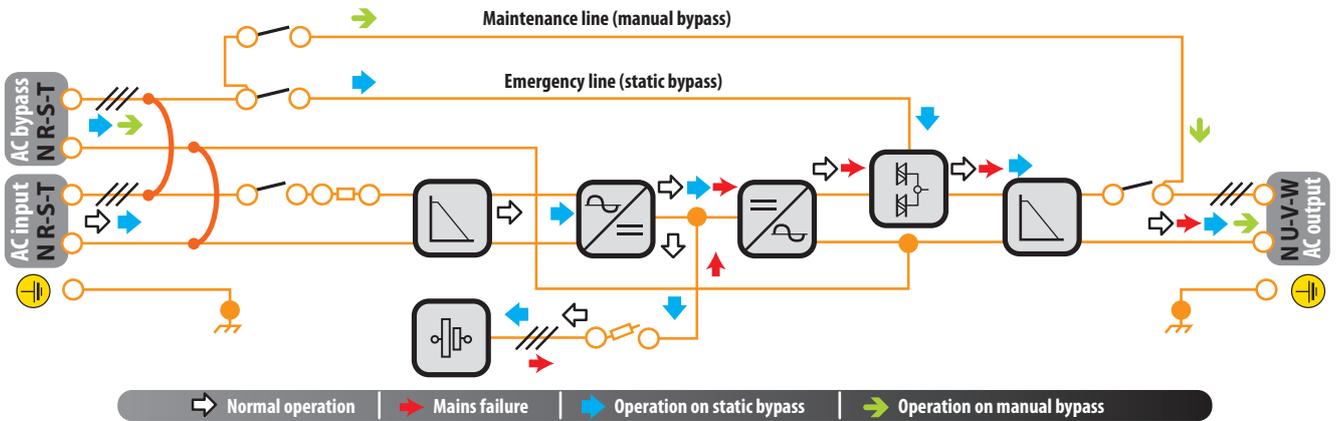
E4 Evolution II TT can therefore stand a connected load of up to 400 kVA.

In case of a temporary fault or a maintenance activity on one of the E4 Evolution II TT of an installation, the parallel configuration allows to switch automatically to the available E4 Evolution II TT backup capabilities.



Static By-pass and Manual By-Pass

Its dual power supply network with independent rectifier and by-pass is appropriate for use in facilities running separate redundant network systems with generator sets (hospitals, airports, train stations, supermarkets, cold chains, etc.). In this way the critical load can be powered by a second source supplying the by-pass circuit, should the main source fail for a lengthy period (see details in the technical specifications chart).



Dual Input

Dual power supply network with independent rectifier and by-pass is appropriate for use in facilities running separate redundant network systems with generator sets (hospitals, airports, train stations, supermarkets, cold chains, etc.).

In this way should the main source fail for a lengthy period the critical load can be powered by a second source supplying the by-pass circuit.

Easy maintenance

E4 Evolution II TT power system is composed of several power boards installed in parallel that can be switched easily.

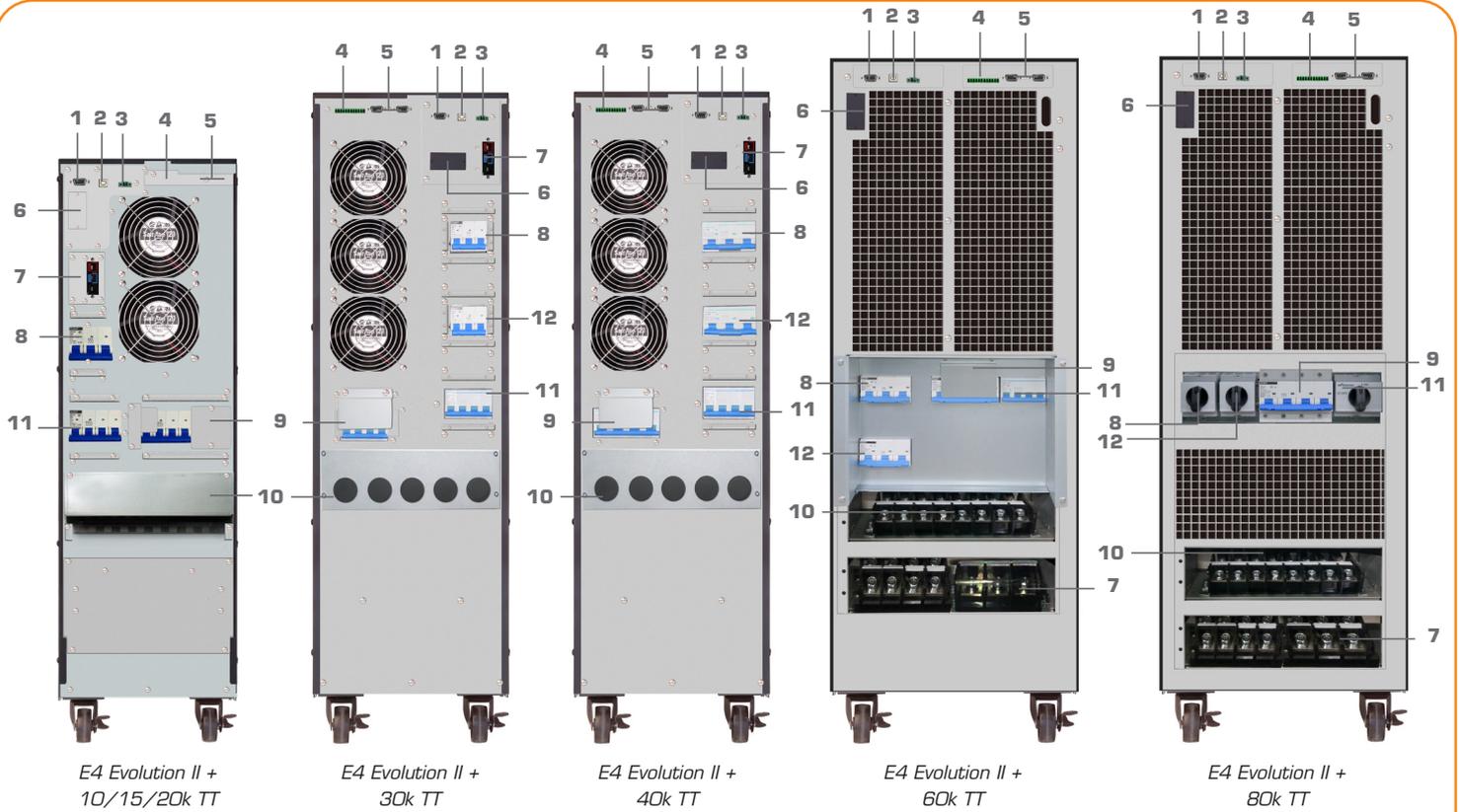
Maintenance interventions are simplified and safer for the technicians, reducing the overall costs of maintenance operations.

DSP - Digital Signal Processor

E4 Evolution II TT as a processor dedicated to calculations and signal quality: the DSP has the ability to process a huge amount of information in real time (20 million instructions per second). On one hand, the DSP controls the rectifier and the network current quality and, on the other hand, it controls the output voltage quality thus guaranteeing users exceptional performance in terms of voltage accuracy, efficiency and reliability.

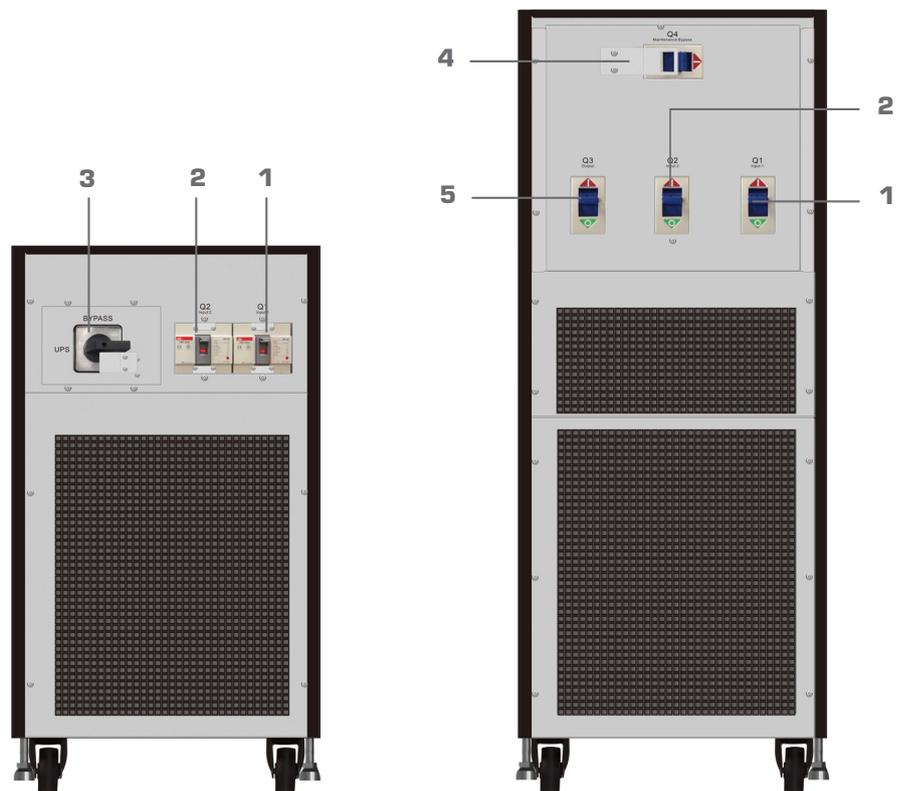


CONNECTION



- | | |
|---|---|
| 1. RS-232 communication port | 7. External battery connector |
| 2. USB communication port | 8. Input circuit breaker/switch |
| 3. Emergency power off function connector | 9. Maintenance bypass switch |
| 4. Parallel port | 10. Input / Output terminal |
| 5. Port parallèle | 11. Output switch |
| 6. Intelligent slot SNMP | 12. Bypass input circuit breaker/switch |

1. Input breaker Q1
2. Input breaker Q2
3. Output and maintenance bypass switch
4. Maintenance bypass breaker (Q4)
5. Output breaker Q3



E4 Evolution II 100/120k TT

E4 Evolution II 160/200k TT

USER-FRIENDLINESS & COMMUNICATION

LCD Screen

- Sharp and user friendly: status indicators and real-time parameters information
- Intuitive LCD display on the front panel: direct access to the UPS settings for a quick adjustment of the operational modes (output voltage settings...)
- Frequency setting on 50 or 60 Hz or auto-detection (easily set from the LCD screen of the device)



LCD screen
10k to 80k VA models

Touchscreen 10"
100k to 200k VA models



For maximum security, and thanks to all these communication systems, the UPS can be monitored remotely 24 hours a day and 7 days a week. The numerous available communication solutions allow to adapt to many interfaces used in various sectors and activities.

Remote Controlling through USB & RS232 ports

The USB and RS232 ports allow to use the communication protocols developed for IT infrastructures, data centers and telecommunications networks.

These features enable the remote control of the UPS and to set alerts in order to obtain real-time information on its functioning status.

The user interface allows to program the shutdown of the connected devices and applications protected by the UPS in order to avoid any information loss, and to prevent from potential damage caused to the machines.

INFOPOWER SOFTWARE

Designed to simplify remote monitoring of the UPS, InfoPower remote controlled software is a user-friendly interface for computers allowing to parameter its different settings in case of a power failure, or to monitor the different UPS status



SNMP I Pro agent (option)

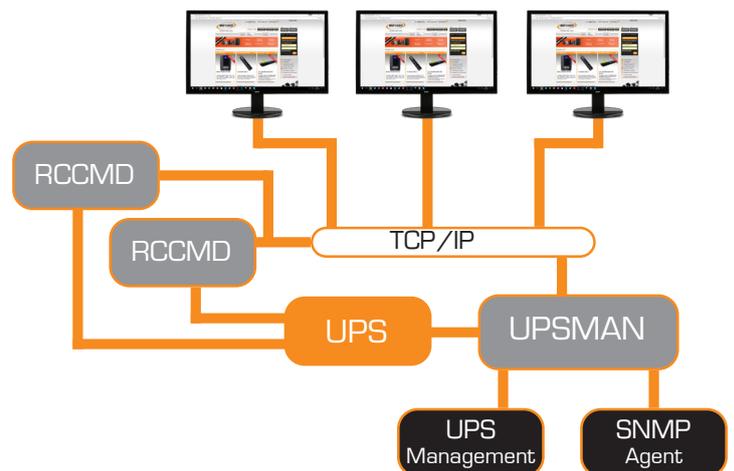
Using the SNMP I pro agent with the E4 Evolution II TT UPS devices makes it easier to manage the UPS due to its various special features: connection to the Ethernet network and identification by IP address (random or fixed), setting and programming a system, shutdown and restart on a weekly basis, local or remote UPS configuration...

Virtual Networks SNMP card (option)

UPS devices compatibility with virtual network servers is a key issue to manage the protection of critical and sensitive hardware such as datacenters or high-scale distant servers.

Nowadays, server virtualization is necessary to protect data and increase data storage availability for IT businesses. It is therefore mandatory to offer UPS devices compliant with remote controlling and the closure of virtual servers.

The SNMP card option is compatible with vmWare® and HyperV® servers and allows the E4 Evolution II TT to position as an optimal tool for the protection of key industry infrastructures, IT or medical environment.



APPLICATIONS

Infrastructures

Large infrastructures often require total security guarantee, as their functioning must be continuous and never suffer any forced interruption, in order to avoid any human risks which consequences could be extremely damaging. Such risk cannot be ignored nor minimized.

E4 Evolution TT offers critical requirements of airports, train stations, hospitals, laboratories, tunnels, malls and other public infrastructures protected and guaranteed continuous supply of their critical applications.



Industrial equipment

Production lines using equipment that cannot suffer any power shortage, including micro-power shortages, have a critical need for electrical protection of their production units.

Factories in the energy industry are also directly concerned by the need to provide an uninterrupted power supply to their applications.

The versatility and adaptability of **E4 Evolution II TT** to any type of load, including the more complicated ones (inductive, capacitive, non-linear, discharge lamps, inductive engines...), together with its high efficiency make it **the ideal solution to guarantee the power supply and the continuity of the activities and services for any industrial application.**



IT & Telecommunications

The phenomenal growth of the telecommunications sector implies the need for uninterrupted availability of communications and service for the suppliers as well as the subscribers.

E4 Evolution TT UPS product range can provide the required autonomy to avoid power shortage. A powerful battery charger allows to set and guarantee additional backup time thanks to several battery packs.

Moreover, the efficient communication systems of this UPS device **allow a 24/7 remote monitoring and surveillance** thus guaranteeing an immediate reaction in case of a problem or fault on the system.



Data centers

Data centres are easily affected by power quality fluctuations. A shortage, even of only a few seconds can have tremendous consequences for a company (data loss, interruption of business...).

INFOSEC recommends the E4 Evolution II TT range as an optimal answer to power supply-linked problems, allowing operators of data treatment centers to improve the efficiency of their equipment, thus providing the adequate answer to their clients' needs.



E4 Evolution II TT's advantages for data centers: parallel redundancy, top-ranked technologies (IGBT rectifier, AFC control...), remote control...

SERVICES & TECHNICAL SUPPORT

Pre-sales and after-sales services provide an appropriate solution to your needs to ensure the durability, reliability and availability of your UPS.

Technical requirements & pre-installation assistance



A needs pre-qualification questionnaire will help validate the technical choices and options selected for each installation configuration. Our technical sales team can be consulted for the most complex issues.

Installation, testing, commissioning



An INFOSEC engineer or an INFOSEC certified installer will come to your site to install and start-up the UPS. A test report would be then provided.

Technical support hotline



The after-sales service can be contacted quickly by phone and/or email to answer any questions or technical queries.

Replacing the batteries



It is important to ensure the proper operation of the batteries which, after a few years of operation must be changed (between 3 and 5 years depending on the room temperature, number of charge and discharge cycles).

The batteries absolutely must be changed by a professional: only an INFOSEC engineer or approved INFOSEC engineer may intervene on request.



Hotline

+33 (0)2 40 76 15 82

hotline@infosec.fr



■ Technical training

INFOSEC makes technical training available for its partners and customers:

- Training in the use subsequent to on-site commissioning.
- More comprehensive training on all INFOSEC UPS SYSTEM product lines for authorised partners.
- Technical-sales training for sales support and to calculate the size of a UPS according to the facilities to be protected..

TECHNICAL SPECIFICATIONS

E4 Evolution II + 10K (S) TT	E4 Evolution II + 15K (S) TT	E4 Evolution II + 20K (S) TT	E4 Evolution II + 30K (S) TT	E4 Evolution II + 40K (S) TT	E4 Evolution II + 60K TT S	E4 Evolution II + 80K TT S	E4 Evolution II 100K TT S	E4 Evolution II 120K TT S	E4 Evolution II 160K TT S	E4 Evolution II 200K TT S
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From 10k to 200 kVA

GENERAL CHARACTERISTICS

Technology	On Line Double Conversion										
Power (VA)	10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	80kVA	100kVA	120kVA	160kVA	200kVA
Power (W)	10kW	15kW	20kW	30kW	40kW	60kW	80kW	90kW	108kW	144kW	180kW
Power factor	1										
	0,9										

CARACTERISTIQUES PHYSIQUES

Standard model	Dimensions L x W x H (mm)	627 x 250 x 826			815 x 300 x 1000							
	Net weight (kg)	105	125	125	225	250						
Extended backup time model (S)	Dimensions L x W x H (mm)	627 x 250 x 826			815 x 300 x 1000			790 x 360 x 1010	945 x 567 x 1015	995 x 567 x 1455		
	Net weight (kg)	41	45	45	60	61	108*	113*	207*	233*	309*	343*

INPUT

Nominal voltage	3 x 400 VAC (3Ph+N)									
Acceptable voltage range	190-520 VAC (3-phase) @ 50% of load 305-478 VAC (3-phase) @ 100% of load					208-478 VAC (3-phase) @ 70% of load 305-478 VAC (3-phase) @ 100% of load				
Frequency range	46~54 Hz or 56~64Hz					40~70Hz				
Phase	Three phase									
Power factor	>=0.99 @ 100% Load									
Dual Input	Optional					Included				

OUTPUT

Nominal voltage	3 x 360*/380/400/415 VAC (3Ph+N)					3 x 380/400/415 VAC (3Ph+N)					
Voltage regulation (inverter mode)	± 1%										
Frequency Range (Synchronized Range)	46~54Hz or 56~64Hz										
Frequency Range (Batt. Mode)	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz										
Admissible crest factor	3:1 (max.)										
Harmonic distortion	<=2 % THD (Linear Load) <=4 % THD (non Linear Load)										
Transfer Time	Line mode to Battery mode	0 ms									
	Inverter to Bypass	0 ms									
Output form	Pure Sinewave										
Output connection	Terminal										

EFFICIENCY

AC mode	94%									
Eco mode	97%					98%				
Batterie mode	93,5%					93%				

BATTERY

Standard model	Typical Recharge Time	9 hours @ 90% capacity			5 hours @ 90% capacity			
	Charging current (max)	12A			24A	32A	40A	48A
Extended backup time model (S)	External backup module	No			Yes			
	Backup time	Depending on the connected load			Depending on backup modules			
Extended backup time model (S)	Type de batterie	Depending on the ackup time requested						
	Nombre de batterie							
	Charging current (max)	12A			24A	32A	40A	48A
	External backup module	Yes						

INDICATORS & ALARMS

LCD Screen	Load level, Battery level, AC mode, Battery mode, bypass mode, and Fault indicator	10"LCD Touch Screen
Audible alarms	Battery mode, low battery, overload and fault	

BYPASS

Static bypass	Yes
Manual bypass	Yes

MANAGEMENT / COMMUNICATION

Communication via RS-232 / USB port	Support Windows family, Novell, Linux, Mac, FreeBSD
Optional SNMP I Pro	Management system through SNMP software (VMware®, Hyper V™ compatible) and web browser
EPO Connector	Yes
Parallel installation	3 UPS
Parallel connector	Yes

ENVIRONMENT

Operating Temperature and Humidity	0-95 % RH à 0-40°C (without condensation)					
Noise level	Less than 55dB@ 1 Meter	Less than 60dB@1Meter	Less than 70dB @1Meter	Less than 75dB @1Meter	Less than 70dB @ 1Meter	Less than 73dB @1Meter

NORMS

Standard	CE RoHS
EMC	EN62040-2:2006; EN61000-2-2:2002; EN61000-4-2:2009; EN61000-4-3:2006+A1:2008+A2:2010; EN61000-4-4:2004+A1:2010; EN61000-4-5:2006; EN61000-4-6:2009; EN61000-4-8:2010
LVD (Safety)	EN62040-1: 2008+A1:2013

SALES INFO

Warranty	1 year										
PN - Standard models	67597	67598	67599	67607	67608						
PN - Extended backup time models (S)						67611	67612	67555	67556	67557	67558
PN - Without batteries versions (SB)	67604	67605	67606	67613	67614						

* Net weight without batteries
S models are UPS devices dedicated for extended backup time without internal batteries.
LV version (110V) is available from 10k to 80k VA.

Communications solutions and remote management

USB & RS232, SNMP & EPO communication ports

Infopower software :

- Simple user interface
- UPS startup and shutdown programming
- Data and events record enabling daily maintenance
- E-mail messaging to manage UPS status at all times via the local network
- Free download from the website

Package content

- E4 Evolution II TT
- Backup Module (>40kVA models)
- 1RS 232 cable
- 1USB cable
- 1 battery cable (S version)
- parallel cable (>40kVA)
- 1User's Manual (ENG-FR)
- 1 Infopower management software

Options

Désignation	Réf
SNMP I Pro Agent	61156
SNMP vm Minislot agent	61142
Dual Input kit for 10-20k	67908
Dry Contact Card (AS 400) (10k to 30k VA)	61454
Isolation transformer	NC
RS 485 card (10k o 30k VA)	61439
Environment Measure Device (EMD)	61452
Additional Backup module	NC
IP 21	NC
Parallel kit: 10-20k	67909
Parallel kit: 30k	61460

Warranty

One-year guarantee against manufacturing defects under normal conditions and compliance with precautionary measures.

Warranty to be registered on the website within 10 days of purchase.



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