INFOSEC™
UPS SYSTEM

L'Énergie Sans Limite !
Safe Energy for Life !

# Networks & critical applications, industrial environments

## E6 LCD-RT Evolution
### From 1 to 10 kVA

**On Line Double Conversion Rack-mount UPS. The ideal solution to effectively protect your critical systems and industrial environments. The E6 LCD RT EVOLUTION range relies on microprocessor control technology intended in particular for users of critical systems that require reliability, availability and high performance at the same time (telecommunications equipment, critical industrial applications, etc.).**

## High Performance and reliability

E6 LCD RT Evolution offers your connected devices a high level of protection against overvoltage, overload and short-circuits:

*E6 LCD RT Evolution from 1 to 3 kVA*

- Output power factor of 0.9
- Up to 3 operating modes: Normal, Eco and Advanced Eco (efficiency up to 98%)
- Programmable outlets enabling different groups of loads to be easily and independently controlled. (models up to 3 kVA)
- Connector for emergency stop EPO/CPAU function ensuring the safety of personnel and equipment in the event of an emergency

## Compatible design

The practical and versatile E6 LCD RT Evolution is designed for simple installation. Its compact 2 in 1 design fits easily into a variety of environments: horizontally, in a patch bay with attachment brackets (included) or vertically in «tower» with its base (included). A reinforcing attachment (rack kit) option is recommended to secure UPS devices in unequipped patch bays.

## The most reliable of technologies

The On Line Double Conversion technology delivers a perfect sinewave output current and provides thorough and effective protection of critical devices.

## Parallel installation

E6 LCD RT Evolution, an ideal solution for data centres from 5 kVA upward, can connect up to 3 UPS devices in redundant parallel mode (N+X) and thus increase the capacity up to 30 kVA.

## Essential advantages

- Warm swappable batteries enable an uninterrupted supply to critical and key loads during maintenance work
- Audible and visual alarms to warn in event of a problem
- Cold start function if there is no mains power
- UPS automatic restart when mains power restored


**On Line Double Conversion Technology**

**Rack/Tower convertible**

**Redundant parallelizable***


**LCD control screen**

**Remote control software**

**Extended backup time possible ***

* see models concerned below

# AVANTAGES

## Power factor of 0.9

- Optimal output power factor : 0.9 (NB: 0.8 for models from 1 to 3 kVA)
- High performance
- Efficiency for critical applications

## Energy Saving ECO Mode

Efficiency of up to 92% from 1 to 3 kVA and 96% for powers from 5 to 10 kVA reduce energy consumption and costs. This operating mode delivers a static bypass power supply and offers timely return to on-line double conversion if required. The E6 devices from 1 to 3 kVA also have an Advanced Eco mode that provides up to 98% efficiency.

## User-friendly LCD display

- Accurate and user-friendly LCD screen displays status and parameters in real time
- Intuitive and multi-directional : allows both Tower and Rack-mount
- Rotating front panel LCD display : gives direct access to UPS settings (adjusting output voltage...)
- Simple programming from the front panel LCD screen enables the frequency to be set to 50 or 60 Hz.

***LCD Rack Display***
*E6 LCD RT Evolution*
*1000 VA*

## Overload protection

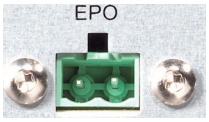
- Protection of internal power components
- prevention of connection errors.
- reliability : automatic control of loads, power supply and UPS internal operation

## Communication

- USB or RS 232 ports enable communication between the UPS and the various stations and IT servers they are protecting
- SNMP agent optional

## EPO emergency stop control

- This function ensures the safety of personnel and equipment in the event of fire or any other emergency situation by initiating a total and immediate shutdown of the UPS.




## Cold start function

- It enables an emergency situation involving a total power cut to be overcome by starting the UPS using batteries if there is no mains power supply.

## Batteries

**Adapted battery cabinets**

Other battery cabinets can be added to increase backup time.

**Intelligent battery chargers to optimise battery performance**

A battery charger from 1 to 3 kVA with 2 levels reduces charging time and adjusts the charging voltage according to the outside temperature to increase the lifetime of batteries and thereby generate energy savings.

## Advantages of models from 1 to 3 kVA

**Programmable outlets**

Programmable outlets allow users to easily control different load groups separately. It will therefore be possible to increase the backup time on the most strategic and vital hardware, during a power outage, by stopping non-critical hardware connected to programmable outlets. These outlets are easy to manage via the LCD display and/or Infopower software.

**Warm swappable batteries**

The E6 LCD RT EVOLUTION, equipped with a practical and versatile battery system, gives the user the opportunity to replace batteries without stopping the UPS and consequently without interrupting the power supply to critical and vital loads.

## Advantages of models from 5 to 10 kVA

**Parallel installation:**

option to connect up to 3 UPS devices in redundant parallel mode (N+X)

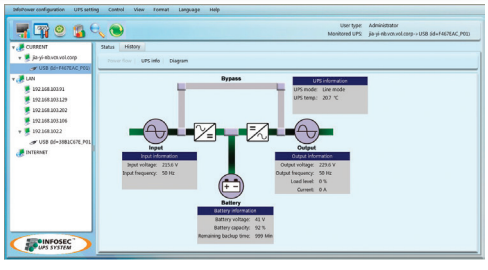
**Battery chargers:**

UPSs upward of 5 kVA are fitted with extendable chargers with 3 levels optimising battery performance as well as their recharge time and extending their useful life even further. In addition, due to an extendible design, a charger can be connected in parallel as needed, thereby offering a greater battery charge capacity.

# COMMUNICATION

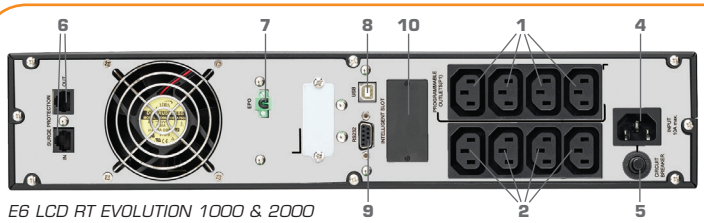
## Communication software

- InfoPower control software (supplied as standard)
- If there is no power : the UPS close the files automatically and in doing so save data from all the PCs in a network
- The communication software offers a graphic interface to view system status, various measurements, events log, etc.

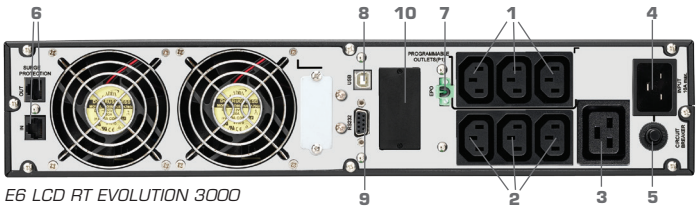


# CONNECTION

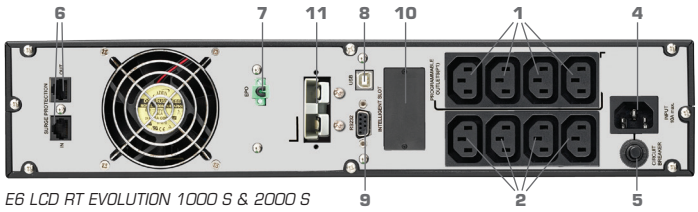
## A connector tailored to industrial environments



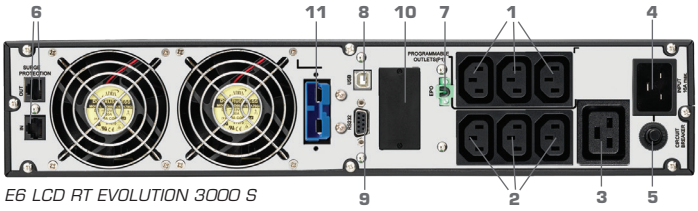

*E6 LCD RT EVOLUTION 1000 & 2000*




*E6 LCD RT EVOLUTION 3000*

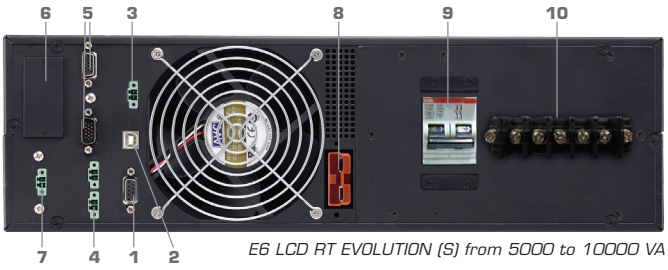



*E6 LCD RT EVOLUTION 1000 S & 2000 S*

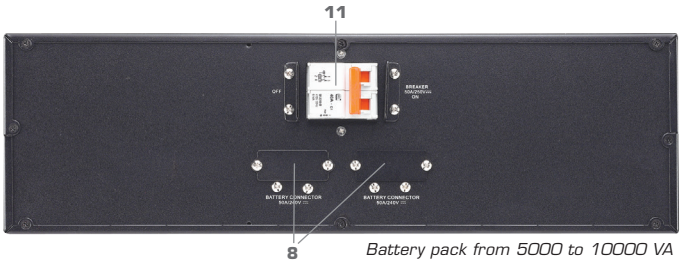



*E6 LCD RT EVOLUTION 3000 S*

1. Programmables protected UPS outlets (10A)
2. Standards protected UPS outlets (10A)
3. Standards protected UPS outlets (16A)
4. AC input cable (1000 VA:10A ; 2000 and 3000 VA:16A)
5. Input breaker
6. Network/Fax/Modem surge protection
7. EPO (Emergency Power Off)
8. USB communication port
9. RS-232 communication port
10. SNMP intelligent slot
11. External battery connector (S models only)




*E6 LCD RT EVOLUTION (S) from 5000 to 10000 VA*




*Battery pack from 5000 to 10000 VA*

1. RS-232 communication port
2. USB communication port
3. EPO (Emergency Power Off)
4. Parallel port 1
5. Parallel port 2
6. SNMP intelligent slot
7. EMBS (External Maintain Bypass Switch) port
8. External Battery connector
9. Input circuit breaker
10. Input/Output terminal
11. Battery pack output circuit breaker

# OPTIONS

## SNMP I Pro agent

The use of SNMP agent with E6 LCD RT EVOLUTION UPS devices makes it easier to manage the UPS due to its many special features:

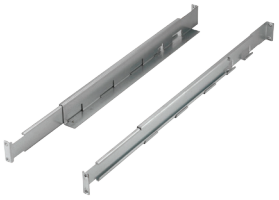
- Connection to the Ethernet network and identification by IP address (random or fixed)
- Low battery detection.
- Configuring and programming switch-off and restarts of the system on a weekly (or other) basis.
- UPS configuration locally or remotely.
- Self-diagnosis of the UPS devices while operating.
- Automatic shutdown according to pre-defined priorities on network PCs.
- Sending warning messages to users of the network / mail / GSM, etc.
- Events log.

## Backup extensions

Opportunity to increase battery power for unstable or highly disrupted environments. The S versions (extended backup time) are delivered without an internal battery but with external battery packs.

## Rack kit

Enables securing to a patch bay



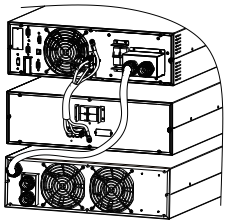
## AS400 dry contact card

The AS400 communication card supplies dry contacts to feedback alarms from your UPS (e.g. centralized technical management).

Depending on the applications, dry contacts may normally be open or closed.

## Isolation Transformer

Isolation Transpormer provides isolation between the input and output current.



## External Maintenance bypass (BMe) for E6 LCD RT EVOLUTION UPS devices from 1 to 10 kVA

- Provides continuous power to connected equipment during maintenance of the UPS via a rotary switch.
- Provides a large number of outlets for extended use.
- Rack or Tower model depending on the working environment (1 to 3 kVA).
- Simple installation (plug and play for models from 1 to 3 kVA).
- Available for all UPS devices from 1 to 10 kVA.

# TECHNICAL CHARACTERISTICS

## GENERAL CHARACTERISTICS

| | | E6 LCD Evolution 1000 RT (S) | 6 LCD Evolution 2000 RT (S) | 6 LCD Evolution 3000 RT (S) | 6 LCD Evolution 5000 RT (S) | 6 LCD Evolution 6000 RT (S) | 6 LCD Evolution 8000 RT (S) | 6 LCD Evolution 10k RT (S) |
|---|---|---|---|---|---|---|---|---|
| **Technology** | | On Line Double Conversion | | | | | | |
| **Power (VA)** | | 1000 VA | 2000 VA | 3000 VA | 5000 VA | 6000 VA | 8000 VA | 10000 VA |
| **Power (W)** | **Standard** | 900 W | 1800 W | 2700 W | 4500 W | 5400 W | 7200 W | 9000 W |
| | **Long Backup time (S)** | 900 W | 1800 W | 2700 W | 4500 W | 5400 W | 7200 W | 9000 W |
| **Power factor** | **Standard** | 0,9 | | | | | | |
| | **Long Backup time (S)** | | | | | | | |

## PHYSICAL CHARACTERISTICS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Standard** | **Dim. D x W x H (mm) - UPS** | 415 x 440 x 88 (2U) | 515 x 440 x 88 (2U) | 635 x 440 x 88 (2U) | 580 x 440 x 133 (3U) | 745 x 440 x 133 (3U) | |
| | **Dim. D x W x H (mm) - Battery bank** | - | - | - | 645 x 440 x 133 (3U) | 645 x 440 x 133 (3U) | |
| | **Net weight (kg) : UPS + Battery bank** | 12,9 | 20,6 | 28 | 17 + 57 | 20 + 63 | |
| **Long Backup time (S)** | **Dim. D x W x H (mm) - UPS** | 415 x 440 x 88 (2U) | 515 x 440 x 88 (2U) | 635 x 440 x 88 (2U) | 580 x 440 x 133 (3U) | 745 x 440 x 133 (3U) | |
| | **Net weight (kg)** | 8,6 | 11,3 | 16 | 17 | 20 | |

## TECHNICAL INPUT CHARACTERISTICS

| | | | | | | |
|---|---|---|---|---|---|---|
| **Low voltage range** | **Low Line transfer** (based on load percentage : 100%-80% / 80%-70% / 70%-60% / 60%-0%) | **110 V*** | 80 VAC / 70 VAC / 60 VAC / 55 VAC +/- 5% | | - | |
| | | **230 V*** | 160 VAC / 140 VAC / 120 VAC / 110 VAC +/- 5% | | 176 VAC / 154 VAC / 132 VAC / 110 VAC +/- 2% | |
| | **Low Line comeback** | **110 V** | 85 VAC / 75 VAC / 65 VAC / 60 VAC +/- 5% | | - | |
| | | **230 V** | 170 VAC / 150 VAC / 130 VAC / 120 VAC +/- 5% | | 186 VAC / 164 VAC / 142 VAC / 120 VAC +/- 2% | |
| **High voltage range** | **High Line transfer** | **110 V** | 150 VAC +/- 5% | | - | |
| | | **230 V** | 300 VAC +/- 5% | | 300 VAC | |
| | **High Line comeback** | **110 V** | 140 VAC +/- 5% | | - | |
| | | **230 V** | 290 VAC +/- 5% | | 290 VAC | |
| **Frequency range** | | | 50 Hz : 40 Hz ~ 70 Hz | | 50 Hz : 46 Hz ~ 54 Hz or 60 Hz : 56 Hz ~ 64 Hz | |
| **Phase** | | | Single phase | | Single phase | |
| **Power factor** | | | 0,99 at 100% load | | 0,99 at 100% load | |

## TECHNICAL OUTPUT CHARACTERISTICS

| | | | | | |
|---|---|---|---|---|---|
| **Voltage** | | [110 / 115 / 120 / 127 VAC]* or [208 / 220 / 230 / 240 VAC] | | | 200 / 208 / 220 / 230 / 240 VAC |
| **AC voltage regulation (Batt mode)** | | +/- 1% | | | +/- 1% |
| **Frequency range (Synchronized range)** | | 50 Hz : 47 ~ 53 Hz or 60 Hz : 57 ~ 63 Hz | | | 50 Hz : 46 Hz ~ 54 Hz or 60 Hz : 56 Hz ~ 64 Hz |
| **Frequency range (Batt mode)** | | 50 Hz +/- 0,2 Hz or 60 Hz +/- 0,2 Hz | | | 50 Hz +/- 0,1 Hz or 60 Hz +/- 0,1 Hz |
| **Current crest ration** | | 5 : 1 (max) | | | 3 : 1 (max) |
| **Harmonic distorsion** | | <= 2% THD (linear load); <= 4% THD (batt mode before shut down) | | | <= 2% THD (linear load); <= 4% THD (batt mode before shut down) |
| **Transfer time** | **Line mode to battery mode** | 0 ms | | | 0 ms |
| | **Inverter to Bypass** | 4 ms (Typical) | | | 0 ms |
| **Waveform** | | Pure sinewave | | | |
| **Output outlets IEC standards / programmables** | | 4 (10A) / 4 (10A) | 4 (10A) / 4 (10A) | 3/3 (10A) + 1 standard (16A) | Terminal board |

## EFFICIENCY

| | | | | |
|---|---|---|---|---|
| **AC mode** | 87% | 88% | 89% | 90% |
| **Battery mode** | 85% | 86% | 87% | 88% |
| **Eco mode** | 92% | | | 96% |

## BATTERY

| | | | | | | |
|---|---|---|---|---|---|---|
| **Standard model** | **Recharging voltage** | 24 Vdc | 48 Vdc | 72 Vdc | 240 Vdc | 240 Vdc |
| | **Typical recharge time** | 4 hours recover to 90% capacity | | | 7 hours recover to 90% capacity | 9 hours recover to 90% capacity |
| | **Charging current (max)** | 1A | | | 1A | |
| | **Backup time** | From 5 to 30 minutes depending on the connected load | | | | |
| **Long backup time model (S)** | **Typical recharge time** | Depending on the capacity of external batteries | | | | |
| | **Charging current (max)** | 1A, 2A, 4A or 8A | | | 4A | |

## INDICATORS & ALARMS

| | |
|---|---|
| **LCD screen** | Load level, Battery level, AC mode, Battery mode, Bypass mode, and Fault indicator. |
| **Alarms** | Battery mode, low battery, overload, fault |

## MANAGEMENT / COMMUNICATION

| | |
|---|---|
| **Communication** | USB & RS232 port and Infopower included software (support Windows family, Linux, Unix and MAC) |
| | Optional SNMP I Pro : Management system through SNMP software (VMware© compatible) and web browser |
| **Parallel connection** | - / Parallel port |

## ENVIRONMENT

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Ideal environment** | 20 - 90% relative humidity @ 0-40° non condensing | | | 0 - 95% relative humidity @ 0-40° non condensing | | | |
| **Operating Altitude** | Up to 1000 m above sea level (> 1000 m 1% deterioration for every 100 m) | | | | | | |
| **Noise level** | Less than 50dBA @ 1 meter | | | Less than 58dBA @ 1 meter | | Less than 60dBA @ 1 meter | |
| **Heat dissipation max - LV (110 V)** | 163 W / 556,31 Btu/h | 257 W / 877,13 Btu/h | 416 W / 1419,80 Btu/h | - | - | - | - |
| **Heat dissipation max - HV (230 V)** | 141 W / 481,11 Btu/h | 256 W / 873,5 Btu/h | 348 W / 1187,41 Btu/h | 600 W / 2047,8 Btu/h | 600 W / 2047,8 Btu/h | 600 W / 2047,8 Btu/h | 600 W / 2047,8 Btu/h |

## NORMS

| | | |
|---|---|---|
| **Standard** | CE RoHS | CE RoHS, cTUVus |
| **EMC (Electromagnetic compatibility)** | EN 62040-2 : 2006 | EN 62040-2 : 2006 |
| **Low voltage (Safety)** | EN62040-1 : 2008 | EN62040-1 : 2008, UL 1778/R:2006;CSA C22.2 NO.107.3-05/R:2006 |

## SALES INFO

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Warranty** | 2 years | | | | | | |
| **PN - Standard versions** | 67113 | 67114 | 67115 | 67325 | 67326 | 67327 | 67328 |
| **PN - Long backup time version (S)** | 67116 | 67117 | 67118 | 67123 | 67124 | 67125 | 67126 |

* LV (110V) and HV (230V) products are different. Reduction of the power down to 95% of (puissance nominale) when the output current is adjusted at 115V. Reduction of the power down to 90% of (puissance nominale) when the output current is adjusted at 110V. Reduction of the power down to 80% of (puissance nominale) when the output current is adjusted at 100V, 200V, 208V.

## BACKUP MODULES

| | E6 LCD Evolution 1000 RT | E6 LCD Evolution 2000 RT | E6 LCD Evolution 3000 RT | E6 LCD Evolution 5000 / 6000 RT | E6 LCD Evolution 8000 / 10k RT |
|---|---|---|---|---|---|
| **Dimensions - D x W x H (mm)** | 515 x 440 x 88 (2U) | | 635 x 440 x 88 (2U) | 640 x 440 x 88 (2U) | |
| **Net weight (kg) - (empty)** | 10.2 | 10.3 | 12.1 | 9 | 13 |
| **Net weight (kg) - (avec batteries)** | 20.6 | 31.1 | 43.3 | 59 | 65 |
| **PN** | 67402 | 67406 | 67409 | 67136 | 67137 |

E6 LCD-RT Evolution

# From 1 to 10 kVA

## Package content

- 1 UPS
- 1 USB cable
- 1 RS 232 cable
- 1 input cable (1 to 3 kVA models)
- 4 IEC 10A output cable (1 to 3 kVA models)
- 2 19" Rackmount Bracket
- 1 floor standing system
- 1 user manual
- Infopower Software
- 2 cables for parallel ports (> 5kVA)
- 1 battery cable (> 5kVA)

## Options

- Rack kit (Ref : 61429)
- SNMP I Pro card (Ref : 61156)
- SNMP vm Minislot card (Ref : 61142)
- Dry contact card (Ref : 61454)
- RS 485 card (Ref : 61439)
- External Maintain Bypass switch

| Model | Ref |
|---|---|
| External bypass RM-IEC | 61442 |
| External bypass RM-FR | 61443 |
| External bypas E6 5 to 10k | 61444 |

- Isolation transformer

| Model | Ref |
|---|---|
| Isolation transformer for 5 and 6 kVA | 67146 |
| Isolation transformer for 8 and 10 kVA | 67147 |

- Additional Battery banks - see table

## Warranty

Two-year warranty against manufacturing defects under normal conditions and compliance with precautionary measures.

Warranty to be taken out on www.infosec-ups.com within 10 days of purchase.

## Maintenance contract

A Maintenance contract is highly recommended: contact hotline@infosec.fr


**Infosec Communication**
15, rue du Moulin
44880 SAUTRON - FRANCE
**Sales Contact**
Tel : 02 40 76 11 77
sales@infosec.fr


www.infosec-ups.com