INFOSEC™
UPS SYSTEM

L'Énergie Sans Limite !
Safe Energy for Life !

# Networks & Critical Apps, Industrial Environments

## E4 LCD Pro
## From 1 to 10 k VA

**E4 LCD Pro range offers an excellent electrical security level and the main features for the protection of your essential and strategic loads.**

On Line Double Conversion technology
High Frequency
microprocessor-controlled

*E4 LCD Pro 1-3 k VA*

*E4 LCD Pro 5-10 k VA*

## The most reliable technology

The microprocessor-controlled On Line Double Conversion technology, delivers a pure sinewave output current for applications with an essential role. Models equipped with this technology have the latest generation IGBT switch on their inverter and rectifier circuits.
The output power factor is optimal, reaching 0.9 on the whole range. Monitoring the UPS through a microprocessor offers a wide input voltage range, a high input power factor, a low harmonic distortion and a noticeable reduction of noise intensity.

## Features fit for the most demanding needs

E4 LCD Pro range features the requested technical specifications designed to offer an optimal level of performance that fits to the most varied needs. Service continuity is guaranteed in any circumstance, even when the UPS is set to Eco mode, or during maintenance operations with the internal manual bypass set during the interventions (from 5k to 10k VA). The Emergency Power Off feature (from 5k to 10k VA) guarantees the maintenance staff's safety and the protection of its environment.

Very low distortion of input current
Input Power Factor correction
up to >0.99%
Output power factor of 0.9

For the most disturbed or demanding environments:
Extended backup time available
on S models with external Battery Bank

WARRANTY 2 YEAR 2 ANS GARANTIE

**On Line Double Conversion Technology**

**LCD control screen**

**Remote control software**

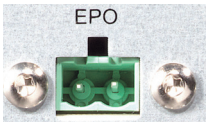
**Extended backup time available**

# SECURITY AND SERVICE CONTINUITY

## A safe solution

- Protection against any wiring default
- Reliability: automatic control of the load, the input voltage and the internal status of the UPS
- Automatic testing during the initialization of the device
- Protection of the internal power components

## Emergency Power Off (EPO) Function




This port is dedicated to the installation of the Emergency Power Off Function (EPO) for staff's safety and equipment protection, allowing to immediately and completely shut down the UPS (models from 5k to 10k VA).

## Cold-start function

In case of an emergency, this feature allows to overcome a total shutdown by starting the UPS thanks to its batteries.

## ECO functioning mode allowing to save energy

Eco mode allows to reduce the energy consuming and costs, thus reaching a 90% efficiency.

This feature allows the unit to supply the connected load directly from the mains while maintaining the UPS device fully operational in case a failure or an important voltage fluctuation should occur, thus guaranteeing a continuous supply of the system.

This functioning mode supplies the UPS through the static bypass and allows a relevant return to the Online Double Conversion if necessary.

E4 LCD Pro UPS devices from 1 to 3 kVA also feature an Advanced Eco mode allowing to reach a 95% efficiency.

# USER-FRIENDLY WITH COMMUNICATION FEATURES

## Easy to use 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 modification 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)

## Communication interfaces

Several **communication interfaces** allow E4 LCD Pro UPS devices to be remotely controlled thanks to the InfoPower software.
An uninterrupted monitoring of the UPS status and its connected applicatons is then possible:

- The **USB port** or **RS232** allow to use communication protocols of IT infrastructures, Data Centers or telecommunication networks.
- An **SNMP port** allows to add an SNMP card (as an option) managed by a software installed on a server.

## Remote management software

The Infopower management software is provided as a standard with the E4 LCD Pro UPS:

- Setting the time of initialization and shutdown of the device
- Recording of the data and events allowing a daily maintenance
- E-mail messaging to manage the status of the UPS at any time from the local network
- Automatic files closing by the UPS when the mains is not available: protection of the data of all the computers of a same IT network
- Intuitive graphic interface: allows to monitor the system's status, the key indicators, the events history…

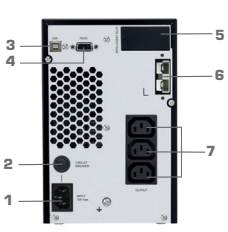
## By-pass manuel de maintenance

- Allows to provide connected equipment with a permanent voltage during maintenance through the rotary switch and therefore avoids the IT network's shutdown.
- As a standard on the E4 LCD Pro UPS range from 5 to 10 kVA.
- As an external option on E4 LCD Pro UPS devices under 5 kVA.

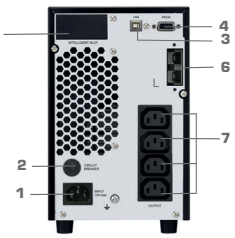
# CONNECTIONS AND BATTERIES

## A connectivity designed for several needs

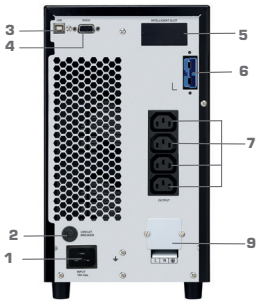
1. Input
2. Input Circuit Breaker
3. USB communication port
4. RS 232 communication port
5. SNMP slot
6. External batteries connection
7. Outlets
8. Input terminal
9. Output terminal
10. EPO connector
11. Maintenance By-pass




*E4 LCD Pro 1000*




*E4 LCD Pro 1500 & 2000*




*E4 LCD Pro 3000*


*E4 LCD Pro 5000 to 10k VA*

# OPTIONS

## Communication options

### SNMP I Pro agent

Using the SNMP I pro agent with the E4 LCD Pro 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 (or other) basis
- Local or remote UPS configuration

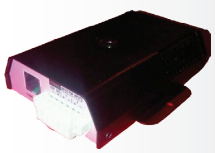
### AS400 Dry Contacts Card

The AS400 communication card sends dry contacts to report the alarms triggered in the UPS (for centralized technical managements for example).

Depending on the applicatons, dry contacts can be normally open or normally closed.

### EMD

This probe is meant for detecting the environmental conditions of the UPS and allows from a distance to monitor the temperature and the moisture rate of the room. This probe is connected to the SNMP card, and can also be used to send dry contacts, this being compatible with security or alarms systems.



### RS485 Card

An RS 485 card can be added as an option in order to allow the E4 LCD Pro UPS to communicate with installations using industrial protocols on long distance.

## Isolation transformer

An isolation transformer at the input and the output providing the system a complete galvanic isolation between the upstream and downstream circuits. The equipment therefore adapts perfectly to all neutral systems upstream as much as downstream.

## BMe

For models from 1000 to 3000 VA, E4 LCD Pro is compatible with the External Maintenance Bypasses BMe 1 with IEC or FR/Schuko outlets.

During maintenance works on a UPS device, BMe1 guarantees, through its independent line, the continuous supply of the connected equipement.

This option can be installed in a few minutes and guarantees the staff's safety without any service interruption.

## Extended backup time

In order to benefit from a prolonged backup-time in disturbed or demanding environments, external battery modules can be added to, **E4 LCD Pro** (option).

Several types of battery banks exist according to the type of batteries required, and also depending on the place's configuration. The wide and modular battery banks offer allows to answer most of the needs.

S versions (Extended Backup Time) are delivered without internal batteries, but with external battery banks.

From 1000 to 3000 VA, an external battery charger can also be added to a standard model to allow increasing the number of battery banks that can be configured on the UPS (up to 4).

# TECHNICAL SPECIFICATIONS

## GENERAL CHARACTERISTICS

| | E4 LCD PRO 1000 (S) | E4 LCD PRO 1500 (S) | E4 LCD PRO 2000 (S) | E4 LCD PRO 3000 (S) | E4 LCD PRO 5000 (S) | E4 LCD PRO 6000 (S) | E4 LCD PRO 8000 (S) | E4 LCD PRO 10000 (S) |
|---|---|---|---|---|---|---|---|---|
| **Technology** | On Line Double Conversion | | | | | | | |
| **Power (VA)** | 1000 VA | 1500 VA | 2000 VA | 3000 VA | 5000 VA | 6000 VA | 8000 VA | 10000 VA |
| **Power (W)** | 900 W | 1350 W | 1800 W | 2700 W | 4500 W | 5400 W | 7200 W | 9000 W |
| **Power factor** | 0,9 | | | | | | | |

## PHYSICAL CHARACTERISTICS

| | | E4 LCD PRO 1000 (S) | E4 LCD PRO 1500 (S) | E4 LCD PRO 2000 (S) | E4 LCD PRO 3000 (S) | E4 LCD PRO 5000 (S) | E4 LCD PRO 6000 (S) | E4 LCD PRO 8000 (S) | E4 LCD PRO 10000 (S) |
|---|---|---|---|---|---|---|---|---|---|
| **Standard** | **Dim. D x W x H (mm) - UPS** | 220 x 145 x 282 | 220 x 145 x 397 | | 318 x 190 x 421 | 369 x 190 x 688 | | 442 X 190 X 688 | |
| | **Net weight (kg)** | 9.8 | 17 | | 27.6 | 72 | | 82 | |
| **Long Backup time (S)** | **Dim. D x W x H (mm) - UPS** | 220 x 145 x 282 | 220 x 145 x 397 | | | 318 x 190 x 369 | | 318 X 190 X 442 | |
| | **Net weight (kg)** | 4.1 | 6.8 | | 7.4 | 21 | | 23 | |

## TECHNICAL INPUT CHARACTERISTICS

| | | E4 LCD PRO 1000 (S) | E4 LCD PRO 1500 (S) | E4 LCD PRO 2000 (S) | E4 LCD PRO 3000 (S) | E4 LCD PRO 5000 (S) | E4 LCD PRO 6000 (S) | E4 LCD PRO 8000 (S) | E4 LCD PRO 10000 (S) |
|---|---|---|---|---|---|---|---|---|---|
| **Low voltage range** | **Low Line transfer** (based on load percentage : 100%-80% / 80%-70% / 70%-60% / 60%-0%) | 180 VAC / 160 VAC / 140 VAC / 120 VAC +/- 5% | | | | 110 VAC +/- 3% at 50% load<br>176 VAC +/- 3% at 100% load | | | |
| | **Low Line comeback** | 195 VAC / 175 VAC / 155 VAC / 135 VAC +/- 5% | | | | 120 VAC +/- 3% at 50% load<br>186VAC +/- 3% at 100% load | | | |
| **High voltage range** | **High Line transfer** (based on load percentage : 100%-80% / 80%-70% / 70%-60% / 60%-0%) | 300 VAC / 280 VAC +/- 5% | | | | 300 VAC +/- 3% | | | |
| | **High Line comeback** | 290 VAC / 270 VAC +/- 5% | | | | 290 VAC +/- 3% | | | |
| **Frequency range** | | 40 Hz ~ 70 Hz | | | | 50 Hz : 46 Hz ~ 54 Hz or 60 Hz : 56 Hz ~ 64 Hz | | | |
| **Power factor** | | > 0,99 at 100% load | | | | > 0,99 at 100% load | | | |

## TECHNICAL OUTPUT CHARACTERISTICS

| | | E4 LCD PRO 1000 (S) | E4 LCD PRO 1500 (S) | E4 LCD PRO 2000 (S) | E4 LCD PRO 3000 (S) | E4 LCD PRO 5000 (S) | E4 LCD PRO 6000 (S) | E4 LCD PRO 8000 (S) | E4 LCD PRO 10000 (S) |
|---|---|---|---|---|---|---|---|---|---|
| **Voltage** | | 200/208/220/230/240 VAC | | | | 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 +/- 0,5 Hz or 60 Hz +/- 0,5 Hz | | | | 50 Hz +/- 0,1 Hz or 60 Hz +/- 0,1 Hz | | | |
| **Current crest ration** | | 3 : 1 | | | | | | | |
| **Harmonic distorsion** | | <= 3% THD (Linear Load); <= 6% THD (Non-linear Load) | | | | | | | |
| **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 10A** | | 3 | 4 | | | 0 | | | |
| **Output terminal block** | | no | | | yes | yes | | | |

## EFFICIENCY

| | E4 LCD PRO 1000 (S) | E4 LCD PRO 1500 (S) | E4 LCD PRO 2000 (S) | E4 LCD PRO 3000 (S) | E4 LCD PRO 5000 (S) | E4 LCD PRO 6000 (S) | E4 LCD PRO 8000 (S) | E4 LCD PRO 10000 (S) |
|---|---|---|---|---|---|---|---|---|
| **AC mode** | 88% | 89% | | 90% | 89% | | 90% | |
| **Battery mode** | 83% | 85% | | 88% | 88% | | 89% | |
| **Eco mode** | 94%-95% | | | | - | | | |

## BATTERY

| | | E4 LCD PRO 1000 (S) | E4 LCD PRO 1500 (S) | E4 LCD PRO 2000 (S) | E4 LCD PRO 3000 (S) | E4 LCD PRO 5000 (S) | E4 LCD PRO 6000 (S) | E4 LCD PRO 8000 (S) | E4 LCD PRO 10000 (S) |
|---|---|---|---|---|---|---|---|---|---|
| **Standard model** | **Battery type** | 12 V / 9 AH | | | | 12 V / 9 AH | | | |
| | **Number** | 2 | 4 | | 6 | 16 | | 20 | |
| | **Typical recharge time** | 4 hours recover to 90% capacity | | | | 9 hours recover to 90% capacity | | | |
| | **Charging current (max)** | 1A | | | | 1A (max 2A) | | | |
| | **Backup time** | from 5 to 30 minutes depending on the connected load | | | | | | | |
| **Long backup time model (S)** | **Battery type** | Depending on the capacity of external batteries | | | | | | | |
| | **Charging current (max)** | 1A/2A/4A/6A | | | | 4A (max 6A) | | | |

## INDICATORS & ALARMS

| | |
|---|---|
| **LCD screen** | Load level, Battery level, AC mode, Battery mode, Bypass mode, and Fault indicator. |
| **Audible alarms** | Battery mode, Low battery, Overload, Fault |

## BYPASS

| | | |
|---|---|---|
| **Static bypass** | Yes | |
| **Manual bypass** | Option | Yes |

## MANAGEMENT / COMMUNICATION

| | |
|---|---|
| **Communication** | USB & RS232 port and Infopower included software (support Windows family, Linux, Unix and MAC)<br>Optional SNMP Pro I : power management from SNMP manager (VMware©, Hyper V™ compatible) and web browser |
| **EPO Connector** | No / Yes |

## ENVIRONMENT

| | E4 LCD PRO 1000 (S) | E4 LCD PRO 1500 (S) | E4 LCD PRO 2000 (S) | E4 LCD PRO 3000 (S) | E4 LCD PRO 5000 (S) | E4 LCD PRO 6000 (S) | E4 LCD PRO 8000 (S) | E4 LCD PRO 10000 (S) |
|---|---|---|---|---|---|---|---|---|
| **Humidity** | 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% derating for every 100 m) | | | | | | | |
| **Noise level** | Less than 50dBA @ 1 meter | | | | Less than 55dBA @ 1 meter | | Less than 58dBA @ 1 meter | |
| **Heat dissipation max** | 141 W / 481,11 BTU/h | 256 W / 873,5 BTU/h | | 348 W / 1187,41 BTU/h | 667 W / 2276,45 BTU/h | | 960 W / 3276,45 BTU/h | |

## NORMS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Standard** | CE RoHS | | | | | | | |
| **EMC (Electromagnetic compatibility)** | EN 62040-2: 2006+AC: 2006 ; EN 61000-3-2: 2014 (EN 61000-4-2: 2009, EN 61000-4-3: 2006+A2: 2010, EN 61000-4-4: 2012, EN 61000-4-5: 2006, EN 61000-4-6: 2014, EN 61000-4-8: 2010, EN 61000-2-2: 2002) | | | | EN 62040-2 : 2006 ; EN 61000-2-2 : 2002; EN61000-4-2 : 2009; EN61000-4-3:2006 +A1:2008 +A2:2010; EN61000-4-4:2004+A1:2010; EN61000-4-5:2006; EN61000-4-8:2010 | | | |
| **Low voltage (Safety)** | EN 62040-1:2008 (1st Edition) + Am 1:2013 | | | | EN62040-1 : 2008 | | | |

## SALES INFO

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Warranty** | 2 years | | | | | | | |
| **PN - standard versions** | 67230 | 67274 | 67231 | 67232 | 67266 | 67267 | 67268 | 67269 |
| **PN - Long backup time version (S)** | 67236 | 67275 | 67237 | 67238 | 67270 | 67271 | 67272 | 67273 |

| | E4 LCD PRO 1000 (S) | E4 LCD PRO 1500 (S) | E4 LCD PRO 2000 (S) | E4 LCD PRO 3000 (S) | E4 LCD PRO 5000 (S) | E4 LCD PRO 6000 (S) | E4 LCD PRO 8000 (S) | E4 LCD PRO 10000 (S) |
|---|---|---|---|---|---|---|---|---|

## BACKUP MODULES

| | | | | | | |
|---|---|---|---|---|---|---|
| **Dimensions - D x W x H (mm)** | 220 x 145 x 397 | 220 x 145 x 397 | | 318 x 190 x 421 | 688 x 190 x 442 | 688 x 190 x 442 |
| **Net weight - kg (empty)** | 22 | 27 | | 42 | 95 | 115 |
| **PN** | 67277 | 67279 | | 67281 | 67283 | 67284 |

S models are long-autonomy UPS devices without internal batteries.
E4 LCD Pro UPS devices from 1k to 3k VA are also available in 110V (LV) - Refer to our sales contacts.

E4 LCD Pro

# From 1 to 10 kVA

## Communications solutions and remote management

USB & RS232, SNMP & EPO communication ports

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

- 1 UPS
- 1 input cable (1 to 3 kVA models)
- IEC 10A output cable (1 to 3 kVA models)
- 1 RS 232 cable
- 1 USB cable
- 1 battery cable (5k to 10kVA and S models)
- 1 user manual
- Infopower Software

## Options

| Désignation | Réf |
|---|---|
| SNMP Pro I Card | 61156 |
| SNMP vm Minislot Card | 61142 |
| Dry contacts card | 61454 |
| RS 485 card | 61439 |
| BMe 1 IEC 1 to 3k | 61440 |
| BMe 1 FR 1 to 3k | 61441 |
| Additional battery banks | See chart |
| EMD detector | 61452 |
| External isolation transformer | NC |

## Warranty

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

Warranty to be taken out on our website within 10 days of purchase.

## Maintenance contract

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