# UPS
# UNINTERRUPTIBLE POWER SUPPLY


## THE **UPS** RANGE UP TO 800kVA

THE **GLOBAL SPECIALIST**
IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURE

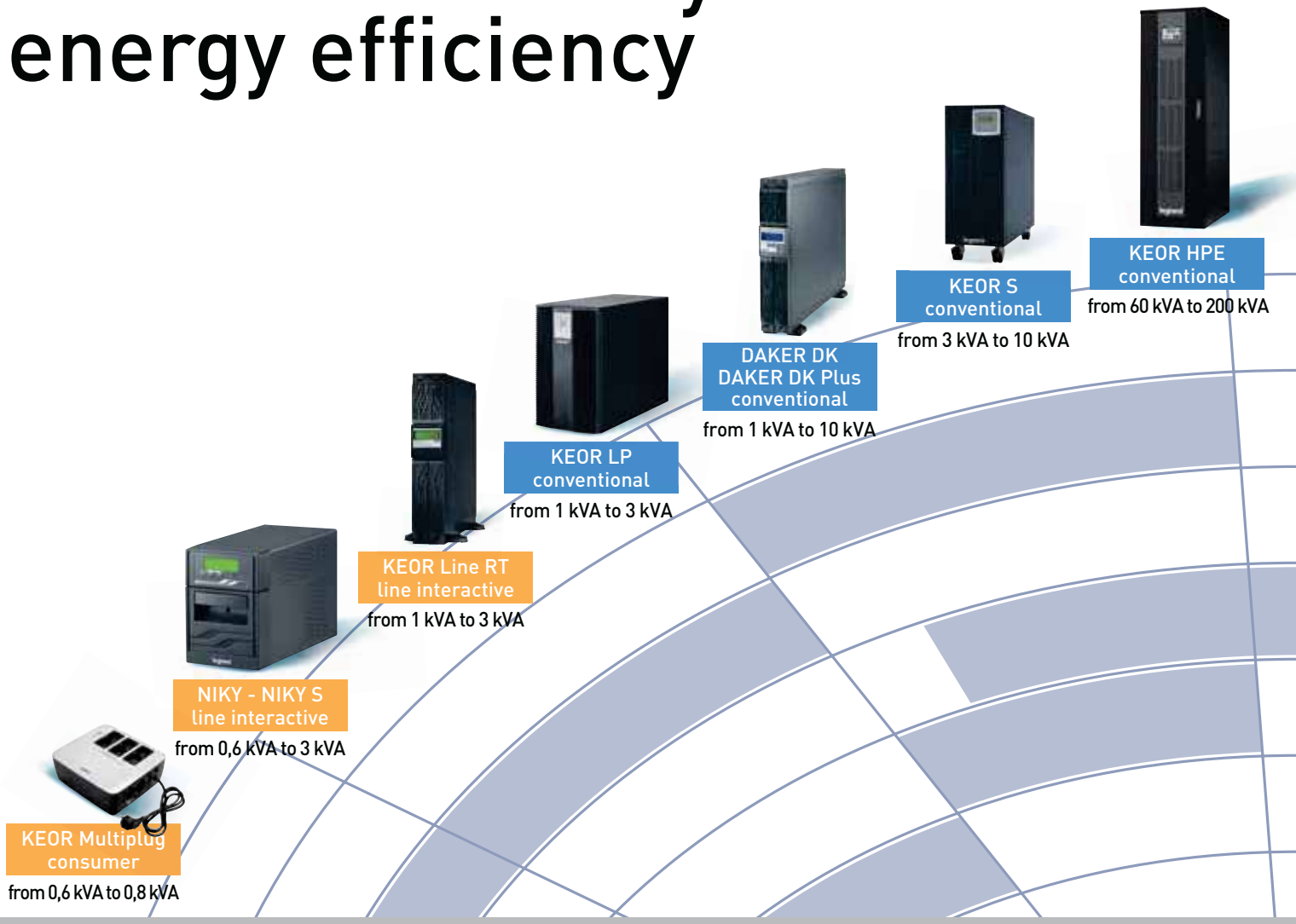
legrand®

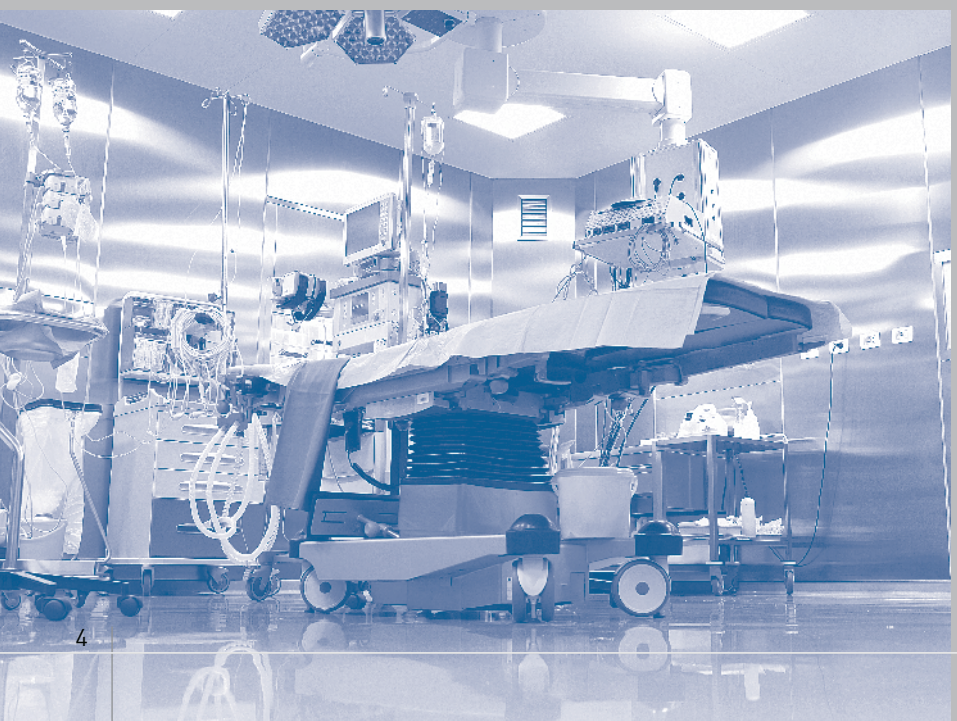
# INDEX

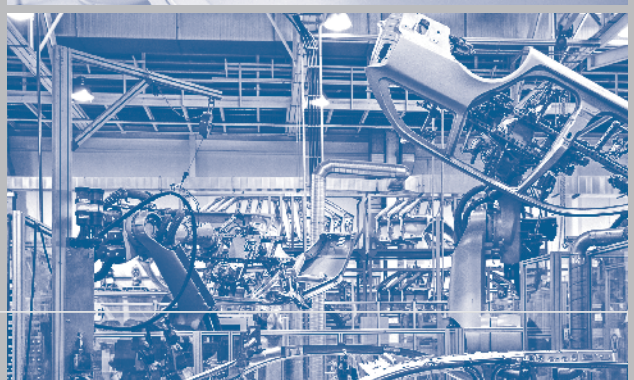


# UPS

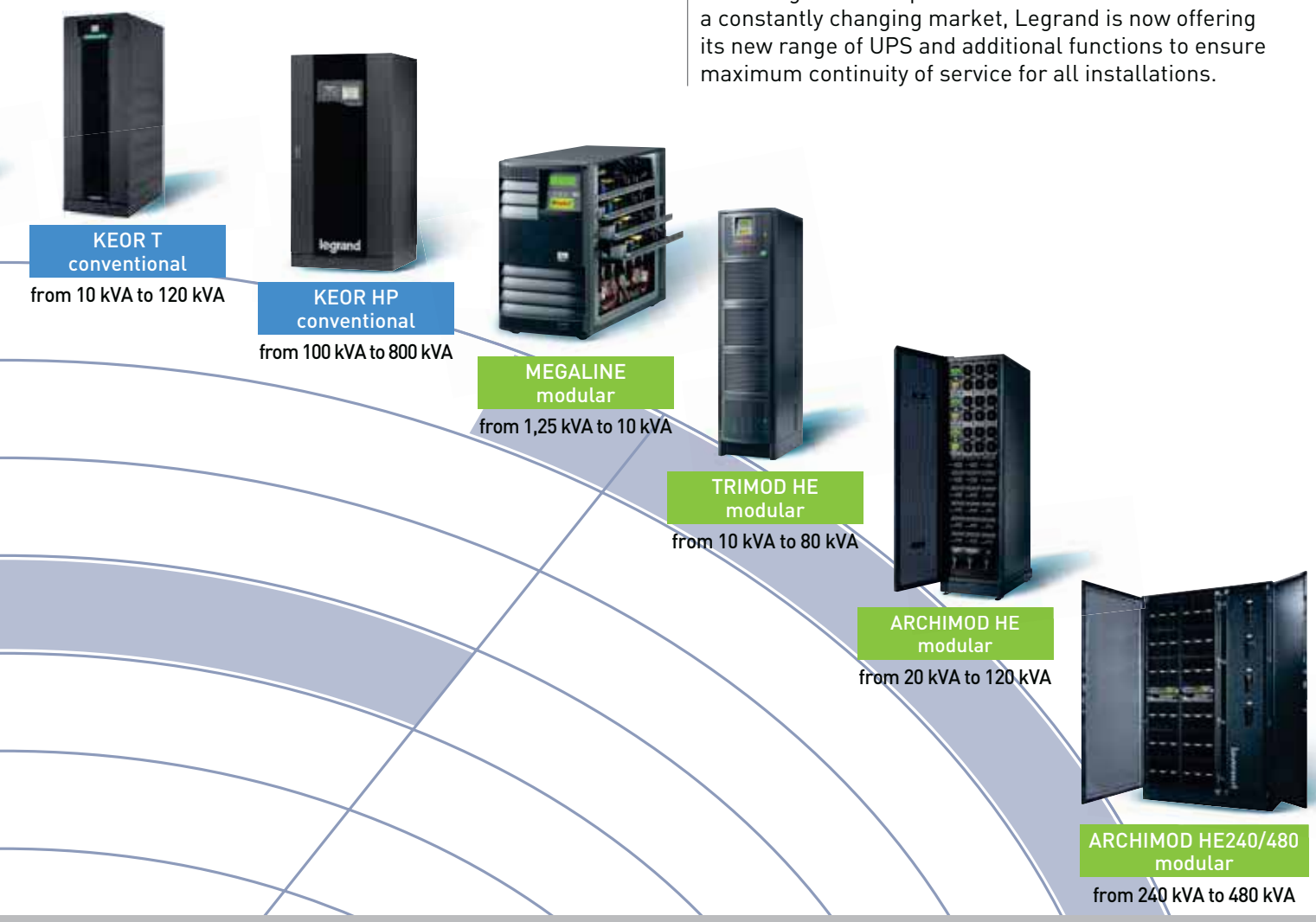
## superior performance
## service continuity
## energy efficiency





Legrand, world leader in the manufacture of electrical equipment, offers an extensive range of solutions to meet all the needs of service sector installations, from structured cabling systems for data networks through to control and management of the installation, including trunking and distribution systems.
Incorporating an environmentally-friendly approach to technological development and to address a constantly changing market, Legrand is now offering its new range of UPS and additional functions to ensure maximum continuity of service for all installations.





## High efficiency

The innovative design and high quality of the components used enable our UPS to achieve up to 96% efficiency, leading to significant energy savings.

## Advanced technology

The On-line Double Conversion technology ensures provision of a top quality power supply and maximum energy efficiency

## Environmentally responsible approach

Our UPS are built with the greatest care with a view to sustainable development. Moreover, Legrand has developed an innovative testing system which reduces the energy consumed for each device manufactured.

# BRING YOUR POWER EFFICIENCY

## beyond the limit

### Reliable electronics

The optimum sizing of the power stages and thorough testing of each unit ensure excellent reliability.

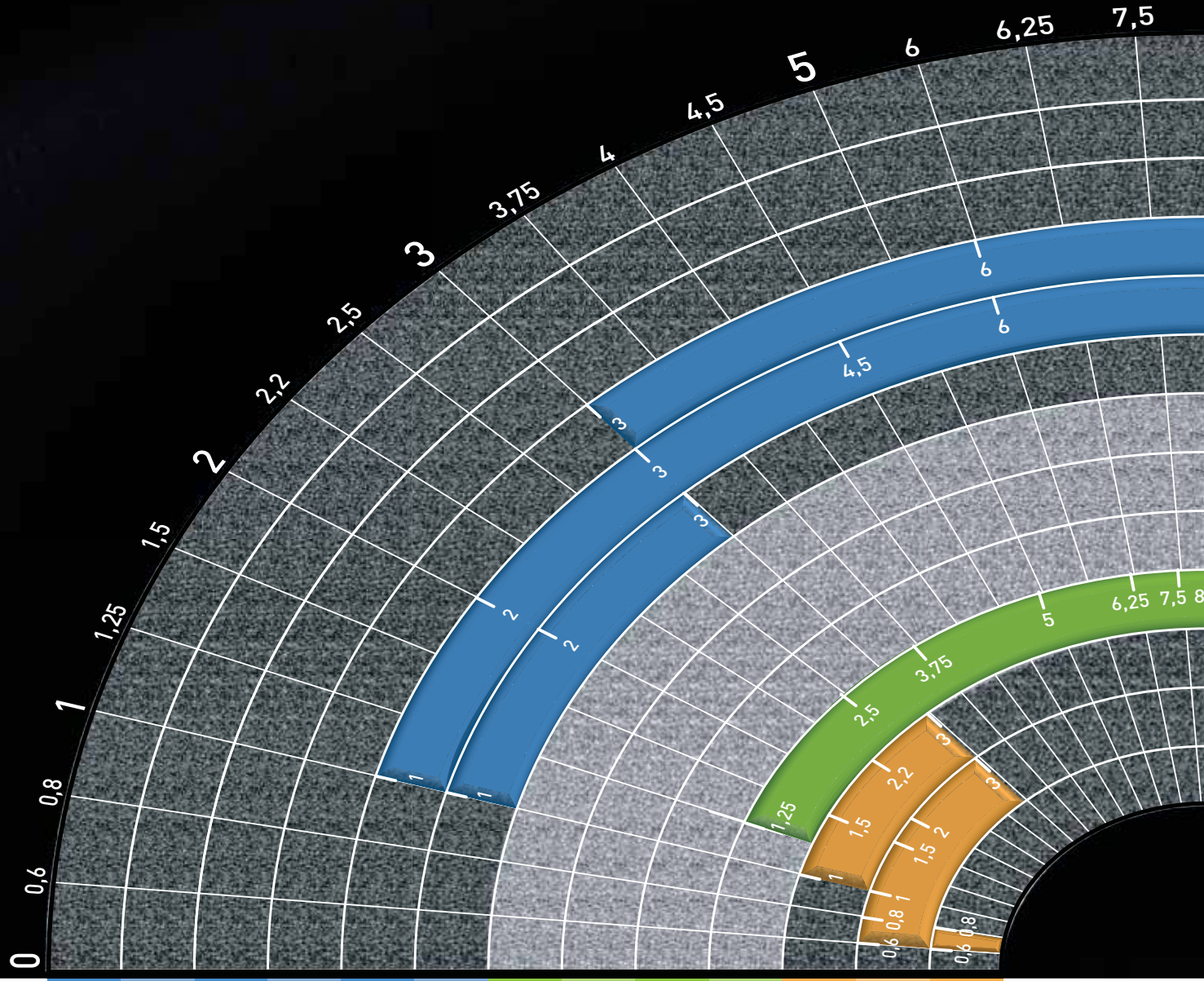
### Latest generation components

A careful search for the best electronic components on the market, together with the most up-to-date manufacturing methods, ensure that Legrand UPS use leading-edge technology and provide optimum reliability.

### High performance batteries

The batteries used in Legrand UPS are the best on the market. The innovative charging system significantly extends battery life by up to 50%.

# THE UPS RANGE




**KEOR HP**
Three-phase UPS VFI from 100 to 800 kVA

**KEOR HPE**
Three-phase UPS VFI from 60 kVA to 200 kVA

**KEOR T**
Three-phase UPS VFI from 10 to 120 kVA

**KEOR S**
Single-phase UPS from 3 to 10 kVA

**DAKER DK - DAKER DK Plus**
Single-phase UPS VFI, from 1 to 10 kVA

**KEOR LP**
Single-phase UPS from 1 to 3 kVA

**ARCHIMOD HE240/480**
Three-phase modular UPS VFI,from 240 up to 480kW

**ARCHIMOD HE**
Three-phase modular UPS VFI, from 20 up to 120kW

**TRIMOD HE**
Three-phase modular UPS VFI, from 10 up to 80kW

**MEGALINE**
Single-phase modular UPS VFI, from 1,25 up to 10kVA

**KEOR Line RT**
Single-phase line-interactive UPS, from 1 up to 3kVA

**NIKY - NIKY S**
Single-phase line interactive UPS VI, from 600 up to 3000VA

**KEOR Multiplug**
Single-fase 600 and 800VA

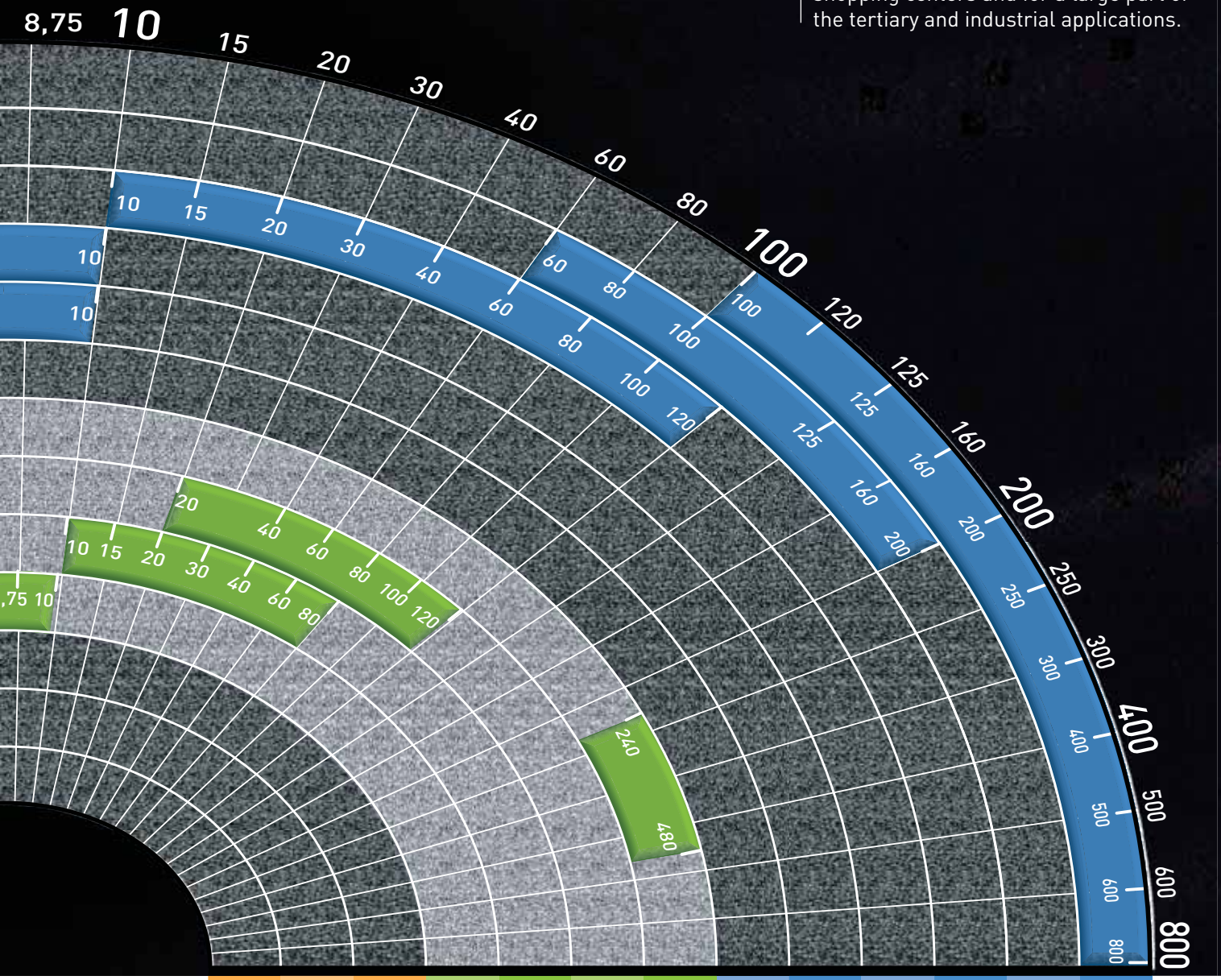
1÷800 kVA — CONVENTIONAL

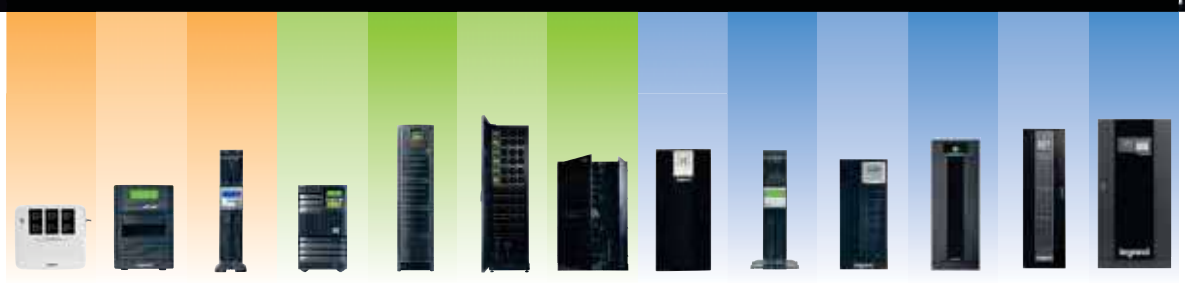
1,25÷480 kVA — MODULAR

0,6÷3 kVA — CONSUMER

# The right solution for EVERY CONTEXT

Legrand has a UPS range that it divided into 3 different families. It is an offer suitable for all applications with solutions providing the best performance levels in terms of power and back-up time.
Legrand UPS are ideal for Data center, hospital and healthcare buildings, shopping centers and for a large part of the tertiary and industrial applications.



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SIMPLE
RELIABLE
LOW COST

**APPLICATION FIELDS**

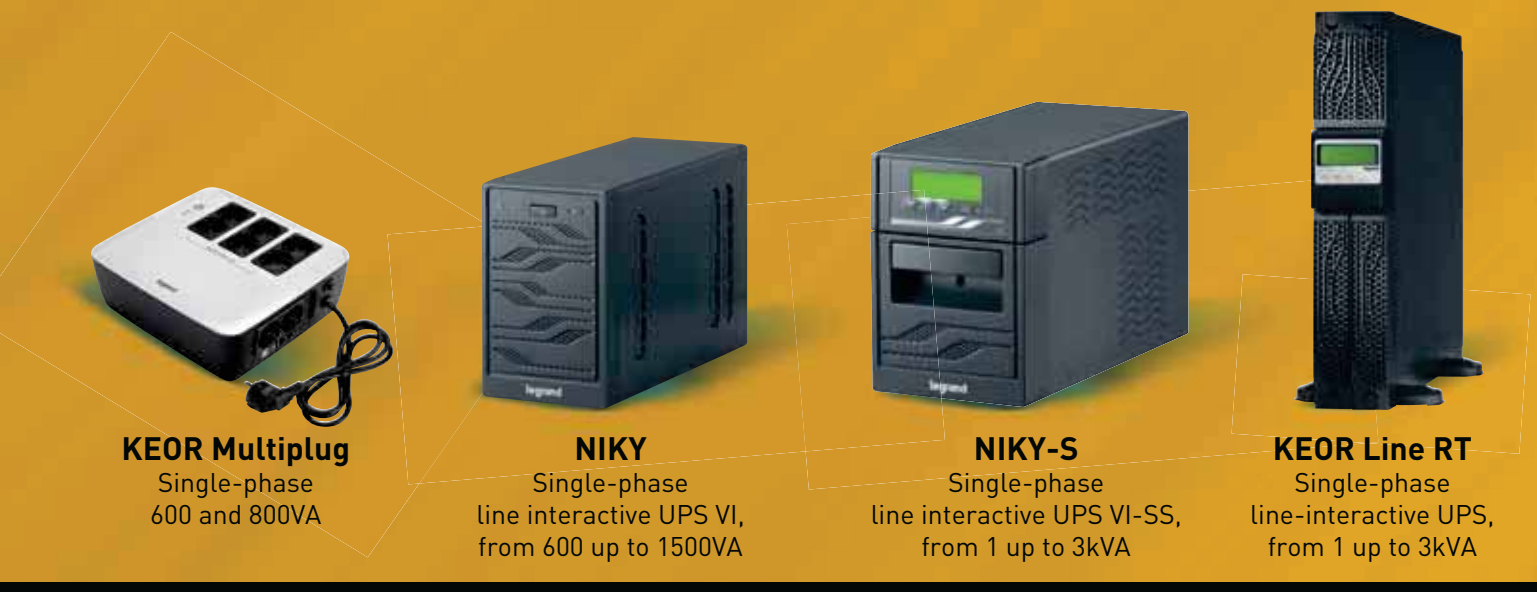
Shops

Small office

Home Entertainment systems

# CONSUMER AND SOHO UPS

**up to 3 kVA**



**KEOR Multiplug**
Single-phase
600 and 800VA

**NIKY**
Single-phase
line interactive UPS VI,
from 600 up to 1500VA

**NIKY-S**
Single-phase
line interactive UPS VI-SS,
from 1 up to 3kVA

**KEOR Line RT**
Single-phase
line-interactive UPS,
from 1 up to 3kVA

## CHARACTERISTICS OF THE RANGE

Compact, easy to install and configure.

With an electronic voltage regulator, an LED indicator and telephone protection, they provide total, reliable protection of the installation.

They provide an excellent quality/price ratio and guarantee of a lasting investment.

# KEOR Multiplug

## Single phase


UPS

UPS for computers and audio and video equipment
Complete protection: discharge, overload, short-circuit, thermal protection
Supply button / LED indicators: provides a visual and audible indication of the UPS status
Reset push-button for the circuit-breaker: for resetting in the event that the overload protection is activated
Automatic start-up: when there is no mains supply or it is of poor quality, the UPS continues working using a battery and switches off if the network breaking time exceeds the back-up time
Quick and easy battery replacement

### Single-phase multi-socket UPS

UPS with output sockets
6 protected sockets with protection from voltage surges
2 sockets with protection from voltage surges
Input voltage: 180-270 V - 50-60 Hz
Output voltage: 230 V~ ± 10% (battery mode)
Ambient operating temperature: 0 to 40°C
Relative humidity: 0 to 90%
Conform to EN 62040-1 and EN 62040-2

| Pack | Cat. No. | | Nominal power (VA) | Active power (W) | Back-up time(1) (min) | No. of sockets | Commu-nication ports |
|---|---|---|---|---|---|---|---|
| | French standard | German standard | | | | | |
| 1 | 3 100 40 | 3 100 38 | 600 | 360 | 10 to 15 | 6 + 2 | USB |
| 1 | 3 100 41 | 3 100 39 | 800 | 480 | 10 to 15 | 6 + 2 | USB |

1: The back-up time values are estimated in minutes and may vary depending on the load characteristics and usage and environmental conditions

## Characteristics


## Why install a UPS?

**Protection from electrical network disturbances**

UPS protect sensitive equipment (TV, home cinema, telephone, computer, printer, etc.) from electrical network disturbances, and in the event of cuts to the power supply, providing a continuous supply for sensitive equipment connected using an integrated battery limited to the specified back-up time

**Selecting the power and calculating the back-up time**

In order to select the power and calculate the back-up time, add the power levels in watts stated on your connected sensitive equipment and select the UPS in accordance with the required power protection levels


You can complete a simulation in order to select the right UPS by connecting to the site configurator:
www.ups.legrand.com

# NIKY

## Line Interactive UPS - Single phase VI

3 100 02

3 100 13

### UPS with German standard output sockets

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | No. of IEC sockets | No. of German standard sockets | Communic. ports |
|---|---|---|---|---|---|---|---|
| 1 | 3 100 00 | 600 | 300 | 3 to 30 | - | 1 | USB |
| 1 | 3 100 01 | 800 | 400 | 3 to 30 | - | 1 | USB |

### UPS with German standard output sockets + IEC socket

| | | Nominal power (VA) | Active power (W) | Back-up time (min) | No. of IEC sockets | No. of German standard sockets | Communic. ports |
|---|---|---|---|---|---|---|---|
| 1 | 3 100 09 | 600 | 300 | 5 to 30 | 1 | 1 | USB |
| 1 | 3 100 10 | 800 | 400 | 5 to 30 | 1 | 1 | USB |
| 1 | 3 100 13 | 1000 | 600 | 5 to 30 | 2 | 2 | RS232 |
| 1 | 3 100 14 | 1500 | 900 | 5 to 30 | 2 | 2 | RS232 |

### UPS with IEC multi-socket outlets

| | | Nominal power (VA) | Active power (W) | Back-up time (min) | No. of IEC sockets | No. of German standard sockets | Communic. ports |
|---|---|---|---|---|---|---|---|
| 1 | 3 100 02 | 600 | 300 | 5 to 30 | 3 | - | USB |
| 1 | 3 100 03 | 800 | 400 | 5 to 30 | 3 | - | USB |
| 1 | 3 100 04 | 1000 | 600 | 5 to 30 | 6 | - | USB |
| 1 | 3 100 05 | 1500 | 900 | 5 to 30 | 6 | - | USB |

### UPS with French Belgium standard socket + IEC socket

| | | Nominal power (VA) | Active power (W) | Back-up time (min) | No. of IEC sockets | No. of French Belgium standard socket | Communic. ports |
|---|---|---|---|---|---|---|---|
| 1 | 3 100 22 | 600 | 300 | 5 to 30 | 1 | 1 | USB |
| 1 | 3 100 23 | 800 | 400 | 5 to 30 | 1 | 1 | USB |
| 1 | 3 100 26 | 1000 | 600 | 5 to 30 | 2 | 2 | RS232 |
| 1 | 3 100 27 | 1500 | 900 | 5 to 30 | 2 | 2 | RS232 |

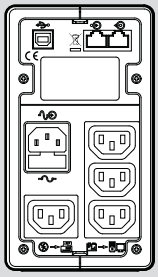
**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

### Characteristics

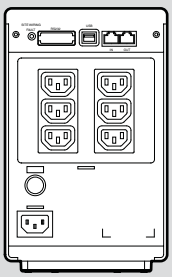
| General characteristics | 3 100 00* 3 100 02 3 100 09 3 100 22 | 3 100 01* 3 100 03 3 100 10 3 100 23 | 3 100 04 3 100 13 3 100 26 | 3 100 05 3 100 14 3 100 27 |
|---|---|---|---|---|
| Nominal power (VA) | 600 | 800 | 1000 | 1500 |
| Active power (W) | 300 | 400 | 600 | 900 |
| Technology | Line interactive VI | | | |
| Waveform | Pseudo-sinusoidal | | | |
| **Input characteristics** | | | | |
| Input voltage | 230 V | | | |
| Input frequency | 50-60 Hz +/- 5% | | | |
| Input voltage range | 160V-290V | | | |
| **Output characteristics** | | | | |
| Output voltage | 230V ± 10% | | | |
| Output frequency (nominal) | 50/60 Hz +/-1% | | | |
| THD of output voltage | < 3% with linear load | | | |
| **Communication and management** | | | | |
| Screen and signalling | One button and 2 LEDs for real-time control | | One button and 4 LEDs for real-time control | |
| Telephone protection | RJ11/RJ45 | | | |
| Remote control | Available | | | |
| **Mechanical characteristics** | | | | |
| Dimensions H x W x D (mm) | 171x95x349 | | 239x147x354 | |
| Net weight (kg) | 7 | 7,5 | 13 | 16 |
| **Ambient conditions** | | | | |
| Ambient operating temperature (°C) | 0 to 40°C | | | |
| Relative humidity (%) | 0 to 95% | | | |
| Noise at 1 m (dBA) | < 40 | | | |
| **Certifications** | | | | |
| Reference product standards | EN62040-1, EN62040-2, EN62040-3 | | | |

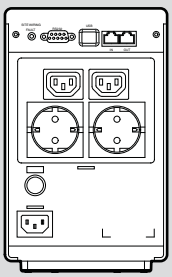
*** 3 100 00 battery 12V5Ah, 3 100 01 battery 12V 7Ah**

**600-800 VA**



**1000-1500 VA**





# NIKY S

## Line Interactive UPS - Single phase VI-SS

3 100 06

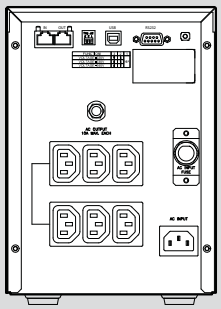
| Pack | Cat. Nos. | UPS with IEC socket | | | | |
|---|---|---|---|---|---|---|
| | | Nominal power VA | Active power W | Back-up time (min) | No. of sockets IEC | Communication ports |
| 1 | 3 100 06 | 1000 | 600 | 9 | 6 | USB-RS232 |
| 1 | 3 100 20 | 1500 | 900 | 8 | 6 | USB-RS232 |
| 1 | 3 100 07 | 2000 | 1200 | 9 | 6 | USB-RS232 |
| 1 | 3 100 08 | 3000 | 1800 | 8 | 6 | USB-RS232 |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

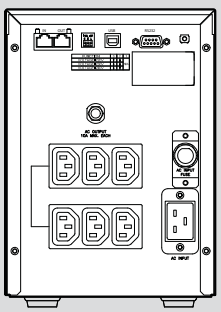
## Characteristics

| General characteristics | 3 100 06 | 3 100 20 | 3 100 07 | 3 100 08 |
|---|---|---|---|---|
| Nominal power (VA) | 1000 | 1500 | 2000 | 3000 |
| Active power (W) | 600 | 900 | 1200 | 1800 |
| Technology | Line interactive VI-SS | | | |
| Waveform | Sinusoidal | | | |
| **Input characteristics** | | | | |
| Input voltage | 230 V ± 12% via mains ± 5% via battery | | | |
| Input frequency | 50-60 Hz +/- 3Hz | | | |
| Input voltage range | 160 V-290 V | | | |
| **Output characteristics** | | | | |
| Output voltage | 230 V ± 10% | | | |
| Output frequency (nominal) | 50/60 Hz +/-0.2% | | | |
| THD of output voltage | < 3% with linear load | | | |
| **Communication and management** | | | | |
| Screen and signalling | Three buttons and three LEDs for real-time control of the status of the UPS | | | |
| Telephone protection | RJ 11/RJ 45 | | | |
| Remote control | Available | | | |
| **Mechanical characteristics** | | | | |
| Dimensions H x W x D (mm) | 247x173x369 | | 247x173x465 | |
| Net weight (kg) | 13 | 15 | 22 | 24 |
| **Ambient conditions** | | | | |
| Ambient operating temperature (°C) | 0 to 40°C | | | |
| Relative humidity (%) | 0 to 95% non-condensing | | | |
| Noise at 1 m (dBA) | < 40 | | | |
| **Certifications** | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | |

**1000-1500-2000 VA**



**3000 VA**



# KEOR LINE RT

**Line Interactive UPS - Single phase VI-SS**

3 100 45

| Pack | Cat. Nos. | UPS with IEC socket | | | | |
|---|---|---|---|---|---|---|
| | | Nominal power VA | Active power W | Back-up time (min) | No. of sockets IEC (10A/16A) | Communication ports |
| 1 | 3 100 45 | 1000 | 900 | 10 | 8 / - | USB-RS232 |
| 1 | 3 100 46 | 1500 | 1350 | 8 | 8 / - | USB-RS232 |
| 1 | 3 100 47 | 2200 | 1980 | 8 | 8 / 1 | USB-RS232 |
| 1 | 3 100 48 | 3000 | 2700 | 8 | 8 / 1 | USB-RS232 |

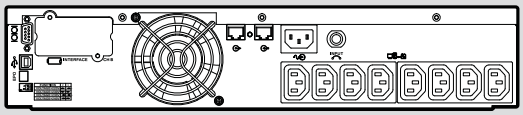
| Pack | Cat. Nos. | Accessories |
|---|---|---|
| | | Description |
| 1 | 3 109 69 | Volt-free contact card |
| 1 | 3 109 52 | Rack support bracket kit |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

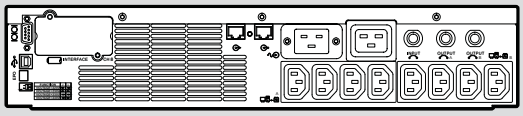
## Characteristics

| General characteristics | 3 100 45 | 3 100 46 | 3 100 47 | 3 100 48 |
|---|---|---|---|---|
| Nominal power (VA) | 1000 | 1500 | 2200 | 3000 |
| Active power (W) | 900 | 1350 | 1980 | 2700 |
| Technology | Line interactive VI-SS | | | |
| Waveform | Sinusoidal | | | |
| **Input characteristics** | | | | |
| Input voltage | 230 V ± 10 % | | | |
| Input frequency | 45-65 Hz | | | |
| Input voltage range | 165 V-300 V | | | |
| **Output characteristics** | | | | |
| Output voltage | 230 V ± 10 % | | | |
| Output frequency (nominal) | 50/60 Hz +/-0,5 % autosensing | | | |
| THD of output voltage | < 3 % with linear load | | | |
| **Communication and management** | | | | |
| Screen and signalling | Three buttons, display and three LEDs for real-time control of the status of the UPS | | | |
| Telephone protection | RJ11/RJ45 | | | |
| Remote control | SNMP Slot | | | |
| **Mechanical characteristics** | | | | |
| Dimensions W x D x H (mm) | 440x405x88 | | 440x650x88 | |
| Net weight (kg) | 19 | 20 | 34 | 37 |
| **Ambient conditions** | | | | |
| Ambient operating temperature (°C) | 0 to 40°C | | | |
| Relative humidity (%) | 0÷95 % non-condensing | | | |
| Noise at 1 m (dBA) | < 40 | | | |
| **Certifications** | | | | |
| Reference product standards | EN62040-1, EN62040-2, EN62040-3 | | | |

**1000-1500 VA**



**2200-3000 VA**



SAFE

EFFICIENT

INNOVATIVE

**APPLICATION FIELDS**

Hospital and healthcare

Office and working areas

Museum

# CONVENTIONAL UPS

**from 0,8 up to 800 kVA**

**KEOR LP**
Single-phase
UPS from
1 to 3 kVA


**DAKER DK**
**DAKER DK Plus**
Single-phase
UPS VFI, from
1 to 10 kVA

**KEOR S**
Single-phase
UPS from
3 to 10 kVA

**KEOR T**
Three-phase
UPS VFI from
10 to 120 kVA


**KEOR HPE**
Three-phase
UPS VFI from
60 kVA to 200 kVA


**KEOR HP**
Three-phase
UPS VFI from
100 to 800 kVA

## CHARACTERISTICS OF THE RANGE

On-line double conversion UPS with DSP microprocessors for precise, constant control of all measurements and of the power factor correction circuit (PFC).

Professional solutions with power up to 800 kVA.

Transformer-free technology for high quality energy output with up to 96% efficiency.

# DAKER DK Plus

## CONVERTIBLE
## SINGLE PHASE UPS

**On-Line double conversion UPS that can be used in both tower and rack configurations**

The main parameters of the system and the status of the UPS, including the battery charge level and faults, are displayed on the LCD screen.

The models from 5 to 10 kVA have power factor 1 with an efficiency of up to 94%.

Additional battery cabinets are available to increase the back-up time of the UPS. A charger can be added in all battery cabinets for fast, safe charging.


**Tower version with additional battery cabinet**

## Three standard sizes for power up to 10 kVA

The UPS and additional battery cabinets are available in sizes ranging from 2 to 4 units, depending on the required power and back-up time.

**UPS and 2-unit battery cabinet**

**UPS and 3-unit battery cabinet**

**UPS and 4-unit battery cabinet**

## Reversible screen

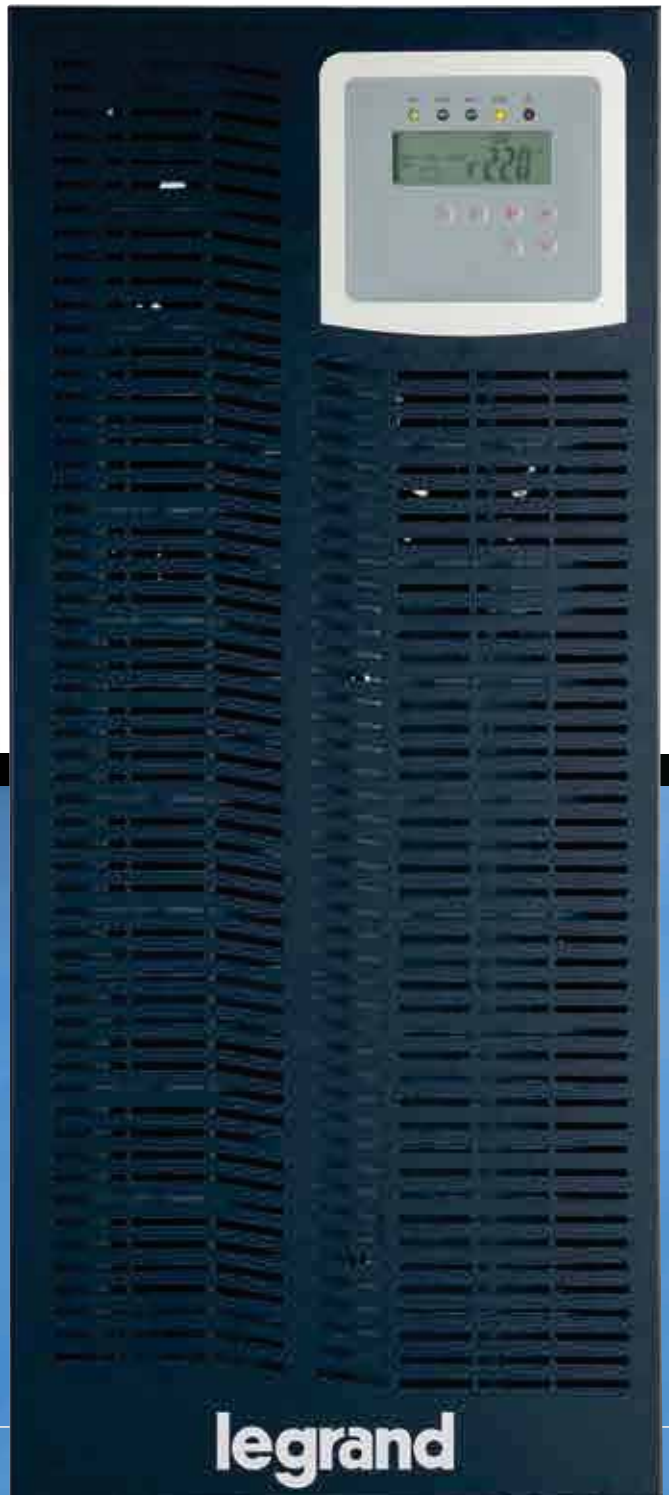
With the reversible screen, the Daker DK Plus UPS can be used in both tower and 19" rack configuration.

# KEOR S

## ONLINE
## SINGLE PHASE

The integrated maintenance bypass simplifies the maintenance operations, increases the service continuity and helps to reduce the complexity of the installations.

Easy access to circuit breakers, INPUT/OUTPUT terminals, maintenance bypass and communication port




## ON LINE UPS
## COMPACT AND EASY TO MOVE

# SINGLE PHASE UPS DESIGNED FOR INDUSTRIAL APPLICATIONS

Compact and robust, Keor S is the perfect UPS to protect and supply loads in the industrial fields.

**Power Range From 3 KVA up to 10KVA**

**Power factor 0,9** [1]

**High Efficiency up to 94%**

**Built in paralleling feature up to 4 units** [2]

**Built in Back Feed Protection**

**Protection Degree IP31**

**Long back-up time availability**

**Integrated maintenance bypass** [2]

**Integrated internal isolation transformer option**

[1] 0,8 for 3kVA
[2] Only available for 6 and 10kVA models

**User friendly Display**

**Remote control & Monitoring Supervision**


**Easy to move**

# KEOR T

## THREE-PHASE UPS

KEOR T has been designed with advanced technologies and the latest generation components; realized to satisfy both users and installers for operational needs and performance. These UPS aim to be functional, safe and very easy to install and use.

Legrand has studied the best way to reconcile high-tech performance and ease of use, making user friendly technologically advanced products. KEOR T supplies maximum protection and power quality for any type of IT load, tertiary application, lighting or building.

10-15-20-30 kVA


10-15-20-30 kVA


40-60-80-100 kVA


120 kVA

## Easy Installation

- Easy installation guaranteed by front access to all wiring connections.
- Availability of standard configurations with batteries or isolation transformers inside the UPS.
- Designed to easily connect an additional battery cabinet to obtain long back-up time.
- Standard internal backfeed protection which provides easy installation without additional cost in UPS supply switchboard.

**0,32 m²**
**(30 kVA, 20')**

**0,54 m²**
**(60 kVA, 14')**

## Reduction of Total Cost Ownership (TCO)

Thanks to its design features and the high level of efficiency (up to 96% thanks to 3-Level technology), there is a drastic reduction of TCO, even from the installation phase; the key factors that allow you to gain these advantages are:

- Transformerless Design
- Significant reduction in power loss due to 3 level IGBT topology
- Reduced dimensions and power use for air conditioning
- Low Output Total Harmonic Distortion (THDV)

## Small Foot Print with Internal Batteries

KEOR T UPS present the only 60 kVA on the market with internal batteries, this saving the cost of the battery cabinet and valuable floor space, and simplifying installation.

## Dual input

KEOR T UPS can be powered from two separate AC supply sources: the dual input configuration can be selected at installation by simply removing a linking connector from its input terminal.

# KEOR T

## EASY MANAGEMENT

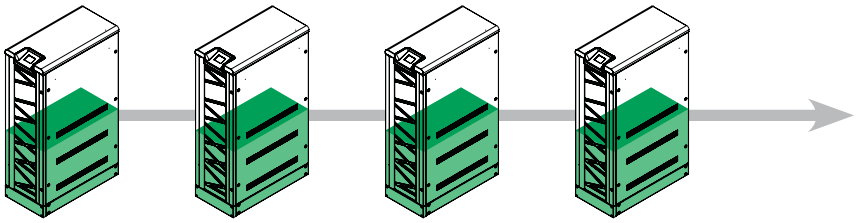

### User friendly touch screen control panel

KEOR T is equipped with a touch screen graphic display that provides information, measurements, status and alarms of the UPS in different languages; the intuitive graphical icons allow you to browse through the various screens easily and quickly. In just a few steps you have access to all the operating parameters of the system. You can also configure and set the parameters to adapt the UPS to various operating modes in order to optimize your critical load supply.

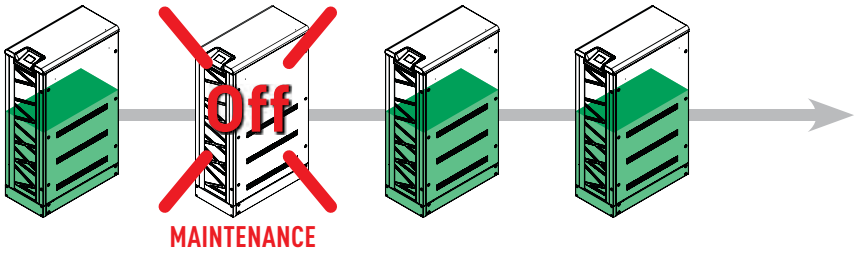
## Scalable to increase the service continuity

The parallel connections between the UPS's allow different levels of redundancy hence the maximum continuity of service.

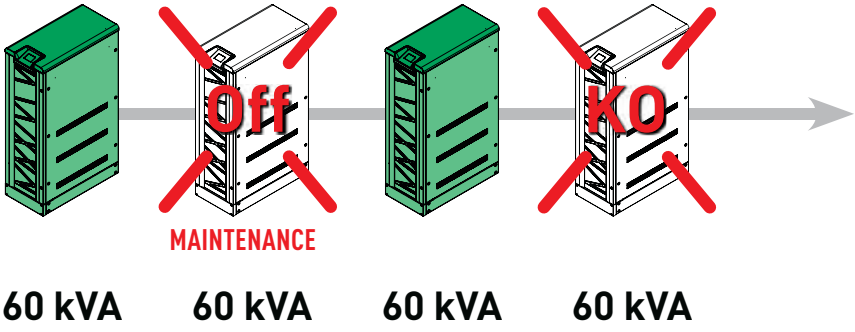
**STANDARD WORKING CONDITION**




**AUTOMATIC LOAD RE-BALANCE IN MAINTENANCE CASE**




**MAXIMUM AUTOMATIC LOAD BALANCE IN CASE OF FAILURE DURING MAINTENANCE**

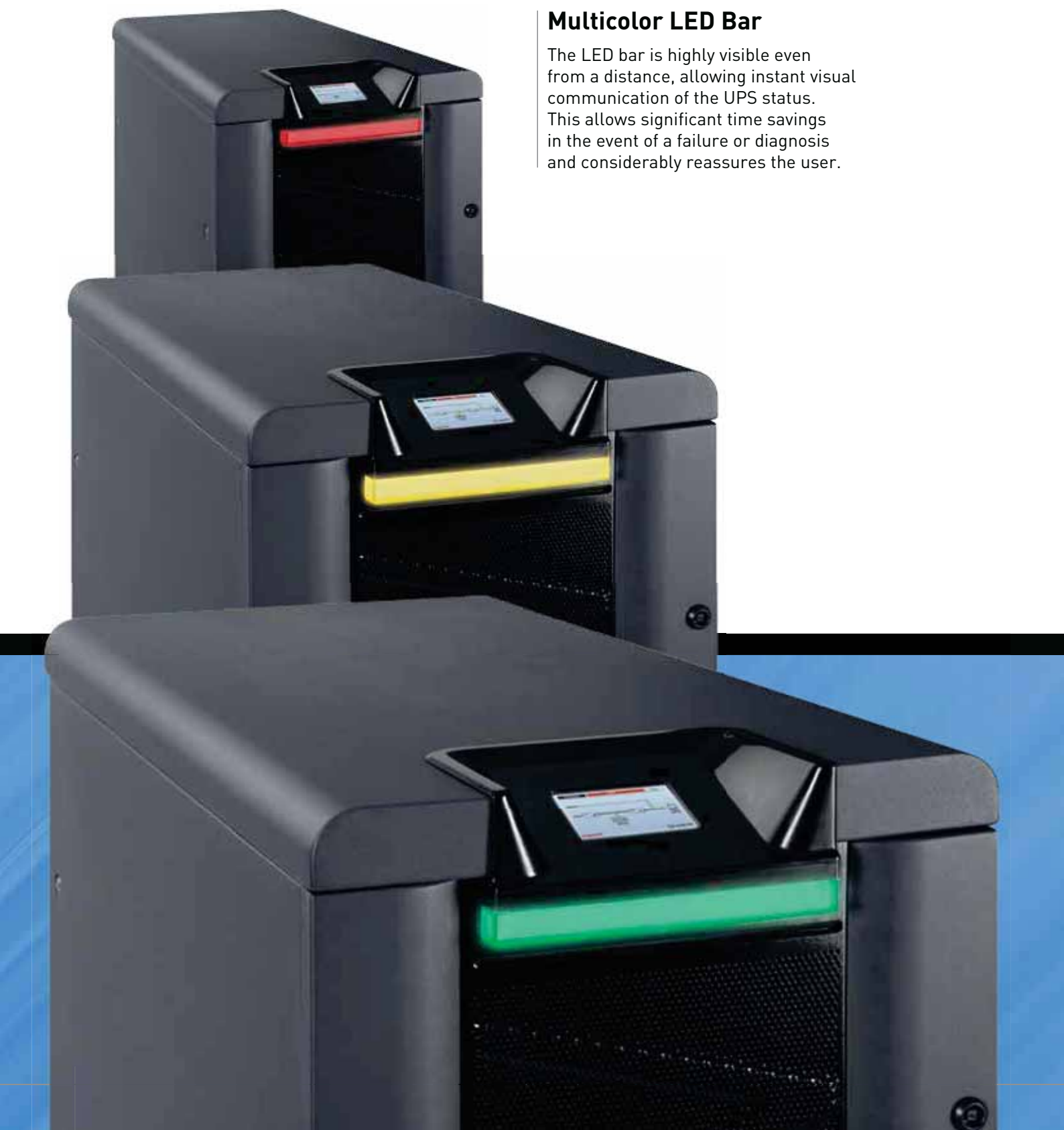



## Parallelable to increase the power

Depending on the power demand, it is possible to connect in parallel operation up to 8 units of the same power rating. This allows delivery of total power up to 960 kVA.

# KEOR T

## EXCLUSIVE CHARACTERISTICS



### Multicolor LED Bar

The LED bar is highly visible even from a distance, allowing instant visual communication of the UPS status. This allows significant time savings in the event of a failure or diagnosis and considerably reassures the user.

## Internal battery up to 60kVA

With battery pack installed inside the UPS cabinet, NO additional battery cabinets are needed, hence a smaller footprint.

## Isolation Transformer Option

Instead of batteries, an isolation transformer can be mounted inside the UPS cabinet upon request.

## Safe and fast battery installation

The Battery drawers system allows:
- safe physical transport of battery and fast mounting on site
- safe and easy connection of individual battery strings outside of the cabinet
- lower UPS downtime for battery replacement.

## Communication features

- Standard RS232
- ModBus
- Programmable dry contacts
- EPO & GenSet and Remote Monitoring Panel
- USB Converter (optional)
- Internal SNMP solutions (optional)

# KEOR HP

## THE UPS WITH POWER UP TO 800kVA

**The Three-Phase UPS range is available in three types of cabinet with total power rating up to 4.8 MVA**


**KEOR HP**
**100-125-160**

**Compact size with the best balance between footprint and power**

**Integrated transformer for the galvanic separation between AC/DC side**

**EASY installation and maintenance**

**High efficiency up to 95%**

**Parallelable up to 4,8MVA**

**Output power factor 0,9**



## KEOR HP 200-250-300

## KEOR HP 400-500-600-800

# KEOR HP

## FLEXIBLE SOLUTIONS

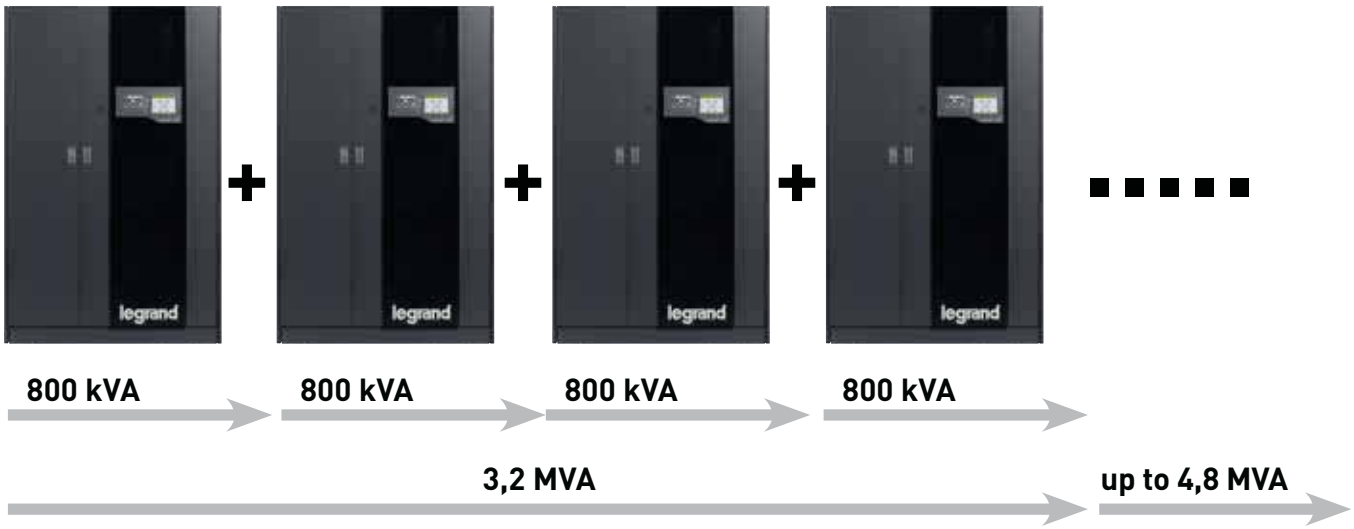
**EASY installation and maintenance**

The optimised cooling system enables to position the UPS against the wall and side by side with other equipment without affecting performance. Full front access permits easy installation and fast maintenance operation.

# PARALLELABLE
# UP 6 UNITS

## To increase the power

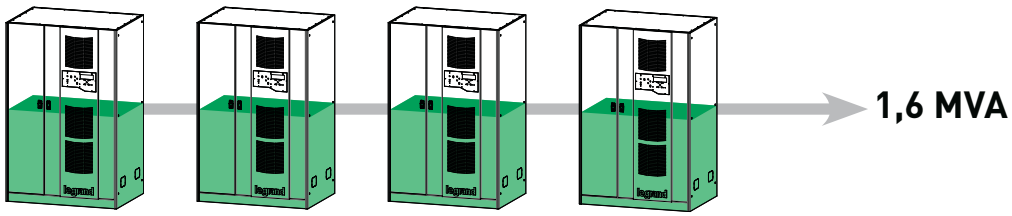
Depending on the power demand, it is possible to connect in parallel operation up to 6 units of the same power rating. This allows delivery of total power up to 4.8 MVA.



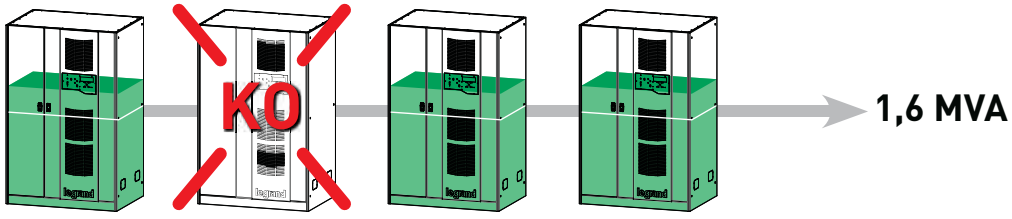

## To increase the service continuity

The parallel connections between the UPS enables to realize different levels of redundancy and obtain the maximum continuity of service.

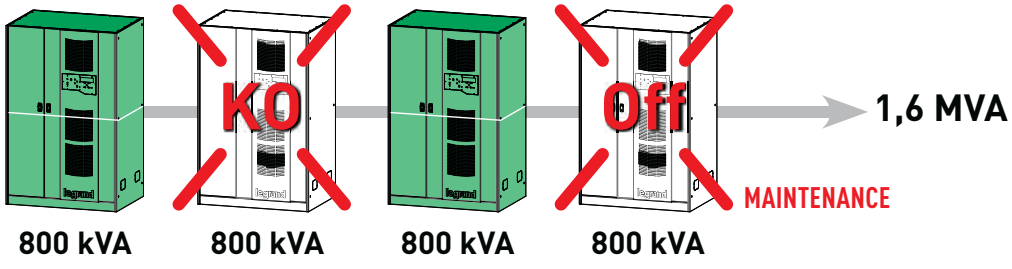
**STANDARD WORKING CONDITION**




**AUTOMATIC LOAD BALANCE IN FAILURE CASE**




**MAXIMUM AUTOMATIC LOAD BALANCE IN FAILURE AND MAINTENANCE CASE**



# KEOR HPE

## THREE-PHASE UPS
## HIGH EFFICIENCY AND LOW TCO

Keor HPE is designed to reduce TCO.
High efficiency double conversion and advanced energy saving modes ensure low operating costs.
Transformer-free architecture and internal battery layout cut commissioning costs and footprint.
The technology conversion control dramatically reduces maintenance costs, extending all critical components and battery's life.

## Power factor 1

Thanks to their unity power factor the new Keor HPE UPS guarantee maximum real power; 11% more than competitor products offering 0,9 power factor, fully 25% more than those of 0.8 power factor.

## Smart parallel up to 1,2MW

Smart-parallel control continuously monitors load power requirements and maximizes system efficiency, by turning off all unnecessary units.

## Backfeed protection

Plus series comes with backfeed energy detection circuit,
for total upstream protection
and operator safety.

## Internal battery

60 and 80 kW models can contain up to 180 batteries, allowing to obtain back-up time up to 12 minutes.


# COMPACT SIZE AND ONE CABINET FOR 60 TO 160 KW CONFIGURATIONS

# KEOR HPE

## FRONT-ACCES INSTALLATION AND MAINTENANCE

The UPS Keor HPE is designed to be installed and maintained completely from the front.
All circuit breakers and communications ports are on UPS front side.
A practical interior door allows you to reach even the parts installed on the bottom of the UPS, in order to have maximum access to all components.

## Communications port

The communications ports are put in the internal door, and are available all the most common protocols:  relay contact, ModBus-RTU by RS485, ModBus TCP/IP o SNMP by Ethernet.

## Internal front acces

All parts are accessible from the front, to speed up installation  and maintenance.

## Cooling system

The optimised cooling system, placed in the upper part of the UPS, enables to position the UPS against the wall without affecting performance.

# KEOR HPE

## OPTIMIZED BATTERY MANAGEMENT

Protecting capital expenditure on batteries, whilst ensuring full availability of mission critical applications can only be achieved by keeping them in perfect condition. Keor HPE comes with advanced charging and battery managing features, providing best battery performance and extended lifetime.

## Intermittent charging

with adjustable charging cycle (27-3 typical), to extend battery operating life and to achieve maximum energy savings.

## Easy access to the batteries

Access to the battery is on the side, the drawers can be extracted and inclined to facilitate the connection and substitution.

## Automatic setting of battery charging current

with feeding priority to output loads, ensuring low charging times for long back-up time applications.

## Battery charging voltage temperature compensation

to prevent excess battery charging and overheating. Temperature sensor included in all units.

## Automatic and manual battery test

to detect any battery performance deterioration.

# KEOR LP

**Conventional UPS - Single phase On-line double conversion VFI**

3 101 54

3 101 56

3 101 58

## UPS with IEC sockets

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | No. of sockets IEC 10A | No. of french socket | Weight (kg) |
|---|---|---|---|---|---|---|---|
| 1 | 3 101 54 | 1000 | 900 | 5 | 3 | - | 10 |
| 1 | 3 101 56 | 2000 | 1800 | 5 | 6 | - | 17 |
| 1 | 3 101 58 | 3000 | 2700 | 5 | 6 | - | 23 |

## UPS with french standard sockets

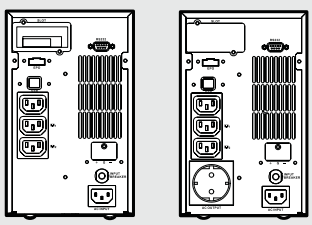
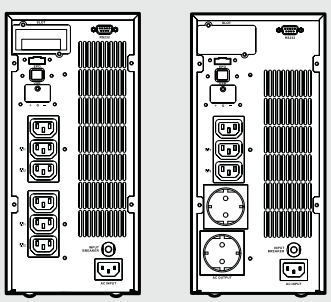
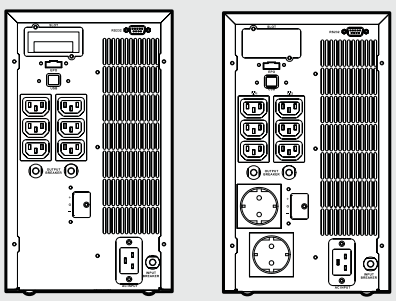
| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | No. of sockets IEC 10A | No. of french socket | Weight (kg) |
|---|---|---|---|---|---|---|---|
| 1 | 3 101 55 | 1000 | 900 | 5 | 3 | 1 | 10 |
| 1 | 3 101 57 | 2000 | 1800 | 5 | 6 | 2 | 17 |
| 1 | 3 101 59 | 3000 | 2700 | 5 | 6 | 2 | 23 |

## Accessories

| Pack | Cat. Nos. | Description |
|---|---|---|
| 1 | 3 105 98* | Additional battery cabinet for 3 101 54 - 3 101 55 |
| 1 | 3 105 99* | Additional battery cabinet for 3 101 56 - 3 101 57 |
| 1 | 3 106 00* | Additional battery cabinet for 3 101 58 - 3 101 59 |
| 1 | 3 109 58 | Additional battery charger for battery cabinet 3 105 98 |
| 1 | 3 109 60 | Additional battery charger for battery cabinet 3 105 99 |
| 1 | 3 109 61 | Additional battery charger for battery cabinet 3 106 00 |
| 1 | 3 109 53 | Bypass |

*Battery included

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

| 1000 | 2000 | 3000 |
|---|---|---|
|  |  |  |

# KEOR LP

**Conventional UPS - Single phase On-line double conversion VFI**

## Characteristics

| General characteristics | 3 101 54<br>3 101 55 | 3 101 56<br>3 101 57 | 3 101 58<br>3 101 59 |
|---|---|---|---|
| Nominal power (VA) | 1000 | 2000 | 3000 |
| Active power (W) | 900 | 1800 | 2700 |
| Technology | On-line double conversion VFI-SS-111 | | |
| Waveform | Sinusoidal | | |
| Architecture | UPS with extendable back-up time | | |
| **Input characteristics** | | | |
| Input voltage | 230 V | | |
| Input frequency | 45-65 Hz ±2 % Autosensing | | |
| Input voltage range | 210 V÷240 Vac at 100% load | | |
| Input power factor | > 0,99 | | |
| **Output characteristics** | | | |
| Output voltage | 230 V ± 1 % | | |
| Efficiency | Up to 90 % | | |
| Output frequency (nominal) | 50/60 Hz synchronised | | |
| Peak factor | 3 : 1 | | |
| THD of output voltage | < 3% with linear load | | |
| Overload capacity: | <105% ONLINE mode, 121÷150% for 10 sec., 106÷120% for 30 sec.,<br>>151% instant transfer to bypass | | |
| Bypass | Automatic, internal, synchronised, electromechanical (for overloads and operating problems) | | |
| **Batteries** | | | |
| Back-up time extension | Sì | | |
| Back-up time (min) | 5 | | |
| **Communication and management** | | | |
| Screen and signalling | Multi-coloured LED status indicator, alarms and audible signalling | | |
| Communication ports | 1 RS232 serial port, 1 slot for network interface connection (ex. CS141) | | |
| Emergency Power Off (EPO) | Yes | | |
| Remote control | Software can be downloaded free of charge | | |
| **Mechanical characteristics** | | | |
| Dimensions (H x W x D) (mm) | 236 x 144 x 367 | 322 x 151 x 444 | 322 x 189 x 444 |
| Dimensions of battery cabinet (H x W x D) (mm) | 322 x 151 x 444 | 322 x 151 x 444 | 322 x 151 x 444 |
| Battery cabinet Net weight (kg) | 31 | 31 | 31 |
| **Ambient conditions** | | | |
| Ambient operating temperature (°C) | 0÷40 | | |
| Relative humidity (%) | 20÷80 non condensing | | |
| Noise at 1 m (dBA) | < 50 | | |
| **Certifications** | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | |

# DAKER DK

**Conventional UPS - On-line double conversion VFI**

3 100 54

3 100 50 — 3 107 71

3 109 53

The main parameters of the UPS, including the battery charge level and faults, are displayed on the LCD screen on the front panel.
The integrated communication software not only controls the UPS and its switch-off if there is a malfunction, and enables the user to test the main functions remotely, communicate via SNMP/Internet/network adaptor and access the functions of the UPS via the Internet, but can also send the user an SMS if specific events occur.
The internal extension connector enables a WEB/SNMP card or a relay interface to be installed which provides insulated contacts for applications on industrial control panels or remote alarm panels.
If there is an electronic fault, overload, overheating or for scheduled maintenance operations, the automatic or manual (optional) bypass ensures continuity of the power supply for critical loads. A bypass switch is available for maintenance.

## Convertible UPS with batteries

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | Weight (kg) |
|---|---|---|---|---|---|
| 1 | 3 100 50 | 1000 | 800 | 10 | 16 |
| 1 | 3 100 51 | 2000 | 1600 | 10 | 29.5 |
| 1 | 3 100 52 | 3000 | 2400 | 8 | 30 |
| 1 | 3 100 53 | 4500 | 4050 | 6 | 60 |
| 1 | 3 100 54 | 6000 | 5400 | 4 | 60 |

## Convertible UPS without batteries

| | | Nominal power (VA) | Active power (W) | Phase configuration | Weight (kg) |
|---|---|---|---|---|---|
| 1 | 3 100 56 | 4500 | 4050 | 1/1 | 25 |
| 1 | 3 100 57 | 6000 | 5400 | 1/1 | 25 |
| 1 | 3 100 58 | 10000 | 9000 | 1/1 | 26 |
| 1 | 3 100 59* | 10000 | 9000 | 3/1 | 26 |

* 3-1 version

## Battery cabinet (with batteries)

| | | Description |
|---|---|---|
| 1 | 3 107 69 | Battery cabinet for 3 100 50 |
| 1 | 3 107 70 | Battery cabinet for 3 100 51 |
| 1 | 3 107 71 | Battery cabinet for 3 100 52 |
| 1 | 3 107 72 | Battery cabinet for 3 100 56 and 3 100 57 |
| 1 | 3 107 66 | Battery cabinet for 3 100 58 |

## Battery cabinet (empty)

| Pack | Cat. Nos. | Description |
|---|---|---|
| 1 | 3 107 50 | Battery cabinet for 3 100 50 |
| 1 | 3 107 51 | Battery cabinet for 3 100 51 |
| 1 | 3 107 52 | Battery cabinet for 3 100 52 |
| 1 | 3 107 53 | Battery cabinet for 3 100 56 and 3 100 57 |
| 1 | 3 107 54 | Battery cabinet for 3 100 58 |

## Accessories

| | | Description |
|---|---|---|
| 1 | 3 109 52 | Rack support bracket kit |
| 1 | 3 109 53 | Bypass manuale esterno per 3 100 50 -3 100 51 - 3 100 52 |
| 1 | 3 109 63 | Bypass manuale esterno per 3 100 53 - 3 100 54 - 3 100 56 -3 100 57 - 3 100 58 - 3 100 59 |
| 1 | 3 109 59 | Additional charger for 3 100 50 |
| 1 | 3 109 61 | Additional charger for 3 100 51 - 3 100 52 |
| 1 | 3 109 54 | Additional charger for 3 100 53 - 3 100 54 - 3 100 56 -3 100 57 - 3 100 58 - 3 100 59 |
| 1 | 3 109 69 | Dry contact card |
| 1 | 3 106 17 | Installation kit for 2 UPS in parallel redundant |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# DAKER DK

**Conventional UPS - On-line double conversion VFI**

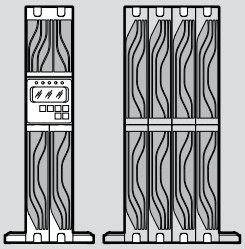
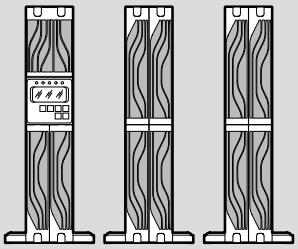
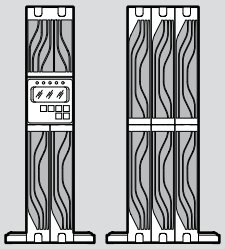
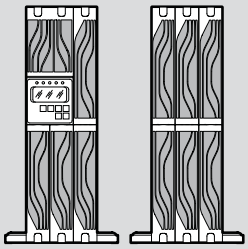
## Characteristics

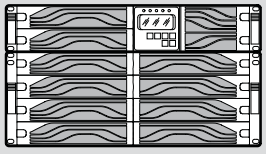
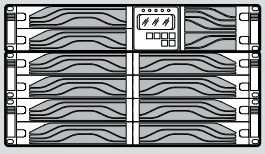
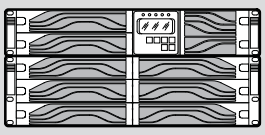
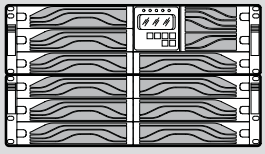
| General characteristics | 3 100 50 | 3 100 51 | 3 100 52 | 3 100 53 | 3 100 56 | 3 100 54 | 3 100 57 | 3 100 58 | 3 100 59 |
|---|---|---|---|---|---|---|---|---|---|
| Nominal power (VA) | 1000 | 2000 | 3000 | 4500 | | 6000 | | 10000 | 10000 |
| Active power (W) | 800 | 1600 | 2400 | 4050 | | 5400 | | 9000 | 9000 |
| Technology | On-line double conversion VFI-SS-111 | | | | | | | | |
| Waveform | Sinusoidal | | | | | | | | |
| Architecture | Convertible tower and 19" rack | | | | | | | | |
| **Input characteristics** | | | | | | | | | |
| Input voltage | 230 V | | | | | | | | 380V 3P+N |
| Input frequency | 50-60 Hz ± 5% autosensing | | | | | | | | |
| Input voltage range | 160 V - 288 V full load | | | | | | | | 277-485V |
| THD of input current | < 3% | | | | | | | | |
| Input power factor | > 0.99 | | | | | | | | |
| **Output characteristics** | | | | | | | | | |
| Output voltage | 230 V ± 1% | | | | | | | | |
| Output frequency (nominal) | 50/60 Hz (configurable via LCD panel) +/- 0.1% | | | | | | | | |
| Peak factor | 1:3 | | | | | | | | |
| THD of output voltage | < 3% with linear load | | | | | | | | |
| Output voltage tolerance | ± 1% | | | | | | | | |
| Bypass | Automatic bypass and optional external manual bypass | | | | | | | | |
| **Batteries** | | | | | | | | | |
| Back-up time extension | Yes | | | | | No | Yes | | |
| Back-up time (min) | 10 | 10 | 8 | 6 | - | 4 | - | - | |
| **Communication and management** | | | | | | | | | |
| Screen and signalling | Four buttons and four LEDs for real-time control of the status and the main parameters of the UPS | | | | | | | | |
| Communication ports | RS232 and USB serial ports | | | RS232 serial ports | | | | | |
| Remote control | Available | | | | | | | | |
| Connector for network interface | SNMP | | | | | | | | |
| Back feed protection | yes | | | | | | | | |
| Emergency power off (EPO) | yes | | | | | | | | |
| **Mechanical characteristics** | | | | | | | | | |
| Dimensions (H x W x D) (mm) | 440x88 (2U) x405 | 440x88 (2U) x650 | 440x88 (2U) x650 | 440x176 (4U) x680 | 440x88 (2U) x680 | 440x176 (4U) x680 | 440x88 (2U) x680 | 440x132 (3U) x680 | |
| Net weight (kg) | 16 | 29.5 | 30 | 60 | 25* | 60 | 25* | 26* | |
| Dimensions of battery cabinet H x W x D (mm) | 440x176 (4U) x405 | 440x88 (2U) x650 | 440x88 (2U) x650 | - | 440x132 (3U) x680 | - | 440x132 (3U) x680 | 440x132 (3U) x680 | |
| **Ambient conditions** | | | | | | | | | |
| Operating temperature (°C) | 0 ÷ 40°C | | | | | | | | |
| Protection index | IP 21 | | | | | | | | |
| Relative humidity (%) | 20 to 80% | | | | | | | | |
| Noise at 1 m (dBA) | < 50 | | | | | | | | |
| Heat dissipation (BTU/h) | 490 | 654 | 818 | 982 | | 1310 | | 1636 | |
| **Certifications** | | | | | | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | | | | | | |

* Weight without batteries

# DAKER DK

**Configurations**

| | 1000 VA 2 cabinet<br>L 2U + 4U | 3000 VA 3 cabinet<br>L 2U +2U + 2U | 6000 VA 2 cabinet<br>L 2U + 3U | 10000 VA 2 cabinet<br>L 3U + 3U |
|---|---|---|---|---|
| version<br>TOWER |  |  |  |  |

| | 1000 VA 2 cabinet<br>H 2U + 4U (264mm) | 3000 VA 3 cabinet<br>H 2U + 2U + 2U (264mm) | 6000 VA 2 cabinet<br>H 2U + 3U (320 mm) | 10000 VA 2 cabinet<br>H 3U + 3U (264mm) |
|---|---|---|---|---|
| version<br>RACK |  |  |  |  |

# DAKER DK

## Long back-up time table

| Model | Power | Back-up time | Dimensions and number of cabinets H x W x D (mm) | Cat. Nos. |
|---|---|---|---|---|
| Daker DK | 1000 VA | 10’ | 440 x 88 x 405 | 3 100 50 |
| | | 1h 22’ | 440 x 88 x 405 + 440 x176 x 405 | 3 100 50 + 3 107 69 |
| | | 2h 44’ | 440 x 88 x 405 + 440x176 x 405 (x2) | 3 100 50 + 3 107 69 (x2) |
| | | 4h 22’ | 440 x 88 x 405 + 440 x176 x 405 (x3) | 3 100 50 + 3 107 69 (x3) |
| | | 5h 52’ | 440 x 88 x 405 + 440 x 176 x 405 (x4) | 3 100 50 + 3 107 69 (x4) |
| | 2000 VA | 10’ | 440 x 88 x 650 | 3 100 51 |
| | | 39’ | 440 x 88 x 650 (x2) | 3 100 51 + 3 107 70 |
| | | 1h 22’ | 440 x 88 x 650 (x3) | 3 100 51 + 3 107 70 (x2) |
| | | 1h 57’ | 440 x 88 x 650 (x4) | 3 100 51 + 3 107 70 (x3) |
| | | 2h 44’ | 440 x 88 x 650 (x5) | 3 100 51 + 3 107 70 (x4) |
| | 3000 VA | 8’ | 440 x 88 x 650 | 3 100 52 |
| | | 34’ | 440 x 88 x 650 (x2) | 3 100 52 + 3 107 71 |
| | | 1h 6’ | 440 x 88 x 650 (x3) | 3 100 52 + 3 107 71 (x2) |
| | | 1h 33’ | 440 x 88 x 650 (x4) | 3 100 52 + 3 107 71 (x3) |
| | | 2h 3’ | 440 x 88 x 650 (x5) | 3 100 52 + 3 107 71 (x4) |
| | 6000 VA | 10’ | 440 x 88 x 650 + 440 x 132 x 680 | 3 100 57 + 3 107 72 |
| | | 29’ | 440 x 88 x 650 + 440 x 132 x 680 (x2) | 3 100 57 + 3 107 72 (x2) |
| | | 49’ | 440 x 88 x 650 + 440 x 132 x 680 (x3) | 3 100 57 + 3 107 72 (x3) |
| | | 1h 11’ | 440 x 88 x 650 + 440x132x680 (x4) | 3 100 57 + 3 107 72 (x4) |
| | 10000 VA | 7’ | 440 x 132 x 650 + 440 x 132 x 680 | 3 100 58 + 3 107 66 |
| | | 18’ | 440 x132x650 + 440 x 132 x 680 (x2) | 3 100 58 + 3 107 66 (x2) |
| | | 29’ | 440 x132x650 + 440 x 132 x 680 (x3) | 3 100 58 + 3 107 66 (x3) |
| | | 42’ | 440 x 132 x 650 + 440 x 132 x 680 (x4) | 3 100 58 + 3 107 66 (x4) |
| | | 56’ | 440 x 132 x 650 + 440 x 132 x 680 (x5) | 3 100 58 + 3 107 66 (x5) |
| Daker DK 3 - 1 | 10000 VA | 7’ | 440 x 132 x 650 + 440 x 132 x 680 | 3 100 59 + 3 107 66 |
| | | 18’ | 440 x132x650 + 440 x 132 x 680 (x2) | 3 100 59 + 3 107 66 (x2) |
| | | 29’ | 440 x132x650 + 440 x 132 x 680 (x3) | 3 100 59 + 3 107 66 (x3) |
| | | 42’ | 440 x 132 x 650 + 440 x 132 x 680 (x4) | 3 100 59 + 3 107 66 (x4) |
| | | 56’ | 440 x 132 x 650 + 440 x 132 x 680 (x5) | 3 100 59 + 3 107 66 (x5) |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# DAKER DK PLUS

**UPS - On-line double conversion VFI**

3 101 74

3 101 77

3 106 64

The main parameters of the UPS, including the battery charge level and faults, are displayed on the LCD screen on the front panel.
The integrated communication software not only controls the UPS and its switch-off if there is a malfunction, and enables the user to test the main functions remotely, communicate via SNMP/Internet/network adaptor and access the functions of the UPS via the Internet, but can also send the user an SMS if specific events occur.
The internal extension connector enables a WEB/SNMP card or a relay interface to be installed which provides insulated contacts for applications on industrial control panels or remote alarm panels.
If there is an electronic fault, overload, overheating or for scheduled maintenance operations, the automatic or manual (optional) bypass ensures continuity of the power supply for critical loads. A bypass switch is available for maintenance.

## Convertible UPS with batteries

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | Weight (kg) |
|---|---|---|---|---|---|
| 1 | 3 101 70 | 1000 | 900 | 10 | 16 |
| 1 | 3 101 71 | 2000 | 1800 | 10 | 29,5 |
| 1 | 3 101 72 | 3000 | 2700 | 8 | 30 |
| 1 | 3 101 73 | 5000 | 5000 | 5 | 60 |
| 1 | 3 101 74 | 6000 | 6000 | 4 | 60 |

## Convertible UPS without batteries

| | | Nominal power (VA) | Active power (W) | Phase configuration | Weight (kg) |
|---|---|---|---|---|---|
| 1 | 3 101 75 | 5000 | 5000 | - | 25 |
| 1 | 3 101 76 | 6000 | 6000 | - | 25 |
| 1 | 3 101 77 | 10000 | 10000 | - | 26 |
| 1 | 3 101 78* | 10000 | 9000 | - | 28 |

* 3-1 version

## Battery cabinet (with batteries)

| | | Description |
|---|---|---|
| 1 | 3 106 60 | Battery cabinet for 3 101 70 |
| 1 | 3 106 61 | Battery cabinet for 3 101 71 |
| 1 | 3 106 62 | Battery cabinet for 3 101 72 |
| 1 | 3 106 63 | Battery cabinet for 3 101 73 - 3 101 74 - 3 101 75 - 3 101 76 |
| 1 | 3 106 64 | Battery cabinet for 3 101 77 - 3 101 78 |

## Battery cabinet (empty)

| Pack | Cat. Nos. | Description |
|---|---|---|
| 1 | 3 106 65 | Battery cabinet for 3 101 70 |
| 1 | 3 106 66 | Battery cabinet for 3 101 71 |
| 1 | 3 106 67 | Battery cabinet for 3 101 72 |
| 1 | 3 106 68 | Battery cabinet for 3 101 73 - 3 101 74 - 3 101 75 - 3 101 76 |
| 1 | 3 106 69 | Battery cabinet for 3 101 77 - 3 101 78 |

## Accessories

| | | Description |
|---|---|---|
| 1 | 3 109 52 | Rack support bracket kit |
| 1 | 3 109 53 | External manual Bypass for 3 101 70 - 3 101 71 - 3 101 72 |
| 1 | 3 109 63 | External manual Bypass for 3 101 73 - 3 101 74 - 3 101 75 - 3 101 76 - 3 101 77 |
| 1 | 3 109 59 | Additional charger for 3 101 70 |
| 1 | 3 109 61 | Additional charger for 3 101 71 - 3 101 72 |
| 1 | 3 109 54 | Additional charger for 3 101 73 - 3 101 74 - 3 101 75 - 3 101 76 - 3 101 77 - 3 101 78 |
| 1 | 3 109 69 | Dry contact card |

**New product codes in red.**

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# DAKER DK PLUS

**UPS - On-line double conversion VFI**

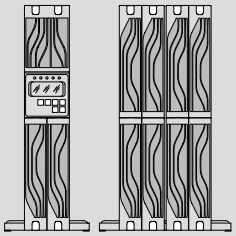
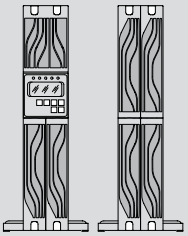
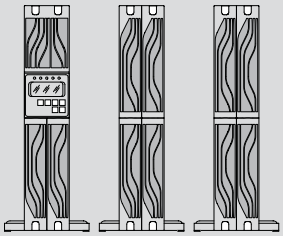
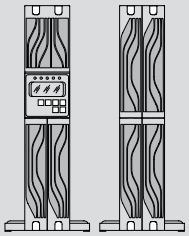
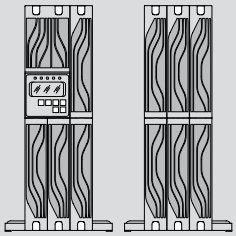
## Characteristics

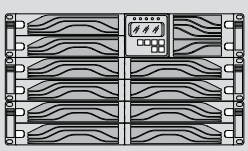
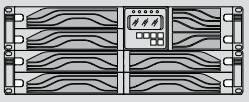
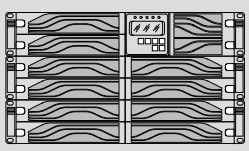
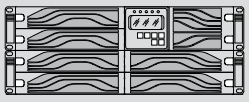
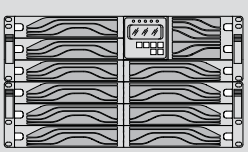
| General characteristics | 3 101 70 | 3 101 71 | 3 101 72 | 3 101 73 | 3 101 75 | 3 101 74 | 3 101 76 | 3 101 77 | 3 101 78 |
|---|---|---|---|---|---|---|---|---|---|
| Nominal power (VA) | 1000 | 2000 | 3000 | 5000 | | 6000 | | 10000 | 10000 |
| Active power (W) | 900 | 1800 | 2700 | 5000 | | 6000 | | 10000 | 9000 |
| Technology | On-line double conversion VFI-SS-111 | | | | | | | | |
| Waveform | Sinusoidal | | | | | | | | |
| Architecture | Convertible tower and 19" rack | | | | | | | | |
| **Input characteristics** | | | | | | | | | |
| Input voltage | 230 V | | | | | | | | 380V 3P+N |
| Input frequency | 50-60 Hz ± 5% autosensing | | | | | | | | |
| Input voltage range | 176V - 280V at full load | | | | | | | | 305V - 485V |
| THD of input current | < 3% | | | | | | | | |
| Input power factor | > 0,99 | | | | | | | | > 0,9 |
| **Output characteristics** | | | | | | | | | |
| Output voltage | 230 V ± 1% | | | | | | | | |
| Output frequency (nominal) | 50/60 Hz (configurable via LCD panel) +/- 0.1% | | | | | | | | |
| Efficiency | up to 90% | up to 91% | up to 92% | up to 94% | | | | | up to 90% |
| Peak factor | 1:3 | | | | | | | | |
| THD of output voltage | < 3% with linear load | | | | | | | | |
| Output voltage tolerance | ± 1% | | | | | | | | |
| Internal automatic bypass | included | | | | | | | | |
| External maintenance bypass | optional | optional | optional | optional | optional | optional | optional | optional | - |
| **Batteries** | | | | | | | | | |
| Back-up time extension | Yes | | | | | | | | |
| Back-up time (min) | 10 | 10 | 8 | 5 | - | 4 | - | - | - |
| **Communication and management** | | | | | | | | | |
| Screen and signalling | Four buttons and five LEDs for real-time control of the status and the main parameters of the UPS | | | | | | | | |
| Communication ports | RS232 and USB serial ports | | | | | | | | RS232 serial ports |
| Remote control | Available | | | | | | | | |
| Connector for network interface | SNMP | | | | | | | | |
| Back feed protection | yes | | | | | | | | |
| Emergency power off (EPO) | yes | | | | | | | | |
| **Mechanical characteristics** | | | | | | | | | |
| Dimensions (H x W x D) (mm) | 440 x 88 (2U) x 405 | 440 x 88 (2U) x 600 | | 440x196 (4U)x680 | 440x88 (2U)x680 | 440x196 (4U)x680 | 440x88 (2U)x680 | 440x132 (3U) x680 | |
| Net weight (kg) | 16 | 29,5 | 30 | 60 | 25* | 60 | 25 | 26 | 28 |
| Dimensions of battery cabinet H x W x D (mm) | 440x196 (4U)x425 | 440 x 88 (2U) x 600 | | - | 440 x 88 (2U) x 680 | - | 440 x 88 (2U) x 680 | 440 x 132 (3U) x 680 | |
| **Ambient conditions** | | | | | | | | | |
| Operating temperature (°C) | 0 ÷ 40°C | | | | | | | | |
| Protection index | IP 21 | | | | | | | | |
| Relative humidity (%) | 20 to 80% | | | | | | | | |
| Noise at 1 m (dBA) | < 50 | | | | | | | | |
| Heat dissipation (BTU/h) | 490 | 654 | 818 | 892 | | 1300 | | 1636 | |
| **Certifications** | | | | | | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | | | | | | |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# DAKER DK PLUS

**Configurations**

| | 1000 VA 2 cabinet<br>L 2U + 4U | 2000 VA 2 cabinet<br>L 2U + 2U | 3000 VA 3 cabinet<br>L 2U +2U + 2U | 6000 VA 2 cabinet<br>L 2U + 2U | 10000 VA 2 cabinet<br>L 3U + 3U |
|---|---|---|---|---|---|
| TOWER version |  |  |  |  |  |

| | 1000 VA 2 cabinet<br>H 2U + 4U (294mm) | 2000 VA 2 cabinet<br>H 2U + 2U (196mm) | 3000 VA 3 cabinet<br>H 2U + 2U + 2U (294mm) | 6000 VA 2 cabinet<br>H 2U + 2U (196 mm) | 10000 VA 2 cabinet<br>H 3U + 3U (294mm) |
|---|---|---|---|---|---|
| RACK version |  |  |  |  |  |

# DAKER DK PLUS

**Long back-up time table**

| Model | Power | Back-up time | Dimensions and number of cabinets H x W x D (mm) | Cat. Nos. |
|---|---|---|---|---|
| Daker DK Plus | 1000 VA | 10’ | 440 x 88 x 405 | 3 101 70 |
| | | 1h 22’ | 440 x 88 x 405 + 440 x 196 x 425 | 3 101 70 + 3 106 65 |
| | | 2h 44’ | 440 x 88 x 405 + 440 x 196 x 425 (x2) | 3 101 70 + 3 106 65 (x2) |
| | | 4h 22’ | 440 x 88 x 405 + 440 x 196 x 425 (x3) | 3 101 70 + 3 106 65 (x3) |
| | | 5h 52’ | 440 x 88 x 405 + 440 x 196 x 425 (x4) | 3 101 70 + 3 106 65 (x4) |
| | 2000 VA | 10’ | 440 x 88 x 600 | 3 101 71 |
| | | 39’ | 440 x 88 x 600 (x2) | 3 101 71 + 3 106 66 |
| | | 1h 22’ | 440 x 88 x 600 (x3) | 3 101 71 + 3 106 66 (x2) |
| | | 1h 57’ | 440 x 88 x 600 (x4) | 3 101 71 + 3 106 66 (x3) |
| | | 2h 44’ | 440 x 88 x 600 (x5) | 3 101 71 + 3 106 66 (x4) |
| | 3000 VA | 8’ | 440 x 88 x 600 | 3 101 72 |
| | | 34’ | 440 x 88 x 600 (x2) | 3 101 72 + 3 106 67 |
| | | 1h 6’ | 440 x 88 x 600 (x3) | 3 101 72 + 3 106 67 (x2) |
| | | 1h 33’ | 440 x 88 x 600 (x4) | 3 101 72 + 3 106 67 (x3) |
| | | 2h 3’ | 440 x 88 x 600 (x5) | 3 101 72 + 3 106 67 (x4) |
| | 5000 VA | 10’ | 440 x 88 x 680 + 440 x 88 x 680 | 3 101 75 + 3 106 68 |
| | | 29’ | 440 x 88 x 680 + 440 x 88 x 680 (x2) | 3 101 75 + 3 106 68 (x2) |
| | | 49’ | 440 x 88 x 680 + 440 x 88 x 680 (x3) | 3 101 75 + 3 106 68 (x3) |
| | | 1h 11’ | 440 x 88 x 680 + 440 x 88 x 680 (x4) | 3 101 75 + 3 106 68 (x4) |
| | 6000 VA | 10’ | 440 x 88 x 680 + 440 x 88 x 680 | 3 101 76 + 3 106 68 |
| | | 29’ | 440 x 88 x 680 + 440 x 88 x 680 (x2) | 3 101 76 + 3 106 68 (x2) |
| | | 49’ | 440 x 88 x 680 + 440 x 88 x 680 (x3) | 3 101 76 + 3 106 68 (x3) |
| | | 1h 11’ | 440 x 88 x 680 + 440 x 88 x 680 (x4) | 3 101 76 + 3 106 68 (x4) |
| | 10000 VA | 7’ | 440 x 132 x 680 + 440 x 132 x 680 | 3 101 77 + 3 106 69 |
| | | 18’ | 440 x 132 x 680 + 440 x 132 x 680 (x2) | 3 101 77 + 3 106 69 (x2) |
| | | 29’ | 440 x 132 x 680 + 440 x 132 x 680 (x3) | 3 101 77 + 3 106 69 (x3) |
| | | 42’ | 440 x 132 x 680 + 440 x 132 x 680 (x4) | 3 101 77 + 3 106 69 (x4) |
| | | 56’ | 440 x 132 x 680 + 440 x 132 x 680 (x5) | 3 101 77 + 3 106 69 (x5) |
| Daker DK Plus 3 - 1 | 10000 VA | 7’ | 440 x 132 x 680 + 440 x 132 x 680 | 3 101 78 + 3 106 69 |
| | | 18’ | 440 x 132 x 680 + 440 x 132 x 680 (x2) | 3 101 78 + 3 106 69 (x2) |
| | | 29’ | 440 x 132 x 680 + 440 x 132 x 680 (x3) | 3 101 78 + 3 106 69 (x3) |
| | | 42’ | 440 x 132 x 680 + 440 x 132 x 680 (x4) | 3 101 78 + 3 106 69 (x4) |
| | | 56’ | 440 x 132 x 680 + 440 x 132 x 680 (x5) | 3 101 78 + 3 106 69 (x5) |

**NOTA: i valori di autonomia, espressi in minuti, sono stimati e possono variare in base alle caratteristiche del carico, condizioni operative e dell’ambiente.**

# KEOR S

**Conventional UPS - Single-phase On-line double conversion**


3 101 21


3 107 41

| Pack | Cat. Nos. | Single-phase UPS | | | |
|---|---|---|---|---|---|
| | | Nominal power (VA) | Active power (W) | Back-up time (min) | Net weight (kg) |
| 1 | 3 101 21 | 3000 | 2400 | 10 | 53 |
| 1 | 3 101 22 | 3000 | 2400 | 27 | 75 |
| 1 | 3 101 23 | 3000 | 2400 | 50 | 97 |
| 1 | 3 101 28 | 6000 | 5400 | 22 | 106 |
| 1 | 3 101 31 | 10000 | 9000 | 10 | 114 |

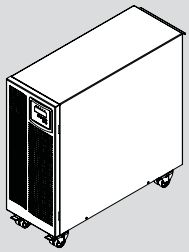
| | | Single-phase UPS with isolation transformer | | | |
|---|---|---|---|---|---|
| | | Nominal power (VA) | Active power (W) | Back-up time (min) | Net weight (kg) |
| 1 | 3 101 25 | 3000 | 2400 | 10 | 85 |
| 1 | 3 101 29 | 6000 | 5400 | 0 | 100 |
| 1 | 3 101 35 | 10000 | 9000 | 0 | 126 |

| | | Battery cabinet |
|---|---|---|
| | | Description |
| 1 | 3 107 40 | Empty battery cabinet |
| 1 | 3 107 41 | Battery cabinet (for KEOR S 3000) |
| 1 | 3 107 42 | Battery cabinet (for KEOR S 3000) |
| 1 | 3 107 43 | Battery cabinet (for KEOR S 3000) |
| 1 | 3 107 44 | Battery cabinet (for KEOR S 6000-10000) |
| 1 | 3 107 45 | Battery cabinet (for KEOR S 6000-10000) |

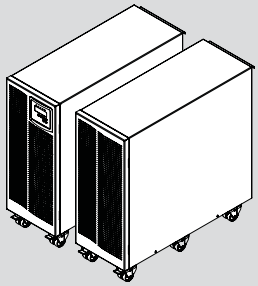
| | | Accessories |
|---|---|---|
| | | Description |
| 1 | 3 109 61 | Battery charger for additional battery cabinet (for 3 107 41 - 3 107 42 - 3 107 43) |
| 1 | 3 109 54 | Battery charger for additional battery cabinet (for 3 107 44 - 3 107 45) |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

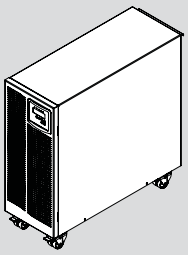
### UPS with internal batteries back-up time up to 50 min for 3 kVA



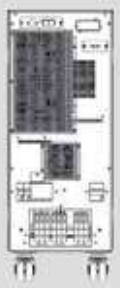
### UPS for long back-up time with additional battery cabinet



### UPS with isolation transformer built in



### Rear pannel



### Long back-up time table

| Power | UPS | Battery cabinet | Back-up time (min.) |
|---|---|---|---|
| 6000 | 3 101 28 | 3 107 44 | 55 |
| 6000 | 3 101 28 | 3 107 45 | 85 |
| 10000 | 3 101 31 | 3 107 44 | 27 |
| 10000 | 3 101 31 | 3 107 45 | 50 |
| 6000 | 3 101 29 | 3 107 45 | 55 |
| 6000 | 3 101 29 | 3 107 44 | 22 |
| 10000 | 3 101 35 | 3 107 44 | 10 |
| 10000 | 3 101 35 | 3 107 45 | 27 |

# KEOR S

**Conventional UPS - Single-phase On-line double conversion**

## Characteristics

| General characteristics | KEOR S 3kVA | KEOR S 6kVA | KEOR S 10kVA |
|---|---|---|---|
| Nominal power (VA) | 3000 | 6000 | 10000 |
| Active power (W) | 2400 | 5400 | 9000 |
| Technology | On-line double conversion | | |
| Waveform | Sinusoidal | | |
| Architecture | conventional UPS | | |
| **Input characteristics** | | | |
| Input voltage | 220V-230V-240V | | |
| Input frequency | 45-65 Hz | | |
| Input voltage range | 160V-288V | 195V-280 V | |
| THD of input current | 6% | | |
| Input power factor | > 0,99 | | |
| **Output characteristics** | | | |
| Output voltage | 220V/230V/240V Adjustable from Front Panel | | |
| Output frequency (nominal) | 50 /60 Hz Adjustable from Front Panel +/- 0,05% | | |
| Crest factor | 2,5:1 | | |
| THD of output voltage | < 1,5% with linear load < 3% with non-linear load | | |
| Overload capacity | 10 seconds at 125%-150%<br>30 seconds at 106%-120% | 120 seconds at 100%-120%<br>30 seconds at 121%-150% | |
| Efficiency in Eco mode | 98% | | |
| Bypass | - | Automatic bypass and manual maintenance bypass | |
| **Batteries** | | | |
| Back-up time extension | Yes | | |
| **Communication and management** | | | |
| LCD Display | Available | | |
| Communication Port | 1 RS232 serial ports, 1 USB port, modbus and SNMP optional | 1 RS232 serial ports, modbus and SNMP optional | |
| Remote Management | Available | | |
| **Mechanical characteristics** | | | |
| Dimensions H x W x D (mm) | 716 x 275 x 776 | | |
| Dimensions battery cabinet H x W x D (mm) | 716 x 275 x 776 | | |
| **Ambient conditions** | | | |
| Operating temperature (°C) | 0÷40 | | |
| Relative humidity (%) | 20÷80 non condensing | | |
| Protection index | IP31 | | |
| Noise at 1 m (dBA) | < 50 | | |
| **Compliance** | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | |

# KEOR T

**Conventional UPS - Three-phase On-line double conversion VFI**

KEOR T10-30

KEOR T10-30

KEOR T40-60-80 -100

KEOR T120

## UPS

| Pack | Cat. Nos. | Nominal power kVA | Back-up time (min.) | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | 3 102 01 | 10 | 24 | 1345 x 400 x 800 | 253 |
| 1 | 3 102 02 | 10 | 35 | 1345 x 400 x 800 | 283 |
| 1 | 3 102 03 | 10 | 56 | 1650 x 400 x 800 | 406 |
| 1 | 3 102 05 | 15 | 12 | 1345 x 400 x 800 | 267 |
| 1 | 3 102 06 | 15 | 20 | 1345 x 400 x 800 | 297 |
| 1 | 3 102 07 | 15 | 33 | 1650 x 400 x 800 | 420 |
| 1 | 3 102 09 | 20 | 8 | 1345 x 400 x 800 | 269 |
| 1 | 3 102 10 | 20 | 14 | 1345 x 400 x 800 | 299 |
| 1 | 3 102 11 | 20 | 36 | 1650 x 400 x 800 | 494 |
| 1 | 3 102 13 | 30 | 8 | 1345 x 400 x 800 | 305 |
| 1 | 3 102 14 | 30 | 13 | 1650 x 400 x 800 | 428 |
| 1 | 3 102 15 | 30 | 20 | 1650 x 400 x 800 | 488 |
| 1 | 3 102 17 | 40 | 8 | 1650 x 600 x 900 | 539 |
| 1 | 3 102 18 | 40 | 13 | 1650 x 600 x 900 | 598 |
| 1 | 3 102 19 | 40 | 22 | 1650 x 600 x 900 | 748 |
| 1 | 3 102 21 | 60 | 8 | 1650 x 600 x 900 | 620 |
| 1 | 3 102 22 | 60 | 14 | 1650 x 600 x 900 | 770 |

## UPS empty for internal battery drawers

| | | Nominal power kVA | Back-up time (min.) | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | 3 102 23 | 10 | 0 | 1650 x 400 x 800 | 140 |
| 1 | 3 102 24 | 15 | 0 | 1650 x 400 x 800 | 151 |
| 1 | 3 102 25 | 20 | 0 | 1650 x 400 x 800 | 162 |
| 1 | 3 102 26 | 30 | 0 | 1650 x 400 x 800 | 169 |
| 1 | 3 109 27 | 40 | 0 | 1650 x 600 x 900 | 241 |
| 1 | 3 109 28 | 60 | 0 | 1650 x 600 x 900 | 276 |

## UPS empty for external battery cabinet

| Pack | Cat. Nos. | Nominal power kVA | Back-up time (min.) | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | 3 102 00 | 10 | 0 | 1345 x 400 x 800 | 118 |
| 1 | 3 102 04 | 15 | 0 | 1345 x 400 x 800 | 132 |
| 1 | 3 102 08 | 20 | 0 | 1345 x 400 x 800 | 134 |
| 1 | 3 102 12 | 30 | 0 | 1345 x 400 x 800 | 140 |
| 1 | 3 102 16 | 40 | 0 | 1650 x 600 x 900 | 255 |
| 1 | 3 102 20 | 60 | 0 | 1650 x 600 x 900 | 277 |
| 1 | 3 102 27 | 80 | - | 1650 x 600 x 800 | 315 |
| 1 | 3 102 28 | 100 | - | 1650 x 600 x 800 | 350 |
| 1 | 3 102 29 | 120 | - | 1650 x 793 x 800 | 430 |

## UPS with insulation transformer

| | | Nominal power kVA | Back-up time (min.) | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | 3 102 30 | 10 | 0 | 1345 x 400 x 800 | 240 |
| 1 | 3 102 31 | 15 | 0 | 1345 x 400 x 800 | 250 |
| 1 | 3 102 32 | 20 | 0 | 1345 x 400 x 800 | 255 |
| 1 | 3 102 33 | 30 | 0 | 1345 x 400 x 800 | 285 |
| 1 | 3 102 34 | 40 | 0 | 1650 x 600 x 900 | 525 |
| 1 | 3 102 35 | 60 | 0 | 1650 x 600 x 900 | 575 |

## Accessories

| | | Description |
|---|---|---|
| 1 | 3 109 18 | Battery cabinet empty (for 60 blocks 55 Ah) |
| 1 | 3 109 21 | Internal cables kit for battery cabinet empty (for 60 blocks 55 Ah) |
| 1 | 3 109 11 | Battery drawers kit for KEOR T 10-30 kVA (60 blocks 7-9 Ah) |
| 1 | 3 109 12 | Battery drawers kit for KEOR T 40-60 kVA (60 blocks 7-9 Ah) |
| 1 | 3 109 13 | Internal battery cables kit for battery drawers KEOR T 10-30 kVA |
| 1 | 3 109 14 | Internal battery cables kit for battery drawers KEOR T 40-60 kVA |
| 1 | 3 109 15 | Parallel kit/UPS (PCB + 5 m cable) |
| 1 | 3 109 16 | Kit for both in & ext battery connections for 1345H |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# KEOR T

**Conventional UPS - Three-phase On-line double conversion VFI**

## Characteristics

| General characteristics | KEOR T10 | KEOR T15 | KEOR T20 | KEOR T30 | KEOR T40 | KEOR T60 | KEOR T80 | KEOR T100 | KEOR T120 |
|---|---|---|---|---|---|---|---|---|---|
| Nominal power (kVA) | 10 | 15 | 20 | 30 | 40 | 60 | 80 | 100 | 120 |
| Active power (kW) | 9 | 13,5 | 18 | 27 | 36 | 54 | 72 | 90 | 108 |
| Technology | On-line double conversion VFI-SS-111 | | | | | | | | |
| Waveform | Sinusoidal | | | | | | | | |
| Architecture | Stand Alone or Distributed Parallel up to 8 units | | | | | | | | |
| **Input characteristics** | | | | | | | | | |
| Input voltage | 380, 400, 415 V 3Ph+N+PE | | | | | | | | |
| Input frequency | 45-65 Hz | | | | | | | | |
| Input voltage range (Ph-Ph) | half load 208 -467 / full load 312-467V | | | | | | | | |
| THD of input current | < 3% at full load* | | | | | | | | |
| Compatibility with diesel generators | Configurable for synchronization between the input and output frequencies, even for high frequency variations | | | | | | | | |
| Input power factor | > 0,99 | | | | | | | | |
| **Output characteristics** | | | | | | | | | |
| Output voltage | 380, 400, 415 V 3Ph+N (Adjustable from Front Panel) | | | | | | | | |
| Efficiency | up to 96% | | | | | | | | |
| Efficiency in Eco mode | up to 98,5% | | | | | | | | |
| Output frequency (nominal) | 50 /60 Hz ±0,01% free run (Adjustable from Front Panel) | | | | | | | | |
| Crest factor | 2,5:1 | | | | | | | | |
| THD of output voltage | < 2% (at full linear load) | | | | | | | | |
| Output power factor | 0,9 | | | | | | | | |
| Output voltage tolerance | ± 1% | | | | | | | | |
| Bypass | Built-in Automatic and Maintenance Bypass | | | | | | | | |
| Isolation Transformer | Transformerless Design. Optional Internal Isolation Transformer on request | | | | | | | | |
| **Batteries** | | | | | | | | | |
| Back-up time extension | Scalable with additional battery cabinets | | | | | | | | |
| Battery type | VRLA - AGM Maintenance-free | | | | | | | | |
| Internal Battery | Yes | | | | | | | | |
| Battery Test | Automatic or manual | | | | | | | | |
| Battery Recharge Profile | IU (DIN41773) | | | | | | | | |
| **Communication and management** | | | | | | | | | |
| LCD Display | Touch screen, led bar status, live synoptic view for real time | | | | | | | | |
| Communication Ports | RS232, GenSet, Programmable 4 Relay Contacts, ModBus | | | | | | | | |
| Back Feed Protection | Internal Back Feed Protection Device is Standard | | | | | | | | |
| Audible Alarm | Acoustic alarms and warnings | | | | | | | | |
| Net Interface Slot | optional SNMP card | | | | | | | | |
| Emergency Power Off (EPO) | Yes | | | | | | | | |
| Remote Management | Available | | | | | | | | |
| **Mechanical characteristics** | | | | | | | | | |
| Dimensions H x W x D (mm) | 1345/1650 x 400 x 800 | | | | 1650 x 600 x 900 | | 1650 x 600 x 800 | | 1650 x 793 x 800 |
| Dimensions battery cabinet H x W x D (mm) | 1345 x 600 x 800 | | | | 1650 x 800 x 900 | | | | |
| **Ambient conditions** | | | | | | | | | |
| Operating temperature (°C) | 0÷40 | | | | | | | | |
| Relative humidity (%) | 20÷95% not condensing | | | | | | | | |
| Protection index | IP20 | | | | | | | | |
| Noise at 1 m (dBA) | < 55 | | | | | | | | |
| **Compliance** | | | | | | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | | | | | | |

* 40-60 kVA

# KEOR HPE 60-80-100-125-160-200

**Conventional UPS - Three-phase On-line double conversion VFI**

KEOR HPE 100

KEOR HPE 200

## UPS (with internal installable batteries)

| Pack | Model | Nominal power kVA | Active power kW | Back-up time mins | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|---|
| 1 | Keor HPE 60 | 60 | 60 | 12 | 1800 x 560 x 940 | 250 |
| 1 | Keor HPE 80 | 80 | 80 | 11 | 1800 x 560 x 940 | 300 |

## UPS (without batteries)

| | | Nominal power kVA | Active power kW | Back-up time mins | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|---|
| 1 | Keor HPE 60 | 60 | 60 | - | 1800 x 560 x 940 | 250 |
| 1 | Keor HPE 80 | 80 | 80 | - | 1800 x 560 x 940 | 300 |
| 1 | Keor HPE 100 | 100 | 100 | - | 1800 x 560 x 940 | 320 |
| 1 | Keor HPE 125 | 125 | 125 | - | 1800 x 560 x 940 | 360 |
| 1 | Keor HPE 160 | 160 | 160 | - | 1800 x 560 x 940 | 380 |
| 1 | Keor HPE 200 | 200 | 200 | - | 1975 x 850 x 953 | 720 |

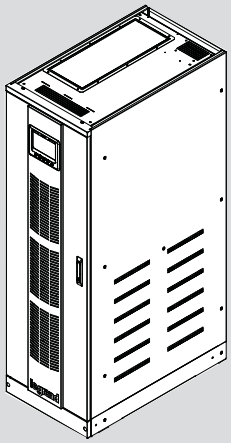
## Options

| | | Description |
|---|---|---|
| 1 | (1) | Serial interface RS-485 ModBus |
| 1 | | SNMP card |
| 1 | | Parallel card interface KIT |
| 1 | | Load-sync card interface kit |
| 1 | | Isolation transformer |
| 1 | | Wall mounted fused switch box external batteries |

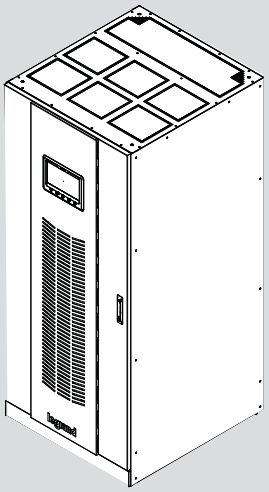
1 accessories to be defined at order time

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

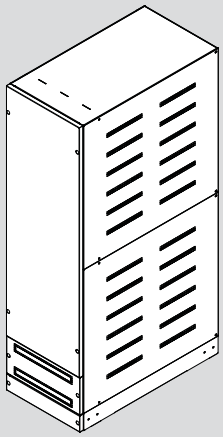
### Keor HPE 60-80-100-125-160



### Keor HPE 200



### Keor HPE battery cabinet



# Keor HPE 60-80-100-125-160-200

**Conventional UPS - Three-phase On-line double conversion VFI**

## Characteristics

| General characteristics | 60 | 80 | 100 | 125 | 160 | 200 |
|---|---|---|---|---|---|---|
| Nominal power (kVA) | 60 | 80 | 100 | 125 | 160 | 200 |
| Active power (kW) | 60 | 80 | 100 | 125 | 160 | 200 |
| Technology | On-line double conversion VFI-SS-111 | | | | | |
| Waveform | Sinusoidal | | | | | |
| Architecture | Conventional UPS, parallelable up to 6 unit | | | | | |
| **Input characteristics** | | | | | | |
| Input voltage | 380-400-415 V 3Ph+N | | | | | |
| Input frequency | 50-60 Hz (45÷65Hz) | | | | | |
| Input voltage range | 400 V -20% / + 15% | | | | | |
| THD of input current | < 3% | | | | | |
| Compatibility with diesel generators | Configurable for synchronism between the input and output frequencies, even for the highest frequency variations | | | | | |
| Input power factor | > 0,99 | | | | | |
| **Output characteristics** | | | | | | |
| Output voltage | 380, 400, 415 V 3Ph+N selected | | | | | |
| Efficiency | up to 96% | | | | | |
| Output frequency (nominal) | 50 /60 Hz | | | | | |
| Crest factor | 3:1 | | | | | |
| THD of output voltage | <1% (with linear load), <5% (with non-linear load) | | | | | |
| Output voltage tolerance | ± 1% (with balance load) | | | | | |
| Overload capacity | 10 minutes at 125%, 30 seconds at 150%, 0,1 seconds >150% | | | | | |
| Efficiency in Eco mode | 99% | | | | | |
| Bypass | Built-in Automatic and Maintenance Bypass | | | | | |
| **Batteries** | | | | | | |
| Back-up time with internal battery (mins) | 12 | 11 | - | - | - | - |
| Back-up time extension | Scalable with additional battery cabinets | | | | | |
| Battery type | VRLA - AGM Maintenance-free Lead Acid Batteries | | | | | |
| Battery test | Automatic or manual | | | | | |
| Battery Recharge Profile | IU (DIN41773) | | | | | |
| **Communication and management** | | | | | | |
| LCD Display | Four LED's to show status at a glance. Four menu-driven interface buttons. | | | | | |
| Communication Ports | voltage free relay contacts, RS485 ModBus-RTU, Ethernet ModBus over IP or SNMP protocol (slot SNMP optional) | | | | | |
| Audible Alarm | Acoustic alarms and warnings, configurable delays | | | | | |
| Emergency Power Off (EPO) | Yes | | | | | |
| Remote Management | Available | | | | | |
| Battery temperature probe | yes | | | | | |
| **Mechanical characteristics** | | | | | | |
| Dimensions H x W x D (mm) | 1800 x 560 x 940 | | | | | 1975 x 850 x 953 |
| Net Weight (kg) | 250 | 300 | 320 | 360 | 380 | 720 |
| Dimensions battery cabinet H x W x D (mm) | 1800 x 503 x 945 (60 batteries) | | | | | |
| **Ambient conditions** | | | | | | |
| Operating temperature (°C) | 0÷40 | | | | | |
| Relative humidity (%) | < 95% not condensing | | | | | |
| Protection index | IP20 | | | | | |
| Noise at 1 m (dBA) | < 60 | | | | | |
| **Certifications** | | | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | | | |

# KEOR HP 100-125-160-200-250-300

**Conventional UPS - Three-phase On-line double conversion VFI**


KEOR HP 100


KEOR HP 200

## UPS (without batteries)

| Pack | Model | Nominal power kVA | Active power kW | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | KEOR HP 100 | 100 | 90 | 1670 x 815 x 825 | 625 |
| 1 | KEOR HP 125 | 125 | 112,5 | 1670 x 815 x 825 | 660 |
| 1 | KEOR HP 160 | 160 | 144 | 1670 x 815 x 825 | 715 |

## UPS (without batteries)

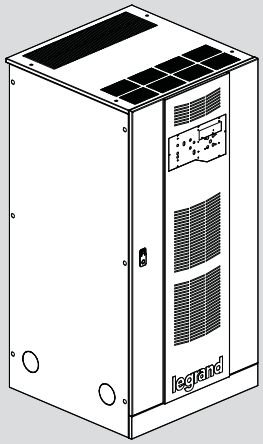
| | | Nominal power kVA | Active power kW | Dimensions H x W x D (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | KEOR HP 200 | 200 | 180 | 1905 x 1220 x 870 | 970 |
| 1 | KEOR HP 250 | 250 | 225 | 1905 x 1220 x 870 | 1090 |
| 1 | KEOR HP 300 | 300 | 270 | 1905 x 1220 x 870 | 1170 |

## Options

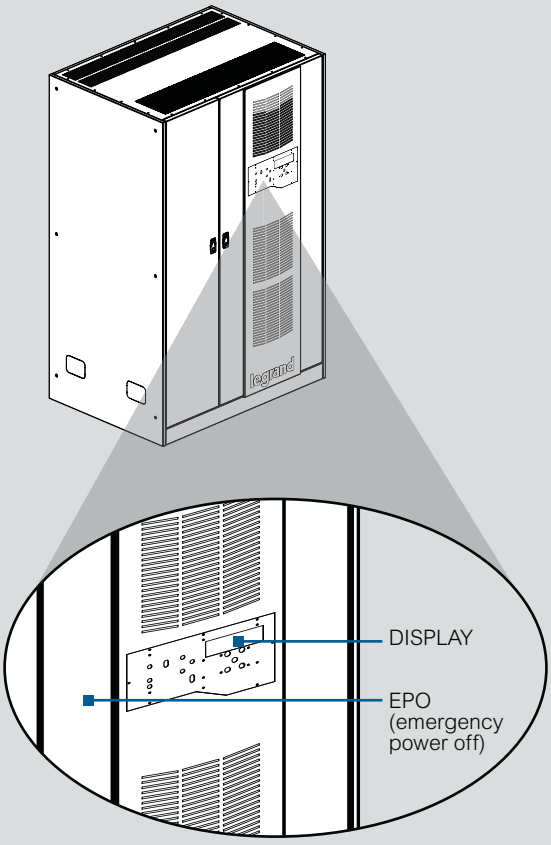
| | | Description |
|---|---|---|
| 1 | (1) | Empty battery cabinet with cables and protection |
| 1 | | Batteries 5 years / 10 years life time in cabinets or racks |
| 1 | | Battery switch box with protection: fuses |
| 1 | | Battery monitoring system |
| 1 | | BY PASS insulation transformer |
| 1 | | External maintenance bypass |
| 1 | | Top entry cable cabinet |
| 1 | | Remote control panel |

1 accessories to be defined at order time

### Keor HP 100-125-160




### Keor HP 200-250-300




**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# KEOR HP 100-125-160-200-250-300

**Conventional UPS - Three-phase On-line double conversion VFI**

## Characteristics

| General characteristics | 100 | 125 | 160 | 200 | 250 | 300 |
|---|---|---|---|---|---|---|
| Nominal power (kVA) | 100 | 125 | 160 | 200 | 250 | 300 |
| Active power (kW) | 90 | 112,5 | 144 | 180 | 225 | 270 |
| Technology | On-line double conversion VFI-SS-111 | | | | | |
| Waveform | Sinusoidal | | | | | |
| Architecture | Conventional UPS, parallelable up to 6 unit | | | | | |
| **Input characteristics** | | | | | | |
| Input voltage | 380-415 V 3Ph+N | | | | | |
| Input frequency | 50-60 Hz ± 10% autosensing | | | | | |
| Input voltage range | 400 V -20% / + 15% | | | | | |
| THD of input current | < 3% | | | | | |
| Compatibility with diesel generators | Configurable for synchronism between the input and output frequencies, even for the highest frequency variations | | | | | |
| Input power factor | > 0,99 | | | | | |
| **Output characteristics** | | | | | | |
| Output voltage | 380, 400, 415 V 3Ph+N selected | | | | | |
| Efficiency | up to 95% | | | | | |
| Output frequency (nominal) | 50 /60 Hz selected ± 0,001% | | | | | |
| Crest factor | 3:1 | | | | | |
| THD of output voltage | <5% (with non-linear load) | | | | | |
| Output voltage tolerance | ± 1% (with balance load) | | | | | |
| Overload capacity | 10 minutes at 125%, 60 seconds at 150%, 10 seconds at 200% | | | | | |
| Efficiency in Eco mode | 98% | | | | | |
| Bypass | Built-in Automatic and Maintenance Bypass | | | | | |
| **Batteries** | | | | | | |
| Back-up time extension | Scalable with additional battery cabinets | | | | | |
| Battery type | VRLA - AGM Maintenance-free Lead Acid Batteries | | | | | |
| Battery test | Automatic or manual | | | | | |
| Battery Recharge Profile | IU (DIN41773) | | | | | |
| **Communication and management** | | | | | | |
| LCD Display | Four LED's to show status at a glance.<br>Four menu-driven interface buttons. Four status at a glance LEDs | | | | | |
| Communication Ports | RS232 and USB serial ports (Optional RS485) | | | | | |
| Audible Alarm | Acoustic alarms and warnings, configurable delays | | | | | |
| Configuration Setting | Auto configuration by firmware, or manual by service engineer | | | | | |
| Net Interface Slot | Built-in dry contact PCB, optional SNMP card | | | | | |
| Emergency Power Off (EPO) | Yes | | | | | |
| Remote Management | Available | | | | | |
| Battery temperature probe | Yes | | | | | |
| **Mechanical characteristics** | | | | | | |
| Dimensions H x W x D (mm) | 1670 x 815 x 825 | | | 1905 x 1220 x 855 | | |
| Net Weight (kg) | 625 | 660 | 715 | 970 | 1090 | 1170 |
| Dimensions battery cabinet H x W x D (mm) | 1900 x 1400 x 830 (50 batteries)<br>1900 x 2800 x 830 (100 batteries) | | | 1900 x 1400 x 860 (50 batteries)<br>1900 x 2800 x 860 (100 batteries) | | |
| **Ambient conditions** | | | | | | |
| Operating temperature (°C) | 0÷40 | | | 0÷40 | | |
| Relative humidity (%) | < 95% not condensing | | | < 95% not condensing | | |
| Protection index | IP20 | | | IP20 | | |
| Noise at 1 m (dBA) | < 60 | | | < 62 | | |
| **Certifications** | | | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | | | |

# KEOR HP 400-500-600-800

**Conventional UPS - Three-phase On-line double conversion VFI**


KEOR HP 400

## UPS (without batteries)

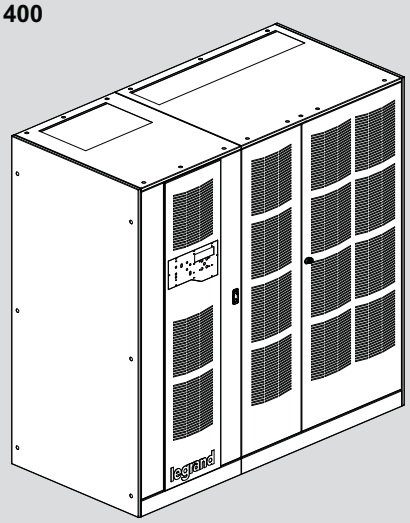
| Pack | Model | Nominal power kVA | Active power kW | Dimensions A X L X P (mm) | Net weight (kg) |
|---|---|---|---|---|---|
| 1 | KEOR HP 400 | 400 | 360 | 1920 x 1990 x 965 | 1820 |
| 1 | KEOR HP 500 | 500 | 450 | 2020 x 2440 x 950 | 2220 |
| 1 | KEOR HP 600 | 600 | 540 | 2020 x 2440 x 950 | 2400 |
| 1 | KEOR HP 800 | 800 | 720 | 1920 x 3640 x 950 | 3600 |

## Options

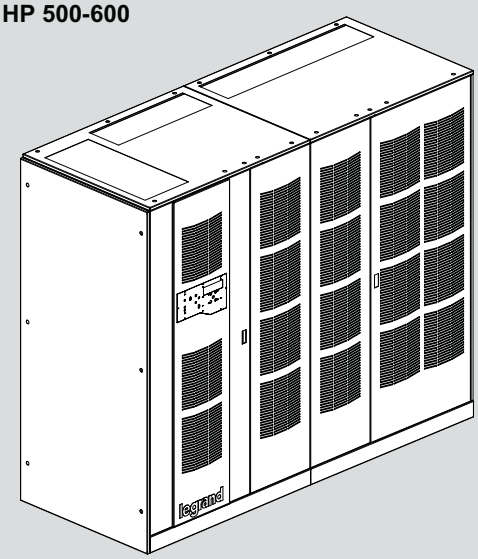
| | | Description |
|---|---|---|
| 1 | | Empty battery cabinet with cables and protection |
| 1 | | Batteries 5 years / 10 years life time in cabinets or racks |
| 1 | | Battery switch box with protection: fuses |
| 1 | | Battery monitoring system |
| 1 | (1) | BY PASS insulation transformer |
| 1 | | External maintenance bypass |
| 1 | | Top entry cable cabinet |
| 1 | | Remote control panel |

1 accessories to be defined at order time

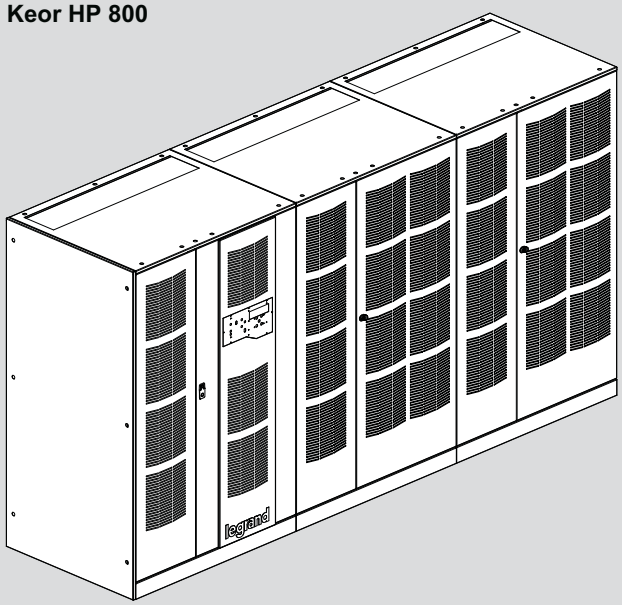
### Keor HP 400




### Keor HP 500-600




### Keor HP 800




**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# KEOR HP 400-500-600-800

**Conventional UPS - Three-phase On-line double conversion VFI**

## Characteristics

| General characteristics | 400 | 500 | 600 | 800 |
|---|---|---|---|---|
| Nominal power (kVA) | 400 | 500 | 600 | 800 |
| Active power (kW) | 360 | 450 | 540 | 720 |
| Technology | On-line double conversion VFI-SS-111 | | | |
| Waveform | Sinusoidal | | | |
| Architecture | Conventional UPS, parallelable up to 6 unit | | | |
| **Input characteristics** | | | | |
| Input voltage | 380-415 V 3Ph+N | | | |
| Input frequency | 50-60 Hz ± 10% autosensing | | | |
| Input voltage range | 400 V -20% / + 15% | | | |
| THD of input current | <3% | | | |
| Compatibility with diesel generators | Configurable for synchronism between the input and output frequencies, even for the highest frequency variations | | | |
| Input power factor | >0,99 | | | |
| **Output characteristics** | | | | |
| Output voltage | 380, 400, 415 V 3Ph+N selected | | | |
| Efficiency | up to 95% | | | |
| Output frequency (nominal) | 50 /60 Hz selected ± 0,001% | | | |
| Crest factor | 3:1 | | | |
| THD of output voltage | <5% (with non-linear load) | | | |
| Output voltage tolerance | ± 1% (with balance load) | | | |
| Overload capacity | 10 minutes at 125%, 60 seconds at 150%, 10 seconds at 200% | | | |
| Efficiency in Eco mode | >98% | | | |
| Bypass | Built-in Automatic (optional Maintenance Bypass) | | | |
| **Batteries** | | | | |
| Back-up time extension | Scalable with additional battery cabinets | | | |
| Battery type | VRLA - AGM Maintenance-free Lead Acid Batteries | | | |
| Battery test | Automatic or manual | | | |
| Battery Recharge Profile | IU (DIN41773) | | | |
| **Communication and management** | | | | |
| LCD Display | Four LED's to show status at a glance. Four menu-driven interface buttons. Four status at a glance LEDs | | | |
| Communication Ports | RS232 and USB serial ports (Optional RS485) | | | |
| Audible Alarm | Acoustic alarms and warnings, configurable delays | | | |
| Configuration Setting | Auto configuration by firmware, or manual by service engineer | | | |
| Net Interface Slot | Built-in dry contact PCB, optional SNMP card | | | |
| Emergency Power Off (EPO) | Yes | | | |
| Remote Management | Available | | | |
| Battery temperature probe | Yes | | | |
| **Mechanical characteristics** | | | | |
| Dimensions H x W x D (mm) | 1920 x 1990 x 965 | 2020 x 2440 x 950 | 2020 x 2440 x 950 | 1920 x 3640 x 950 |
| Net Weight (kg) | 1820 | 2220 | 2400 | 3600 |
| Dimensions battery cabinet H x W x D (mm) | 1900 x 2800 x 860 (100 batteries) | | - | |
| **Ambient conditions** | | | | |
| Operating temperature (°C) | 0÷40 | | | |
| Relative humidity (%) | <95% not condensing | | | |
| Protection index | IP20 | | | |
| Noise at 1 m (dBA) | <62 | | | |
| **Certifications** | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | |

FLEXIBLE
EXPANDABLE
REDUNDANT

**APPLICATION FIELDS**

Data center

Tertiary

Industry

# MODULAR UPS

**from 1,25 up to 480 kW**

**MEGALINE**
Single-phase modular UPS VFI, from 1,25 up to 10kVA

**TRIMOD HE**
Three-phase modular UPS VFI, from 10 up to 80kW

**ARCHIMOD HE**
Three-phase modular UPS VFI, from 20 up to 120kW

**ARCHIMOD HE240/480**
Three-phase modular UPS VFI, from 240 up to 480kW

## CHARACTERISTICS OF THE RANGE

Modular UPS enable the power supply to be sized exactly to requirements, without precluding any future expansion.

They are made up of "standard" modules that can be added to existing configurations to increase their power or back-up time.

Their innovative three-phase system, made up of individual single phase modules, provides the highest possible level of redundancy.

# MEGALINE

## SINGLE PHASE MODULAR UPS

**Redundant modular UPS, expandable up to 10 kVA with the best performance levels in their category**

AVAILABLE IN THREE VERSIONS:
- SINGLE CABINET
- DOUBLE CABINET
- 19'' RACK

All models have a configurable microprocessor control card, an LCD display unit, 1250 VA power modules and battery kits (BK) containing three 9 Ah batteries.

The single cabinet and 19» rack versions distribute powers of 1250 to 5000 VA, and can take up to 4 power modules 4 battery kits. To increase the back-up time, additional batteries can be added in dedicated cabinets, which are easy to connect.

The range also includes double cabinets. They consist of 2 cabinets: 1 power cabinet and 1 battery cabinet. The former houses up to eight 1250 VA modules, reaching a maximum power of 10 kVA.
The latter can take up to 10 battery kits and an additional charger. To increase the back-up time still further, other identical battery cabinets can be added.

## CLASS A/B (immunity emission)

All the MegaLine models comply with the most stringent standards in terms of both emission and immunity to electromagnetic interference so they can be used for any application, in either civil or industrial environments

# ALARMS AND SIGNALS

An acoustic signal and high-visibility flashing on the backlit front panel ensure that any alarm signal is noticed immediately. The signals can be split into various categories based on their severity.

**GREEN & NOT FLASHING - Normal Operation**
Normal operation, no anomaly

**YELLOW & FLASHING - Battery Mode**
Battery operation, accompanied by a slow, intermittent alarm signal, which can be silenced

**RED & FLASHING - Warning (together with an acoustic alarm signal)**
- Operation blocked
- Output voltage anomaly

**RED & NOT FLASHING - Severe alarm (together with an acoustic alarm signal)**
- Failure of one or more power modules
- Incorrect connection of input neutral
- Overload

# TRIMOD HE & ARCHIMOD HE

**HIGH** efficiency
**HIGH** performance
**LOW** environmental impact


### THE TECHNOLOGY EVOLUTION

Legrand's modular UPS know-how goes back more than 20 years, when the first ever modular UPS were introduced in 1993. Since then, continuous firmware development and research on control and hardware components have led to no stop improvements in system reliability, quality and technical performance.

Continuous research combined with modern production methods has led Legrand to offer the market a cutting-edge, top-performing product: certified efficiency up to 96% and unity power factor.

Combining high density with a structural design that optimises the space, the new TRIMOD HE and ARCHIMOD HE UPS are the ideal solution for advanced energy management and cost containment.

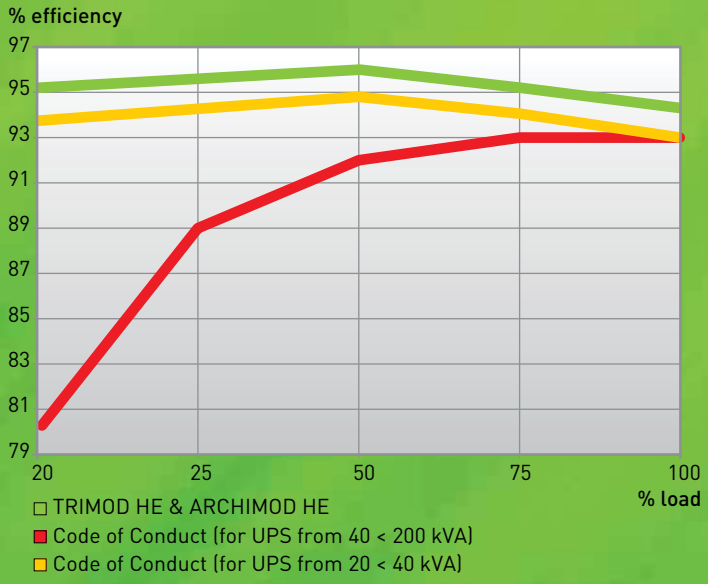
## kVA = kW
## POWER FACTOR 1

## INCREASED POWER

Thanks to their unity power factor the new TRIMOD HE and ARCHIMOD HE UPS guarantee maximum real power;
11% more than competitor products offering 0,9 power factor, fully 25% more than those of 0.8 power factor.

## GREATER EFFICIENCY 96%

The European Code of Conduct requires a minimum value of 92%. TRIMOD HE and ARCHIMOD HE are up to 4% more efficient, thus effectively dividing by 2 all UPS energy losses.



# TRIMOD HE & ARCHIMOD HE

## FLEXIBILITY MODULARITY EXPANSION

### Gradual power adaptation

The three-phase UPS are made up of individual single phase modules which are redundant and «selfconfiguring», so that power can be increased quickly and safely.

### Optimisation of work

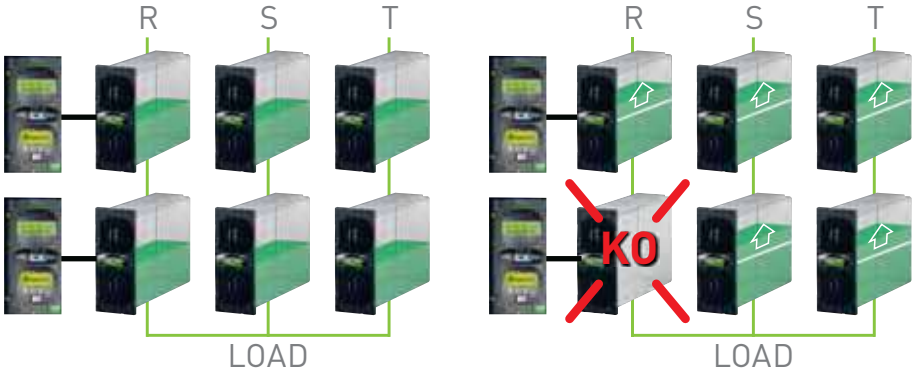
The compact and lightweight power modules (only 8.5 kg) make the UPS easy to transport, install and maintain.

### Extending the back-up time

The back-up time can be extended either by adding battery trays in the same cabinet or by adding another battery cabinet, depending on the power of the UPS and the back-up time required. Non-modular compact battery cabinets are also available for extending the back-up time to several hours.

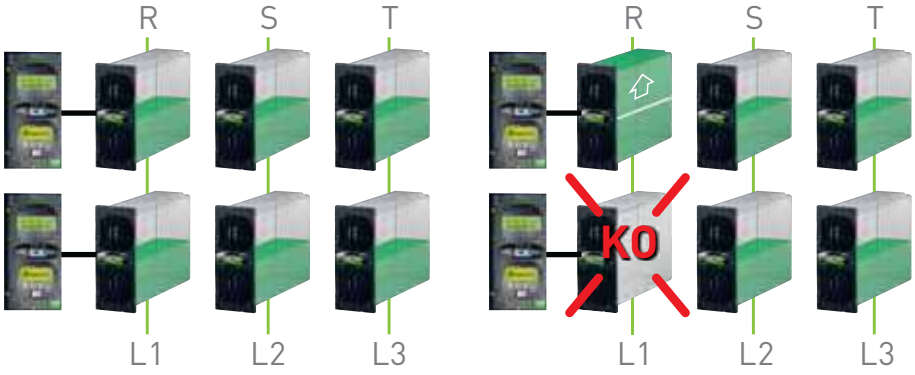
## Redundancy on the single phase load

In a three-phase power supply system with single phase loads, if one of the modules fails, there is no loss of power as the power is distributed over the other modules that are still operational.



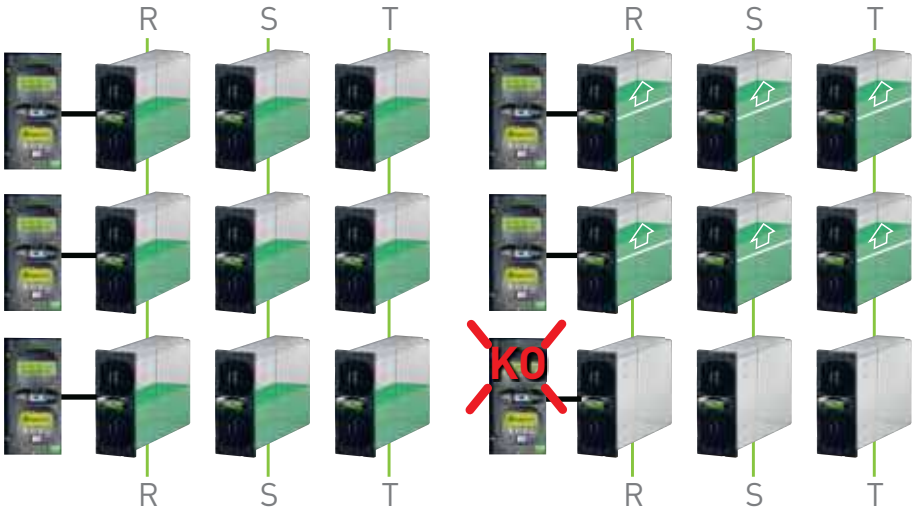

## Redundancy on the phases

In a system with three-phase outputs, it is possible to create redundancy on each individual phase. If one of the power modules fails, the other modules for this phase take over from the faulty module.




## Redundancy on the control

In UPS that include several control modules, the failure of one of the control modules results in the modules it controls being stopped. However continuity of service is assured by the automatic distribution of the lost power over the other modules.



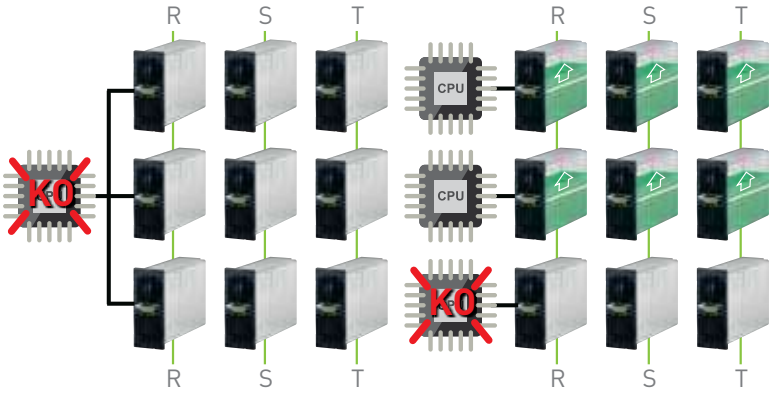

# HIGH LEVELS OF REDUNDANCY

Thanks to the construction technology of the TRIMOD HE and ARCHIMOD HE UPS systems, you can set various redundancy levels so that maximum service continuity is always guaranteed.

# TRIMOD HE

## POWER CABINET WITH MULTI CONTROL BOARD

In order to increase service continuity and consequently decrease failures (limit the single point of failure) the new cabinet are provided with more control modules, from 1 to a maximum of 4, so as to ensure redundancy also on control.




### Redundancy on the control

In UPS systems incorporating several control modules, failure of one of the control boards results in the modules it controls being switched off. However, continuity of service is assured by automatic distribution of the lost power over the other modules.

### HOT-SWAP

Thanks to the multi control board system you can replace the power modules without having to turn off the UPS.

### Separate batteries

The new multi control board cabinet, also allows you to associate each control a separate battery pack.

# POWER CABINET WITH DUAL INPUT FUNCTION

TRIMOD HE, in addition to the standard cabinet, it offers cabinet with power up to 80 kW and DUAL INPUT function. The new cabinet can be fed two AC sources is source separated: the configuration can be selected at installation time and easily obtained by removing a bridge from the input terminals.

## POSSIBLE CONFIGURATIONS

SCALABLE SOLUTION
FROM 40 kW UP TO 80 kW

SCALABLE SOLUTION
FROM 60 kW UP TO 80 kW

REDUNDANCY SOLUTION
60 kW N+1

# ARCHIMOD HE

## MODULAR ARCHITECTURE UPS

ARCHIMOD HE: expandable, modular architecture UPS, power from 20 to 120 kW, in a 19 rack cabinet.

The system comprises a set of standard, pre-assembled components which simplify and optimise the design and building of critical power infrastructures.

The innovative modular design of these UPS means that the availability of the power can be optimised, the flexibility of the system increased and the total cost of ownership (TCO) reduced.


FLEXIBLE
EXPANDABLE

## 1 Control module

Equipped with a microprocessor, it manages 3 power modules. If it is used with a power expansion module, it can manage up to 6 power modules, thus increasing the power from 20 to 40 kW.
It has a screen and a multifunction keypad for monitoring the operating parameters of the UPS and for configuring numerous functions.
It can be connected in parallel to other control modules and used with power expansion modules.
The front panel has a backlit status indicator for immediate checking of the operating status of the system and an RS 232 port for connecting a PC for maintenance.

## 2 Power modules

The power modules (nominal power 6.7 kW) are extremely compact and easy to handle.
They have a plug-in hot swap system, making them quick to install and maintain. They work in parallel with all modules that are present to ensure optimum system performance.

## 3 Power expansion module

This must be used with a control module.
It increases the power from 20 to 40 kW and can be used to establish individual redundancy on each phase.

## 4 Battery modules

Each module contains batteries that can be connected in series, forming separate strings each with a very low safe DC voltage. The compactness and functionality of the single (plug-in) module make it easy to handle, and expansion operations are possible without any modification of the structure of the installed system.


## 5 Distribution module

This is used to configure the distribution type of the UPS (three-phase/three-phase, three-phase/single phase, single phase/single phase or single phase/three-phase). It has I/O connection blocks, handling and protection devices, and the connection for additional battery cabinets. The power supply can be configured on two separate input sources (main and back-up).

## 6 Cable entry

Special sleeves enable entry and exit of the input and output cables, via the top and via the bottom.

# ARCHIMOD
# HE 240/480

# FULLY INTEGRATED HIGH POWER SOLUTIONS

## Advanced technology

The connections between the UPS and the distribution enclosure can be integrated in the same solution, making installation easier and tidy.

## Visual & technical coordination

The new ARCHIMOD HE 240/480 is available in 2 colours (RAL7016-RAL7035), with the same aesthetics as the front panel of LEGRAND distribution enclosures.

## Turnkey solutions

Legrand offers a fully coordinated UPS and power distribution switchboard range; one single supplier for any secure power need.

# ARCHIMOD
# HE 240/480

## FRONT-ACCES INSTALLATION AND MAINTENANCE

AS A LEADING MANUFACTURER OF POWER DISTRIBUTION ENCLOSURES, LEGRAND IS FULLY AWARE OF THE INSTALLATION REQUIREMENTS OF THESE SYSTEMS. THE ARCHIMOD HE240/480 RANGE HAS BEEN DEVELOPED TO SIMPLIFY ALL PHASES OF INSTALLATION, POSITIONING AND CONNECTION. THE UPS IS DESIGNED WITH A LARGE AMOUNT OF AVAILABLE SPACE FOR CABLE ENTRY AND BENDING.

## Dedicated connection solutions

The connection cabinet has been designed to fit several cables with a large cross-section. The switches are fitted with special terminals to simplify connection of the cables.

## User-friendly interface

The display position makes it easy to read and navigate the menu. All communication ports are fitted on the front panel below the display, allowing faster control and testing. A cable management system is available for the communication cables.
An acoustic signal and high-visibility flashing on the backlit front panel ensure that any alarm signal is noticed immediately. The signals can be split into various categories according to their severity.

## Designed to fit any location

Compact and lightweight components simplify and optimise the installation in any location.
The structure without the power modules weighs only 300 kg, making it easy to position the UPS in the equipment room or in its final destination.

## Visual and mechanical safety

The status of the switches is always visible via the position of the handle. When the switches are closed the handle prevents the wiring cabinet from opening, ensuring complete safety of operation.

# MEGALINE

**Modular UPS -Single-phase On-line double conversion VFI**

3 103 60 + 3 107 78

3 108 62

3 107 85

3 108 35

## Single cabinet (German standard)

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets | Weight (kg) |
|---|---|---|---|---|---|---|
| 1 | 3 103 50 | 1250 | 875 | 13 | 1 | 23,5 |
| 1 | 3 103 52 | 2500 | 1750 | 13 | 1 | 34 |
| 1 | 3 103 54 | 3750 | 2625 | 13 | 1 | 43 |
| 1 | 3 103 56 | 5000 | 3500 | 13 | 1 | 53 |

## Double cabinet

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets | Weight (kg) |
|---|---|---|---|---|---|---|
| 1 | 3 103 60 + 3 107 78 | 5000 | 3500 | 13 | 2 | 24+50 |
| 1 | 3 103 63 + 3 107 79 | 6250 | 4375 | 13 | 2 | 27+58 |
| 1 | 3 103 66 + 3 107 80 | 7500 | 5250 | 13 | 2 | 29+65 |
| 1 | 3 103 69 + 3 107 81 | 8750 | 6125 | 13 | 2 | 32+73 |
| 1 | 3 103 72 + 3 107 82 | 10000 | 7000 | 13 | 2 | 34+80 |

## Single cabinet (French standard)

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets | Weight (kg) |
|---|---|---|---|---|---|---|
| 1 | 3 103 42 | 1250 | 875 | 13 | 1 | 23.5 |
| 1 | 3 103 43 | 2500 | 1750 | 13 | 1 | 34 |
| 1 | 3 103 44 | 3750 | 2625 | 13 | 1 | 43 |
| 1 | 3 103 45 | 5000 | 3500 | 13 | 1 | 53 |

## Single cabinet (British standard)

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets | Weight (kg) |
|---|---|---|---|---|---|---|
| 1 | 3 103 46 | 1250 | 875 | 13 | 1 | 23.5 |
| 1 | 3 103 47 | 2500 | 1750 | 13 | 1 | 34 |
| 1 | 3 103 48 | 3750 | 2625 | 13 | 1 | 43 |
| 1 | 3 103 49 | 5000 | 3500 | 13 | 1 | 53 |

## Single cabinet - without batteries

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets |
|---|---|---|---|---|---|
| 1 | 3 103 51 | 1250 | 875 | - | 1 |
| 1 | 3 103 53 | 2500 | 1750 | - | 1 |
| 1 | 3 103 55 | 3750 | 2625 | - | 1 |
| 1 | 3 103 57 | 5000 | 3500 | - | 1 |

## Double cabinet - without batteries

| | | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets |
|---|---|---|---|---|---|
| 1 | 3 103 60 + 3 108 59 | 5000 | 3500 | - | 2 |
| 1 | 3 103 63 + 3 108 59 | 6250 | 4375 | - | 2 |
| 1 | 3 103 66 + 3 108 59 | 7500 | 5250 | - | 2 |
| 1 | 3 103 69 + 3 108 59 | 8750 | 6125 | - | 2 |
| 1 | 3 103 72 + 3 108 59 | 10000 | 7000 | - | 2 |

## Battery extensions

| | | Description |
|---|---|---|
| 1 | 3 107 75 | Cabinet with 1 BK |
| 1 | 3 107 76 | Cabinet with 2 BK |
| 1 | 3 107 77 | Cabinet with 3 BK |
| 1 | 3 107 78 | Cabinet with 4 BK |
| 1 | 3 107 79 | Cabinet with 5 BK |
| 1 | 3 107 80 | Cabinet with 6 BK |
| 1 | 3 107 81 | Cabinet with 7 BK |
| 1 | 3 107 82 | Cabinet with 8 BK |
| 1 | 3 107 83 | Cabinet with 9 BK |
| 1 | 3 107 84 | Cabinet with 10 BK |

## Battery extensions with charger

| | | Description |
|---|---|---|
| 1 | 3 107 86 | Cabinet with 1 BK with charger |
| 1 | 3 107 87 | Cabinet with 2 BK with charger |
| 1 | 3 107 88 | Cabinet with 3 BK with charger |
| 1 | 3 107 89 | Cabinet with 4 BK with charger |
| 1 | 3 107 90 | Cabinet with 5 BK with charger |
| 1 | 3 107 91 | Cabinet with 6 BK with charger |
| 1 | 3 107 92 | Cabinet with 7 BK with charger |
| 1 | 3 107 93 | Cabinet with 8 BK with charger |
| 1 | 3 107 94 | Cabinet with 9 BK with charger |
| 1 | 3 107 95 | Cabinet with 10 BK with charger |

## Accessories

| | | Description |
|---|---|---|
| 1 | 3 108 35 | Power module (PW 1250) |
| 1 | 3 108 57 | Single cabinet back-up extension (MegaLine BK/1) |
| 1 | 3 108 58 | Double cabinet back-up extension (MegaLine BK/2) |
| 1 | 3 108 59 | Empty battery cabinet |
| 1 | 3 108 60 | Y cable for connecting a second additional battery cabinet |
| 1 | 3 108 61 | Battery cabinet extension kit for tower configuration (PL MegaLine cable) |
| 1 | 3 108 62 | Manual bypass for single cabinet (BP/1) |
| 1 | 3 108 63 | Manual bypass for double cabinet (BP/2) |
| 1 | 3 107 85 | Additional charger (CB 36) |
| 1 | 3 109 72 | Relay interface kit |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# MEGALINE

**Modular UPS -Single-phase On-line double conversion VFI**

## Characteristics

| General characteristics | 3 103 42<br>3 103 46<br>3 103 50 | 3 103 43<br>3 103 47<br>3 103 52 | 3 103 44<br>3 103 48<br>3 103 54 | 3 103 45<br>3 103 49<br>3 103 56 | 3 103 60 +<br>3 107 78 | 3 103 63 +<br>3 107 79 | 3 103 66 +<br>3 107 80 | 3 103 69 +<br>3 107 81 | 3 103 72 +<br>3 107 82 |
|---|---|---|---|---|---|---|---|---|---|
| | Single cabinet | | | | Double cabinet | | | | |
| Nominal power (VA) | 1250 | 2500 | 3750 | 5000 | 5000 | 6250 | 7500 | 8750 | 10000 |
| Active power (W) | 875 | 1750 | 2625 | 3500 | 3500 | 4375 | 5250 | 6125 | 7000 |
| Max. expansion (VA) | 5000 | | | | 10000 | | | | |
| Max. expansion (W) | 3500 | | | | 7000 | | | | |
| Technology | On-line double conversion VFI-SS-111 | | | | | | | | |
| Architecture | Modular, expandable, N+X redundant with 1250 VA power cards,contained in a single cabinet | | | | | | | | |
| **Input characteristics** | | | | | | | | | |
| Nominal input voltage | 230 V | | | | | | | | |
| Input voltage range | 184 V to 264 V at 100% load | | | | | | | | |
| Minimum operating voltage | 100 V at 50% load | | | | | | | | |
| THD of input current | < 3% | | | | | | | | |
| Input power factor | > 0.99 at 20% load | | | | | | | | |
| Input frequency | 50 Hz/60 Hz ± 2% autosensing | | | | | | | | |
| **Output characteristics** | | | | | | | | | |
| Output voltage | 230 V ± 1% | | | | | | | | |
| Output frequency | 50 Hz/60 Hz synchronised | | | | | | | | |
| THD of output voltage | < 1% with non-linear load | | | | | | | | |
| Waveform | Sinusoidal | | | | | | | | |
| Peak factor | 3:1 | | | | | | | | |
| Efficiency | up to 92% | | | | | | | | |
| Overload capacity | 300% for 1 s – 200% for 5 s – 150% for 30 s | | | | | | | | |
| **Back-up time** | | | | | | | | | |
| Back-up time (min) | 13 | | | | | | | | |
| Extension of back-up time | Yes | | | | | | | | |
| **Equipment** | | | | | | | | | |
| Bypass | Automatic, internally synchronised, static and electromechanical (for overloads and operating problems) | | | | | | | | |
| Signalling and alarms | Wide screen with 4 alphanumeric lines, multi-coloured status indicator, audible signalling | | | | | | | | |
| Communication ports | 1 RS 232 port, 2 logic level ports | | | | | | | | |
| Communicator UPS software | Can be downloaded free of charge (after requesting an activation code) | | | | | | | | |
| Protection | Electronic devices for protection against overloads, short-circuits and excessive battery discharge. Operation stops at end of back-up time. Inrush current limiter on start-up. Sensor for correct neutral switching. Back-feed protection (electrical safety insulation of the input plug during battery-based operation). EPO (emergency power off) contact. | | | | | | | | |
| I/O mains connection | German standard/terminal connector with universal multi-socket outlet (Italian/German standard) | | | | | | | | |
| **Mechanical characteristics** | | | | | | | | | |
| Net weight (kg) | 23,5 | 34 | 43 | 53 | 24 + 50 | 26,5+57,5 | 29 + 65 | 31,5+72,5 | 34 + 80 |
| Dimensions (H x W x D) (mm) | 475 x 270 x 570 | | | | 2 x 475 x 270 x 570 | | | | |
| Installed power cards | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 7 | 8 |
| Free power expansion slots | 3 | 2 | 1 | - | 4 | 3 | 2 | 1 | - |
| Installed battery kits | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 7 | 8 |
| Free back-up time extension slots | 3 | 2 | 1 | - | 6 | 5 | 4 | 3 | 2 |
| **Ambient conditions** | | | | | | | | | |
| Ambient operating temperature (°C) | 0 to 40 | | | | | | | | |
| Protection index | IP 21 | | | | | | | | |
| Relative humidity (%) | 20 to 80 | | | | | | | | |
| Noise at 1 m (dBA) | < 40 | | | | | | | | |
| **Certifications** | | | | | | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | | | | | | |

# MEGALINE RACK

**Modular UPS -Single-phase On-line double conversion VFI**

3 103 85

3 107 96

3 108 62

3 107 85

3 109 73

- Wide input voltage and frequency range
- Operating frequency: 50 or 60 Hz with auto-recognition
- 50-60 Hz frequency conversion in both directions
- Extension of the input frequency range for operation with gensets
- Eco mode (energy-saving) operation
- Load waiting mode operation (protection on request)
- Output voltage can be adjusted in 1 volt steps from front panel
- Low noise
- Internal and external temperature measurement
- Ventilation control according to temperature and load
- Designed for remote emergency stop

## RACKs (German standard)

| Pack | Cat. Nos. | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets | Weight (kg) |
|---|---|---|---|---|---|---|
| 1 | 3 103 79 | 1250 | 875 | 13 | 1 | 23.5 |
| 1 | 3 103 81 | 2500 | 1750 | 13 | 1 | 34 |
| 1 | 3 103 83 | 3750 | 2625 | 13 | 1 | 43 |
| 1 | 3 103 85 | 5000 | 3500 | 13 | 1 | 53 |

## RACKs (French standard)

| | | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets | Weight (kg) |
|---|---|---|---|---|---|---|
| 1 | 3 103 34 | 1250 | 875 | 13 | 1 | 23.5 |
| 1 | 3 103 35 | 2500 | 1750 | 13 | 1 | 34 |
| 1 | 3 103 36 | 3750 | 2625 | 13 | 1 | 43 |
| 1 | 3 103 37 | 5000 | 3500 | 13 | 1 | 53 |

## RACKS (British standard)

| | | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets | Weight (kg) |
|---|---|---|---|---|---|---|
| 1 | 3 103 38 | 1250 | 875 | 13 | 1 | 23.5 |
| 1 | 3 103 39 | 2500 | 1750 | 13 | 1 | 34 |
| 1 | 3 103 40 | 3750 | 2625 | 13 | 1 | 43 |
| 1 | 3 103 41 | 5000 | 3500 | 13 | 1 | 53 |

## RACKS - without batteries

| | | Nominal power (VA) | Active power (W) | Back-up time (min) | Number of cabinets |
|---|---|---|---|---|---|
| 1 | 3 103 80 | 1250 | 875 | - | 1 |
| 1 | 3 103 82 | 2500 | 1750 | - | 1 |
| 1 | 3 103 84 | 3750 | 2625 | - | 1 |
| 1 | 3 103 86 | 5000 | 3500 | - | 1 |

## Back-up time extensions

| Pack | Cat. Nos. | Nominal power (VA) | Additional BK | Expansion (min) |
|---|---|---|---|---|
| 1 | 3 103 87 | 1250 | 1 | 30 |
| 1 | 3 103 88 | 1250 | 2 | 52 |
| 1 | 3 103 89 | 1250 | 3 | 75 |
| 1 | 3 103 90 | 2500 | 1 | 22 |
| 1 | 3 103 91 | 2500 | 2 | 30 |
| 1 | 3 103 92 | 3750 | 1 | 18 |

## Battery expansions for Rack UPS

| | | Description |
|---|---|---|
| 1 | 3 107 96 | Rack with 1 BK |
| 1 | 3 107 97 | Rack with 2 BK |
| 1 | 3 107 98 | Rack with 3 BK |
| 1 | 3 107 99 | Rack with 4 BK |
| 1 | 3 108 00 | Rack with 1 BK with charger |
| 1 | 3 108 01 | Rack with 2 BK with charger |
| 1 | 3 108 02 | Rack with 3 BK with charger |
| 1 | 3 108 03 | Rack with 4 BK with charger |

## Accessories

| | | Description |
|---|---|---|
| 1 | 3 108 35 | Power module (PW 1250) |
| 1 | 3 108 04 | Empty battery rack cabinet |
| 1 | 3 108 62 | Manual bypass for single rack (BP/1) |
| 1 | 3 107 85 | Additional charger (CB 36) |
| 1 | 3 109 72 | Relay interface kit |
| 1 | 3 109 73 | Telescopic runner kit for 6U rack |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# MEGALINE RACK

**Modular UPS -Single-phase On-line double conversion VFI**

## Characteristics

| General characteristics | 3 103 34<br>3 103 38<br>3 103 79 | 3 103 35<br>3 103 39<br>3 103 81 | 3 103 36<br>3 103 40<br>3 103 83 | 3 103 37<br>3 103 41<br>3 103 85 |
|---|---|---|---|---|
| Nominal power (VA) | 1250 | 2500 | 3750 | 5000 |
| Active power (W) | 875 | 1750 | 2625 | 3500 |
| Max. expansion (VA) | 5000 | | | |
| Max. expansion (W) | 3500 | | | |
| Technology | On line doppia conversione (VFI-SS-111) | | | |
| Architecture | Modular, expandable, N+X redundant with 1250 VA power cards, contained in a single rack | | | |
| **Input characteristics** | | | | |
| Nominal input voltage | 230 V | | | |
| Input voltage range | 184 V to 264 V at 100% load | | | |
| Minimum operating voltage via mains | 100 V at 50% load | | | |
| THD of input current | < 3% | | | |
| Input power factor | > 0.99 at 20% load | | | |
| Input frequency | 50 Hz/60 Hz ± 2% autosensing | | | |
| **Output characteristics** | | | | |
| Output voltage | 230 V ± 1% | | | |
| Output frequency | 50 Hz/60 Hz synchronised | | | |
| THD of output voltage | < 1% with non-linear load | | | |
| Waveform | Sinusoidal | | | |
| Peak factor | 3:1 | | | |
| Efficiency | up to 92% | | | |
| Overload capacity | 300% for 1 s – 200% for 5 s – 150% for 30 s | | | |
| **Back-up time** | | | | |
| Back-up time (min) | 13 | | | |
| Extension of back-up time | Yes | | | |
| **Equipment** | | | | |
| Bypass | Automatic, internally synchronised, static and electromechanical (for overloads and operating problems). | | | |
| Signalling and alarms | Large screen with 4 alphanumeric lines, multi-coloured status indicator, audible signalling | | | |
| Communication ports | 1 RS 232 port, 2 logic level ports | | | |
| Communicator UPS software | Can be downloaded free of charge (after requesting an activation code) | | | |
| Protection | Electronic devices for protection against overloads, short-circuits and excessive battery discharge. Operation stops at end of back-up time. Inrush current limiter on start-up. Sensor for correct neutral switching. Back-feed protection (electrical safety insulation of the input plug during battery-based operation). EPO (emergency power off) contact | | | |
| I/O mains connection | German standard/terminal connector with universal multi-socket outlet (Italian/German standard) | | | |
| **Mechanical characteristics** | | | | |
| Net weight (kg) | 23,5 | 34 | 43 | 53 |
| Dimensions (H x W x D) (mm) | 266 x 483 x 582 | | | |
| Installed power cards | 1 | 2 | 3 | 4 |
| Free power expansion slots | 3 | 2 | 1 | - |
| Installed battery kits | 1 | 2 | 3 | 4 |
| Free back-up time extension slots | 3 | 2 | 1 | - |
| **Ambient conditions** | | | | |
| Ambient operating temperature (°C) | 0÷40 | | | |
| Protection index | IP21 | | | |
| Relative humidity (%) | 20 to 80 | | | |
| Noise at 1 m (dBA) | < 40 | | | |
| **Certifications** | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | |

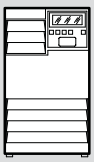
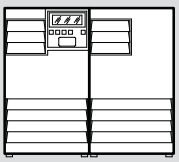
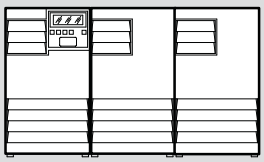
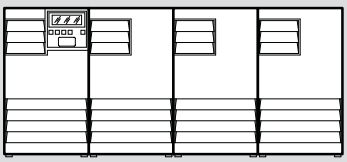
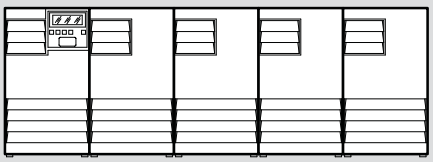
# MEGALINE

**Long back-up time table for single cabinet and double cabinet versions**

| Model | Power | Back-up time | Number of cabinets and dimensions W x H x D (mm) | Cat. Nos. |
|---|---|---|---|---|
| **Single cabinet** | | | | |
| | 1.250 VA | 30’ | 1x (270 x 475 x 570) | 3 103 73 |
| | 1.250 VA | 52’ | 1x (270 x 475 x 570) | 3 103 74 |
| | 1.250 VA | 75’ | 1x (270 x 475 x 570) | 3 103 75 |
| | 2.500 VA | 22’ | 1x (270 x 475 x 570) | 3 103 76 |
| | 2.500 VA | 30’ | 2x (270 x 475 x 570) | 3 103 77 |
| | 2.500 VA | 52’ | 2x (270 x 475 x 570) | 3 103 52 + 3 107 78 |
| | 2.500 VA | 63’ | 2x (270 x 475 x 570) | 3 103 52 + 3 107 79 |
| | 3.750 VA | 18’ | 1x (270 x 475 x 570) | 3 103 78 |
| | 3.750 VA | 29’ | 2x (270 x 475 x 570) | 3 103 54 + 3 107 77 |
| | 3.750 VA | 44’ | 2x (270 x 475 x 570) | 3 103 54 + 3 107 79 |
| | 3.750 VA | 67’ | 2x (270 x 475 x 570) | 3 103 54 + 3 107 82 |
| | 5.000 VA | 22’ | 2x (270 x 475 x 570) | 3 103 56 + 3 107 76 |
| | 5.000 VA | 30’ | 2x (270 x 475 x 570) | 3 103 56 + 3 107 78 |
| | 5.000 VA | 46’ | 2x (270 x 475 x 570) | 3 103 56 + 3 107 81 |
| | 5.000 VA | 63’ | 2x (270 x 475 x 570) | 3 103 56 + 3 107 84 |
| **Double cabinet** | | | | |
| | 5.000 VA | 22’ | 2x (270 x 475 x 570) | 3 103 60 + 3 107 80 |
| | 5.000 VA | 30’ | 2x (270 x 475 x 570) | 3 103 60 + 3 107 82 |
| | 5.000 VA | 46’ | 3x (270 x 475 x 570)* | 3 103 60 + 3 107 84 + 3 107 75 |
| | 5.000 VA | 63’ | 3x (270 x 475 x 570)* | 3 103 60 + 3 107 84 + 3 107 78 |
| | 6.250 VA | 20’ | 2x (270 x 475 x 570) | 3 103 63 + 3 107 81 |
| | 6.250 VA | 30’ | 2x (270 x 475 x 570) | 3 103 63 + 3 107 84 |
| | 6.250 VA | 47’ | 3x (270 x 475 x 570)* | 3 103 63 + 3 107 84 + 3 107 78 |
| | 6.250 VA | 60’ | 3x (270 x 475 x 570)* | 3 103 63 + 3 107 84 + 3 107 81 |
| | 7.500 VA | 18’ | 2x (270 x 475 x 570) | 3 103 66 + 3 107 82 |
| | 7.500 VA | 30’ | 3x (270 x 475 x 570)* | 3 103 66 + 3 107 84 + 3 107 76 |
| | 7.500 VA | 48’ | 3x (270 x 475 x 570)* | 3 103 66 + 3 107 84 + 3 107 81 |
| | 7.500 VA | 59’ | 3x (270 x 475 x 570)* | 3 103 66 + 3 107 84 (x2) |
| | 8.750 VA | 20’ | 2x (270 x 475 x 570) | 3 103 69 + 3 107 84 |
| | 8.750 VA | 30’ | 3x (270 x 475 x 570)* | 3 103 69 + 3 107 84 + 3 107 78 |
| | 8.750 VA | 45’ | 3x (270 x 475 x 570)* | 3 103 69 + 3 107 84 + 3 107 83 |
| | 8.750 VA | 61’ | 4x (270 x 475 x 570)* | 3 103 69 + 3 107 84 (x2) + 3 107 78 |
| | 10.000 VA | 22’ | 3x (270 x 475 x 570)* | 3 103 72 + 3 107 84 + 3 107 76 |
| | 10.000 VA | 30’ | 3x (270 x 475 x 570)* | 3 103 72 + 3 107 84 + 3 107 80 |
| | 10.000 VA | 46’ | 4x (270 x 475 x 570)* | 3 103 72 + 3 107 84 (x2) + 3 107 76 |
| | 10.000 VA | 60’ | 4x (270 x 475 x 570)* | 3 103 72 + 3 107 84 (x2) + 3 107 81 |

* This configuration requires the use of a Y cable Cat. No. 3 108 60. The number of cables required is equal to the total number of cabinets minus 2.

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

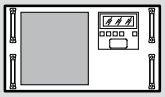
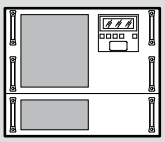
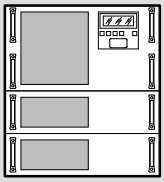
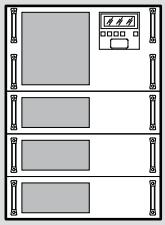
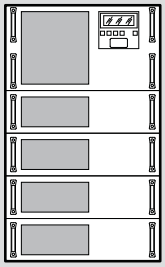
| 1 cabinet L 270mm | 2 cabinets L 540mm | 3 cabinets L 810mm | 4 cabinets L 1080mm | 5 cabinets L 1350mm |
|---|---|---|---|---|
|  |  |  |  |  |

# MEGALINE RACK

**Long back-up time table rack version**

| Model | Power | Back-up time | Number of cabinets and dimensions W x H x D (mm) | Cat. Nos. |
|---|---|---|---|---|
| **Rack** | | | | |
| | 1.250 VA | 30' | 1 (6U) | 3 103 87 |
| | 1.250 VA | 52' | 1 (6U) | 3 103 88 |
| | 1.250 VA | 75' | 1 (6U) | 3 103 89 |
| | 2.500 VA | 22' | 1 (6U) | 3 103 90 |
| | 2.500 VA | 30' | 1 (6U) | 3 103 91 |
| | 2.500 VA | 52' | 2 (6U + 3U) | 3 103 81 + 3 107 99 |
| | 2.500 VA | 63' | 3 (6U + 2x3U) | 3 103 81 + 3 107 99 + 3 107 96 |
| | 3.750 VA | 18' | 1 (6U) | 3 103 92 |
| | 3.750 VA | 29' | 2 (6U + 3U) | 3 103 83 + 3 107 98 |
| | 3.750 VA | 44' | 3 (6U + 2x3U) | 3 103 83 + 3 107 99 + 3 107 96 |
| | 3.750 VA | 67' | 3 (6U + 2x3U) | 3 103 83 + 3 107 99 (x2) |
| | 5.000 VA | 22' | 2 (6U + 3U) | 3 103 85 + 3 107 97 |
| | 5.000 VA | 30' | 2 (6U + 3U) | 3 103 85 + 3 107 99 |
| | 5.000 VA | 46' | 3 (6U + 2x3U) | 3 103 85 + 3 107 99 + 3 107 98 |
| | 5.000 VA | 63' | 4 (6U + 3x3U) | 3 103 85 + 3 107 97 + 3 107 99 (x2) |
| | | | 6U= 483 x 266 x 582<br>3U= 483 x 133x 584 | |

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

| 1 cabinet<br>H 266mm (6U) | 2 cabinets<br>H 532mm (6U+3U) | 3 cabinets<br>H 798mm (6U+2x3U) | 4 cabinets<br>H 1064mm (6U+3x3U) | 5 cabinets<br>H 1330mm (6U+4x3U) |
|---|---|---|---|---|
|  |  |  |  |  |

# TRIMOD HE

**Double conversion VFI three-phase modular UPS**

3 104 42

3 108 71

3 108 43

## UPS

| Pack | Cat. Nos. | Power kW | Back-up time (min) | no. and type of cabinet | Weight (kg) |
|---|---|---|---|---|---|
| 1 | 3 104 42 | 10 | 11 | 1A | 167 |
| 1 | 3 104 43 | 10 | 17 | 1A | 223 |
| 1 | 3 104 44 | 10 | 35 | 1A | 279 |
| 1 | 3 104 02 | 10 | 49 | 1B | 350 |
| 1 | 3 104 45 | 15 | 13 | 1A | 220 |
| 1 | 3 104 46 | 15 | 21 | 1A | 279 |
| 1 | 3 104 07 | 15 | 29 | 1B | 350 |
| 1 | 3 104 47 | 20 | 9 | 1A | 220 |
| 1 | 3 104 48 | 20 | 14 | 1A | 279 |
| 1 | 3 104 13 | 20 | 20 | 1B | 350 |
| 1 | 3 104 17 | 30 | 8 | 1A | 325 |
| 1 | 3 104 19 + 3 107 63 | 40 | 8 | 2A | 564 |
| 1 | 3 104 20 + 2 x 3 107 58 | 60 | 9 | 3A | 830 |

*Cabinet A h=1370, Cabinet B h=1650

## Accessories

| | | Description |
|---|---|---|
| 1 | 3 108 69 | 3.4 kW power module |
| 1 | 3 108 71 | 5 kW power module |
| 1 | 3 108 73 | 6.7 kW power module |
| 1 | 3 108 51 | Additional 15 A battery charger module |

## Battery accessories

| | | Description |
|---|---|---|
| 1 | 3 108 54 | Kit of 4 empty battery drawers |
| 1 | 3 108 43 | Single drawer with 5 7.2Ah batteries (installable in multiples of 4) |
| 1 | 3 108 45 | Single drawer with 5 9Ah batteries (installable in multiples of 4) |
| 1 | 3 108 75 | Single drawer with 5 9Ah long life batteries (installable in multiples of 4) |
| 1 | 3 109 29 | KIt for separate batteries (only for 80 kW) |

**New product codes in red.**

**Cabinet A h=1370, Cabinet B h=1650**

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

## Power cabinet

| Pack | Cat. Nos. | Power kW | NO. of installable battery drawers | NO. of phases | Type of cabinet | Weight (kg) |
|---|---|---|---|---|---|---|
| 1 | 3 103 96 | 10 | 12 | 1-1 / 3-3 / 3-1 / 1-3 | A | 120 |
| 1 | 3 103 97 | 10 | 16 | 1-1 / 3-3 / 3-1 / 1-3 | B | 155 |
| 1 | 3 104 08 | 15 | 12 | 1-1 / 3-3 / 3-1 / 1-3 | A | 120 |
| 1 | 3 104 03 | 15 | 16 | 1-1 / 3-3 / 3-1 / 1-3 | B | 155 |
| 1 | 3 104 14 | 20 | 12 | 1-1 / 3-3 / 3-1 / 1-3 | A | 120 |
| 1 | 3 104 09 | 20 | 16 | 3-3 | B | 155 |
| 1 | 3 104 18 | 30 | - | 1-1/3-3/3-1/1-3 | A | 146 |
| 1 | 3 104 15 | 30 | 12 | 3-3 | B | 181 |
| 1 | 3 104 19 | 40 | - | 3-3 | A | 146 |
| 1 | 3 104 20 | 60 | - | 3-3 | A | 165 |

## Power cabinets (empty)

| | | Type and NO. of installable power module | NO. of installable battery drawers | NO. of phases | Type of cabinet | Weight (kg) |
|---|---|---|---|---|---|---|
| 1 | 3 104 22 | 3 x 3,4 kW | 12 | 1-1 / 3-3 / 3-1 / 1-3 | A | 85 |
| 1 | 3 104 31 | 3 x 3,4 kW | 16 | 1-1 / 3-3 / 3-1 / 1-3 | B | 98 |
| 1 | 3 104 23 | 3 x 5 o 6,7 kW | 12 | 1-1 / 3-3 / 3-1 / 1-3 | A | 90 |
| 1 | 3 104 32 | 6 x 3,4 kW | 12 | 1-1 / 3-3 / 3-1 / 1-3 | B | 102 |
| 1 | 3 104 33 | 3 x 5 o 6,7 kW | 16 | 1-1 / 3-3 / 3-1 / 1-3 | B | 102 |
| 1 | 3 104 24 | 6 x 5 kW | - | 3-3 | A | 80 |
| 1 | 3 104 25 | 6 x 5 kW | - | 1-1/3-3/3-1/1-3 | A | 84 |
| 1 | 3 104 34 | 6 x 5 kW | 12 | 3-3 | B | 104 |
| 1 | 3 104 26 | 6 x 6,7 kW | - | 3-3 | A | 80 |
| 1 | 3 104 27 | 9 x 6,7 kW | - | 3-3 | A | 90 |

## DUAL INPUT Power cabinets (empty)

| | | Type and NO. of installable power module | NO. of installable battery drawers | NO. of phases | Type of cabinet | Weight (kg) | NO. CTRL boards |
|---|---|---|---|---|---|---|---|
| 1 | 3 104 65 | 3 x 3,4 kW | 12 | 1-1 / 3-3 / 3-1 / 1-3 | A | 86 | 1 |
| 1 | 3 104 66 | 3 x 5 o 6,7 kW | 12 | 1-1 / 3-3 / 3-1 / 1-3 | A | 89 | 1 |
| 1 | 3 104 67 | 3 x 5 o 6,7 kW | 16 | 1-1 / 3-3 / 3-1 / 1-3 | B | 103 | 1 |
| 1 | 3 104 68 | 6 x 3,4 o 5 kW | - | 1-1 / 3-3 / 3-1 / 1-3 | A | 85 | 2 |
| 1 | 3 104 69 | 6 x 5 kW | 12 | 3-3 | B | 106 | 2 |
| 1 | 3 104 71 | 6 x 6,7 kW | - | 3-3 | A | 82 | 2 |
| 1 | 3 104 72 | 9 x 6,7 kW | - | 3-3 | A | 91 | 3 |
| 1 | 3 104 73 | 12 x 6,7 kW | - | 3-3 | B | 120 | 4 |

## Additional empty battery cabinets

| | | Description |
|---|---|---|
| 1 | 3 108 05 | 16-drawer modular battery cabinet |
| 1 | 3 108 06 | 20-drawer modular battery cabinet |

## Additional battery cabinets with batteries

| | Batteries | | Description |
|---|---|---|---|
| | 7,2 Ah | 9 Ah | |
| 1 | 3 107 55 | 3 107 60 | Modular battery cabinet with 4 drawers |
| 1 | 3 107 56 | 3 107 61 | Modular battery cabinet with 8 drawers |
| 1 | 3 107 57 | 3 107 62 | Modular battery cabinet with 12 drawers |
| 1 | 3 107 58 | 3 107 63 | Modular battery cabinet with 16 drawers |
| 1 | 3 107 59 | 3 107 64 | Modular battery cabinet with 20 drawers |

## Additional battery cabinets for long-life 94 Ah batteries (empty)

| | | Description |
|---|---|---|
| 1 | 3 108 12 | Battery cabinet (20 x 94Ah - WxLxD 1635x600x800 mm) |

## Battery kit 94 Ah

| | | Description |
|---|---|---|
| 1 | 3 109 23 | kit of 20 batteries 94Ah |

# TRIMOD HE

**Double conversion VFI three-phase modular UPS**

## Characteristics

| General specifications | 3 103 96<br>3 103 97<br>3 104 65 | 3 104 03<br>3 104 08 | 3 104 09<br>3 104 14<br>3 104 66<br>3 104 67 | 3 104 15*<br>3 104 18*<br>3 104 68<br>3 104 69 | 3 104 19<br>3 104 71 | 3 104 20<br>3 104 72 | 3 104 73 |
|---|---|---|---|---|---|---|---|
| Nominal power (kVA) | 10 | 15 | 20 | 30 | 40 | 60 | 80 |
| Active power (kW) | 10 | 15 | 20 | 30 | 40 | 60 | 80 |
| Module power (kW) | 3,4 | 5 | 6,7 | 5 | 6,7 | 6,7 | 6,7 |
| Classification | On-Line double conversion VFI-SS-111 | | | | | | |
| System | Modular, expandable and redundant UPS system | | | | | | |
| **Input specifications** | | | | | | | |
| Input voltage | 380, 400, 415 3PH+N+PE<br>(or 220, 230, 240 1PH) | | | 380, 400, 415 3PH+N+PE | | | |
| Input frequency | 45-65 Hz (43,0 ÷ 68.4 Hz) | | | | | | |
| Input voltage range | 400V +15%/-20% - 230V +15%/-20% | | | 400V +15%/-20% | | | |
| THD input current | < 3% ( at full load) | | | | | | |
| Compatibility with power supply units | Si | | | | | | |
| Input power factor | > 0,99 | | | | | | |
| **Output Specifications** | | | | | | | |
| Output voltage | 380, 400, 415 3F+N+PE<br>(o 220, 230, 240 1F) | | | 380, 400, 415 3F+N+PE | | | |
| Efficiency | Up to 96% | | | | | | |
| Efficiency in Eco mode | 99% | | | | | | |
| Nominal output frequency | 50/60 Hz selectable by the user ±2 % (standard), ±14 % (extended) | | | | | | |
| Crest factor | 3:1 | | | | | | |
| Waveform | Sinusoidal | | | | | | |
| Output voltage tolerance | ±1% | | | | | | |
| THD output voltage | <1% | | | | | | |
| Overload capacity | 10 minutes at 115%, 60 seconds at 135% | | | | | | |
| Bypass | Automatic bypass (static and electromechanical) and manual maintenance bypass | | | | | | |
| **Batteries** | | | | | | | |
| Battery module | Plug & play | | | | | | |
| Battery series type/voltage | VRLA - AGM / 240 Vdc | | | | | | |
| Back-up time | Configurable | | | | | | |
| Battery charger | Smart charge technology. 3-stage advanced cycle | | | | | | |
| Batteries saparate configuration | no | | | yes | | | yes with kit |
| **Communication and management** | | | | | | | |
| Display and signals | 4 x 20-character lines, 4 menu navigation buttons,<br>LED multi-colour status indicator, alarms and audio signals | | | | | | |
| Communication ports | 2 RS232 serial ports, 1 logical gate, 5 ports with dry contacts, 1 slot for interfaces | | | | | | |
| Backfeed protection | NC/NO auxiliary contact | | | | | | |
| Emergency Power Off (EPO) | Yes | | | | | | |
| Remote management | Available | | | | | | |
| **Mechanical characteristics** | | | | | | | |
| Height (A-B) | 1650 - 1370 | | 1650 - 1370 | 1370 | 1370 | 1650 | |
| Width | 414 | | 414 | 414 | 414 | 414 | |
| Depth | 628 | | 628 | 628 | 628 | 628 | |
| Installed power modules | 3 | | 6 | 6 | 9 | 12 | |
| Installable battery drawers (A-B) | Up to 16 - Up to 12 | | Up to 12 - 0 | - | - | - | |
| Net weight kg (A-B) | 155 - 120 | | 181 - 146 | 146 | 165 | | |
| **Ambient Conditions** | | | | | | | |
| Operating temperature/humidity | 0 - 40°C / 0 - 95% non condensing | | | | | | |
| Protection rating | IP21 | | | | | | |
| Maximum audible noise at 1 m from the unit (dBA) | 58-62 | | | | | | |
| **Certifications** | | | | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | | | | |

* Standard configurations with 3-3 distribution (multi IN/OUT conf available on request)

# ARCHIMOD HE

**Modular UPS -Three-phase On-line double conversion VFI**

3 103 61

3 108 55

3 108 73

| Pack | Cat. Nos. | Configurable cabinets | | | |
|---|---|---|---|---|---|
| | | Nominal power (kVA) | Number of battery modules | Number of control modules | Number of phases |
| 1 | 3 104 59 | 20 | 30 | 1 | 1-1/3-3/3-1/1-3 |
| 1 | 3 104 60 | 40 | 24 | 2 | 1-1/3-3/3-1/1-3 |
| 1 | 3 104 61 | 60 | 18 | 3 | 3-3 |
| 1 | 3 104 62 | 80 | - | 4 | 3-3 |
| 1 | 3 104 63 | 100 | - | 3 | 3-3 |
| 1 | 3 104 64 | 120 | - | 3 | 3-3 |

| | | Additional cabinets for batteries |
|---|---|---|
| | | Description |
| 1 | 3 108 18 | Empty modular battery cabinet |
| 1 | 3 107 17 | Empty Battery cabinet for long life batteries (21 x 94Ah - WxLxD 1635x600x800 mm) |

| | | Accessories |
|---|---|---|
| | | Description |
| 1 | 3 108 73 | 6.7 kVA power module |
| 1 | 3 108 76 | kit of 3 x long life battery trays |
| 1 | 3 108 64 | Front/rear door |
| 1 | 3 108 55 | Kit of 3 x 9 Ah battery drawers |
| 1 | 3 108 56 | Kit of 3 empty battery drawers |
| 1 | 3 108 51 | Additional charger module |
| 1 | 3 108 65 | Cover for empty battery slot |
| 1 | 3 108 66* | 3 Cover for empty power module slot |

* always be used when there are empty slots

## Configurations

**20**
Power: 20 kVA
Back-up time: 65 min
1 Cabinet
1 Control module
3 Power modules
30 Battery drawers
1 Distribution module

**40**
Power: 40 kVA
Back-up time: 21 min
1 Cabinet
2 Control modules
6 Power modules
24 Battery drawers
1 Distribution module

**60**
Power: 60 kVA
Back-up time: 8 min
1 Cabinet
3 Control modules
9 Power modules
18 Battery drawers
1 Distribution module

**80**
Power: 80 kVA
Back-up time: 14 min
2 Cabinets
4 Control modules
12 Power modules
36 Battery drawers
1 Distribution module

**100**
Power: 100 kVA
Back-up time: 10 min
2 Cabinets
3 Control modules
2 Power expansion modules
15 Power modules
36 Battery drawers
1 Distribution module

**120**
Power: 120 kVA
Back-up time: 8 min
2 Cabinets
3 Control modules
3 Power expansion modules
18 Power modules
36 Battery drawers
1 Distribution module

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

# ARCHIMOD HE

**Modular UPS -Three-phase On-line double conversion VFI**

## Characteristics

| General characteristics | 3 104 59 | 3 104 60 | 3 104 61 | 3 104 62 | 3 104 63 | 3 104 64 |
|---|---|---|---|---|---|---|
| Nominal power (kVA) | 20 | 40 | 60 | 80 | 100 | 120 |
| Active power (kW) | 20 | 40 | 60 | 80 | 100 | 120 |
| Module power (kVA) | 6.7 per power module (20 kVA with 3 modules), cosφ 1 | | | | | |
| Technology | On-line double conversion VFI-SS-111 | | | | | |
| System | Modular, expandable and redundant system in a single cabinet, 19" rack | | | | | |
| Hot Swap capacity | The power and/or battery modules can be replaced without switching off the UPS | | | | | |
| **Input characteristics** | | | | | | |
| Input voltage | 380, 400, 415 3F+N+PE (o 220, 230, 240 1F) | | 380, 400, 415 3F+N+PE | | | |
| Input frequency | 45-65 Hz ±2% Autosensing | | | | | |
| Input voltage range | 230 V + 15%/-20% 1P<br>400 V + 15 %/-20% 3P | | 400 V +15%/-20% 3P | | | |
| THD of input current | < 3% | | | | | |
| Compatibility with gensets | Configurable for synchronisation between the input and output frequencies, even for the highest frequency ranges, ± 14% | | | | | |
| Input power factor | > 0,99 | | | | | |
| **Output characteristics** | | | | | | |
| Output voltage | 380, 400, 415 3F+N+PE (o 220, 230, 240 1F) | | 380, 400, 415 3F+N+PE | | | |
| Efficiency | Up to 96% | | | | | |
| Nominal output frequency | 50/60 Hz ± 0.1 | | | | | |
| Peak factor | 3.5:1 | | | | | |
| Tolerance on output voltage | ±1% | | | | | |
| Overload capacity | 10 minutes at 113% and 60 seconds at 135% | | | | | |
| Efficiency in Eco mode | 99% | | | | | |
| Bypass | Automatic and maintenance bypass | | | | | |
| **Batteries** | | | | | | |
| Battery modules | The battery modules are designed for easy insertion in the cabinet. No special operation is required to connect them | | | | | |
| Battery range type/voltage | VRLA - AGM / 252 Vdc | | | | | |
| Back-up time | Configurable and extendable, both internally and with additional battery cabinets | | | | | |
| Battery charging | Smart Charge technology 3-step advanced cycle | | | | | |
| **Communication and management** | | | | | | |
| Screen and signalling | 4 x 20-character lines, 4 menu navigation buttons, multi-coloured LED status indicator | | | | | |
| Communication ports | For each control module: 2 x RS232 serial ports, 1 logic level port, 5 volt-free contact ports, 2 slots for SNMP interfaces (optional) | | | | | |
| Back-feed protection | N/C + N/O auxiliary contact | | | | | |
| Emergency stop | Yes | | | | | |
| Remote control | Available | | | | | |
| **Mechanical characteristics** | | | | | | |
| Dimensions (H x W x D) (mm) | 2080 x 570 x 912 (42U) | | | | | |
| Installable power modules | 3 | 6 | 9 | 12 | 15 | 18 |
| Installable battery modules | Up to 30 | Up to 24 | Up to 18 | - | - | - |
| Net weight (kg) | 205 | 240 | 276 | 272 | 318 | 364 |
| **Ambient conditions** | | | | | | |
| Operating temperature/humidity | 0 - 40 °C / 0 - 95% non condensing | | | | | |
| Protection index | IP21 | | | | | |
| Maximum noise audible at 1 m (dBA) | 50÷65 | | | | | |
| **Certifications** | | | | | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | | | | | |

# TRIMOD HE

**Long back-up time table**

modular battery cabinet
up to 20 battery drawers installable
(100 batteries)

not modular battery cabinet
up to 21 batteries installable*

| TRIMOD HE | cabinet type | Power (kW) | Back-up time (min) | Dimensions A x L x P (mm) | Weight (kg) |
|---|---|---|---|---|---|
| 3 104 43 + 3 107 58 | modular | 10 | 68 | 1370 x 414 x 628 + 1650 x 414 x 628 | 527 |
| 3 104 46 + 3 107 60 | modular | 15 | 33 | 2 x 1370 x 414 x 628 | 413 |
| 3 104 46 + 3 108 08 | not modular | 15 | 110 * | 1370 x 414 x 628 + 1635 x 600 x 800 | 865 |
| 3 104 46 + 3 107 63 | modular | 15 | 57 | 2 x 1370 x 414 x 628 | 550 |
| 3 104 48 + 3 107 62 | modular | 20 | 35 | 2 x 1370 x 414 x 628 | 572 |
| 3 104 14 + 3 108 08 | not modular | 20 | 82 * | 1370 x 414 x 628 + 1635 x 600 x 800 | 865 |
| 3 104 18 + 3 107 63 | modular | 30 | 12 | 2 x 1370 x 414 x 628 | 434 |
| 3 104 18 + 3 108 09 | not modular | 30 | 50 * | 1370 x 414 x 628 + 1635 x 600 x 800 | 890 |
| 3 104 18 + 2 x 3 108 09 | not modular | 30 | 110 * | 1370 x 414 x 628 + 2 x 1635 x 600 x 800 | 1645 |
| 3 104 19 + 2 x 3 107 58 | modular | 40 | 16 | 3 x 1370 x 414 x 628 | 801 |
| 3 104 19 + 3 108 10 | not modular | 40 | 33 * | 1370 x 414 x 628 + 1635 x 600 x 800 | 925 |
| 3 104 19 + 2 x 3 108 10 | not modular | 40 | 82 * | 1370 x 414 x 628 + 2 x 1635 x 600 x 800 | 1700 |
| 3 104 19 + 3 x 3 108 10 | not modular | 40 | 120 * | 1370 x 414 x 628 + 3 x 1635 x 600 x 800 | 2430 |
| 3 104 19 + 3 x 3 107 59 | modular | 40 | 38 | 1370 x 414 x 628 + 3 x 1650 x 414 x 628 | 439 |
| 3 104 19 + 4 x 3 107 64 | modular | 40 | 60 | 1370 x 414 x 628 + 4 x 1650 x 414 x 628 | 1663 |
| 3 104 20 + 2 x 3 107 64 | modular | 60 | 15 | 1370 x 414 x 628 + 2 x 1650 x 414 x 628 | 942 |
| 3 104 20 + 4 x 3 107 63 | modular | 60 | 27 | 5 x 1370 x 414 x 628 | 1579 |
| 3 104 20 + 3 108 11 | not modular | 60 | 17 * | 1370 x 414 x 628 + 1635 x 600 x 800 | 952 |
| 3 104 20 + 2 x 3 108 11 | not modular | 60 | 50 * | 1370 x 414 x 628 + 2 x 1635 x 600 x 800 | 1715 |
| 3 104 20 + 3 x 3 108 11 | not modular | 60 | 80 * | 1370 x 414 x 628 + 3 x 1635 x 600 x 800 | 2474 |
| 3 104 20 + 4 x 3 108 11 | not modular | 60 | 110 * | 1370 x 414 x 628 + 4 x 1635 x 600 x 800 | 3234 |

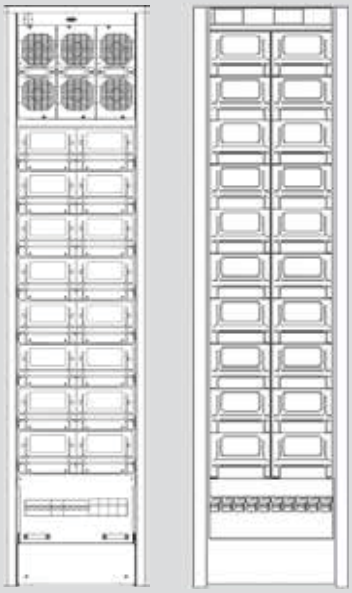
*** Configurations with battery cabinet (20 x 94 Ah).**
**Dimensions and weight: A x L x P 1635 x 600 x 800 (mm), 785 kg**

**NOTE: The stated back-up times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.**

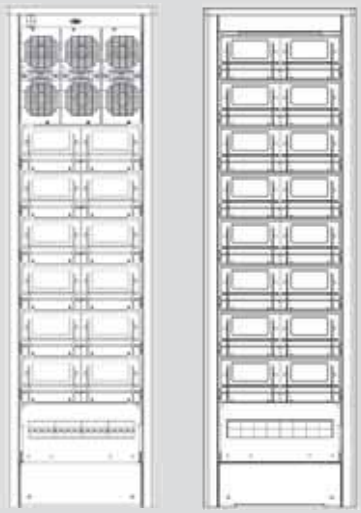
# TRIMOD HE

**Examples of configuration**

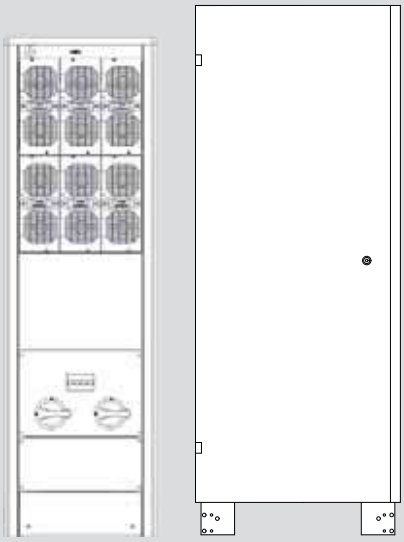
TRIMOD HE 10 kW
2 modular cabinets
Back-up time 68 min
Weight 527 kg



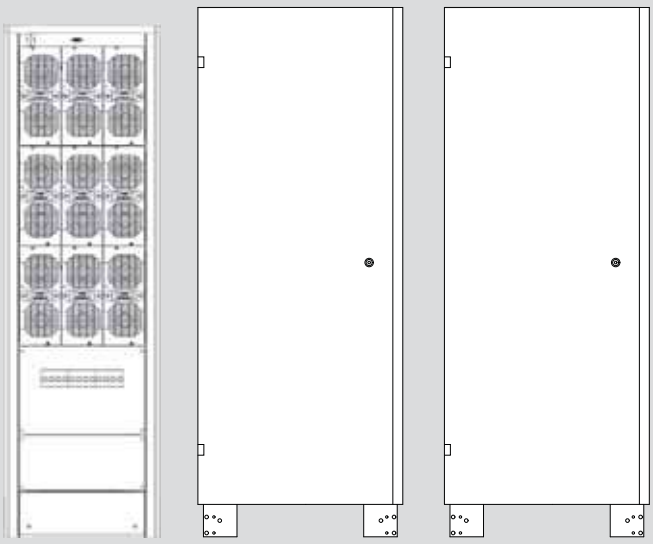
TRIMOD HE 15 kW
2 modular cabinets
Back-up time 57 min
Weight 550 kg



TRIMOD HE 30 kW
1 modular cabinet, 1 not modular cabinet **(20 x 94 Ah)**
Back-up time 50 min
Weight 890 kg



TRIMOD HE 60 kW
1 modular cabinet, 2 not modular cabinets **(20 x 94 Ah)**
Back-up time 50 min
Weight 1715 kg



# ARCHIMOD HE 240/480

**Modular UPS -Three-phase On-line double conversion VFI**

3 104 75

3 108 73

| Pack | Cat. Nos. | Empty preconfigured cabinets |
|---|---|---|
| | | The cabinets are supplied empty and are preconfigured for the power and capacity indicated in the table |

| Pack | Cat. Nos. | Nominal power kW | Number of Installable power modules | Number of phases |
|---|---|---|---|---|
| 1 | 3 104 75 | 240 | 36 | 3-3 |
| 1 | 310476 + 310477* | 480 | 72 | 3-3 |

* ordered both

| Pack | Cat. Nos. | Communication accessories |
|---|---|---|
| | | Description |
| 1 | 3 109 30 | PROFESSIONAL network interface, internal version (card) |
| 1 | 3 109 31 | STANDARD network interface, internal version (card) |
| 1 | 3 109 35 | INDUSTRIAL network interface, internal version (card) |

| Pack | Cat. Nos. | Accessories |
|---|---|---|
| | | Description |
| 1 | 3 108 73 | 6.7 kW power module |
| 1 | 3 108 51 | Additional charger module |
| 1 | 0 205 82 | Set of 4 lifting rings |
| 1 | 3 108 66* | 3 covers for empty power module slot |

* always be used when there are empty slots.

## Examples of configuration

ARCHIMOD HE160
Power: 160 kW scalable up to 240
1 Distribution cabinet
24 Power modules
4 covers for empty
power module slot

ARCHIMOD HE240
Power: 240 kW
1 Distribution cabinet
36 Power modules

ARCHIMOD HE320
Power: 320 kW
scalable up to 480
1 Distribution cabinet
48 Power modules
6 covers for empty
power module slot

ARCHIMOD HE480
Power: 480 kW
1 Cabinet
72 Power modules
1 Distribution cabinet

# ARCHIMOD HE 240/480

**Modular UPS -Three-phase On-line double conversion VFI**

## Characteristics

| General characteristics | 3 104 75 | 310476 + 310477 |
|---|---|---|
| Nominal power (kW) | 240 | 480 |
| Module power (kW) | 6.7 per power module (20 kW with 3 modules), cosφ 1 | |
| Technology | On-line double conversion VFI-SS-111 | |
| System | Modular, expandable and redundant system in a single cabinet | |
| **Input characteristics** | | |
| Input voltage | 380, 400, 415 3PH+N+PE | |
| Input frequency | 45-65 Hz (autosensing) | |
| Input voltage range | + 15%/- 20% | |
| THD of input current | < 3% | |
| Compatibility with gensets | Configurable for synchronisation between the input and output frequencies, even for the highest frequency ranges, ± 14% | |
| Input power factor | > 0.99 | |
| **Output Specifications** | | |
| Output voltage | 380, 400, 415 3PH+N+PE | |
| Efficiency | Up to 96% | |
| Nominal output frequency | 50/60 Hz | |
| Peak factor | 3.5:1 | |
| Tolerance on output voltage | ±1% | |
| Permitted overload | 10 minutes at 115% and 60 seconds at 135% | |
| Efficiency in Eco mode | 99% | |
| Bypass | Static, electromechanical and maintenance bypass | |
| **Batteries** | | |
| Battery range type/voltage | VRLA - AGM/252 VDC | |
| Back-up time | Configurable and extendable, with additional battery cabinets | |
| Battery charging | Smart Charge technology 3-step advanced cycle | |
| **Communication and management** | | |
| Screen and signalling | For each control drawer, 1 display with 4 x 20-character lines, 4 menu navigation buttons, multi-coloured LED status indicator | |
| Communication ports | 2x RS232 communications port, 2x 5 volt-free contacts 2x logic level port, N.2 SNMP slot | |
| Back-feed protection | N/C + N/O auxiliary contact | |
| Emergency stop | Yes | |
| **Mechanical characteristics** | | |
| Dimensions (W x H x D) (mm) | 1350 x 2050 x 750 | 820 x 2050 x 750 + 1650 x 2050 x 750 |
| Installable power modules | up to 36 | up to 72 |
| Installable battery modules | - | - |
| Net weight (kg) * | 440 | 256 + 610 |
| **Ambient conditions** | | |
| Operating temperature/humidity | 0 - 40°C / 0 - 95% non condensing | |
| Protection index | IP 21 | |
| Maximum noise audible at 1 m (dBA) | <80 | |
| **Certifications** | | |
| Reference product standards | EN 62040-1, EN 62040-2, EN 62040-3 | |

On its own, a UPS is unable to guarantee total protection of the data processing systems it powers. This is due to several factors, amongst which:

- Unexpected load connections, such as stoves and vacuum cleaners, can cause overloads which annul the protection provided by the UPS.
- Installation in unmanned areas such as EDP rooms and basements or round-the-clock operations can make alarm reception difficult or impossible. This consequently put critical equipment at risk.

Moreover, since the systems can be extremely costly to repair, also owing to the time relevant downtime, it is easy to understand the importance to equip a UPS with a supervision system able to inform the user of the imminent danger and automatically proceed with a series of actions to protect the data and the operating systems. Legrand offers 2 solutions for the UPS supervision according to the type of installation and the management method: sofware solution and harware solution.

# COMMUNICATION ACCESSORIES

## UPS SUPERVISION SYSTEM

### CHARACTERISTICS OF THE RANGE

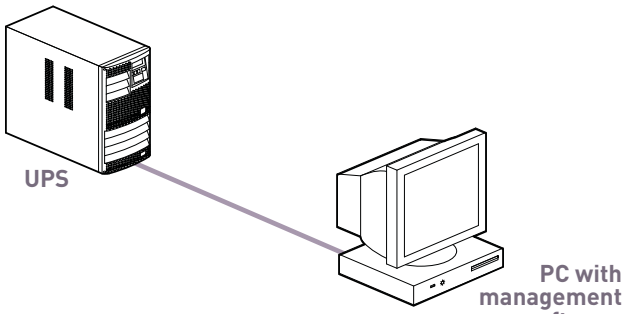
Network interfaces, for remote control of UPS.

Sensors for monitoring the ambient temperature and humidity.

Communication and supervision software for accessing the operating parameters of the UPS, carrying out full diagnostics and configuring specific functions.

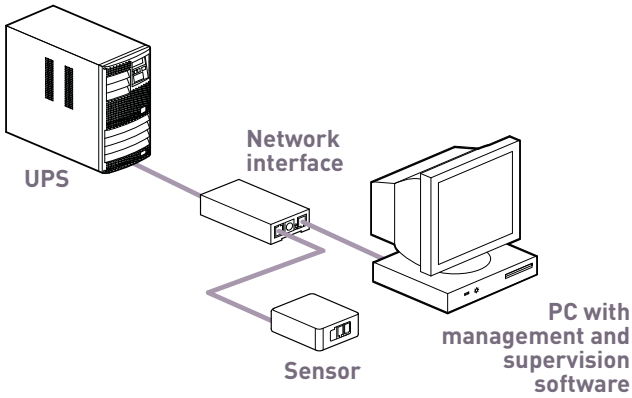
## “Software” solution

The Management is performed by the software installed on the PC or server to protect. This solution is recommended for small installations where the UPS is installed close to PC or server.

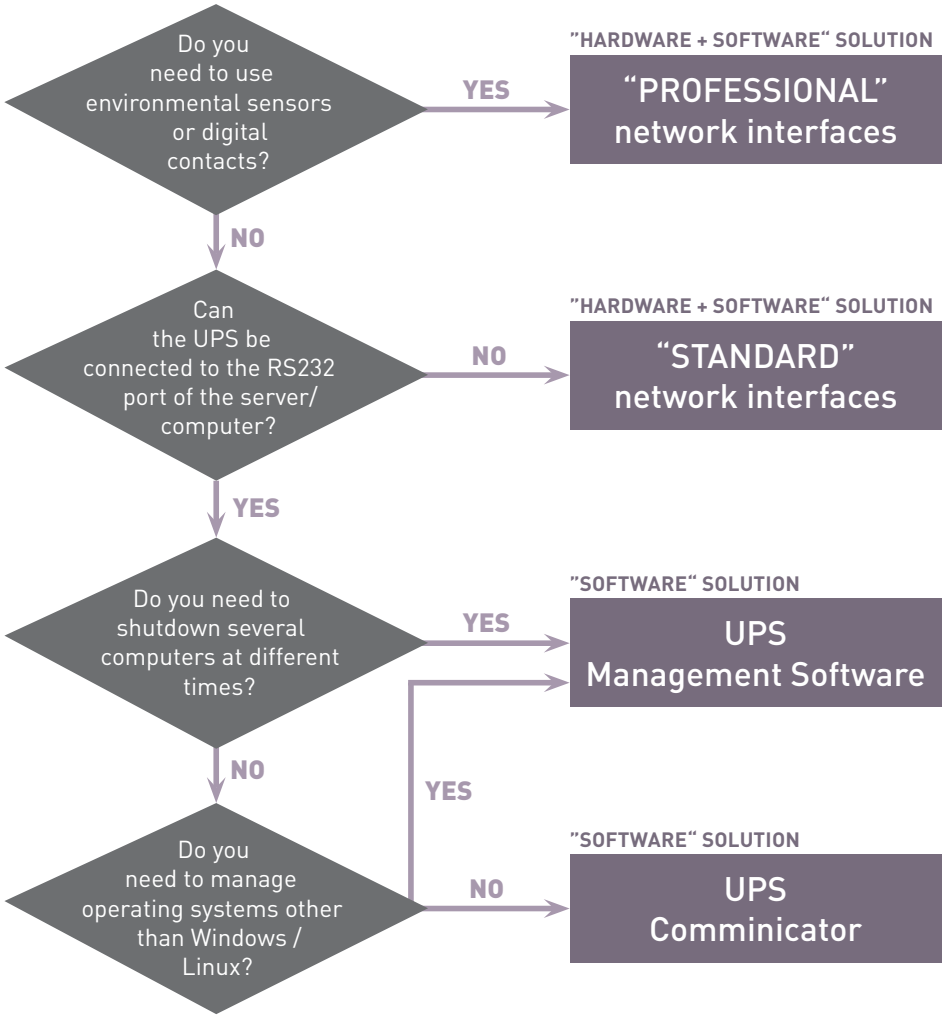



## “Hardware + software” solution

The System is made by a set of communication accessories and software allowing to perform more extended supervision, direct or remotely by INTERNET.




The following diagram shows how is possible to choose the best configuration for your needs:



# Accessories

## Network interfaces


3 109 33


3 109 32


3 109 34


3 109 31


3 109 30

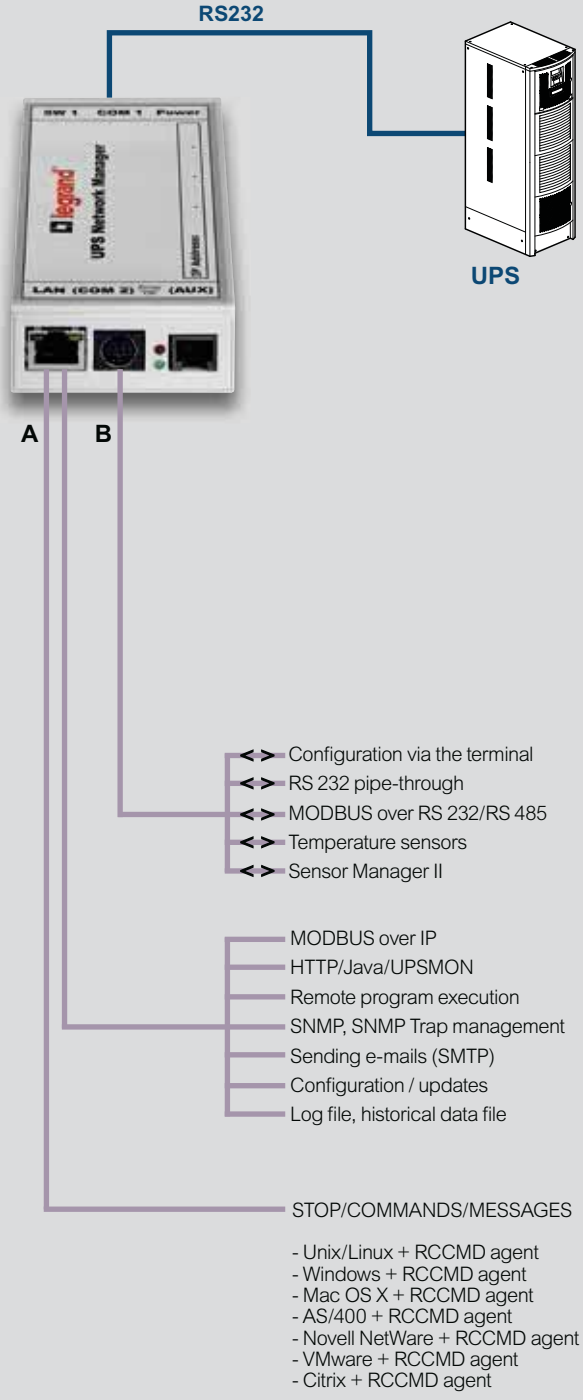

3 109 35

The network interfaces for managing UPS do not require any external software. They include a proprietary system capable of real-time control of the operation of the UPS and managing numerous events (power failure, overload, bypass, problem, etc.) and as a result executing a series of actions, such as:

- Memorisation of events in time-stamped log files
- Regular memorisation of the main operating parameters
- Sending e-mails
- Execution of scheduled actions
- Display of pop-up messages, shutdown, and execution of customised commands on remote computers (the RCCMD software agent must be installed on these computers)
- Stopping and restarting the UPS
- Sending "Wake on LAN (WOL)" signals
- Support of the SNMP protocol and the main management software (HP OpenView, IBM Tivoli, etc.)
- Sending SNMP trap messages
- Displaying data and configuration via a web browser (Internet Explorer, Mozilla Firefox, Opera, etc.)
- Firmware updatable, which can be downloaded free of charge on the Internet
- Ethernet 10/100 Base-T (half-duplex and full-duplex) connection with auto-recognition function
- DHCP function
- 1 RCCMD licence included

Available in external and internal version (in this case it is inserted in a dedicated slot in the UPS).
Supply voltage 9 - 30 VDC (power supply included in external versions).
The professional and industrial versions have an additional RS 232/RS 485 communication ports.

| Pack | Cat. Nos. | Network interface<br>Description |
|---|---|---|
| 1 | 3 109 30 | CS141 SK<br>PROFESSIONAL network interface, internal version (card)* |
| 1 | 3 109 31 | CS141B SK<br>STANDARD network interface, internal version (card)* |
| 1 | 3 109 32 | CS141<br>PROFESSIONAL network interface, external version** |
| 1 | 3 109 33 | CS141B<br>STANDARD network interface, external version** |
| 1 | 3 109 34 | CS141M<br>INDUSTRIAL network interface, external version** |
| 1 | 3 109 35 | CS141M SK<br>INDUSTRIAL network interface, internal version (card)* |




| Model | A | B |
|---|---|---|
| CS141B | X | |
| CS141B SK | X | |
| CS141 | X | X |
| CS141 SK | X | X |
| CS141M | X | X* |
| CS141M SK | X | X* |

* Only Modbus over RS 485

# Accessories

## Sensors and other accessories

3 109 00

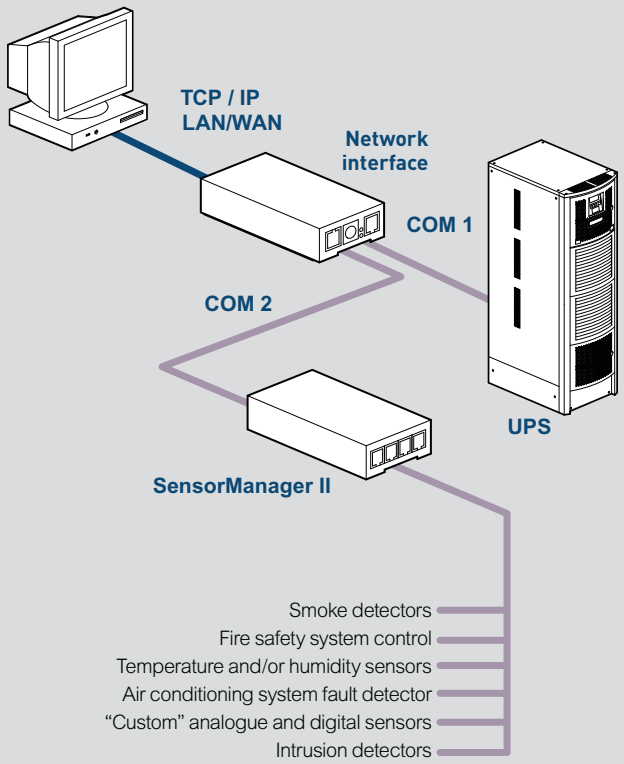
3 108 98

3 109 03

3 108 99

3 109 02

| Pack | Cat. Nos. | Sensors<br>Description |
|---|---|---|
| 1 | 3 108 97 | SM_T_COM<br>Temperature sensor for direct connection to the COM2 port on the CS141 and CS141 SK interfaces SensorManager II. Cannot be used with SensorManager II. |
| 1 | 3 108 98 | SM_T_H_COM<br>Combined temperature and humidity sensor for direct connection to the COM2 port on the CS141 and CS141 SK interfaces SensorManager II.<br>Cannot be used with SensorManager II. |
| 1 | 3 108 99 | SensorManager II<br>Manager for sensors: connects to the COM2 port on the CS141 and CS141 SK interfaces and manages up to 8 analogue inputs, 4 digital inputs and 4 digital outputs.<br>The configuration is managed directly by the CS141 interfaces (PROFESSIONAL version), described previously.<br>The “Scale Divisor” and “Off set” configuration functions enable SensorManager to be used with any analogue device (see characteristics).<br>It includes 1 “SM_T” temperature sensor. |
| 1 | 3 109 00 | SM_T<br>Temperature sensor that can only be used with SensorManager.<br>It enables another “SM_T” sensor to be connected using a special connector. |
| 1 | 3 109 01 | SM_T_H<br>Combined temperature and humidity sensor that can.<br>Only compatible with SensorManager II. |
| 1 | 3 109 02 | Door sensor<br>This consists of a reed switch and a magnet.<br>Only compatible with SensorManager II. |
| 1 | 3 109 03 | SM_flash<br>Flashing illuminated signal.<br>Only compatible with SensorManager II. |




### SensorManager II technical characteristics

| | |
|---|---|
| Supply voltage (VDC) | 9-24 |
| Temperature (°C) | 0 ÷ 65 |
| Non-condensing humidity (%) | 10 ÷ 80 |
| Analogue inputs (V) | 0 ÷ 10 |
| Digital inputs (V) | 9 ÷ 24 |
| 100 mA digital outputs (V) | 9 ÷ 24 |
| Dimensions (WxDxH) (mm) | 70 x 130 x 30 |

### Sensor technical characteristics

| | 3 108 97 | 3 108 98 | 3 109 00 | 3 109 01 |
|---|---|---|---|---|
| Supply voltage VDC | 9 to 15* | 9 to 15* | 15 to 24** | 15 to 24** |
| Temperature range °C | -25 to +100 | -25 to +100 | 0 to +100 | 0 to +100 |
| Relative humidity ± 5% (%) | | 0 to 100 | | 0 to 100 |
| Connection cable included (m) | 1.8 | 1.8 | 5 | 5 |
| Dimensions H x W x D (mm) | 27 x 70 x 70 | | | |

* Direct from the network interface
** Direct from SensorManager II

# Accessories

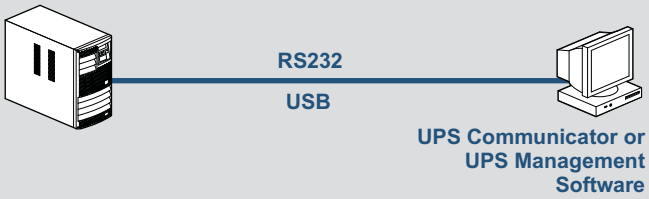
## Management software

| Pack | Cat. Nos. | Software<br>Description |
|---|---|---|
| 1 | downloadable | UPS Communicator<br>Set of applications for real-time control of the operation of the UPS and to ensure the integrity of the systems on the computers supplied by this UPS. Operates with an agent for executing commands on remote computers (RS System). |
| 1 | 3 108 79 | UPS Management Software<br>Set of applications for real-time control of the operation of the UPS and to ensure the integrity of the systems on the computers supplied by this UPS.<br>Requires the addition of an agent for executing commands on remote computers (RCCMD). |
| 1 | 3 108 80 | UPS Management Software<br>Set of applications for real-time control of the operation of the UPS and to ensure the integrity of the systems on the computers supplied by this UPS.<br>Requires the addition of an agent for executing commands on remote computers (RCCMD).<br>Includes an RS232/USB converter. |
| | | RCCMD<br>Software enabling a computer to receive and execute, using the TCP/IP protocol, all the remote commands sent by the management systems of the UPS.<br>An RCCMD licence is necessary for each computer to be controlled.<br>Only the licences are supplied: the software can be downloaded on the Internet (after requesting the activation code). |
| 1 | 3 108 85 | RCCMD<br>Multi-OS RCCMD licence |
| 1 | 3 108 86 | RCCMD<br>Pack of multi-OS RCCMD licences |
| 1 | 3 108 87 | RCCMD<br>Pack of 10 multi-OS RCCMD licences |
| 1 | 3 108 88 | RCCMD<br>Pack of 25 multi-OS RCCMD licences |
| 1 | 3 108 89 | RCCMD<br>Pack of 50 multi-OS RCCMD licences |
| 1 | 3 108 90 | RCCMD<br>RCCMD licence for AS/400 (minimum release: V5R3M0) |
| | | UNMS<br>"WEB based" application capable of real-time supervision of the status of all UPS, via the management systems of the UPS and the TCP/IP protocol. |
| 1 | 3 108 91 | UNMS<br>UNMS licence for 25 UPS |
| 1 | 3 108 92 | UNMS<br>UNMS licence for 50 UPS |
| 1 | 3 108 93 | UNMS<br>UNMS licence for 150 UPS |

Examples of types of management and communication that can be created with software and hardware.

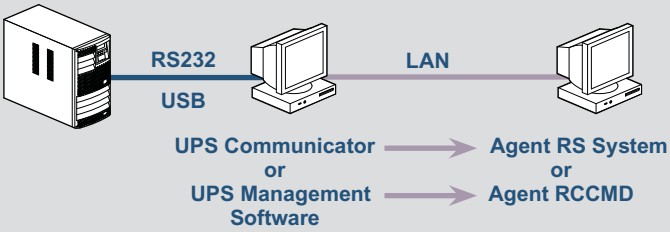
### Local protection

Protects and controls a single station (PC or server) which must be located less than 12 metres away.



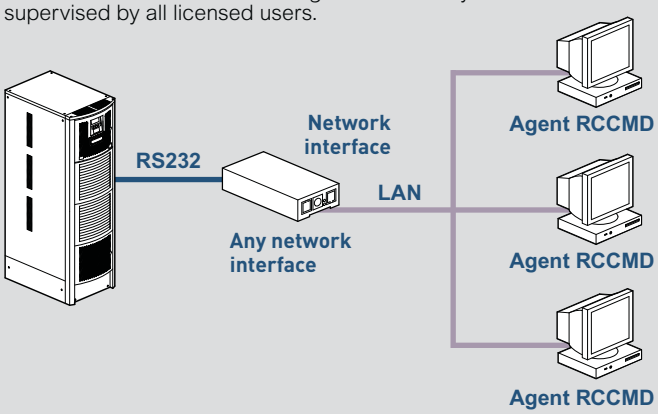

### Extended local protection

Protects a larger number of stations (PC or server) but they are all controlled by the station directly connected to the UPS.



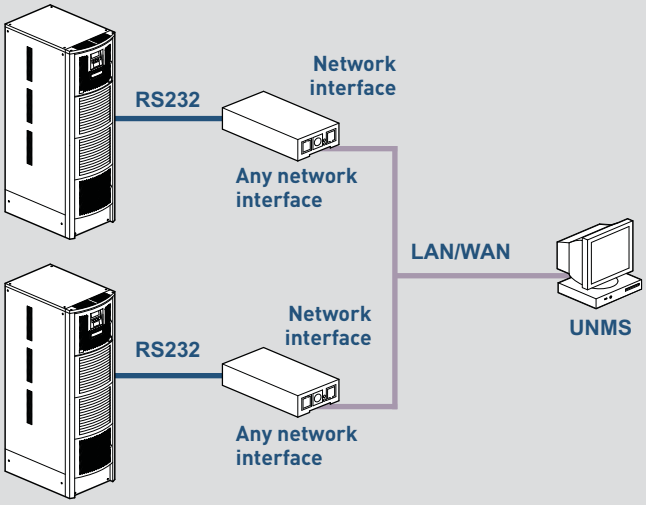

### Protection via TCP/IP network

Enables control of all the stations that can communicate with the network interface. The management of the system can be supervised by all licensed users.




### Centralised protection

Using the UNMS supervision software, it is possible to control all the UPS connected to a TCP/IP network.



# CUSTOMER SERVICES

## Reliable

Directly present in more than 70 countries and servicing its products in more than 150 countries worldwide, a team of qualified engineers is available 24/7/365 to support your UPS system to ensure power quality and availability to the most critical loads.

## Excellent

Legrand's competitive edge lies in its ability to provide high value-added UPS systems and services for both end users and business partners.
For Legrand, creating value means coming up with solutions for lower energy consumption, but also integrating product design into the overall development process.
With around 200 000 catalogue items, the Group also provides all products required for electrical and digital building installations, particularly as integrated systems, finding solutions to fit everyone's needs.

## Tailor-made

Legrand offers a complete range of specific solutions and services to meet customer requirements:
- Technical pre-sales support at the project design stage
- Factory acceptance test
- Supervision of installation, testing and commissioning, site acceptance test
- Operator training
- Site audit
- Warranty extension
- Annual maintenance contract
- Fast intervention on emergency call

# SUPPORT

**SITE INSPECTION, INSTALLATION SUPERVISION.**
We perform a comprehensive check of the UPS environment to ensure safety and fault-free operation.
Our technical experts give manufacturer's recommendations to the site engineer or electrical contractors, and supervise the UPS installation before load power-up.

**SITE TEST, COMMISSIONING.**
Our Service Engineers conduct rigorous site tests and full setting-up of the UPS system before going live. They also perform site acceptance tests according to your requirements.
Commissioning operations for all UPS are carried out by qualified engineers to guarantee seamless start-up.
After the final handing over of the UPS system, a Test and Commissioning report is delivered to you.

# TRAINING

We offer on-site training to ensure your equipment's safe and efficient operation.
Troubleshooting courses are also available in our plants for intensive hands-on practice on UPS training equipment.

# MAINTENANCE

**PREVENTIVE MAINTENANCE**
Electronic equipment and power systems, such as UPS, contain life-limited components and parts that must be replaced according to the manufacturer's specifications.
To ensure optimal performance and to protect your critical application from potential downtime, it is crucial to perform preventive maintenance operations on a regular basis and replace parts when needed. Our Service Contracts include cleaning, IR thermography, measurements, functional tests, event log and power quality analysis, battery health check, hardware and software upgrades, and technical reports.
A Preventive Maintenance Plan is one of the most cost-effective actions that can preserve your initial investment and ensure your business continuity.

**CORRECTIVE MAINTENANCE, EMERGENCY CALL**
In the event of an Emergency Call, our worldwide service network, with engineers and spare-parts stocks strategically located as close as possible to your site, guarantees a fast intervention time with 24/7/365 assistance.
After connecting his laptop to your UPS, very powerful diagnostic software helps our engineer to identify the fault, thus ensuring short MTTR (Mean Time To Repair).
Corrective actions are performed such as part replacement, adjustments and upgrades to return the UPS system back to normal operation.

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