

# Keor T EVO

THREE-PHASE  
UPS

from 10 to 60 kVA



GLOBAL SPECIALIST IN ELECTRICAL  
AND DIGITAL BUILDING INFRASTRUCTURES



# Keor T EVO

## THREE-PHASE UPS

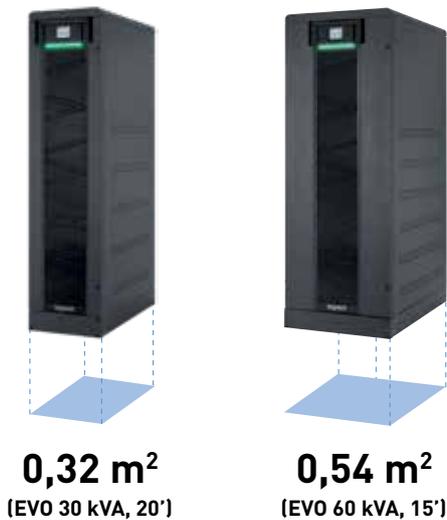
Keor T EVO has been designed with advanced technologies and the latest generation components; realized to satisfy both users and installers for operational needs and performance. These UPS aim to be functional, safe and very easy to install and use.

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



## Easy Installation

- Easy installation guaranteed by front access to all wiring connections.
- Availability of standard configurations with batteries 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.



## Small Foot Print with Internal Batteries

Keor T EVO with internal batteries allows you to reach 60 kW with 15 minutes of backup time; this avoids the cost of an external battery cabinet, reduces the floor space and simplifies the installation.

## PF=1 → VA=W

Keor T EVO is able to provide over 10% more active power than PF 0.9 UPS with same kVA Nominal power.

## 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
- High Efficiency due to 3 level IGBT topology
- Reduced dimensions and power use for air conditioning
- Low Output Total Harmonic Distortion (THDV)



## Dual input

Keor T EVO 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.



## 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.

# Keor T EVO

EASY MANAGEMENT



## User friendly touch screen control panel

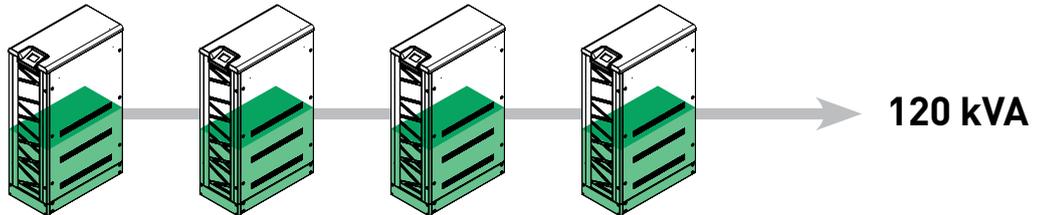
Keor T EVO is equipped with a touch screen graphic display that provides information, measurements, status and alarms of the UPS in different languages; the intuitive graphical icons allow you to browse through the various screens easily and quickly. In just a few steps you have access to all the operating 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.

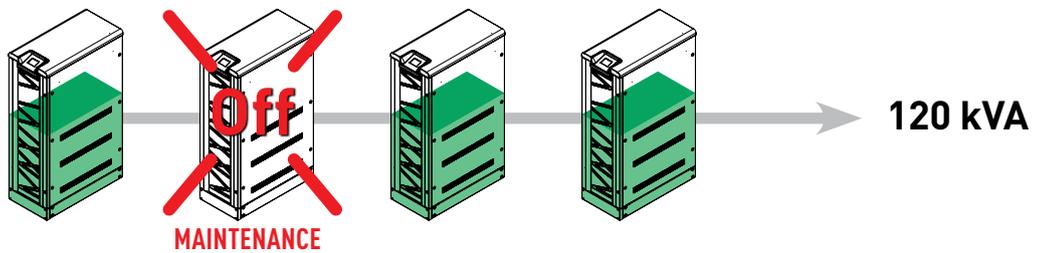
**Scalable to increase the service continuity**

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

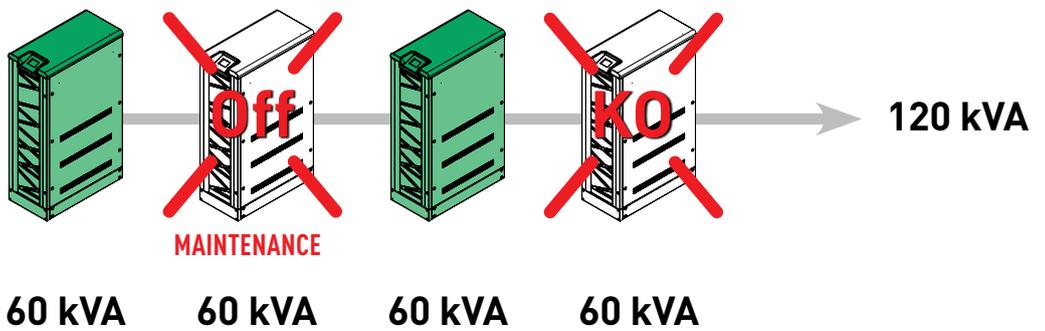
**STANDARD WORKING CONDITION**



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

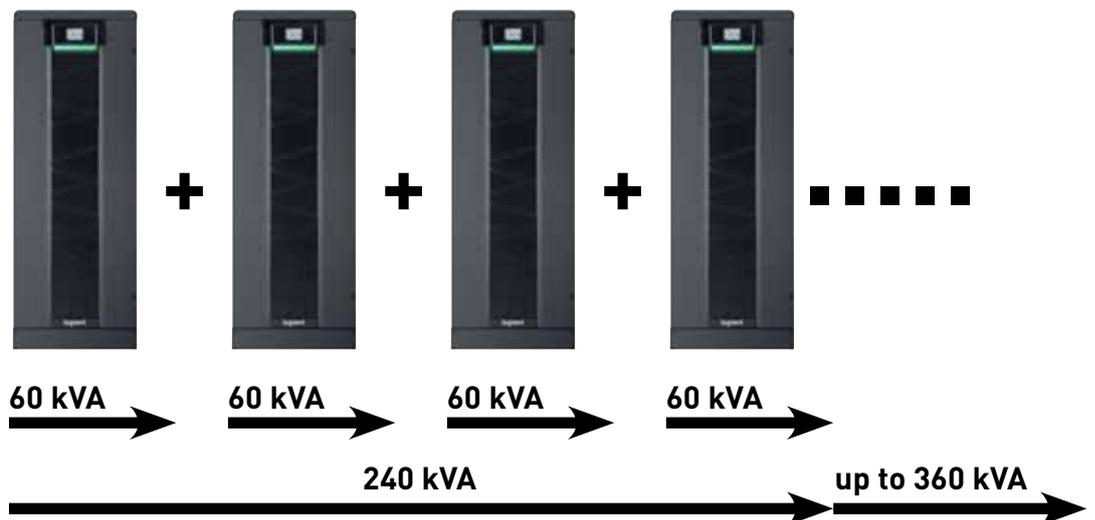


**MAXIMUM AUTOMATIC LOAD BALANCE IN CASE OF FAILURE DURING MAINTENANCE**



**Parallelable to increase the power**

Depending on the power demand, it is possible to connect Keor T EVO in parallel operation up to 6 units of the same power rating. This allows delivery of total power up to 360 kVA.



# Keor T EVO

## EXCLUSIVE CHARACTERISTICS

### Internal battery up to 60 kVA

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

### 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 T EVO

## UPS - On-line three-phase double conversion VFI



Keor T EVO 10-30

Keor T EVO 10-30

Keor T EVO 40-60

### Characteristics:

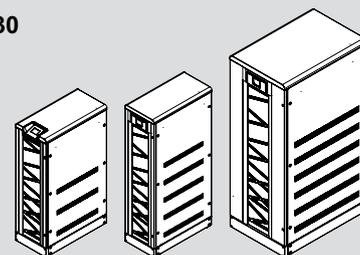
- Output from 10 to 60 kVA
- New Keor T Eco up to 20 kVA and power factor 1
- Three-phase UPS
- 3 level Switching technology
- IGBT Rectifier and inverter
- High efficiency
- Digital signal processor (DSP)
- High Input Power Factor Correction
- 3.5" TFT touch screen panel
- High output Power Factor
- Low input and output total harmonic distortion values (THD)
- Compatibility with gensets
- Parallelable system with up to 4 units
- Communication ports

Item	UPS	Nominal power (kVA)	Back-up time (min.)	Dimensions (mm)	Weight (kg)
3 110 20		10	0	1345 x 400 x 800	122
3 110 50		10	0	1650 x 400 x 800	118
3 110 21		10	24	1345 x 400 x 800	261
3 110 22		10	37	1345 x 400 x 800	283
3 110 23		10	57	1650 x 400 x 800	426
3 110 24		15	0	1345 x 400 x 800	127
3 110 51		15	0	1650 x 400 x 800	132
3 110 25		15	14	1345 x 400 x 800	268
3 110 26		15	22	1345 x 400 x 800	288
3 110 27		15	33	1650 x 400 x 800	431
3 110 28		20	0	1345 x 400 x 800	134
3 110 52		20	0	1650 x 400 x 800	134
3 110 29		20	10	1345 x 400 x 800	275
3 110 30		20	15	1345 x 400 x 800	296
3 110 31		20	37	1650 x 400 x 800	477
3 110 32		30	0	1345 x 400 x 800	141
3 110 53		30	0	1650 x 400 x 800	140
3 110 33		30	10	1345 x 400 x 800	302
3 110 34		30	13	1650 x 400 x 800	441
3 110 35		30	22	1650 x 400 x 800	484
3 110 36		40	0	1650 x 600 x 900	238
3 110 37		40	10	1650 x 600 x 900	538
3 110 38		40	15	1650 x 600 x 900	573
3 110 39		40	25	1650 x 600 x 900	740
3 110 40		60	0	1650 x 600 x 900	258
3 110 41		60	10	1650 x 600 x 900	590
3 110 42		60	15	1650 x 600 x 900	755

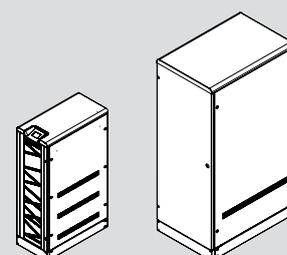
NOTE: the stated backup times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.

For more battery cabinet solutions, please refer to the dedicated catalogue

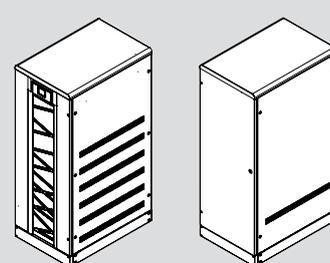
### Keor T EVO 10-15-20-30 with internal batteries



### Keor T EVO 10-15-20-30 with external battery cabinet



### Keor T EVO 40-60 with external battery cabinet



### Keor T EVO 208 V

Item	Nominal power (kVA)	Active Power (kW)	Dimensions H x W x D (mm)	Net weight (kg)
3 101 32	5	4,5	1345 x 400 x 800	118
3 101 33	7,5	6,75	1345 x 400 x 800	132
3 101 34	10	9	1345 x 400 x 800	134
3 102 78	15	13,5	1345 x 400 x 800	140
3 102 79	20	18	1650 x 600 x 900	255
3 102 96	30	27	1650 x 600 x 900	277

### Accessories

- 3 109 18** Battery cabinet empty (up to 60 blocks 55 Ah)
- 3 109 21** Internal cables kit for battery cabinet empty (for 60 blocks 55 Ah)
- 3 109 11** Battery drawers kit for Keor T EVO 10-30 kVA (up to 60 blocks 7-9 Ah)
- 3 109 12** Battery drawers kit for Keor T EVO 40-60 kVA (up to 60 blocks 7-9 Ah)
- 3 109 13** Internal battery cables kit for battery drawers Keor T EVO 10-30 kVA
- 3 109 14** Internal battery cables kit for battery drawers Keor T EVO 40-60 kVA
- 3 109 15** Parallel kit/UPS (PCB + 5 m cable)



# KEOR T EVO

## UPS - On-line three-phase double conversion VFI

Characteristics						
<b>Model 3Ph 400V (380-400-415V) 3Ph</b>	<b>Keor T EVO 10</b>	<b>Keor T EVO 15</b>	<b>Keor T EVO 20</b>	<b>Keor T EVO 30</b>	<b>Keor T EVO 40</b>	<b>Keor T EVO 60</b>
Nominal power (kVA)	10	15	20	30	40	60
Active power (kW)	10	15	20	30	40	60
<b>3Ph version 208V (200-208-220V)</b>	<b>Keor T EVO 208V 5</b>	<b>Keor T EVO 208V 7,5</b>	<b>Keor T EVO 208V 10</b>	<b>Keor T EVO 208V 15</b>	<b>Keor T EVO 208V 20</b>	<b>Keor T EVO 208V 30</b>
Nominal power (kVA)	5	7,5	10	15	20	30
Active power (kW)	4,5	6,75	9	13,5	18	27
General characteristics						
Technology	On-line double conversion VFI-SS-111					
Waveform	Sinusoidal					
Architecture	Stand alone or distributed parallel up to 6 units					
Input Characteristics						
Input voltage	400V (3Ph+N+PE)* / 200-208-220V (3Ph+N+PE)**					
Input frequency	45-65 Hz					
Input voltage range (Ph-Ph)	±20%* / ±15%**					
THD of input current	<5% at full load					
Compatibility with diesel generators	Yes					
Input power factor	>0.99					
Output characteristics						
Output voltage	380, 400, 415V (3Ph+N+PE)* / 200-208-220V (3Ph+N+PE)** (Adjustable from front panel)					
Efficiency	up to 96% *					
Efficiency in ECO mode	up to 98,5%					
Output frequency (nominal)	50 /60 Hz (Adjustable from front panel)					
Output frequency tolerance	±0,1%Synch with Mains; ±0,01% Free Run					
Crest factor	up to 3:1					
THD of output voltage	< 2% at full linear load					
Output power factor	1* / 0,9**					
Output voltage tolerance	± 1%					
Overload capability	10 min at 125%; 60 sec at 150%					
By-pass	Builtin automatic and maintenance bypass					
Batteries						
Battery type	VRLA – AGM Maintenance free					
Internal batteries	Yes					
Battery test	Yes 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, RS485, 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					
Physical characteristics						
Dimensions H x W x D (mm)	1345/1650 x 400 x 800* 1345 x 400 x 800**				1650 x 600 x 900	
Dimensions battery cabinet H x W x D (mm)	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)	< 58			< 60		
<b>Estimated content of circular economy derived materials</b>	<b>39%</b>					
<b>Recyclability rate calculated using the method described in technical report IEC/TR 62635***</b>	<b>71%</b>					
Compliance						
Reference product standards	EN 62040-1, EN 62040-2, EN 62040-3					

\* for 3Ph 400V Version

\*\* for 3Ph 208V Version

\*\*\* This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for end-of-life of this product.

# 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 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

# CUSTOMER SERVICES

## 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.





FOLLOW US  
ALSO ON

@ [www.ups.legrand.com](http://www.ups.legrand.com)



**World Headquarters and  
International Department**  
87045 Limoges Cedex - France  
☎ : + 33 (0) 5 55 06 87 87  
Fax : + 33 (0) 5 55 06 74 55