

# Keor T EVO

# THREE-PHASE UPS

from 15 to 60 kVA









# Keor T EVO

# THREE-PHASE UPS

Keor T EVO is an evolution of the successful Keor T range of UPS, that represents Legrand's philosophy of continuous innovation to address the changing needs of its customers. Keor T EVO has been designed with advanced technologies and latest generation components; 3 level IGBT rectifier and inverter with multi DSP controller.

It offers maximum protection and power quality for IT loads, light industrial and lighting loads. Moreover, Keor T EVO meets specific operational needs and performance parameters for key stakeholders like users and installers. Get the benefits of high-tech performance and ease of use with Keor T EVO.

Keor T EVO 40-60 kVA

Keor T EV0 15-20-30 kVA







# Easy Installation

- Easy installation guaranteed by front access to all wiring connections.
- Availability of standard configurations with batteries or isolation transformer 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 m<sup>2</sup>** (EVO 30 kVA, 20')



**0,54 m**<sup>2</sup>

## PF=1 → VA=W

Keor T EVO is able to provide over 11% 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



### 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.

# **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 I FD 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.

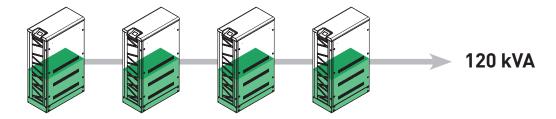




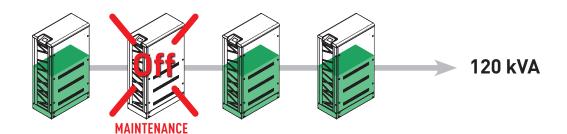
# Scalable to increasethe service continuity

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

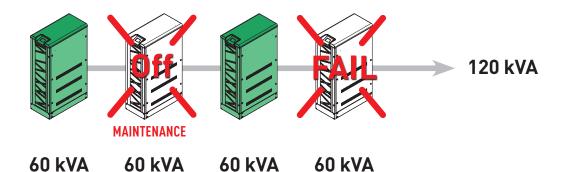
# STANDARD WORKING CONDITION



## AUTOMATIC LOAD RE-BALANCE IN MAINTENANCE CASE

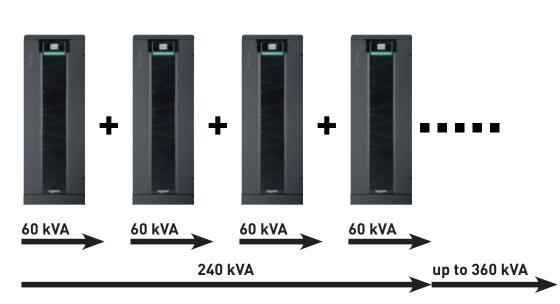


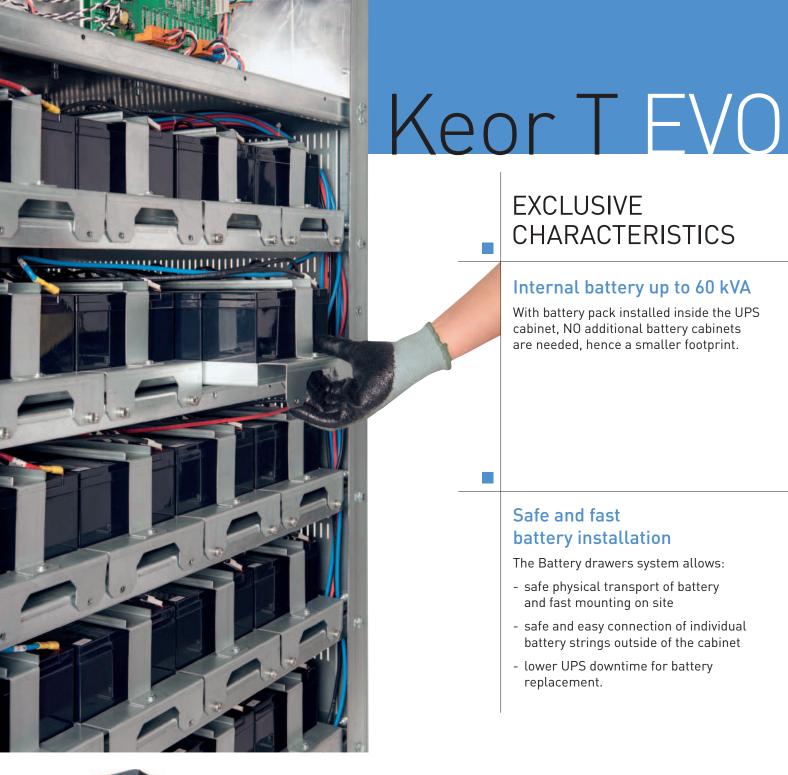
MAXIMUM AUTOMATIC LOAD BALANCE IN CASE OF FAILURE DURING MAINTENANCE



# 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.





**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.



# **Built-in Galvanic Isolation Transformer**

Optional isolation transformer in place of internal battery, reduces the foot print and thus saves space for installation.



Complete Distribution Panel with Embedded Manual bypass







Wheels for easy installation and maintenance



# **Communication features**

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

7





KEOR T 15-30

3 110 92

3 110 93

3 110 94

3 110 95

20

30

40

60

KEOR T EVO 40-60

Pack	Cat. Nos.	Keor T	EVO						
		Nominal power kVA	Backup time (min)	Dimension H x W x D (mm)	Net weight (in kg)				
1	3 110 24	15	0	1345 x 400 x 800	132				
1	3 110 28	20	0	1345 x 400 x 800	134				
1	3 110 32	30	0	1345 x 400 x 800	140				
1	3 110 36	40	0	1650 x 600 x 900	255				
1	3 110 40	60	0	1650 x 600 x 900	277				
		With in	ouilt batte	orios					
		Nominal power kVA	Backup time (min)	Dimensions H x W x D (mm)	Net weight (kg)				
1	3 110 25	15	15	1345 x 400 x 800	267				
1	3 110 30	20	15	1345 x 400 x 800	299				
1	3 110 33	30	10	1345 x 400 x 800	305				
1	3 110 38	40	15	1650 x 600 x 900	598				
1	3 110 42	60	15	1650 x 600 x 900	770				
With inbuilt isolation transformer									
		Nominal power kVA	Backup time (min)	Dimensions H x W x D (mm)	Net weight (kg)				
1	3 110 91	15	0	1345 x 400 x 800	222				

0

0

0

0

1345 x 400 x 800

1345 x 400 x 800

1650 x 600 x 900

1650 x 600 x 900

254

270

435

507

Pack	Cat. Nos.	Accessories
1	3 109 11	Description Battery drawers kit for Keor T EVO 10-30 kVA (up to 60 blocks 7-9 Ah)
1	3 109 12	Battery drawers kit for Keor T EVO 40-60 kVA (up to 60 blocks 7-9 Ah)
1	3 109 13	Internal battery cables kit for battery drawers Keor T EVO 10-30 kVA
1	3 109 14	Internal battery cables kit for battery drawers Keor T EVO 40-60 kVA
1	3 109 15	Parallal kit/UPS (PCB + 5m cable)*
1	3 109 16	Kit for both in & ext battery connections for 1345H*
1	3 109 30	CS 141 SK Professional (SNMP Only)
1	3 109 31	CS 141B SK Standard (SNMP with Sensor)
1	3 109 35	CS 141M SK Industrial (SNMP with MODBUS)
1	3 110 46	Parallal connection cable
1	3 110 47	Temperature probe

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

# **KEOR T EVO**



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

## Characteristics

Model	Keor T EVO 15	Keor T EVO 20	Keor T EVO 30	Keor T EVO 40	Keor T EVO 60		
Nominal Power (kVA)	15	20	30	40	60		
Active Power (kW)	15	20	30	40	60		
eneral characteristics							
Technology	Technology On-line double conversion VFI-SS-111						
Waveform	Sinusoidal						
Architecture	Stand Alone or Distributed Parallel up to 6 units						
nput Characteristics							
Input Voltage	Range: 242 - 459V at 50% load & 338V - 459V at full load						
Input Frequency	45-65 Hz						
Input Voltage Range (Ph-Ph)	318-459 V						
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) (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				
Output voltage tolerance	± 1%						
Overload Capability	10 min at 125%; 60 sec at 150%						
By-pass	Builtin Automatic and Mainteinance Bypass						
Batteries							
Battery type		VR	LA – 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, 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 x 400 x 800		1650 x 6	300 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		
Compliance							
Reference product standards	EN 62040-1, EN 62040-2, EN 62040-3						



#### Reliable

Directly present in 250+ locations across India to ensure quick support, a team of 900 factory qualified engineers are available 24/7/365 to support your UPS system to ensure availability to the most critical loads.

### **Excellent**

Numeric competitive edge lies in its ability to provide high value-added UPS systems and service for customers.

For Numeric, creating value means providing solutions with low energy consumption. The Legrand Group also provides all products required for electrical and digital building installations, particularly as an integrated system, with solution to fit customer needs.

### Tailor-made

We offer a complete range of specific solutions and services to meet customer requirements:

- Technical pre-sales support
- UPS sizing and solution
- Supervision of installation, testing and commissioning.
- Operator training
- Site audits
- Warranty extension offers
- Annual maintenance contract



# SERVICES

Today a business is in always ON mode with zero-tolerance for downtime. Numeric offers a wide range of products that promise seamless quality power solutions for all kinds of consumers – industrial, commercial and residential. The range of power solutions covers 3P, 2P and LI across power needs.



#### SITE INSPECTION, INSTALLATION SUPERVISION.

Numeric UPS' safe and fault-free operations start at the time of installation. A team of technical experts from Numeric visit the UPS site to perform a comprehensive check of the environment. The site engineer or electrical contractor is informed of their recommendations. The installation is supervised by the Numeric technical team.



#### SITE TEST, COMMISSIONING.

After the installations, the UPS is subjected to rigorous site tests. The UPS is configured according to user's requirements and completely set-up before going live. After successful testing, the UPS is handed over with the installation report.

# **Training**

#### TRAINING

On-site training is made available to ensure the safe and efficient operation of the equipment. Hands-on training for the client's engineers and technical team can be arranged at Numeric's plants



# **Maintenance**

#### PREVENTIVE MAINTENANCE

Optimal performance of the UPS require regular preventive maintenance operations, with parts replaced when needed. Numeric offers Service Contracts with Preventive Maintenance that include cleaning, UPS measurements, functional tests, technical reports (optional), battery health check up and software upgrades.



#### CORRECTIVE MAINTENANCE, EMERGENCY CALL

Engineers and spare parts stocks have been strategically located to handle emergencies. A powerful diagnostic software helps engineers identify the fault quickly and ensure short MTTR (Mean Time To Repair). The diagnosis further helps corrective actions such as part replacement, adjustments to be performed and return the UPS system back to normal.

**UPS** 

#### **Head Office**

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#### Regional Offices

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