

Keor T UPS



**THREE-PHASE
UPS**
from 10 to 120 kVA

GLOBAL SPECIALIST IN ELECTRICAL AND DIGITAL
BUILDING INFRASTRUCTURES



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

40-60-80-100 kVA

120 kVA

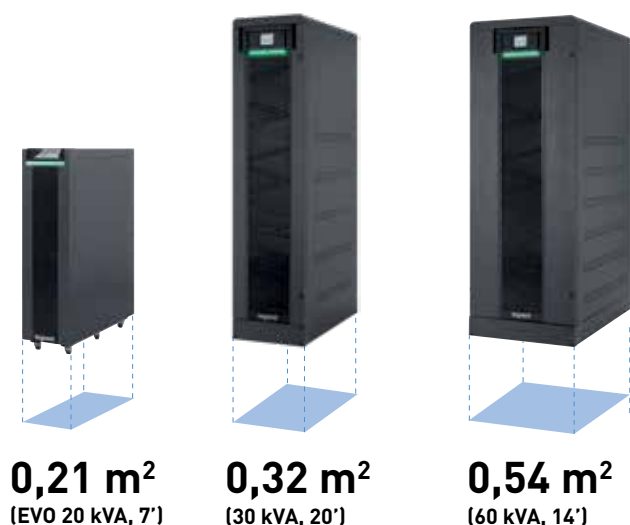
10-15-20-30 kVA

EVO 10-15-20 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.



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.

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)



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.



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

EASY MANAGEMENT



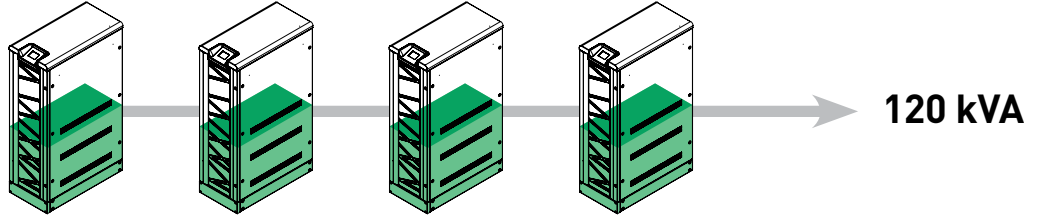
User friendly touch screen control panel

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.

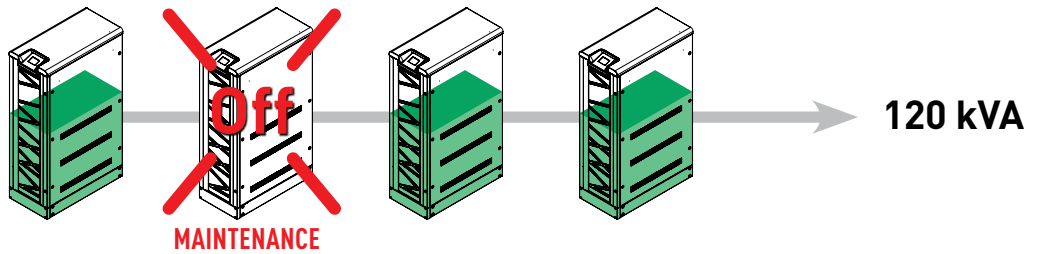
Scalable to increase the service continuity

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

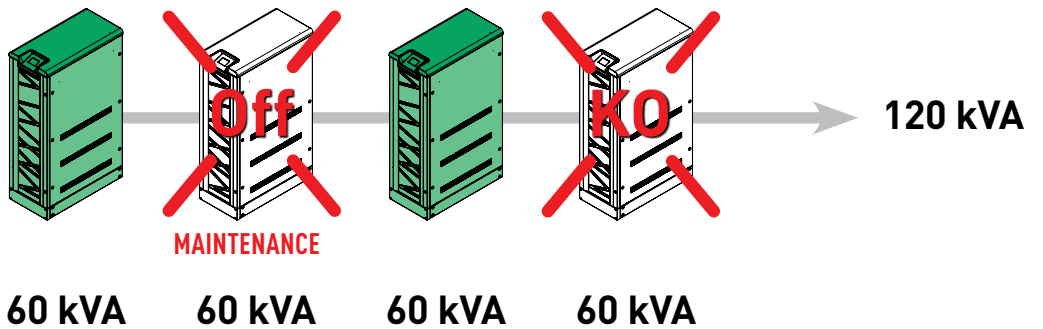
STANDARD WORKING CONDITION



AUTOMATIC LOAD RE-BALANCE IN MAINTENANCE CASE

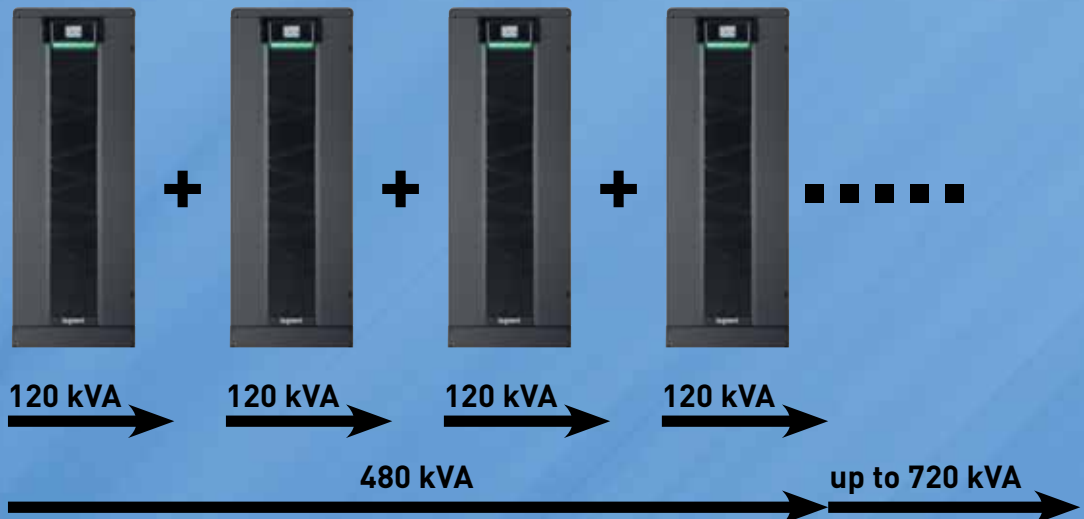


MAXIMUM AUTOMATIC LOAD BALANCE IN CASE OF FAILURE DURING MAINTENANCE



Parallelable to increase the power

Depending on the power demand, it is possible to connect in parallel operation up to 6 units of the same power rating. This allows delivery of total power up to 720 kVA.



KEOR T

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.

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 T EVO

NEW COMPACT UPS UP TO 20 kVA

PF=1 -> VA=W

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

Compact dimensions

Keor T EVO has foot print 35% smaller with the double of the power density compared the Keor T of same nominal power.

Embedded batteries for standard back up time

Keor T EVO can contain up to 36 batteries, allowing to obtain backup time up to 15 minutes (Keor T ev0 10 kVA)



Complete Distribution Panel with Embedded Manual bypass



Wheels for easy installation and maintenance



Floor fixing kit for secure installations



KEOR T EVO

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



KEOR T EVO 10-15-20

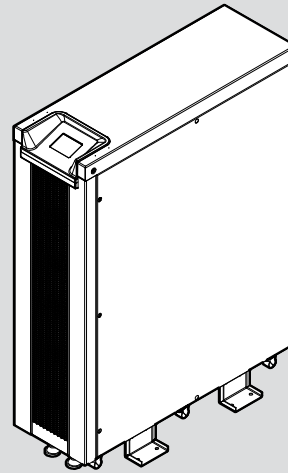
Pack	Cat. Nos.	UPS		Dimensions H x W x D (mm)	Net weight (kg)
		Nominal power kVA	Backup time (min.)		
1	3 102 70	10	-	1020 x 265 x 800	78
1	3 102 71	10	10	1020 x 265 x 800	145
1	3 102 72	10	15	1020 x 265 x 800	168
1	3 102 73	15	-	1020 x 265 x 800	79
1	3 102 74	15	7	1020 x 265 x 800	163
1	3 102 75	15	10	1020 x 265 x 800	180
1	3 102 76	20	-	1020 x 265 x 800	84
1	3 102 77	20	7	1020 x 265 x 800	185

		Accessories
		Description
1	3 109 15	Parallel kit/UPS (PCB + 5 m cable)

KEOR T EVO

UPS - trifase on line doppia conversione VFI

Keor T EVO 10-15-20



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

General characteristics	KEOR T EVO 10	KEOR T EVO 15	KEOR T EVO 20
Nominal power (kVA)	10	15	20
Active power (kW)	10	15	20
Technology	On-line double conversion VFI-SS-111		
Waveform	Sinusoidal		
Architecture	Stand Alone or Distributed Parallel up to 4 units		
Input characteristics			
Input voltage	380, 400, 415 V Ph+N+PE		
Input frequency	45-65 Hz		
Input voltage range (Ph-Ph)	half load 208 -459 / full load 358-459V		
THD of input current	<5% 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 3F+N (Adjustable from Front Panel)		
Efficiency	up to 95%		
Efficiency in Eco mode	up to 98,5%		
Output frequency (nominal)	50 /60 Hz $\pm 0,01\%$ (Adjustable from Front Panel)		
Crest factor	2,5:1		
THD of output voltage	<2% (at full linear load)		
Output power factor	1		
Output voltage tolerance	$\pm 1\%$		
Overload capability	10 min. 125%, 60 sec. 150%		
Bypass	Built-in Automatic and Maintenance By-pass		
Batteries			
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	Embedded		
Audible Alarm	Acoustic alarms and warnings		
Net Interface Slot	yes for optional SNMP card		
Emergency Power Off (EPO)	Yes		
Remote Management	Available		
Physical characteristics			
Dimensions H x W x D (mm)	1020 x 265 x 800		
Net Weight (kg)	78	79	84
Ambient conditions			
Operating temperature (°C)	0÷40		
Relative humidity (%)	20÷95% not condensing		
Protection index	IP20		
Acoustic Noise at 1m; 50%load (dBA)	< 51		
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

Pack	Cat. Nos.	UPS			
		Nominal power kVA	Backup 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	Backup 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					
		Nominal power kVA	Backup 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 980	315
1	3 102 28	100	-	1650 x 600 x 980	350
1	3 102 29	120	-	1650 x 793 x 800	430

Pack	Cat. Nos.	UPS with insulation transformer			
		Nominal power kVA	Backup 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

UPS 208V					
		Nominal power kVA	Backup time (min.)	Dimensions H x W x D (mm)	Net weight (kg)
1	3 101 32	5	0	1345 x 400 x 800	118
1	3 101 33	7,5	0	1345 x 400 x 800	132
1	3 101 34	10	0	1345 x 400 x 800	134
1	3 102 78	15	0	1345 x 400 x 800	140
1	3 102 79	20	0	1650 x 600 x 900	255
1	3 102 96	30	0	1650 x 600 x 900	277
1	3 102 97	40	0	1650 x 600 x 800	315
1	3 102 98	50	0	1650 x 600 x 800	350
1	3 102 99	60	0	1650 x 793 x 800	430

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

3Ph version 400V (380-400-415V)	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
3Ph version 208V (200-208-220V)	KEOR T 5	KEOR T 7,5	KEOR T 10	KEOR T 15	KEOR T 20	KEOR T 30	KEOR T 40	KEOR T 50	KEOR T 60
Nominal power (kVA)	5	7,5	10	15	20	30	40	50	60
Active power (kW)	4,5	6,75	9	13,5	18	27	36	45	54

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	380, 400, 415 V 3Ph+N+PE*, 200-208-220V 3Ph+N+PE**
Input frequency	45-65 Hz
Input voltage range (Ph-Ph)	± 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, 415 V 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 ±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%
Overload capability	10min. at 125%, 60sec. at 150%
Bypass	Built-in Automatic and Maintenance By-pass
Isolation Transformer	Transformerless Design. Optional Internal Isolation Transformer on request*

Batteries

Backup 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

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	1650 x 600 x 980	1650 x 793 x 800
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	< 65

Compliance

Reference product standards	EN 62040-1, EN 62040-2, EN 62040-3
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* for 3Ph 400V Version
** for 3Ph 208V Version



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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