

# KEOR T EVO 40-60 kVA

311036 - 311037 - 311038 - 311039 - 311040 - 311041 - 311042



## Index

1. GENERAL SPECIFICATIONS .....	1
2. TECHNICAL SPECIFICATIONS.....	2

## 1. GENERAL SPECIFICATIONS

Legrand UPS model KEOR T EVO is an uninterruptible power supply:

- Double Conversion Online Transformer Free;
- Power Factor 1
- Passing Solid Neutral;
- 3Level IGBT switching high frequency PWM technology,
- N+X Parallel redundancy up to total 6 units,

Batteries are lead acid, sealed, free maintenance, valve regulated, and arranged, inside the UPS in dedicated Drawers or external battery cabinet

KEOR T has the UE/CE Mark accordingly with the EU Directives 73/23, 93/68, 89/336, 92/31, 93/68 and it complies with following standards:

- EN62040-1 "General rules for electric safety"
- EN62040-2 "Electromagnetic compatibility and immunity (EMC)"
- EN62040-3 "Performances and testing rules"

### 1. Architecture

Legrand UPS KEOR T EVO has standalone architecture composed by

- IGBT Rectifier/PFC
- Inverter 3Level IGBT
- Logic Control Unit
- 3.5" TFT Touch Panel
- Dedicated Input for Bypass
- Embedded Static and Manual Bypass
- Standard Internal Back Feed Protection
- Internal Battery Drawer Shelves.

### 2. Control and monitoring

A multicolor LED bar shows the status of the UPS:

- GREEN: Normal or ECO Mode Operation
- ORANGE: Bypass or Battery Operation
- RED: Critical alarm

A touch screen graphic TFT display provides information, measurements, statuses and alarms in different languages. The information available are:

<b>RECTIFIER (INPUT)</b> Voltage (Vac), per phase Current (Aac), per phase DC BUS Voltage (±Vdc)	<b>INVERTER (OUTPUT)</b> Voltage (Vac), per phase Current (Aac), per phase Power (kVA), per phase Active Power (kW), per phase Power Factor (load), per phase Bypass Voltage, per phase Load (%), per phase
<b>FREQUENCY</b> Input Frequency (Hz) Output Frequency (Hz)	<b>BATTERY</b> Voltage (±Vdc) Current (±Adc) Temperature Autonomy (minute)

The UPS allows also the following settings by **display**:

<b>OUTPUT</b> Voltage (380/400/415) Frequency (50Hz/60Hz)	<b>BATTERY</b> Battery String Battery Capacity
<b>PARALLEL MODE</b> Parallel Mode (Enable/Disable(Single))	<b>UPS ID</b> Redundancy (+1, +2, ..., +5) Power Increase
Hystory Event Log to 500 last events. Events are stored in EEPROM using FIFO method.	

KEOR T EVO is equipped also with communication ports and interfaces for remote monitoring and control:

- RS232 Serial Communication Port
- Emergency Power Off (UPS OFF)
- Generator Contact (GEN ON)
- Two contact relays for Bypass and Battery
- ModBus (over RS485, with 2400 Baud Rate)
- Four programmable Dry Contacts

## KEOR T EVO 40-60 kVA

311036 - 311037 - 311038 - 311039 - 311040 - 311041 - 311042

### 2. TECHNICAL SPECIFICATIONS

#### 1. General specifications

Model	40	60
UPS Topology	On line double conversion VFI SS 111	
Architecture of the UPS	Stand alone, transformerless, OnSite Paralleling	
In/Out phase Configuration	Three phase	Three phase
Neutral	Neutral Passing through	
Switching Technology	3Level IGBT	
Backfeed Protection	Internal, standard	
Output wave form on mains operation	Sinusoidal	
Output wave form on battery operation	Sinusoidal	
Standards	EN 620401, EN 620402, EN 620403	

#### 2. Input

Nominal Voltage	400V 3ph+N+PE
Voltage Range	312 - 467 Ph-Ph full load 208 - 467 Ph-Ph half load"
Frequency	45 65Hz
THDin	< 5% at full load
Power Factor	> 0.99

#### 3. Bypass

Nominal Voltage	400V 3ph+N+PE
Voltage Range	380/400/415 -18% +15% (adjustable)
Frequency	47-53Hz or 57-63Hz (adjustable)
Bypass Type	Static and Electromechanic
Transfer Time	Zero
Manual Bypass	Built in

#### 4. Output with mains (AC-AC)

Nominal Voltage	380/400/415V 3ph+N+PE
Nominal Power (KVA)	40   60
Active Power (KW)	40   60
Voltage variation (static)	± 1%
THDv on nominal power (linear load)	< 2%
THDv on nominal power (nonlinear load)	< 4%
Frequency	50 Hz or 60 Hz (selectable)
Frequency tolerance	± 0,1% Synchronized with input frequency
Current Crest Factor	up to 3:1
Overload capability:	
10 min	125% load with no bypass
60 sec	150% load with no bypass

#### 5. Output on battery (DC-AC)

Model	40	60
Nominal Voltage	380/400/415V 3ph+N+PE	
Nominal Power (KVA)	40	60
Active Power (KW)	40	60
Voltage variation (static)	± 1%	
THDv on nominal power (linear load)	< 2%	
THDv on nominal power (nonlinear load)	< 4%	
Frequency	50 Hz or 60 Hz (selectable)	
Frequency tolerance	± 0,01% free run	
Current Crest Factor	up to 3:1	
Overload capability:		
10 min	125% load with no Bypass	
60 sec	150% load with no Bypass	

#### 6. Battery

Type	Lead Acid, sealed, free maintenance VRLA	
Nominal UPS Battery Voltage	±360 Volt DC	
No. of Batteries in Series	30+30	
Charging Method	boost - advanced management temperature control	
Max Charging Current without derating	4A	5A
Max Charging Current at <75%load	16A	24A

#### 7. Environmental specs

Noise level @ 1m (50% load)	< 60dBA
Operating temperature range	from 0°C to +40°C
Stock temperature range	from 20°C to +50°C
Humidity range	20-95% not condensing
Protection degree	IP20

#### 8. Mechanical and miscellaneous

Net Weight without batteries	277 kg
Dimensions (HxW xD)	1650 x 600 x 900mm
Colour	Enclosure: RAL 7016 Front Door Metal: RAL 9005
Communication Interface	1 serial port RS232, 1 RS485, 1 smart port for internal SNMP, 4 Dry Contacts, 1 EPO, 1 GENSET
Input/Output connections	3Ph + N + PE
Miscellaneous	Wheels and adjustable feet