87045 LIMOGES Cedex
Phone number : (+33) 05 55 06 87 87 - Fax : (+33) 05 55 06 88 88

KEOR T EVO 10-15-20-30 kVA

311020 - 311021 - 311022 - 311023 - 311024 - 311025 - 311026 - 311027 - 311028 - 311029 - 311030 - 311031 - 311032 - 311033 - 311034 – 311035 – 311050 – 311051 – 311052 - 311053

h 1345 mm h 1650 mm

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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:

RECTIFIER (INPUT) Voltage (Vac), per phase Current (Aac), per phase DC BUS Voltage (±Vdc)	**INVERTER (OUTPUT)** 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
FREQUENCY Input Frequency (Hz) Output Frequency (Hz)	**BATTERY** Voltage (±Vdc) Current (±Adc) Temperature Autonomy (minute)

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

OUTPUT Voltage (380/400/415) Frequency (50Hz/60Hz)	**BATTERY** Battery String Battery Capacity
PARALLEL MODE Parallel Mode (Enable/Disable(Single))	**UPS ID** 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

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2. TECHNICAL SPECIFICATIONS

1. General specifications

Model	10	15	20	30
UPS Topology	On line double conversion VFI SS 111			
Architecture of the UPS	Stand alone, transformerless, OnSite Paralleling			
In/Out phase Configuration	Three phaseThree 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
Static bypass overload capability	100% - 125% continuous 125% - 150% 10 min 150% - 60 secs
Manual Bypass	Built in

4. Output with mains (AC-AC)

Nominal Voltage	380/400/415V 3ph+N+PE			
Nominal Power (KVA)	10	15	20	30
Active Power (KW)	10	15	20	30
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 60 sec	 125% load with no bypass 150% load with no bypass			

5. Output on battery (DC-AC)

Model	10	15	20	30
Nominal Voltage	380/400/415V 3ph+N+PE			
Nominal Power (KVA)	10	15	20	30
Active Power (KW)	10	15	20	30
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:	125% 10 min 150% 60 secs			

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	1.2A	1.2A	2A	3A
Max Charging Current at <75%load	4.4A	6A	8A	12.5A

7. Environmental specs

Noise level @ 1m (50% load)	< 58dBA
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	121Kg	132Kg	144Kg	148Kg
Dimensions (HxW xD)	1345/1650 x 400 x 800mm			
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			