

Keor MP 160 kVA Three-phase UPS system

Cat.No : 3 112 41



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1. CHARACTERISTICS

Keor MP is three-phase online double conversion technology UPS system. The Keor MP UPS is based on a Three Level IGBT inverter technology in a compact design, compatible with Li-ion and VRLA battery technology.

■ 1.1 Specific application

Suitable for generic critical application which needs power continuity. Ideal solution for IT, Residential, Commercial and Tertiary applications.

2. TECHNICAL DATA

■ 2.1 General characteristics

Nominal power [kVA]	160
Active power [kW]	160
Classification	True online double conversion, VFI-SS-111
Possible configuration	3Ph-3Ph
Topology	DSP based IGBT rectifier with advanced PF correction

■ 2.2 Input

Nominal voltage [V]	L-L 380, 400, 415 Vac; L-N 220, 230, 240 Vac
Voltage range[%]	At 400 Vac, (-40 %, + 20%) for 40% load; (-22.5%, + 20%) for 100% load
Frequency [Hz]	50/ 60 with tolerance from 40 to 70 Hz
Input phases	3 phase + N + PE
THDlin [%] @100% load	<3%
Input Power Factor	>0.99
Power walk-In	1-20 secs (selectable)
Rectifier hold off	1-200 secs

■ 2.3 Output

Topology	DSP based PWM 3 level IGBT inverter
Output power factor	1
Output load PF handling	0.7 lag to 0.7 lead
Nominal output voltage with adjustment range	Vac = 380/ 400/ 415V ± 1% ± 0.5 (others selectable)
Output frequency (Hz)	50/60 (± 0.1Hz) in-sync with input frequency

Range of frequency for bypass synchronizing	50/ 60 ± 10%
Output phases	3Ph + N + PE
Output voltage regulation	For static balanced load < 1%, unbalanced load < 3% Dynamic load < 5% & recovery time as per IEC 62040-3
Voltage harmonics	< 2% for linear load & < 4% for non linear load
Range of frequency for bypass synchronizing (Hz)	50/60 ± 10%
Voltage range for static bypass mode	Maximum voltage 220V: + 25% (optional + 10%, + 15%, + 20%) 230V: + 20% (optional + 10%, + 15%) 240V: + 15% (optional + 10%) Minimum voltage -45% (optional - 10%, - 15%, - 20%, - 30%)
Permitted overload on mains (PF=1)*	≤ 110% for 30 mins, ≤ 125% for 10 mins, ≤ 150% for 1 min, > 150% for 1.2 secs - the inverter shuts down
Overall efficiency in double conversion mode in linear load	Up to 95% at 100% load Up to 95% at 75% load Up to 95.5% at 50% load Up to 95% at 25% load
Efficiency on eco mode	up to 99%
Crest factor	3:1

■ 2.4 Battery

Type	VRLA and Li-ion
Nominal battery voltage [Vdc]	432 Vdc ~ 600 Vdc
Nominal Li-ion battery voltage [Vdc]	512 ~ 614 Vdc
Battery charging mode	3 stage advanced cycle: Boost 14.5V Batt; Maintenance 13.75V Batt, Equalizing charging
DC ripple	< 1%
Charging current	20A/ module

■ **2.5 Communication Interface**

Cabinet displays	Synoptic LED bar
Input/Output wirings	3Ph + N + PE from the bottom and rear
Functioning mode	On-line/ parallel mode/ frequency converter/ eco mode/ eco parallel mode (PECO)
Maintenance by-pass switch	MCCB - Included (Standard)
Static by-pass	Yes
Cold start	Yes
Paralleling	Max 6 cabinets
USB port	Yes
MODBUS/ RS485/RS232	Yes
RJ45 LAN/WAN	Yes
Potential free contact	Yes
SNMP	Yes (optional)
Load bus sync kit	Yes (optional)
Safety and Protection	Overload, Short circuit, Back feed port available (external connection optional), Over & low voltage, Fast acting fuses
Available neutral status	TN-C, TN-S
Event logs	Upto 1000 first in/out

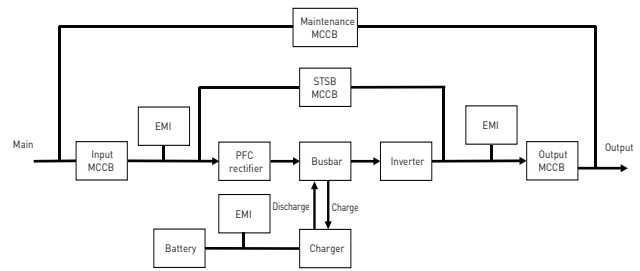
■ **2.6 Enviromental specs**

Operating temperature [°C]	0 - 40
Operating humidity [Rh]	20% - 95% non-condensing
Storage temprature [°C]	20 - 55
Maximum noise audible at 1m [dBA]	63

■ **2.7 Mechanical characteristics**

Overall net weight [Kg]	205
Frame dimensions [W x D x H] [mm]	442 x 850 x 1200
Protection index	IP20
Color shade	RAL 9005 + 9003
Cable entry	Rear bottom

■ **2.8 Block Diagram**



3. COMMUNICATION & CONNECTIVITY

1. Serial interface RS485 (ModBus protocol RTU) (Inbuilt)
2. SNMP (Optional)
3. Parallel interface kit (5 meters)(Optional)
4. LBS interface kit
5. Dry contact (Optional)
6. Temperature sensor (Optional)
7. Backfeed protection (Optional)
8. REPO (Optional)
9. RAM panel (Optional)

4. SOFTWARE ENABLED FUNCTIONS

1. Generator compatible
2. Rectifiers sequential star
3. Softstart rectifier
4. Cold start
5. VFI / VFD (Eco) operating mode management
6. Frequency converter
7. EPO
8. Common battery bank with 2 UPS

3. STANDARDS AND REGULATIONS

The UPS Keor MP has the CE Mark accordingly with the EU Directives 2006 95 2004 108 and it comply with following standards

- EN 62040-1: General rules for electric safety
- EN 62040-2: Electromagnetic compatibility and immunity (EMC)
- EN 62040-3: Performances and testing rules
- EN 62040-4: Environmental
- ROHS / REACH

4. OTHER INFORMATIONS



Installation and maintenance manual: mounting informations and maintenance guide available on e-catalogue

For further technical information, please contact Legrand technical support.
 Unless otherwise indicated, data reported in this document refers exclusively to test conditions according to product standards.
 For different conditions of use of the product, inside electrical equipment or in any different installation context, refer to the regulatory requirements of the equipment, local regulations and design specifications of the system.

Note: Specifications are subject to change with continuous development
 * < 30 degrees celsius for overload < / = 125% & < / = 150%