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TriMOD 20 kW

Three-phase modular UPS system

Cat.No : 3 112 82 - 3 112 83 - 3 112 84 - 3 112 93 - 3 112 94 - 3 112 99 - 3 113 00 - 3 113 01 - 3 113 08

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1. CHARACTERISTICS

High efficiency UPS online double conversion with PWM Hi-Frequency technology. Passing trough neutral and Modular Architecture with the possibility to have N+X redundancy for internal power module and power cabinet. The nominal power is 20kVA – 20kW.
The system is composed by identical modules (3.4, 5 or 6.7 kW 1ph PM) connected in parallel. Each PM is a complete 1ph UPS who works in parallel with the others in order to supply the required power. It's possible to reach different power and redundancy levels according to the PM and power cabinet number.

1.1 Specific application

Ideal solution for IT and Data Centre applications

2. RANGE

Power cabinet dual input WITH batteries and WITH power modules

Cat. Nos	No. of batt. drawers	No. of PM	No. of phases	No of control	Cabinet type
3 112 82	8	3x 6.7kVA	Multi In/Out	1	A
3 112 83	12	3x 6.7kVA	Multi In/Out	1	A
3 112 84	16	3x 6.7kVA	Multi In/Out	1	B

Power cabinet dual input WITHOUT batteries and WITH power modules

Cat. Nos	No. of installable batt drawers	No. of PM	No. of phases	No of control	Cabinet type
3 112 93	12	3x 6.7kVA	Multi In/Out	1	A
3 112 94	16	3x 6.7kVA	Multi In/Out	1	B

Power cabinet dual input WITHOUT batteries and WITHOUT power modules

Cat. Nos	No. of installable batt drawers	No. of installable PM	No. of phases	No of control	Cabinet type
3 112 99	12	3x 6.7kVA	Multi In/Out	1	A
3 113 00	12	6x 3.4kVA	Multi In/Out	1	B
3 113 01	16	3x 6.7kVA	Multi In/Out	1	B
3 113 08	-	6x 3.4kVA	Multi In/Out	2	A

3. TECHNICAL DATA

3.1 General characteristics

UPS Topology	On line double conversion VFI SS 11
Architecture of the UPS	Modular, scalable, redundant based on single phase Power Modules
In/Out phase Configuration	1-1 / 3-3 / 3-1 / 1-3
Neutral	Neutral Passing through
Output wave form on mains run	Sinusoidal
Output wave form on battery run	Sinusoidal
Bypass type	Static, electro-mechanic and maintenance bypass
Transfer time	Zero

3.2 Input

Nominal voltage [V]	380, 400, 415 3F+N+PE (or 220, 230, 240 1F+N+PE)
Voltage range[%]	-20 +15
Frequency [Hz]	50/60 (autosensing)
THDIin [%]	<3.5
Power Factor	>0.99

3. TECHNICAL DATA (continued)

3.3 Output

Nominal voltage [V]	380, 400, 415 3F+N+PE (or 220, 230, 240 1F+N+PE)
Nominal power	20 kVA
Active power	20 kW
Efficiency [%]	96.5
Voltage variation (static)	± 1%
Voltage variation (dynamic 0-100%; 100-0%)	± 1%
THDv on nominal power (linear load) [%]	<1
THDv on nominal power (not linear load P.F.=1)	
Frequency [Hz]	50/60
Frequency tolerance	Synchronized with input frequency adjustable range from +/- 0.5% to +/- 7%
Current Crest Factor	3:1
Overload capability: 10 min 60 sec	 112.5% load rate with no bypass intervention 135% load rate with no bypass intervention

3.4 Battery

Type	Lead Acid, sealed, free maintenance VRLA
Unit Capacity	Depending on backup time
Nominal UPS Battery Voltage [Vdc]	240 DC
Battery charger type	PWM hi efficiency, one in each power module
Charging Cycle	Smart Charge technology 3-step advanced cycle
Max Charging Current [A]	2.5 each power module

3.5 Enviromental specs

Noise level @ 1m [dBA]	58-62
Working temperature range [°C]	from 0°C to +40°C
Stock temperature range	from -25°C to +55°C (excluded batteries)
Humidity range [%]	10-75 not condensing
Protection degree	IP20

3.6 Mechanical characteristics

Net Weight without batteries with PM [kg]	105~117
Dimensions [WxHxDmm]	413 x 1383/1650 x 632 (cab A/B)
Colour	RAL9003, RAL9011
Technology rectifier/booster/ inverter	IGBT
Communication Interface	1xRS232, 1xslot SNMP, 1xUSB (service), 1xUSB host port

4. USER INTERFACE

TriMOD is equipped with an innovative 5" touch screen display with multicolor LED status bar, provides an user-friendly interface for monitoring the UPS in real time.

Historical alarm logs and messages facilitate maintenance and resolution of problems. The predictive diagnostics anticipates potential faults, ensuring maximum business continuity.

Input	Current	RMS value Peak value Crest factor
	Voltage	Ph-N RMS value Ph-Ph RMS value Bypass line voltage
	Power	Nominal (VA) Active (W) Power factor Frequency
Output	Output current	RMS value Peak value Crest factor
	Voltage	Ph-N RMS value Ph-Ph RMS value
	Power	Nominal (VA) Active (W) Power factor Frequency
Batteries	Voltage Capacity Current History data Residual capacity Charging status	
Miscellaneous	Internal Temperature Fan Speed HV DC BUS voltage	
Data Log.	By-pass intervention Overheats Overloads Battery interventions Total discharge Events Alarms	

The UPS allows also the following settings by display:

Output	Voltage Frequency
Input	Enable freq. synchronizing
By-pass	Enabling Forced ECO Mode batteries

5. STANDARDS AND REGULATIONS

The UPS TriMOD 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

RoHS :
Compliance with the 2011/65/EU Directive (RoHS), as modified by the 2015/863/EU Delegated Directive, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

REACH :
The substances identified as SVHC (Substances of Very High Concern) according to the REACH Regulation (1907/2006), if present in the products at a concentration above 0.1% weight by weight, are declared inside the European SCIP database. At the date of publication of this document none of the substance listed in the annex XIV is found in this product.

Batteries
The batteries included in this product comply with the requirements set out in European Regulation 2023/1542, according to the application timing indicated therein.

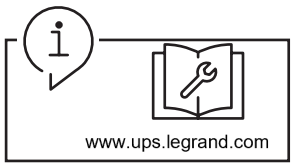
WEEE
WEEE Directive (2012/19/EU): the sale of this product includes a contribution to the appointed environmental bodies of each European country in charge of handling, at the end of their life, the products falling within the scope of the EU Directive on Electrical and Electronic Equipment Waste

Packaging :
Design and manufacture of packaging compliant with European Directive 94/62/CE.

The UPS TriMOD is CE marked in accordance with EU directives 2006 95 2004 108

CE

6. 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.