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# TriMOD 15 kW

**Three-phase modular UPS system**

**Cat.No : 3 112 79 – 3 112 80– 3 112 81– 3 112 91– 3 112 92- 3 112 99 - 3 113 01**

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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 15kVA – 15kW.
The system is composed by identical modules (5 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 79 | 8 | 3x 5kVA | Multi In/Out | 1 | A |
| 3 112 80 | 12 | 3x 5kVA | Multi In/Out | 1 | A |
| 3 112 81 | 16 | 3x 5kVA | 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 91 | 12 | 3x 5kVA | Multi In/Out | 1 | A |
| 3 112 92 | 16 | 3x 5kVA | 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 5kW | Multi In/Out | 1 | A |
| 3 113 01 | 16 | 3x 5kW | Multi In/Out | 1 | B |

## 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 | 15 kVA |
| Active power | 15 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:<br>10 min<br>60 sec | <br>115% load rate with no bypass intervention<br>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] | 414 x 1370/1650 x 628 (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 10" touch screen user-friendly graphic user interface.

The display is housed in a retractable tray and is capable of reading real-time data regarding working conditions, efficiency, consumption, load variations, as well as input / output power, current, voltage, etc.

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

The UPS allows also the following settings by display:

| | |
|---|---|
| **Output** | Voltage<br>Frequency |
| **Input** | Enable freq. synchronizing |
| **By-pass** | Enabling<br>Forced<br>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.

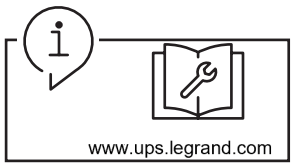
**WEEE**
WEEE Directive (2012/19/EU): the sale of this product includes a contribution to the appointed environmental bodies of each European country in charge of handling, at the end of their life, the products falling within the scope of the EU Directive on Electrical and Electronic Equipment Waste

**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.