



TriMOD

THREE-PHASE
MODULAR UPS
from 10 to 80 kW



#legrandImprovingLives



SUSTAINABILITY

CORPORATE SOCIAL RESPONSIBILITY

Green management and sustainable supply chain: these concepts are part of Legrand's Corporate Social Responsibility, which is the company's commitment to drawing up a strategy and implementing it with practical actions aimed at socially responsible behaviour towards everything around it, such as people, things and environment.

CSR involves the management of human resources, the organisation and division of labour and the management of natural resources. CSR aims to assess the impact that the company's actions and decisions have internally, but also externally, on the stakeholders and the environment.

BUSINESS ECOSYSTEM

or how Legrand interacts ethically with the whole ecosystem of its activities.

PEOPLE

or how Legrand engages with all of its employees and stakeholders.

ENVIRONMENT

or how Legrand intends to limit the Group's environmental impact.



CIRCULAR ECONOMY

We are committed to creating a system that involves all stakeholders to share values, objectives and actions in order to control and reduce the environmental impact of all our economic and production processes, reduce waste and environmental impact and transform what would once have been defined as «waste» into new resources.

Controlling these aspects has an impact on the entire life cycle of the product, starting from the design of new concepts and new specifications for the materials the UPS is made of; this is possible through responsible design and procurement processes (so-called «green procurement»), with a strong focus on research and the use of innovative materials from the circular economy and alternative raw materials. When a product ends its life, all these materials can become high value-added resources that can be used in other production cycles.



DIGITALISATION

Many of our documents are now available in a digital format to view on a PC or smartphone, not only making them always accessible but also reducing the amount of paper we use.

Digitalisation also becomes an important driver of the circular economy, since it allows the use of tools for performance data analysis and preventive diagnostics, both useful for optimising the life cycle and durability of the product.

EFFICIENCY

Our R&D team is constantly working on the development of increasingly efficient UPSs that allow high and incremental performance with minimum energy dissipation; with regard to CO₂ emissions, we are implementing processes and products that represent an improvement in the percentage of carbon footprint compared to the past.

But efficiency is not only synonymous with high performance.

For us, efficiency also means ecodesign: this implies that the UPS is designed to be easily repaired, maintained and it's easy to separate its components.

This means increasing the durability of our UPSs and the possibility of reusing and recycling them at the end of their life.



EPD/PEP

For each product family we draw up an EPD (Environmental Product Declaration) or PEP (Profil Environnemental Produit) in line with ISO 14025: it is a declaration that is a sort of environmental photograph of the product.

The EPD is drawn up according to the concept of Life Cycle Assessment: it examines the environmental impact of a product throughout its life cycle, from the development of product specifications to the choice of materials to be used and the end-of-life destination of the product itself.

UPservice contains the full documentation of UPS products in digital format. This tool allows to reduce the use of paper documents in favour of the digital format for the benefit of a lower environmental impact. Visit our website **ups.legrand.com** to download the app.

UPS

SUPPORTED BY
UPSERVICE

TriMOD

The 5th generation of Power Protection.

Legrand's experience with modular UPSs started in 1993, when the company launched its first revolutionary model. TriMOD is the result of continuous development, introducing an additional level of protection for critical systems, increasing the scalability and redundancy of the system to ensure maximum protection of the investment. TriMOD is a three-phase uninterruptible power supply from 10 to 80kW that is characterised by its modular architecture. The redundant and self-configuring single-phase modules guarantee maximum reliability and flexibility, making TriMOD the ideal solution for IT and Data Centre applications.



TriMOD

**TriMOD
revolutionizes
the three-phase
UPS concept
with its innovative
modularity based
on individual
single-phase
modules.**



EXPANDIBLE

Single-phase modules allow power to be managed more efficiently, adapting to the specific needs of the load.



SCALABLE

The system offers high granularity, with parallel option for power modules and UPS cabinets.



LIGHTWEIGHT DESIGN

Easy to transport and install thanks to its compact size and lightweight (only 8.4 kg for Power Module). Maintenance is quick, simple and safe.



This revolutionary architecture offers a number of unique advantages:



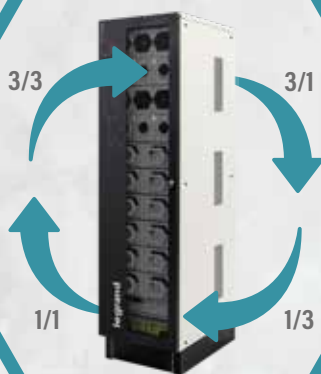
VERTICAL PARALLELABILITY

The power modules are connected in parallel in columns and each column is related to a phase.



SAFE AND EASY HANDLING

Hot-swappable battery drawers designed according to EN 60485-2 to prevent overheating.



FLEXIBLE

TriMOD offers Multi In/out configuration (3/3, 1/1, 3/1, 1/3) thanks to its 3 independent single-phase lines.

USER-FRIENDLY HMI

The 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 latest generation of predictive diagnostics anticipates potential faults, ensuring maximum business continuity.



IMMERSIVE HMI DESIGN

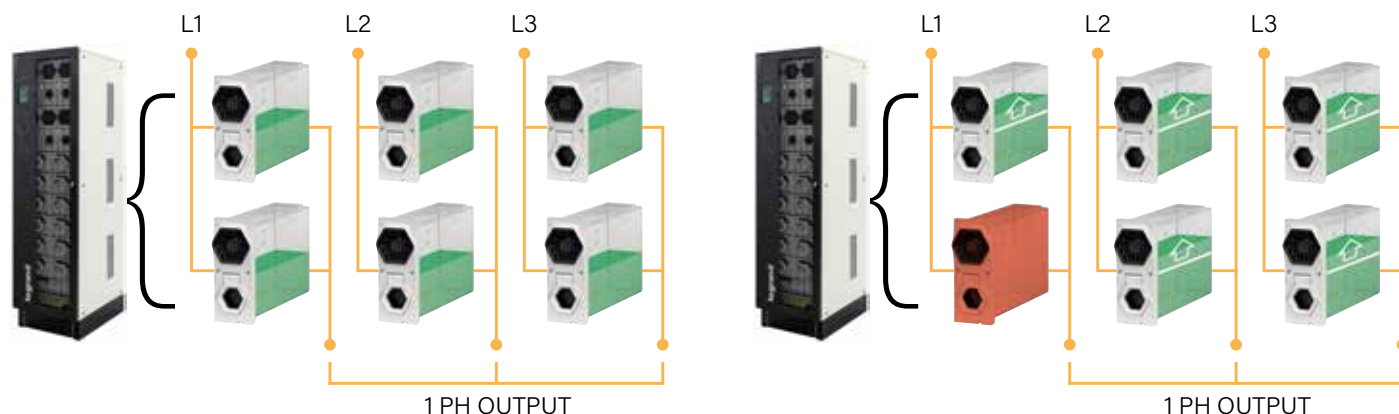
The concave shape of the HMI allows for a wider field of view and optimizes light direction, ensuring clear and readable content from every angle.



TriMOD

REDUNDANCY ON SINGLE-PHASE LOAD

In a system with three-phase power supply and single-phase load, if one of the modules fails, there is no loss of power as it is supplied by the other modules in operation.



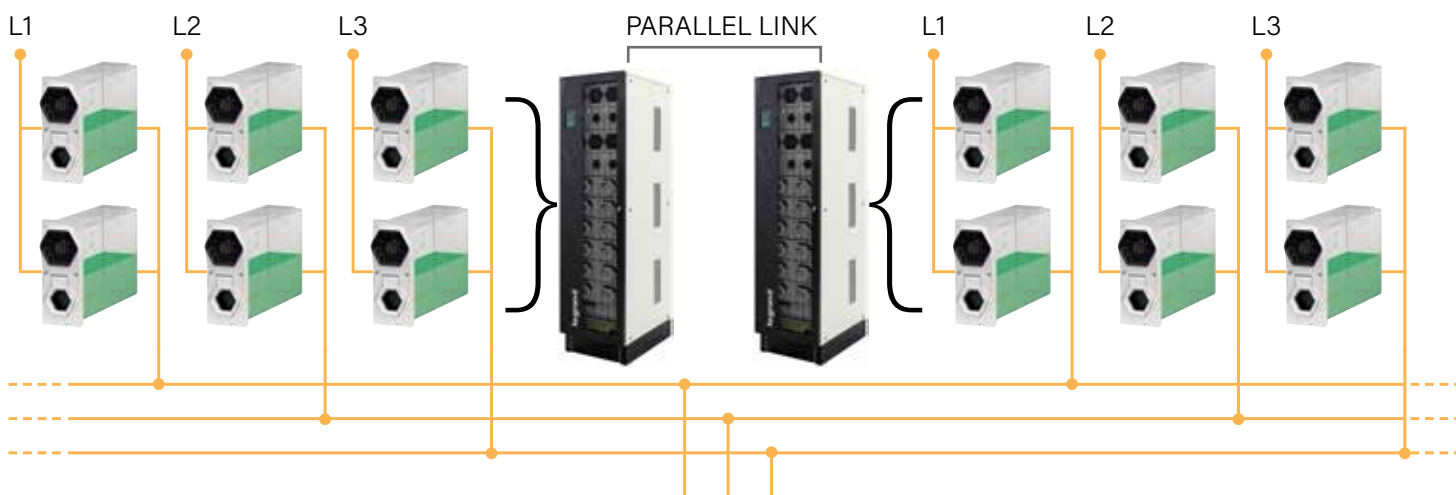
REDUNDANCY ON THE PHASES

In a system with three independent outputs, it is possible to set the redundancy on the single phases. If one of the power modules fails, the modules in the same phase take over for the defective module.



HORIZONTAL REDUNDANCY

Each TriMOD unit can be connected in parallel with one or more units to obtain the desired power and redundancy level. In addition, the inverter output can be synchronized for no-break load transfers by downstream static transfer switches.

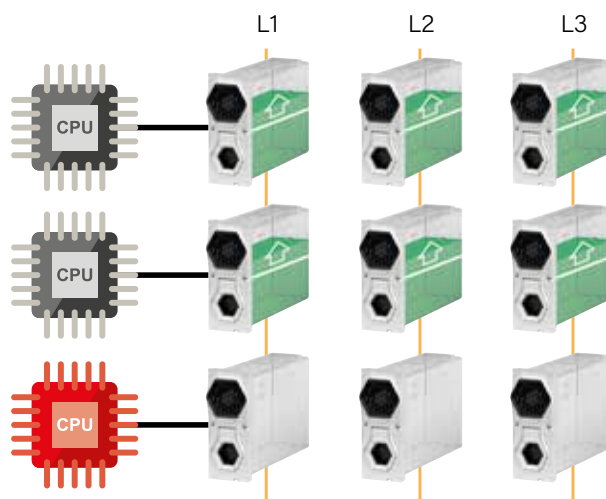




TriMOD

MULTI CONTROL BOARD SYSTEM: ADVANCED REDUNDANCY FOR MAXIMUM SERVICE CONTINUITY

TriMOD can be configured from 1 to 4 Multi Control Boards ensuring redundant control of the UPS, eliminating single points of failure and maximising reliability.



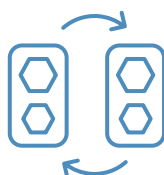
LOAD REDUNDANCY

In the event of a failure of one of the control boards, only the modules it controls will be switched off. The system ensures service continuity by automatically redistributing the lost power to the other modules.



HOT-SWAP

Thanks to the multi control board system you can replace the power modules without having to turn off the UPS.



LOW TCO

It offers enhanced energy efficiency, scalability, flexibility, and maximum availability, thanks to its modular technology and ease of maintenance, with no single point of failure.





3 112 84



3 113 28

Characteristics:

- Modular three-phase UPS from 10 to 80 kW
- On-Line double conversion VFI-SS-11
- Adaptable, redundant and scalable solutions (IN/OUT 3-1 phase configuration)
- Quick and simple maintenance
- Low environmental impact
- Diagnostics, monitoring, historical data and parameters by display
- Reduced foot print and dimensions
- Taller cabinet to extend backup time and standard configurations
- Multi control board function
- Hot Swap system
- Frequency converter in 40-70Hz out 50/60Hz (selectable)
- Operations with genset
- Three independent phase outputs
- Event log complete with date and time

Item	UPS	Power (kW)	Back-up time (min.)	No. and Type Cabinet	Weight (kg)
3 112 75		10	11	1A	167
3 112 76		10	21	1A	223
3 112 77		10	35	1A	279
3 112 78		10	49	1B	350
3 112 79		15	13	1A	220
3 112 80		15	21	1A	279
3 112 81		15	29	1B	350
3 112 82		20	9	1A	220
3 112 83		20	14	1A	279
3 112 84		20	20	1B	350
3 112 85		30	8	1B	325
3 112 86+ 3 113 27		40	8	2A	564
3 112 87+ 2 x 3 113 27		60	10	3A	830
3 112 88+3 104 78		80	9	2B	987

Cabinet A h=1370, Cabinet B h=1650

Item	Accessories
3 113 15	Power module 3.4 kW
3 113 16	Power module 5 kW
3 113 17	Power module 6.7 kW
3 111 12	Seismic kit
3 113 29	Parallel cable kit (1 kit every 2 cabinets - length 6 m)

Item	Battery accessories
3 113 18	Kit of 4 empty battery drawers
3 113 19	Kit of 4 battery drawers 9 Ah
3 113 20	Kit of 4 battery drawers 9 Ah long life
3 113 21	Kit of 4 battery drawers 11 Ah long life

Item	Additional empty battery cabinet
3 113 22	16-drawer modular battery cabinet
3 113 23	20-drawer modular battery cabinet

Item	Additional battery cabinet with 9Ah batteries
3 113 24	4-drawer modular battery cabinet
3 113 25	8-drawer modular battery cabinet
3 113 26	12-drawer modular battery cabinet
3 113 27	16-drawer modular battery cabinet
3 113 28	20-drawer modular battery cabinet

Item	Power cabinet	Power (kW)	No. of installable battery drawers	No. of phases	Type Cabinet	Weight (kg)
3 112 89		10	12	1-1 / 3-3 / 3-1 / 1-3	A	100
3 112 90		10	16	1-1 / 3-3 / 3-1 / 1-3	B	112
3 112 91		15	12	1-1 / 3-3 / 3-1 / 1-3	A	105
3 112 92		15	16	1-1 / 3-3 / 3-1 / 1-3	B	117
3 112 93		20	12	1-1 / 3-3 / 3-1 / 1-3	A	105
3 112 94		20	16	1-1 / 3-3 / 3-1 / 1-3	B	117
3 112 95		30	-	3-3	A	124
3 112 96		30	12	3-3	B	142
3 112 96		40	-	3-3	A	124
3 112 97		60	-	3-3	A	154
3 112 98		80	-	3-3	B	197

Item	Power cabinets (empty)	No. of installable power modules	No. of installable battery drawers	No. of phases	Type Cabinet	Weight (kg)
3 112 97		3 x 3.4 kW	12	1-1 / 3-3 / 3-1 / 1-3	A	74
3 112 98		3 x 3.4 kW	16	1-1 / 3-3 / 3-1 / 1-3	B	86
3 112 99		3 x 5 o 6,7 kW	12	1-1 / 3-3 / 3-1 / 1-3	A	79
3 113 00		6 x 3.4 kW	12	1-1 / 3-3 / 3-1 / 1-3	B	91
3 113 01		3 x 5 o 6,7 kW	16	1-1 / 3-3 / 3-1 / 1-3	B	91
3 113 02		6 x 5 kW	-	3-3	A	73
3 113 03		6 x 5 kW	-	1-1/3-3/3-1/1-3	A	78
3 113 04		6 x 5 kW	12	3-3	B	91
3 113 05		6 x 6.7 kW	-	3-3	A	73
3 113 06		9 x 6.7 kW	-	3-3	A	77
3 113 07		12x 6.7kW	-	3-3	B	95

Item	Power cabinets with MULTI CONTROL BOARD (empty)	No. of installable power modules	No. of installable battery drawers	No. of phases	Type Cabinet	Weight (kg)	No. of controls
3 113 08		6 x 3,4 - 5 - 6,7 kW	-	1-1 / 3-3 / 3-1 / 1-3	A	79	2
3 113 09		6 x 5 kW	12	3-3	B	92	2
3 113 10		6 x 6.7 kW	-	3-3	A	74	2
3 113 11		9 x 6.7 kW	-	3-3	A	79	3
3 113 12		12 x 6.7 kW	-	3-3	B	97	4



NOTE: the stated backup times in minutes are estimated and may vary according to the load characteristics, operating conditions and environment.

Characteristics

General specifications	3 112 89 3 112 90 3 112 97 3 112 98	3 112 91 3 112 92	3 112 93 3 112 94 3 112 99 3 113 00 3 113 01	3 112 95* 3 112 96* 3 113 02* 3 113 04*	3 112 86* 3 113 05* 3 113 10*	3 112 87 3 113 06 3 113 11	3 112 88 3 113 07 3 113 12	
	Nominal power (kVA)	10	15	20	30	40	60	80
	Active power (kW)	10	15	20	30	40	60	80
	Module power (kW)	3,4	5	6,7	5	6,7	6,7	6,7
	Technology	On-Line Double Conversion VFI-SS-11						
System	Modular, expandable and redundant UPS system							
Input								
Input voltage	380, 400, 415 3F+N+PE (or 220, 230, 240 1F+N+PE)			380, 400, 415 3F+N+PE				
Input frequency	50/60Hz							
Input voltage range	400V +15% -20%							
THD Input current	< 3.5% (at full load)							
Compatibility with genset	Yes							
Input Power Factor	> 0,99							
Output								
Output voltage	380, 400, 415 3F+N+PE (or 220, 230, 240 1F+N+PE)			380, 400, 415 3F+N+PE				
Efficiency	Up to 96.5%							
Efficiency in Eco Mode	Up to 99%							
Nominal output frequency	50/60 Hz							
Peak factor	3:1							
Waveform	Sinusoidal							
Output Voltage Tolerance	±1%							
THD Output Voltage	<1%							
Overload capacity	10 minutes at 115%, 60 seconds at 135%							
Bypass	Automatic bypass (static and electromechanical) and manual maintenance bypass							
Batteries								
Battery module	Plug & Play							
Battery series type/voltage	VRLA							
Back-up time	Configurable							
Battery charger	Smart Charge Technology, advanced 3-stage cycle							
Communication and management								
Screen and signalling	Touch Screen 5" display with PM LED status bar							
Communication ports	1xRS232, 1xSlot network card, 1xUSB (service), 1xUSB host port							
Auxiliary signal	6 output floating contacts, 5 input floating contacts (including EPO), external temperature sensor, external bypass							
Backfeed protection	NC/NO auxiliary contact							
Emergency Power Off (EPO)	Yes							
Remote control	Available							
Mechanical characteristics								
Height A-B (mm)	1370 - 1650							
Width (mm)	414			414	414	414	414	
Depth (mm)	628			628	628	628	628	
Number of Installed Power Modules	3			6	6	9	12	
Installable battery drawers (A-B)	Up to 12 - Up to 16			Up to 0 - 12	-	-	-	
Net weight A-B (kg)	Refer to the previous page, where there are the weights of the various configurations							
Environmental conditions								
Operating temperature/humidity	0-40°C/ 10% to 75% (non-condensing)							
Protection rating	IP20							
Noise at 1 m from the unit (dBA)	58-62							
Certifications								
Standards	EN 62040-1, EN 62040-2, EN 62040-3, Seismic standard (ICC-ES AC156)							

* Standard configurations with 3-3 distribution (multi IN/OUT settings available upon request).

CUSTOMER SERVICES



Reliable

Directly present in more than 70 countries and servicing its products in more than 150 countries worldwide, a team of qualified engineers is available to support your UPS system to ensure power quality and availability to the most critical loads.

Excellent

Legrand's competitive edge lies in its ability to provide high value-added UPS systems and services for both end users and business partners.

For Legrand, creating value means coming up with solutions for lower energy consumption, but also integrating product design into the overall development process. With around 200 000 catalogue items, the Group also provides all products required for electrical and digital building installations, particularly as integrated systems, finding solutions to fit everyone's needs.

Tailor-made

Legrand offers a complete range of specific solutions and services to meet customer requirements:

- Technical pre-sales support at the project design stage
- Factory acceptance test
- Supervision of installation, testing and commissioning, site acceptance test
- Operator training
- Site audit
- Warranty extension
- Annual maintenance contract
- Fast intervention on emergency call

SUPPORT



SITE INSPECTION, INSTALLATION SUPERVISION.

We perform a comprehensive check of the UPS environment to ensure safety and fault-free operation.

Our technical experts give manufacturer's recommendations to the site engineer or electrical contractors, and supervise the UPS installation before load power-up.

SITE TEST, FACTORY TEST, COMMISSIONING

Our Service Engineers conduct rigorous site tests and full setting-up of the UPS system before going live. They also perform Site Acceptance Test (SAT) and Factory Acceptance Test (FAT) according to your requirements. Commissioning operations for all UPS are carried out by qualified engineers to guarantee seamless start-up. After the final handing over of the UPS system, a Test and Commissioning report is delivered to you.

TRAINING



We offer on-site training to ensure your equipment's safe and efficient operation.

Troubleshooting courses are also available in our plants for intensive hands-on practice on UPS training equipment.

MAINTENANCE



PREVENTIVE MAINTENANCE

Electronic equipment and power systems, such as UPS, contain life-limited components and parts that must be replaced according to the manufacturer's specifications.

To ensure optimal performance and to protect your critical application from potential downtime, it is crucial to perform

preventive maintenance operations on a regular basis and replace parts when needed. Our Service Contracts include cleaning, IR thermography, measurements, functional tests, event log and power quality analysis, battery health check, hardware and software upgrades, and technical reports.

A Preventive Maintenance Plan is one of the most cost-effective actions that can preserve your initial investment and ensure your business continuity.

CORRECTIVE MAINTENANCE, EMERGENCY CALL

In the event of an Emergency Call, our worldwide service network, with engineers and spare-parts stocks strategically located as close as possible to your site, guarantees a fast intervention time with 24/7/365 assistance.

After connecting his laptop to your UPS, very powerful diagnostic software helps our engineer to identify the fault, thus ensuring short MTTR (Mean Time To Repair).

Corrective actions are performed such as part replacement, adjustments and upgrades to return the UPS system back to normal operation.



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