



L'Énergie Sans Limite !
Safe Energy for Life !



Critical, industrial and medical applications



From 10 to 200k VA

The M5T range is the new three-phase solution designed to protect the most strategic powerful loads. It offers all the features needed to ensure maximum security, even in sensitive environments.

A range with many advantages

The M5T range is equipped with On Line Double Conversion technology, controlled by microprocessor, and is intended to permanently supply the most demanding infrastructures with high-quality power. These UPSs are designed with multiple internal power modules placed in parallel which simplifies procedures and reduces maintenance costs. Their numerous possibilities of communication interfaces, configuration and backup time extension make them some of the best-performing products on the market !

Advantages of M5T range

- Power factor = 1
- Touch LCD screen
- Dual Input
- Smart battery charger
- Parallel configuration up to 6 devices with one single set of batteries



On Line Double Conversion Technology



Redundant parallelizable



High Efficiency



Remote control software



Extended backup time available



Total protection of the most critical loads

M5T range was designed to supply permanent high-quality power to the most demanding infrastructures. This product embeds all the useful features required to efficiently protect critical activities such as :

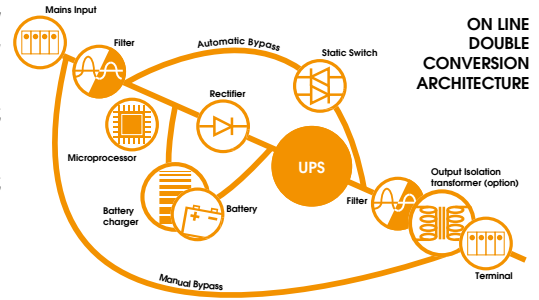
- Industrial production facilities
- Datacenters
- Banking
- Medical labs

A RELEVANT ANSWER TO THE MOST DEMANDING NEEDS

On Line Double Conversion Technology

The M5T product range is equipped with the On Line Double Conversion with High Frequency Technology, providing the users with the highest security level. The current is constantly delivered by the UPS device, thus guaranteeing a constant voltage level with a perfect stability. Critical applications are therefore supplied with a perfect current as they are independent from the mains input. There is no commutation time and no micro-power shortage.

The output power factor is optimal, reaching 1. Microprocessor UPS driving provides a wide input voltage range, a high input power factor, and low harmonic distortion.



High output and performance

M5T ranges combine the best UPS in terms of rectifier, filter, charger, UPS, DS controller to ensure the best possible efficiency and performance. M5T UPS ensures a high overall efficiency of 96%.

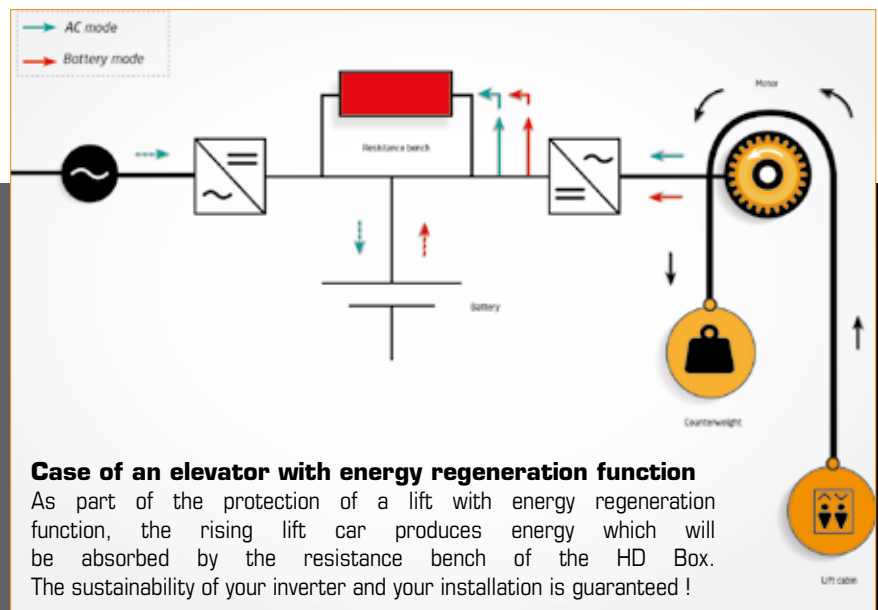
Fit your M5T UPS with the HD Box

With M5T HD solution, you offer your M5T UPS the possibility to be compatible with motorized devices including a braking system. In addition to the 30 to 60 kVA M5T UPS of your choice, there is an HD Box, an external accessory equipped with an integrated resistance bench. This accessory absorbs the current returned by the protected equipment, especially if it is equipped with the energy regeneration function (lifts) or with a motor braking system (frequency converter).

This feature allows to ensure the continuity of service of the connected equipment and to preserve the vital functions of the UPS.

By coupling an M5T UPS with the HD Box external accessory, any type of motorized device connected to the UPS will be protected without compromise !

A motor releases part of the kinetic energy into electrical energy. This electric current will be directed to the HD Box and absorbed by the integrated resistance bench, thus preventing your UPS from being damaged: the continuity of service of your installation is guaranteed !



Extended Backup Time

In order to get extended backup time, battery extension modules can be connected as an option to M5T.

Different types of battery modules are available according to the type of battery needed, but also to the physical setting. Depending on the type of installation and equipment to protect (single UPS device or several devices connected in parallel), backup time need may vary. Large and scalable range of battery banks allows to answer most of the needs.

M5T UPS are also available for extended backup time needs in WOB versions for models from 10 to 40 kVA and in S versions from 60 to 200 kVA. These UPS are built with a powerful charger, without internal batteries but with external battery banks connectors. WOB versions are identical than standard models without internal batteries.

Optimum Design: Small Footprint

M5T has been designed with an optimized architecture, allowing to significantly reduce the occupied space of the product. Its internal components being of a smaller size than the average UPS parts, the cabinet of M5T has been minimized and is distinctly smaller than the average volume of UPS devices of equivalent power.

M5T can easily adapt to the stocking constraints of small and larger businesses and all types of environment.

SECURITY AND SERVICE CONTINUITY

Parallel installation

To enhance system security and meet the need for system flexibility and upgradability, M5T can be configured in parallel. Up to 4 units can be connected in parallel for models from 10k to 40k VA. For models from 60k to 200 kVA, 6 units can be connected in parallel, increasing the power and redundancy for even greater security. The parallel feature is built into the UPS and is therefore configurable for free.

Parallel configuration of two or three M5T can, at the same time, increase the power supported by the array, and maximize the security provided to the connected equipment.

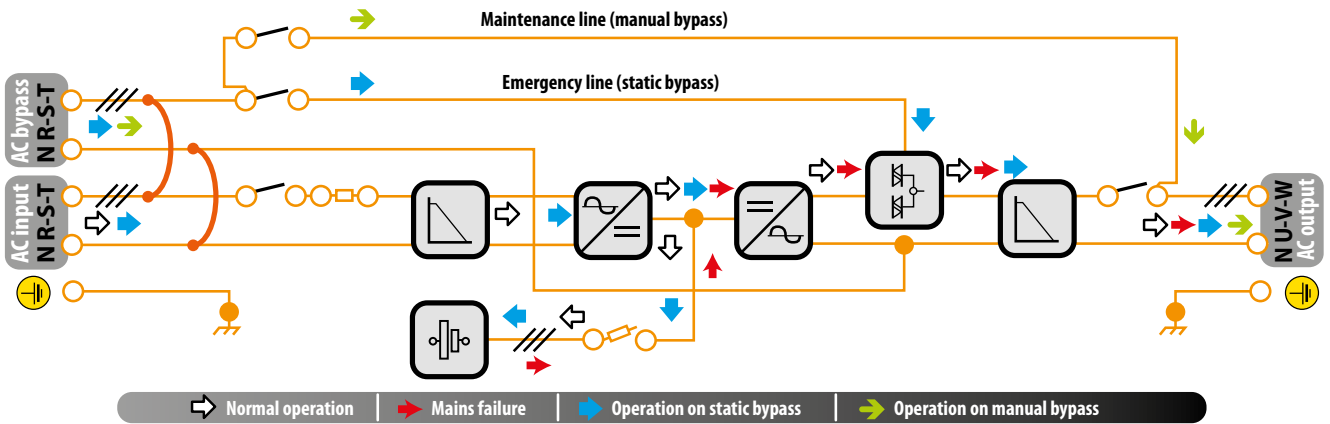
M5T can therefore stand a connected load of up to 1200 kVA max.

In case of a temporary fault or a maintenance activity on one of the M5T of an installation, the parallel configuration allows to switch automatically to the available M5T backup capabilities.



Static By-pass and Manual By-Pass

Its dual power supply network with independent rectifier and by-pass is appropriate for use in facilities running separate redundant network systems with generator sets (hospitals, airports, train stations, supermarkets, cold chains, etc.). In this way the critical load can be powered by a second source supplying the by-pass circuit, should the main source fail for a lengthy period (see details in the technical specifications chart).



Dual Input

Dual power supply network with independent rectifier and by-pass is appropriate for use in facilities running separate redundant network systems with generator sets (hospitals, airports, train stations, supermarkets, cold chains, etc.).

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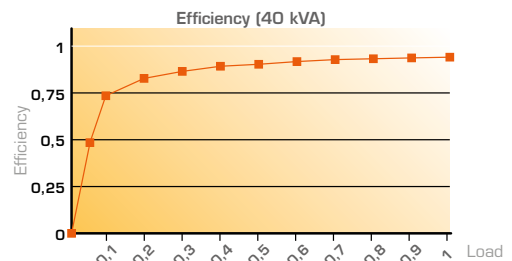
Easy maintenance

M5T power system is composed of several power boards installed in parallel that can be switched easily.

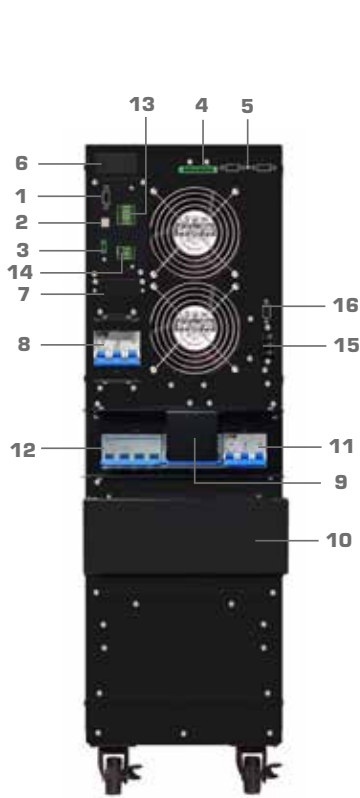
Maintenance interventions are simplified and safer for the technicians, reducing the overall costs of maintenance operations.

DSP - Digital Signal Processor

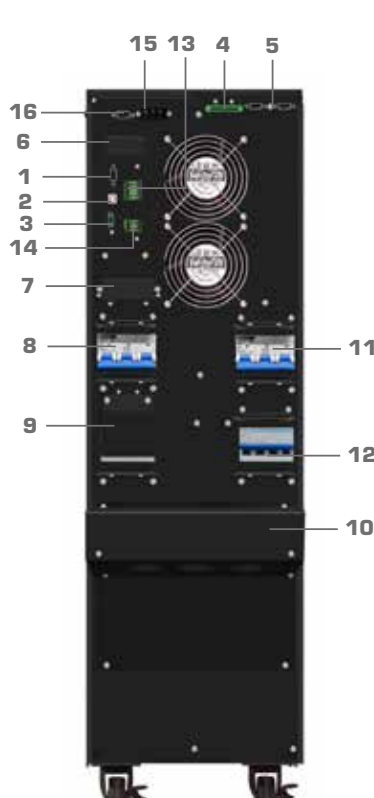
M5T as a processor dedicated to calculations and signal quality: the DSP has the ability to process a huge amount of information in real time (20 million instructions per second). On one hand, the DSP controls the rectifier and the network current quality and, on the other hand, it controls the output voltage quality thus guaranteeing users exceptional performance in terms of voltage accuracy, efficiency and reliability.



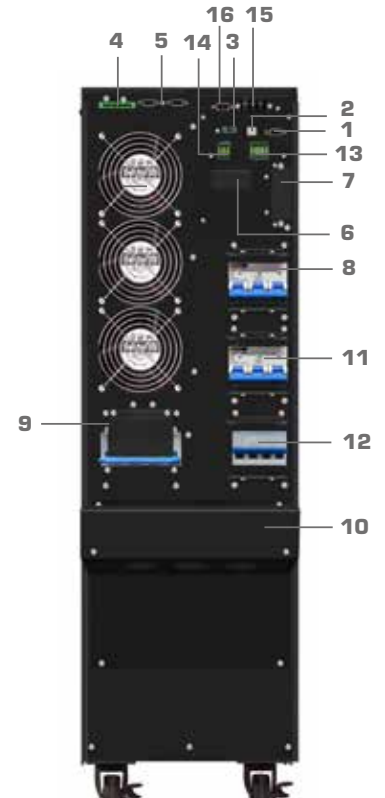
CONNECTION



M5T 10/15/20k HV AN10

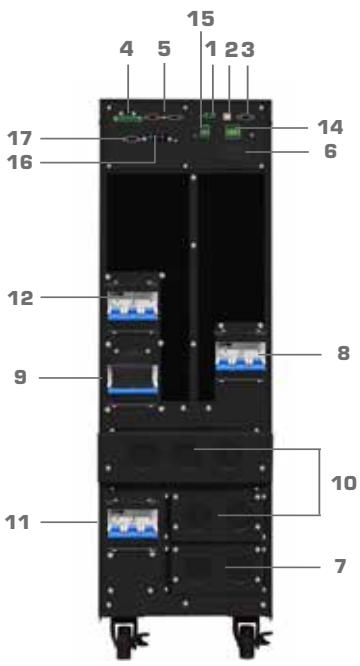


M5T 30k HV AN10

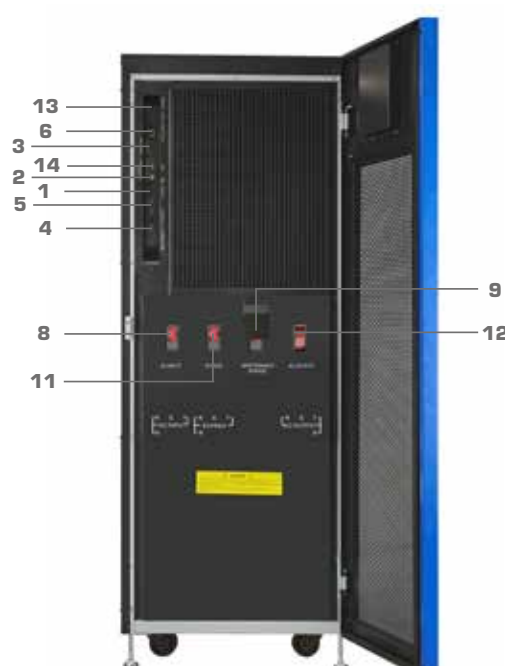


M5T 40k HV AN10

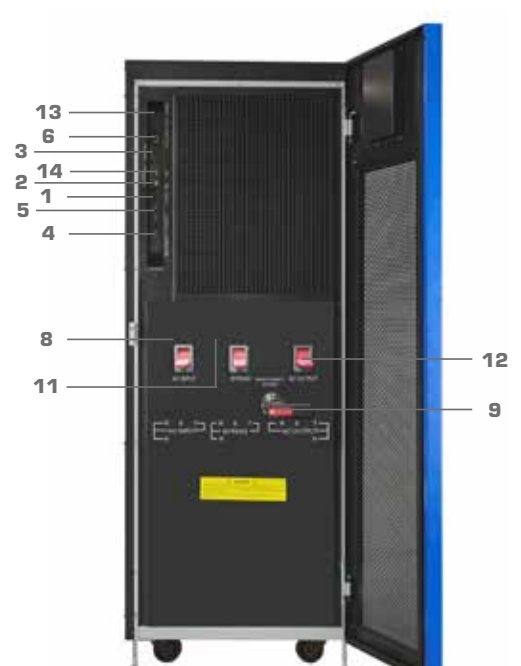
- | | | |
|---|---|--|
| 1. RS-232 communication port | 6. Intelligent slot | 12. Output switch |
| 2. USB communication port | 7. External battery connector/terminal | 13. 8-pin input dry contact ports |
| 3. Emergency power off function connector (EPO connector) | 8. Line input circuit breaker/switch | 14. 6-pin output dry contact ports |
| 4. Share current port | 9. Maintenance bypass switch (option) | 15. High voltage DC BUS terminals (option) |
| 5. Parallel port | 10. Input/Output terminal | 16. Signal port (option) |
| | 11. Bypass input circuit breaker/switch | |



M5T 60k S



M5T 100/120k S



M5T 180/200k S

- | | | |
|---|---|--|
| 1. RS-232 communication port | 7. External battery connector/terminal | 13. Output switch |
| 2. USB communication port | 8. Line input circuit breaker/switch | 14. 8-pin input dry contact ports |
| 3. Emergency power off function connector (EPO connector) | 9. Maintenance bypass switch | 15. 6-pin output dry contact ports |
| 4. Share current port | 10. Input/Output terminal | 16. High voltage DC BUS terminals (option) |
| 5. Parallel port | 11. Bypass input circuit breaker/switch | 17. Signal port (option) |
| 6. Intelligent slot | 12. Bypass input terminal | |

USER-FRIENDLINESS & COMMUNICATION

LCD Screen

- Touch LCD screen 5" for models from 10 to 40 kVA and 7" from 60 to 200 kVA
- Sharp and user friendly: status indicators and real-time parameters information
- Intuitive LCD display on the front panel: direct access to the UPS settings for a quick adjustment of the operational modes(output voltage settings...)
- Frequency setting on 50 or 60 Hz or auto-detection (easily set from the LCD screen of the device)

Touch LCD screen



For maximum security, and thanks to all these communication systems, the UPS can be monitored remotely 24 hours a day and 7 days a week. The numerous available communication solutions allow to adapt to many interfaces used in various sectors and activities.

Remote Controlling through USB & RS232 ports

The USB and RS232 ports allow to use the communication protocols developed for IT infrastructures, data centers and telecommunications networks.

These features enable the remote control of the UPS and to set alerts in order to obtain real-time information on its functioning status.

The user interface allows to program the shutdown of the connected devices and applications protected by the UPS in order to avoid any information loss, and to prevent from potential damage caused to the machines.

INFOPOWER SOFTWARE

Designed to simplify remote monitoring of the UPS, InfoPower remote controlled software is a user-friendly interface for computers allowing to parameter its different settings in case of a power failure, or to monitor the different UPS status



SNMP I Pro agent (option)

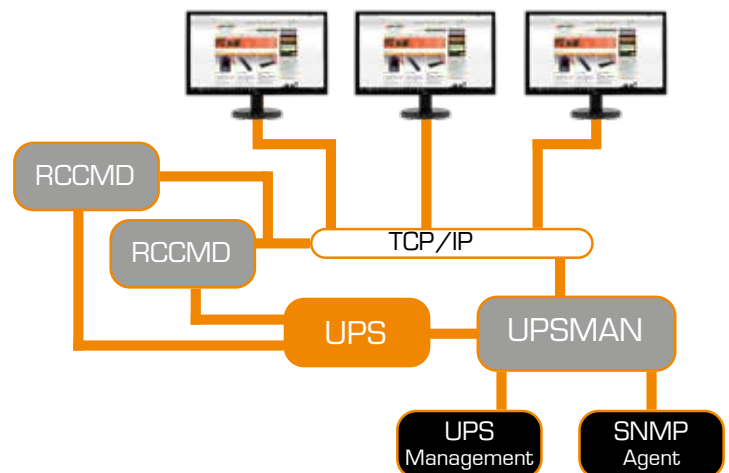
Using the SNMP I pro agent with the M5T UPS devices makes it easier to manage the UPS due to its various special features: connection to the Ethernet network and identification by IP address (random or fixed), setting and programming a system, shutdown and restart on a weekly basis, local or remote UPS configuration...

Virtual Networks SNMP card (option)

UPS devices compatibility with virtual network servers is a key issue to manage the protection of critical and sensitive hardware such as datacenters or high-scale distant servers.

Nowadays, server virtualization is necessary to protect data and increase data storage availability for IT businesses. It is therefore mandatory to offer UPS devices compliant with remote controlling and the closure of virtual servers.

The SNMP card option is compatible with vmWare® and HyperV® servers and allows the M5T to position as an optimal tool for the protection of key industry infrastructures, IT or medical environment.



APPLICATIONS

Infrastructures

Large infrastructures often require total security guarantee, as their functioning must be continuous and never suffer any forced interruption, in order to avoid any human risks which consequences could be extremely damaging. Such risk cannot be ignored nor minimized.

M5T offers critical requirements of airports, train stations, hospitals, laboratories, tunnels, malls and other public infrastructures protected and guaranteed continuous supply of their critical applications.



Industrial equipment

Production lines using equipment that cannot suffer any power shortage, including micro-power shortages, have a critical need for electrical protection of their production units.

Factories in the energy industry are also directly concerned by the need to provide an uninterrupted power supply to their applications.

The versatility and adaptability of **M5T** to any type of load, including the more complicated ones (inductive, capacitive, non-linear, discharge lamps, inductive engines...), together with its high efficiency make it **the ideal solution to guarantee the power supply and the continuity of the activities and services for any industrial application.**



IT & Telecommunications

The phenomenal growth of the telecommunications sector implies the need for uninterrupted availability of communications and service for the suppliers as well as the subscribers.

M5T UPS product range can provide the required autonomy to avoid power shortage. A powerful battery charger allows to set and guarantee additional backup time thanks to several battery packs.

Moreover, the efficient communication systems of this UPS device **allow a 24/7 remote monitoring and surveillance** thus guaranteeing an immediate reaction in case of a problem or fault on the system.



Data centers

Data centres are easily affected by power quality fluctuations. A shortage, even of only a few seconds can have tremendous consequences for a company (data loss, interruption of business...).

INFOSEC recommends the **M5T** range as an optimal answer to power supply-linked problems, allowing operators of data treatment centers to improve the efficiency of their equipment, thus providing the adequate answer to their clients' needs.



M5T's advantages for data centers:
parallel redundancy, top-ranked technologies (IGBT rectifier, AFC control...), remote control...

SERVICES & TECHNICAL SUPPORT

Pre-sales and after-sales services provide an appropriate solution to your needs to ensure the durability, reliability and availability of your UPS.

Technical requirements & pre-installation assistance



A needs pre-qualification questionnaire will help validate the technical choices and options selected for each installation configuration. Our technical sales team can be consulted for the most complex issues.

Installation, testing, commissioning



An INFOSEC engineer or an INFOSEC certified installer will come to your site to install and start-up the UPS. A test report would be then provided.

Technical support hotline



The after-sales service can be contacted quickly by phone and/or email to answer any questions or technical queries.

Replacing the batteries



It is important to ensure the proper operation of the batteries which, after a few years of operation must be changed (between 3 and 5 years depending on the room temperature, number of charge and discharge cycles).

The batteries absolutely must be changed by a professional: only an INFOSEC engineer or approved INFOSEC engineer may intervene on request.



Hotline

+33 (0)2 40 76 15 82

hotline@infosec.fr



■ Technical training

INFOSEC makes technical training available for its partners and customers:

- Training in the use subsequent to on-site commissioning.
- More comprehensive training on all INFOSEC UPS SYSTEM product lines for authorised partners.
- Technical-sales training for sales support and to calculate the size of a UPS according to the facilities to be protected..

TECHNICAL SPECIFICATIONS

MST 10K (WOB)	MST 15K (WOB)	MST 20K (WOB)	MST 30K (WOB)	MST 40K (WOB)	MST 60K S	MST 100K S	MST 120K S	MST 180K S	MST 200K S
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GENERAL CHARACTERISTICS

Technology	On Line Double Conversion									
Power (VA)	10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	100kVA	120kVA	180kVA	200kVA
Power (W)	10kW	15kW	20kW	30kW	40kW	60kW	100kW	120kW	180kW	200kW
Power factor	1									

CARACTERISTIQUES PHYSIQUES

Standard model	Dimensions L x W x H (mm)	627 x 250 x 826			815 x 300 x 1000						
	Net weight (kg)	105	125	125	213	243					
Extended backup time model (S)	Dimensions L x W x H (mm)	627 x 250 x 826			815 x 300 x 1000		815 x 300 x 1000	979 x 600 x 1600			
	Net weight (kg)	41	45	45	78	80	87*	250*	250*	309*	311*

INPUT

Nominal voltage	3 x 400 VAC (3Ph+N)	3 x 380/400/415 VAC (3Ph+N)
Acceptable voltage range	190-520 VAC (3-phase) @ 50% of load 305-478 VAC (3-phase) @ 100% of load	-30% ~ +20%
Frequency range	46~54 Hz or 56~64Hz	40~70 Hz
Phase	Three phase	
Power factor	>=0.99 @ 100% Load	
Harmonic Distortion	-	< 3% @ 100% at full linear load
Dual Input	Included	

OUTPUT

Nominal voltage	3 x 360**/380/400/415 VAC (3Ph+N)		
Voltage regulation (battery mode)	± 1%		
Frequency Range (Synchronized Range)	46~54Hz or 56~64Hz		
Frequency Range (Batt. Mode)	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz		
Admissible crest factor	3:1 (max.)		
Harmonic distortion	<=2 % THD (Linear Load) <=4 % THD (non Linear Load)	3:1 (max.)	<=1 % THD (Linear Load) <=3 % THD (non Linear Load)
Transfer Time	Line mode to Battery mode	0 ms	
	Inverter to Bypass	0 ms	
Output form	Pure Sinewave		
Output connection	Terminal		

EFFICIENCY

AC mode	94%	96%
Eco mode	97%	99%
Battery mode	93,5%	96%

BATTERY

Standard model	Typical Recharge Time	9 hours @ 90% capacity			
	Charging current (max)	12A			
	External backup module	No			
	Backup time	Depending on the connected load			
Extended backup time model (S)	Battery type	Depending on the ackup time requested		Depending on the ackup time requested	
	Battery numbers				
	Charging current (max)	12A	18A	36A	54A
	External backup module	Yes	Yes		

INDICATORS & ALARMS

LCD Screen	5"LCD Touch Screen	7"LCD Touch Screen
Audible alarms	Battery mode, low battery, overload and fault	

BYPASS

Static bypass	Yes
Manual bypass	Yes

MANAGEMENT / COMMUNICATION

Communication via RS-232 / USB port	Support Windows family, Novell, Linux, Mac, FreeBSD
Optional SNMP I Pro	Management system through SNMP software (VMware®, Hyper V™ compatible) and web browser
EPO Connector	Yes
Parallel connector	Yes
Parallel installation	4 6

ENVIRONMENT

Operating Temperature and Humidity	0-95 % RH à 0-40°C (without condensation)				
Noise level	Less than 55dB@ 1 Meter	Less than 60dB@1Meter	Less than 70dB @1Meter	Less than 65dB @1m	Less than 70dB @ 1m

NORMS

Standard	CE RoHS
EMC	EN62040-2:2006+AC:2006
LVD (Safety)	EN62040-1: 2008+A1:2013

SALES INFO

Warranty	1 year								
PN - Standard models	67658	67659	67660	67661	67662	-			
PN - Extended backup time models (S)					67663	67664	67665	67666	67667
PN - Without batteries versions (WOB)	67670	67668	67669	67671	67672				

* Net weight without batteries

**When output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.

S and WOB models are UPS devices dedicated for extended backup time without internal batteries - WOB models are identical than standards models without batteries.

Models from 10 to 20 kVA are configurable in 3/1.

Product specifications are subject to change without further notice.



From 10k to 200 kVA

Communications solutions and remote management

USB & RS232, SNMP & EPO communication ports

Infopower software :

- Simple user interface
- UPS startup and shutdown programming
- Data and events record enabling daily maintenance
- E-mail messaging to manage UPS status at all times via the local network
- Free download from the website

Package content

- MST UPS
- Backup Module (>40kVA models)
- 1 RS 232 cable
- 1 USB cable
- 1 battery cable (≤40kVA)
- Parallel DB15 cable (≥30kVA)
- Parallel share current cable (≥30kVA)
- Cables glands
- User's Manual (EN-FR)

Options

Désignation	Réf
SNMP I Pro Agent	61156
SNMP vm Minislot agent	61142
Dry Contact Card (AS 400) (60k to 200k VA)	61454
Isolation transformer	NC
RS 485 card	61439
Environment Measure Device (EMD)	61452
Additional Backup module	NC
IP 21	NC
HD Box	61820

Warranty

One-year guarantee against manufacturing defects under normal conditions and compliance with precautionary measures.

Warranty to be registered on the website within 10 days of purchase.



Infosec Communication

15, rue du Moulin
44880 Sautron - FRANCE
Contact commercial
Tél : 02 40 76 11 77
sales@infosec.fr

www.infosec-ups.com

