

UPS, STS and AC/DC systems SUPERIOR Power Protection

2020

- 1. Safety
- 2. Availability
- 3. Efficiency



When **energy** matters



EXIT



1. Safety
2. Availability
3. Efficiency

Exit
3b



Superior

UPS - Single-phase



NETYS RT
1100 to 11000 VA
p. 4



NETYS RT-M
1100 to 3300 VA
p. 8

UPS - Three-phase



MASTERYS GP4 RK
10 to 40 kVA/kW
p. 10



MASTERYS GP4
10 to 160 kVA/kW
p. 12



DELPHYS GP
160 to 1000 kVA/kW
p. 14

UPS - Transformer-based



MASTERYS IP+
10 to 80 kVA
p. 16



DELPHYS MX
250 to 900 kVA
p. 18

AC/DC system



SHARYS IP system
60 to 200 A
p. 20

STS - Transfer System



STATYS XS
16 and 32 A
p. 24

Unrivalled power performance



Best-in-class solutions with certified performance, tailored to optimise the usage for a profitable Total Cost of Ownership (TCO).

NETYS RT

Total protection on rack or tower
from 1100 to 11000 VA



High protection and availability

- Online double conversion technology with sinusoidal waveform, completely filters out all disturbances from / to the mains power supply and ensures maximum protection of the utility.
- Permanent regulation of output voltage and frequency.
- Wide tolerance of the input voltage reduces switchovers to battery mode, prolonging battery life.

Simple to install

- No configuration necessary on first startup.
- Space and time saving 'tower-to-rack' conversion mode.
- IEC input and output connections (1100-3300 VA) or terminal input and output connections with built-in magnetothermal input switch (5000-11000 VA).
- Compact footprint (tower mode).
- Compact rack enclosure saving valuable cabinet rack space.

Easy to use

- Clear and uncluttered LCD interface, with buzzers that immediately indicate the operating status of the UPS, even for less specialist users.
- Wide range of communication protocols for integration into LAN networks or Building Management Systems (BMS).
- Load segmentation function to prioritize loads and manage critical situations.
- EPO (Emergency Power Off).
- RS232 advanced connection for the management of power supply and local/remote shutdown of the applications.

Meets practical needs

- Modular battery extension (EBM) to meet all back-up time requirements, even after installation.
- Possibility of 1+1 parallel redundant configuration to maximise the availability of critical utilities, even in the event of a module breakdown (5000-11000 VA).

The solution for

- > Switching
- > Storage
- > Servers and networking devices
- > VoIP communication systems
- > Structured cabling systems
- > Control systems
- > Video surveillance systems

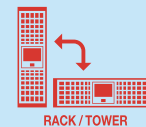
Technology

- > VFI "online double conversion"

Certifications



Advantages



Standard electrical features

- Built-in backfeed protection.
- RJ11 connection for Emergency Power Off (EPO).
- Connection for battery extension modules.
- Port for parallel operation (5000-11000 VA).

Electrical options

- 1+1 parallel module (5000-11000 VA).
- Battery extension modules.
- Manual bypass without interruption (5000-11000 VA).
- Hot-swap manual bypass (1100-3300 VA).
- Portable multiple German standard outlets with cable and IEC 320-C20 plug.

Standard communication features

- 1 slot for communication options.
- RT-VISION: professional WEB/SNMP interface for UPS monitoring and shutdown management of several operating systems (5000-11000 VA).
- USB port for UPS management based on HID protocol.
- MODBUS RTU (RS232).
- LOCAL VIEW software for local UPS monitoring and shutdown for Windows, Linux and MAC Osx.

Communication options

- Dry-contact interface.
- RT-VISION: professional WEB/SNMP interface for UPS monitoring and shutdown management of several operating systems (1100-3300 VA).
- Environmental Monitoring Device (EMD).
- REMOTE VIEW PRO supervision software.

Technical data

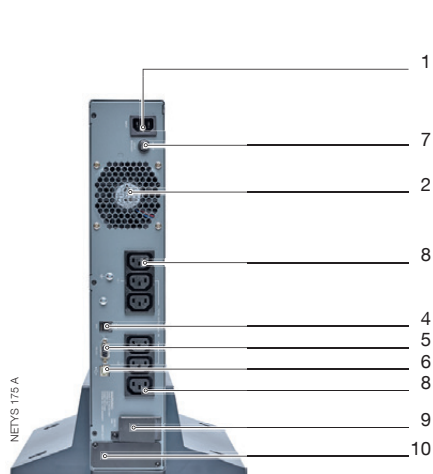
NETYS RT								
Model	NRT2-U1100	NRT2-U1700	NRT2-U2200	NRT2-U3300	NRT2-5000K	NRT2-7000K	NRT2-9000K	NRT2-11000K
Sn	1100 VA	1700 VA	2200 VA	3300 VA	5000 VA	7000 VA	9000 VA	11000 VA
Pn	900 W	1350 W	1800 W	2700 W	4500 W	5400 W	7200 W	9000 W
Architecture	online double conversion VFI with input PFC and automatic bypass							
Parallel redundant function	-	-	-	-	1+1	1+1	1+1	1+1
INPUT								
Voltage	230 V (1ph) 175±280 V; up to 120 V @70% load				230 V (1ph) 181±280 V; up to 100 V @50% load			
Frequency	50/60 Hz +/-10% (Auto-Selectable)							
Power factor / THDi	>0.99 / <5%							
Input socket	IEC 320-C14 (10 A)	IEC 320-C20 (16 A)			terminals			
OUTPUT								
Voltage	230 V (1ph) selectable 200 / 208 / 220 / 240 V - 50 or 60 Hz ± 2% (± 0.05 Hz in battery mode)							
Power factor	0.9 @ 1000 VA	0.9 @ 1500 VA	0.9 @ 2000 VA	0.9 @ 3000 VA	0.9 @ 5000 VA	0.9 @ 6000 VA	0.9 @ 8000 VA	0.9 @ 10000 VA
Efficiency	up to 93% online mode							
Overload capability	up to 105% continuously; 125% x 3 min; 150% x 30 sec				up to 105% continuously; 125% x 5 min; 150% x 30 sec			
Output connections	6 x IEC 320-C13 (10 A)	6 x IEC 320-C13 (10 A) + 1 x IEC 320-C19 (16 A)			terminals			
BATTERY								
Standard autonomy ⁽¹⁾	8	12	8	10	8	6	8	6
Voltage	24 VDC	48 VDC	48 VDC	72 VDC	192 VDC	192 VDC	240 VDC	240 VDC
Recharge time	< 3 hr to recover 90% capacity				< 6 hr to recover 90% capacity			
COMMUNICATION								
Mimic panel	LCD with graphical icons				LCD with menu available in 6 languages			
RS232 MODBUS protocol	•	•	•	•	•	•	•	•
USB HID protocol	•	•	•	•	-	-	-	-
WEB/SNMP (Ethernet RJ45 port)	option	option	option	option	•	•	•	•
COMM slot	•	•	•	•	•	•	•	•
Dry contacts card	option	option	option	option	option	option	option	option
EPO input (RJ11 port)	•	•	•	•	•	•	•	•
Parallel port	-	-	-	-	•	•	•	•
STANDARDS								
Safety	IEC/EN 62040-1, AS 62040.1.1, AS 62040.1.2							
EMC	IEC/EN 62040-2, AS 62040.2							
Performance	IEC/EN 62040-3 (efficiency tested by an external independent body)							
Product declaration ⁽²⁾	CE, RCM (E2376)							
ENVIRONMENT								
Operating ambient temperature	from 0 °C to +40 °C (from 15 °C to 25 °C for best battery life)							
Storage temperature range	from -15 °C to +50 °C (from 15 °C to 25 °C for best battery life)							
Relative Humidity	5-95% non-condensing							
Noise level (ISO 3746)	< 45 dBA	< 50 dBA			< 55 dBA			
UPS CABINET								
UPS size std (W x D x H)	89x332x440 mm	89x430x440 mm	89x430x440 mm	89x608x440 mm	177.5x670x440 mm	177.5x670x440 mm	261x623x440 mm	261x623x440 mm
UPS size RACK	2U	2U	2U	2U	2U+2U	2U+2U	3U+3U	3U+3U
UPS weight std	13 kg	18 kg	19 kg	30 kg	15.5+40 kg	16+40 kg	19.5+66 kg	20+66 kg
IP rating	IP20							
EBM module size (W x D x H)	89x332x440 mm	89x430x440 mm	89x430x440 mm	89x608x440 mm	89x608x440 mm	89 x 608 x 440	131 x 623 x 440 mm	131 x 623 x 440 mm
EBM module RACK	2U	2U	2U	2U	2U	2U	3U	3U
EBM module weight	16 kg	29 kg	29 kg	43 kg	40 kg	40 kg	66 kg	66 kg

(1) @75% of rated load PF 0.7. (2) BIS compliance for 5000 VA model

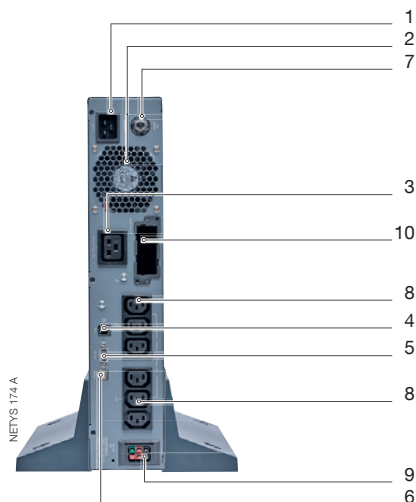
NETYS RT

Single-phase UPS
from 1100 to 11000 VA

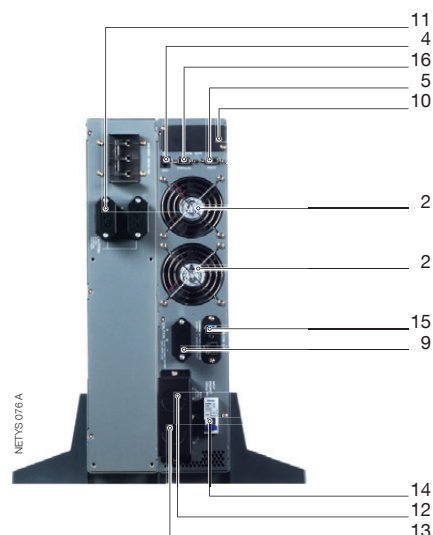
Connections



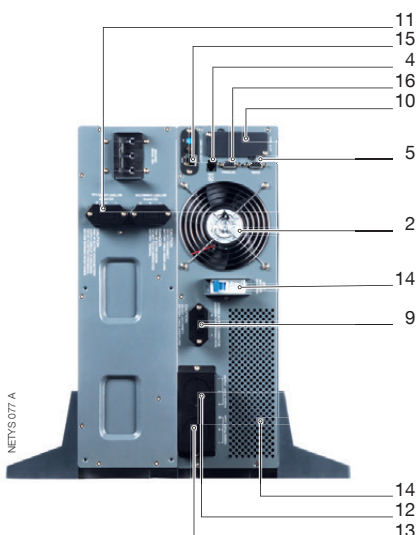
1100 VA



1700 VA - 2200 VA - 3300 VA



5000 VA - 7000 VA + battery



9000 VA - 11000 VA + battery

- | | |
|--------------------------------------|---|
| 1. Mains input socket (IEC 320) | 9. Connector for external battery extension |
| 2. Fan | 10. Slot for optional communication boards |
| 3. Output socket (full power) | 11. Battery extension connector |
| 4. EPO (Emergency Power Off) input | 12. Output terminals |
| 5. RS232 interface (MODBUS protocol) | 13. Input terminals |
| 6. USB port | 14. Input switch |
| 7. Input protection | 15. RJ45 LAN ethernet connector |
| 8. Output sockets (IEC 320 - 10 A) | 16. Parallel port connector |

Electrical options



NETYS 181 A

Model: ENT-OP-IEC-3DIN
Portable multiple
German standard sockets



NETYS 182 A

Model: NRT-OP-MBP
Manual bypass
(5000-11000 VA)



NETYS 183 A

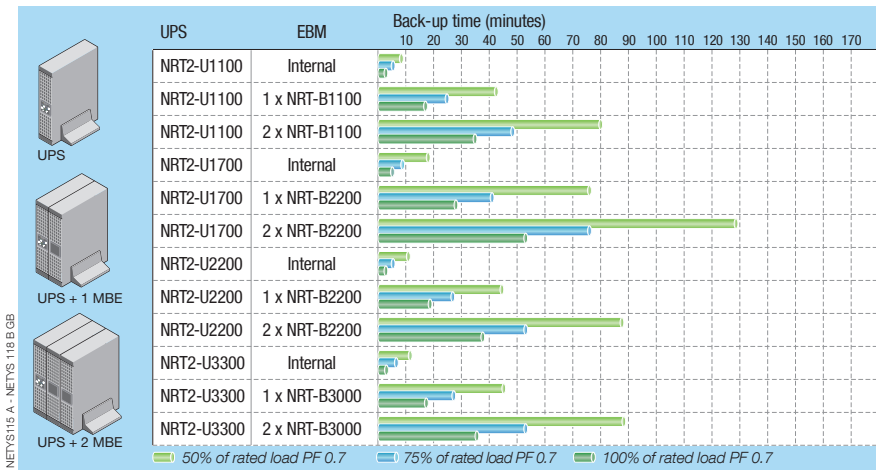
Model: MBP-1U-IEC
Hot-swap manual bypass
(1100-3300 VA)

Converts from Tower to Rack mounted



APPLI 057 - 058 - 059 - 060 - 061 - 062 - 063 - 064 A

NETYS RT 1100-3300 VA - Battery extension



Parallel redundant operation for business continuity

To achieve the highest level of availability and to power critical utilities, NETYS RT UPS modules above 3.3 kVA can be configured for 1:1 redundancy.

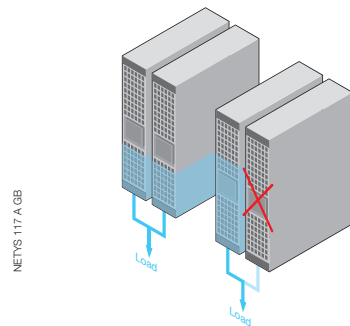
Redundant operation (1+1) means: the system incorporates one more UPS module than is needed to protect the load; in the event of a breakdown, it guarantees sufficient power supply capacity to the load by maintaining online protection.

Parallel technology is based on the principle of load sharing, whereby both units are always kept active.

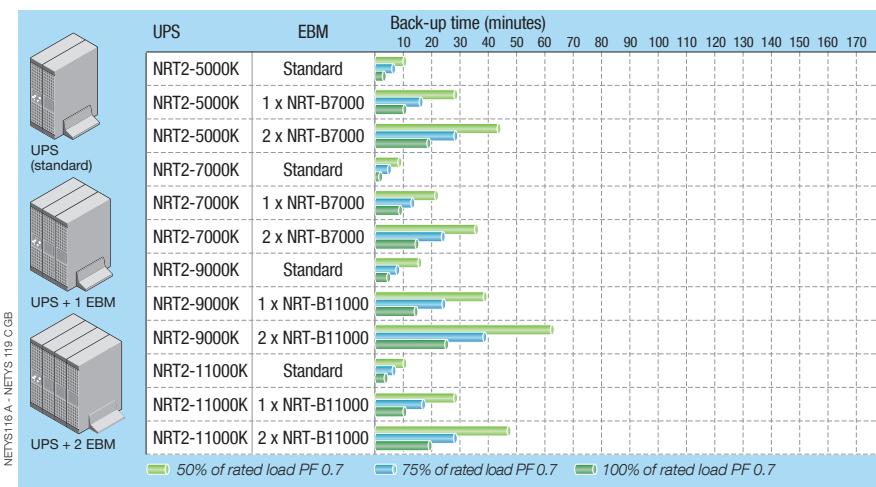
In a redundant configuration, overall system availability is much higher than a conventional UPS system using similar technology.

1+1 redundant configuration does not require additional circuits and can therefore be set up at a later date, simply by using two UPS modules and a collector/manual bypass module which simplifies cabling and maintenance of the UPS installation.

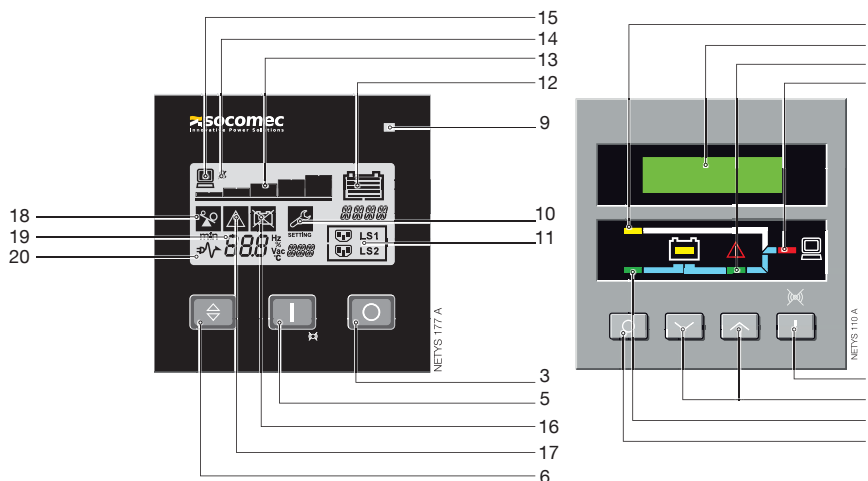
To further streamline the solution, it is also possible to select between operation with separate battery or shared battery, which is extremely useful in the case of applications requiring high levels of autonomy.



NETYS RT 5000-11000 VA - Battery extension



Control panel



1. Yellow LED lit. Operation in bypass mode
2. Green LED lit. Mains healthy
3. OFF button
4. Green LED lit. Normal operation (inverter in-line)
5. ON/TEST and buzzer override button
6. Navigator button
7. Alphanumeric LCD display
8. Green LED lit. Status of the load
9. Load status
10. Configuration
11. Programmable outlets
12. Battery status
13. Load level (5 steps)
14. Buzzer off
15. Load present
16. Battery fault / Replace the battery
17. General alarm
18. Overload
19. Input value
20. Normal mode / Battery mode (flashing)

1100 VA - 1700 VA - 2200 VA - 3300 VA

5000 VA - 7000 VA - 9000 VA - 11000 VA

NETYS RT-M

Solution for marine applications
from 1100 to 3300 VA

Superior



GANME 563

High availability in marine environments

The marine industry calls for reliable equipment which is able to supply applications operating in harsh environments. In such a context, power outages cause extremely serious problems to critical equipment for the navigation system, and communication and engine controls, which leads to costs increasing. In line with the company's commitment to develop innovative solutions to ensure availability, improve energy efficiency and reduce costs, SOCOMEC has introduced NETYS RT-M, high-performance UPS DNV GL standard certified.

Easy to use

- Easy configurable frequency converter operation (50 Hz, 60 Hz).
- No configuration necessary on first startup.
- Wide range of communication protocols (including TCP/IP and SNMP) for integration into LAN networks or building management systems (BMS).

Meets practical needs

- Online double conversion technology with sinusoidal waveform, to completely filter out all disturbances from / to the mains power supply and to ensure maximum protection of the equipment.
- Optional battery extension modules (EBM) to meet wide back-up time requirements, even after installation.
- Clear and uncluttered LCD interface, with buzzers that immediately indicate the operating status of the UPS, even for less specialist users.

The solution for

- > Steering systems
- > Bridge systems
- > Radar systems
- > Control systems
- > Video surveillance systems

Certifications



Standard electrical features

- Built-in backfeed protection.
- Protection against atmospheric phenomena (NTP) for telephone/ADSL modems.
- RJ11 connection for Emergency Power Off (EPO).
- Connection for battery extension modules.

Electrical options

- Battery extension modules.

Standard communication features

- 1 slot for communication options.
- RT-VISION: professional WEB/SNMP interface for UPS monitoring and shutdown management of several operating systems (5000-11000 VA).
- USB port for UPS management based on HID protocol.
- MODBUS RTU (RS232).
- LOCAL VIEW software for local UPS monitoring and shutdown for Windows, Linux and MAC Osx.

Technical data

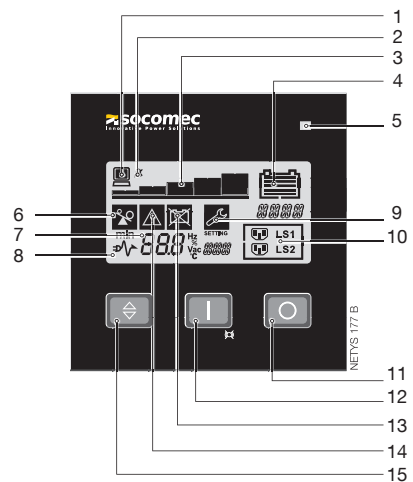
NETYS RT-M				
Model	NRT2-U1100C	NRT2-U1700C	NRT2-U2200C	NRT2-U3300C
Sn	1100 VA	1700 VA	2200 VA	3300 VA
Pn	900 W	1350 W	1800 W	2700 W
Architecture	on-line double conversion VFI with input PFC and automatic bypass			
INPUT				
Rated voltage	230 V (1ph)			
Voltage tolerance	175÷280 V; up to 120 V @70% load			
Rated frequency	50/60 Hz			
Frequency tolerance	± 10% (Auto-Selectable)			
Power factor / THDI	> 0.99 / < 5%			
OUTPUT				
Rated voltage	230 V (1ph)			
Voltage tolerance	selectable 200/208/220/240 V			
Rated frequency	50 or 60 Hz			
Frequency tolerance	± 2% (± 0.05 Hz in battery mode)			
Power factor	0.9 @ 1000 VA	0.9 @ 1500 VA	0.9 @ 2000 VA	0.9 @ 3000 VA
Efficiency	up to 93% online mode			
Overload capability	up to 105% continuously; 125% for 3 min; 150% for 30 s			
Connections	6 x IEC 320-C13 (10 A)	6 x IEC 320-C13 (10 A)	+ 1 x IEC 320-C19 (16 A)	
BATTERY				
Standard autonomy ⁽¹⁾	8 min	12 min	8 min	10 min
Voltage	24 VDC	48 VDC	72 VDC	
Recharge time	< 6 hours to recover 90% capacity			
COMMUNICATION				
Interfaces	RS232 (DB9 port) MODBUS protocol, USB HID protocol			
Ethernet	WEB / SNMP (Ethernet RJ45 port) - option			
COMM slots	1 available as standard			
Dry contacts card	option			
EPO input	RJ11 port			
ENVIRONMENT				
Operating ambient temperature	from 0 °C up to +40 °C (from 15 °C to 25 °C for maximum battery life) Temperature class A according to DNV GL			
Relative humidity	5-95% non-condensing			
Maximum altitude	1000 m without derating (max. 3000 m)			
Noise level (ISO 3746)	< 45 dBA	< 50 dBA		
UPS CABINET				
Dimensions W x D x H	89 x 333 x 440 mm	89 x 430 x 440 mm	89 x 608 x 440 mm	
Dimensions RACK U	2U			
Weight	13 kg	18 kg	19 kg	30 kg
Degree of protection	IP20			
EBM - EXTERNAL BATTERY MODULE				
Dimensions W x D x H	89 x 333 x 440 mm	89 x 430 x 440 mm	89 x 608 x 440 mm	
Dimensions RACK U	2U			
Weight	16 kg	29 kg	43 kg	
STANDARDS				
Safety	IEC/EN 62040-1, AS 62040.1.1, AS 62040.1.2			
EMC	IEC/EN 62040-2, AS 62040.2			
Performance	IEC/EN 62040-3 (efficiency tested by an external independent body)			
Maritime certification	Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2015 and EN 62040-1:2008/A1:2013.			
Product declaration	CE, RCM (E2376)			

(1) @ 75% of rated load PF0.7.

Communication options

- Dry-contact interface.
- RT-VISION: professional WEB/SNMP interface for UPS monitoring and shutdown management of several operating systems (1100-3300 VA).
- Environmental Monitoring Device (EMD).
- REMOTE VIEW PRO supervision software.

Control panel



1. Load present
2. Buzzer off
3. Load level (5 steps)
4. Battery status
5. Load status
6. Overload
7. Input value
8. Normal mode / Battery mode (flashing)
9. Configuration
10. Programmable outlets
11. OFF button
12. ON/TEST and buzzer override button
13. Battery fault / Replace the battery
14. General alarm
15. Navigator button

MASTERYS GP4 RK

Tailored protection for Edge computing
from 10 to 40 kVA/kW



Whilst organisations are outsourcing to colocation and cloud service providers, they are also investing heavily in local Edge computing to meet new and evolving requirements: data security, analytics, maintaining control of mission-critical applications, IoT development programmes and augmented reality experience.

Certified performance

- Full performance up to 40 °C without derating.
- Energy savings - without compromise: 96.5% efficiency in VFI.
- Up to 99% efficiency in "ECO" mode.
- Performance tested and verified by TÜV SÜD.

Embedded digital technology

- IoT-ready device for access to connected services .
- SOLIVE UPS mobile app for remote control and anomaly notification.
- Easy integration in LAN/WAN and virtual environments.
- Safe guided repair procedure.

Engineered for easy integration

- Fits within existing 19" cabinet.
- Lithium battery option.
- Fast recharge - even for very long back-up time.

Front access maintenance

- Easy maintenance - innovative brick swap architecture.
- Power brick replacement without rack disconnection.
- Minimized risk of human error.
- Rapid repairs: 5 time faster than legacy UPS.

The solution for

- > Edge data centres
- > Banks
- > Telecom & media infrastructure

Certifications



The MASTERYS GP4 series is certified by TÜV SÜD with regard to product safety (EN 62040-1).

Advantages

3
LEVEL
TECHNOLOGY

96.5%
EFFICIENCY

PF 1

kW
=
kVA

RoHS
COMPLIANT

Li-Ion

Ready for Li-Ion battery

Designed for availability

> MTBF VFI*: 500,000 hrs

* Officially attested.

Connected services



www.socomec.com/tool

Expert services



www.socomec.com/services

To know more



Learn more about Edge application by watching our videos on YouTube: bit.ly/socomec-youtube

MASTERYS GP4 RK

Three-phase UPS

from 10 to 40 kVA/kW

System features

- Dual input mains.
- Internal maintenance bypass switch.
- Input mains switch breaker.
- Output switch breaker.
- Auxiliary mains switch breaker.
- Backfeed protection: detection circuit.
- Power walk-in ramp for full compatibility with generators.

Standard communication features

- 3.5" multilanguage graphic display.
- 2 slots for communication options.
- USB port for downloading UPS report and log file.
- Ethernet port for service purposes.

System options

- 3-phase input without neutral.
- Internal backfeed isolation device.
- Common mains coupling bars.
- TN-C grounding system.
- ACS synchronisation system.

Communication options

- Dry-contact interface (configurable voltage-free contacts).
- MODBUS RTU RS485 or TCP.
- PROFIBUS / PROFINET gateway.
- BACnet/IP interface.
- NET VISION: professional WEB/SNMP Ethernet interface for secure UPS monitoring and remote automatic shutdown.
- REMOTE VIEW PRO supervision software
- IoT gateway for Socomec cloud services and SOLIVE UPS mobile app.
- Remote touch-screen panel.

Technical data

MASTERYS GP4 RK					
Sn [kVA]	10	15	20	30	40
Pn [kW]	10	15	20	30	40
Input / output 3/1	•	•	•	-	-
Input / output 3/3	•	•	•	•	•
Parallel configuration	up to 6 units				
INPUT					
Rated voltage	400 V 3ph+N				
Voltage tolerance	240 V to 480 V				
Rated frequency	50/60 Hz ± 10%				
OUTPUT					
Power factor	1 (according to IEC / EN 62040-3)				
Rated voltage	1ph + N: 230 V (can be configured 220/240 V) 3ph + N: 400 V (can be configured 380/415 V)				
Rated frequency	50/60 Hz				
EFFICIENCY (TÜV SÜD VERIFIED)					
Double conversion VFI mode	up to 96.5%				
Eco Mode	up to 99%				
BATTERY					
Technologies	VRLA, NiCd, Li-Ion Battery				
Battery type	normal life - long life				
Configuration	external separated or shared				
RELIABILITY (MTBF)					
MTBF (VFI)	> 500,000 hrs (attested)				
MTBF (UPS)	> 12,000,000 hrs (attested)				
ENVIRONMENT					
Operating ambient temperature	full performance up to +40 °C (without specific conditions)				
UPS CABINET					
19" rack height	7U				
Dimensions W x D x H (mm)	442 x 820 x 305				
Weight	79 kg max ⁽¹⁾				
Display	3.5"				
Backup battery	external batteries				
Battery type	normal life - long life				
Degree of protection	IP20				
Colours	RAL 7016				
ADVANCED SERVICE PERFORMANCE					
Life extension	service programme to avoid end of life				
Quick repair	5 times less MTTR than legacy UPS by removable front access parts				
STANDARDS					
Safety	IEC/EN 62040-1, AS 62040.1.1, AS 62040.1.2				
EMC	IEC/EN 62040-2, AS 62040.2				
Performance	IEC/EN 62040-3, AS 62040.3				
Environmental	full compliance with the RoHS EU directive				
Seismic compliance	on demand, in accordance with the Uniform Building Code UBC-1997 Zone 4				
Product declaration	CE, RCM (E2376)				

(1) According to the model.

Remote monitoring and cloud services

- LINK-UPS: Socomec 24/7 remote monitoring service connecting your installation to the nearest Socomec Service Centre.
- SOLIVE UPS: mobile app enabling the monitoring of the UPS systems from a smartphone.

MASTERYS GP4

Superior reliability and performance
from 10 to 160 kVA/kW

Superior



Superior design and reliability

- Oversized design margin: reliability first.
- Certified seismic resistance.
- Superior and officially attested MTBF.
- Long product life expectancy.

Unrivalled serviceability

- Innovative maintenance thanks to brick architecture.
- Rapid repairs: 5 times faster than legacy UPS.
- Totally front access maintenance.

Embedded digital technology

- IoT ready device for access to connected services.
- eWIRE mobile app for AR guided installation and reporting.
- SOLIVE UPS mobile app for remote control and anomaly notification.
- Easy integration in LAN/WAN and virtual environments.

Certified performance

- Full performance up to 40 °C without derating and without specific conditions.
- Energy savings - without compromise: 96.5% efficiency in VFI.
- Up to 99% efficiency in "ECO" mode.
- Performance tested and verified by TÜV SÜD.

User and environmentally friendly

- Ergonomics designed to simplify usage.
- Ready for upcoming eco-regulations.
- RoHS compliant.
- Halogen-free cables.
- 25+ languages available on the mimic panel.

Extended and flexible back-up time

- High density internal battery engineering reduces footprint significantly.
- Internal battery up to 80 kW included.
- Fast recharge - even for very long back-up time.
- Li-Ion battery technology-ready.

The solution for

- > Small & medium-sized data centres
- > Banks
- > Medical facilities
- > Medical devices
- > Telecom & media infrastructure
- > Transport
- > Control rooms

Certifications



The MASTERYS GP4 series is certified by TÜV SÜD with regard to product safety (EN 62040-1).



Seismic resistant
The MASTERYS GP4 units have successfully passed severe tests to verify their resistance to withstand Zone 4 seismic events.

Advantages



Ready for Li-Ion battery

Designed for availability

- > MTBF VFI*: 350,000 hrs

* Officially attested.

e-WIRE



QR CODE 219 A GB

MASTERYS GP4

Three-phase UPS

from 10 to 160 kVA/kW

System features

- Dual input mains.
- Internal maintenance bypass switch.
- Input mains switch breaker.
- Output switch breaker.
- Auxiliary mains switch breaker.
- Backfeed protection: detection circuit.
- Power walk-in ramp for full compatibility with generators.
- Normal and long-life battery.
- Common or shared battery for N+1 configuration.

Standard communication features

- User-friendly 7" touch screen with multilingual colour graphic display (60-160 kVA/kW).
- 2 slots for communication options.
- USB port for downloading UPS report and log file.
- Ethernet port for service purposes.

System options

- 3-phase input without neutral.
- Internal backfeed isolation device.
- Common mains coupling bars.
- TN-C grounding system.
- ACS synchronization system.
- IP21 degree of protection.
- Top cabling kit.
- Top ventilation kit.
- Redundant bypass fan.
- Seismic bracing kit.

Technical data

MASTERYS GP4										
Sn [kVA]	10	15	20	30	40	60	80	100	120	160
Pn [kW]	10	15	20	30	40	60	80	100	120	160
Input / output 3/1	•	•	•	-	-	-	-	-	-	-
Input / output 3/3	•	•	•	•	•	•	•	•	•	•
Parallel configuration	up to 6 units									
INPUT										
Rated voltage	400 V 3ph+N (3 wire input also available on demand)									
Voltage tolerance	240 V to 480 V									
Rated frequency	50/60 Hz ± 10%									
OUTPUT										
Power factor	1 (according to IEC / EN 62040-3)									
Rated voltage	1ph + N: 230 V (can be configured 220/240 V) 3ph + N: 400 V (can be configured 380/415 V)									
Rated frequency	50/60 Hz									
EFFICIENCY (TÜV SÜD VERIFIED)										
Double conversion VFI mode	up to 96.5%									
Eco Mode	up to 99%									
BATTERIES										
Technologies	VRLA, NiCd, Li-Ion Battery									
Battery configuration	separated or shared									
	internal - external						external			
INTERNAL BACK-UP TIME (MINUTES) ⁽¹⁾										
Type S4	33	19	13	8	5					
Type M4	101	62	43	25	18					
Type T6						11	8			
RELIABILITY (MTBF)										
MTBF (VFI)	> 350,000 hrs (attested)									
MTBF (UPS)	> 10,000,000 hrs (attested)									
ENVIRONMENT										
Operating ambient temperature	full performance up to +40 °C (without specific conditions)									
UPS CABINET										
Type S4 - Dimensions W x D x H (mm)	444 x 800 x 800									
Type M4 - Dimensions W x D x H (mm)	444 x 800 x 1400									
Type M6 - Dimensions W x D x H (mm)						600 x 855 x 1400				
Type T6 - Dimensions W x D x H (mm)						600 x 910 x 1930		600 x 855 x 1930		
Weight	depends on the number of batteries installed - contact us									
Display	3.5" (7" touch option)					7" touch				
Degree of protection	IP20 (IP21 on demand)									
Colours	RAL 7016									
ADVANCED SERVICE PERFORMANCE										
Life extension	service programme to avoid end of life									
Quick repair	5 times less MTTR than legacy UPS by removable front access parts									
STANDARDS										
Safety	IEC/EN 62040-1									
EMC	IEC/EN 62040-2									
Performance	EN 62040-3									
Environmental	full compliance with the RoHS EU directive									
Seismic compliance	on demand, in accordance with the Uniform Building Code UBC-1997 Zone 4									
Product declaration	CE, EAC									

(1) Max BUT @ 80% of the load.

Communication options

- Dry-contact interface (configurable voltage-free contacts).
- MODBUS RTU RS485 or TCP.
- PROFIBUS / PROFINET gateway.
- BACnet/IP interface.
- NET VISION: professional WEB/ SNMP Ethernet interface for secure UPS monitoring and remote automatic shutdown.
- REMOTE VIEW PRO supervision software.
- IoT gateway for Socomec cloud services and SOLIVE UPS mobile app.
- Remote touch-screen panel.
- User-friendly 7" touch screen with multilingual colour graphic display (10-40 kVA/kW).

Remote monitoring and cloud services

- LINK-UPS: Socomec 24/7 remote monitoring service connecting your installation to the nearest Socomec Service Centre.
- SOLIVE UPS: mobile app enabling the monitoring of the UPS systems from a smartphone.

Connected services



www.socomec.com/tool

Expert services



www.socomec.com/services

DELPHYS GP

High-efficiency protection without compromise
from 160 to 1000 kVA/kW

Superior



GAAMME 738.PSD

Energy saving + Full rated power = reduced TCO

Energy saving: high efficiency without compromise

- Offers the highest efficiency in the market using VFI – Double Conversion Mode, the only UPS working-mode that assures total load protection against all mains quality problems.
- Ultra high efficiency output independently tested and verified by an international certification organization in a wide range of load and voltage operating condition.
- Ultra high efficiency in VFI mode is provided by an innovative topology (3-Level technology) that has been developed for all the Green Power 2.0 UPS ranges.

Full rated power: kW=kVA

- No power downgrading when supplying the latest generation of servers (leading or unity power factor).
- Real full power, according to IEC 62040: kW=kVA (unity power factor design) means 25% more active power available compared to legacy UPS.
- Suitable also for leading power factor loads down to 0.9 without apparent power derating.

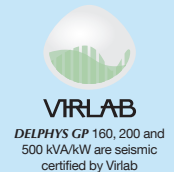
Significant cost-saving (TCO)

- Maximum energy saving thanks to 96% efficiency in true double conversion mode: 50% saving on energy losses compared to legacy UPS gives significant savings in energy bill.
- Up to 99% efficiency with FAST ECOMODE.
- UPS "self-paying" with energy saving.
- Energy Saver mode for global efficiency improvement on parallel systems.
- kW=kVA means maximum power available with the same UPS rating: no overdesign cost and therefore less €/kW.
- Upstream infrastructure cost optimization (sources and distribution), thanks to high performance IGBT rectifier.
- Extended battery life and performance:
 - long life battery,
 - very wide input voltage and frequency acceptance, without battery use.
- EBS (Expert Battery System) charging management improves battery service life.
- BCR (Battery Capacity Re-injection) removes the constraints of using an additional load bank for the battery discharge test: it consists in re-injecting the energy stored in the batteries to other applications.

The solution for

- > Data centres
- > Telecommunications
- > Healthcare sector
- > Service sector
- > Infrastructure
- > Industrial applications

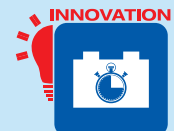
Attestations and certifications



Advantages



Ready for Li-Ion battery



Battery Capacity Re-injection

Our dedicated Expert Services for UPS

We offer services to ensure your UPS highest availability:

- > Commissioning
- > On-site intervention
- > Preventive maintenance visits
- > 24-hour call out and rapid on-site repairs
- > Maintenance packages
- > Training



www.socomec.com/services

Parallel systems

To fulfil the most demanding needs for power supply availability, flexibility and the installation to be upgraded.

- Modular parallel configurations up to 4 MW, development without constraint.
- Distributed or centralized bypass flexibility to ensure a perfect compatibility with the electrical infrastructure.
- Twin channel architecture with Static Transfer Systems.
- Distributed or shared battery for energy storage optimization on parallel systems.

Standard electrical features

- Integrated maintenance bypass for single unit (and 1+1 system).
- Backfeed protection: detection circuit.
- EBS (Expert Battery System) for battery management.
- Redundant cooling.
- Battery temperature sensor.

Electrical options

- Separated or common input mains.
- External maintenance bypass.
- Extended battery charger capability.
- Shared battery.
- Compatible with different battery technologies (e.g. Li-Ion, Ni-Cd...).
- Galvanic isolation transformer.
- Backfeed isolation device.
- ACS synchronisation system.
- BCR (Battery Capacity Re-injection).
- FAST ECOMODE.

Technical data

DELPHYS GP										
Sn [kVA]	160	200	250	300	400	500	600	800	1000	
Pn [kW]	160	200	250	300	400	500	600	800	1000	
Input/output	3/3									
Parallel configuration	up to 4 MW									
INPUT										
Rated voltage	400 V 3ph									
Voltage tolerance	200 V to 480 V ⁽¹⁾									
Rated frequency	50/60 Hz									
Frequency tolerance	± 10 Hz									
Power factor / THDI	> 0.99 / < 2.5% ⁽³⁾									
OUTPUT										
Power factor	1 (according to IEC/EN 62040-3)									
Rated voltage	3ph + N 400 V									
Voltage tolerance static load	± 1 % dynamic load in accordance with VFI-SS-111									
Rated frequency	50/60 Hz									
Frequency tolerance	± 2% (configurable for GenSet compatibility)									
Total output voltage distortion linear load	ThdU < 1.5%									
Total output voltage distortion non-linear load (IEC 62043-3)	ThdU < 3%									
Short-circuit current ⁽²⁾	up to 3.4 x In									
BYPASS										
Rated voltage	rated output voltage									
Voltage tolerance	± 15% (configurable from 10% to 20%)									
Rated frequency	50/60 Hz									
Frequency tolerance	± 2% (configurable for GenSet compatibility)									
EFFICIENCY										
Online mode @ 40% of load	up to 96%									
Online mode @ 75% of load	up to 96%									
Online mode @ 100% of load	up to 96%									
Fast EcoMode	up to 99%									
ENVIRONMENT										
Operating ambient temperature	from 0 °C up to +40 ⁽¹⁾ °C (from 15 °C to 25 °C for maximum battery life)									
Relative humidity	0% - 95% without condensation									
Maximum altitude	1000 m without derating (max. 3000 m)									
Acoustic level at 1 m (ISO 3746)	< 65 dBA	< 67 dBA	< 70 dBA	< 72 dBA	< 74 dBA					
UPS CABINET										
Dimensions	W	700 mm	1000 mm	1400 mm	1600 mm	2800 mm	3510 mm	3910 mm		
	D	800 mm	950 mm	800 mm	950 mm	950 mm				
	H	1930 mm					2060 mm			
Weight	470 kg	490 kg	850 kg	900 kg	1000 kg	1500 kg	2300 kg	2800 kg	3850 kg	
Degree of protection	IP20 (other IP as option)									
Colours	cabinet: RAL 7012, door: silver grey									
STANDARDS										
Safety	IEC/EN 62040-1, AS 62040.1.1, AS 62040.1.2									
EMC	IEC/EN 62040-2, AS 62040.2									
Performance	IEC/EN 62040-3, AS 62040.3									
Seismic compliance ⁽⁴⁾	Uniform Building Code UBC-1997, EN 60068-3-3/1993 (seismic), EN 60068-2-6/2008 (sinusoidal), EN 60068-2-47/2005 (mounting).									
Product declaration	CE, RCM (E2376)									

(1) Conditions apply. (2) Worst condition (Auxiliary Mains not available). (3) With input THDV < 1%. (4) 160, 200 and 500 kVA/kW models.

Standard communication features

- User-friendly 7" touch-screen multilingual colour graphic display.
- 2 slots for communication options.
- USB port to download UPS report and log file.
- Ethernet port for service purpose.

Communication options

- Dry-contact interface (configurable voltage-free contacts).
- MODBUS RTU RS485 or MODBUS TCP.
- PROFIBUS / PROFINET gateway.
- BACnet/IP interface.
- NET VISION: professional WEB/SNMP Ethernet interface for secure UPS monitoring and remote automatic shutdown.
- REMOTE VIEW PRO supervision software.
- IoT gateway for Socomec cloud services and SOLIVE UPS mobile app.
- Remote touch-screen panel.
- Additional Com-slot extension.

Remote monitoring and cloud services

- LINK-UPS: Socomec 24/7 remote monitoring service connecting your installation to the nearest Socomec Service Centre.
- SOLIVE UPS: mobile app enabling the monitoring of the UPS systems from a smartphone.

MASTERYS IP+

Protection endurente, à haute fiabilité pour les environnements contraignants

de 10 à 80 kVA



Conçu pour les applications les plus contraignantes

- Conçu pour protéger les process industriels.
- Solution compacte qui intègre transformateur d'isolement et batteries.
- Armoire robuste (parois en acier de 2 mm d'épaisseur).
- Ancrage au sol (pour éviter le basculement).
- Indice de protection élevé (IP31).
- Enveloppe résistante à l'eau et aux projections (IP52) avec filtres à poussière facilement remplaçables (en option).
- Plage de température étendue jusqu'à 50 °C.
- Grande tolérance en entrée de -40 % à +20 % de la tension nominale.
- Immunité électromagnétique deux fois supérieure à la norme internationale CEI 62040-2 relative aux alimentations sans interruption.
- Double protection contre les surtensions.

Continuité du process

- Accès frontal pour le câblage d'entrée/sortie, le remplacement de pièces et la maintenance préventive.
- Extensible en puissance et en disponibilité (redondance) grâce à la possibilité de connecter jusqu'à 6 unités en parallèle.

Facilement intégrable dans les réseaux industriels

- Facteur de puissance en entrée > 0,99 et taux de distorsion harmonique du courant d'entrée (THDi) < 3 % grâce à l'emploi d'un redresseur à IGBT.
- Compatible avec des batteries au plomb ouvert, au plomb-acide à régulation par soupape (VRLA) et au nickel-cadmium.
- Interface multilingue intuitive avec affichage graphique.
- Cartes de communication flexibles pour tous types de communication industrielle : contacts secs, MODBUS, PROFIBUS, etc.
- Compatibilité totale avec une alimentation par groupe électrogène.
- Transformateur d'isolement galvanique intégré.
- Adaptation aux tensions industrielles types (entrée et sortie).

La solution pour

- > Process industriels
- > Services
- > Médical

Certifications



La gamme MASTERYS IP+ est certifiée par TUV SUD concernant la sécurité du produit (norme EN 62040-1).

Avantages



Nos Services experts dédiés aux ASI

Nos services garantissent le plus haut niveau de disponibilité à vos ASI :

- > Mise en service
- > Intervention sur site
- > Maintenance préventive
- > Intervention 24h/24 et réparations rapides sur site
- > Packs de maintenance
- > Formation



www.socomec.com/services

Pour les charges industrielles

- 100 % de charges non-linéaires.
- 100 % de charges déséquilibrées.
- 100 % de charges « 6 puls » (variateurs de vitesse, matériel de soudage, alimentations...).
- Moteurs, lampes, charges capacitives.

Fonctions standard

- Double réseau d'alimentation.
- By-pass de maintenance interne.
- Protection backfeed: circuit de détection.
- EBS (Expert Battery System) pour la gestion des batteries.

ASI et batteries

UPS	IN/OUT kVA	Back-up time (minutes) ⁽¹⁾																	
		2.5	5	7.5	10	12.5	15	17.5	20	22.5									
IP+ 110	3/1	10																	
IP+ 310	3/3	10																	
IP+ 115	3/1	15																	
IP+ 315	3/3	15																	
IP+ 120	3/1	20																	
IP+ 320	3/3	20																	
IP+ 130	3/1	30																	
IP+ 330	3/3	30																	
IP+ 140	3/1	40																	
IP+ 340	3/3	40																	
IP+ 160	3/1	60																	
IP+ 360	3/3	60																	
IP+ 380	3/3	80																	

External battery cabinet

(1) Max BUT @ 70% load

Caractéristiques techniques

MASTERYS IP+ 10-80							
Sn [kVA]	10	15	20	30	40	60	80
Pn [kW] - 3/1	9	13,5	18	27	32	48	-
Pn [kW] - 3/3	9	13,5	18	27	36	48	64
Configuration parallèle ⁽¹⁾	jusqu'à 6 unités						
ENTRÉE							
Tension nominale	400 V						
Tolérance de tension	±20 % ⁽²⁾ (jusqu'à -40 % à 50 % de la puissance nominale)						
Fréquence nominale	50/60 Hz						
Tolérance de fréquence	± 10 %						
Facteur de puissance / THDI ⁽³⁾	0,99 / < 3 %						
SORTIE							
Tension nominale	Monophasé + N : 230 V (configurable 220/240 V) Triphasé + N : 400 V (380/415 V configurable)						
Tolérance de tension	± 1 %						
Fréquence nominale	50/60 Hz						
Tolérance de fréquence	± 2 % (configurable de 1 % à 8 % avec groupe électrogène)						
Distorsion totale de tension en sortie – charge linéaire	< 1 %						
Distorsion de la tension de sortie – charge non linéaire	< 5 %						
Surcharge	125 % pour 10 minutes, 150 % pour 1 minute ⁽²⁾						
Facteur de crête	3:1 (conforme à la norme CEI 62040-3)						
BY-PASS							
Tension nominale	Monophasé + N : 230 V, triphasé + N : 400 V						
Tolérance de tension	± 15 % (configurable de 10 % à 20 % avec groupe électrogène)						
Fréquence nominale	50/60 Hz						
Tolérance de fréquence	± 2 % (configurable de 1 % à 8 % avec groupe électrogène)						
ENVIRONNEMENT							
Température de fonctionnement	de 0 °C à +50 °C ⁽²⁾ (de 15 °C à 25 °C pour une durée de vie maximale des batteries)						
Humidité relative	0 % - 95 % sans condensation						
Altitude maximale	1000 m sans déclassement (max. 3000 m)						
Niveau acoustique à 1 m (ISO 3746)	< 52 dBA	< 55 dBA	< 55 dBA	< 55 dBA	< 55 dBA	< 65 dBA	< 65 dBA
ARMOIRE ASI							
Dimensions (3/1) L x P x H	600 x 800 x 1400 mm			1000 x 835 x 1400 mm		-	
Dimensions (3/3) L x P x H	600 x 800 x 1400 mm			1000 x 835 x 1400 mm		-	
Masse (3/1)	230 kg	250 kg	270 kg	330 kg	490 kg	540 kg	-
Masse (3/3)	230 kg	250 kg	270 kg	320 kg	370 kg	500 kg	550 kg
Indice de protection (selon CEI 60529)	IP31 et IP52			IP31			
Couleur	RAL 7012						
NORMES							
Sécurité	CEI/EN 62040-1, AS 62040.1.1, AS 62040.1.2						
CEM	CEI/EN 62040-2, AS 62040.2						
Performances	CEI/EN 62040-3, AS 62040.3						
Certification produit	CE, RCM (E2376)						

(1) avec un transformateur côté entrée/bypass. (2) Selon les conditions.
(3) pour un THDV source < 2 % et charge nominale.

Fonctions optionnelles

- Batteries à longue durée de vie.
- Armoire de batteries externes (indice de protection jusqu'à IP32).
- Sonde de température externe.
- Chargeur batterie supplémentaire.
- Transformateur additionnel.
- Kit de fonctionnement en parallèle.
- Démarrage en l'absence du réseau (cold start).
- Système de synchronisation ACS.
- Kit de création du neutre pour réseaux sans neutre.
- Cartes électroniques tropicalisées et traitées contre la corrosion.

Communication

- Écran graphique avec affichage multilingue.
- MODBUS RTU.
- Interface contacts secs configurables.
- Interface Ethernet pour la surveillance des ASI via pages Web.

Options de communication

- 2 slots pour options de communication.
- MODBUS RTU RS485 ou MODBUS TCP.
- Passerelle PROFIBUS / PROFINET.
- Interface BACnet/IP.
- NET VISION : interface professionnelle WEB/SNMP pour une gestion sécurisée des ASI et l'arrêt automatique (shutdown) à distance.
- Logiciel de supervision REMOTE VIEW PRO
- Passerelle IoT pour services cloud Socomec et appli mobile SOLIVE UPS.

Télesurveillance et services cloud

- LINK-UPS : Service de téléassistance Socomec 24h/24 et 7j/7 connectant votre installation au centre technique Socomec local.
- SOLIVE UPS : appli mobile permettant la surveillance des systèmes ASI depuis un smartphone.

DELPHYS MX

Flexible transformer-based solution for resilient architectures
from 250 to 900 kVA

Superior



Optimum load protection

- Permanent operation in VFI mode (online double conversion).
- The inverter isolation transformer provides galvanic separation both between the DC current and the load and between the two sources.
- Output voltage precision under all load conditions.
- High overload capacity to withstand abnormal load conditions.
- Easy maintainability reduces MTTR thanks to pull-out sub-assemblies and front access to all components.
- Fault-tolerant architecture with built-in redundant components.

Flexible and easily upgradable

- Robust and reliable paralleling mode.
- Distributed or centralised bypass ensures perfect compatibility with any electrical infrastructure.
- Hot-plug capability simplifies extension or redundancy while keeping high quality power.
- The transformer based topology is adapted to all kinds of electrical installations.

Minimised Total Cost of Ownership

- High efficiency in VFI mode, including the transformer.
- High power density: its small footprint saves space on your premises.
- The high and constant input power factor helps limit the dimensions of your upstream network infrastructure.
- Mains connection of the rectifier requires only 3 cables (no neutral).
- High short-circuit capacity simplifies downstream protective devices.

The solution for

- > Industry
- > Processes
- > Infrastructure
- > IT applications
- > Healthcare

Attestations and certifications



Advantages



Our dedicated Expert Services for UPS

We offer services to ensure your UPS highest availability:

- > Commissioning
- > On-site intervention
- > Preventive maintenance visits
- > 24-hour call out and rapid on-site repairs
- > Maintenance packages
- > Training



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Standard communication features

- Dry-contact interface (configurable voltage-free contacts)
- 3 slots for communication options

Parallel systems

- Distributed or centralized bypass for parallel architecture up to 6 units.
- Redundant systems ("1+1" and "n+1").
- "2n" architecture with Static Transfer Systems.

Standard electrical features

- Slots for 3 communication cards.
- Backfeed protection: detection circuit.
- Standard interface:
 - 3 inputs (emergency stop, generating set, battery protection),
 - 4 outputs (general alarm, back-up, bypass, preventative maintenance needs).

Electrical options

- EBS (Expert Battery System)⁽²⁾.
- ACS synchronisation system for 2n architecture.
- Redundant electronic power supplies.
- Hot plug option (increase the power keeping the load supplied in double conversion).

Mechanical options

- Reinforced IP protection up to IP52.
- Dust filters.
- Fan redundancy with failure detection.
- Top entry connection.

Communication options

- User-friendly touch-screen multilingual color graphic display.
- Dry-contact interface (configurable voltage-free contacts).
- MODBUS RTU RS485 or MODBUS TCP.
- PROFIBUS / PROFINET gateway.
- BACnet/IP interface.
- NET VISION: professional WEB/SNMP Ethernet interface for secure UPS monitoring and remote automatic shutdown.
- REMOTE VIEW PRO supervision software
- IoT gateway for Socomec cloud services and SOLIVE UPS mobile app.
- Additional Com-slot extension.

Technical data

DELPHYS MX						
Sn [kVA]	250	300	400	500	800	900
Pn [kW] ⁽¹⁾	225	270	360	450	720	810
Input/output	3/3					
Parallel configuration	up to 6 units					
INPUT						
Rated voltage ⁽²⁾	380 V - 400 V - 415 V					
Voltage tolerance	340 to 460 V			360 to 460 V		
Rated frequency	50/60 Hz					
Frequency tolerance	± 5 Hz					
Power factor / THDI	0.93 / < 4.5%			0.94 / < 5%		
OUTPUT						
Rated voltage	380 V - 400 V - 415 V					
Voltage tolerance	< 1 % (static load), ± 2 % in 5 ms (dynamic load conditions from 0 to 100 %)					
Rated frequency	50/60 Hz					
Frequency tolerance	± 0.2%					
Total output voltage distortion - linear load	ThdU < 2%					
Total output voltage distortion - non-linear load (IEC 62043-3)	ThdU < 3.2 %		ThdU < 2.5%			
Short-circuit current	Up to 4,4 In					
Overload	150% for 1 minute, 125% for 10 minutes					
Crest factor	3:1					
Admissible power factor without derating	inductive up to 0.9 leading					
BYPASS						
Rated voltage	380 V - 400 V - 415 V					
Voltage tolerance	± 10%					
Rated frequency	50/60 Hz					
Frequency tolerance	± 2% (configurable for GenSet compatibility)					
EFFICIENCY						
Online mode	up to 93.5%					
Eco Mode	98%					
ENVIRONMENT						
Operating ambient temperature	from 0 °C up to +35 °C (from 15 °C to 25 °C for maximum battery life)					
Relative humidity	0% - 95 % without condensation					
Maximum altitude	1000 m without derating (max. 3000 m)					
Acoustic level at 1 m (ISO 3746) ⁽³⁾	≤ 70 dBA		≤ 72 dBA		≤ 75 dBA	
UPS CABINET						
Dimensions W x D x H	1600 x 995 x 1930 mm			3200 x 995 x 2210 mm		
Weight	2500 kg	2800 kg	3300 kg	5900 kg		
Degree of protection	IP20					
Colours	RAL 9006					
STANDARDS						
Safety	IEC/EN 62041-1, AS 62040.1.1, AS 62040.1.2					
EMC	IEC/EN 62040-2, AS 62040.2					
Performance	IEC/EN 62040-3, AS 62040.3					
Product declaration	CE, RCM (E2376)					

(1) Conditions apply. (2) DELPHYS MX 250-500: others on demand. (3) As per power range.

Remote monitoring and cloud services

- LINK-UPS: Socomec 24/7 remote monitoring service connecting your installation to the nearest Socomec Service Centre.
- SOLIVE UPS: mobile app enabling the monitoring of the UPS systems from a smartphone.

SHARYS IP

Rugged, reliable DC power solution

24/48/108/120 V from 15 to 200 A



The solution for

- > Process industry
- > Switchgear tripping
- > Signalling
- > Alarms systems
- > Automatism (PLC, relays, etc)

Certifications



All SHARYS IP (SH-IP) series rectifiers are certified by TUV SUD with regard to product safety (EN 61204-7 and EN 60950-1).

The SHARYS IP series have been designed with the objective of reliable DC supply. Ideally suited for industrial applications, SHARYS IP combines telecom features like modularity, hot swap module replacements, redundancy N+1 and scalability along with a robustly designed frame creating an innovative mix.

Flexible design and a wide range of customization possibilities complete the package and enable the use of SHARYS IP in a wide range of situations.

Upgradeability

- Expandable according to future requirements by adding additional rectifier modules.

Reliability and robustness

- Robust steel frame.
- Degree of protection IP30⁽¹⁾.
- PCB tropicalisation as standard.
- Microprocessor control.
- Intelligent rectifier cooling.
- Battery safe thanks to the end of discharge protection (option).
- Limited thermal stress and longer life of the components.

Total Costs of Ownership (TCO)

- High efficiency up to 93%: low energy consumption, low heat dissipation.
- Sinusoidal current absorption with power factor close to one: low conductor heat dissipation and no plant oversize.
- Easy to install.
- Reduced maintenance costs.
- Process continuity with hot-swap capabilities (replacement of modules without any power interruption).

Easy, user-friendly operation

- Front mimic panel with clear working status indication.
- Digital control and monitoring of the rectifier modules.
- Adapted to be used with different types of battery technologies.
- Wide choice of communication interfaces: Dry contact, MODBUS RTU, SNMP (with NET VISION option).

⁽¹⁾ Contact us for power extension or customization needs

Technical data

SHARYS IP - Rectifier Module						
Model	24 V 50 A	48 V 15 A	48 V 30 A	48 V 50 A	108 V 20 A	120 V 20 A
INPUT						
Rated voltage	230 V 1ph + N					
Voltage tolerance	±20% @ 100% I _n up to -50% @ 40% I _n					
Frequency	47.5 ... 63 Hz					
Power factor	≥ 0.99	≥ 0.98	≥ 0.99	≥ 0.99	≥ 0.99	≥ 0.99
Absorbed current distortion	complies with standard EN 61000-3-2					
Inrush current on insertion	limited by precharge circuit					
OUTPUT						
Rated voltage	24 V	48 V		108 V	120 V	
Voltage regulation ⁽¹⁾	21-29 V	42-58 V		95-131 V	105-145 V	
Static behaviour V ₀	≤ 1%					
Rated current	50 A	15 A	30 A	50 A	20 A	20 A
Permanent current overload with constant power	105% of rated current					
Residual ripple (with I ₀ ≥ 10%)	AC < 50 mV, PP < 100 mV					
Current imbalance in parallel operation	≤ 0,05 I ₀					
Dynamic behaviour on load variation (Δ I ₀ = 50% I ₀ in the range 10-100% I ₀)	Δ V ₀ ≤ 4%					
EFFICIENCY						
Typical	90%	90%	91%	92%	93%	93%
ISOLATION						
Input/output dielectric rigidity	3 kV (50 Hz for 60 s)					
ENVIRONMENT						
Operating ambient temperature	-5 ... 45 °C without derating, up to 55 °C with power derating					
Relative humidity	10% to 90%					
Cooling	Forced with intelligent fan speed control					
CONNECTIONS						
Connections	Plug in + locking screw					
RECTIFIER ENCLOSURE						
Degree of protection	IP20					
Colours	RAL 7012					
STANDARDS						
Safety	IEC/EN 61204-7					
EMC	EN 61204-3, EN 61000-6-4, EN 61000-6-2					
Performance	IEC/EN 61204					
Resistance to vibrations	ASTM D999					
Resistance to falls	ASTM D5276					

Standard electrical features

- Polarity insulated or grounded.
- Internal battery protection.
- Fitting for output DC distribution.
- Battery temperature sensor.
- PCB tropicalization.
- IP30 steel cabinet.
- Pallet truck friendly base.

Electrical options

- BLVD battery low voltage disconnect.
- Output distribution.
- Double AC power supply.
- Double string battery protection.
- Emergency Power Off (EPO).
- Power Share.
- Coupling kit.
- Earth leakage control.
- Input surge suppressors.
- Battery cabinet.
- Enhanced protection degree.

Standard communication features

- Front mimic panel with clear working status indication.
- 2 slots for communication options.
- MODBUS RTU (RS232).

Communication options

- Dry-contact interface (configurable voltage-free contacts).
- NET VISION DC: professional WEB/SNMP Ethernet interface for SHARYS IP monitoring.

SHARYS IP - Enclosures and Systems																			
Model	ENCLOSURE ED						ENCLOSURE EX				SYSTEM IS				SYSTEM IX				
INPUT																			
Rated voltage	230 V 1ph + N						400 V 2ph				230 V 1ph + N, 400 V 3ph + N				400 V 3ph				
Voltage tolerance	± 20% @ 100% P _n up to a -50% @ 40% P _n																		
Frequency	from 47.5 to 63 Hz																		
Input transformer	-						included in standard				-				included in standard				
OUTPUT																			
Rated voltage (V)	24	48		108	120	24	48		108	120	24	48	108	120	24	48	108	120	
Rated current (A)	100	30	60	100	40	100	30	60	100	40	200	200	80	80	150	150	60	60	
Maximum power (kW)	2.4	1.4	2.9	4.8	4.3	2.4	1.4	2.9	4.8	4.3	4.8	4.8	9.6	8.6	9.6	3.6	7.2	6.5	14.4
Max number of rectifier	2 modules						2 modules				4 modules				3 modules				
Voltage regulation ⁽¹⁾ (V)	21-29	42-58		95-131	105-145	21-29	42-58		95-131	105-145	21-29	42-58	95-131	105-145	21-29	42-58	95-131	105-145	
Voltage ripple	50mVrms 100mVpp																		
RECTIFIER CABINET																			
Dimensions W x D x H ⁽²⁾	600 x 535 x (894 to 1254) mm										600 x 600 x 1925 mm								
Weight ⁽³⁾	60 to 75 kg										245 kg				305 kg				
Degree of protection	IP30																		
Colours	RAL 7012																		

(1) Output voltage variation depends on the recharging voltage and on the end of the discharging voltage settings (typically 1.13 Vn with mains present and battery charged, 0.90 Vn when batteries are completely discharged). - (2) Height depends on accessories and backup time. - (3) Without batteries.

SHARYS IP

Rectifiers

24/48/108/120 V from 15 to 200 A

Rectifier module

SHARYS RECTIFIER modules use double conversion switching technology. The combination of SMD technology, of digital microprocessor control and of IGBT components result in a highly reliable and efficient rectifier.

- Plug-in "hot-swap".
- Microprocessor control with CAN-BUS protocol communication.
- Parallel connection with active load sharing and selective disconnection of a faulty module.
- PCB conformal coating (tropicalization) as standard.



	24 V DC	48 V DC	108 V DC	120 V DC
15 A	-	SH-IP-048015	-	-
20 A	-	-	SH-IP-108020	SH-IP-120020
30 A	-	SH-IP-048030	-	-
50 A	SH-IP-024050	SH-IP-048050	-	-

Enclosure

Flexible modular design DC power supply system.

Can include 2 rectifier modules max, suitable for full power application or redundant solution.

Useful in all most common low-medium power applications such as switchgear tripping equipment.

ED - Max 2 rectifier modules, redundancy 1+1 or full power

	24 V DC	48 V DC	108 V DC	120 V DC
30 A	-	ED048I030	-	-
40 A	-	-	ED108I040	ED120I040
60 A	-	ED048I060	-	-
100 A	ED024I100	ED048I100	-	-

EX - Max 2 rectifier modules, redundancy 1+1 or full power, integrated input transformer

	24 V DC	48 V DC	108 V DC	120 V DC
30 A	-	EX048I030	-	-
40 A	-	-	EX108I040	EX120I040
60 A	-	EX048I060	-	-
100 A	EX024I100	EX048I100	-	-

System

Complete DC power supply system

This can include up to 4 rectifier modules⁽¹⁾, suitable for N+1 redundant solution.

Useful in medium power applications such as automatic control equipment (PLC, relays, etc.) and process supply.

Thanks to the advanced controller SHARYS PLUS, it is indicated when extended communication possibilities and full setting flexibility are required.

⁽¹⁾ Contact us for power extension or customization

IS - Max 4 rectifier modules, redundancy N+1

	24 V DC	48 V DC	108 V DC	120 V DC
80 A	-	-	IS108I080	IS120I080
200 A	IS024I200	IS048I200	-	-

IX - Max 3 rectifier modules, redundancy N+1, integrated input transformer

	24 V DC	48 V DC	108 V DC	120 V DC
60 A	-	-	IX108I060	IX120I060
150 A	IX024I150	IX048I150	-	-

SHARYS PLUS control module⁽¹⁾

The SHARYS PLUS advanced control and monitoring module is included as standard on all SHARYS IP SYSTEMS. A 32-digit LCD display provides easy and fast access to all information parameter settings.

- Microprocessor control with CAN-BUS protocol communication and RS232/485 port for external communication.
- Additional easy frontal LEDs indications.
- Plug-in "hot swap" solution, easy to replace.

⁽¹⁾ System only.

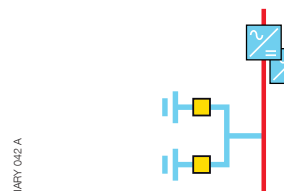
Typical configurations

Single



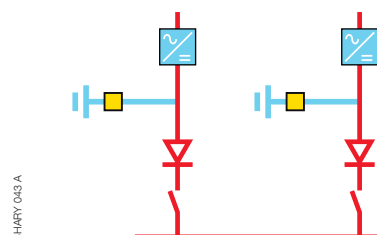
SHARY 001 A

Redundant N+1



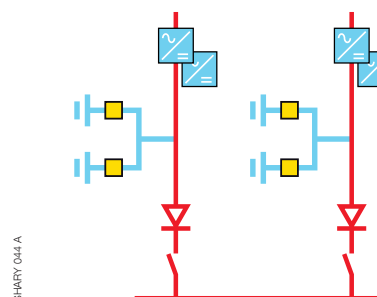
SHARY 002 A

Full redundant 1+1



SHARY 003 A

Extended full redundant



SHARY 004 A

Full battery compatibility

SHARYS IP design is compatible with different battery technologies⁽¹⁾ such as:

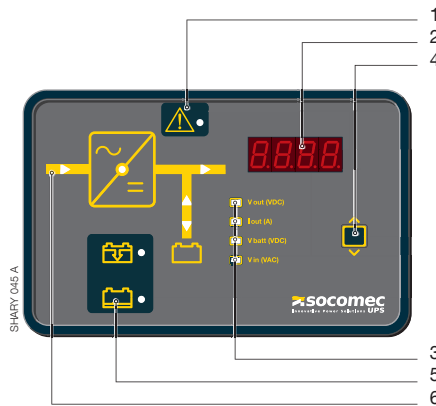
- Valve Regulated Lead Acid (VRLA),
- Open Vented Lead Acid,
- Nichel Cadmium.

(1) Please check the compatibility with load supply voltages.



APPLI 146 A

Mimic panel



1. Fault alarm
2. Display
3. Status LED
4. Selection button
5. Battery discharge status
6. Power flow indication

Product highlights



APPLI 496 A

Double conversion IGBT based topology



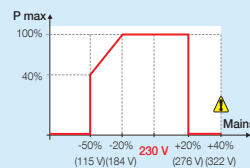
Unitary input power factor (PF > 0.99) and low input THDI



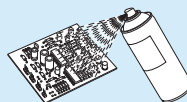
Hot swappable wireless modules with selective disconnection



Wide Input Voltage and frequency range. Protection against permanent input overvoltages (up to +40%) and against surges



PCB tropicalization



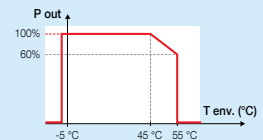
Built-in input output galvanic isolation



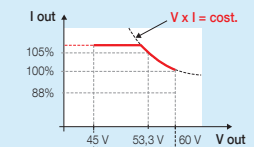
Digital microprocessor control and regulation SMD technology



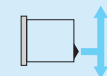
Wide temperature and environment range up to +55 °C ambient temperature



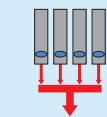
Constant output power



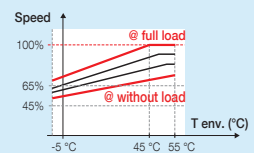
Can bus communication between modules



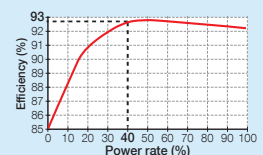
Active load sharing among modules



Speed controlled forced air cooling (temperature-load) Automatic self-test fan failure detection



Optimized efficiency design point



STATYS XS

Reliable transfer system for redundant power supply
16 and 32 A - Rack mounted

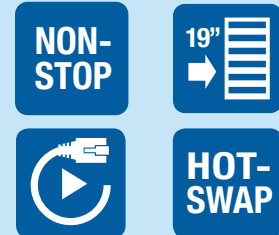
Superior



The solution for

- > Rack servers
- > IT networking
- > Hubs & routers

Advantages



Certifications



Ensured power continuity

- Provides redundant power supply to single-corded IT equipment.
- Powered by two independent sources.
- A competitive alternative to redundant power supply (dual-corded) in the equipment cabinet in terms of price and features.
- Fast transfer time without source overlapping (ITIC curve compliant).
- Maintenance-free equipment.

Easy rack integration

- Easy installation in 19" rack cabinets.
- Compact enclosure saving valuable cabinet rack space.
- Plug and Play devices pre-configured according to Socomec's STS field experience.
- Easy and quick connection of the loads via multiple IEC 320 outlets.
- Integrated backfeed protection device for even easier electrical integration.

Hot-swappable version

- Easy extraction and replacement of control and power unit without load interruption.
- Reduced MTTR.
- Front mounted double bypass protected against miss manipulation.
- Flexible load connection via fully rated terminal (up to 35 mm²) or locking IEC sockets.

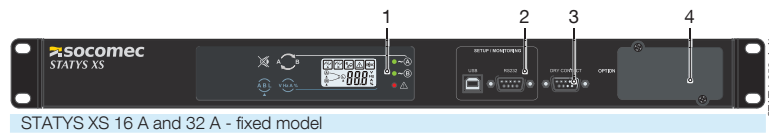
Agility and ease of use

- Front panel with LCD display for intuitive control and easy management.
- Source selection from the front panel without modifying the cabling.
- Automatic and manual transfer.
- Synchronised and non-synchronised sources management.
- LCD display of all input and output values.
- Configuration tool for easy customisation of rated voltage, monitoring parameters/tolerances, functionalities and operation.

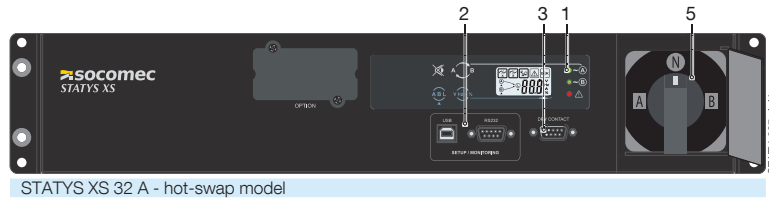
Flexible remote management

- Remote management via LAN networks (SNMP).
- Real-time monitoring (RS485).
- Configurable dry contacts communication port via local setup connection port.
- USB port & RS232 port for STATYS XS local monitoring.

Front view



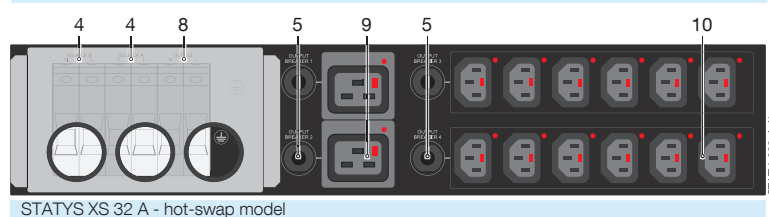
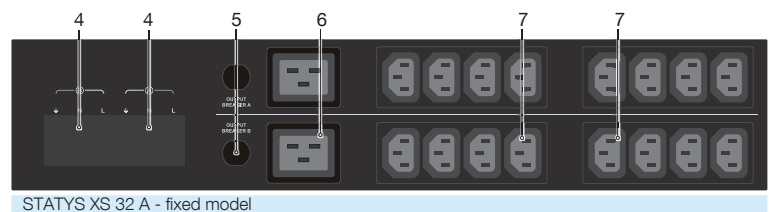
1. Control and monitoring panel
2. Setup connection ports
3. Dry contacts port
4. Slot for RS485 or SNMP board
5. Front-mounted bypass



Connections



1. Source input sockets (2x IEC 320-C20)
2. 16 A output socket (IEC 320-C19)
3. 10 A output sockets (2x 4x IEC 320-C13)
4. Source input terminals
5. Output protections
6. 16 A output sockets (2x IEC 320-C19)
7. 10 A output sockets (2x 8x IEC 320-C13)
8. Source output terminals
9. 16 A locking output sockets (2x IEC 320-C19)
10. 10 A locking output sockets (2x 6x IEC 320-C13)



Technical data

	STATYS XS		
Model	16 A - fixed model	32 A - fixed model	32 A - hot-swap model
INPUT / OUTPUT			
Rated current	16 A (configurable 10 to 16 A)	32 A (configurable 20 to 32 A)	32 A (configurable 16 to 32 A)
Rated voltage	200 / 208 / 220 / 230 / 240 V		
Voltage tolerance	± 10% (configurable)		
Rated frequency	50/60 Hz		
Frequency tolerance	± 10% (configurable)		
Transfer time	ITIC curve compliant		
Admitted overload	125% for 1 minute, 150% for 30 seconds		
CONNECTIONS			
Input	2 x IEC C20 (16 A)	Terminal 1x6P (10 mm ²)	Terminal 1x4P (up to 35 mm ²)
Output	1 x IEC C19 (16 A), 8 x IEC C13 (10 A)	2 x IEC C19 (16 A), 16 x IEC C13 (10 A)	2 x locking IEC C19 (16 A), 12 x locking IEC C13 (10 A), terminal 1 x 2P (up to 35 mm ²)
COMMUNICATION AND USER INTERFACES			
Display	LCD display		
Standard communication features	slot for optional communication board, 5 dry contacts (voltage-free, configurable), setup connection port for configuration tool		
Communication options	SNMP card, RS485 card		
ENVIRONMENT			
Operating ambient temperature	up to +40 °C		
Relative humidity	5% to 90% without condensation		
Acoustic level at 1 m (ISO 3746)	< 25 dBA		
MECHANICAL SPECIFICATIONS			
Dimensions W x D x H	440 (19") x 285 x 44 mm (1U)	440 (19") x 360 x 88 mm (2U)	440 (19") x 420 x 88 mm (2U)
Weight	4 kg	6 kg	9 kg
STANDARDS			
Directives	2014/35/UE, 2014/30/UE		
Standards	IEC60950-1, CEI/EN 62310-2		
Environmental	WEEE, ROHS		
Product declaration	CE		

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