Single-phase UPS

NeTYS RT

from 1100 to 11000 VA

Complete professional solutions for the protection and availability of IT infrastructures

Infrastructures such as data centres, networking systems and modern data networks play a leading role in value production on the information market.

Power supply problems can result in data loss and undermine the productivity of IT infrastructures. That is why IT loads require an extremely high-quality power supply, without disturbances or interruptions: business continuity is the name of the game.

The way in which maintenance is performed on power supply devices is crucial in IT environments: the possibility of unintrusive servicing (performed without switching off the load), reduced maintenance time and load protection are all fundamental considerations.

Such infrastructures are increasingly required to manage the high-density processing power of modern servers and devices (including those offered by blade technologies), in terms of space consumption and heat output.

A detailed knowledge of the operating parameters of power supply equipment is equally important. This enables breakdowns to be prevented by maintaining the profitability of the infrastructure's operations.

RANGES 110 A

N876 N876

Your protection for

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

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Equipment for professionals

NETYS RT has been designed to meet the demands of professional applications.

NETYS RT is the most effective high power density solution on the market: 4.4 W/cm³ (11 kVA/8 kW UPS module).

The space and time-saving tower/rack conversion option means that it can be installed easily either in tower mode or inside standard 19" rack cabinets. The system also offers practical connectivity options by means of IEC320 sockets or terminals.

Protection

Online double conversion technology guarantees matchless power quality. This ensures a perfectly stable sinusoidal waveform at the output of the **NETYS RT**, regardless of the quality of the mains supply.

It includes built-in backfeed protection, in compliance with the latest UPS system regulations. This feature protects against reverse current flow without the need for additional external devices.

Availability

The optional external manual bypass module also assures the continuity of power supplied to loads during routine or non-routine maintenance of the system, resulting in reduced mean time to repair (MTTR).

With the special manual parallel/bypass module, 1+1 redundant architectures are easy to construct using **NETYS RT**. This type of architecture guarantees maximum power availability in any situation, even following the breakdown of an electronic module, and is therefore essential for mission-critical applications.

The possibility of adding extra battery modules (EBM) means that back-up time in battery mode is flexible. This enables the system to meet the need for different back-up times depending on the load supplied, thus providing a tailor-made solution. Additionally in the case of parallel installations, the same battery pack can be used for both power modules, guaranteeing full back-up time availability even if one of the two modules is undergoing maintenance.

Comprehensive range

The wide range of **NETYS RT** modules offers an effective power solution architecture to match the high-quality power demands of any medium or small load.

Converts from **Tower** to **Rack mounted**

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

This vast range of solutions is accompanied by a series of standard and optional features that fulfil all of the protection, quality and communication needs of the installation environment.

The multilingual LCD display provides detailed information about the status and alarms of the applications.

Standard features for communication with external devices, such as Ethernet or USB, enable all **NETYS RT** models to communicate and integrate easily in the infrastructure via the most widespread protocols on the market.

NETYS RT can be installed easily in rack or tower mode, or converted from one mode to another at any time, using the standard accessories included with the product.

Parallel redundant operation for business continuity

To achieve the highest level of availability and to power critical utilities, **NETYS RT** UPS modules above 3 kVA can be configured for 1:1 redundancy.

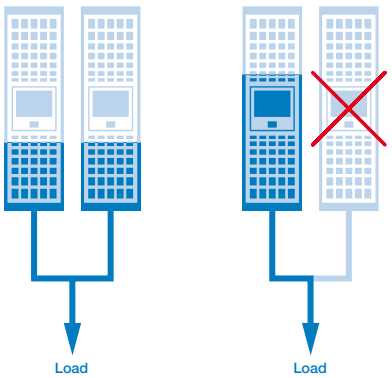
Redundant operation (1+1) means: the system incorporates one more UPS module than is needed to protect the load; in the event of a breakdown, it guarantees sufficient power supply capacity to the load by maintaining online protection.

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.



Single-phase UPS

NETYS RT

from 1100 to 3000 VA

The high-performance, versatile and comprehensive UPS system

Simple to install

- IEC input and output connections compatible with most IT equipment.
- Compact footprint (2U / 89 mm) for installation in rack cabinets.
- Attractive design for visible installation in offices.
- USB port and HID protocol as standard for direct interfacing with Windows systems®, without the need for additional specialist software.

Easy to use

- 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 utility.
- Optional battery extension modules (BEM) to meet all back-up time requirements, even after installation.
- Clear and uncluttered LED interface, with buzzers that immediately indicate the operating status of the UPS, even for less specialist users.

Standard communication equipment

- USB connection.
- RS232 connection for JBUS protocol.
- HID protocol for interfacing with Windows systems®.

Standard electrical equipment

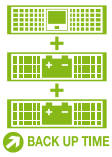
- Built-in backfeed protection.
- Protection against atmospheric phenomena (NTP) for telephone / ADSL modems.
- RJ11 connection for Emergency Power Off (EPO).
- Connection for battery extension modules.

Communication options

- Programmable dry-contact interface.
- WEB / SNMP manager interface for connection to LAN network. This accessory can be integrated in the UPS by means of the slot located on the back panel.

Electrical options

- Battery extension modules.



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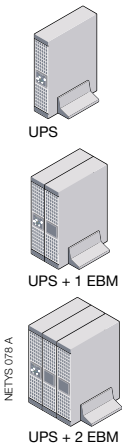
Battery expansion



UPS	EBM	Back up time (minutes) 10 20 30 40 50 60 70 80 90 100 110 120 130 140
NRT-U1100	Internal	
NRT-U1100	1 x NRT-B1100	
NRT-U1100	2 x NRT-B1100	
NRT-U1700	Internal	
NRT-U1700	1 x NRT-B2200	
NRT-U1700	2 x NRT-B2200	
NRT-U2200	Internal	
NRT-U2200	1 x NRT-B2200	
NRT-U2200	2 x NRT-B2200	
NRT-U3000	Internal	
NRT-U3000	1 x NRT-B3000	
NRT-U3000	2 x NRT-B3000	

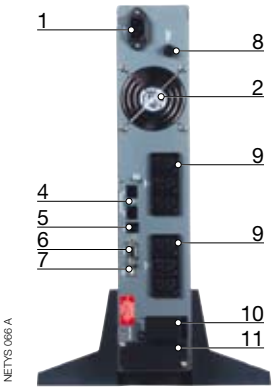
50 % of nominal load *75 % of nominal load* *100 % of nominal load*

Technical data

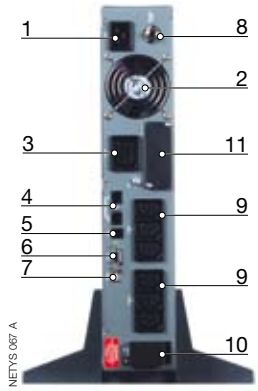
	NETYS RT 1100	NETYS RT 1700	NETYS RT 2200	NETYS RT 3000
MODELS	NRT-U1100	NRT-U1700	NRT-U2200	NRT-U3000
POWER	1100 VA/800 W	1700 VA/1200 W	2200 VA/1600 W	3000 VA/2100 W
Architecture	online double conversion VFI with input PFC and automatic bypass			
INPUT				
Voltage	230 V (1ph) 160~275 Vac; up to 130 Vac @70 % load			
Frequency	50/60 Hz +/-10% (Auto-Selectable)			
Power factor/THDi	> 0.98/< 6 %			
OUTPUT				
Voltage (pure sinewave)	230 V (1ph) selectable 200/208/220/240V, 50 or 60 Hz +/- 2% (+/- 0.05 Hz in battery mode)			
Efficiency	up to 91 % online mode			
Overload capability	up to 105 % continuously; 125 % x 3 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-C20 (16 A)		
BATTERY				
Standard autonomy*	8	12	8	10
Voltage	24 Vdc	48 Vdc	48 Vdc	72 Vdc
Recharge time	< 6h to recover 90 % capacity			
COMMUNICATION				
Mimic panel	LED			
RS232 (DB9 port) Jbus protocol	•	•	•	•
USB HID protocol	•	•	•	•
WEB/SNMP (Ethernet RJ45 port)	option	option	option	option
COMM slot	•	•	•	•
Dry contacts card	option	option	option	option
EPO input (RJ11 port)	•	•	•	•
Modem/ADSL surge protection	•	•	•	•
Parallel port	-	-	-	-
STANDARDS				
Performance & topology	IEC 62040-3 (VFI-SS-111)			
Safety/EMC	IEC 62040-1-1 (TÜV-GS certified) IEC 62040-2			
Product certifications	CE, TÜV-GS, A-Tick, C-Tick			
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	0-90 % non-condensing			
Noise level (ISO 3746)	< 45 dB			< 55 dB
DIMENSIONS & WEIGHT				
UPS size std BUT (W x D x H mm)	440x332x88.7	440x430x88.7	440x430x88.7	440x608x88.7
UPS size RACK U	2U	2U	2U	2U
UPS weight std BUT (kg)	13	21	22	31
EBM module size (W x D x H mm)	440x332x88.7	440x430x88.7	440x430x88.7	440x608x88.7
EBM module RACK U	2U	2U	2U	2U
EBM module weight (kg)	16	29	29	43

** @ 75 % of nominal load.*

Connections



1 100 VA



1700 VA - 2200 VA - 3000 VA

1. Mains input socket (IEC 320)
2. Fan
3. Output socket (full power)
4. Telephone/modem line protection
5. EPO (Emergency Power Off) input
6. RS232 interface (JBUS protocol)
7. USB port
8. Input protection
9. Output sockets (IEC 320 - 10 A)
10. Battery extension connector
11. Slot for optional communication boards

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. LED bar. Depending on the situation, this indicates either the charge level or the capacity of the battery

Single-phase UPS

NeTYS RT

from 5000 to 11000 VA

The professional UPS system for high power density, high availability and complete integration

Simple to install

- Terminal input and output connections with built-in input protection by means of magnetothermal switch.
- Compact footprint: 4U (178 mm) for 5-7 kVA and 6U (267 mm) for 9-11 kVA, for installation in rack cabinets.
- Optional manual bypass enables routine maintenace to be performed without disconnecting the powered appliance.
- Built-in LAN interface for remote monitoring via Web browser or SNMP protocol

Easy to use

- LCD display with menu available in 6 languages
- Extensive range of communication protocols (including TCP/IP and SNMP) for integration in building management system (BMS) networks.

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 utility.
- 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.

Standard communication features

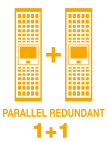
- 10/100 LAN Ethernet connection.
- WEB/SNMP manager interface for connecting the UPS system to the Ethernet network.
- RS 232 serial connection with JBUS protocol.

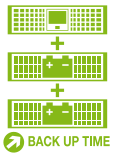
Standard electrical equipment

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

Communication options

- Programmable dry-contact interface.





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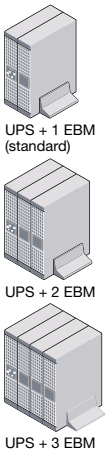
Battery expansion



UPS	EBM	Back up time (minutes) 10 20 30 40 50 60 70 80
NRT-5000K	Standard	
NRT-5000K	2 x NRT-B7000	
NRT-5000K	3 x NRT-B7000	
NRT-7000K	Standard	
NRT-7000K	2 x NRT-B7000	
NRT-7000K	3 x NRT-B7000	
NRT-9000K	Standard	
NRT-9000K	2 x NRT-B11000	
NRT-9000K	3 x NRT-B11000	
NRT-11000K	Standard	
NRT-11000K	2 x NRT-B11000	
NRT-11000K	3 x NRT-B11000	

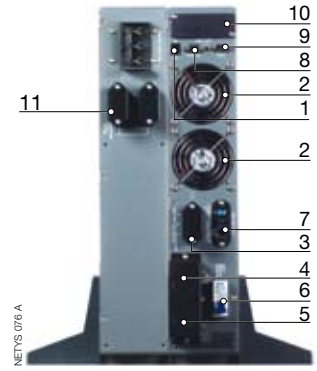
50 % of nominal load *75% of nominal load*
100 % of nominal load

Technical data

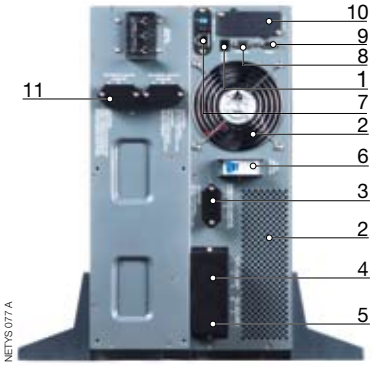
	NETYS RT 5000	NETYS RT 7000	NETYS RT 9000	NETYS RT 11000
MODELS	NRT-5000K	NRT-7000K	NRT-9000K	NRT-11000K
POWER	5000 VA/3500 W	7000 VA/4900 W	9000 VA/6400 W	11000 VA/8000 W
Architecture	online double conversion VFI with input PFC and automatic bypass			
Parallel redundant function	1+1	1+1	1+1	1+1
INPUT				
Voltage	230 V (1ph) 156~280 Vac up to 130 Vac @70 % load			
Frequency	50/60 Hz +/-10% (Auto-Selectable)			
Power factor/THDi	> 0.99/< 5 %			
OUTPUT				
Voltage (pure sinewave)	230 V (1ph) selectable 200/208/220/240V - 50 or 60 Hz +/- 2% (+/- 0.05 Hz in battery mode)			
Efficiency	up to 92 % online mode			
Overload capability	up to 105 % continuously; 125 % x 5 min; 150 % x 30 sec			
Output connections	terminals			
BATTERY				
Standard autonomy*	10	7	12	8
Voltage	192 Vdc	192 Vdc	240 Vdc	240 Vdc
Recharge time	< 4h to recover 90 % capacity			
COMMUNICATION				
Mimic panel	LCD 6 languages			
RS232 (DB9 port) Jbus protocol	•	•	•	•
WEB/SNMP (Ethernet RJ45 port)	•	•	•	•
COMM slot	•	•	•	•
Dry contacts card	option	option	option	option
EPO input (RJ11 port)	•	•	•	•
Parallel port	•	•	•	•
STANDARDS				
Performance & topology	IEC 62040-3 (VFI-SS-111)			
Safety/EMC	IEC 62040-1-1 (TÜV-GS certified) IEC 62040-2			
Product certifications	CE, TÜV-GS, A-Tick, C-Tick			
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	0-90 % non-condensing			
Noise level (ISO 3746)	< 55 dB			
DIMENSIONS & WEIGHT				
UPS size std BUT (W x D x H mm)	440x670x(177.4)	440x670x(177.4)	440x623x(261.2)	440x623x(261.2)
UPS size RACK U	2U+2U	2U+2U	3U+3U	3U+3U
UPS weight std BUT (kg)	15.5+40	16+40	19.5+66	20+66
EBM module size (W x D x H mm)	440x608x88.7	440x608x88.7	440x623x130.6	440x623x130.6
EBM module RACK U	2U	2U	3U	3U
EBM module weight (kg)	40	40	66	66

** @ 75 % of nominal load.*

Connections



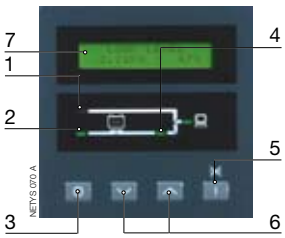
5000 VA - 7000 VA + battery



9000 VA - 11000 VA + battery

1. EPO (Emergency Power Off) input
2. Fan
3. Battery extension connector
4. Output terminals
5. Input terminals
6. Input switch
7. RJ45 LAN ethernet connector
8. Parallel port connector
9. RS232 interface (JBUS protocol)
10. Slot for optional communication boards
11. Battery extension connector

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/Enter and buzzer override button
6. Navigator buttons
7. Alphanumeric LCD display

Electrical options

- 1+1 parallel module.
- Manual bypass without interruption.
- Battery extension modules.