

**Compact. Scalable. Cost-Saving**  
**The NEW STANDALONE 3-Phase UPS**

**Powernet plus**

**10-50 KVA**



# POWERnet plus

## Premium power protection

**NRG**  
POWER NET plus

Powernet plus is a mid-size, three-phase UPS system that delivers premium power protection for the increasing loads in today's server rooms and data centers. Powernet plus is available in five different power ratings: 10,15, 20,25,30,40 & 50kVA.

This new generation of transformerless UPS respond to all major concerns of IT and facility managers. As saving costs and 100% uptime are their top priorities, Powernet plus offers the lowest cost of ownership of any UPS system by providing energy efficiency, scalable flexibility, highest availability and easy serviceability.

The all-in-one solution including a true online double conversion (VFI = Voltage Frequency Independent), a power distribution unit, a manual maintenance bypass, a static thyristor bypass, an intelligent battery management and the space for internal batteries delivers a complete power protection in one box and allows for simple installation. The stand alone three-phase UPS system is the ideal solution for server rooms, networks, small data centers, telecommunications and health care infrastructures, banking and industrial. The broad range of Powernet plus has been designed to offer the most important benefits to our customers and fulfill today's most demanding requirements in terms of:

- System Availability
- Environmental impact
- Total cost of ownership
- Solution flexibility

*Powernet plus is available in three cabinet sizes and allows various battery backup time configurations.*



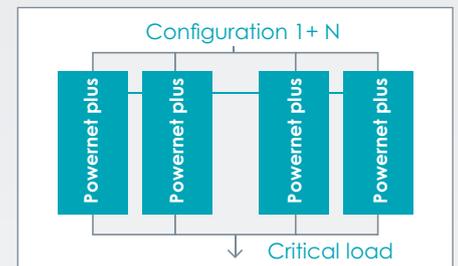
## High system availability

Today's critical applications require full redundancy in order to ensure the highest availability and 100% uptime. Up to 20 Powernet Plus units can be installed in parallel. Also, Powernet plus show superior reliability as a result of being built of the highest quality components.

The high quality of components used, the advanced design, the highly efficient and lean production process and the exhaustive system test of each unit ensure the exceptional reliability of all Powernet plus units. These specific measures are confirmed by Powernet plus industry leading characteristics such as:

- Output power factor: 0.9
- High input voltage tolerance (100% load: -23%/+15%; 60% load: -40%/+15%)
- High input frequency tolerance (35-70 Hz)
- AC-AC efficiency up to 95.5%
- Ripple-free battery charging

Parallel systems (n+x) substantially increase redundancy and therefore ensure continuous support of the load should any unit shut down. The redundant system allows for maintenance on all parallel cabinets without the need for an external maintenance bypass and without having to remove the critical load from conditioned power.



Up to 20 UPS units can be installed in parallel to achieve increased redundancy or more power

## Low environmental impact

The Powernet plus range operates in the largest three-phase UPS market. Consequently it is even more important that Powernet plus offers best-in-class, environmentally friendly features such as:

- High efficiency for energy saving
- Small size for space saving
- Flexible battery block per string for minimal environmental impact
- Sustainable material for proper recycling
- Efficient manufacturing

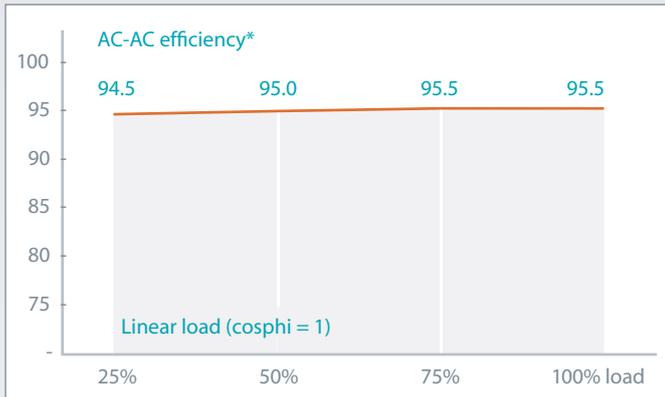
Powernet plus allows IT facility managers to employ a sustainable power protection strategy.

# POWERnet *plus*

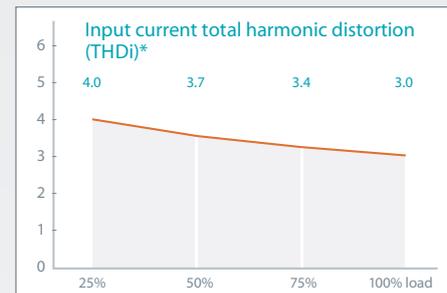
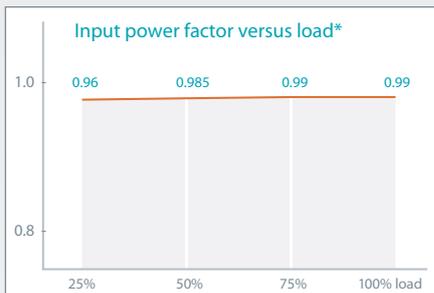
## Low total cost of ownership



Thanks to its broad range and simple parallel configuration, each Powernet *plus* system can be configured and extended to function with the initial or future power requirements of your infrastructure. Initial right-sizing of the UPS system and gradual extension according to effective load requirements will optimise your investment.



Powernet *plus* exhibits state-of-the-art energy efficiency of up to 95.5%, therefore helping you to further reduce operating costs over the life of your UPS system. The flat efficiency curve and hence the fall in efficiency is marginal even at partial loads. This enables significant energy savings in every working condition.



The input power factor of Powernet *plus* is near unity.

This is made possible by the advance booster PFC (Power Factor Correction) circuit of the transformer-less technology. As a result there is no need for a filter for phase compensation. When using Powernet *plus*, the UPS system respects the power grid regulations and therefore achieves important energy savings.

The outstanding low input current total harmonic distortion (THDi) helps to enhance the compatibility with generators. Low THDi eliminates possible interference with other equipment in the scheme, reduces the size of power cables, fuses and breakers at the input and avoids excess heating of power transformers.

## Compact Design



### Compact design and simple serviceability

The compact design and small footprint of all Powernet *plus* models serve to minimise space requirements and save valuable floor space. The units are available in three different cabinet sizes: A/B/C

Cabinet type C allows front access. The front panel is easily removable and offers simple serviceability. Cabinet types A and B are accessible from the rear.

### Enhanced communication capabilities

Powernet *plus* is equipped with a variety of standard and optional communications features for network connectivity and application management.

#### Standard features:

- RS 232 on Sub-D9 port
- 4 input contacts
- 12 V DC source
- RJ 45 for multidrop

#### Optional features:

- SNMP card (slot)
- Card including 5 potential free output contacts & USB port.

## TECHNICAL SPECIFICATIONS

GENERAL DATA	10 kVA	15 kVA	20 kVA	25 kVA	30 kVA	40 kVA	50 kVA
Output power max.	9 kW	13.5 kW	18 kW	22.5 kW	27 kW	36 kW	45 kW
Output power factor	0.9						
Topology	True online double conversion, pure sinewave						
Parallel configuration	Up to 20 units in parallel configuration						
UPS type	Standalone						
Cable entry	Rear accessible				Front accessible		
Inbuilt batteries	Yes						
INPUT							
Nominal input voltage	3 x 380 V/220 V + N, 3 x 400 V/230 V + N, 3 x 415 V/240 V + N						
Voltage tolerance (Ref. to 3 x 400V/230 V)	For loads <100% (-23%, +15%), <80% (-30%, +15%), <60% (-40%, +15%)						
Input distortion THDi	<3% at 100% (sinewave)						
Frequency	35–70 Hz						
Power factor	0.99 at 100% load						
OUTPUT							
Rated output voltage	3 x 380 V/220 V + N, 3 x 400 V/230 V + N, 3 x 415 V/240 V + N						
Voltage tolerance (Ref. to 3 x 400 V/230 V)	1% (static), 4% (dynamic)						
Voltage distortion	<2% linear load, <4% non-linear load (IEC/EN62040-3)						
Frequency	50 or 60 Hz						
Overload capability	10 min.: 125% or 1 min.: 150% (at cosphi 0.8); 10 min.: 111% or 1 min.: 133% (at cosphi 0.9)						
Unbalanced load	100% (all 3 phases regulated independently)						
Crest factor	3 : 1						
EFFICIENCY							
Overall efficiency	Up to 95.5%						
In eco-mode configuration	98%						
ENVIRONMENT							
Storage temperature	-25–70°C						
Operating temperature	0–40°C						
Altitude	1000 m without derating						
BATTERY							
Battery type	7 Ah/9 Ah/28 Ah, sealed, lead-acid, maintenance-free						
Battery replacement	Field-replaceable						
Battery voltage	Flexible voltage for longer backup times						
COMMUNICATIONS							
LCD Display (PDM)	Yes						
LEDs	LED for notification and alarm						
Communication ports	1x RS 232						
Customer input interface	Remote shutdown, genset interface						
STANDARDS							
Safety	IEC/EN 62040-1-1, IEC/EN 60950-1						
Electromagnetic compatibility (EMC)	EN 61000-6-4, Product standard: EN 62040-2 EN 61000-4-2, EN 61000-4-3, EN 61000-4-4			EN 61000-6-2, Product standard: EN 62040-2 EN 61000-4-5, EN 61000-4-6			
Performance	IEC/EN 62040-3						
Product certification	CE						
Protection rating	IP 20						
Manufacturing	ISO 9001:2008, ISO 14001:2004						
WEIGHT, DIMENSIONS							
Cabinet type	A or B	A or B	A or B	B or C	C	C	C
Weight	60 or 90 kg	60 or 90 kg	60 or 90 kg	90 or 145 kg	145 kg	145 kg	145 kg
Dimensions W x H x D (mm)	345 x 720 x 710 or 345 x 1045 x 710	345 x 720 x 710 or 345 x 1045 x 710	345 x 720 x 710 or 345 x 1045 x 710	345 x 1045 x 710 or 440 x 1420 x 910	440 x 1420 x 910	440 x 1420 x 910	440 x 1420 x 910

\*Technical specifications are subject to change without notice.