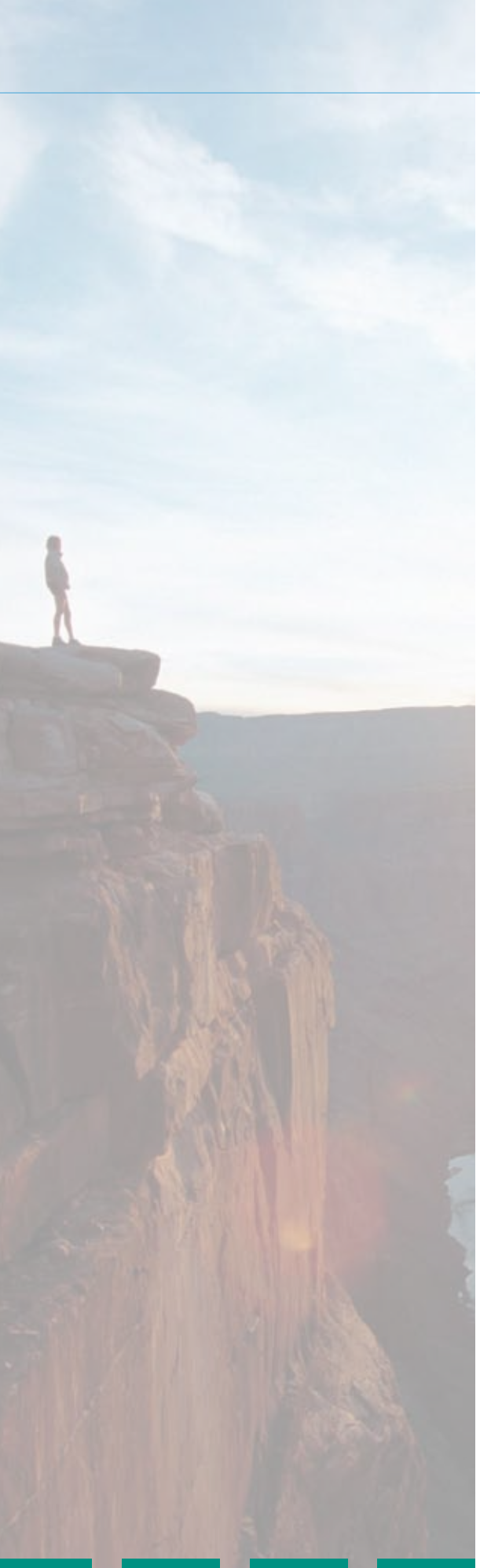


newave

POWERVALUE™

Compact protection for power supply
For Continous Power Protection Availability

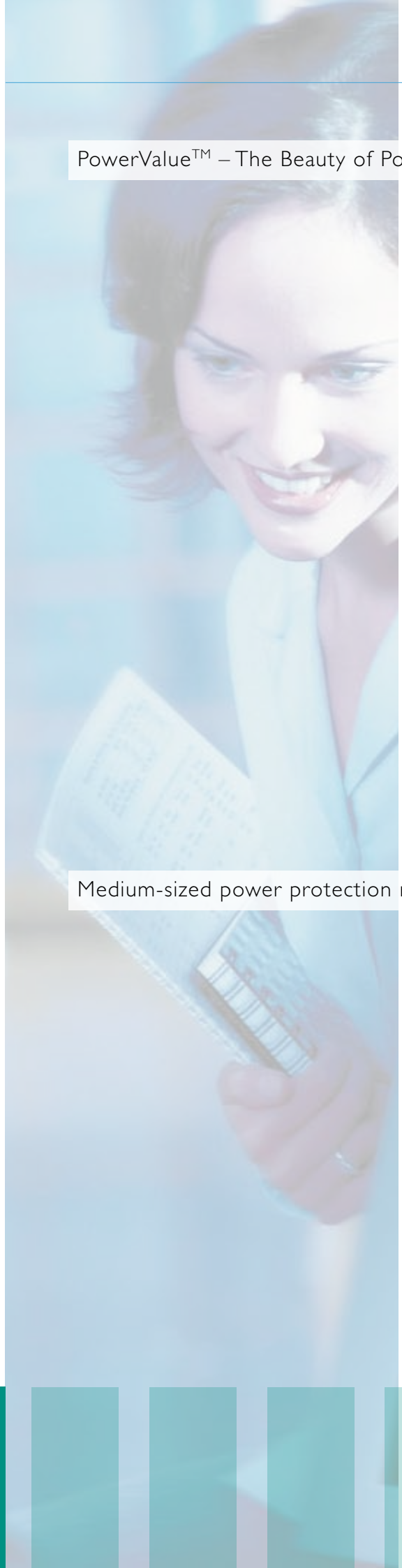
English

Technical specifications PowerValue™ 11 and 31

GENERAL DATA		1-phase in/output (11)			3-phase input/1-phase output (31)			
Output Rated Power	kVA	7.5	10	12	7.5	10	15	20
Output Power Factor		0.7						
Topology		Double conversion (on-line)						
Construction		Standalone						
Static and Maintenance Bypass		Standard						
Cable entry		Cabinet A from rear, cabinet B and C from front						
Audible Noise With 100% / 50% load	dBA	50/48	50/48	50/48	50/48	50/48	53/49	53/49
Inbuilt Batteries		Yes						
INPUT								
Voltage	V	1 x 220/230/240+N			3 x 380/220+N, 3 x 400/230+N, 3 x 415/240+N			
Voltage Tolerance (Ref. to 3x400/230 V)		For loads <100% (-23%,+15%), <80% (-30%,+15%), <60% (-40%,+15%)						
Current Form THDi	%	THDi=7-9%			THDi <25% standard (THDi=12-14% optional)			
Frequency	Hz	35-70						
Power Factor (electrically regulated)		0.98			0.95 standard (0.98 optional)			
Current Distortion	%	sinewave						
Inrush Current		Soft start						
Cabling		Hardwired						
OUTPUT								
Voltage	V	1 x 220/230/240+N						
Voltage Tolerance (Ref. to 3x400/230V)		1% (linear load), 4% (non-linear load)						
Voltage Distortion	%	<2% linear load, <4% non-linear load (IEC/EN62040-3)						
Frequency	Hz	50 or 60						
Frequency Tolerance	Hz	±0.1 (free-running), ±2 or ±4 (with mains, adjustable)						
Overloading capability	%	125% / 10 min., 150% / 60 s						
Crest Factor		3 : 1						
EFFICIENCY								
Load 100/75/50/25%	%	Up to 94.5/94.5/93/91, AC-AC on-line mode						
Eco-Mode at 100% Load	%	98						
ENVIRONMENT								
Storage Temperature	°C	-25…+70						
Operating Temperature	°C	0…+40						
Maximum Altitude	m	Up to 1000m without derating, max. 3000m						
COMMUNICATIONS								
Interfaces		LC-Display (PDM), 1x RS232 1 x RS232 (SMART PORTS), customer input interfaces (Remote shutdown, GENSET-ON), customer output interfaces (Dry Ports)						
Options		Additional COM-Cards						
STANDARDS								
Safety		IEC/EN 62040-1-1, IEC/EN 60950-1						
Electromagnetic Comp. (EMC)		IEC/EN 61000-6-4 (product standard IEC/EN 62040-2 limit A (C2 UPS)) IEC/EN 61000-6-2 (product standard IEC/EN 62040-2 Criterion A (C2 UPS)) IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6						
Performance		IEC/EN 62040-3						
Product Certification		CE, GOST by TÜV						
Enclosure		IP 20						
Manufacturing		ISO 9001:2000, ISO 14001:2004						
Country of origin		Italy						
WEIGHT, DIMENSIONS		Cabinet Type						
		A (7.5–15kVA)		B (7.5–20kVA)		C (7.5–20kVA)		
Weight	kg	75		154		204		
Dimensions (WxHxD)	mm	340x820x800		450x1250x860		550x1650x890		

Technical specifications PowerValue™ 33

GENERAL DATA		3-phase input/3-phase output (33)					
Output Rated Power	kVA	7.5	10	15	20	30	40
Output Power Factor		0.8					
Topology		Double conversion (on-line)					
Construction		Standalone					
Static and Maintenance Bypass		Standard					
Cable entry		Cabinet A from rear, Cabinet B and C from front					
Audible Noise with 100% / 50% load	dBA	50/48	50/48	43/49	53/49	59/51	63/53
Inbuilt Batteries		Yes					
INPUT							
Voltage	V	3 x 380/220+N, 3 x 400/230+N, 3 x 415/240+N					
Voltage Tolerance (Ref. to 3x400/230 V)		For loads <100% (-23%,+15%), <80% (-30%,+15%), <60% (-40%,+15%)					
Current Form THDi	%	THDi < 25% Standard (THDi=12-14% optional)					
Frequency	Hz	35-70					
Power Factor (electrically regulated)		0.95 Standard (0.98 optional)					
Current Distortion	%	sinewave					
Inrush Current		Soft start					
Cabling		Hardwired					
OUTPUT							
Voltage	V	3 x 380/220+N, 3 x 400/230+N, 3 x 415/240+N					
Voltage Tolerance (Ref. to 3x400/230 V)		±1% (linear load), ±3 (non-linear load)					
Voltage Distortion	%	<2% linear load, <4% non-linear load (IEC/EN62040-3)					
Frequency	Hz	50 or 60					
Frequency Tolerance	Hz	±0.1 (free-running), ±2 or ±4 (with mains, adjustable)					
Overloading capability	%	125%/10 min., 150%/60 s					
Permissible Unbalanced Load	%	100% (all 3 phases regulated independently)					
Crest Factor		3 : 1					
EFFICIENCY							
Load 100/75/50/25%	%	Up to 95/95/93.5/92, AC-AC online mode					
Eco-Mode at 100% Load	%	98					
ENVIRONMENT							
Storage Temperature	°C	-25…+70					
Operating Temperature	°C	0…+40					
Maximum Altitude	m	Up to 1000m without derating, max. 3000m					
COMMUNICATIONS							
Interfaces		LC-Display (PDM), 1x RS232 1 x RS232 (SMART PORTS), customer input interfaces (Remote shutdown, GENSET-ON), customer output interfaces (Dry Ports)					
Options		Additional COM-Cards					
STANDARDS							
Safety		IEC/EN 62040-1-1, IEC/EN 60950-1					
Electromagnetic Comp. (EMC)		IEC/EN 61000-6-4 (product standard IEC/EN 62040-2 limit A (C2 UPS)) IEC/EN 61000-6-2 (product standard IEC/EN 62040-2 Criterion A (C2 UPS)) IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6					
Performance		IEC/EN 62040-3					
Product Certification		CE, GOST by TÜV					
Enclosure		IP 20					
Manufacturing		ISO 9001:2000, ISO 14001:2004					
Country of origin		Italy					
WEIGHT, DIMENSIONS		Cabinet Type					
		A (7.5–40kVA)		B (7.5–40kVA)		C (7.5–40kVA)	
Weight	kg	75		154		204	
Dimensions (WxHxD)	mm	340x820x800		450x1250x860		550x1650x890	



PowerValue™ – The Beauty of Power Protection Simplicity

PowerValue™ represents an accurately balanced combination of unmatched reliability, excellent electrical performance, exceptionally compact size and outstanding cost-efficiency housed in an attractive enclosure.

Cabinet A:
Up to 15kVA with 10 min.

Cabinet B:
Up to 40kVA with 10 min.

Cabinet C:
Up to 40kVA with 20 min.

Medium-sized power protection range with outstanding price/performance capability

PowerValue™ is a third-generation transformer-less double-conversion (VFI) power protection technology designed to protect a wide area of critical applications including server rooms, networks, telecommunication systems, industrial processes and medical equipment.

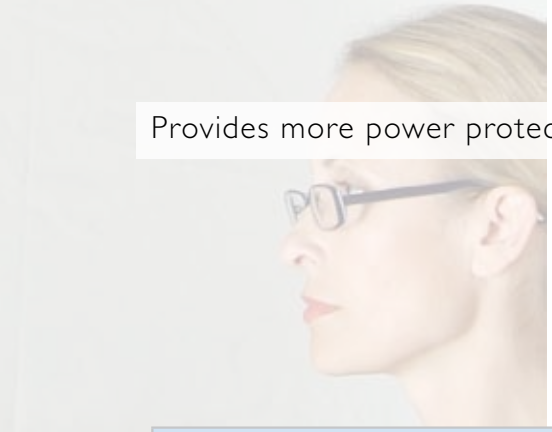
PowerValue™ addresses mid-sized server rooms, networks, telecommunication systems, industrial processes and medical equipment where the higher cost of parallelable or scalable power protection solutions are not justified. Furthermore, as PowerValue™ provides increased protection security and efficiency it can be used instead of multiple separate, smaller units spread throughout a facility.

The uniqueness of the PowerValue™ design lies in its technical simplicity which is based on Newave's transformerless, double-conversion (VFI = Voltage Frequency Independent) technology with unmatched reliability.

PowerValue™ is available in a variety of models and input/output configurations:

- PowerValue™ (1phase input and 1phase output), 7.5, 10 and 12 kVA
- PowerValue™ (3phase input and 1phase output), 7.5, 10, 15 and 20 kVA
- PowerValue™ (3phase input and 3phase output), 7.5, 10, 15, 20, 30 and 40 kVA

Features and benefits



Provides more power protection value at a more affordable price

PowerValue™ has been designed to provide an optimised price/performance ratio. A number of exceptional features have been carefully selected and built into the PowerValue™ without a substantial increase of material contents in order to optimize both performance and cost benefits.

Benefits	Features
Continuous Uptime	Highest reliability is provided through mature, on-line double conversion, transformerless technology. Built-in reliability with redundant power supply, reduced cable harness, improved cooling of critical components.
Space Saving	Smallest foot-print and weight: 15kVA (3/3) = 0.26 mm², weight w/o batteries = 75kg 40kVA (3/3) = 0.37 mm², weight w/o batteries = 204kg
Cost Saving	Outstanding power and back-up-time density.
High Power Availability	Wide input voltage window (up to 40% for loads less than 60%) and input frequency window (35–70 Hz) allows high power availability even in environments where input power supply is unstable and sub-standard. Battery usage is minimised.
Low Cost of Ownership	Thanks to Energy Saving Inverter Switching (ESIS) high double conversion efficiencies (up to 95%) are achieved. PowerValue™ 11: PF = 0.98 and THDI = 7–9% PowerValue™ 31: PF = 0.98 and THDI <25% standard (THDI = 12–14% optional) PowerValue™ 33: PF = 0.98 and THDI <25% standard (THDI = 12–14% optional)
Low Audible Noise	Variable load-dependent DC-fan-speed reduces the audible noise, so that the UPS can be operated in office environments.
Integration in Networks	PowerValue™ has advanced monitoring and communication capabilities to keep you in constant command of your critical power protection system.
Protects Your Environment	PowerValue™ protects not only critical applications but also our environment. It is a true environmentally friendly UPS with limited hardware components (saving natural resources).

Interfaces

User friendly, easy to install and easy to commission

PowerValue™ is a user-friendly UPS which is easy to install and commission. In the following pictures the various interfaces of the UPS are illustrated:

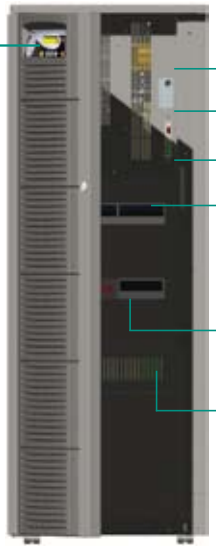
Interfaces for cabinet A, B and C

User friendly Control Panel is composed of:

a. Mimic Diagram
b. LC-Display
c. Keyboard

Front View
Cabinet A

Rear View
Cabinet A



Front View
Cabinet B*

Rear View
Cabinet B*

*The position of the interfaces on the larger cabinet C are equivalent to cabinet B.

Battery flexibility

Compact size with capability of supplying longer back-up times without extra battery cabinet

PowerValue™ is provided in three cabinet sizes in order to allow longer battery back-up times and therefore avoid the use of additional battery cabinets. All PowerValue™ are equipped with a 6 Amp ripple-free battery charger that protects batteries and delays their aging process. Optional temperature-dependent charging function is provided. The advanced Battery Monitoring and Management algorithm monitors the battery continuously and in the unlikely event of a battery fault an early warning will be triggered.

Battery configurations

Cabinet type*	Maximum Battery Configuration	Maximum Back-up (min.) with 100% load		UPS Rating (kVA)
A	2 x 27 x 9Ah	28 (PF=0.8) 20 (PF=0.8) 14 (PF=0.8) 12 (PF=0.8)	33 (PF=0.7) 23 (PF=0.7) 18 (PF=0.7) 14 (PF=0.7)	7.5 10 12 15
B	3 x 48 x 9Ah	96 (PF=0.8) 66 (PF=0.8) 52 (PF=0.8) 40 (PF=0.8) 26 (PF=0.8)	110 (PF=0.7) 78 (PF=0.7) 62 (PF=0.7) 46 (PF=0.7) 30 (PF=0.7)	7.5 10 12 15 20
		16 (PF=0.8) 11 (PF=0.8)		30 40
C	2 x 40 x 28Ah	130 (PF=0.8) 76 (PF=0.8) 60 (PF=0.8) 35 (PF=0.8) 28 (PF=0.8)		10 15 20 30 40

* Cabinet (WxHxD): A 335x809x767mm / B 450x1250x830mm / C 550x1600x830mm

Options

Monitoring and control data are shown on an easy-to-understand front panel display featuring pushbutton controls, LCD readout for event logs and diagnostics and a mimic diagram for system status.

Wavemon shutdown and management software is compatible with all common operation systems.

The power protection system can be remotely monitored via RS232, volt-free relays or via SNMP Adapter.

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American Express
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AXA Insurance
Bank Renaissance Moscow
Bank Vontobel AG
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BNFL (British Nuclear Fuels Ltd.)
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Newave Certifications & Recognitions

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