

VISION UPS
UPS PRODUCT CATALOGUE

2012

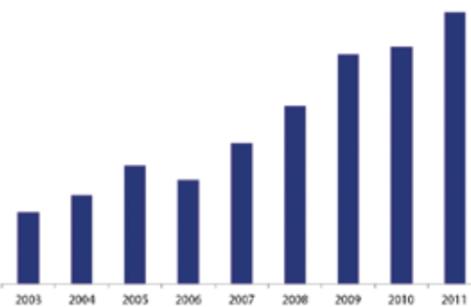


VISION UPS Systems S. à r. l.

About VISION UPS

VISION UPS SYSTEMS S. à r. l. was established in 2003 by the two belgian UPS-specialists Patrick Willems and Ralph Collas based on the experience which was gained in the course of 20 years work in the UPS sector.

VISION UPS quickly gained currency on four continents and is at the present day a worldwide appreciated manufacturer of UPS and AC and DC systems. Equipment made by VISION UPS demonstrates its quality and reliability not only in Europe but also under severe conditions in Africa and Asia.



In 2009 VISION UPS established its representation in Russia, which is concerned with support service for customers in Eastern Europe and Asia.

The philosophy of VISION

European quality for the best price

Shortest delivery time

Individual solutions in cooperation with the customer

Wide product range

Unique products for your requirements

Service and training center in Luxembourg

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XL - tower and rackmount version "2 in 1"

+ - with galvanic isolation transformer for phase

++ - with galvanic isolation transformer for phase and neutral

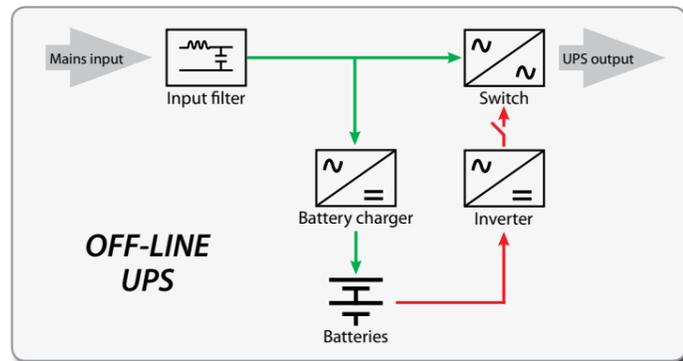
II - allows parallel connection (up to 4 units)

3 UPS Technologies

OFF-LINE TECHNOLOGY

(VFD - voltage & frequency dependent)

Passive standby topology (off-line) is the most frequently used UPS topology for **protecting against blackout**. In normal mode, the UPS supplies power to the application directly from the mains, filtered but without active conversion. The battery is charged from the mains. In the event of a power cut or fluctuation, the UPS delivers stable power from the battery. The advantages of this topology are low cost and adequacy for office environments. Passive standby topology is not suitable if the power supply is of lower quality (industrial sites).

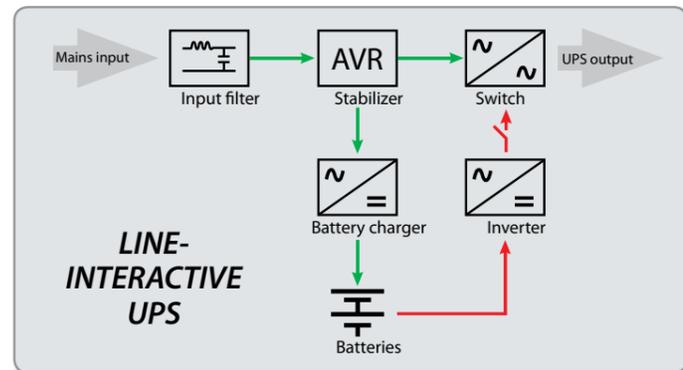


OFF-LINE UPS

LINE-INTERACTIVE TECHNOLOGY

(VI - voltage independent)

Line interactive topology is mostly used for enterprise networks and IT applications. It **protects from blackout, undervoltage and overvoltage**. In normal mode, the device is controlled by a microprocessor that monitors the quality of the supply and reacts to fluctuations. A voltage stabilizer (AVR) is enabled to boost or reduce the supply voltage to compensate for the fluctuations. The main advantage of this topology is that it enables compensation of under and overvoltage without using the batteries.

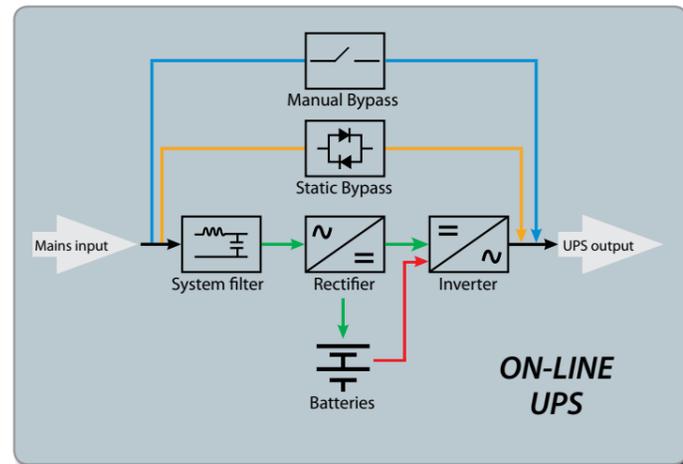


LINE-INTERACTIVE UPS

ON-LINE TECHNOLOGY

(VFI - voltage and frequency independent)

Double conversion topology (on-line) is a basis for UPS designed for continuous power **protection from all eight power problems: power failure, undervoltage, overvoltage, frequency variation, voltage harmonics, voltage distortion, high-frequency transient, power surge** (with galvanic isolation). It ensures a consistent quality of power supply regardless of disturbances in the incoming mains. The output voltage is entirely regenerated by a sequence of AC to DC conversion followed by DC to AC conversion in order to create power supply without any electrical interference. Double conversion UPSs can be used with any type of equipment as there is no switching when changing over to battery power.



ON-LINE UPS

- Operation in normal mode
- Operation in battery mode
- Operation in static Bypass
- Operation in manual Bypass

Technical problems

VISION solutions



Blackout

OFF-LINE TECHNOLOGY

Due to the lower protection level, this type is not recommended/produced by VISION UPS



Overvoltage

LINE-INTERACTIVE TECHNOLOGY

- | | |
|---|---|
| Square wave output
Budget (p.10-13)
Pro Blue (p.14)
Pro Blue rackmount
(p.14) | Pure sine wave output
Jupiter Pro (p.16)
Jupiter XL (p.18)
Marathon (p.36) |
|---|---|



Undervoltage



Frequency variation

ON-LINE TECHNOLOGY

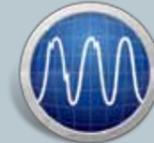
- Single-phase UPS (1/1)
 - Spirit / Vision LCD (p.20/24)
 - Spirit XL / Vision XL (p.22/26)
 - Marathon (p.36-39)
- Single-phase UPS (3/1)
 - Vision II (p.30)
 - Vision XL II (p.28)
- Three-phase UPS (3/3)
 - Premium DSP (p.32)
 - Marathon three-phase (p.42)
 - Vision Modular UPS (p.44-47)



Voltage harmonics



Voltage distortion



High-frequency transient

INCLUDING GALVANIC ISOLATION TRANSFORMER

- Marathon + (p.40), Vision II + (p.30)
- Premium DSP + / ++ (p.32), Premium 33 + (p.34)



Power surge
(Lightning,...)

FIELDS OF APPLICATION



Home
PC
Workstation

BUDGET 650-2000VA	PRO BLUE 650-1600VA	MARATHON 3/3 20kVA
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Small offices
SOHO

PRO BLUE 650-1600VA	JUPITER PRO 1000-3000VA PURE SINE WAVE	JUPITER XL 1500-4000VA PURE SINE WAVE	SPIRIT 1-3kVA
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Healthcare
Security systems
Broadcast

SPIRIT XL 1-3kVA	VISION XL (II) 1-10kVA	MARATHON XL 1-3kVA
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VISION LCD 1-3kVA	MARATHON 1-3kVA	MARATHON + 1-10kVA	VISION II (+) 6-20kVA (N+1) - "+"
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Three-phase UPS

PREMIUM DSP 10-300kVA



Datacentres
IT
Servers
Telecom
VoIP

SPIRIT XL 1-3kVA	VISION XL (II) 1-10kVA	MARATHON XL 1-3kVA
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VISION II (+) 6-20kVA (N+1) - "+"	PREMIUM DSP 10-300kVA	PREMIUM 33 + 10-200kVA
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Three-phase UPS

Modular UPS

VISION MOD MODULES 6-10kVA	VISION MOD MODULES 20kVA
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Industry
Airports
Oil&Gas
Government
Education

MARATHON + 1-10kVA	VISION II (+) 6-20kVA (N+1) - "+"
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PREMIUM DSP 10-300kVA	PREMIUM 33 + 10-200kVA
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Three-phase UPS

Modular UPS

VISION MOD MODULES 6-10kVA	VISION MOD MODULES 20kVA
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UNINTERRUPTIBLE POWER SUPPLY

VISION - MORE THAN UPS...

LINE-INTERACTIVE

ON-LINE (1/1)

ON-LINE
(3/1 - 3/3)

MARATHON
LONG BACKUP SERIES
WITH BIG CHARGER AND
EXTERNAL BATTERIES

MODULAR UPS
(1/1 - 3/1 - 3/3)

BUDGET 650-2000VA	PRO BLUE 650-1600VA	JUPITER PRO 1000-3000VA PURE SINE WAVE	JUPITER XL 1500-4000VA PURE SINE WAVE
SPIRIT (XL) 1-3kVA	VISION LCD 1-3kVA	VISION XL (II) 1-10kVA	VISION II (+) 1-10kVA
VISION II (+) 10-20kVA	PREMIUM DSP 10-300kVA (+/++)	PREMIUM 33+ 10-200kVA	
MARATHON 1-3kVA	MARATHON XL 1-3kVA	MARATHON + 1-10kVA	MARATHON 3/3 20kVA
VISION MOD MODULES 6-10kVA 1/1 3/1	VISION MOD MODULES 20kVA 3/3	XL - TOWER AND RACKMOUNT VERSION "2 IN 1" + - WITH GALVANIC ISOLATION TRANSFORMER II - ALLOWS PARALLEL CONNECTION (UP TO 4 UNITS)	

VOLTAGE STABILIZERS
ACTIVE POWER FILTER

RECTIFIERS
INDUSTRIAL/TELECOM

INVERTERS
INDUSTRIAL/TELECOM

BATTERIES
BATTERY ANALYZER

LIGHTNING
PROTECTION

SOLAR
TECHNOLOGY

STABILIZERS 1/1 1-10kVA	STABILIZERS 3/3 3-1000kVA	VISION APF 30-960A	
RECTIFIERS THYRISTOR OUTPUT 12-220VDC	RECTIFIERS IGBT OUTPUT 12-110VDC	VIS-RECTIFIERS TELECOM OUTPUT 48VDC	CHARGERS OUTPUT 12/24/48VDC
ST-INVERTERS INPUT 12VDC 1-4KW PARALLEL	INV-SERIES INPUT 48VDC	SA-SERIES INPUT 24/48/110/220VDC	SB-INVERTERS INPUT 48VDC
VRLA 12V/7-200AH	BATTERY ANALYZER NEW DEVELOPMENT!		
LIGHTNING PROTECTION ALL APPLICATIONS	LIGHTNING PROTECTION OIL/GAS	SPIKE PROTECTION HOME USE	
SOLAR CHARGER / CONTROLLER	SOLAR INVERTER	SOLAR PANELS	SOLAR HYBRID SOLAR UPS

BUDGET PRO

400 - 2000VA

Line-interactive technology (VI)

Automatic Voltage Regulator (AVR, "Boost and trim")

Transfer to battery at under and over voltage

Self-diagnostic function

Battery cold start

Genset-compatible

Auto-charging in Off-Mode

Auto-restart function

Automatic computer shutdown

Audible and visible alarm

Surge protection

RJ45/11 protection (EMI/RFI filtering)

USB interface including software

Options:
LCD-Display, IEC to Schuko converter

2 years warranty (electronics)



TECHNICAL CHARACTERISTICS

Nominal capacity, VA
Power, W
Voltage
Input voltage range
Voltage stabilizer (AVR)
Input frequency range
AC Output voltage (battery mode)
AC Output frequency (battery mode)
Transfer time
Waveform
Battery (voltage and amount)
Backup time
Typical recharge time
Outlets IEC (Schuko on request)
Interface
Protection
Visual indication
Acoustic indication
Humidity / Noise level
Dimensions WxDxH
Weight
Warranty
Software

400	600	800	1000	1200	1500	2000
240	360	480	600	720	900	1200
220/230/240V / 110/120V						
162-290V / 81-145V						
Boost and trim						
50/60Hz (auto sensing)						
+- 0%						
50/60Hz +-1Hz						
typical: 2-6ms / maximum: 10ms						
Square wave (simulated sine wave)						
12V (1x 4,5Ah)	12V (1x 7Ah)	12V (1x 9Ah)	24V (2x 7Ah)	24V (2x 9Ah)		
5-10 minutes						
6-8 hours recover to 90% capacity						
4 outlets (400-1200VA) / 6 outlets (1500-2000VA)						
USB-port						
RJ45/11 (telephone/modem) overload - short circuit - discharge - overcharge						
LED: AC-Mode / Battery-Mode / Alarm (optional: LCD-display)						
Battery mode - low battery - overload - battery replacement alarm - fault						
0-90% @ 0-40° (non condensing) / less than 40dB						
101x302x142mm		149x338x160mm		158x380x196mm		
3,6kg	4,3kg	4,9kg	7,8kg	8kg	11,1kg	11,5kg
2 years (electronics)						
for Windows, Mac, Linux						

Uninterruptible Power Supplies
Solartechnology
Telecomsystems
DC Products
Stabilizers
Batteries



BUDGET

650 / 1200 / 1500VA

Line-interactive technology (VI)

Transfer to battery at under and over voltage

Automatic Voltage Regulator (AVR, "Boost and trim")

RJ11 protection (EMI/RFI filtering)
Battery (DC) cold start

Automatic computer
shutdown

Audible and visible alarm

Surge protection

DB9 interface
including software

Option:
IEC to Schuko converter

2 years warranty (electronics)



TECHNICAL CHARACTERISTICS



Nominal capacity, VA	650	1200	1500
Power, W	390	720	900
Input voltage range	165 - 265VAC		
Voltage stabilizer (AVR)	Boost & Trim		
Input frequency range	50Hz		
Output waveform	Square wave (simulated sine wave)		
Output voltage (Line mode)	220/230VAC (± 10%)		
Output voltage (Battery mode)	220/230VAC (± 5%)		
Output frequency (Battery mode)	50Hz (± 1%)		
Battery (capacity x amount)	7Ah x 1	7Ah x 2	9Ah x 2
Backup time (typical computer load)	10min		
IEC outlets (amount)	3	4	
Interface	DB9		
Dimensions WxHxD (Weight kg)	96x163x320mm (5,2kg)	127x223x390mm (10,0kg)	127x223x390mm (12,8kg)
RJ11 protection (telephone)	✓		
Overload protection	✓		
Short circuit protection	✓		
Warranty	2 years (electronics)		
Software (RUPS)	for Windows, Mac, Linux		

PRO BLUE

650 - 1600VA

Line-interactive technology (VI)

Transfer to battery at under and over voltage

UPS with intelligent LCD Display

Automatic computer shutdown

Automatic Voltage Regulator (AVR, "Boost and Trim")

Very wide input and voltage range

Up to 65 min runtime

Battery (DC) cold start

Overload and short circuit protection

RJ11 telephone line protection

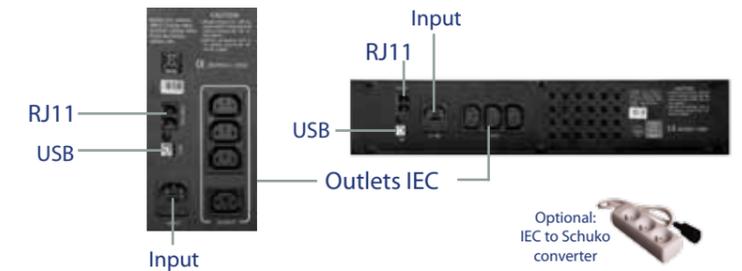
Audible and visible alarm

USB interface including software

2 years warranty (electronics)



TECHNICAL CHARACTERISTICS



Nominal capacity, VA	650	750	1000	1200	1600
Power, W	390	450	600	720	960
Input voltage range	165 - 265VAC				
Voltage stabilizer (AVR)	Boost & Trim				
Input frequency range	50Hz				
Output waveform	Square wave (simulated sine wave)				
Output voltage (Line Mode)	220/230VAC (± 10%)				
Output voltage (Battery mode)	220/230VAC (± 5%)				
Output frequency (Battery mode)	50Hz (± 1%)				
Battery (capacity x amount)	7Ah x 1	9Ah x 1	7Ah x 2	9Ah x 2	9Ah x 2
Backup time (typical computer load)	10-35min		10-65min		
IEC outlets (amount)	3		4		
Interface	Interface USB				
RJ11/RJ45 protection	✓				
Tower: Dimensions HxWxD (Weight kg)	159x95 x325mm (5,2kg)	159x95 x325mm (6,0kg)	222x124 x325mm (10,6kg)	222x124 x325mm (11,1kg)	222x124 x385mm (13,1kg)
Rack 19": Dimensions HxWxD (Weight kg)	-	2Ux483 x310mm (8,7kg)	2Ux483 x310mm (12,5kg)	2Ux483 x310mm (13,2kg)	3Ux483 x310mm (15,8kg)
Protection from overload and short circuit	✓				
Noise suppression	✓				
Warranty	2 years (electronics)				
Software (UPSilon 2000)	for Windows, Mac, Linux				

JUPITER PRO

1000 - 3000VA

Line-interactive technology (VI)
with pure sine wave

Automatic Voltage Regulator (AVR, "Boost and Trim")

Battery transfer at under and over voltage

Including software for automatic
computer shutdown

Internal static and manual bypass

Pure sinewave output

Intelligent LCD display

Battery (DC) cold start

Audible and visible alarm
Overload and short circuit protection
RJ11 protection, surge protection

USB interface

Option:
SNMP-card

2 years warranty (electronics)



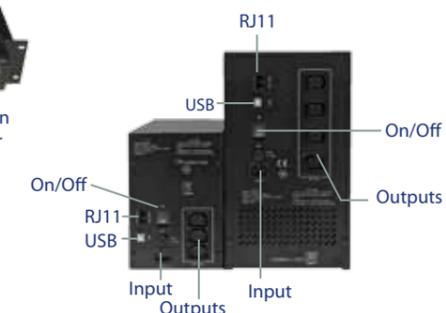
TECHNICAL CHARACTERISTICS



Jupiter Pro RM rackmount version
1/2/3kVA - optional 12A charger
(on request)



Optional:
IEC to Schuko
converter



Labels for rear panel: RJ11, USB, On/Off, Outputs, Input, Output, Input, On/Off, RJ11, USB, Input, Output.

Nominal capacity, VA	1000	1500	2000	3000
Power, W	600	900	1200	1800
Input voltage range	165 - 280VAC (option: 145-280VAC)			
Voltage stabilizer (AVR)	Boost & Trim			
Input frequency range	50/60Hz			
Output voltage (Line mode)	190 - 245VAC			
Output voltage (Battery mode)	220/230VAC (± 5%) - pure sine wave			
Output frequency (Battery mode)	50/60Hz (± 1%)			
Battery (capacity x amount)	7Ah x 2	8Ah x 2	8Ah x 3	8Ah x 4
Backup time	over 10-35min (for IT-load)			
IEC outlets (amount)	3/4			
Interface	USB (standard) SNMP (Option)			
RJ11 protection	Standard			
Dimensions WxDxH - Weight	145x360x215mm 11,5kg	145x360x215mm 13,2kg	145x430x215mm 17,9kg	200x475x337mm 26,3kg
Overload protection	✓			
Short circuit protection	✓			
Noise suppression	✓			
Warranty	2 years (electronics)			
Software (UPSilon 2000)	for Windows, Mac, Linux			

JUPITER XL

1500 - 4000VA

Line-interactive technology (VI)
 with pure sine wave

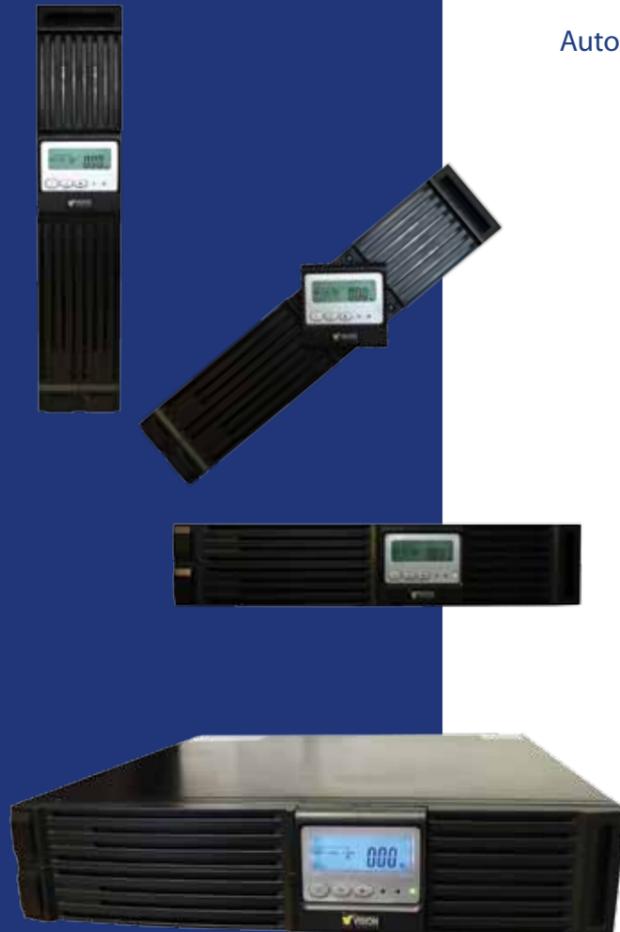
- Automatic Voltage Regulator (AVR, "Boost and Trim")
- Transfer to battery at under and over voltage
- Hot swappable battery replacement
- Optional additional backup time
- User-friendly LCD display
- Pure sinewave output
- 4A charger
- Battery (DC) cold start
- Large backup time
- Input voltage range from 150-320V
- Rack & Tower - 2 in 1 design

- RJ11/45 phone / network protection
- Overload and short circuit protection

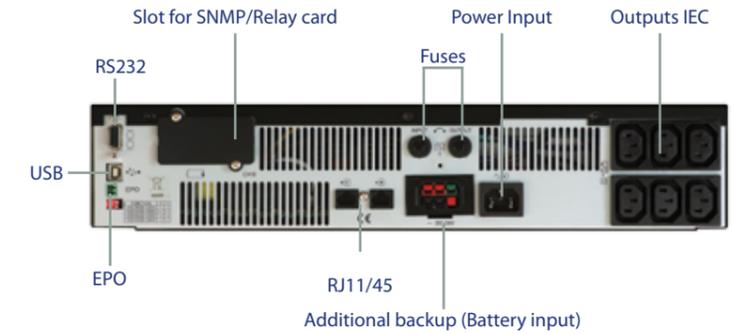
- EPO (Emergency Power Off)
- True RS232/USB interface including software

- Options:
- SNMP - Relay - AS400 card
 - Audible and visible alarm

2 years warranty (electronics)



TECHNICAL CHARACTERISTICS



Nominal capacity, VA	1500	2000	3000	4000
Power, W	900	1350	1980	2700
Input voltage range	165 - 300VAC			
Voltage stabilizer (AVR)	Boost & Trim			
Input frequency range	50/60Hz			
Output voltage (Line mode)	220/230VAC (± 9%)			
Output voltage (Battery mode)	220/230/240VAC (± 3%) - pure sine wave			
Output frequency (Battery mode)	50/60Hz (± 0,1%)			
Battery (capacity x amount)	7Ah x 4	9Ah x 4	7Ah x 8	9Ah x 8
Backup time	> 10 minutes at 100% load			
IEC outlets (amount)	6 (optional: 19" module with 4 IEC and 2 Schuko outlets)			
Interface	RS232 - USB - EPO			
RJ11/RJ45 protection	✓			
Dimensions HxWxD (Weight kg)	88x440x485mm (23,7kg)	88x440x690mm (26,2kg)	88x440x690mm (42kg)	88x440x690mm (46kg)
Overload protection	✓			
Short circuit protection	✓			
Noise suppression	✓			
Warranty	2 years (electronics)			
Software (UPSilon2000)	for Windows, Mac, Linux			

SPIRIT

1000-3000VA

On-line „Double conversion“ technology (VFI)

DSP (Digital Signal Processor) technology

Internal static and manual bypass

Input Power Factor up to 0.99

Wide input voltage range

Rack / Tower (XL design)

Battery (DC) cold start

Site wiring fault indication

Self testing when UPS startup

RJ45/11 network protection

Intelligent management through RS232 & USB

For extended backup time check MARATHON series (external batteries)

Options:

SNMP adapter

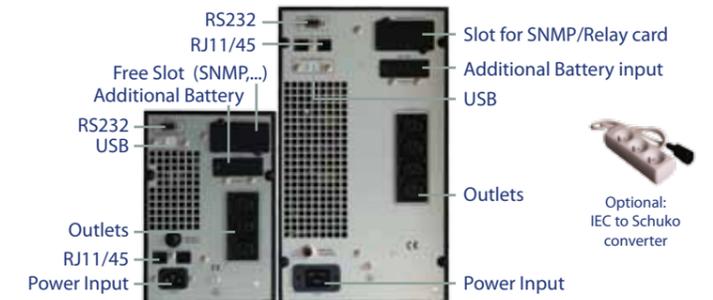
Relay card (dry contacts)

External maintenance Bypass

2 years warranty (electronics)



TECHNICAL CHARACTERISTICS



Model	1000VA	2000VA	3000VA
Power	800W	1600W	2400W
Input			
Minimum voltage	115VAC (at 50% load)		
Maximum voltage	295VAC		
Frequency	45Hz~55Hz±0.5Hz or 55Hz~65Hz±0.5Hz (Auto sensing)		
Input power factor	≥0.99		
Bypass voltage range	186-252VAC		
Harmonic distortion (THD)	≤7% at 100% non-linear load		
Output			
Voltage	200 / 208 / 220 / 230 / 240VAC		
Waveform	Pure sine wave		
Harmonic distortion (THD)	< 3% at 100% linear load		
Frequency	50/60Hz ±0.2%		
Voltage stabilization	± 2%		
Crest factor	3 : 1		
Efficiency	86% (Utility Mode) / 94% (Battery Mode)		
Battery			
Type	VRLA		
Voltage	24VDC (2x9Ah)	48VDC (4x9Ah)	72VDC (6x9Ah)
Backup time	5-8min with internal batteries / variable with external batteries		
Power of the internal charger	1A	1A	1A
Protection			
RJ11/45 protection	Yes		
Input / Output protection against	Overload - Temperature - Short circuit		
Overload in battery mode	108%±5%<Load≤150%±5% exceed 30s, cut off and alarm 150%±5%<Load<200%±5% exceed 300ms, cut off and alarm		
Overload in utility mode	108%±5%<Load≤150%±5% exceed 30s transfer to bypass and alarm 150%±5%<Load<200%±5% exceed 300ms transfer to bypass and alarm		
Alarms - Information			
Audible alarm	Beeping sound for battery backup, battery low, overload status, fault status		
LED-Alarm	Mains, inverter, bypass, fault, battery level		
LCD-Display	Input & output voltage, load, battery voltage, error codes		
Bypass			
Type	Internal static (automatic) and manual bypass / External bypass optional		
Environment			
Temperature / Altitude / Humidity	0-40°C / less than 1500m / 0-95% non-condensing		
Audible noise at 1m	< 50dBA		
Interface			
Standard	RS232 / USB		
Optional	SNMP card / Dry contact (relay) card		
Dimensions			
Weight	10,5kg	22kg	27kg
WxDxH	144x361x215mm		191x428x337mm
Standard	CE-Certificate		

SPIRIT XL

1 - 3kVA (1/1)

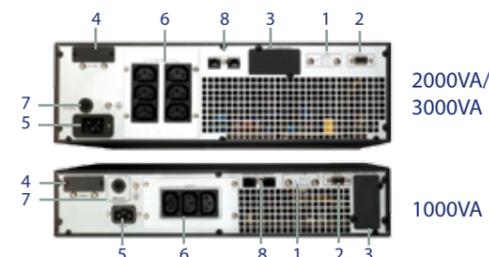


- On-line „Double conversion“ technology (VFI)
- DSP (Digital Signal Processor) technology
- Internal static and manual bypass
- Input Power Factor up to 0.99
- Wide input voltage range
- Rack / Tower (XL design)
- Battery (DC) cold start
- Site wiring fault indication
- Self testing when UPS startup
- RJ45/11 network protection
- Intelligent management through RS232 & USB
- For extended backup time check MARATHON XL series (external batteries)
- Options:
 - SNMP adapter
 - Relay card (dry contacts)
 - External maintenance Bypass
- 2 years warranty (electronics)



TECHNICAL CHARACTERISTICS

- 1) USB
- 2) RS232
- 3) Slot for SNMP/Relay
- 4) Additional battery input
- 5) Power Input
- 6) Standard outlets (IEC)
- 7) Input fuse
- 8) RJ45/11 Surge protection



Model	1000VA	2000VA	3000VA
Power	800W	1600W	2400W
Input			
Minimum voltage	115VAC (at 50% load)		
Maximum voltage	295VAC		
Frequency	45Hz~55Hz±0.5Hz or 55Hz~65Hz±0.5Hz (Auto sensing)		
Input power factor	up to 0.98		
Bypass voltage range	186-252VAC		
Harmonic distortion (THD)	≤7% at 100% non-linear load		
Output			
Voltage	200 / 208 / 220 / 230 / 240VAC		
Waveform	Pure sine wave		
Harmonic distortion (THD)	< 3% at 100% linear load		
Frequency	50/60Hz +0,02Hz		
Voltage stabilization	± 2%		
Crest factor	3 : 1		
Efficiency	86% (Utility Mode) / 94% (Battery Mode)		
Battery			
Type	VRLA		
Voltage	24VDC (2x9Ah)	48VDC (4x9Ah)	72VDC (6x9Ah)
Backup time	3-5 min at full load	3-5 min at full load	3-5 min at full load
Power of the internal charger (UPS with internal batteries)	1A	1A	1A
Power of the internal charger (UPS without internal batteries)	6A or 12A	6A or 12A	6A or 12A
Additional backup time	Yes (additional 19" battery modules) and see MARATHON series		
Protection			
RJ11/45 protection	Yes		
Input / Output protection against	Overload - Temperature - Short circuit		
Overload in battery mode	108%±5%<Load≤150%±5% exceed 30s, cut off and alarm 150%±5%<Load<200%±5% exceed 300ms, cut off and alarm		
Overload in utility mode	108%±5%<Load≤150%±5% exceed 30s transfer to bypass and alarm 150%±5%<Load<200%±5% exceed 300ms transfer to bypass and alarm		
Alarms - Information			
Audible alarm	Beeping sound for battery backup, battery low, overload status, fault status		
LED-Alarm	Mains, inverter, bypass, fault, battery level		
LCD-Display	Input & output voltage, load, battery voltage, error codes		
Bypass			
Type	Internal static (automatic) and manual bypass / External bypass optional		
Standards			
Industry	CE-Certificate		
Environment			
Temperature / Altitude / Humidity	0-40°C / less than 1500m / 0-95% non-condensing		
Audible noise at 1m (1M)	< 50dBA		
Interface			
Standard	RS232 / USB		
Optional	SNMP card / Dry contact (relay) card		
Dimensions			
Weight	12kg	22kg	26kg
WxDxH	440x380x88mm (2U)	440x520x132mm (3U)	

VISION LCD



1 - 3kVA (1/1)

On-line „Double conversion“ technology (VFI)

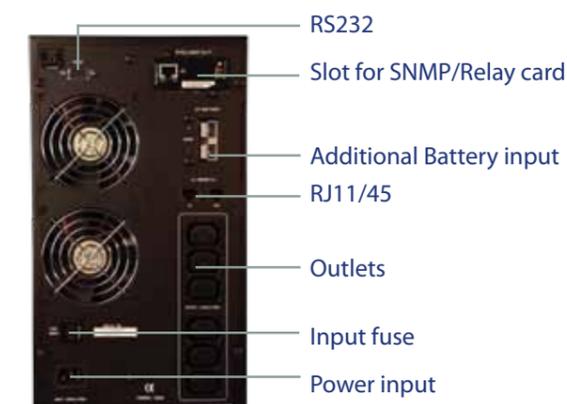
- Internal static and manual bypass
- Input Power Factor up to 0.99
- Wide input voltage range
- Battery (DC) cold start
- RJ11 network protection
- Self testing when UPS startup
- Intelligent management through RS232 & USB
- Output with less than 3% THD
- EMI/RFI noise filter

Up to 15 minutes backup time at full load with internal batteries

For extended backup time check MARATHON series (external batteries)

- Options:
- SNMP/AS400 card
 - USB Interface
 - Relay card (dry contacts)
 - External maintenance Bypass

2 years warranty (electronics)



TECHNICAL CHARACTERISTICS

	1000VA	2000VA	3000VA
Power	700W	1400W	2100W
Input			
Minimum voltage	165VAC (120VAC at 50% load)		
Maximum voltage	276VAC (300VAC at 50% load)		
Frequency	45-55Hz		
Input power factor	up to 0.95		
Bypass voltage range	190-250VAC		
Harmonic distortion (THD)	≤7% at 100% non-linear load		
Output			
Voltage	220 / 230 / 240VAC		
Waveform	Pure sine wave		
Harmonic distortion (THD)	< 3% at 100% linear load		
Frequency	50/60Hz ±0,2%		
Voltage stabilization	± 2%		
Crest factor	3 : 1		
Efficiency	up to 85%		
Battery			
Type	VRLA		
Voltage	36VDC (3x7Ah)	96VDC (8x7Ah)	96VDC (8x7Ah)
Backup time	8-15min at full load		
Power of the internal charger	1A		
Protection			
RJ11/45 protection	Yes		
Input / Output protection against	Overload - Temperature - Short circuit		
Overload in battery mode	110-150% 1 minute, then switch to bypass more than 150%: switch to bypass after 200ms		
Alarms - Information			
Audible alarm	Beeping sound for battery backup, battery low, overload status, fault status		
LED-Alarm	Mains, inverter, bypass, fault, battery level		
LCD-Display	Input & output voltage, load, battery voltage, error codes		
Bypass			
Type	Internal static (automatic) and manual bypass / External bypass optional		
Environment			
Temperature / Altitude / Humidity	0-40°C / less than 1500m / 10-90%		
Audible noise at 1m	< 55dBA		
Interface			
Standard	RS232		
Optional	SNMP card / Dry contact (relay) card / USB		
Dimensions			
Weight (with/without batteries version)	12,1kg	27,2kg	28,2kg
WxDxH	140x405x210mm	195x470x330mm	
Standard	CE-Certificate		

VISION XL

1 - 3kVA (1/1)

On-line „Double conversion“ technology (VFI)

DSP (Digital Signal Processor) technology

Internal static and manual bypass

Input Power Factor up to 0.99

Wide input voltage range

Rack / Tower (XL design)

Battery (DC) cold start

Site wiring fault indication

RJ45/11 network protection

Self testing when UPS startup

Intelligent management through RS232 & USB

For extended backup time check

MARATHON XL series (external batteries)

EPO Contact (Emergency Power Off)

Frequency converter 50/60/50Hz

Powerful built-in charger up to 2,7A

Additional battery modules

Programmable outlets

Hot-swappable batteries

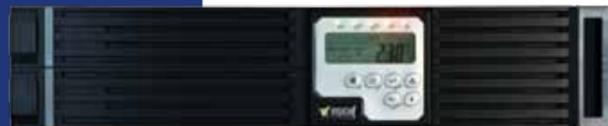
Options:

SNMP/AS400 card

Relay card (dry contacts)

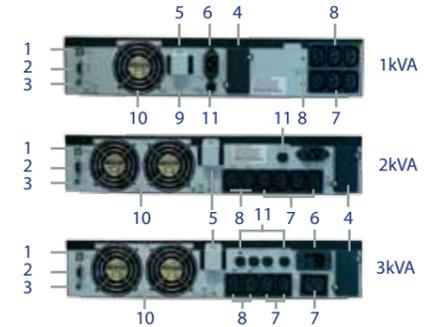
External maintenance Bypass

2 years warranty (electronics)



TECHNICAL CHARACTERISTICS

- 1) USB
- 2) RS232
- 3) EPO (Emergency Power Off)
- 4) Slot for SNMP/Relay/AS400
- 5) Additional battery input
- 6) Power Input
- 7) Standard outlets (IEC)
- 8) Programmable outlets (IEC)
- 9) Cabinet grounding
- 10) Cooling fans
- 11) Output fuses



Model	1000VA	2000VA	3000VA
Power	800W	1600W	2400W
Input			
Minimum voltage		120VAC	
Minimum voltage at full load		160VAC	
Maximum Voltage		288VAC	
Frequency		45-65Hz	
Input power factor		> 0.99	
Harmonic distortion (THD)		6%	
Output			
Voltage		208 / 220 / 230 / 240VAC	
Waveform		Pure sine wave	
Harmonic distortion (THD)		< 2%	
Frequency		50/60Hz	
Voltage stabilization		± 1%	
Crest factor		3 : 1	
Efficiency		85%	
Battery			
Type		VRLA	
Voltage	36VDC	72VDC	72VDC
Backup time	> 8min	> 8min	> 8min
Power of the internal charger	1,1A	2,1A	2,7A
Additional backup time	Yes (additional 19" battery modules) and see MARATHON series		
Protection			
Input / Output protection against	Overload - Temperature - Short circuit		
Overload protection	> 30sec at 150% - switching to bypass-mode		
Alarms - Information			
Audible alarm	Beeping sound for battery backup, battery low, overload status, fault status		
LED-Alarm	Mains, inverter, bypass, fault, battery level		
LCD-Display	Input & output voltage, load, battery voltage, error codes		
Bypass			
Type	Internal static (automatic) and manual bypass / External bypass optional		
Standards			
EMV	EN 500091-1, EN 50091-2		
Environment			
Temperature	0-40°C		
Humidity	0-95% non-condensing		
Audible noise at 1m (1M)	< 50dBA		
Interface			
RS232	Yes		
SNMP / Relay / AS400	Option (free slot)		
USB	Yes		
Dimensions			
Weight	14,5kg	27,1kg	29,8kg
WxHxD	440x88(2U)x405mm	440x88(2U)x650mm	440(2U)x88x650mm

VISION XL II

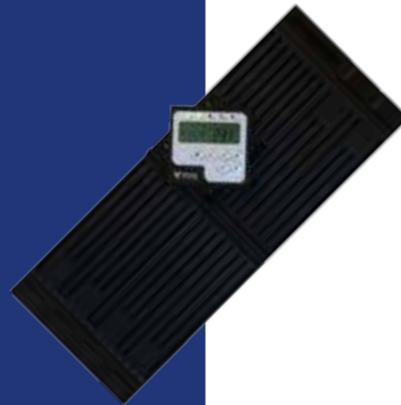
6kVA (1/1) 10kVA (1/1, 3/1)

On-line „Double conversion“ technology (VFI)

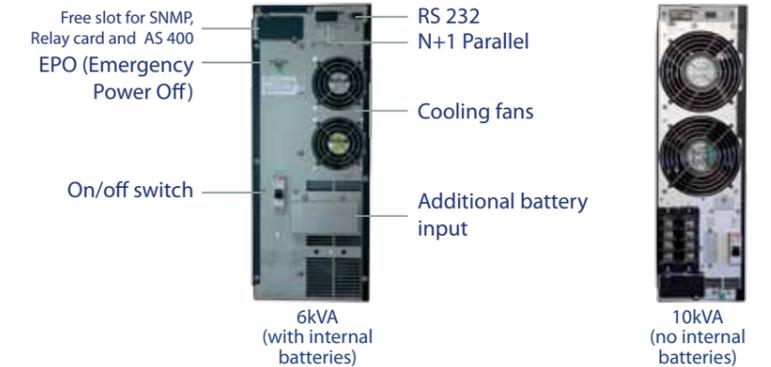
- Input power factor up to 0.99
- DSP (Digital Signal Processor) technology
- Parallel Redundancy On Line UPS (Up to 4 units)
- Programmable frequency through front panel
- LED-LCD front panel (easily controlling)
- Wide input voltage range (160V-280V)
- ECO-Mode for energy-saving
- Internal static and manual bypass
- EPO (Emergency Power Off) contact
- Extended runtime (Plug & Play)
- Rack/Tower (XL-design)
- Galvanic isolation (optional)
- Battery (DC) cold start
- RS232 interface
- Inductive load acceptable

- Options:
- SNMP/AS400 Card
 - Relay card (dry contacts)
 - External battery charger
 - External maintenance bypass

2 years warranty (electronics)



TECHNICAL CHARACTERISTICS



Nominal capacity	
Power	
Input	
Input voltage range (1/1 and 3/1)	
Frequency	
Input power factor	
Harmonic distortion (THD)	
Output	
Voltage and Waveform	
Harmonic distortion (THD)	
Frequency	
Voltage Stabilization	
Crest factor	
Efficiency	
Battery	
Type and voltage VDC	
Power of the internal charger	
Backup time (at full/half load)	
Additional batteries for long backup time	
Protection	
Input / Output	
Overload, inverter protection	
Overload, bypass protection	
Alarms - Information	
Audible alarm	
Visual alarm	
LCD-Display	
Bypass	
Type	
Standards	
EMV	
Protection class	
Interface	
RS232 / Relay card	
AS400 / SNMP / EPO	
Dimensions Vision II 6kVA	
Module	
Weight	
WxHxD	
Dimensions Vision II 10kVA	
Module	
Weight	
WxHxD	

	6kVA (1/1)	10kVA (1/1 - 3/1)
Power	5,4kW (1/1)	9kW (1/1 - 3/1)
Input voltage range (1/1 and 3/1)	160-280VAC / 277-485VAC	
Frequency	45-65Hz	
Input power factor	> 0.97 (at linear load)	
Harmonic distortion (THD)	< 5% at 100% linear load	
Output		
Voltage and Waveform	208 / 220 / 230 / 240VAC - Pure sine wave	
Harmonic distortion (THD)	< 2%	
Frequency	50/60Hz	
Voltage Stabilization	±2%	
Crest factor	3:1	
Efficiency	Up to 91%	
Battery		
Type and voltage VDC	VRLA - 240VDC (20 batteries)	
Power of the internal charger	2A (optional: additional chargers)	
Backup time (at full/half load)	5-15min	
Additional batteries for long backup time	Yes (Option)	
Protection		
Input / Output	Overload, Overheating, Short Circuit, Battery Low, Noise and Spike Suppression	
Overload, inverter protection	105-150% for 160 Seconds	
Overload, bypass protection	105-200% for 500 Seconds	
Alarms - Information		
Audible alarm	Beeping sound for Line Failure, Battery Low, Bypass - Overload Status, Fault Status	
Visual alarm	Line - Backup - Eco Mode, Bypass, Battery Low/Bad/Disconnect, Overload, Fault	
LCD-Display	Voltage/Frequency, Load %, Battery Voltage, Inner Temperature	
Bypass		
Type	Internal static (automatic) and manual bypass / External bypass optional	
Standards		
EMV	EN 500091-1, EN 50091-2, UL1778, EN61000-3-2, EN61000-3-3, FCC Class A	
Protection class	IP20	
Interface	Yes / Option	
RS232 / Relay card	Option / Option / Yes	
AS400 / SNMP / EPO	Option / Option / Yes	
Dimensions Vision II 6kVA		
Module	Battery module	Galvanic isolation
Weight	58,0kg	42,0kg
WxHxD	440x176x660mm (4U)	440x133x660mm (3U) 440x88x660mm (2U)
Dimensions Vision II 10kVA		
Module	Battery module	Galvanic isolation
Weight	30,0kg	42,0kg
WxHxD	440x133x660mm (3U)	440x133x660mm (3U) 440x88x660mm (2U)

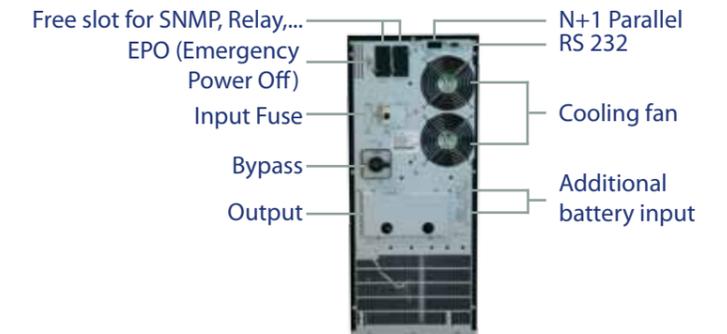
VISION II (+)

6-20kVA (1/1 - 3/1)

- On-line „Double conversion“ technology (VFI)
- Input power factor up to 0.99
- DSP (Digital Signal Processor) technology
- Parallel Redundancy On-line UPS (up to 4 Units)
- Programmable frequency through front panel
- Internal static and manual bypass
- LED-LCD front panel (easily controlling)
- Wide input voltage range (160V - 280V)
- Extended runtime (Plug & Play)
- Galvanic isolation (Vision II +)
- Eco-mode for energy-saving
- Battery (DC) cold start
- Inductive load acceptable
- Self testing when UPS start up
- RS232-Interface
- EPO (Emergency Power Off)
- Options:
 - SNMP/AS400 card
 - Relay card (dry contacts)
 - External battery charger
 - External maintenance Bypass
- 2 years warranty (electronics)



TECHNICAL CHARACTERISTICS



Model	6kVA	10kVA	10kVA	15kVA	20kVA
Power	5,4kW	9kW	9kW	13,5kW	18kW
Input					
Minimum voltage	160VAC		277VAC		
Maximum voltage	280VAC		485VAC		
Frequency	45Hz - 65Hz				
Input power factor at 100% linear load	> 99%			> 95%	
Harmonic distortion (THD) at 100% linear load	< 5%			< 30%	
Output					
Voltage	208/220/230/240VAC		200/220/230/240VAC (208/120 - Option)		
Waveform	Pure sine wave				
Harmonic distortion (THD)	2%				
Frequency	50/60Hz ± 0,2%				
Output voltage range	± 2 %				
Crest factor	3 : 1				
Efficiency	Up to 91% (ECO mode up to 98%)			> 90% (without transformer)	
Battery					
Type and voltage (VDC)	VRLA - 240VDC (20 batteries)				
Backup time (at full/half load)	10-25min (additional batteries optional)				
Additional batteries for long backup time	Yes		Only external batteries		
Protection					
Galvanic isolation transformer	Yes (= Vision II+)				
Input / Output	Overload, Overheating, Short Circuit, Battery Low, Noise and Spike Suppression				
Overload protection	Inverter: 105-150% - 160sec / Bypass: 105-200% - 500sec				
Alarms and information					
Audible alarms	Sound for Line Failure, Battery Low, Bypass - Overload Status, Fault Status				
LEDs + LCD-Display	Line, Backup, Eco Mode, Bypass, Battery Low/Bad/Disconnect, Overload, Fault				
LCD-Display	Voltage/Frequency, Load %, Battery Voltage, Temperature, Error code				
Bypass					
Type	Internal static (automatic) and manual bypass / External bypass optional				
Standarts	EN 500091-1, EN 50091-2, UL1778, EN61000-3-2, EN61000-3-3, FCC Class A				
EM-conformity	IP20				
Protection class					
Environment					
Temperature	0-40°C				
Humidity	0-95%				
Noise (1M)	< 50dB				
Interface					
RS232 / EPO	Yes				
Relay card / AS400 / USB / RS485 / SNMP	Option				
Dimensions					
Weight (with galvanic isolation)	122kg	143kg	130kg		
Dimensions: WxHxD (with galvanic isolation)	290x748x645mm	290x881x645mm	290x1014x645mm		
Weight (without galvanic isolation)	87kg	100kg	60kg (no batteries)		
Dimensions: WxHxD (without galvanic isolation)	290x748x645mm	290x748x645mm	290x748x645mm		

PREMIUM DSP

PREMIUM DSP +
 with galvanic isolation for phase

PREMIUM DSP ++
 with galvanic isolation
 for phase, neutral and bypass



10 - 300kVA (3/3)

- On-line „Double conversion“ technology (VFI)
- Parallel redundancy On-line UPS (up to 4 units)
- DSP (Digital Signal Processor) technology
- Charger-boost if load is less than 100%
- IGBT technology (rectifier&inverter)
- Internal static and manual bypass
- Input Power Factor up to 0,99
- ECO-Mode for energy-saving
- Self testing when UPS start up
- Optional battery runtime
- Inductive load acceptable
- Wide input voltage range
- LCD-LED Display
- Audible and visible alarms
- Intelligent management via RS232
- EPO (Emergency Power Off)
- Relay card (dry contacts)

- Options:
 SNMP/AS400 card,
 Remote LCD panel
 External maintenance Bypass

1 year warranty (electronics)

TECHNICAL CHARACTERISTICS

Model (kVA)	
Power (kW)	
Input	
Minimum voltage	
Maximum voltage	
Frequency	
Input Power Factor	
Harmonic distortion (THD)	
Output	
Voltage	
Waveform	
Harmonic distortion (THD)	
Frequency	
Output voltage range	
Crest factor	
Efficiency	
Bypass	
Battery	
Type and voltage	
Backup time	
Protection	
Input / Output	
Overload protection at load 100 - 125% / 125 - 150%	
Alarms - Information	
Audible alarm	
LED-Alarm	
LCD-Display	
Standards	
EMV	
Protection class	
Environment	
Temperature / Humidity	
Noise	
Interface	
RS232 / Relay card	
AS400 / SNMP / EPO	
Dimensions Premium DSP	
Weight (without batteries - kg)	
Width mm	
Depth mm	
Height mm	
Dimensions Premium DSP + (Premium DSP ++ on request)	
Weight (without batteries - kg)	
Width mm	
Depth mm	
Height mm	

10	15	20	30	40	60	80	100	120	160	200	250	300
8	12	16	24	32	48	64	80	96	128	160	200	240
100% load: -15% / 90% load: -45% / 60% load: -60%												
500VAC												
50/60Hz (45-65Hz)												
0.99												
< 4%												
380/400/415V (230V and 480V on request)												
Sine Wave												
< 3% linear load (Premium DSP+/++ < 1,5%) - < 5% non Linear Load (Premium DSP+/++ < 2,5%)												
50/60Hz (±1%)												
± 1%												
3:1												
95% (at 100% linear load)												
Internal static (automatic) and manual bypass / External bypass optional												
VRLA - 2x372VDC (2x31 batteries) 2x360VDC (2x30 batteries)												
10min - 2 hours (internal batteries and external battery cabinets)												
Overload, Overheating, Short Circuit, Battery Low, Noise and Spike Suppression												
10min / 1min												
Beeping sound for Line Failure, Battery Low, Bypass - Overload Status, Fault Status												
Line - Backup - Eco Mode, Bypass, Battery Low/Bad/Disconnect, Overload, Fault												
Voltage/Frequency, Load %, Battery Voltage/Runtime, Inner Temperature												
EN 50091-1, EN 50091-2, IEC 62040-3 (class VFI)												
IP20												
0-40°C / 0-95%												
< 55dB												
Yes												
Option/Option/Yes												
96	110	140	242	260	295	330	523	560	740	765		
	400		520	670	640	770		960		1610		
	780		900	730	980	760		870		1080		
	1070		1300	1530	1400	1700		1900		1930		
235	238	273	365	502	625	680	790	1200	1290	1740	1840	
	400		520		635		760		980		1610	
	780		900		1000		1025		1080		1080	
	1070		1300		1400		1685		1820		1930	

LED indication
 (Input, battery, inverter, bypass...)



LCD-Display
 (Voltage, frequency, temperature...)



PREMIUM DSP ++

PREMIUM 33 +

10 - 200kVA (3/3)

On-line „Double conversion“ technology (VFI)

Galvanic isolation transformer

LCD-LED Display

IGBT technology (inverter)

Optional battery runtime

Inductive load acceptable

Wide input voltage range

Parallel redundancy (optional)

Internal static and manual bypass

Self testing when UPS start up

Audible and visible alarm

Intelligent management via RS232

EPO (Emergency Power Off)

Relay card (dry contacts)

Options:

SNMP/AS400 card

External maintenance Bypass

1 year warranty (electronics)



TECHNICAL CHARACTERISTICS

Model (kVA)	10	15	20	30	40	60	80	100	120	160	200	
Power (kW)	8	12	16	24	32	48	64	80	96	128	160	
Input												
Minimum voltage	340VAC											
Maximum voltage	470VAC											
Frequency	50/60Hz (45 - 65Hz)											
Input Power Factor	> 0.85											
Harmonic distortion (THD)	< 5% at 100% linear load											
Output												
Voltage	380/400/415V (230V and 480V on request)											
Waveform	Pure sine wave											
Harmonic distortion (THD)	< 3% (linear load) - < 5% (non-linear load)											
Frequency	50/60Hz (± 1%)											
Output voltage range	± 1%											
Crest factor	3:1											
Efficiency	up to 90% (97% ECO Mode - Option)											
Battery												
Type	VRLA											
Voltage	360VDC											
Backup time	10min - 2 hours											
Additional batteries for long backup time	Yes - in external battery cabinet											
Protection												
Input / Output	Overload, Overheating, Short Circuit, Battery Low, Noise and Spike Suppression											
Overload protection at load 100 - 125%	10min											
Overload protection at load 125 - 150%	1min											
Alarms - Information												
Audible alarm	Beeping sound for Line Failure, Battery Low, Bypass - Overload Status, Fault Status											
LED-Alarm	Line - Backup - Eco Mode, Bypass, Battery Low/Bad/Disconnect, Overload, Fault											
LCD-Display	Voltage/Frequency, Load %, Battery Voltage/Runtime, Inner Temperature											
Bypass												
Type	Internal static (automatic) and manual bypass / External bypass optional											
Standards												
EMV	EN 500091-1, EN 50091-2, IEC 62040-3 (class VFI)											
Protection class	IP20											
Environment												
Temperature	0-40°C											
Humidity	0-95%											
Noise	< 55dB											
Interface												
RS232	Yes											
Relay card	Yes											
AS400 / SNMP / EPO	Option / Option / Yes											
Dimensions												
Weight (without batteries) - kg	240	255	270	285	490	570	600	750	810	970	1170	
WxDxH (without batteries) - mm	490x680x1200			550x800x1400			1100x800x1650					



LED indication
(Input, battery, inverter, bypass...)

LCD-Display
(Voltage, frequency, temperature...)

MARATHON

Extremely long backup-time with external batteries and big charger!



800-1500/3500VA



1000-3000VA

800-3500VA

MARATHON 800-1500/3500VA

Line-interactive technology (VI) with pure sine wave output
 Only with external batteries - big charger (10/20A adjustable)
 Wide input voltage range (130-290V)
 Fully digitalized microprocessor controlled
 Energy saving function with UPS Green Mode
 Battery (DC) cold start
 Wide application range (Rectifier/Inverter/UPS)

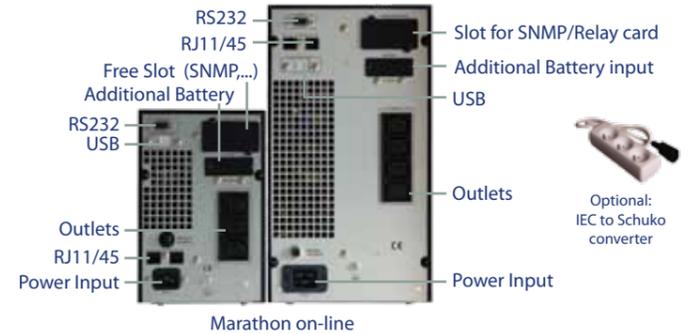
MARATHON 1000-3000VA

On-line „Double conversion“ technology (VFI)
 Only with external batteries - big charger (6/12A)
 DSP (Digital Signal Processor) technology
 ECO-Mode for energy-saving
 Internal static and manual bypass
 Intelligent management through USB-interface
 Site wiring fault indication
 Wide input voltage range
 Battery (DC) cold start
 Self testing when UPS startup
 Bypass voltage range can be set
 Optional battery runtime
 RJ45/11 network protection
 SNMP card (Option)
 Dry contacts/relay (Option)
 Input PFC up to 0.99

2 years warranty (electronics)

TECHNICAL CHARACTERISTICS

Model	
Power	
Technology	line-interactive UPS
Input	
Minimum voltage	145VAC
Maximum voltage	285VAC
Frequency	38-70Hz
Input power factor	≥0.95
Bypass voltage range	-
Output	
Voltage	220/230VAC
Waveform	Pure sine wave
Frequency	50Hz±1Hz
Voltage stabilization	220VDC±10%
Crest factor	2,5 : 1
Efficiency	≥92%
Battery	
Type	VRLA
Voltage	12VDC 24VDC 48VDC
Power of the internal charger (UPS without internal batteries)	10/20A
Protection	
RJ11/45 protection	-
Input / Output protection against	Overload - Temperature - Short circuit
Overload in battery mode	-
Overload in utility mode	-
Alarms - Information	
Audible alarm	Yes
LED-Alarm	Yes
LCD-Display	-
Bypass	
Type	-
Standards	
Industry	CE-Certificate
Environment	
Temperature / Altitude / Humidity	0-40°C / less than 1500m / 0-95%
Audible noise at 1m	< 50dB
Interface	
Standard	-
Optional	-
Dimensions	
Weight (without batteries)	13,4kg 15kg 18,6kg 27kg
WxDxH	272x285x165mm 313x295x189mm 350x230x480mm



800VA	1000VA	1500VA	3500VA	1000VA	2000VA	3000VA
640W	800W	1200W	2800W	800W	1600W	2400W
line-interactive UPS				on-line UPS		
				115VAC (at 50% load)		
				295VAC		
				45Hz~65Hz±0.5Hz (aAuto sensing)		
				≥0.99		
				186-252VAC		
				200 / 208 / 220 / 230 / 240VAC		
				Pure sine wave		
				50/60Hz ±0.2%		
				± 2%		
				3 : 1		
				86% (Utility Mode) / 94% (Battery Mode)		
				VRLA		
12VDC	24VDC	48VDC		24VDC	48VDC	72VDC
				6A or 12A	6A or 12A	6A or 12A
				Yes		
				Overload - Temperature - Short circuit		
				108%±5%<Load≤150%±5% exceed 30s		
				108%±5%<Load≤150%±5% exceed 30s		
				Battery backup, battery low, overload status, fault		
				battery backup, battery low, overload status, fault		
				Yes		
				Internal static (automatic) and manual bypass		
				CE-Certificate		
				CE-Certificate		
				0-40°C / less than 1500m / 0-95%		
				0-40°C / less than 1500m / 0-95%		
				< 50dB		
				RS232 / USB		
				SNMP / Relay card (dry contacts)		
				5,5kg	10kg	10kg
144x361x215mm	191x428x337mm	191x428x337mm				

MARATHON XL

Extremely long backup-time with external batteries and big charger!



1000 - 3000VA

On-line „Double conversion“ technology (VFI)

DSP (Digital Signal Processor) technology

Input Power Factor up to 0.99

6A or 12A charger available

ECO-Mode for energy-saving

Internal static and manual bypass

Wide input voltage range

Battery (DC) cold start

Rack / Tower (XL design)

Self testing when UPS startup

Bypass voltage range can be set

Optional battery runtime

RJ45/11 network protection

Site wiring fault indication

Intelligent management through RS232 & USB

Options:

SNMP card

Relay card (dry contacts)

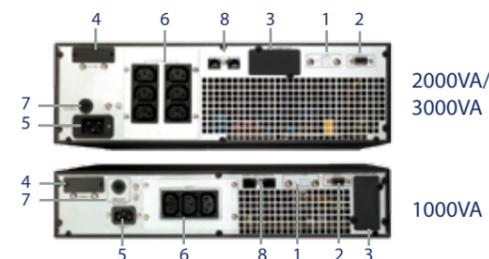
External maintenance Bypass

2 years warranty (electronics)

TECHNICAL CHARACTERISTICS

	1000VA	2000VA	3000VA
Model	1000VA	2000VA	3000VA
Power	800W	1600W	2400W
Input	115VAC (at 50% load)		
Minimum voltage	295VAC		
Maximum voltage	45Hz~55Hz±0.5Hz or 55Hz~65Hz±0.5Hz (Auto sensing)		
Frequency	up to 0.99		
Input power factor	186-252VAC		
Bypass voltage range	≤7% at 100% non-linear load		
Harmonic distortion (THD)	200 / 208 / 220 / 230 / 240VAC		
Output	Pure sine wave		
Voltage	< 3% at 100% linear load		
Waveform	50/60Hz +0,02Hz		
Harmonic distortion (THD)	± 2%		
Frequency	3 : 1		
Voltage stabilization	86% (Utility Mode) / 94% (Battery Mode)		
Crest factor	VRLA		
Efficiency	24VDC	48VDC	72VDC
Battery	According to the amount of batteries		
Type	6A or 12A		
Voltage	Yes (additional 19" battery modules)		
Backup time	Yes		
Power of the internal charger	Overload - Temperature - Short circuit		
Additional backup time	108%±5%<Load≤150%±5% exceed 30s, cut off and alarm 150%±5%<Load<200%±5% exceed 300ms, cut off and alarm		
Protection	108%±5%<Load≤150%±5% exceed 30s transfer to bypass and alarm 150%±5%<Load<200%±5% exceed 300ms transfer to bypass and alarm		
RJ11/45 protection	Beeping sound for battery backup, battery low, overload status, fault status		
Input / Output protection against	Mains, inverter, bypass, fault, battery level		
Overload in battery mode	Input & output voltage, load, battery voltage, error codes		
Overload in utility mode	Internal static (automatic) and manual bypass / External bypass optional		
Alarms - Information	CE-Certificate		
Audible alarm	0-40°C / less than 1500m / 0-95% non-condensing		
LED-Alarm	< 50dBA		
LCD-Display	RS232 / USB		
Bypass	SNMP card / Dry contact (relay) card		
Type	Internal static (automatic) and manual bypass / External bypass optional		
Standards	CE-Certificate		
Industry	0-40°C / less than 1500m / 0-95% non-condensing		
Environment	< 50dBA		
Temperature / Altitude / Humidity	RS232 / USB		
Audible noise at 1m (1M)	SNMP card / Dry contact (relay) card		
Interface	Internal static (automatic) and manual bypass / External bypass optional		
Standard	CE-Certificate		
Optional	0-40°C / less than 1500m / 0-95% non-condensing		
Dimensions	< 50dBA		
Weight (with/without batteries version)	12kg / 7kg	22kg / 12kg	26kg / 12kg
WxDxH	440x380x88mm (2U)	440x520x132mm (3U)	

- 1) USB
- 2) RS232
- 3) Slot for SNMP/Relay
- 4) Additional battery input
- 5) Power Input
- 6) Standard outlets (IEC)
- 7) Input fuse
- 8) RJ45/11 Surge protection



MARATHON +

Extremely long backup-time!



10000VA



1000-3000VA

1 -10kVA (1/1)

On-line „Double conversion“ technology (VFI)

- Galvanic isolation transformer
- Input Power Factor up to 0.98
- Wide Input voltage range 120-300VAC
- Internal static and manual bypass
- Output with less than 3% THD
- EMI/RFI noise filter
- Battery (DC) cold start
- Additional batteries for long backup time

- RJ45/11 protection for telephone and modem line
- Short circuit and overload protection

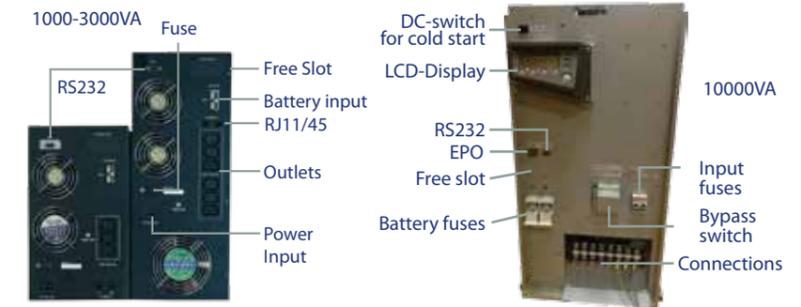
Intelligent management via RS232
 Slot for relay card and AS 400

- Extra for 10kva/8kW**
- Big charger (12A)
- Diesel-Genset Compatibility
- Suitable for inductive load

Options:
 SNMP card for monitoring
 EPO (Emergency Power Off)

2 years warranty (electronics)

TECHNICAL CHARACTERISTICS



Nominal capacity	1000VA	2000VA	3000VA	10000VA
Power	700W	1400W	2100W	8000W
Input				
Minimum voltage	165V (at 100% load) / 120V (at 50% load)			160VAC
Maximum voltage	276V (at 100% load) / 300V (at 50% load)			280VAC
Frequency	45-55Hz			45 - 65Hz
Input power factor	> 95% conform to EN605552			> 98%
Output				
Voltage	220/230VAC (± 3%)			220/230/240VAC
Waveform	Pure sine wave			
Harmonic distortion (THD)	< 3% (linear load), < 5% (non-linear load)			<2%
Frequency	50/60Hz (± 0.5%)			50/60Hz (± 0,2%)
Output voltage range	± 3%			± 2%
Crest factor	3:1			
Efficiency	> 85%			
Battery				
Type	VRLA			
Voltage (VDC)	36VDC (3x7Ah)	96VDC (8x7Ah)	96VDC (8x7Ah)	192VDC (16 batteries)
Backup time (at full/half load)	> 10min (with internal batteries)			10-25min (with internal batteries)
Additional batteries for long backup time	optional (in external cabinet)			
Protection	Yes			
Galvanic isolation transformer	Yes			
Input / Output	Overload, Overheating, Short Circuit, Battery Low, Noise and Spike Suppression			
Overload capability	130% for 30 seconds			AC-Mode: 120% for 15 minutes Inverter:120% for 30 seconds
Alarms and information	Sound for Line Failure, Battery Low, Bypass - Overload Status, Fault Status			
Audible alarm	Line, Backup, Eco Mode, Bypass, Battery Low/Bad/Disconnect, Overload, Fault			
LEDs + LCD-Display	Voltage/Frequency, Load %, Battery Voltage, Temperature, Error code			
LCD-Display				
Bypass				
Type	Internal static (automatic) and manual bypass / External bypass optional			
Standards				
EM-conformity	EN 500091-2, EN 61000-4-5, EN 61000-3-3, FCC Class A			
Protection class	IP20			
Environment				
Temperature	0-40°C			
Humidity	0-90%			
Noise (1M)	< 50dB (1m)			< 60dB (1m)
Interface				
RS232	Yes			
Relay card / AS400	Option			
USB / RS 485 / SNMP	Option			
Dimensions				
Weight	27kg	48kg	53kg	120kg / 183kg (with Battery)
Dimensions WxDxH (without batteries) - mm	190x465x330mm	190x470x475mm	190x470x475mm	400x730x842mm
Software	for Windows, Mac, Linux			
Warranty	2 years (electronics)			

MARATHON 3/3

Extremely long backup-time!

All-in-one solution
UPS+Battery+cabinet

20kVA
up to 1 ½ hours
backup time

40kVA
up to 50 minutes
backup time



20kVA/18kW (3/3)

On-line „Double conversion“ technology (VFI)

Input power factor up to 0.99

DSP (Digital Signal Processor) technology

Internal static and manual bypass

Tower/rackmount installation

Wide input voltage range 208-478VAC

Parallel connection for 2 units

Automatic load sharing for all units in parallel

Adjustable 6A charger per module

Diesel-genset compatibility

Centralized touchscreen LCD-display

Various monitoring systems

RS232/RS485/Modbus Interface

EPO (Emergency Power OFF)

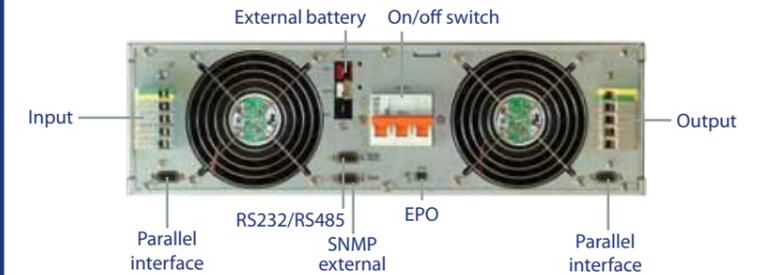
Option:

SNMP card

External maintenance bypass

1 year warranty (electronics)

TECHNICAL CHARACTERISTICS



Nominal capacity (kVA) / Power (kW)	20kVA / 18kW
Input	
Minimum voltage	208VAC
Maximum voltage	478VAC
Frequency	40 - 70Hz
Input Power Factor	>0.99
Harmonic distortion (THD)	< 3% (linear load) < 5% (non-linear load)
Output	
Voltage	380/400/415VAC (±2%)
Waveform	Pure sine wave
Frequency	Battery mode: 50/60Hz ±0,2% Utility mode: ± 1/2/4/5/10% of the rated frequency (optional)
Harmonic distortion	< 2% (linear load) / < 5% (non-linear load)
Crest factor	3:1
Efficiency	ECO-mode ≥98% / Normal mode ≥92%
Battery	
Type	VRLA
Voltage	Optional battery quantity: 384-480V (32-40 batteries)
Maximum charging current	6A
Additional backup time	External battery cabinet (Option)
Backup time	Depends on the capacity of external batteries
Protection	
Input / Output	
Overload protection	Overload, Overheating, Short Circuit, Battery Low, Noise and Spike Suppression
Overload more than 150%	≤110% - 60min / ≤125% - 10min / ≤150% - 1min Immediate shutdown of the UPS
Alarms - Information	
Audible alarm	Beeping sound for Line Failure, Battery Low, Bypass - Overload Status, Fault Status
LED-Alarm	Line - Backup - Eco Mode, Bypass, Battery Low/Bad/Disconnect, Overload, Fault
LCD-Display	Big touchscreen display 5"
Bypass	
Type	Internal static (automatic) and manual bypass / External bypass optional
Bypass voltage range	Max.voltage: +15%(optional +5/10/25%) / Min. voltage: -45% (optional -20/30%) Frequency protection range: ±10%
Standards	
Certificates	CE, EN62040-1-1 (ESD), EN62040-2 (EMI)
Protection class	IP20
Environment	
Temperature	Working temperature: 0 - 40°C Storage temperature: -25 - 55°C
Humidity	0-95% non condensing
Audible noise at 1m	<60dB / 1m
Altitude	< 1500m
Interface	
RS232 / RS485 / EPO	Yes
SNMP	Option
Dimensions	
Dimensions WxDxH	483x625x133mm (3U)
Weight	31,30kg

VISION MOD

6/10KVA MODULES

6-100kVA
(1/1 and 3/1)

On-line „Double conversion“ technology (VFI)

Input power factor up to 0.99
 Internal static and manual bypass in each module
 (no centralized bypass required)

Hot swappable power and battery modules
 Wide input voltage range 208-478VAC

Adjustable battery voltage
 (192-240VDC, 16-20 batteries)

Only one battery string for N+1 application

6A charging current per module

Adjustable charging current

Automatic load sharing

Diesel-genset compatibility

Big touchscreen LCD-display

Various monitoring systems

Multiple choice of cabinets IP20 to IP55

High overload capacity

Low noise

RS232/RS485 Interface

Relay card (dry contacts)

EPO (Emergency Power Off)

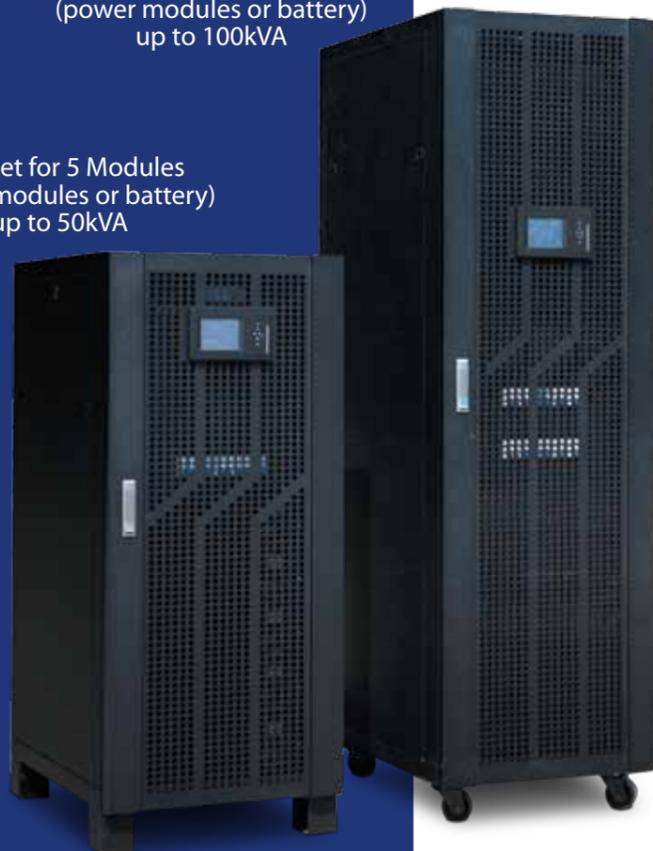
Options:

SNMP card

1 year warranty (electronics)

Cabinet for 10 Modules
 (power modules or battery)
 up to 100kVA

Cabinet for 5 Modules
 (power modules or battery)
 up to 50kVA



TECHNICAL CHARACTERISTICS



Centralized LCD Touchscreen Display



6/10kVA Power Module

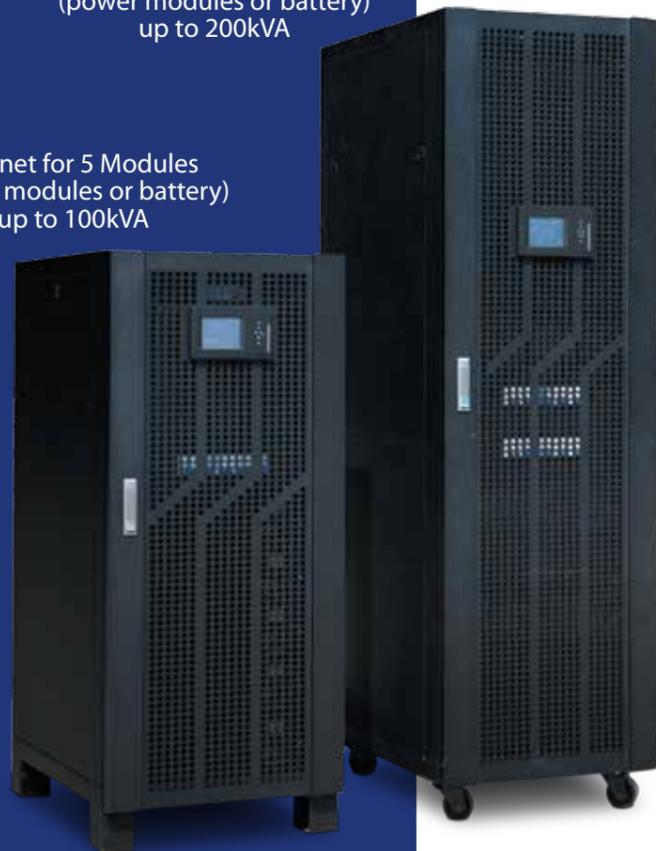
Nominal capacity (kVA) / Power (kW) per module	6kVA / 4,8kW	10kVA/8kW
Input		
Rated voltage	380/400VAC or 220/230VAC	
Voltage range	208-478VAC (3/1) or 120-276VAC (1/1)	
Frequency	40 - 70Hz	
Input Power Factor	>0.99	
Current THDi	< 5% (at 100% non-linear load)	
Output		
Voltage	220/230VAC ±2% with pure sine wave	
Frequency	50/60Hz ±0,2%	
Harmonic distortion	< 2% (linear load) / < 5% (non-linear load)	
Crest factor	3:1	
Efficiency	ECO-mode ≥98% / Normal mode ≥90%	
Battery		
Type	VRLA	
Voltage	Optional battery quantity: 192/216/240V (16-20 batteries)	
Maximum charging current	6A per module (can be set according to battery capacity installed)	
Additional backup time	Internal batteries for short backup time or external battery cabinet for long backup	
Protection		
Input / Output	Overload, Overheating, Short Circuit, Battery Low, Noise and Spike Suppression	
Overload AC-Mode	≤110% - 60min / ≤125% - 10min / ≤150% - 1min	
Overload Battery Mode	≤110% - 30sec / ≤125% - 1sec / ≤150% - 200msec	
Overload Bypass Mode	Input Breaker 40A	Input Breaker 60A
Alarms - Indication		
Audible alarm	Beeping sound for Line Failure, Battery Low, Bypass - Overload Status, Fault Status	
LED-Alarm	Line - Backup - Eco Mode, Bypass, Battery Low/Bad/Disconnect, Overload, Fault	
LCD-Display	Big touchscreen display 5"	
Bypass		
Type	Internal static (automatic) and manual bypass / External bypass optional	
Bypass voltage range	Max.voltage: +15%(optional +5/10/25%) / Min. voltage: -45% (optional -20/30%) Frequency protection range: ±10%	
Standards		
Certificates	CE, EN62040-1-1 (ESD), EN62040-2 (EMI)	
Protection class	IP20	
Environment		
Temperature	Working temperature: 0 - 40°C / Storage temperature: -25 - 55°C	
Humidity / Altitude	0-95% non condensing / < 1500m	
Audible noise at 1m	<50dB / 1m according to EN62040-2	
Interface		
In the cabinet	RS232 / RS485 / 2 free slots / dry contacts / EPO	
In the module	RS232	
Optional	SNMP-Adapter	
Dimensions of the module		
Dimensions WxDxH	6kVA / 4,8kW 443x580x131mm (3U)	10kVA/8kW 443x580x131mm (3U)
Weight	23kg	25kg
Dimensions of the battery module		
Dimensions WxDxH	Module for 18 pcs 7Ah (for 6/10kVA) 443x580x131mm (3U)	Module for 18 pcs 9Ah (for 6/10kVA) 443x580x131mm (3U)
Weight	52kg (without batteries 13,5kg)	60kg (without batteries 13,5kg)
Dimensions of the cabinet	for max. 5 modules 6/10kVA	
Dimensions WxDxH	600x840x1400mm	
Weight	150kg	
	for max. 10 modules 6/10kVA 600x840x2000mm 213kg	

VISION MOD

20KVA MODULES

Cabinet for 10 Modules
(power modules or battery)
up to 200kVA

Cabinet for 5 Modules
(power modules or battery)
up to 100kVA



20-200kVA (3/3)

On-line „Double conversion“ technology (VFI)

Input power factor up to 0.99
DSP (Digital Signal Processor) technology
Output Power Factor 0.9

Internal static and manual bypass in each module
(no centralized bypass required)

Hot swappable power and battery modules

Wide input voltage range 208-478VAC
Adjustable battery voltage
(384-480VDC, 32-40 batteries)

Only one battery string for N+1 application

6A charging current per module

Adjustable charging current

Automatic load sharing

Diesel-genset compatibility

Big touchscreen LCD-display

Various monitoring systems

Multiple choice of cabinets IP20 to IP55

High overload capacity

Low noise

RS232/RS485 Interface

Relay card (dry contacts)

EPO (Emergency Power Off)

Options:

SNMP card

1 year warranty (electronics)

TECHNICAL CHARACTERISTICS

Nominal capacity (kVA) / Power (kW) per module	20kVA / 18kW	
Input		
Rated voltage	380/400/415VAC	
Voltage range	208-478VAC	
Frequency	40 - 70Hz	
Input Power Factor	>0.99	
Current THDi	< 3% (at 100% non-linear load)	
Output		
Voltage	380/400/415VAC ±2% with pure sine wave	
Frequency	50/60Hz ±0,2%	
Harmonic distortion	< 2% (linear load) / < 5% (non-linear load)	
Crest factor	3:1	
Efficiency	ECO-mode ≥98% / Normal mode ≥92%	
Battery		
Type	VRLA	
Voltage	Optional battery quantity: 384-480V (32-40 batteries)	
Maximum charging current	6A per module (can be set according to battery capacity installed)	
Additional backup time	Internal batteries for short backup time or external battery cabinet for long backup	
Protection		
Input / Output	Overload, Overheating, Short Circuit, Battery Low, Noise and Spike Suppression	
Overload AC-Mode	≤110% - 60min / ≤125% - 10min / ≤150% - 1min	
Overload Battery Mode	≤110% - 30sec / ≤125% - 1sec / ≤150% - 200msec	
Overload Bypass Mode	Input Breaker 40A	
Alarms - Indication		
Audible alarm	Beeping sound for Line Failure, Battery Low, Bypass - Overload Status, Fault Status	
LED-Alarm	Line - Backup - Eco Mode, Bypass, Battery Low/Bad/Disconnect, Overload, Fault	
LCD-Display	Big touchscreen display 5"	
Bypass		
Type	Internal static (automatic) and manual bypass / External bypass optional	
Bypass voltage range	Max.voltage: +15%(optional +5/10/25%) / Min. voltage: -45% (optional -20/30%) Frequency protection range: ±10%	
Standards		
Certificates	CE, EN62040-1-1 (ESD), EN62040-2 (EMI)	
Protection class	IP20	
Environment		
Temperature	Working temperature: 0 - 40°C / Storage temperature: -25 - 55°C	
Humidity / Altitude	0-95% non condensing / < 1500m	
Audible noise at 1m	<60dB /1m according to EN62040-2	
Interface		
In the cabinet	RS232 / RS485 / 2 free slots / dry contacts / EPO	
In the module	RS232	
Optional	SNMP-Adapter	
Dimensions of the module	20kVA / 18kW	
Dimensions WxDxH	443x580x131 mm (3U)	
Weight	31kg	
Dimensions of the cabinet	for max. 5 modules	for max. 10 modules
Dimensions WxDxH	600x840x1400mm	600x840x2000mm
Weight	170kg	230kg

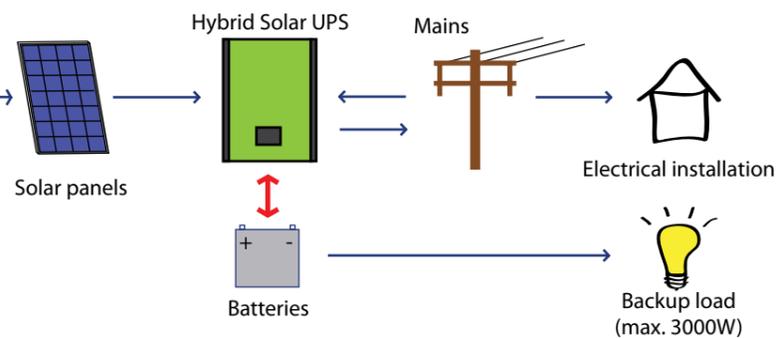


Centralized LCD Touchscreen Display



20kVA Power Module

Examples



Examples for individual solutions

Cabinets up to protection class IP55

Cabinet for Premium DSP
in protection class IP31

VISION Budget with power cut-off feature

Developed for a project in Ukraine to meet special legal standards: Microprocessor controlled power cut-off when reaching the maximum consumed power.

"Outdoor UPS"

UPS with special cabinet in protection class IP55, working at a temperature from -30 up to +50 degrees

Hybrid Solar UPS

UPS for mains-solar application with battery-backup. The UPS can be supplied by solar panels and the mains.

Options



Options and monitoring

Additional outlets

Energy distribution unit with two Schuko-outlets and four IEC-outlets. Rackmount module version with a height of 2 units.

Parallel Distribution Box with Bypass

A compact distribution box which allows parallel connection of up to four UPS to increase the power and reliability of the system. UPS can be added in a very simple way. The box also has an external bypass module inside, which provides power supply to the load even if the UPS is disconnected for maintenance.

Remote control panel

The remote control panel is physically connected with the UPS (by cable) and allows distant monitoring and management of the system. The panel can be installed as far as 500m from the UPS and will be power supplied by the interface cable.

NetFeeler Temperature/Humidity/Water sensor

Wireless smoke sensor
Magnetic contact sensor

The sensors are connected to the three-port-SNMP-adapter, offered by VISION UPS. They are mostly used in server cabinets and for the observation of buildings. Very easy installation and adjustment.

Split-Bypass

Alternative input for the UPS which allows the use of an additional power source, which works independently from the first power source (for example mains and diesel genset).

Additional chargers (internal/external)

For batteries of higher capacity and faster time of recharge

Options



Options and monitoring

Galvanic isolation transformer

The high-quality online UPS of VISION can be provided with a galvanic isolation transformer, which means that the electric circuits before and after the UPS are not connected physically, but via an electromagnetic field. This increases the reliability of the protection essentially. Spikes and disturbances can not pass the galvanic isolation transformer.

External Bypass

External manual bypass modules allow service and maintenance work without interruption of the power supply. The UPS can be disconnected after the power supply was switched to the bypass line.

Web/SNMP-Adapter

SNMP-Adapters provide monitoring of the UPS via Ethernet. The monitoring software allows connection with one or more UPS by means of the individual IP-adress every UPS gets. Monitoring and control can be made distantly.

For example all servers in a network can be shutdown. Afterwards all servers can be started up by Wake-up-on-LAN. SMS can be sent without LAN-connection by using a GSM Modem.

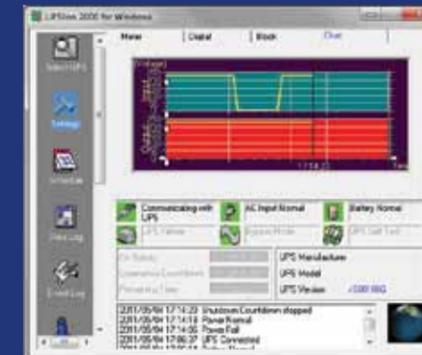
Relay card / AS400 / Modbus

Relay cards are based on dry contacts and give signals in the case of power supply interruption, switching to bypass or general faults. The AS400 and ModBus card provide the interface for the corresponding protocols.

IEC to Schuko converter with 3 outlets

For additional Schuko outlets

Monitoring



Monitoring

UPS Management-software by VISION

The UPS-Management Software is a client/server application for networks and local workstations. The UPS-Management Software is connected with the UPS by RS-232/485/USB cable. The software collects the messages sent from the UPS as a background program.

If the software detects voltage variations or a power loss it can execute different system event routines, which, for example, may shutdown the server or send warnings to connected users. These system event routines, which are part of the UPS-Management Software, are fully customisable. You can program UPS-Routines (e.g. define dates for automatic UPS-tests, shutdown the system at defined dates, etc.), check the status of the UPS, execute different UPS tests or create power quality statistics. You can also constantly monitor and evaluate the event protocol (log file) that is permanently updated. It is also possible to provide a simultaneous shutdown of several servers that are all supported by the same UPS.

- Low battery warning, on-screen backup time, battery time countdown, Low battery warning, UPS temperature such as battery and internal temperature, defect battery warning, time and date stamp event logging, extensive logging of all UPS activity and user messaging.
- Battery management, surveillance and counter for power events.
- SMTP compatible system with messaging service for E-mail, E-mail to SMS or other external services.
- Client/server software for heterogeneous networks with one and three-phased UPS.
- "Look & feel" is identical on all platforms.
- Integrated SNMP agent for NetWare, MS -WINDOWS™ NT/2000, Linux and SUN
- Supports all important network protocols for the graphical control of the UPS from every Windows Station in the network.
- Automatic unattended shutdown of local and remote computers in networks (Master/Slave via RCCMD module)
- Selftest functions, such as economy mode, UPS temperature, battery load, power socket switching and UPS emergency cut-off.
- Shutdown and test functions can be executed with a Scheduler
- Graphic display of quality of incoming power load frequency in minimum-maximum or average values.

Software made by Generex and MegaTec.

Service and warranty

Service and warranty

Optimal service in all stages

The philosophy of VISION attends to a long-term joint operation in service and technical support. It means exactly:

Training

VISION offers its customers free courses, where managers or technicians can get to know all details of our production.

Designing

In common with its clients VISION UPS develops custom elaborations, which have a lot of modifications and individual configurations due to their great flexibility.

Installation and maintenance

VISION UPS – in addition to standard instructions - specified technical documentations for installation and maintenance its devices, what makes it possible for technicians to save time on-site and minimize sources of error. Besides, the specialists of VISION are always disposable for fast consultations.

During and after the term of warranty

VISION UPS considers to be responsible for an uninterpretable functioning of its devices during and after the term of warranty. That is why we offer technical support at any time. Rapid and effective problem solving from VISION per E-mail, Skype, ICQ, phone is appreciated in all over the world – first of all in the regions, which are far from big populated areas.

Warranty

- Line Interactive UPS: 2 years
- Online UPS (1/1): 2 years
- Online UPS (3/1 & 3/3): 1 year
- Converters AC-DC and DC-AC: 2 years
- Stabilizers: 2 years
- Batteries (also in UPS): 1 year

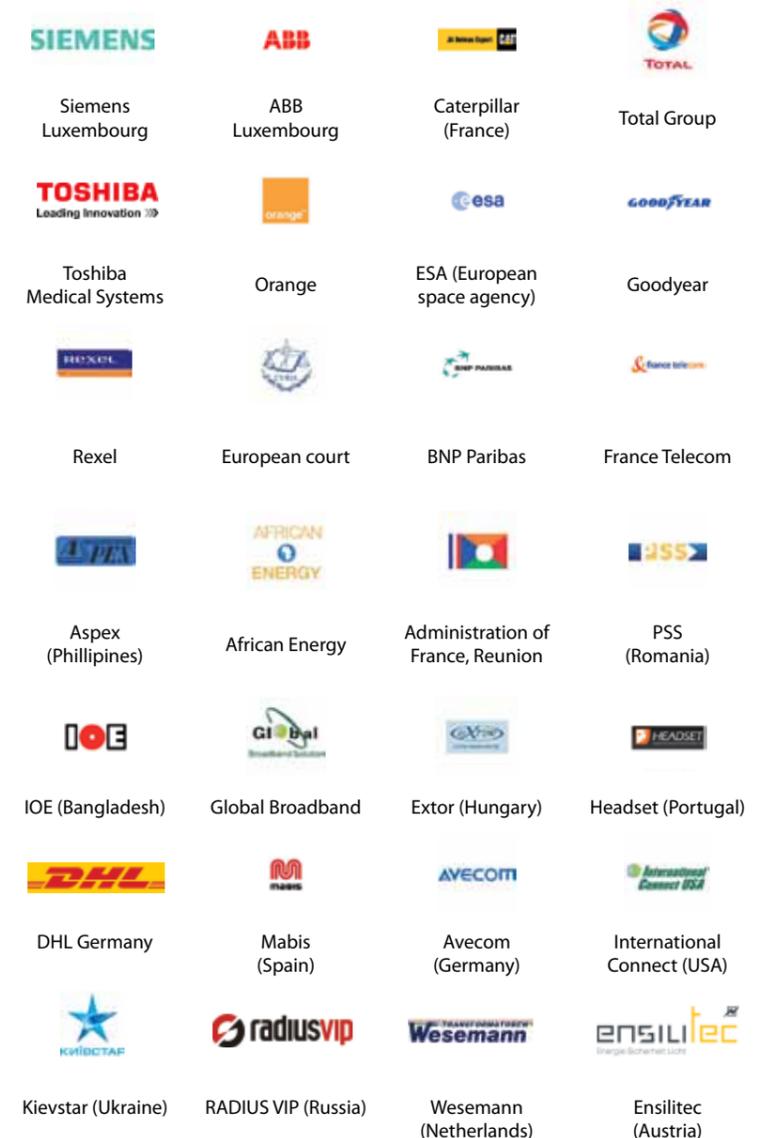
Replacement of batteries:

The availability of commodities in our storehouse makes it possible for us to replace batteries in a short time for all types of UPS.

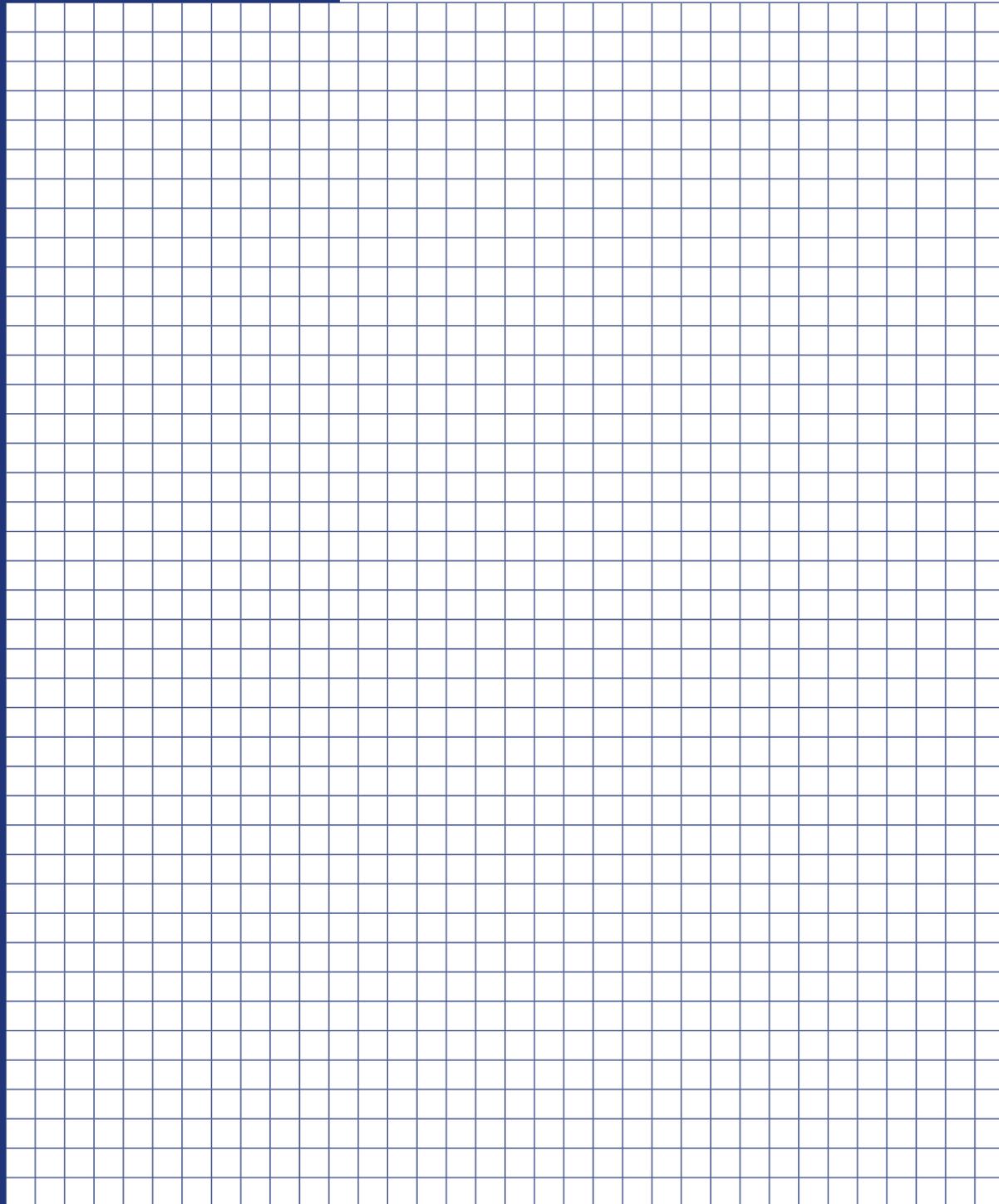
References

References

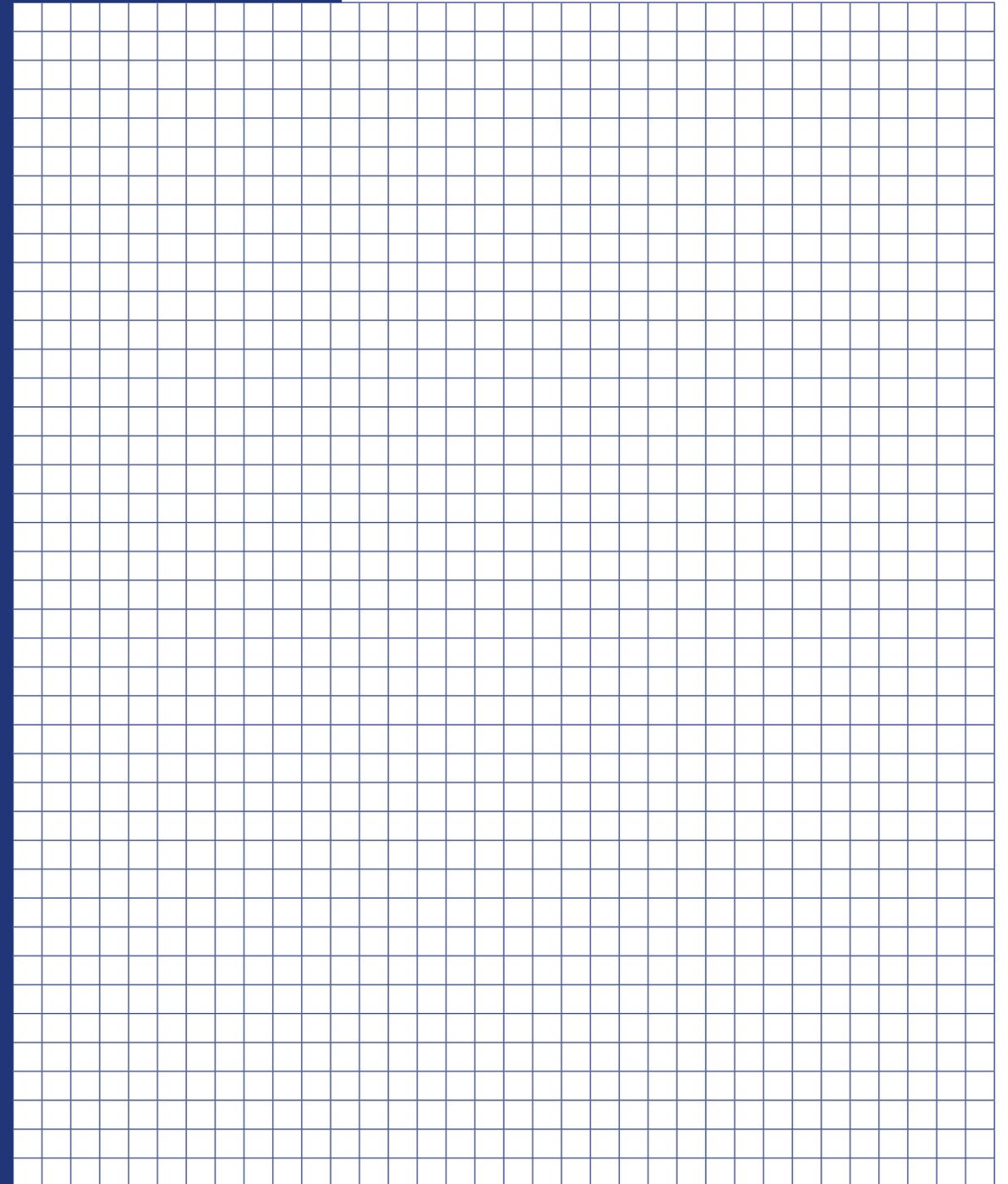
Some of our partners and projects



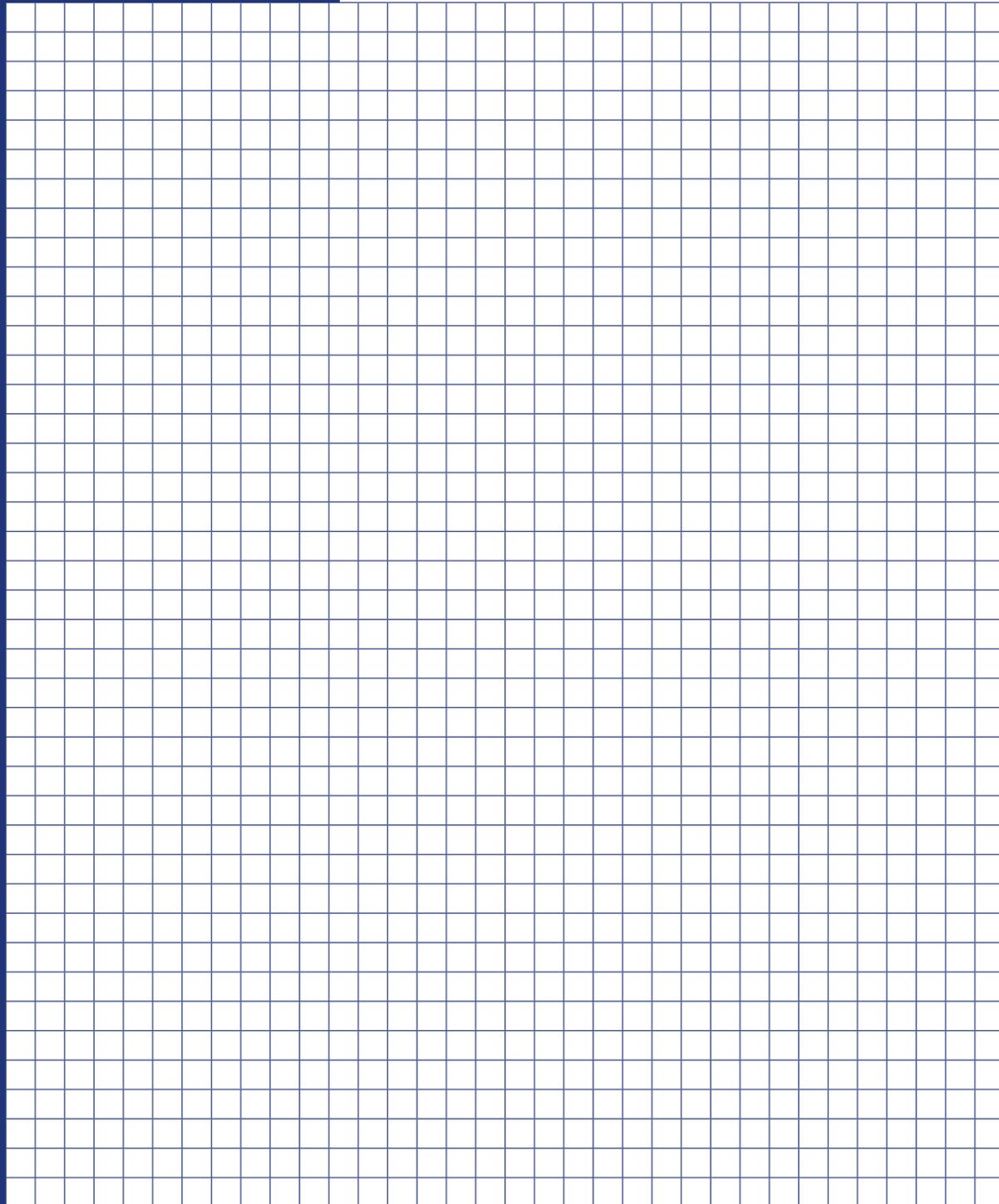
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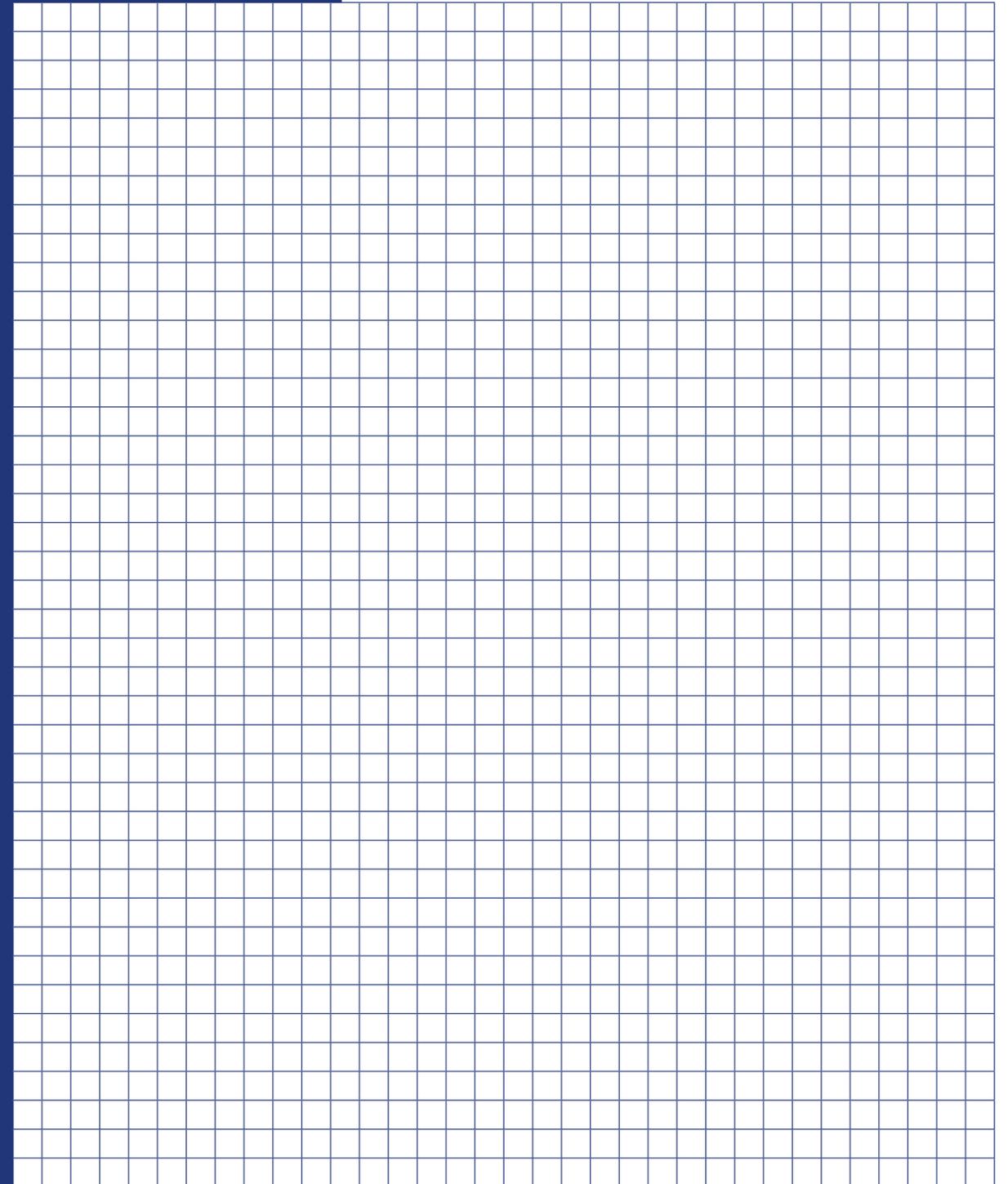
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NOTES



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VISION UPS
UPS PRODUCT CATALOGUE

2012



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