



3 PHASE

UNINTERRUPTIBLE POWER SUPPLY

www.powerwalker.com



VFI CP 3/3 | Series

- Compact tower UPS with PF 0.9
- Battery Packs available
- Easy to install Data Center solution

10000VA
15000VA
20000VA
30000VA



VFI MP 3/3 | Series

- Hot-swappable modular UPS with PF 0.9
- The easiest solution for parallel and redundant management
- Select cabinet and amount of modules

CUSTOMIZED CABINETS
90KVA 120KVA 150KVA
FOR 15KVA MODULES



VFI TP 3/3 |BI Series

- Industrial solution
- Integrated batteries
- Provides highest level of protection and overload capabilities

20000VA
30000VA
40000VA



VFI TP 3/3 |BX Series

- Industrial solution
- Designed to work with external battery banks
- Provides highest level of protection and overload capabilities

20000VA
30000VA
40000VA



BLUEWALKER GMBH

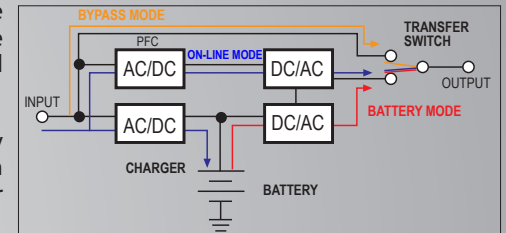
BlueWalker GmbH is a German company founded in 2004. PowerWalker UPS is an established brand of BlueWalker for professional power protection devices, including Uninterruptible Power Supplies, Automatic Voltage Regulators and Inverters.

The product portfolio reaches from models for home use over devices for corporate environment up to professional systems for mission critical installations. We proudly provide secure, reliable and cost effective solutions for all UPS applications.

PROFESSIONAL ON-LINE 3 PHASE UPS

PowerWalker VFI 3/3 Series are true double conversion units designed to combine secure protection, premium energy efficiency, small foot print and the best cost-benefit ratio.

VFI stands for Voltage and Frequency Independent, which represents full isolation from input voltage and of course zero transfer time from Line Mode to Battery Mode.



The AC power at the input of the UPS is rectified and alternated afterwards. In this way, the load connected to the UPS output is isolated from the electrical current input and its variable character. The result is always clean and stable output power.

EXTENDED CAPABILITIES

Technical Specifications of our products are meeting highest industrial requirements. Each of our models is available with various accessories. Extension Cards enable different means of communication - USB, RS-232, RS-485, dry contacts serving with various protocols, including raw signals, modbus, SNMP. With powerful software available, status of equipment and network can be monitored, maintained and controlled from personal computer or control board.

APPLICATION

Our products provide clean of imperfections electric power for your equipment. Our 3-phase offer ranges from 10kVA to 150kVA in a single unit and 320kVA in parallel systems.

On-line UPSs are specially designed for all professional applications. Especially for Industrial Applications, Data Processing Center (DPC), Cloud Computing, High Power Applications, Financial Services, Medical Centers, Mission Critical Applications in general, etc..

Redundant Mode

In redundant configuration there are at least 2 units of UPS required. One of the UPS acts as main, delivering clean power, free of imperfections to the load connected to the UPS output. The second UPS is connected to the first, remaining in Hot-Standby situation. That is, if the first fails, the second would come into operation immediately. Furthermore, this configuration has the ability to give the installation doubled autonomy. This redundant design is recommended for critical applications where failure of a UPS may not result in the breakdown of the electric power system.

Parallel Mode

The second possible configuration, the parallel mode, allows summing power to the system. Thus, if we combine eight 40000VA models, we would get the equivalent of 320kVA. Either configuration admits enlargement of autonomy, configurable depending on customer needs.

Expanding Autonomy

To prepare equipment for long power outage more batteries should be considered. PowerWalker offers connections for External Battery Packs and for project designed battery banks. VFI CP 3/3 Series is manufactured with internal batteries and you can easily place it nearby the UPS and connect it with attached cable. VFI TP 3/3 BI comes with the set of batteries inside and it is ready to use, while VFI TP 3/3 BE leaves the space inside for user-selected batteries, which will make further expansion much easier as it is important to have all the batteries of the same type. Beside that, our VFI MP 3/3 and VFI TP 3/3 BX are the best solutions to use with big battery banks.



PowerWalker UPS are compatible with various accessories. Apart from Battery Packs we offer communication extensions for Intelligent Slot. User can choose between popular protocols like SNMP used in IT business or Modbus, which finds its application in industry. If raw signals are required, for example for Programmable Logic Controllers, AS-400 comes handy.



AS-400 Card

Specific card to communicate systems with IBM AS-400 with VFI Series of PowerWalker or for other application if you need dry contacts.



NMC card / SNMP

The Network Management Card or Simple Network Management Protocol Card enables monitoring, management and maintenance of the PowerWalker UPS from anywhere in the world, with only a computer with Internet access. Our professional UPSs are equipped with the Intelligent Slot for inserting the card.



Modbus card

The Modbus communication module gives an easy and simple way to achieve remote monitoring and controlling of all the UPS in the same net at same time using the standardized Modbus-Protocol.



Environment Measurement Device

The EMD Module is an extension for SNMP and NMC Card. It allows to take measurements of humidity and temperature of the surrounding conditions. With this device you can get even better control over the UPS status.

VFI 10000/15000/20000/30000 CP 3/3

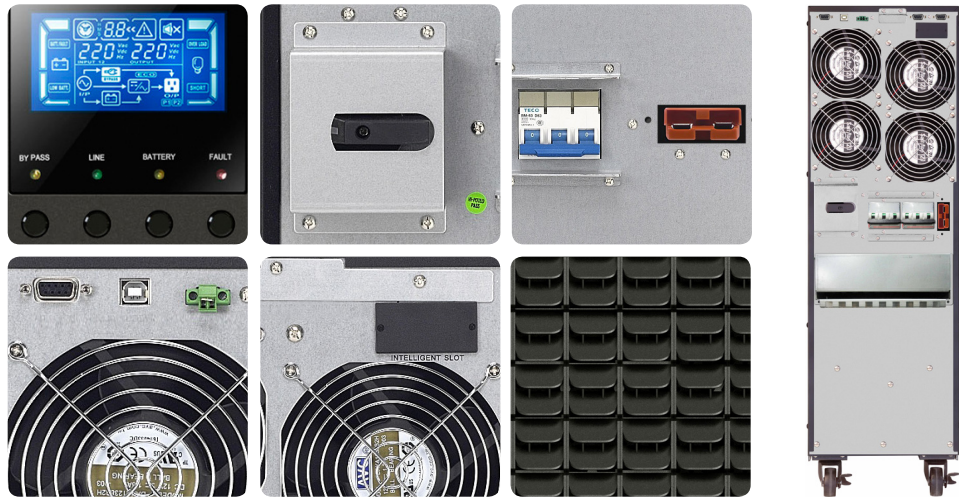
On-line Technology

- True double-conversion
- Output power factor 0.9
- Wide input voltage range (305-478 VAC)
- Active power factor correction in all phases
- ECO mode operation for energy saving
- Accepts dual-mains inputs
- Emergency power off function (EPO)
- Generator compatible
- SNMP+USB+RS-232 multiple communications
- 3-stage extendable charging design for optimized battery performance
- Adjustable battery numbers
- Maintenance bypass available
- Optional N+X parallel redundancy
- Optional isolation transformer offers full isolation and complete common mode noise rejection on input or output



Designed in small footprints, PowerWalker VFI CP 3/3 Series integrates true double conversion design with active input power factor correction. It is designed to ensure better output voltage conditions, power quality and power performance at all times. Besides, easy-configurable program via LCD panel enhances the flexibility to meet ever-increasing power demand of IT and network environment. It is equipped with intelligent overload management, where endurance has linear relationship with overload degree and if limit has been exceeded it will switch to bypass when possible.

VFI 10000/15000/20000/30000 CP 3/3



PowerWalker VFI CP 3/3 Series accommodates Intelligent Slot, which could be used with SNMP Card, AS/400 or Modbus Card as accessories.

This series is designed for professional users who require additional backup time, with range of different Battery Packs (40, 60, 80 batteries!) available.

With Parallel Extension Kit up to 3 models can be connected together providing power capacity of 90kVA.



Parallel Mode

Up to 3 models in parallel

MODEL	VFI 10000 CP 3/3	VFI 15000 CP 3/3	VFI 20000 CP 3/3	VFI 30000 CP 3/3
Power (VA)	10000VA	15000VA	20000VA	30000VA
Power (W)	9000W	13500W	18000W	27000W
INPUT				
Voltage	3x 400VAC (3Phase + N)			
Voltage Range	305-478 VAC (3-phase) at 100% load; 190-520 VAC (3-phase) at 50% load			
Frequency Range	46-54Hz or 56-64Hz			
Power Factor	≥ 0.99 at Full Load			
OUTPUT				
Voltage	3 x 400 VAC (3phase + N)			
AC Voltage Regulation (BAT MODE)	+/- 1%			
Frequency Range (synchronized)	46-54Hz or 56-64Hz			
Frequency Range (BAT MODE)	50/60 Hz +/-0.1Hz			
Current Crest Ratio	3:1 (max.)			
Harmonic Distortion	<2% THD (Linear Load); <5% THD (Non-Linear Load)			
Transfer Time	0ms			
Waveform	Pure Sine Wave			
EFFICIENCY				
AC Mode	10min @ 100%-110%; 1min @ 110%-130%; 1a @ >130%			
Battery Mode	30s @ 100%-110%; 10s @ 110%-130%; 1s @ >130%			
OVERLOAD				
Line Mode	90%	90%	91%	92%
Battery Mode	88%	88%	88%	89%
BATTERY				
Battery Type	9Ah / 12V			
Number in the string	20 pcs (18-20 adjustable)			
Number of strings	1	2	3	
Typical Charge Time	9h to 90%			
Charging Current (max)	1A	2A	4A	
Charging Voltage	273VDC +/- 1%			
INDICATORS				
LCD Display	UPS Status, Load level, Battery level, Input/Output voltage, Discharge timer, faults			
ALARM				
Battery Mode	Sounding every 4 seconds			
Low Battery	Sounding every second			
Overload	Sounding twice a second			
Fault	Continuously sounding			
PHYSICAL				
Dimension (mm)	815 x 250 x 826			815 x 300 x 1000
Net Weight (kg)	109	164	233,5	
ENVIRONMENT				
Humidity	0-95% RH @ 0-40degC			
Noise Level	< 60dB @ 1m	< 65dB @ 1m		
CONNECTIONS				
Smart RS-232 / USB	Supports Windows 2000/2003/XP/Vista/2008/7/8, Linux, Unix, MAC			
Optional SNMP	Power management from SNMP manager and web browser			
Parallel Configuration	Up to 3 UPS with extension kit			

VFI 20000/30000/40000 TP 3/3 (BX, BE, BI)

On-line Technology

- 3 phase in / 3 phase out
- Parallel and parallel redundant (N+X) system setup with already integrated communication slots
- N+X Parallel Redundancy for up to 8 UPS of same size
- Intelligent slot, EPO, RS-232, RS-485, extended slot, parallel communication port, integrated MBS
- Dual Feed input, Terminal- in and - out, IP21 compliant design
- Optional: SNMP module, AS/400, Battery Pack, USB-Card
- True double-conversion with pure sine wave output
- Monitoring software included
- Wide input voltage range of 210 to 475 Vac
- ECO mode operation for energy saving
- Emergency power off (EPO) function

Parallel Mode

Up to 8 models in parallel



20000/30000/40000 BX

With its true double-conversion on-line UPS design it fits perfectly to any environment where uninterrupted power feed is required to secure critical equipment's continuous operation. Multiple communication ports allow integrating the UPS in existing structures. This model provides a perfect solution for power protection, and solves power quality problems such as surges, spikes, voltage fluctuations, harmonic distortion, clutter interference and frequency fluctuations.

Each phase is independently double converted and regulated. In addition, PFC (power factor controller) is used for real time control and data processing, ensuring high



BE/BI



BX

availability at all times. Further extent reliability is accomplished by introducing intelligent charge mode which significantly prolongs service life of batteries. Also, possibility to have dual feed on UPS input adds availability thus increases reliability of system.

IP21 compliant design makes it a perfect fit to industrial and other applications, where harsh environmental conditions may set extent requirements to mechanical design. Optional filter is also available for further protection against the smallest damaging particles.

VFI 20000/30000/40000 TP 3/3 BX



VFI 20000/30000/40000 TP 3/3 BE/BI



VFI 20000/30000/40000 TP 3/3 (BE / BI / BX)

VFI 3/3 phase accessories

VFI TP 3/3 Series Common Features

MODEL	VFI 20000/30000/40000 TP 3/3 BE/BI/BX (Series)
INPUT	
Voltage	400 Vac (L-L), 230 Vac (L-N)
Voltage Range	285-475VAC @ Full Load 210-475VAC @ <70% Load
Phase	3-Phase + Neutral + Ground
Dual-line Input	Yes
THDi	<5%
Frequency Range	40-70Hz (self-adaptive to 50Hz/60Hz)
Power Factor	≥ 0.99
Generator Set	2.2 x UPS Rating Power
OUTPUT	
Voltage	346/360/380/400/416VAC Derating 10% with 346/360VAC
Frequency (Synchronized Range)	46-54Hz/56-64Hz
Frequency (Battery Mode)	50/60Hz ± 0.05Hz
Current Crest Ratio	3:1
Harmonic Distortion	≤ 2% THD (Full Linear Load) ≤ 5% THD (Non-Linear Load)
Waveform	Pure Sine Wave
Overload Capability	10 min @ 110-125% 1 min @ 125-150% 0.5 sec@ >150%
Parallel configuration	Up to 8 UPS of same size Parallel port built-in
TRANSFER TIME	
AC to DC	Zero
Inverter to Bypass	Zero
Inverter to ECO	Zero
ECO to Inverter	<10ms
BYPASS	
Static Bypass	Yes
MBS	Yes
CONNECTIONS	
Indicator	LCD + LED
Communications	RS-232, RS-485
Outlets	Terminal outlet
Intelligent Slot	Yes
AS-400 Slot	Optional
EPO (Emergency Power Off)	Yes
REQUIREMENTS AND SOFTWARE	
Software	Winpower
ENVIRONMENT	
Noise Level	< 55 dB @ 1m
Humidity	5 - 95%
Temperature	0 - 40 degC

VFI TP 3/3 Series Differences

MODEL	VFI 20000 3/3 BE	VFI 20000 3/3 BI	VFI 20000 3/3 BX	VFI 30000 3/3 BE	VFI 30000 3/3 BI	VFI 30000 3/3 BX	VFI 40000 3/3 BE	VFI 40000 3/3 BI	VFI 40000 3/3 BX
Power	20000VA / 16000W			30000VA / 24000W			40000VA / 32000W		
BATTERY									
Type	12V / 9Ah								
Quantity	Housing space for 60 pcs	60 pcs	External battery solution	Housing space for 128 pcs	128 pcs	External battery solution	Housing space for 128 pc	128 pcs	External battery solution
	settable 28,30 or 32								
Charging Current	± 4.5A								
PRODUCT DETAILS									
Dimensions	700 x 420 x 1245		643 x 420 x 956	700 x 470 x 1752,5		710 x 470 x 1150	700 x 470 x 1752,5		710 x 470 x 1150
Weight	120kg	272kg	82kg	195kg	515kg	110kg	195kg	515kg	114kg

Perfect solution for:

- Industrial Application
- Industrial PLCs
- Medical Devices
- Financial Systems (ATMs)
- Data Centers
- Internet Centers (ISP/ASP/POP)
- Local Area Networks (LAN)
- Telecommunications Devices
- Servers
- Emergency Devices (Lights, Alarms)

VFI Tower

On-line 3/3

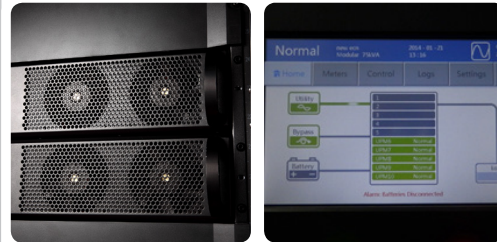
VFI 15000 MP 3/3 in 90/120/150kVA cabinets

On-line Modular Technology

- Supports up to 10x15kVA UPS modules up to 150KVA output capacity
- Hot-swappable UPS module with wireless design
- N+X parallel redundant configuration which leaves no SPOF (Single Point of Failure)
- 7" colorful touch-screen
- Easy installation and load expansion resulted from modular design
- 3 multi-function intelligent ports which support USB, RS232, SNMP, AS400, NMC, and CMC cards
- Optimized performance with >93% efficiency
- Ready to support AC generator
- Configurable battery quantity from 32 to 42 pieces per set



VFI MP 3/3

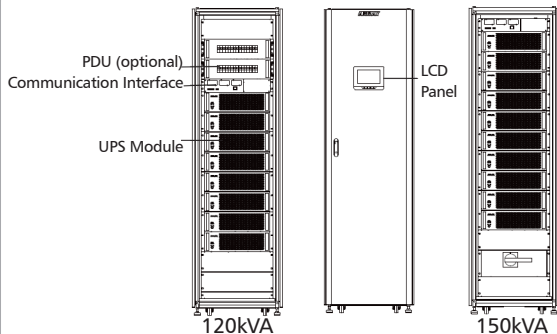


VFI MP 3/3 is the modular three-phase double conversion On-line UPS which can be configured with capacity from 15KVA to 150KVA to meet various applications such as data center, larger computer systems and equipment with large power demand.

Instead of centralized control design, the UPS module is designed for N+X parallel redundant configuration which forms a robust system without SPOF (Single Point of Failure).

7" colorful touch-screen LCD provides user-friendly interface for the display of operational information.

APPLICATION



For 80kVA Data Center a 120kVA cabinet is ordered with 7 Power Modules installed. Unit is capable of providing 105kVA (7x15000VA) of power on output (cabinet is rated 120kVA). UPS works in 6+1 redundancy system. If one power module fails, system is still providing enough power.

Additional 3 modules can be installed to provide maximum 120kVA (cabinet rating) to work in 6+4 redundancy.

Data Center, if upgraded to 110kVA, works in 8+2 redundancy.



Each module is a complete UPS set, which requires only to be mounted in the special cabinet. No additional control module for parallel application and load sharing is necessary. If the system installs 2 more modules for parallel redundancy, the availability of the UPS system is over 99.99% and its MTBF would be over 10 Million hours.



If the system has one more module for parallel redundancy, the MTTR would be 0. If the quantity of failure modules is over parallel redundancy capacity, the MTTR to change the module is less than 5 minutes.

MODEL	VFI 15000 MP 3/3		
Power (VA)	15000VA		
Power (W)	13500W		
INPUT			
Voltage	3x 400VAC (3Phase + N +G)		
Voltage Range	304-520 VAC		
Frequency Range	40-70 Hz		
Power Factor	>0.99 @ 100% RCD load		
THDi	<5% @ 100% RCD Load		
OUTPUT			
Voltage	353/380/400/415 VAC (3phase + N +G)		
Power Factor	0.9		
THDv	<2% with full linear load <4% with full non-linear load		
Overload Capacity	10 min @ 110% - 130%		
	1s @ 130% - 150%		
	150ms @ >150%		
Transfer Time	0ms		
Waveform	Pure Sine Wave		
BATTERY			
Amount	32/34/36/38/40 pieces of 12V		
Charger	3.5A per module		
EFFICIENCY			
AC Mode / Battery Mode	>93% @ full load		
INDICATORS			
LCD Display	7" full color touch-screen LCD		
PHYSICAL (MODULE)			
Dimension (mm)	440 x 707 x 131 (module)		
Net Weight (kg)	35kg		
PHYSICAL (CABINET)			
Dimension (mm)	600 x 1050 x 2030 (cabinet)		
Net Weight (kg)	230kg (90kVA)	265kg (120kVA)	275kVA (150kVA)
ENVIRONMENT			
Humidity	5-90% RH @ 0-40degC		
Noise Level	< 62db @ 1m		
COMMUNICATION			
Interface	EPO, Battery Temperature Detection Port and Intelligent Slots		



www.powerwalker.com



BlueWalker GmbH

Martin-Buber-Str. 12, 41470 Neuss, Germany

Tel.: +49(0)2137-929873

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