


High-Capacity Uninterruptible Power Supply System

UPS7500WX

High-capacity modular UPS adhering to the needs of high-power data centers

- ✓ Highest power conversion efficiency in its class
- ✓ High availability through high system reliability
- ✓ Smallest footprint in its class with a reduced installation space





Achieves high efficiency and high reliability
through proven technologies
High-capacity modular UPS7500WX for data
center applications

Data centers are becoming increasingly popular due to the spread of IT in today's digitalized society.

UPS systems are one of the key players that support stable power supply and availability of facilities in the advent of a power outage.

The UPS7500WX combines Fuji Electric's technological capabilities to achieve high efficiency and high reliability, making it ideal for large-scale data centers where power consumption is increasing.



I/O-M

CTR-M

UPM (600 kVA x 2)

High efficiency

Achieves the highest efficiency in its class as a normal inverter feeding system UPS. Reduces power loss and contributes to energy conservation in data centers and plants.

High reliability

Ensures high reliability by improving maintainability and shortening mean time to repair (MTTR). Protects facilities from unforeseen power failures by incorporating a system that supplies continuous power 24 hours a day, all year round.

Space savings

Smallest footprint in its class for a modular UPS of 1,000 kVA or more. No maintenance space is required on the back and sides, allowing for wall and back-to-back mounting layouts.

High functionality

We provide valuable features by integrating our cultivated power electronics and device technologies, such as power regeneration functions that contribute to cost reductions during field tests.



High efficiency

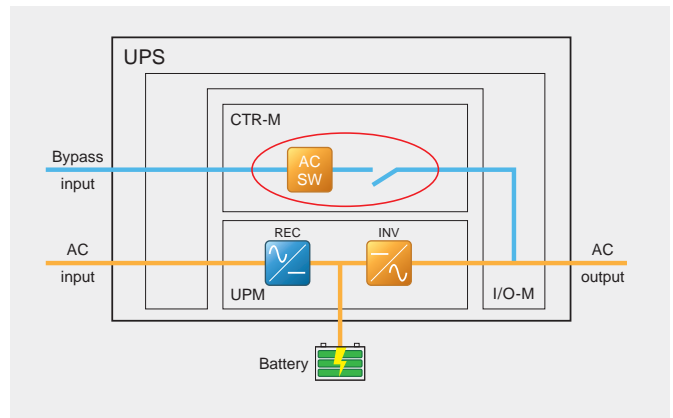
“HE mode*” continuous commercial power supply system

HE mode compatible type is now available, in addition to hybrid type, similar to conventional products. HE mode achieves 99% power supply efficiency by using a bypass power supply circuit during normal commercial power supply. This facilitates low-loss power from the commercial power supply. The inverter uses active filter control to improve the power factor and transfers to inverter power feeding without causing shock during periods of abnormality. It further reduces power loss and contributes to the improvement of data center PUE.

* High Efficiency Mode

HE mode compatible type

Semiconductor switch and switchgear in series

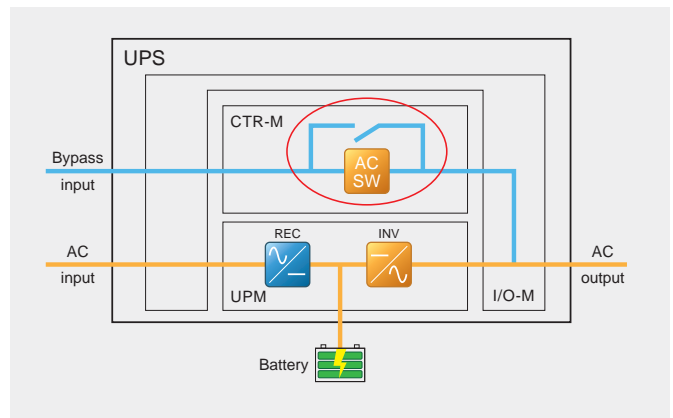


New power conversion

A new three-level RB-IGBT based conversion technology has reduced switching loss and halved harmonic components thereby achieving high efficiency.

Hybrid type

Semiconductor switch and switchgear in parallel



High reliability

Shortens MTTR

Excellent availability provided with an MTTR of approximately 1 hour and an uptime of 99.9991%. This is suitable for use in critical systems where maintenance can be performed during uptime.

Supports high-reliability systems

We are providing reliable systems that can continuously supply power 24 X 7 with parallel or standby redundancy.

Unparalleled support

In addition to UPS systems, we support all aspects of systems necessary for stable power supply, from the design of electrical facilities to the procurement and manufacture of equipment.



* PWU: Power Unit

Space savings

Reduced footprint

The UPS7500WX has a footprint-saving design with a standard module configuration of 3,500 mm wide x 900 mm deep, providing more space for server equipment. Further space savings are achieved by eliminating the need for maintenance space on the back and sides of the panel.

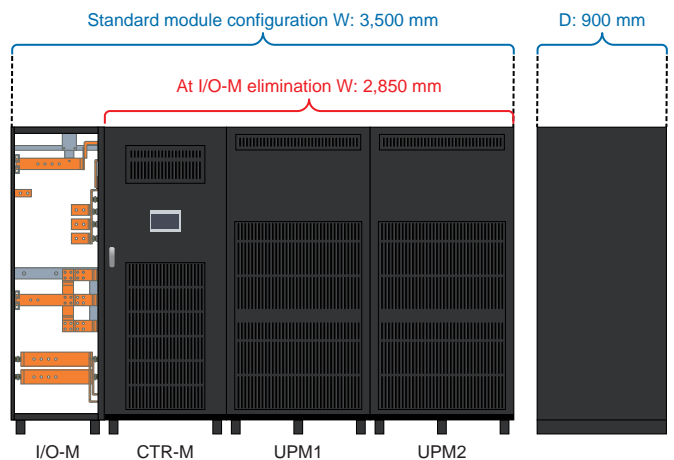
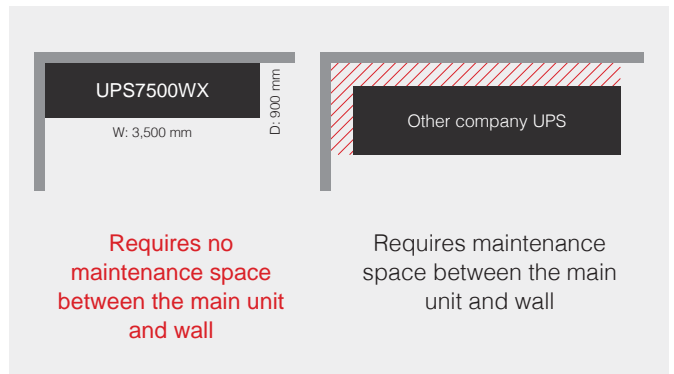
Provision of redundant fans on top

The need for maintenance space on the back and sides is eliminated. This is achieved by drawing in air from the front and releasing it at the top.

Eliminates I/O modules

The I/O modules for connecting main circuit cables during system design are eliminated. This facilitates direct in-series connection of peripheral panels with custom built-in molded-case circuit breakers and transformers. Further UPS system space savings are thus achieved.

Comparison of maintenance space with other company products



High functionality

Reduces power consumption by about 90% Power regeneration feature (our patented technology)

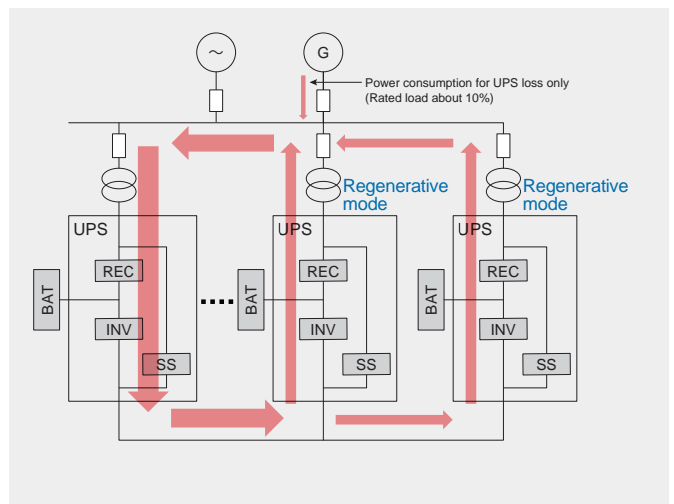
A simulated load test device (by operating a separate unit) in regenerative mode is presented. This technology can reduce power consumption by about 90%. This eliminates the need to lease, install, or remove load testing devices. Additionally, the cost of load testing by technicians is significantly reduced.

3-phase 4-wire high-capacity UPS

This High-capacity 600 to 1,200 kVA-UPS supports increased power consumption per rack with up to four modules in parallel.

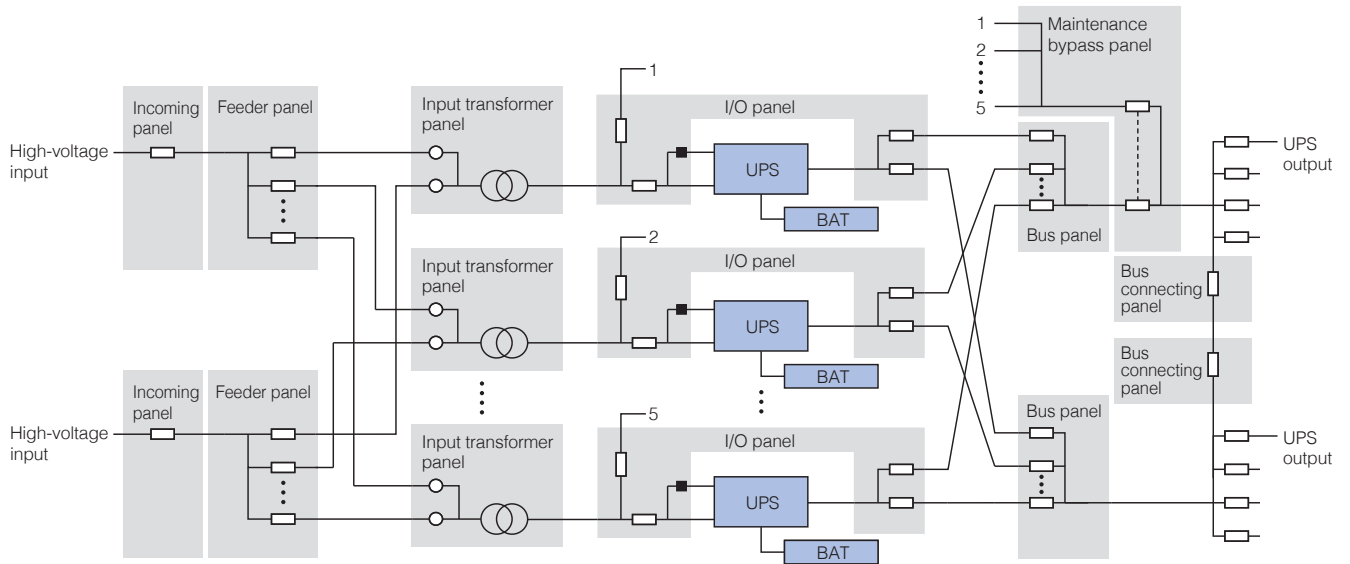
Example of regenerative mode use

(Continuous operation at rated load)

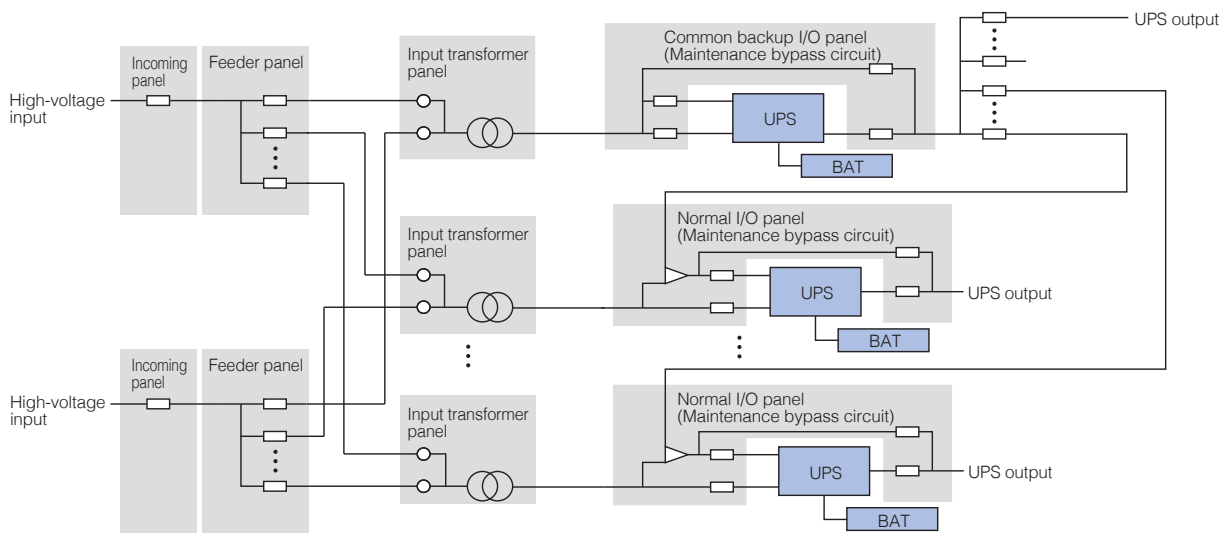


Example of UPS system configuration

Parallel redundant system configuration



Standby redundant system configuration



Main specifications

Model	7500WX (rated 380 V)		7500WX (rated 400/415/420 V)	
UPS capacity	1,140 kVA		1,200 kVA	
UPS feeding system	Normal inverter feeding system			
Number of I/O phases	3-phase 4-wire			
AC input	Rated voltage	380 V		400/415/420 V
	Operating voltage range	380 V/400 V: +15%, -35% 415 V/420 V: +10%, -35%		
	Rated frequency	50/60 Hz		
	Frequency fluctuation range	±5%		
	Power factor (at rated load)	0.99 (delay) or higher		
	Harmonic current (total of up to 40 orders at rated linear load)	5% or less		
Bypass	Rated voltage	380 V		400/415/420 V
	Rated frequency	50/60 Hz		
DC input	Rated voltage	480 V / 528 V (240/264 cells)		
AC output	Rated voltage	380 V		400/415/420 V
	Voltage accuracy	At balanced load	Within ±1%	
		At unbalanced load	Within ±2%	
	Voltage adjustment range	±5%		
	Rated frequency	50/60 Hz		
	Frequency accuracy (at internal oscillation)	±0.01%		
	Synchronization frequency range (at bypass synchronization)	±5% (selectable at ±1 to 5%)		
	Rated load power factor	1.0		
	Load power factor fluctuation range	0.7 (delay) to 1.0		
	Voltage waveform distortion factor	Linear load	2% or less	
		Rectifying load according to IEC 62040-3	2.5% or less	
	Transient voltage fluctuation	At sudden load change of 100%	3% or less	
		At AC input power failure/restoration	2% or less	
		At bypass to UPS switching	5% or less	
		When one unit is selected and cut off	5% or less	
	Transient fluctuation setting time	50 ms		
	Voltage unbalance rate (at 100% load unbalance)	Within ±1.5%		
Overload capacity*	125%	10 minutes		
	150%	1 minute		
Environmental conditions	Operating temperature	0 to 40°C (at rated voltage and rated load)		
	Relative humidity	15 to 95% (No condensation)		
	Altitude	1,000 m or less		
	Noise	80 dB (A) or less		
Compliant standards	Safety: IEC 62040-1, JIS C 4411-1 EMC: IEC 62040-2, JIS C 4411-2 Performance: IEC 62040-3, JIS C 4411-3, JEC 2433			

*Temperature conditions are limited.

Dimensions and mass

Number of UPMS	UPM × 1		UPM × 2	
Capacity (kVA)	570	600	1,140	1,200
Dimensions (mm)	Width	2,500	2,500	3,500
	Depth	900	900	900
	Height	2,150	2,150	2,150
Mass (kg)	2,150	2,150	3,450	3,450

Efficiency

Load factor	25%	50%	75%	100%
Device efficiency	94.9	96.1	96.2	96.0

*Heat dissipation at 1,200 kVA: 50.4 kW (at 400 V rating)

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