FSP

UPS

OFF LINE

LINE INTERACTIVE

ON LINE

POWER
NEVER ENDS

About FSP Group

FSP Group is the leading power supply manufacturer in the world.
Since established in 1993, the company has been committed to its R&D capability, production capacity and product quality to stand out from the competitive market.

FSP Group provides a great variety of products related to power and electronics technology, such as adapter, open frame, LED Lighting, Medical, LCD TV, Industrial / Desktop computers and Servers to fulfil our OEM / ODM customers' needs. And FSP Group is now making more efforts to develop better environment friendly products, including PV Inverter, UPS and ESS products.

FSP Group's global presence in Taiwan, Brazil, China, Germany, Sweden, France, India, Japan, Korea, Russia, Turkey, UK, and USA has made it easier to provide immediate support. As FSP Group is aiming to create a win-win situation, we treat our customers as friends by providing customized products and excellent service.

For FSP Group, making Power never ends will be our sustainable goal.

Our vision:
To be the global leading provider of green energy solutions, touch people's life, contribute to the better environment.

Our mission:
Providing the best value to customers, employees and shareholders by our innovative service and high quality products.

Uninterruptible Power Supply

01
Off Line

NANO
NanoFit

05
Line Interactive

FP
Eco
iFP
Eufo

13
On line / single phase

Champ
Champ RM
Custos 9X+

21
On line / three phase

Proline
EPOS
Mplus

Power Rating & Function List

UPS TYPE	Off-line		Line-interactive				On-line				
											
SERIES	NANO	NanoFit	FP	Eco	iFP	Eufo	Champ	Custos 9X+	Proline	EPOS	Mplus
Phase (Input / Output)		1/1	1/1	1/1	1/1	1/1	1/1	1/1	3/1, 3/3	3/3	3/3
OUTPUT WAVEFORM	Simulated Sine Wave		Simulated Sine Wave			Pure Sinewave	Pure Sinewave				
Power Configuration	Single-phase System		Single-phase System				Single-phase System		Three-phase System		
POWER RATING (kVA)											
300											▲
210											▲
180											▲
120											▲
90										▲	▲
80										▲	▲
60										▲	▲
40										▲	▲
30									▲		▲
20									▲		
15									▲		
10							▲	▲	▲		
6							▲	▲			
3						▲	▲	▲			
2			▲		▲	▲	▲	▲			
1.5			▲		▲	▲	▲	▲			
1.1			▲		▲	▲	▲	▲			
1			▲		▲	▲	▲	▲			
0.8	▲	▲	▲	▲	▲	▲					
0.6	▲	▲	▲	▲	▲						
TYPE	Wall-mounted		Tower	Wall-mounted	Tower	Rack-mount	Tower / Rack-mount	Rack-mount	Tower		
Outlet Type	Receptacle			Receptacle			Receptacle / Terminal Block		Terminal Block		
Programmable Management Outlets	-	-	-	-	-	●	-	●	-	-	-
Build in AVR	-	-	●	●	●	●	-	-	-	-	-
Long-run Model	-	-	-	-	-	○	○	○	●	●	●
LCD	-	○	-	-	●	●	●	●	●	●	●
RJ 11/45 Protect Port	-	○	-	○	●	●	-	●	●	●	●
5V/1A Charger or USB Comm Port	-	○	-	○	●	●	●	●	●	●	●
Battery Mode Efficiency > 80%	-	-	-	-	-	●	●	●	●	●	●
Transfer Time (AC to battery mode)=0ms	-	-	-	-	-	-	●	●	●	●	●
Transfer Time (AC to bypass mode)=0ms	-	-	-	-	-	-	○	○	●	●	●
THDi/THDv	-	-	-	-	-	●	●	●	●	●	●
Intelligent Slot	-	-	-	-	-	●	●	●	●	●	●
Emergency Power Off	-	-	-	-	-	●	○	●	●	●	●
Advance ECO Mode	-	-	-	-	-	-	●	●	●	●	●
PFC Function	-	-	-	-	-	●	●	●	●	●	●
Maintain bypass Switch	-	-	-	-	-	-	-	○	○	●	●
Parallel Function (n+1)	-	-	-	-	-	-	-	○	○	○	○
Mean time to recovery, MTTR	-	-	-	-	-	-	-	-	-	○	●

Note: ●standard / ○option / — None

Retail Compare List

MODEL SERIES	NANO 600	Nano-fit 600	FP 600	Eco 600	iFP 600
INTERNAL TOPOLOGY	Off-line	Off-line	Line-interactive	Line-interactive	Line-interactive
TYPE	Wall-mounted	Wall-mounted	Tower	Wall-mounted	Tower
Battery Type	12V / 7Ah	12V / 4.5Ah	12V / 7Ah	12V / 5Ah	12V / 7Ah
Net Weight (kgs)	2.7	2.6	4.25	4	4.25
Size D x W x H (mm)	228 x 83 x 207	305 x 159 x 95	279 x 101 x 142	245 x 163 x 90	300 x 101 x 142
Volume /1,000,000mm^2	3.9	4.6	4	3.6	4.3
Back-up Time (mins) @ Mac book 13" (60W)*2pcs	14	7	10	8	10
Battery Type	12V / 7Ah	12V / 4.5Ah	12V / 7Ah	12V / 5Ah	12V / 7Ah
Input Breaker Protector	-	●	●	●	●
Build in AVR	-	-	●	●	●
Battery Backup Outlets	●	●	●	●	●
Surge Protected Outlets	-	●	-	-	-
Touch LCD	-	○	-	-	●
RJ 11/45 Protect Port	-	○	-	○	●
5V/1A Charger or USB Comm Port	-	○	-	○	●
Off-mode Charging	-	-	●	●	●

Note: ●standard / ○option / — None

Online Compare List

MODEL SERIES	Champ RM series	Custos 9X+ series
Long-run Model PF	PF=0.8	PF=0.9
Standard Model can be Long-run Model (accept extra battery package)	X	O
Input Harmonic Distortion(THDi)	≦8% @ nominal input voltage	≦5% @ nominal input voltage
Output Harmonic Distortion (THDv)	≦ 3 % THD (Linear Load) ≦ 6 % THD (Non-linear load)	≦ 2 % THD (Linear Load) ≦ 4 % THD (Non-linear load)
Battery Mode Efficiency	1K：83%；2K：87%；3K：88%	1K：88%；2K：88%；3K：90%
Advance ECO Mode	X	O
Charging Current (max.)	1A	1.5A
Programmable Power Management Outlets	X	O
Emergency Power Off Function (EPO)	X	O
RJ45 Surge Protector	X	O
Hot Swappable Battery Design	X	O
IEC Outlet Numbers	1K：IEC C13 x 3 2K：IEC C13 x 4 3K：IEC C13 x 4+terminal	1K：IEC C13 x 8 2K：IEC C13 x 8 3K：IEC C13 x 6+IEC C19 x 1
STANDARD MODEL		
Dimension, D x W x H (mm)	1K：310 x 438 x 88 2K：410 x 438 x 88 3K：630 x 438 x 88	1K：410 x 438 x 88 2K：510 x 438 x 88 3K：630 x 438 x 88
Net Weight (kgs)	1K：12.0 2K：19.0 3K：29.3	1K：11.6 2K：19.5 3K：27.4

Off Line
series

Simple Solution
for Home and Office Users

The Standby UPS provides comprehensive protection in a small and economic package. The UPS is more compact and offers greater comprehensive power protection against surges and spikes. This UPS will continue providing stable power to connect equipment and enable to shutdown PC safely during power failure. Its embedded microprocessor controller guarantees high reliability and it's perfect for any home or small office application.

General Features /

- Compact size with stand and mounting flexibility
- Excellent microprocessor controller guarantees high reliability
- Auto restart while AC is recovering
- Simulated sine wave output
- Cold start function
- Full protection: discharge, overcharge, short circuit and thermal protection

Off line | Nano

400/600/800

Features

- Compact size with stand and mounting flexibility
- Excellent microprocessor control guarantees high reliability
- Auto restart while AC is recovering
- Simulated sine wave
- Cold start function

MODEL	NANO 400	NANO 600	NANO 800
CAPACITY	400VA / 240W	600VA / 360W	800VA / 480W
INPUT			
Voltage		220 / 230 / 240Vac	
Voltage Range		180-270Vac	
Frequency Range		50Hz (auto sensing)	
OUTPUT			
AC Voltage Regulation (Batt. Mode)		±10%	
Frequency Range (Batt. Mode)		50Hz ±1 Hz	
Transfer Time		Typical 2-6 ms	
Waveform (Batt. Mode)		Simulated Sine Wave	
BATTERY			
Battery Type & Number	12V / 4.5Ah x 1	12V / 7Ah x 1	12V / 9Ah x 1
Typical Recharge Time		8 hours up to 90% capacity	
INDICATORS			
AC Mode		Green lighting	
Battery Mode		Green flashing	
ALARM			
Battery Mode		Beeps every 10 seconds	
Low Battery		Beeps every second	
Fault		Continuously beeping	
PROTECTION			
Full Protection		Overload, discharge and overcharge protection	
PHYSICAL			
Dimension, D x W x H (mm)		228 x 82.5 x 207 (Vertically stand)	
Net Weight (kgs)	2.2	2.7	3.1
ENVIRONMENT			
Humidity		0-90% RH @ 0- 40°C (non-condensing)	
Noise Level		Less than 40dB	

* Product specifications are subject to change without further notice

Off line | NanoFit

600/800

Features

- 600VA / 800VA Standby UPS
- Compact size for standalone and mounting flexibility
- Excellent microprocessor control guarantees high reliability
- Auto restart while AC is recovering
- Simulated sine wave output
- Cold start function
- Optional USB communication port
- Optional 5V USB charger
- Optional RJ11 and coax surge protection
- Optional LCD version is also available upon request

MODEL	NanoFit 600	NanoFit 800
CAPACITY	600VA / 360W	800VA / 480W
INPUT		
Voltage	220 / 230 / 240Vac	
Acceptable Voltage Range	180-270Vac	
Frequency Range	60Hz / 50Hz (Auto sensing)	
OUTPUT		
Output Voltage	220 / 230 / 240Vac	
AC Voltage Regulation (Batt. Mode)	±10%	
Frequency Range (Batt. Mode)	60Hz or 50Hz ±1Hz	
Transfer Time	Typical 2-6 ms, Max. 10ms	
Waveform (Batt. Mode)	Simulated Sinewave	
BATTERY		
Battery Type & Numbe	12V / 4.5Ah x 1	12V / 5Ah x 1
Typical Recharge Time	8 hours recover to 90% capacity	
INDICATORS		
Line Mode	Green lighting	
Battery Mode	Yellow flashing	
Fault	Red lighting	
ALARM		
Battery Mode	Beeps every 10 seconds	
Low Battery	Beeps every second	
Overload	Beeps every 0.5 seconds	
Fault	Continuously beeping	
PROTECTION		
Full Protection	Overload, discharge and overcharge protection	
PHYSICAL		
Dimension, D x W x H (mm)	305 x 158.5 x 95 mm	
Net Weight (kgs)	2.6	2.9
ENVIRONMENT		
Humidity	0-90% RH @ 0- 40°C (non-condensing)	
Noise Level	Less than 40dB	

* Product specifications are subject to change without further notice

Line Interactive
series

Advanced UPS Solution for Home and Office Users

This Series protect your power issue on personal computers. It provides comprehensive protection in a small and economic package. Not only offering greater comprehensive power protection against surges and spikes, it also provides pure voltage with built-in AVR stabilizer. The UPS will continue providing clean and stable power to connect equipment while its embedded microprocessor controller guarantees high reliability, perfect for any home or small office application.

General Features /

- Compact size
- Excellent microprocessor control guarantees high reliability
- Boost and buck AVR for voltage stabilization
- Auto restart while AC is recovering
- Simulated sine wave
- Off-mode charging
- Cold start function
- Generator compatible(option)

Line Interactive | FP

600/800/1000/1500/2000

Features

- Compact size
- Excellent microprocessor control guarantees high reliability
- Boost and buck AVR for voltage stabilization
- Auto restart while AC is recovering
- Simulated sine wave
- Off-mode charging
- Cold start function
- Generator compatible (option)

MODEL	FP 600	FP 800	FP 1K	FP 1.5K	FP 2K
CAPACITY	600VA / 360W	800VA / 480W	1000VA / 600W	1500VA / 900W	2000VA / 1200W
INPUT					
Voltage	110 / 120Vac or 220 / 230 / 240Vac				
Voltage Range	81-145Vac / 162-290Vac				
Frequency Range	60 / 50Hz (auto sensing)				
OUTPUT					
Voltage	110 / 120Vac or 220 / 230 / 240Vac				
AC Voltage Regulation (Batt. Mode)	±10%				
Frequency Range (Batt. Mode)	60Hz or 50Hz ±1 Hz				
Transfer Time	Typical 2-6 ms				
Waveform (Batt. Mode)	Simulated Sinewave				
BATTERY					
Battery Type & Number	12V / 7Ah x 1	12V / 9Ah x 1	12V / 7Ah x 2	12V / 9Ah x 2	12V / 9Ah x 2
Typical Recharge Time	4 hours recover to 90% capacity		4-6 hours recover to 90% capacity		
INDICATORS					
AC Mode	Green lighting			Green lighting	
Battery Mode	Green flashing			Yellow flashing	
Fault	N/A			Red lighting	
ALARM					
Battery Mode	Beeps every 10 seconds				
Low Battery	Beeps every second				
Overload	Beeps every 0.5 seconds				
Fault	Continuously beeping				
PROTECTION					
Full Protection	Overload, discharge and overcharge protection				
PHYSICAL					
Dimension, D x W x H (mm)	279 x 101 x 142			320 x 130 x 182	
Net Weight (kgs)	4.25	4.9	8.2	10.4	11
ENVIRONMENT					
Humidity	0-90% RH @ 0- 40°C (non-condensing)				
Noise Level	Less than 40dB				
BACKUP TIME					
Battery Config.	7.0Ah x 1	9.0Ah x 1	7.0Ah x 2	9.0Ah x 2	9.0Ah x 2
Backup time	19 mins	20 mins	18 mins	18 mins	15 mins
Load Condition	Mac book 15" (90W)*1	Mac book 13" (60W)*2	Mac book 13" (60W)*1 Mac book 15" (90W)*1	Mac book 13" (60W)*2 Mac book 15" (90W)*1	Mac book 13" (60W)*2 Mac book 15" (90W)*2

* Product specifications are subject to change without further notice

Line Interactive | Eco

400/600/800

Features

- Compact size
- Excellent microprocessor control guarantees high reliability
- Boost and buck AVR for voltage stabilization
- Auto restart while AC is recovering
- Simulated sine wave output
- Off-mode charging
- Cold start function
- Generator compatible (option)
- Optional 5V USB charging port

MODEL	Eco 400	Eco 600	Eco 800
CAPACITY	400VA / 240W	600VA / 360W	800VA / 480W
INPUT			
Voltage	110 / 120Vac or 220 / 230 / 240Vac		
Voltage Range	81-134Vac / 89-145Vac or 162-268Vac / 170-280Vac / 177-290Vac		
Frequency Range	60 / 50Hz (auto sensing)		
OUTPUT			
Voltage	110 / 120Vac or 220 / 230 / 240Vac		
AC Voltage Regulation (Batt. Mode)	±10%		
Frequency Range (Batt. Mode)	60Hz or 50Hz ± 1Hz		
Transfer Time	2-6 ms typical, 10 ms max		
Waveform (Batt. Mode)	Simulated Sinewave		
BATTERY			
Battery Type & Number	12V / 4.5Ah x 1	12V / 5Ah x 1	12V / 5Ah x 1
Typical Recharge Time	4-6 hours recover to 90% capacity		
INDICATORS			
AC Mode	Blue lighting		
Battery Mode	Blue flashing		
ALARM			
Battery Mode	Beeps every 10 seconds		
Low Battery	Beeps every second		
Overload	Beeps every 0.5 seconds		
Fault	Continuously beeping		
PROTECTION			
Full Protection	Overload, discharge, and overcharge protection		
PHYSICAL			
Dimension, D x W x H (mm)	245 x 163 x 90		
Net Weight (kgs)	3.5	4	4.5
ENVIRONMENT			
Humidity	0-90% RH @ 0- 40°C (non-condensing)		
Noise Level	Less than 40dB		
BACKUP TIME			
Battery Config.	4.5Ah x 1	5.0Ah x 1	5.0Ah x 1
Backup time	10 mins	14 mins	20 mins
Load Condition	Mac book 13" (60W)*1	Mac book 15" (60W)*1	Mac book 13" (60W)*1

* Product specifications are subject to change without further notice

Line Interactive | iFP

600/800/1000/1500/2000

Features

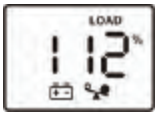
- Compact size
- Excellent microprocessor control guarantees high reliability
- Boost and buck AVR for voltage stabilization
- Auto restart while AC is recovering
- Simulated sine wave
- Off-mode charging
- Cold start function
- Generator compatible(option)
- Built-in USB communication port and RJ network protection
- Touch screen LCD to display UPS information circularly

MODEL	iFP 600	iFP 800	iFP 1000	iFP 1500	iFP 2000
CAPACITY	600VA / 360W	800VA / 480W	1000VA / 600W	1500VA / 900W	2000VA / 1200W
INPUT					
Voltage	110 / 120Vac or 220 / 230 / 240Vac				
Voltage Range	81-145Vac / 140-290Vac				
Frequency Range	60 / 50Hz (auto sensing)				
OUTPUT					
Voltage	110 / 120Vac or 220 / 230 / 240Vac				
AC Voltage Regulation (Batt. Mode)	±10%				
Frequency Range (Batt. Mode)	60Hz or 50Hz ± 1Hz				
Transfer Time	Typical 2-6 ms				
Waveform (Batt. Mode)	Simulated Sinewave				
BATTERY					
Battery Type & Number	12V / 7Ah x 1	12V / 9Ah x 1	12V / 7Ah x 2	12V / 9Ah x 2	12V / 9Ah x 2
Typical Recharge Time	4 hours recover to 90% capacity		4-6 hours recover to 90% capacity		
INDICATORS					
LCD Display	Digital information				
ALARM					
Battery Mode	Beeps every 10 seconds				
Low Battery	Beeps every second				
Overload	Beeps every 0.5 seconds				
Fault	Continuously beeping				
PROTECTION					
Full Protection	Overload, discharge and overcharge protection				
PHYSICAL					
Dimension, D x W x H (mm)	300 x 101 x 142		320 x 130 x 182		
Net Weight (kgs)	4.25	4.9	8.2	10.4	11
ENVIRONMENT					
Humidity	0-90% RH @ 0- 40°C (non-condensing)				
Noise Level	Less than 40dB				
BACKUP TIME					
Battery Config.	7.0Ah x 1	9.0Ah x 1	7.0Ah x 2	9.0Ah x 2	9.0Ah x 2
Backup time	19 mins	20 mins	18 mins	18 mins	15 mins
Load Condition	Mac book 15" (90W)*1	Mac book 13" (60W)*2	Mac book 13" (60W)*1 Mac book 15" (90W)*1	Mac book 13" (60W)*2 Mac book 15" (90W)*1	Mac book 13" (60W)*2 Mac book 15" (90W)*2

* Product specifications are subject to change without further notice

LCD Display Information

Operation Display

UPS Mode	LCD	UPS Mode
UPS Power on		When UPS is powered on, it will enter this mode for 4 seconds.
AC Mode		LCD information will be displayed in the following order when LCD is touched. 1. Output voltage 2. Input voltage 3. Load level 4. Battery capacity
Overload in AC mode	 icon will flash.	When overload occurs, alarm will beep every 0.5 seconds.
Battery Mode	 When battery level is low, icon will flash.	Alarm will beep every 10 seconds and LCD information will be displayed in the following order when LCD is touched. 1. Output voltage 2. Input voltage 3. Load level 4. Battery capacity
Overload in battery mode	 icon will flash.	When overload occurs, alarm will beep every 0.5 seconds.

Line Interactive | Eufo

750/1000/1500/2000

Features

- Microprocessor-based line interactive design
- Pure sine wave output
- User-friendly and easy-shift LCD display
- Rack/Tower design
- Built-in boost and buck AVR
- Output power factor 0.9
- Hot-swappable battery design
- Programmable power management outlets
- ECO operation for energy saving (Efficiency Corrective Optimizer)
- Emergency Power Off Function (EPO)
- Long-run models available
- Multiple communication available

MODEL		EUFO 800	EUFO 1.1K(L)	EUFO1.5K	EUFO 2K(L)	EUFO2.5K	EUFO 3K(L)
CAPACITY		800VA / 720W	1100VA / 990W	1500VA / 1350W	2000VA / 1800W	2500VA / 2250W	3000VA / 2700W
INPUT							
Nominal Voltage		208 / 220 / 230 / 240Vac					
Voltage Range		162-290Vac					
Frequency Range		60 / 50Hz (Auto sensing)					
OUTPUT							
Output Voltage		208 / 220 / 230 / 240Vac					
Voltage Regulation (Batt. Mode)		± 1.5% (Before battery alarm)					
Frequency Range (Batt. Mode)		50Hz or 60Hz ± 1Hz					
Current Crest Ratio		3:1					
Harmonic Distortion		2% max @ 100% linear load, 5% max @ 100% non-linear load (before low battery alarm)					
Transfer Time		Typical 2-6ms, 10ms max.					
Waveform (Batt. Mode)		Pure Sinewave					
EFFICIENCY							
To AC Mode		97%		97%		97%	
Buck & Boost Mode		95%		95%		95%	
To Battery Mode		90%		91%		92%	
BATTERY							
Standard Model	Battery Type	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah
	Numbers	2	2	4	4	6	6
	Typical Recharge Time	4 hours recover to 90% capacity					
	Charging Current (max.)	27.4Vdc ± 1%		54.8Vdc ± 1%		82.1Vdc ±1%	
Long-run Model	Charging Current (max.)	N/A	1A / 2A / 4A / 8A	N/A	1A / 2A / 4A / 8A	N/A	1A / 2A / 4A / 8A
	Float Charging Voltage	N/A	27.4Vdc ± 1%	N/A	54.8Vdc ± 1%	N/A	82.1Vdc ± 1%
INDICATORS							
LCD Display		AC mode, Battery mode, Load level, Battery level, Input Voltage, Output Voltage, Overload, Fault and Low Battery					
ALARM							
Battery Mode		Beeps every 10 seconds					
Low Battery		Beeps every 2 seconds					
Overload		Beeps every second					
Fault		Continously beeping					
PROTECTION							
Full Protection		Overload, discharge and overcharge protection					
PHYSICAL							
Standard Model	Dimension, D x W x H (mm)	410 x 438 x 88		510 x 438 x 88		630 x 438 x 88	
	Net Weight (kgs)	12.9	13.4	19.5	21.5	27.7	29.3
Long-run Model	Dimension, D x W x H (mm)	N/A	410 x 438 x 88	N/A	410 x 438 x 88	N/A	410 x 438 x 88
	Net Weight (kgs)	N/A	9	N/A	10.8	N/A	11.9
ENVIRONMENT							
Humidity		0-90% RH @ 0- 40°C (non-condensing)					
Noise Level		Less than 45dB					
MANAGEMENT							
Smart RS-232 / USB		Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10, Linux, Unix and MAC					
Optional SNMP		Power management from SNMP manager and web browser					

* Product specifications are subject to change without further notice * Derate capacity to 80% of capacity when the output voltage is adjusted to 208Vac

Microprocessor-based line interactive design

Eufo series UPS is designed with microprocessor controller for fast response to power disturbances.

Pure sine wave output

With pure sine wave output, Eufo series guarantees compatibility for all kinds of loads. It's perfect power protection for versatile applications such as networking, telecom and other mission-critical applications.

User-friendly and easy-shift LCD display

The front panel digital display can be easily shifted through LCD setting to suit the installation format, vertically stand or flat wall mount.

Rack / Tower design

Eufo series is designed in true universal-mount case. It can be easily installed as floor-standing tower or in 19-inch rackmount bracket.

19" rack-mounting

Floor-standing Tower

Built-in boost and buck AVR

With built-in voltage regulator, the UPS will maintain regulated nominal output without using battery power during brownouts and overvoltages.

Output power factor 0.9

Eufo series is a high-density UPS with output power factor 0.9 to provide higher performance and effciency to critical applications.

Programmable power management

With programmable power management outlets, users can easily and independently control load segments. During power failure, this feature will extend battery time to mission critical devices by shutting down the non-critical devices.

Programmable Outlets (P1) connect to non-critical devices

50 / 60 Hz frequency converter mode

Lock output frequency at 50Hz or 60Hz to suit power sensitive equipments.

ECO operation for energy saving (Efficiency Corrective Optimizer)

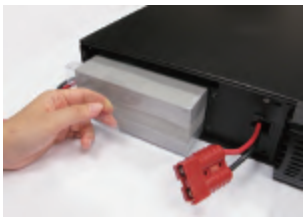
The ECO function allows cost-effective operation of UPS Systems as high as 98%. In this operation mode, load is supplied by the mains. When battery is fully charged, the fan will stop running for energy saving. In the event of a mains failure, the inverter takes over the load and provides supply continuity to the connected systems.

Emergency Power Off function (EPO)

This feature can secure the personnel and equipment in case of fires or other emergencies.

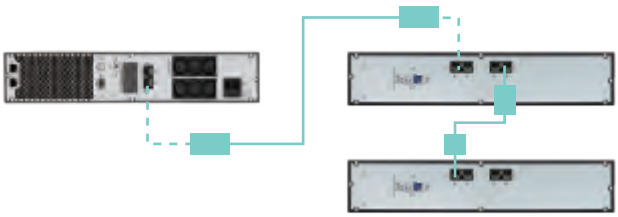
Hot-swappable battery design

This design ensures clean and uninterruptible power to protected equipment during battery replacement.



Extend battery capacity Functio

Eufo series offer extend battery capacity function for long back up time purpose.



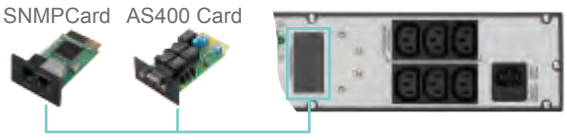
RJ-45 Surge protector

Eufo Series implements RJ-45 Surge Protection ports to prevent Ethernet network damage caused by lightning or ground surges.

Multiple communication

- USB port
- RS-232 port
- Intelligent slot for SNMP or Relay Card (option)

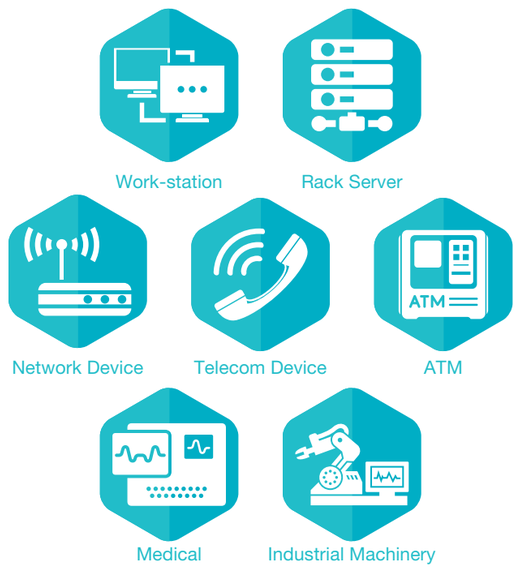
Also offer free monitoring software, ViewPower, downloaded from the internet. This advanced and networking software supports various operating systems and multiple languages.



On Line
series

Reliable UPS Solution for Wide Information Technology Application

On Line Series is specifically designed for operation in poor power areas. Built-in internal battery and extend battery connector in tower model, user can extend autonomy time via plug and play battery design. The Reliable design is ideal for Banking, ATM and other business critical application.



General Features /

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction ≧ 0.99
- Output power factor 0.9
- Wide input voltage (110V–300V)
- Converter mode available
- ECO mode for energy saving
- Generator compatible
- SNMP Function operate with USB or RS-232 synchronizingly
- Comprehensive LCD Display for access & setting

On Line | Champ

1K/2K/3K/6K/10K

Features

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction
- Output power factor 0.9
- Wide input voltage (110V - 300V)
- Converter mode available
- ECO mode for energy saving(Only available for 1-3kVA)
- Adjustable battery string numbers only available for 6K / 10K models
- Adjustable charging current via LCD or software (1A~6A)
- Emergency power off function (EPO) only available for 6K / 10K models
- Generator compatible
- Smart SNMP works well with either USB or RS-233 together
- Comprehensive LCD display allows easy monitoring and access of UPS status

MODEL		Champ 1K	Champ 2K	Champ 3K	Champ 6K	Champ 10K
PHASE		Single phase with ground				
CAPACITY		1000VA / 900W	2000VA / 1800W	3000VA / 2700W	6000VA / 5400W	10000VA / 9000W
INPUT						
Nominal Voltage		200 / 208 / 220 / 230 / 240Vac			208 / 220 / 230 / 240Vac	
Voltage Range		110-300Vac (Based on load at 50%) 160-280Vac (Based on load at 100%)			110-300Vac (Based on load at 50%) 176-300Vac (Based on load at 100%)	
Frequency Range		40~70Hz			46~54Hz or 56~64Hz	
Power Factor		≧ 0.99 @ Nominal Voltage (100% load)				
OUTPUT						
Output Voltage		200 / 208 / 220 / 230 / 240Vac			208 / 220 / 230 / 240Vac	
Voltage Regulation		± 1%				
Frequency Range (Synchronized Range)		47~53Hz or 57~63Hz			46~54Hz or 56~64Hz	
Frequency Range (Batt. Mode)		50Hz ± 0.25Hz or 60Hz ± 0.3Hz			50Hz or 60Hz ± 0.1Hz	
Inverter Crest Ratio		3:1				
Harmonic Distortion (THDv)		≦ 3% THD (Linear Load) ≦ 6% THD (Non-linear Load)			≦ 3% THD (Linear Load) ≦ 5% THD (Non-linear Load)	
Transfer Time	AC Mode to Battery Mode	Zero				
	Inverter to Bypass	4 ms (Typical)			Zero	
Waveform (Batt. Mode)		Pure Sinewave				
EFFICIENCY						
AC Mode		88%	88%	90%	92%	93%
Battery Mode		83%	87%	88%	90%	91%
BATTERY						
Standard Model	Battery Type	12V / 9Ah	12V / 9Ah	12V / 9Ah	12V / 9Ah	
	Numbers in string	2	4	6	16	16
	Typical Recharge Time	4 hours recover to 90% capacity			9 hours recover to 90% capacity	
	Charging Current (max.)	1.0A			1A / 2A (Adjustable)	
	Charging Voltage	27.4Vdc ± 1%	54.7Vdc ± 1%	82.1Vdc ± 1%	218.4Vdc ± 1%	218.4Vdc ± 1%
Long-run Model	Battery Type	Depending on the capacity of external batteries				
	Numbers in string	2	4	6	16	16
	Charging Current (max.)	1A / 2A / 4A / 6A (Adjustable)			1A / 2A / 4A / 6A (Adjustable)	
	Charging Voltage	27.4Vdc± 1%	54.7Vdc ± 1%	82.1Vdc ± a1%	218.4Vdc ± 1%	218.4Vdc ± 1%
INDICATORS						
LCD Panel		Load level, Battery level, Line mode, Battery mode, Bypass mode, ECO mode and Fault indicators				
ALARM						
Battery Mode		Beeps every 4 seconds				
Low Battery		Beeps every second				
Overload		Beeps twice per second				
Fault		Continously beeping				
PHYSICAL						
Standard Model	Dimension, D x W x H (mm)	282 x 145 x 220	397 x 145 x 220	421 x 190 x 318	369 x 190 x 688	442 x 190 x 688
	Net Weight (kgs)	9.8	17	27.6	61	66
Long-run Model	Dimension, D x W x H (mm)	282 x 145 x 220	397 x 145 x 220	397 x 145 x 220	369 x 190 x 318	442 x 190 x 318
	Net Weight (kgs)	4.1	6.8	7.4	12	16
ENVIRONMENT						
Humidity		20-90% RH @ 0-40°C (non-condensing)			0-95% RH @ 0-50°C (non-condensing)	0-95% RH @ 0-40°C (non-condensing)
Noise Level		Less than 50dBA @ 1 Meter			Less than 55dBA @ 1 Meter	Less than 58dBA @ 1 Meter
MANAGEMENT						
Smart RS-232 / USB		Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10, Linux and MAC				
Optional SNMP		Power management from SNMP manager and web browser				

* In Frequency converter mode, the output capacity derate to 80% with output voltage adjusted to 200 / 208Vac
* Long-run model power factor: 0.8
* Product specifications are subject to change without further notice

On Line | Champ RM

1K/2K/3K

Features

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction
- Output power factor 0.9
- Wide input voltage (110V - 300V)
- Converter mode available
- ECO mode for energy saving
- Adjustable charging current via LCD or software (1A~6A)
- Generator compatible
- Smart SNMP works well with either USB or RS-233 together
- Comprehensive LCD display allows easy monitoring and access of UPS status

CE

MODEL		Champ RM 1K(L)	Champ RM 2K(L)	Champ RM 3K(L)
PHASE		Single phase with ground		
CAPACITY		1000VA / 900W	2000VA / 1800W	3000VA / 2700W
INPUT				
Nominal Voltage		110 / 115 / 120 / 127Vac or 208 / 220 / 230 / 240Vac		
Input Voltage Range		60-145Vac or 120-300Vac at 50% load 90-145Vac or 180-300Vac at 100% load		
Frequency Range		40~70Hz		
Power Factor		≧ 0.99 @ Nominal Voltage (100% load)		
OUTPUT				
Output Voltage		110 / 115 / 120 / 127Vac or 208 / 220 / 230 / 240Vac		
Voltage Regulation		± 1%		
Frequency Range (Synchronized Range)		47~53Hz or 57~63Hz		
Frequency Range (Batt. Mode)		50Hz ± 0.25Hz or 60Hz ± 0.3Hz		
Current Crest Ratio		3:1		
Harmonic Distortion		≦ 3% THD (Linear Load) / ≦ 6% THD (Non-linear Load)		
Transfer Time	AC Mode to Batt. Mode	Zero		
	Inverter to Bypass	4 ms (Typical)		
Waveform (Batt. Mode)		Pure Sinewave		
EFFICIENCY				
AC Mode		88%	89%	90%
Battery Mode		83%	87%	88%
BATTERY				
Standard Model	Battery Type	12V / 9Ah	12V / 9Ah	12V / 9Ah
	Numbers	2	4	6
	Typical Recharge Time	4 hours recover to 90% capacity		
	Charging Current (max.)	1.0A		
	Charging Voltage	27.4Vdc ± 1%	54.7Vdc ± 1%	82.1Vdc ± 1%
Long-run Model	Battery Type	Depending on the capacity of external batteries		
	Numbers	2 3	4 6 8	6 8
	Charging Current (max.)	1A / 2A / 4A / 6A (Adjustable)		
	Charging Voltage	27.4Vdc ± 1% 41.0Vdc ± 1%	54.7Vdc ± 1% 82.1Vdc ± 1% 109.4Vdc ± 1%	82.1Vdc ± 1% 109.4Vdc ± 1%
INDICATORS				
LCD Panel		Load level, Battery level, AC mode, Battery mode, Bypass mode and Fault indicators		
ALARM				
Battery Mode		Beeps every 4 seconds		
Low Battery		Beeps every second		
Overload		Beeps twice every second		
Fault		Continously beeping		
PHYSICAL				
Standard Model	Dimension, D x W x H (mm)	310 x 438 x 88	410 x 438 x 88	630 x 438 x 88
	Net Weight (kgs)	12	19	29.3
Long-run Model*	Dimension, D x W x H (mm)	310 x 438 x 88	410 x 438 x 88	410 x 438 x 88
	Net Weight (kgs)	9	12	14.2
ENVIRONMENT				
Humidity		20-90% RH @ 0- 40°C (non-condensing)		
Noise Level		Less than 50dBA @ 1 Meter		
MANAGEMENT				
Smart RS-232 / USB		Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8, Linux, Unix and MAC		
Optional SNMP		Power management from SNMP manager and web browser		

* 1K-3K: Derate to 80% of capacity in Frequency converter mode or when the output voltage is adjusted to 208Vac.
* Product specifications are subject to change without further notice
* Long-run model power factor: 0.8

On Line | Champ RM

6K/10K

Features

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction
- Output power factor 0.9
- Wide input voltage (110V - 300V)
- Converter mode available
- Adjustable battery string numbers
- Adjustable charging current via LCD or software (1A~6A)
- Emergency power off function (EPO)
- Generator compatible
- Smart SNMP works well with either USB or RS-233 together
- Comprehensive LCD display allows easy monitoring and access of UPS status

CE

MODEL		Champ RM 6K(L)		Champ RM 10K(L)	
PHASE		Single phase with ground			
CAPACITY		6000VA / 5400W		10000VA / 9000W	
INPUT					
Nominal Voltage		208 / 220 / 230 / 240Vac			
Input Voltage Range		110-300Vac (Based on load at 50%) 176-300Vac (Based on load at 100%)			
Frequency Range		46Hz ~ 54Hz or 56Hz ~ 64Hz			
Power Factor		≧ 0.99 @ Nominal Voltage (100% load)			
OUTPUT					
Output Voltage		208 / 220 / 230 / 240Vac			
Voltage Regulation		± 1%			
Frequency Range (Synchronized Range)		46Hz ~ 54Hz or 56Hz ~ 64Hz			
Frequency Range (Batt. Mode)		50Hz ± 0.1Hz or 60Hz ± 0.1Hz			
Current Crest Ratio		3:1			
Harmonic Distortion		≦ 3% THD (Linear Load) / ≦ 5% THD (Non-linear Load)			
Transfer Time	AC Mode to Batt. Mode	Zero			
	Inverter to Bypass	Zero			
Waveform (Batt. Mode)		Pure Sinewave			
EFFICIENCY					
AC Mode		92%		93%	
Battery Mode		90%		91%	
BATTERY					
Standard Model	Battery Type	12V / 9Ah			
	Numbers	16	20	16	20
	Typical Recharge Time	9 hours recover to 90% capacity			
	Charging Current (max.)	1A / 2A (Adjustable)			
	Charging Voltage	218.4Vdc ± 1%	273Vdc ± 1%	218.4Vdc ± 1%	273Vdc ± 1%
Long-run Model	Battery Type	Depending on applications			
	Numbers	16-20pcs (Adjustable)			
	Charging Current (max.)	1A / 2A / 4A / 6A (Adjustable, 6A is only available for 16pcs batteries)			
	Charging Voltage	218.4Vdc ± 1% (Based on 16pcs batteries)			
INDICATORS					
LCD Panel		Load level, Battery level, AC mode, Battery mode, Bypass mode and Fault indicators			
ALARM					
Battery Mode		Beeps every 4 seconds			
Low Battery		Beeps every second			
Overload		Beeps twice every second			
Fault		Continously beeping			
PHYSICAL					
Standard Model	Dimension, D x W x H (mm)	UPS Unit:500 x 438 x 88 [2U] Battery Pack: 668 x 438 x 88 [2U]	UPS Unit: 500 x 438 x 88 [2U] Battery Pack: 580 x 438 x 133	UPS Unit: 580 x 438 x 133[3U] Battery Pack: 580 x 438 x 133 [3U]	UPS Unit: 580 x 438 x 133[3U] Battery Pack: 580 x 438 x 133 [3U]
	Net Weight (kgs)	UPS Unit: 15 Battery Pack: 48	UPS Unit: 15 Battery Pack: 48	UPS Unit: 18 Battery Pack: 51	UPS Unit: 18 Battery Pack: 61
Long-run Model*	Dimension, D x W x H (mm)	500 x 438 x 88 [2U]		580 x 438 x 133[3U]	
	Net Weight (kgs)	15		18	
ENVIRONMENT					
Humidity		0-90% RH @ 0- 40°C (non-condensing)			
Noise Level		Less than 55dBA @ 1 Meter		Less than 58dBA @ 1 Meter	
MANAGEMENT					
Smart RS-232 / USB		Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8, Linux, Unix and MAC			
Optional SNMP		Power management from SNMP manager and web browser			

* 6K/10K: Derate to 60% of capacity in Frequency converter mode and to 80% when the output voltage is adjusted to 208Vac.
* Product specifications are subject to change without further notice

On Line | CUSTOS 9X+

1K/2K/3K

Features

- True double-conversion online UPS
- Output power factor 0.9
- User-friendly and easy-shift LCD display
- Rack/Tower design
- Programmable power management outlets
- 50/60Hz frequency converter mode
- ECO and advanced ECO mode for energy saving
- Emergency power off function (EPO)
- Hot-swappable battery design

MODEL	Custos 9X+ 1K	Custos 9X+ 1K(L)	Custos 9X+ 1.5K	Custos 9X+ 1.5K(L)	Custos 9X+ 2K	Custos 9X+ 2K(L)	Custos 9X+ 3K	Custos 9X+ 3K(L)
PHASE	Single phase with ground							
CAPACITY	1000VA / 900W	1000VA / 800W	1500VA / 1350W	1500VA / 1200W	2000VA / 1800W	2000VA / 1600W	3000VA / 2700W	3000VA / 2400W
INPUT								
Nominal Voltage	100* / 110* / 115* / 120 / 127Vac or 200 / 208 / 220 / 230 / 240Vac							
Voltage Range	55-150Vac ± 5% or 110-300Vac ± 5%							
Frequency Range	40~70Hz							
Phase	Single phase with ground							
Power Factor	≧ 0.99 @ nominal voltage (100% load)							
OUTPUT								
Output Voltage	100* / 110* / 115* / 120 / 127Vac or 200 / 208 / 220 / 230 / 240Vac							
AC Voltage Regulation (Batt. Mode)	± 1%							
Frequency Range (Synchronized Range)	47~53Hz or 57~63Hz							
Frequency Range (Batt. Mode)	50Hz ± 0.5% or 60Hz ± 0.5%							
Current Crest Ratio	5:1 (max.)							
Harmonic Distortion	≦ 2% THD (Linear Load); ≦ 4% THD (Non-linear Load)							
Transfer Time — AC Mode to Batt. Mode	Zero							
Transfer Time — Inverter to Bypass	4 ms (Typical)							
Waveform (Batt. Mode)	Pure Sinewave							
EFFICIENCY								
AC Mode	87%		88%		88%		89%	
ECO Mode	94%		95%		95%		97%	
Battery Mode	85%		86%		86%		87%	
BATTERY								
Battery Type	12V / 9Ah	Depending on the capacity of external batteries	12V / 9Ah	Depending on the capacity of external batteries	12V / 9Ah	Depending on the capacity of external batteries	12V / 9Ah	Depending on the capacity of external batteries
Numbers	2		3		4		6	
Typical Recharge Time	4 hours recover to 90% capacity		4 hours recover to 90% capacity		4 hours recover to 90% capacity		4 hours recover to 90% capacity	
Charging Current (max.)	1.0A	1A / 2A / 4A / 8A	1.0A	1A / 2A / 4A / 8A	1.0A	1A / 2A / 4A / 8A	1.0A	1A / 2A / 4A / 8A
Charging Voltage	27.4Vdc ± 1%		41.1Vdc ± 1%		54.7Vdc ± 1%		82.1Vdc ± 1%	
INDICATORS								
LCD Panel	Load level, Battery level, AC mode, Battery mode, Bypass mode and Fault indicator							
ALARM								
Battery Mode	Beeps every 4 seconds							
Low Battery	Beeps every second							
Overload	Beeps twice every second							
Fault	Continously beeping							
PHYSICAL								
Dimension, D x W x H (mm)	410 x 438 x 88[2U]		510 x 438 x 88[2U]		510 x 438 x 88[2U]		630 x 438 x 88[2U]	
Net Weight (kgs)	12.9	8.6	17.6	10.7	20.6	11.3	28	13.8
ENVIRONMENT								
Humidity	20-90% RH @ 0- 40°C (non-condensing)							
Noise Level	Less than 50dBA @ 1 Meter							
MANAGEMENT								
Smart RS-232 / USB	Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10, Linux, Unix and MAC							
Optional SNMP	Power management from SNMP manager and web browser							

* *Derate capacity to 95% when the output voltage is adjusted to 115Vac, derate capacity to 90% when the output voltage is adjusted to 110Vac and derate capacity to 80% when the output voltage is adjusted to 100Vac

* Product specifications are subject to change without further notice

On Line | CUSTOS 9X+

6K/10K

Features

- True double-conversion online UPS
- Output power factor 0.9
- User-friendly and easy-shift LCD display
- Rack/Tower design
- Programmable power management outlets
- 50/60Hz frequency converter mode
- ECO and advanced ECO mode for energy saving
- Emergency power off function (EPO)
- DSP technology applied for 6K and up models
- Active input power factor correction 0.99
- N+X paralled redundancy available

MODEL		Custos 9X+ 6K	Custos 9X+ 10K
PHASE		Single phase with ground	
CAPACITY		6000VA / 5400 W	10000VA / 9000 W
INPUT			
Nominal Voltage		200 / 208 / 220 / 230 / 240Vac	
Voltage Range		176-300Vac ± 3% @ 100% load 110-300Vac ± 3% @ 50% load	
Frequency Range		46~54Hz or 56~64Hz	
Power Factor		≧ 0.99 @ 100% load	
OUTPUT			
Nominal Voltage		200 / 208 / 220 / 230 / 240Vac	
AC Voltage Regulation		± 1%	
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz	
Frequency Range (Batt. Mode)		50Hz ± 0.1Hz or 60Hz ± 0.1Hz	
Current Crest Ratio		3:1 (max.)	
Harmonic Distortion		≦ 2% THD (Linear Load), ≦ 4% THD (Non-linear Load)	
Transfer Time	AC mode to Battery mode	Zero	
	Inverter to Bypass	Zero	
Waveform (Batt. Mode)		Pure Sinewave	
EFFICIENCY			
AC Mode		91%	91%
ECO Mode		96%	96%
Battery Mode		88%	88%
BATTERY			
Standard Model	Battery Type	12V / 7Ah	12V / 9Ah
	Numbers	20 (18-20pcs adjustable)*	20 (18-20pcs adjustable)*
	Typical Recharge Time	7 hours recover to 90% capacity	9 hours recover to 90% capacity
	Charging Current (max.)	1.0A	
	Float Charging Voltage	273Vdc (based on battery numbers at 20pcs)	
Long-run Model	Battery Type and Numbers	Depending on applications	
	Charging Current (max.)	4.0A	
	Float Charging Voltage	273Vdc (based on battery numbers at 20pcs)	
INDICATORS			
LCD Panel		UPS status, Load level, Battery level, Input / Output voltage, Discharge timer and Fault conditions	
ALARM			
Battery Mode		Beeps every 4 seconds	
Low Battery		Beeps every second	
Overload		Beeps twice every second	
Fault		Continuously beeping	
PHYSICAL			
Standard Model	Dimension, D x W x H (mm)	UPS unit: 606 x 438 x 133 [3U] Battery pack: 606 x 438 x 133 [3U]	UPS unit: 686 x 438 x 133 [3U] Battery pack: 606 x 438 x 133 [3U]
	Net Weight (kgs)	UPS unit: 20 Battery pack: 58	UPS unit: 23.5 Battery pack: 65
Long-run Model	Dimension, D x W x H (mm)	606 x 438 x 133 [3U]	686 x 438 x 133 [3U]
	Net Weight (kgs)	20	23.5
ENVIRONMENT			
Humidity		0-95% RH @ 0- 40°C (non-condensing)	
Noise Level		Less than 58dBA @ 1 Meter	Less than 60dBA @ 1 Meter
MANAGEMENT			
Smart RS-232 / USB		Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10, Linux, Unix and MAC	
Optional SNMP		Power management from SNMP manager and web browser	

* When using internal batteries from 18-19, the unit will de-rate according to below formula: P=Prating x N/20
* If the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be derated one percent per 100m
* L means long-run model
* Product specifications are subject to change without further notice

True double-conversion online UPS

A true double conversion UPS will rectify input power to offer clean,pure, high level quality power with ±1% voltage output regulation to fully protect mission-critical devices such as sensitive networks, small computer centers servers, telecom applications, as well as for industrial applications.

Output power factor 0.9

Custos 9X+ series is a high-density UPS with output power factor 0.9 to provide higher performance and effciency to critical applications.

User-friendly and easy-shift LCD display

The front panel digital display can be easily shifted through LCD setting to suit the installation format, vertically stand or flat wall mount.

Rack / Tower design

Custos 9X+ series is designed in true universal-mount case. It can be easily installed as floor-standing tower or in 19-inch rackmount bracket.

19" rack-mounting

Floor-standing Tower

Programmable power management

With programmable power management outlets, users can easily and independently control load segments. During power failure, this feature will extend battery time to mission critical devices by shutting down the non-critical devices.

Programmable Outlets (P1)
connect to non-critical devices

50 / 60 Hz frequency converter mode

Lock output frequency at 50Hz or 60Hz to suit power sensitive equipments.

ECO and advanced ECO mode for energy saving

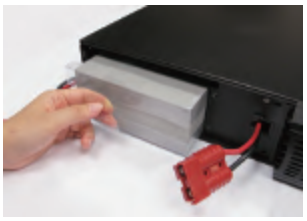
Thanks FSP Custos9X+ smart design, operation effciency up to 97% ECO mode implemented. Furthermore, Custos 9X+ 1-3K even offers advanced ECO mode to allow UPS to operate at higher effciency up to 98% for more energy saving.
In these operation modes, load is supplied by the utility. When utility failure, UPS inverter will assume control the load and provide clean power continuity to the connected devices.

Emergency Power Off function (EPO)

The safety function can guarantee & secure the emergency responders, fire fighters not exposed to dangerous voltage, electrical hazard from the device. This is important if equipment is emitting smoke, fire, or flood, or if person is being electrocuted.

Hot-swappable battery design

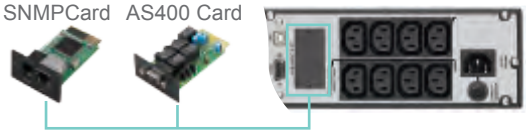
This design ensures clean and uninterruptible power to protected equipment during battery replacement.



RJ-45 Surge protector

Custos 1-3kVA implements RJ-45 Surge Protection ports to prevent Ethernet network damage caused by lightning or ground surges.

Intelligent slot for SNMP or Relay Card



Parallel Option N+X for 6K-10K models

Custos 9X+ 6K/10K can be parallel operated with up to 3 units to accommodate increses in power demand as well as to attain power redundancy with high system integrity.

On Line
Three-Phase series

Heavy UPS Solution for Wide Industry Application

3 Phase Tower UPS Solutions : 3P/3P, 3P/1P Online UPS series integrates true double conversion design, DSP technology and active input power factor correction design to ensure output power quality and performance at all times. N+X redundancy function available reduce power failure or lost rick. Besides, easy-configurable program via LCD panel enhances the flexibility to meet ever-increasing power demand of IT and networked environment.

General Features /

- True double-conversion
- DSP technology guarantees high performance
- Output power factor 0.9
- Wide input voltage range (110-300Vac)
- Active power factor correction in all phases
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving
- Emergency power off function (EPO)
- SNMP+USB+RS-232 multiple communications
- 3-stage extendable charging design for optimized battery performance
- Accepts dual-mains inputs
- Generator compatible
- Battery number adjustable
- Maintenance bypass available
- Optional N+X parallel redundancy
- Optional isolation transformer offers full isolation and complete common mode noise rejection

On Line | EPOS(3P/ 1P)

10-20K

Features

- True double-conversion
- DSP technology guarantees high performance
- Output power factor 1.0
- Active power factor correction in all phases
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving (ECO)
- 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 for long-run model
- Maintenance bypass available
- Optional parallel operation
- Optional isolation transformer offers full isolation and complete common mode noise rejection

MODEL		EPOS 3/1-10K(L)	EPOS 3/1-15K(L)	EPOS 3/1-20K(L)
PHASE			3 phase in / 1 phase out	
CAPACITY		10kVA/10kW	15kVA / 15kW	20kVA / 20kW
INPUT				
Nominal Voltage			3X400Vac (3Ph+N)	
Voltage Range			110-300VAC @ 50% load / 176-276VAC @ 100% load	
Frequency Range			46~54Hz @50Hz System or 56~64Hz @ 60Hz System	
Power Factor			≧ 0.99 @ 100% load	
OUTPUT				
Output Voltage			208*/220/230/240 VAC (Ph-N)	
AC Voltage Regulation (Batt. Mode)			± 1%	
Frequency Range (Synchronized Range)			46~54Hz @50 Hz System or 56~64Hz @60 Hz System	
Frequency Range (Batt. Mode)			50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz	
Current Crest Ratio			3:1 (max.)	
Harmonic Distortion			≦ 2 % @100% Linear Load; ≦ 5 % @100% Non-linear Load	
Transfer Time	AC Mode to Battery Mode		zero	
	Inverter to Bypass		zero (when phase lock fails, <4ms interruption occurs from inverter to bypass)	
Waveform (Batt. Mode)			Pure Sine Wave	
Overload	Line Mode		100-110% for 60 min, 110-125% for 10 min, 125%~150% 1min, >150% immediately	
	Battery Mode		100-110% for 60 min, 110-125% for 10 min, 125%~150% 1min, >150% immediately	
PARALLEL CAPACITY			up to 3 units in parallel	
EFFICIENCY				
AC Mode			95.5%	
ECO Mode			98.5%	
Battery Mode			94.5%	
BATTERY				
Standard Model	Battery Type	12V / 7Ah	12V / 9Ah	12V / 9Ah
	Numbers in string	(10+10) PCS	(16+16) PCS	(16+16) PCS
	Typical Recharge Time		9 hours recover to 90% capacity	
	Charging Current (max.)		2.0A ± 10% (Recommended) 1.0~12.0A (Adjustable)	
	Charging Voltage	+/-136.5 VDC ± 1%	+/-218 VDC ± 1%	
Long-run Model	Battery Type		Depending on the capacity of external batteries	
	Numbers in string	20PCS	32~40 pcs (Adjustable)	
	Charging Current (max.)	1.0~12.0A ± 10% (Adjustable)	2.0~24.0A ± 10% (Adjustable)	
	Charging Voltage	+/-13.65 VDC* N ± 1% (N = 10)	+/-13.65 VDC* N ± 1% (N = 16~20)	
INDICATORS				
LCD Panel			UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions	
PROTECTION				
Full Protection			Overload, Overtemperature,Utility abnormal, UPS fault, UPS warning, battery low,etc	
ALARM				
Battery Mode			Sounding every 4 seconds	
Low Battery			Sounding every second	
Overload			Sounding twice every second	
Fault			Continuously sounding	
PHYSICAL				
Standard Model	Dimension, D x W x H (mm)		626x 250 x 827	
	Net Weight (kgs)	85	127.5	127.5
Long-run Model	Dimension, D x W x H (mm)		626 x 250 x 827	
	Net Weight (kgs)	46.5	46.5	46.5
ENVIRONMENT				
Operation Temperture			0-40°C (the battery life will down when > 25°C)	
Operation Humidity			< 95% and non-condersing	
Operation Altitude**			< 1000m**	
Noise Level		Less than 55dB @ 1 Meter	Less than 58dB @ 1 Meter	
STANDARDS				
Safety			EN 62040-1:2008/A1:2013;IEC 62040-1:2008/A1:2013;CE low voltage directive	
EMC			EN 62040-2: 2006(C3) CE EMC directive	
MANAGEMENT				
Smart RS-232 / USB			Supports Windows® 2000/2003/XP/Vista/2008/7/8/10, Linux, Unix and MAC	
Optional SNMP			Power management from SNMP manager and web browser	

*Derate capacity to 90% when the output voltage is adjusted to 208 VAC.

**If the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be de-reated 1% per 100 m.

Product specifications are subject to change without further notice

On Line | EPOS(3P/ 3P)

10-80K

Features

- True double-conversion
- DSP technology guarantees high performance
- Output power factor 1 for 10K-80K
- Active power factor correction in all phases
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving (ECO)
- 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 for long-run model
- Maintenance bypass available
- Parallel operation with commom battery
- Optional parallel operation
- Optional isolation transformer offers full isolation and complete common mode noise rejection

MODEL		EPOS 10K(L)*	EPOS 15K(L)	EPOS 20K(L)*	EPOS 30K(L)*	EPOS 40K(L)*	EPOS 60K(L)*	EPOS 80K(L)*
PHASE		3-phase in / 3-phase out						
CAPACITY		10kVA/10kW	15kVA / 15kW	20kVA / 20kW	30kVA / 30kW	40kVA / 40kW	60kVA / 60kW	80kVA / 80kW
INPUT								
Nominal Voltage		3 x 400 VAC (3Ph+N)						
Voltage Range		190-520 Vac (3-phase) @ 50% load 305-478 Vac (3-phase) @ 100% load						
Frequency Range		46~54 Hz or 56~64Hz						
Power Factor		≧ 0.99 @ 100% load						
OUTPUT								
Output Voltage		3 x 360*/380/400/415 Vac (3Ph+N)						
AC Voltage Regulation (Batt. Mode)		± 1%						
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz						
Frequency Range (Batt. Mode)		50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz						
Current Crest Ratio		3:1 (max.)						
Harmonic Distortion		≦ 2 % THD (Linear Load) / ≦ 5 % THD (Non-linear Load)						
Transfer Time	AC Mode to Battery Mode	zero						
	Inverter to Bypass	zero						
Waveform (Batt. Mode)		Pure Sine Wave						
Overload	Line Mode	100-110% for 60 min, 110-125% for 10 min, 125%~150% for 1 min; >150% immediately						
	Battery Mode	100-110% for 60 min, 110-125% for 10 min, 125%~150% for 1 min; >150% immediately						
PARALLEL CAPACITY		up to 3 units in parallel						
EFFICIENCY								
AC Mode		95.5%						
ECO Mode		98.5%						
Battery Mode		94.5%						
BATTERY								
Standard Model	Battery Type	12V/9Ah	12V/9Ah	12V/9Ah	12V/7Ah	12V/9Ah	N/A	
	Numbers in string	(10+10)pcs	(16+16)pcs	(16+16)pcs	(16+16)pcs x 2 strings	(16+16)pcs x 2 strings	N/A	
	Typical Recharge Time	9 hours recover to 90% capacity					N/A	
	Charging Current (max.)	1A ~ 12A (Adjustable)					N/A	
	Charging Voltage	+/-136.5 VDC ± 10%		+/-218 Vdc ± 10%			N/A	
Long-run Model	Battery Type	Depending on the capacity of external batteries						
	Numbers in string	20pcs	32~40 pcs (Adjustable)					
	Charging Current (max.)	1A ~ 12A (Adjustable)					2A ~ 24 A (Adjustable)	
	Charging Voltage	+/-136.5 VDC ± 10%	+/-13.65V*N (N=16~20)					
INDICATORS								
LCD Panel		UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions						
PHYSICAL								
Standard Model	Dimension, D x W x H (mm)	630 x 250 x 826			815 x 300 x 1000		N/A	
	Net Weight (kgs)	124	139		225	250	N/A	
Long-run Model	Dimension, D x W x H (mm)	630 x 250 x 826			815 x 300 x 1000		790 x 360 x 1010	
	Net Weight (kgs)	28	43		60	67	108	113
ENVIRONMENT								
Operation Temperture		0-40°C						
Operation Humidity		<95% and non-condersing						
Noise Level		Less than 55dB @ 1 Meter	Less than 58dB @ 1 Meter		Less than 65dB @ 1 Meter	Less than 58dB @ 1 Meter		Less than 55dB @ 1 Meter
MANAGEMENT								
Smart RS-232 / USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC						
Optional SNMP		Power management from SNMP manager and web browser						

* When output voltage is set as 3 x 360Vac, the output power of the unit will be de-rated to 90%.
* Product specifications are subject to change without further notice

On Line | EPOS(3P / 3P)

100-200K

Features

- True double-conversion
- DSP technology guarantees high performance
- Output power factor 1 for 10K-80K
- Active power factor correction in all phases
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving (ECO)
- 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 for long-run model
- Maintenance bypass available
- Parallel operation with commom battery
- Optional parallel operation
- Optional isolation transformer offers full isolation and complete common mode noise rejection

MODEL		EPOS 100KL	EPOS 120KL	EPOS 160KL	EPOS 200KL
PHASE		3-phase in / 3-phase out			
CAPACITY		100kVA / 90kW	120kVA / 108kW	160kVA / 144kW	200kVA / 180kW
INPUT					
Nominal Voltage		3 x 400 VAC (3Ph+N)			
Voltage Range		208-478 VAC (3-phase) @ 70% load 305-478 VAC (3-phase) @ 100% load			
Frequency Range		40~70Hz			
Power Factor		≧ 0.99 @ 100% load			
OUTPUT					
Output Voltage		3 x 380/400/415 VAC (3Ph+N)			
AC Voltage Regulation (Batt. Mode)		± 1%			
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz			
Frequency Range (Batt. Mode)		50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz			
Current Crest Ratio		3:1 (max.)			
Harmonic Distortion		zero			
Transfer Time	AC Mode to Battery Mode	zero			
	Inverter to Bypass	Pure Sine Wave			
Waveform (Batt. Mode)		≦ 2 % THD (Linear Load) / ≦ 4 % THD (Non-linear Load)			
Overload	Line Mode	105-110% for 1 hr, 111-125% for 10 min, 126-150% for 1 min, >150% for 200ms			
	Battery Mode	105-110% for 1 hr, 111-125% for 10 min, 126-150% for 1 min, >150% for 200ms			
PARALLEL CAPACITY		up to 2 units in parallel			
EFFICIENCY					
AC Mode		94%			
ECO Mode		98%			
Battery Mode		93%			
BATTERY					
Standard Model	Battery Type	N/A			
	Numbers in string	N/A			
	Typical Recharge Time	N/A			
	Charging Current (max.)	N/A			
	Charging Voltage	N/A			
Long-run Model	Battery Type	Depending on the capacity of external batteries			
	Numbers in string	32~40 pcs (Adjustable)			
	Charging Current (max.)	24A	32A	40A	48A
	Charging Voltage	+/-13.7V*N (N = 16~20)			
INDICATORS					
LCD Panel		10" Touch Type color LCD			
PHYSICAL					
Standard Model	Dimension, D x W x H (mm)	N/A			
	Net Weight (kgs)	N/A			
Long-run Model	Dimension, D x W x H (mm)	940 x 567 x 1015		1040 x 567 x 1452	
	Net Weight (kgs)	199	234	306	340
ENVIRONMENT					
Operation Temperture		0-40°C			
Operation Humidity		<95% and non-condersing			
Noise Level		Less than 70dB @ 1 Meter		Less than 73dB @ 1 Meter	
MANAGEMENT					
Smart RS-232 / USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC			
Optional SNMP		Power management from SNMP manager and web browser			

* When output voltage is set as 3 x 360Vac, the output power of the unit will be de-rated to 90%.
* Product specifications are subject to change without further notice

On Line | MPLUS

30K-300K

Features

- High efficiency online double conversion technology
- High scalability
- Unity output power factor
- Modular design lowers MTTR
- N+1 or N+R Parallel Redundancy for power guarantee
- Ease of installation and maintenance
- Flexible battery configuration adapts different applications
- Highly reliable operation with redundant power supply in STS
- User-adjustable charging current
- High overload capability
- Graphic 5.7" LCD design for easy management
- Optional 10" touch LCD panel

MODEL	Mplus 30K	Mplus 60K	Mplus 90K	Mplus 120K	Mplus 150K	Mplus 180K	Mplus 210K	Mplus 300K
PHASE	3-phase in/3-phase out							
TOTAL CAPACITY*	30kW	60kW	90kW	120kW	150kW	180kW	210kW	300kW
UPS POWER MODULES	1	2	3	4	5	6	7	10
TOPOLOGY	True Double-Conversion Online							
INPUT								
Nominal Voltage	3 x 380Vac / 400Vac / 415Vac (3Ph+N)							
Voltage Range	305~478Vac at 100% load; 208~304Vac at <70% load							
Nominal Frequency	50 / 60Hz (Auto sensing)							
Frequency Range	40~70Hz							
Power Factor	> 0.99 at 100% load, >0.98 at 50% load							
Harmonic Distortion (THDi)	< 3% @ 100% load							
OUTPUT								
Nominal Voltage	3 x 380Vac / 400Vac / 415Vac (3Ph+N)							
Voltage Regulation (Steady state)	≦± 1% Typical (balanced load), ≦± 2% Typical (unbalanced load)							
Voltage Regulation (Transient)	≦± 5% Typical							
Nominal Frequency	50 / 60Hz							
Frequency Range (Synchronized range)	46~54Hz or 56~64Hz							
Overload Capability	1 hour for 110%, 10 mins for 125%, 1 min for 150% and 200ms for >150%							
Harmonic Distortion	≦ 2% THD (Linear Load) ≦ 4% THD (Non-linear Load)							
Efficiency	Up to 94.5%							
BATTERY / CHARGER								
Nominal Voltage	+/- 216V (12V x 36Pcs)							
Maximum Voltage	+/- 240V (12V x 40Pcs)							
Minimum Voltage	+/- 192V (12V x 32Pcs)							
Floating Charge Voltage	2.25V / Cell							
Boost Charging Voltage	2.35V / Cell							
Temperature Compensation	Yes							
Maximum Charging Current	8A (User-djustable)							
PHYSICAL								
Medium Size (D x W x H)	600 x 1100 x 1485 (30U) mm						-	
Full Size	600 x 1100 x 2030 (42U) mm							
ENVIRONMENT								
Operation Temperature	0 ~ 40˚C							
Relative Humidity	0 ~ 95% non-condensing							
Altitude	<1000m for Nominal power							
IP Class	IP 20							
MANAGEMENT								
Smart RS-232 / USB	Supports Windows® 2000 / 2003 / XP / Vista / 2008 / 7 / 8 / 10, Linux, Unix and MAC							
Optional SNMP	Power management from SNMP manager and web browser							
STANDARDS								
Safety	IEC / EN 60950-1; IEC / EN 62040-1							
EMC	IEC / EN 62040-2 Category C3							

* When temperature is above 30˚C, the output power factor will be de-rated, 0.9 at 31˚C~35˚C and 0.8 at 36˚C~40˚C.
* One battery module contains 10pcs of 12V / 7Ah or 12 / 9Ah sealed lead acid batteries in one tray. One complete battery set contains 4 battery modules.
* If the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be derated one percent per 100m.
* Product specifications are subject to change without further notice.

High efficiency online double conversion technology

Mplus is applied online double conversion technology with high performance over 94.5% at 50% load. It significantly reduces overall Total Cost of Ownership (TCO).

High scalability

DSP control provides an improved solution with high performance. Integrated with modular design and parallel technology, Mplus simplifies future power expansion.

Unity output power factor

Mplus delivers unity output power (kVA=kW) providing the maximum power capacity to mission critical loads. It satisfies the requirements of the latest servers and optimizes IT investment with every penny.

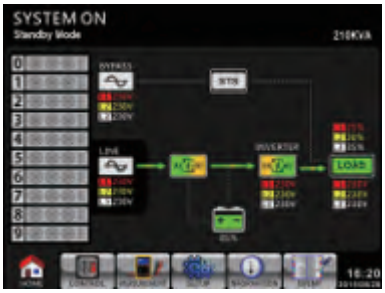
Modular design lowers MTTR

Modular design is applied in power module, STS module and battery module. It will simplify maintenance and replacement with low MTTR (Mean Time To Repair).

N+1 or N+X parallel redundancy for power guarantee

Scalable architecture allows you to optimize cost expense to meet power demands by vertically expanding in a single rack enclosure from 30kVA to 210kVA and achieve N+1 or N+X redundancy in the same rack.

Optional 10" touch LCD panel



Ease of installation and maintenance

Built-in maintenance bypass assures continuous power to critical loads during UPS maintenance. Besides, to facilitate installation and maintenance, all panel control and connectors are front accessibility.

Flexible battery configuration adapts different applications

Battery numbers can be adjusted flexibly. It will adapt different power demands and shorten system downtime. Battery voltage can be set from 32 to 40 pieces per string.

Graphic 5.7” LCD design for easy management

Designed for easy management, Mplus is equipped with 5.7” graphic LCD screen. Intuitive design enhances display information identified and advanced configuration.

High reliable operation with redundant power supply in STS

Mplus provides 2 power supplies in STS. It will ensure no shutdown risk for STS.

User-adjustable charging current

Mplus provides maximum 8A or 6A charging current for every power module and it's user-adjustable based on requirement.

High overload capability

Mplus provides 2 power supplies in STS. It will ensure no shutdown risk for STS.

Standard Series

Mplus 30U-90

Mplus 42U-120

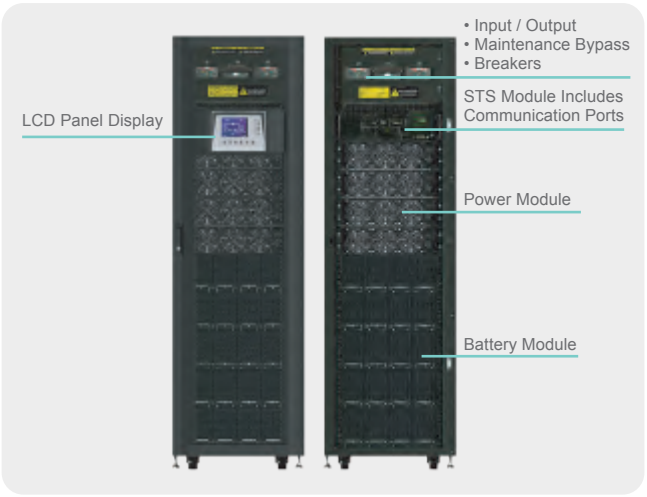
Extended Series

Mplus 30U-120

Mplus 30U-180

Mplus 42U-200

Mplus 42U-210



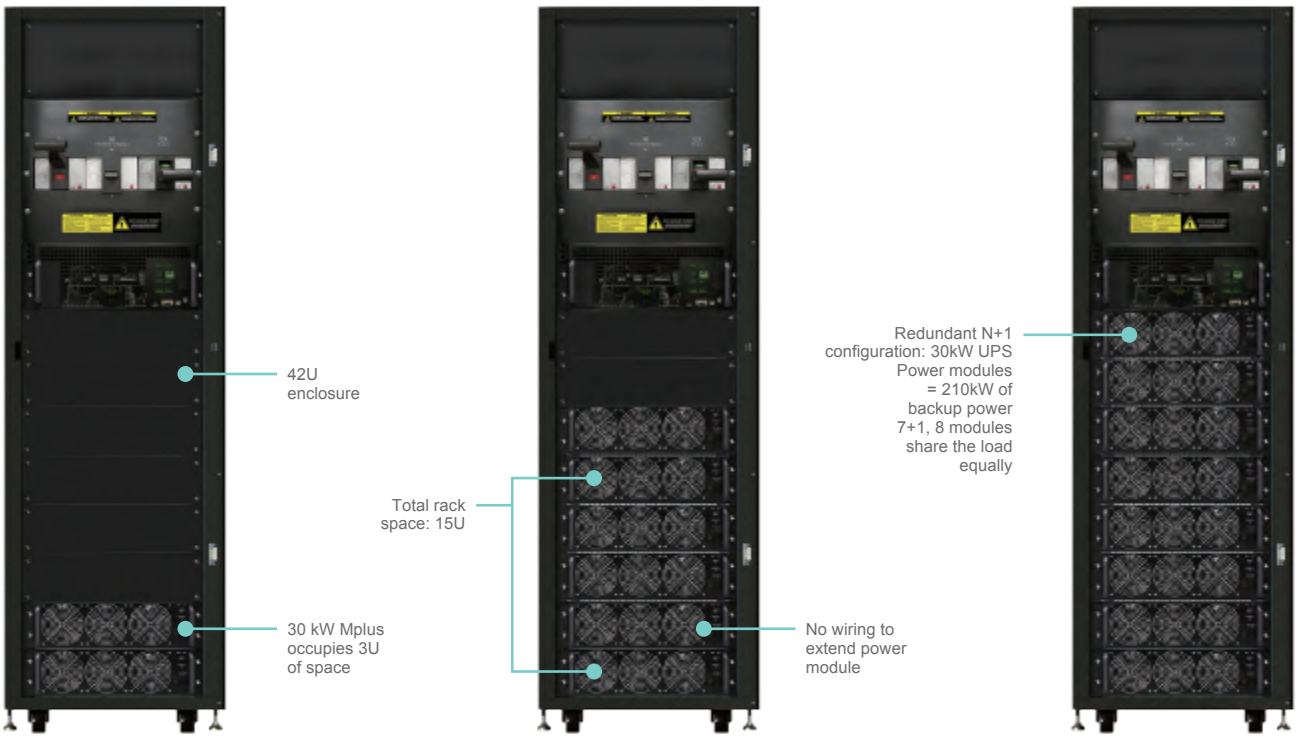
Expandability. Flexibility. Uninterruptibility. Via Modular architecture

Thanks MPLUS Modular design architecture, scalable and compact size 3U rackmount power module that supplies 30kW of backup power protection. Whole system can be easily expanded as your data center growth. Plug and play N+X,N+1 redundancy design optimizes customer's power demand and enhance the capital investment plan and deployment.
MPLUS smart intelligent load sharing system proportionates workload into each power module without linking any extra communication, paralleled, current share cables. Besides, system is no need to shutdown or interrupt, MPLUS can provide backup support during power module maintenance.

YEAR 1:
INITIAL INSTALL

YEAR 3:
EXPANSION

YEAR 5:
FURTHER



MPLUS Offers 20kVA and 30kVA power module, no matter which model, e.g, in 30U extend model, power module can be installed up to 6PC, 120kVA with 20kVA or 180kVA with 30kVA 6PC power modules. In addition, same cabinet reduces wiring, or human error operation issue and ensures backup power increased to cover new power demand in a right way.

MPLUS also offers 15U cabinet as economy purpose, full range power rating is not only suitablit for large IT room, Datacenter, but also adquate to infrastructures and different purposes.

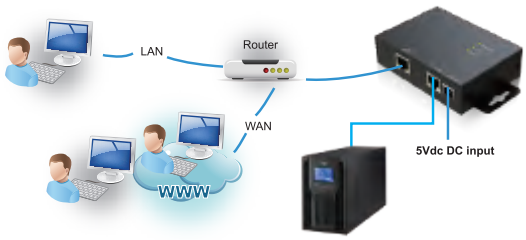
MPLUS 30U/42U extremely flexible characteristic, One power module with 30kW unity power factor can be single or multi module operation. In 42U cabinet model can up to 7+1 modules 210kW, elastic design offers proper backup power protection with appropriate capital investment whenever needed.

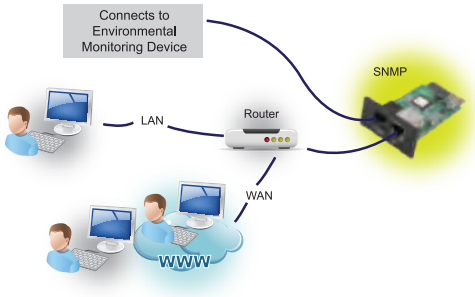
15U 90kW

Accessory

UPS Remote Monitoring and Connectivity

FSP provides complete connectivity solutions with comprehensive products and software package. These connectivity products ensure communication compatibility with a variety external devices through relay, SNMP and Modbus.





Connectivity Product


SNMP Card


SNMP Web Card

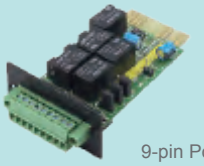

SNMP Web Card (DP801B)


SNMP Web Box


Modbus Card


Modbus Web Box


DB9 Port


9-pin Port


EMD

SNMP Web Card/Box

- Allows control and monitoring of multiple inverters through RJ-45 network connection
- Real-time dynamic graphs of UPS / PowerManager data
- Warning notifications via audible alarm, broadcast, mobile messenger, e-mail and SNMP traps
- Historic data log stored in centralized PC database
- Simple firmware upgrade with one click
- Password security protection and remote access management
- Supports optional environmental monitoring detector for temperature, humidity and smoke

Modbus Card

- Real-time control and monitoring of multiple inverters via RS-485 communication port
- Supports Modbus RTU protocol
- Provides MODBUS functions including read Holding Registers and write Registers
- Provides surge protection

Modbus Web Box

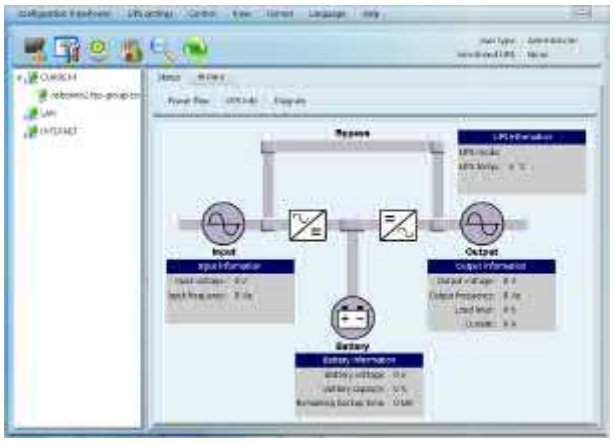
- Supports to monitor off-grid inverter through modbus interface
- Implements MODBUS RTU protocol
- Integrated with WatchPower software
- Supports PowerManager Hybrid series

Relay Card

The AS400 communication card provides contact closures for remote monitoring UPS. To meet different application requirement, the AS400 card is capable of selection the status of the dry-contact signal (active close or active open) by setting jumper.

Environmental Monitoring Device (EMD)

- Plug & use for simple installation with SNMP manager
- Monitor temperature and humidity to protect your precious equipment
- Allow 4 contact closure signals for user-defined usage
- Management software to remote monitor temperature and humidity status via web browser
- Measure temperatures between 0 to 100°C with an accuracy of ±1.5°C
- Measure relative humidity between 10 to 90% RH with an accuracy of ±3%
- Optional smoke alarm available



ViewPower - UPS Management Software

ViewPower Pro is UPS management software which is perfect for home users and enterprises. It can monitor and manage from one to multiple UPSs in a networked environment including LAN, INTERNET and Modbus networks. Integrated with Shutdown Wizard, it can not only prevent data loss from power outage and safely shutdown systems, but also store programming data and scheduled shut down UPSs. All UPS working data and event records can be kept in local database system.

Accessory

IEC Cable 16A C19/C20
(180cm)

IEC Cable 16A C14/C19
(150cm)

IEC Cable 16A C20/C13
(180cm)

Rackmount Slider
Simple installation for mounting Rack in your server rack enclosure. RMS-001 for 1-3kVA Rack UPS
RMS-002 for 6-10kVA Rack UPS

BATTERY PACK												
Form Factor	Tower		Tower		Tower		Tower		Tower		Tower	
Capacity	1K		1K / 1.5K		2K / 3K		6K / 10K		6K / 10K		6K / 10K	
Battery Type	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah
Battery Number	4 pcs	4 pcs	6pcs	6 pcs	12 pcs	12 pcs	40 pcs	40 pcs	60 pcs	60 pcs	80 pcs	80 pcs
Battery Voltage	24Vdc / 48Vdc		36Vdc / 72Vdc		72Vdc		240Vdc		240Vdc		240Vdc	
Dimension(D x W x H)	397 x 145 x 220		397 x 145 x 220		421 x 190 x 318		592 x 250 x 576		830 x 250 x 576		815 x 250 x 826	
Net Weight (kgs)	12	13.3	18	20	36	40	109	125	166	190	210	242

BATTERY PACK										
Form Factor	2U Rack		2U Rack		2U Rack		2U Rack		3U Rack	
Capacity	1K		1K / 1.5K		2K		2K / 3K		6K / 10K	
Battery Type	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah	12V / 7Ah	12V / 9Ah
Battery Number	4 pcs	4 pcs	6pcs	6 pcs	8 pcs	8 pcs	12 pcs	12 pcs	20 pcs	20 pcs
Battery Voltage	24Vdc / 48Vdc		36Vdc / 72Vdc		48Vdc		72Vdc		240Vdc	
Dimension(D x W x H)	380 x 438 x 88		380 x 438 x 88		480 x 438 x 88		600 x 438 x 88		580 x 438 x 131	
Net Weight (kgs)	15.5	16.9	19.2	21.3	25.9	28.7	36.6	40.8	57	65

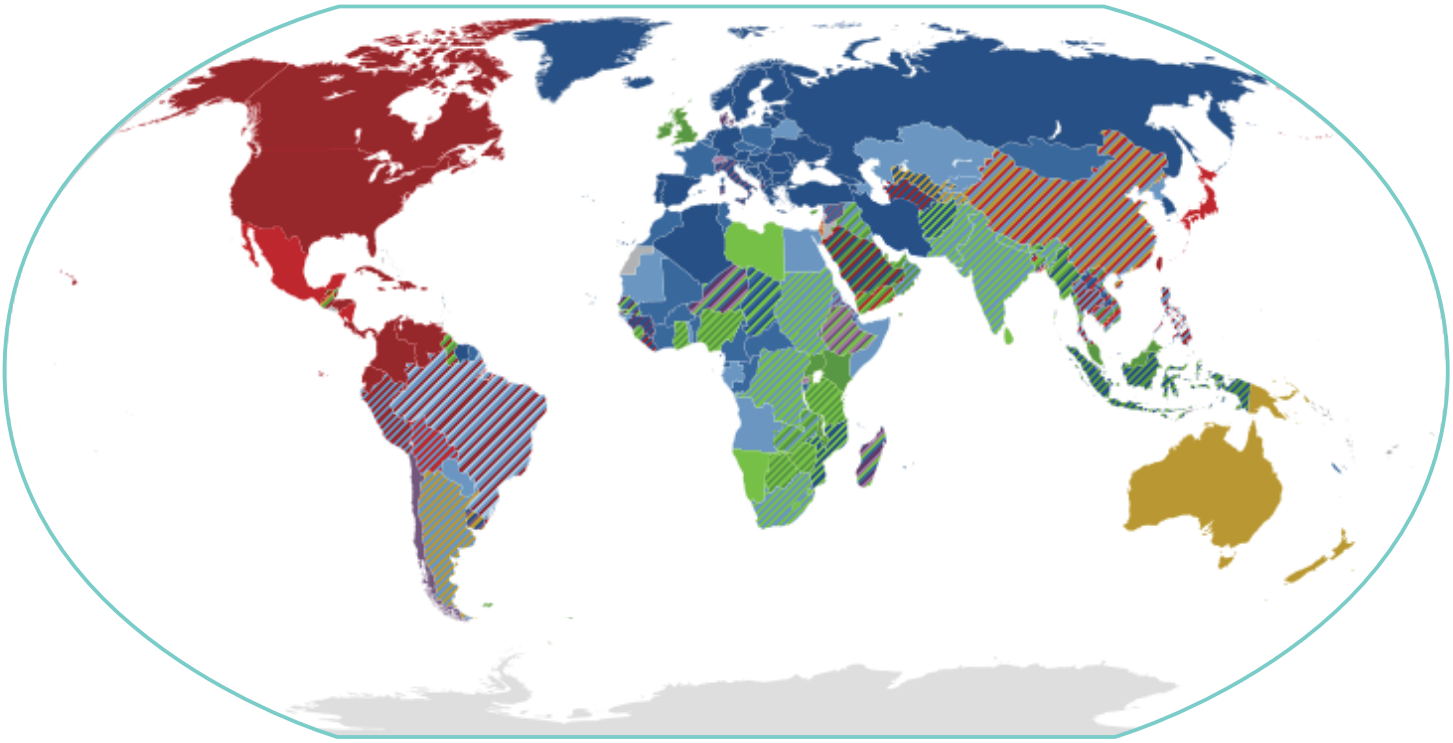
MODEL NO.	C1	C2	C3	C4	C6	C8	C12
Cabinet Dimension	435 x 210 x 270	450 x 470 x 320	585 x 470 x 320	450 x 470 x 615	585 x 470 x 615	780 x 470 x 615	780 x 470 x 900
BATTERY Q'TY FIT FOR CABINET							
100Ah	1	1	3	4	6	8	12
65Ah	1	2	3	4	6	8	12
38Ah	2	4	6	8	12	16	24
24Ah	3	4	6	8	12	16	24
17Ah	5	10	14	20	28	36	/
Weight	3.5kg	6kg	8kg	18kg	22kg	25kg	32kg

MODEL NO.	C16	C20	C24	C32	C16	C32
Cabinet Dimension	780 x 470 x 1190	950 x 470 x 1190	1150 x 470 x 1190	780 x 880 x 1190	780 x 470 x 1190	780 x 880 x 1190
BATTERY Q'TY FIT FOR CABINET						
100Ah	16	20	24	32	/	/
65Ah	16	20	24	32	/	/
38Ah	32	40	/	/	/	62
24Ah	32	40	/	/	/	62
17Ah	/	/	/	/	62	/
Weight	45kg	45kg	75kg	95kg	45kg	95kg

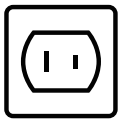
※ C series battery cabinet include wire but without circuit breaker

Mains electricity by country and plugs / sockets list

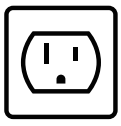
The International Electrotechnical Commission publishes a web microsite World Plugs[1] which provides the main source for this page, except where other sources are indicated. World Plugs includes some history, a description of plug types, and a list of countries giving the type(s) used and the mains voltage and frequency.



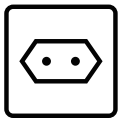
The system of plug types using a single letter (from A to N) used here is from World Plugs, which defines the plug type letters in terms of a general description, without making reference to specific standards. Where a plug does not have a specific letter code assigned to it, then it may be defined by the style sheet number listed in IEC TR 60083.



Type A
(NEMA 1–15 U.S. 2 pin)
max 125 V AC, max rating 15A



Type B
(NEMA 5-15 U.S. 3 pin)
max 125 V AC, max rating 15 A
and IEC standard 60906-2

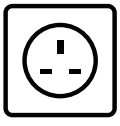


Type C
(CEE 7/16 Europlug)

Type D
(BS 546 5 A)

Type E
(French)
CEE 7/6 plug & CEE 7/5 socket,
16A

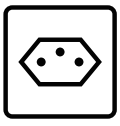
Type F
(Schuko)
CEE 7/4 plug & CEE 7/3 socket,
16A



Type G
(BS 1363 UK)

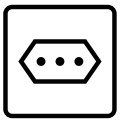
Type H
(SI 32 Israel)

Type I
(Australian AS/NZS 3112)
Argentinian version has reversed
polarity compared to Chinese and
Australian versions

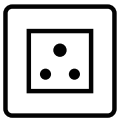


Type J
(SEV-1011 Switzerland)
10A

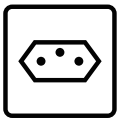
Type K
(SRAF 1962/DB Denmark)



Type L
(CEI 23-50)



Type M
(15 A BS 546)

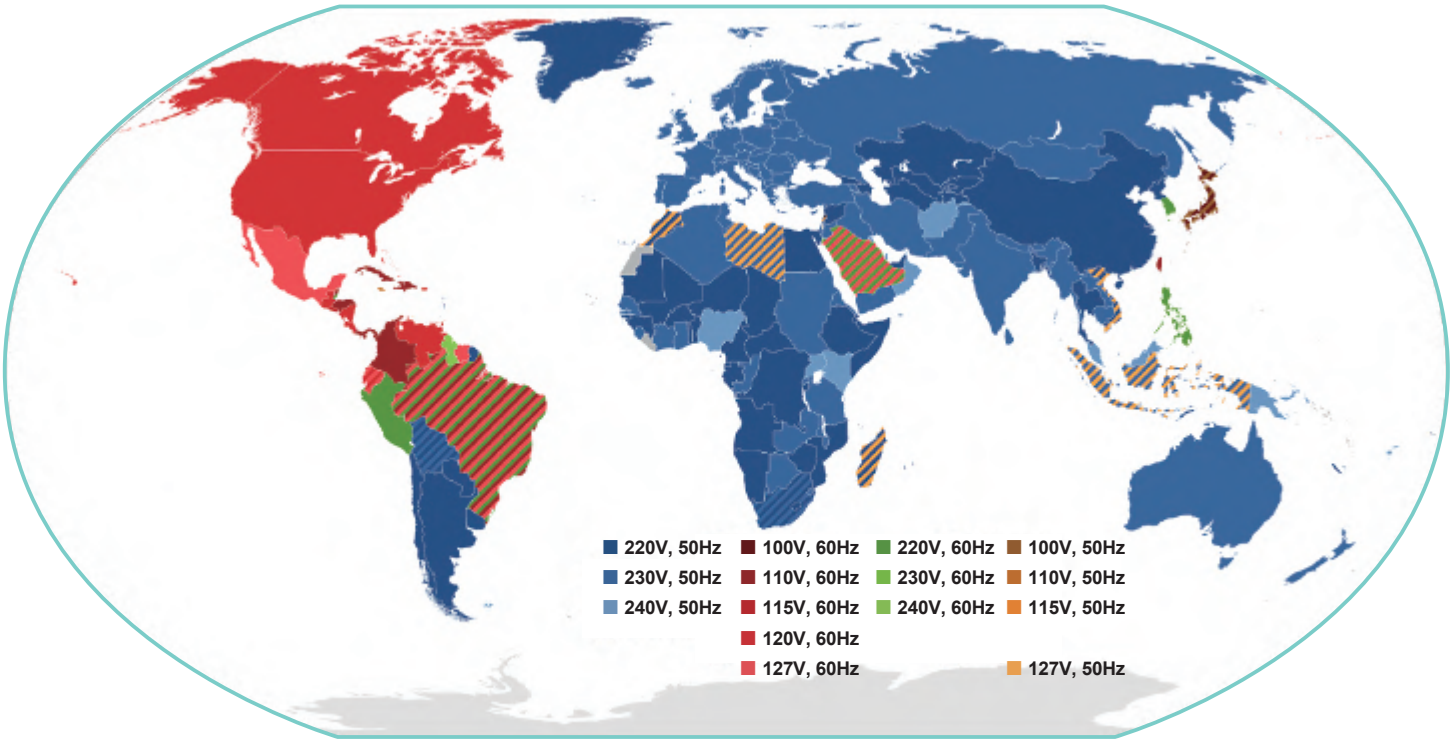


Type N
(Brazilian NBR 14136)

Universal Socket
which meets no standard[5] but
accepts a number of different plug
types.(criticized as unsafe)

Mains electricity by country includes a list of countries and territories, with the plugs, voltages and frequencies they commonly use for providing electrical power to appliances, equipment, and lighting typically found in homes and offices. (For industrial machinery, see Industrial and multiphase power plugs and sockets.) Some countries have more than one voltage available. For example, in North America most sockets are attached to a 120 V supply, but there is a 240 V supply available for large appliances. Often different sockets are mandated for different voltage or current levels.

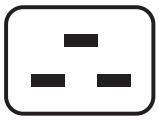
Voltage, frequency, and plug type vary, but large regions may use common standards. Physical compatibility of receptacles may not ensure compatibility of voltage, frequency, or connection to earth (ground), including plugs and cords.



IEC 60320 Appliance couplers for household and similar general purposes[1] is a set of standards from the International Electrotechnical Commission (IEC) specifying non-locking appliance and interconnection couplers for connecting power supply cords to electrical appliances of voltage not exceeding 250 V (a.c.) and rated current not exceeding 16 A.[2] Different types of connector (distinguished by shape and size) are specified for different combinations of current, temperature and earthing requirements. Unlike IEC 60309 connectors, they are not coded for voltage; users must ensure that the voltage rating of the equipment is compatible with the mains supply.

The first edition of IEC 320 (later renumbered IEC 60320) was published in 1970

C13/C14 Coupler
Most desktop computers use the C14 inlet to attach the power cord to the power supply, as do many instrument amplifiers, monitors, printers and other peripherals. A power cord with a suitable power plug (for the locality where the appliance is being used) on one end and a C13 connector (connecting to the appliance) on the other is commonly called an IEC cord. IEC cords are used to power many pieces of electronic equipment, including computers, instrument amplifiers, professional audio equipment and virtually all professional video equipment.



C19/C20 Coupler
Earthed, 16 A, polarized. This coupler is used for some IT applications where higher currents are required, as for instance, on high-power workstations and servers, uninterruptible power supplies, power distribution units, large network routers, switches, blade enclosures, and similar equipment. This connector can also be found on high current medical equipment. It is rectangular and has pins parallel to the long axis of the coupler face.

Reference: https://www.iec.ch/worldplugs, https://en.wikipedia.org/wiki/Mains_electricity_by_country, https://en.wikipedia.org/wiki/IEC_60320#C19/C20_coupler

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