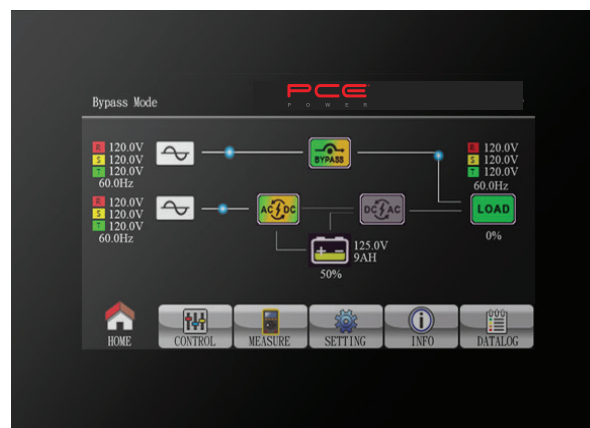




5" Touch LCD Panel

General Features

DSP technology guarantees high reliability

DSP and MCU dual chips to secure the product reliability.

Output power factor 1

For critical applications, this 3-phase online UPS with output power factor 1.0 ensures higher efficiency and advances performance.

Adapting the latest Silicon carbide diodes

Through adapting the latest Silicon carbide diodes, no matter it's in AC mode or in battery mode, the efficiency is higher than 96%.

Adjustable battery design

The number of connected batteries can be adjusted flexibly based on different power demands.

Adjustable charging current

Users can adjust charging current via LCD setting based on various battery configurations.

5" color touch type LCD display

Built-in 5" color touch type LCD display with 500 event/data logs.

Dynamic password feature optimizes service performance

This dynamic password is automatically generated from our exclusive utility tool. Each time when it is required to change service-related settings, this utility tool would generated a unique password on time basis. It secures the UPS from unexpected operation due to unauthorized settings.

Optional programmable relay dry contact card

Configurable 4 dry contact ports definition through software for various applications.

Voice warning / error code notice

Inbuilt the speaker to have human voice for warning/error codes notice instead of traditional beeps.

High overload capability

Supporting 110% overload capacity for 60 min and up to 1 min overload condition at 150% load.

Dual Inputs

MX series is also available for optional dual inputs to support various inputs to have flexibility for system configuration.

Parallel up to 6 units with common battery pack

Supports maximum 6 units in parallel with common battery pack for the parallel system.

Very powerful charger to shorten the recharge time

Adapting the charger rating equals to 30% of UPS capacity on 10/20Kva. Charger rating is also 20% of UPS capacity for 30Kva and above models.

Power walk-in function

MX series is designed to have flexible power walk-in by adjusting the power walk-in time. This setting will optimize the generator sizing and reduces the impact to the AC source by having different walk-in time period for different paralleled UPS system when AC grid is recovered.

Product introduction

Today MX/MXL is designed to provide continuous utility AC power protection for critical system installation and to facilitate flexibility in expanding power distribution requirements via parallel redundancy.

It can be configured to parallel redundancy which increases flexibility and reliability to maximum power, and it is very cost effective to upgrade the system without a large investment.

With its double conversion on-line technology, it delivers the optimum level of reliability and scalability. This ensures a pure sine wave output free of any input voltage fluctuations and disturbances. Via this technology, the MX/MXL is particularly suitable for use in areas where power supply is consistently in shortage.

It absolutely prevents power failures, power surges, brownouts, line noise, high voltage spikes, frequency variations, harmonic distortion and switching transients ensuring no transfer time in the event of a power failure.

Outstanding power range

The MX/MXL series comes in a broad range of output power (1kVA, 2kVA, 3kVA, 6kVA, 10kVA) in single phase.

Leading technology

PCE UPS SYSTEMS Inc. has designed the MX/MXL UPS so that it would be equipped with the latest innovations in Uninterruptible Power Supply technology.

Several features have gone into the design to ensure that the MX/MXL UPS is capable of being a central cornerstone in any high quality power protection solution.

Because the control of the inverter is of utmost importance for the quality of the output voltage, especially in critical operating situations, PCE UPS SYSTEMS Inc. employs a Space Vector Modulation Digital Control Technology to increase the performance of power components and enable active conditioning of the load in a straightforward way.

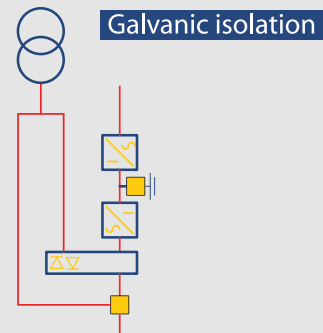
With the use of digital signal processors (DSP), the realization of very complex control structures with flexible adapting mechanisms is possible.

DSP implementation gives redundant operation and the highest possible operating reliability for the most mission critical applications.

The MX/MXL UPS not only utilizes DSP technology but also digital power quality management system PWM (Pulse Width Modulation) controlled IGBT (Isolation Gate Bipolar Transistor) to improve the performance of the power components.

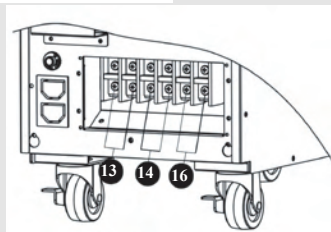
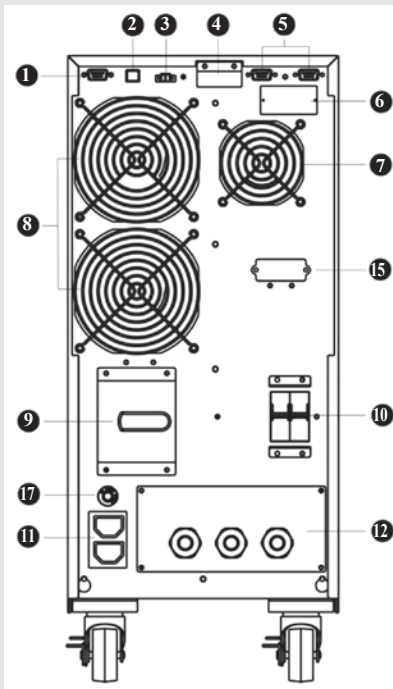
Many benefits are realized using the Vector Control Technology:

- Using an IGBT rectifier, the MX/MXL can provide superior Power Factor Correction (PFC) reducing input harmonic distortion.
- The Galvanic Isolation Transformer may be used in situations where you increase the quality of your power output even more. This transformer ensures complete galvanic isolation of your power supply from the loads.
- The pure sine wave output that the MX/MXL delivers makes it perfect for powering highly sensitive equipment operating in environments where power supply quality is not reliable.
- Improved performance for specific unbalanced load conditions.
- Improved fault clearing capacity for downstream short circuits.
- Improved efficiency through easy installation times and reduced servicing.
- Customization easily achieved via simple software modifications.
- Perfect load distribution among different MX/MXL units connected in parallel and synchronization of the inverters.
- Phase-synchronous operation of the UPS output with the feeding mains to be able to switch to it anytime without any switching gap.



High Performance and Reliability

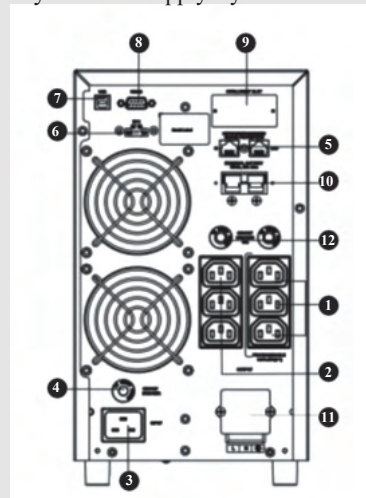
- On-line Double Conversion Technology This technology guarantees consistent high power quality. Whatever the disturbances on the distribution system are, a pure sine wave is regenerated via AC to DC to AC double conversion process. The battery supplies the load with power at all times so that no switching time is noticed at the output when the input power goes off.



1. RS-232 communication port
2. USB communication port
3. Emergency power off function connector (EPO connector)
4. Share current port (only available for parallel model)
5. Parallel port (only available for parallel model)
6. Intelligent slot
7. Charger fan
8. Power stage fan
9. Maintenance bypass switch
10. Input circuit breaker
11. Output receptacles: connect to mission-critical loads
12. Input/Output terminal (Refer to Diagram 2 for the details)
13. Output terminal: connect to mission-critical loads
14. Programmable output terminal: connect to non-critical loads
15. External battery terminal (only available for Long-run model)
16. Utility input terminal
17. Output circuit breaker for receptacles

- Parallel redundancy

The MX/MXI UPS is capable of acting in a parallel configuration which is ideal for redundancy and load sharing, while maintaining high utilization efficiency at the same time. Up to three UPS can be connected in parallel. When connected together, the MX/MXI units automatically detect the presence of their neighbors and coordinate load sharing and protection accordingly. This simple upgrade setup enables you to easily modify your existing solution whenever your load requirements change. Parallel redundancy feature increases power and redundancy of the supply system whilst controlling costs.



1. Programmable outlets: connect to non-critical loads.
2. Output receptacles: connect to mission-critical loads.
3. Ac input
4. Input circuit breaker
5. Network/Fax/Modem surge protection
6. Emergency power off function connector (EPO)
7. USB communication port
8. RS-232 communication port
9. SNMP intelligent slot
10. External battery connection (only available for L model)
11. Output terminal
12. Output circuit breaker
13. Input terminal

High Availability

- Cold Start on battery power

This function elaborates the emergency standby capability of UPS to a sufficient extent.

- Automatic Bypass

In the event of an overload or a UPS fault, the MX/MXI UPS automatically transfers the load to utility AC power.

Ease of Use

Easy installation and integration

- Complete installation kit

- Easy connection to AC power

Advanced Battery Management

The MX/MXL UPS employs unique technologies to increase the life of the batteries. It uses two step charging technique that optimizes the charging time.

The battery is one of the most important components that make up an Uninterruptible Power Supply system, and the degree of power protection that such system provides is closely tied to the quality of the batteries installed. This is a fact that PCE never tires of stressing, and, for this reason, you will only find Sealed Lead Acid batteries of the most superior quality as a back up power source in our UPS solutions.

In addition, we have equipped the MX/MXL Series with the capability to continuously monitor your power input and output status and operate with extreme efficiency accordingly. Such mechanisms increase the system's battery life by up to 60%.

Some of the advanced battery care features that the MX/MXL UPS employs are listed below:

- A wide input voltage acceptance range
- Temperature-compensated battery charger
- Intelligent battery charger
- Charge and discharge cycle control
- End of discharge voltage compensated with time
- Minimum ripple current values
- Algorithm to calculate battery life expectancy
- **Periodic battery testing**
- Different options for battery placement

All these features put together sum up to considerable **savings in your running costs.**

PCE Power Track Suite™

The industry's most comprehensive software bundle, the PCE PowerTrack™ Software Suite comes included with every PCEMX/MXL UPS.

- PowerTrack™ wizard guides you through software selection and installation
- PowerTrack™ performs critical power management functions
- Automatic shutdown / reboot
- User notification of power events
- Broadcast power abnormal status
- Smart save file
- Scheduled system shutdown/reboot
- UPS Battery low warning
- Real-time graphical display
- Powerquality datalog
- Printing power events list
- Graphic display by meter
- Support Windows Services and auto-start

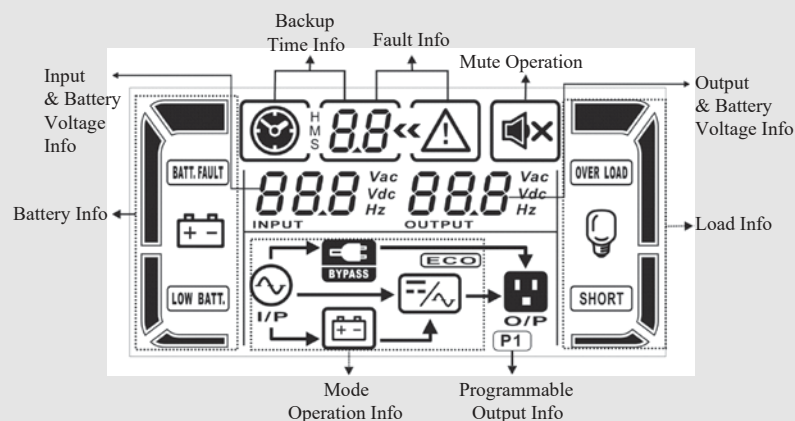
PowerTrack™ is compatible with several operating system: Windows, Linux, MAC

Applications

The MX/MXL series provides a secure power infrastructure for a wide range of applications including:

- DataCenters
- Network Infrastructures
- Production Servers
- Industrial Equipment

LCD Display



MODEL		MX 10	MX 15	MX 20	MX 30	MX 40
PHASE		3-phase in / 3-phase out				
CAPACITY		10KVA /10KW	15KVA /15KW	20KVA /20KW	30KVA /30KW	40KV /40KW
PARALLEL CAPABILITY		up to 6 units in parallel				
INPUT						
Nominal Voltage		3 x 380/400/415 VAC (3Ph+N)				
Voltage Range		-30% ~ +20%				
Frequency Range		40~70 Hz				
Power Factor		0.99 @ 100% Load				
Harmonic Distortion (THDi)		< 3% at full linear 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)		50/60 Hz ± 1%				
Current Crest Ratio		3:1 (max.)				
Harmonic Distortion		1 % THD (Linear Load) ; 3 % THD (Non-linear Load)				
Transfer Time	AC Mode to Batt. Mode	Zero				
	Inverter to Bypass	Zero				
Waveform (Batt. Mode)		Pure Sine wave				
Overload Capability		100-110% for 60 min, 111-125% for 10 min, 126%~150% for 1 min; >150% or 400ms				
BYPASS						
Nominal Voltage		3 x 380/400/415 VAC (3Ph+N)				
Voltage Range		-30% ~ +20% (Adjustable)				
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz				
Overload Capability		> 130% 1 minute (default) Continuously working until breaker protection (optional)				
EFFICIENCY						
AC Mode		96.0%				
ECO Mode		99.0%				
Battery Mode		96.0%				
BATTERY						
Standard Model	Battery Type	12 V/9 Ah	12 V/9 Ah	12 V/9 Ah	12 V/7 Ah	12 V/9 Ah
	Numbers	(10+10) pcs	(16+16) pcs	(16+16) pcs	(16+16) pcs x 2 strings	
	Typical Recharge Time	9 hours recover to 90% capacity				
	Charging Current (max.)	1A ~ 12A (Adjustable)				1A ~ 16 A (Adjustable)
	Charging Voltage	+/-136.5 VDC ± 10%	+/-218 VDC ± 10%			
INDICATORS						
LCD Panel		UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions				
PHYSICAL						
Standard Model	Dimension,DxWxH (mm)	630 x 250 x 826			815 x 300 x 1000	
	Net Weight (kgs)	124	139		225	250
ENVIRONMENT						
Operation Temperture		0-40°C				
Operation Humidity		< 95% and non-condersing				
Altitude**		0 ~ 1500m at full load				
Noise Level		Less than 60 dB @1 Meter			Less than 63 dB @1 Meter	
MANAGEMENT						
Smart RS-232 / USB		Supports Windows, Linux and MAC				
Optional SNMP		Power management from SNMP manager and web browser				

*If output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.

**If the UPS is installed or used in a place where the altitude is higher than maximum height, the output power will be derated 1% per 100m.
Product specifications are subject to change without further notice.

MODEL		MXL 10	MXL 15	MXL 20	MXL 30	MXL 40	MXL 60	MXL 80
PHASE		3-phase in / 3-phase out						
CAPACITY		10KVA /10KW	15KVA /15KW	20KVA /20KW	30KVA /30KW	40KV /40KW	60KVA /60KW	80KVA /80KW
PARALLEL CAPABILITY		up to 6 units in parallel						
INPUT								
Nominal Voltage		3 x 380/400/415 VAC (3Ph+N)						
Voltage Range		-30% ~ +20%						
Frequency Range		40~70 Hz						
Power Factor		0.99 @ 100% Load						
Harmonic Distortion (THDi)		< 3% at full linear 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)		50/60 Hz ± 1%						
Current Crest Ratio		3:1 (max.)						
Harmonic Distortion		1 % THD (Linear Load) ; 3 % THD (Non-linear Load)						
Transfer Time	AC Mode to Batt. Mode	Zero						
	Inverter to Bypass	Zero						
Waveform (Batt. Mode)		Pure Sine wave						
Overload Capability		100-110% for 60 min, 111-125% for 10 min, 126%~150% for 1 min; >150% or 400ms						
BYPASS								
Nominal Voltage		3 x 380/400/415 VAC (3Ph+N)						
Voltage Range		-30% ~ +20% (Adjustable)						
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz						
Overload Capability		> 130% 1 minute (default) Continuously working until breaker protection (optional)						
EFFICIENCY								
AC Mode		96.0%						
ECO Mode		99.0%						
Battery Mode		96.0%						
BATTERY								
Long-run Model	Battery Type	Depending on the applications						
	Numbers	+/- 10 pcs	+/-16 pcs ~ +/- 20 pcs (Adjustable)					
	Charging Current (max.)	1A ~ 12A (Adjustable)				1A ~ 16 A (Adjustable)	2A ~ 24 A (Adjustable)	2A ~ 32A (Adjustable)
	Charging Voltage	+/-136.5 VDC ± 10%	+/-13.65V x N (N=16~20)					
INDICATORS								
LCD Panel		UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions						
PHYSICAL								
Long-run Model	Dimension,DxWxH (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						
Altitude**		0 ~ 1500m at full load						
Noise Level		Less than 60 dB @1 Meter			Less than 63 dB @1 Meter		Less than 65 dB @1 Meter	
MANAGEMENT								
Smart RS-232 / USB		Supports Windows, Linux and MAC						
Optional SNMP		Power management from SNMP manager and web browser						

*If output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.

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Product specifications are subject to change without further notice.