The OL1M-UPS™ Series

P213E

Compact, Modular and Fully Featured Single Phase UPS from 6 to 20KVA

The OL1M™ UPS Series is the latest generation of UPS systems from E24 focused on delivering a features rich, versatile single phase UPS to be compatible with almost every possible application in the range 6 to 20 KVA.

The OL1M™ Series includes almost any possible feature conceivable: From parallel redundancy, digital screen, high output power factor, wide input voltage range, DC start. The OL1M Series is the right choice for almost any application requiring uninterrupted single phase power.

The OL1M™ UPS Series

Offering maximum power protection, the OL1M™ UPS Series helps you use less energy and takes up less space, resulting in significant cost savings.

The OL1M™ UPS Series exceptional design meets all modern requirements of building and operating energy efficient and environmentally friendly data-centers. The OL1M™ UPS Series employs transformerless double conversion UPS topology and is available from 6 to 20 kVA Modules that can be set in parallel to reach up to 80KVA.

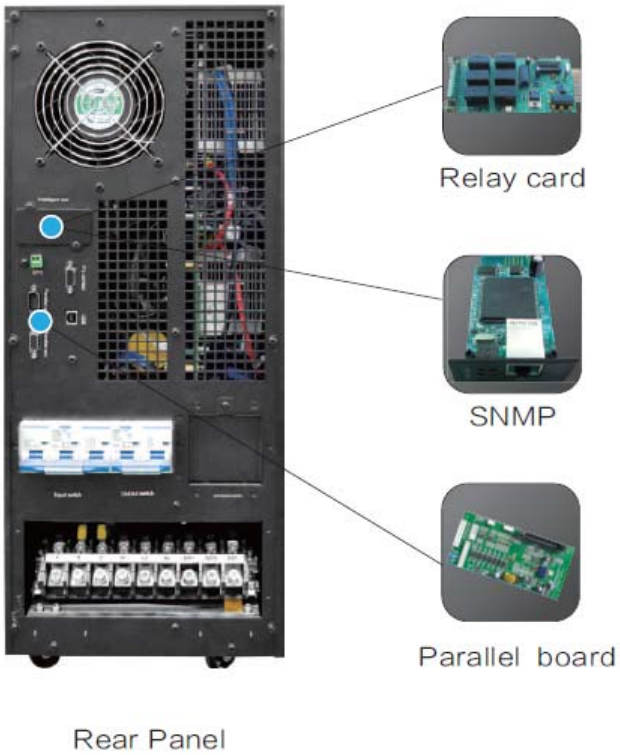
The E24 OL1M™ UPS Series is designed with the flexibility to accommodate an increase in power requirements and to provide N+X parallel redundancy. Easy installation and maintenance from the basis of the core design for this standalone UPS system with back access to electrical connections and fully serviceable components.

Further highlights

• Up to 93.5 % efficiency in double conversion mode minimizes running costs
• Maximized output active power (1kVA = 0.9kW)
• Excellent input performance minimizes installation costs
• Full back access maximizes system serviceability

- Fully scalable up to 72KW
- Compact Size
- Small Foot Print
- Up to 93.5 % AC–AC efficiency
- Parallel Redundancy up to 4 units
- Wide input voltage and frequency
- Unity Input Power factor
- Low Input Distortion
- Output Power Factor at 0.9
- ECO Mode for saving Energy
- Common Battery
- Programmable Battery Voltage (16,18,20 batteries)
- Matching Battery Cabinet
- 3-level Intelligent Battery Charger with charge current adjustment
- Powerful charger up to 6A
- Versatile communication interface
- Superior Overload Capacity
- Programmable Control and Monitoring Software via RS232
- Emergency Power Off
- DC Start

E24 OLM1-UPS Series Backside



Modular power protection for small & medium Single phase power applications

The OL1M UPS series delivers true modular single phase power protection for small and medium sized loads from 6 to 80KVA. The OL1M series are cost effective feature rich modules in 6, 10, 15, and 20KVA versions that can be connected in parallel redundant configuration (up to 4 parallel units) to build power protection solutions that can grow gradually with your load requirements.

Compact and light, the units can be connected to separate or common battery banks where charging can be programmed at will.

The OL1M Series is based on E24 unique and proven Decentralized Parallel Architecture where each UPS module contains all the hardware and software required for full system operation. They share no common components, and as a result system uptime is maximized.

With a footprint per unit of only 0.10 m² , the OL1M takes up less floor space than alternative UPS solutions. The UPS provides all the benefits of a modular UPS solution with a maximum power density of 180kW / m².

Cost effective and Fully Featured at the same time

The OL1M™ UPS Series is designed to offer all the possible features while also offering value. Its 3-level intelligent charger maximized battery life time lowering cost of ownership. The OL1M Series is the ideal choice for applications requiring reliability, flexibility and value .

All the features you need

Besides power performance, the next criteria of choice is UPS Features. The OL1M™ Series offers all the features you need: DSP Technology, Wide Input Voltage and Frequency Range, Intelligent Battery Management, N+X parallel redundancy, Strong Overload capability, Power Walk In, Generator Mode, Full Self protection circuitry, EPO and Comprehensive communication options.

N+X parallel redundancy

Up to 4 units of OL1M™ UPS can be positioned in parallel in N+X parallel redundancy mode to reach up to 80KVA.

DSP Technology

The OL1M™ UPS is built on advance Digital Signal Processing technology in order to provide high performance steady and accurate operation over its lifetime.

Wide Input Voltage and Frequency range

The OL1M™ UPS is capable to operate steadily under a wide input voltage range. The UPS can handle 220/230/240Vac with variations of -45% and + 20% minimizing the use of battery in a manner to extend their life.

Frequency range is 45 to 65Hz making it compatible with both 50Hz and 60Hz grids.

Intelligent Battery Management

The OL1M™ UPS includes an intelligent battery charger that includes a float/boost charger and a dynamic cut-off level that reduces battery maintenance and improves battery life.

Battery Discharge Time Prediction

The OL1M™ UPS is capable of predicting the remaining time on battery under a current load level allowing you to make accurate decision making.

Flexible Battery Configuration

The OL1M™ UPS is programmable to operate on a variable number of batteries (series of 16,18 or 20 battery blocks can be used).

Strong Overload Capability

The OL1M™ UPS is capable of handling overloads of 110% / 125% / 150% for 60min / 10min / 1 min respectively.

Power Walk In

Power Walk In function allows the rectifier of each unit to be turned on progressively and in sequences in order to avoid the sudden load on generators.

Generator Mode

The OL1M™ Series cab be programmed to supply the load with power from both the battery and generator simultaneously.

Emergency Power Off (EPO)

The OL1M™ Series is can be connected to an EPO button for emergency power off.

Comprehensive Communication Options

Communications options include: RS232, RS485, Modbus (option), SNMP adaptor (Option), Dry Contacts.

Technical Specifications

Model		OL1M-6KI	OL1M-10KI
Capacity (VA/Watts)		6K/5.4K	10K/9K
INPUT			
Nominal voltage		220/230/240Vac	
Operating voltage range		120-276Vac	
Operating frequency range		50Hz:45~55Hz;60Hz:54~66Hz(auto sensing)	
Power factor		≥0.99	
Bypass voltange range		Max. voltage: 220V: + 25% (optional +10%, +15%, +20%) 230V: +20% (optional +10%, + 15%) 240V: +15% (optional +10%) Min. voltage: - 45% (optional -20%, -30%)	
ECO range		Same as the bypass	
Harmonic distortion (THDi)		<3% (100% linear load)	
Generator input		Support	
OUTPUT			
Rated voltage		220/230/240 Vac	
Power factor		0.9	
Voltage regulation		±1%	
Frequency	Line mode	±1% / ±2% /±4% / ±5% / ±10% of the rated frequency (optional)	
	Bat. mode	50/60 (±0.1) Hz	
Crest factor		3:1	
Harmonic distortion		≤2% with linear load ≤5% with non-linear load	
Efficiency		>93.5%	
BATTERY			
Battery voltage		±96/108/120Vdc (optional)	
Typically recharge time		6~8 hours (to 90% of full capacity)	
Charge current		1A (Standard unit); Long run unit max. current 10A (charge current can be set according to battery capacity installed)	
SYSTEM FEATURES			
Transfer time		Mains to Battery:0ms; Mains to Bypass:0ms	
Overload	Line Mode	Load≤110%: last 60 min, ≤125%: last 10 min, ≤150%: last 1min, >150% turn to bypass mode immediately	
	Bypass Mode	40A (Breaker)	60A (Breaker)
Short circuit		Hold whole system	
Overheat		Line mode: turn to bypass; backup mode: shut down UPS immediately	
Low battery voltage		Alarm and switch off	
Self-diagnostics		Upon power on and software control	
Battery		Advanced battery management	
Audible & visual alarms		Line failure, battery low, overload, system fault	
LED & LCD display		Line mode, Bat. Mode, Eco mode, Bypass mode, Battery mode, Battery low, Battery bad, overload & UPS fault	
LCD display		Input voltage, Input frequency, Output voltage, Output frequency, Load percentage, Battery voltage, Inner temperature & remaining battery backup time	
Communication interface		Dry contact, USB, SNMP card (optional), Relay card (optional)	
ENVIRONMENTAL			
Operating temperature		$0^{o}C$~$40^{o}C$	
Storage temperature		$-25^{o}C$~$55^{o}C$	
Humidity range		0~95% (non-condensing)	
Altitude		<1500m	
Noise level		<55dB	
PHYSICAL			
Dimension DxWxH (mm)		502x250x616	
Net weight (kg)		62/18	64/20
STANDARD			
Safety		IEC/EN62040-1,IEC/EN60950-1	
EMC		IEC/EN62040-2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC6100-4-6, IEC61000-4-8	
BATTERY BANK			
Model		MP-BT Series	
Battery type & Max. quantity		2x20 pcs/7Ah/(9Ah)	
PHYSICAL OF BATTERY BANK			
Dimension DxWxH (mm)		597x250x616	
Net weight (kg)		122/134	

Technical Specifications

Model		OL1M-310KI	OL1M-315KI	OL1M-320KI
Capacity (VA/Watts)		10k/9k	15k/13.5k	20k/18k
INPUT				
Nominal voltage		380/400/415Vac; (3Ph+N+PE)		
Operating voltage range		208~478Vac		
Operating frequency range		50Hz:45~55Hz;60Hz:54~66Hz(auto sensing)		
Power factor		≥0.99		
Bypass voltange range		Max. voltage: 220V: +25%(optional+10%, +15%, +20%) 230V:+20%(optional +10%, +15%) Min. voltage: - 45% (optional - 20%, -30%)		
Bypass Frequency range		Frequency protection range: ±10%		
ECO range		same as bypass		
Harmonic distortion (THDi)		<5% (100% linear load)		
Generator input		support		
OUTPUT				
Rated voltage		220/230/240 Vac		
Power factor		0.9		
Voltage regulation		±1%		
Frequency	Line mode	±1%/ ±2%/ ±4%/ ±5%/ ±10%/ of the related frequency (optional)		
	Bat. mode	50/60 (±0.1) Hz		
Crest factor		3:1		
Harmonic distortion		≤ 2% with linear load ≤ 5% with non-linear load		
Efficiency		>93.5%	>94.5%	
BATTERY				
Battery voltage		±96/108/120 Vdc(optional)		
Capacity (standard unit)		12V/7Ah		
Typically recharge time		6-8 hours (to 90% of full lcapacity)		
Charge current		1A (10kVA standard unit); Max. current 10 A (Long run unit)		
SYSTEM FEATURES				
Transfer time		Mains to battery: 0 ms; Mains to bypass: 0 ms		
Overload	Line Mode	Load ≤ 110%: last 60 min, ≤ 125%: last 10 min, ≤ 150%: last 1 min, >150% turn to bypass mode immediately		
	Bypass Mode	63A (Breaker)	100A (Breaker)	125A (Breaker)
Short circuit		Hold whole system		
Overheat		Line mode: turn to bypass; Bat. mode: shut down UPS immediately		
Low battery voltage		Alarm and switch off		
Self-diagnostics		Upon power on and software control		
Battery		advanced battery management		
Audible & visual alarms		Line failure, battery low, overload, system fault		
LED & LCD display		Line mode, Bat. mode, Eco mode, Bypass mode, Battery low, Battery bad, overload & UPS fault		
LCD display		Input voltage, input frequency, output voltage, output frequency, load percentage, battery voltage, inner temperature & remaining battery back up time		
Communication interface		dry contact, USB, SNMP card (optional), Parallel board (optional), Relay card (optional)		
ENVIRONMENTAL				
Operating temperature		$0^{o}C$~$40^{o}C$		
Storage temperature		$-25^{o}C$~$55^{o}C$		
Humidity range		0~95% (non-condensing)		
Altitude		<1500m		
Noise level		<55dB	<58dB	
PHYSICAL				
Dimension DxWxH (mm)		597x250x655(s)/502x250x616(H)	502x250x616	
Net weight (kg)		76(S)/35(H)	45	46
STANDARD				
Safety		IEC/EN62040-1,IEC/EN60950-1		
EMC		IEC/EN62040-2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC6100-4-6, IEC61000-4-8		
BATTERY BANK				
Model		MP-BT series		
Battery type & Max. quantity		2x20pcs/7Ah(9Ah)		
PHYSICAL OF BATTERY BANK				
Dimension DxWxH (mm)		597x250x616		
Net weight (kg)		122/134		

OL3M-UPS™ OL3C-UPS™ OL3DC-UPS™

E24 Modular Range Of Products For Building Easy, Flexible & Evolutive Solutions

E24 products dynamically evolve with the lifestyle and work style of its customers while easing the installation process.

E24 products are conceived in modules allowing for an easy upgrade to adjust with the needs of the customers. Being modular and easy to connect E24 products allow installers to easily configure the required modules for an optimal solution while offering easy upgrade options.

Ordering Information

Reference	Description
OL1M-6KI	OLM1-UPS 6KVA, Redundant Modular ups 1 phase input/output, 230 V, 50/60 Hz, 10A charging, w/o batteries
OL1M-10KI	OLM1-UPS 10KVA, Redundant Modular ups 1 phase input/output, 230 V, 50/60 Hz, 10A charging, w/o batteries
OL1M-310KI	OLM1-UPS 10KVA, Redundant Modular ups 3 phase input, 1 phase output, 230 V, 50/60 Hz, 10A charging, w/o batteries
OL1M-315KI	OLM1-UPS 15KVA, Redundant Modular ups 3 phase input, 1 phase output, 230 V, 50/60 Hz, 10A charging, w/o batteries
OL1M-320KI	OLM1-UPS 20KVA, Redundant Modular ups 3 phase input, 1 phase output, 230 V, 50/60 Hz, 10A charging, w/o batteries
OL1M-PAR	OLM1-UPS Optional N+X Paralleling Card
OL1M-BC	OLM1-Empty Battery Cabinet

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ISO 9001:2015

QUALITY STANDARD