The OL3MD™ UPS Series

e24™

P223E

High Reliability, High Performace, Three phase Modular, Decentralised UPS from 40KVA to 2080KV

The OL3MD™ UPS Series is a modular and decentralised UPS system specifically conceived to provide the highest levels of reliability while designed to acconpany the growth of your business.

The OL3MD™ UPS Series exceptional design allows you to instantaly upgrade in power or reliability by adding modules of 40KVA each. The OL3MD™ is completely decentralised, allowing you hot swap any module in a blink of an eye, to grow your capacity from 40 to 520KVA.

Up to 4 Frames can be placed in parallel to build up to 2080 KVA of total capacity.

The OL3MD™ UPS Series is a modular decentralised UPS system built in modules of 40KVA each allowing to reach a total capacity of 2060 KVA. The OL3MD™ is highly compact and efficient allowing substantial savings in space and energy.

The OL3MD™ UPS Series exceptional design meets all modern requirements of building and operating energy efficient and environmentally friendly data-centers. The OL3MD™ UPS Series employs transformerless double conversion UPS topology and is available in three possible frame sizes: 200KVA (5 modules of 40KVA), 320KVA (up to 8 modules of 40KVA and 520KVA (up to 13 modules of 40KVA).

The C-TECH OL3MD™ 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 front access to electrical connections and fully serviceable components.

- **Up to 96 % AC–AC efficiency**
- **0.9 Output power factor**
- **Fully scalable up to 2.06 MW**

Advanced Features

- Decentralized Parallel Structure with Hot-swappable features
- Modular N+X Parallel Redundancy
- DSP Controlled Technology
- Unity Input Power Factor
- Touch Screen LCD Display
- Scalable and evolutive (Invest as you grow)
- Up to 96 % efficiency in double conversion mode minimizes running costs
- OL3MD maximized output active power (1kVA = 0.9kW)
- Excellent input performance minimizes installation costs
- Power density up to 558kW / m² minimizes space requirements
- Full front access OL3MD maximizes system serviceability
- Superior MTBF and MTTR
- Emergency Power Off can be operated on site or remotely
- Comon Battery Bank
- Programmable Battery Voltage
- Intelligent Charge Mode with smart charge current adjustment
- Powerfull charger built in Modules and Frame
- Versatile Communication interfaces

OL3MD-FR5 & OL3MD-FR8

Applications

The OL3MD™ UPS Series is engineered with your growth in mind. It can be easely upgraded to either grow your capacity and reliability needs by simply adding a power module into your rack or increase your runtime by adding battery odules.

Each power module added will either add your power capacity by 40 KVA (36KW) or increase your system reliability through N+X redundancy.

You may also increase your runtime by adding rackmount battery modules. The OL3MD™ UPS can be software configured to use +/- 16,17,18,19,20 battery blocks allowing you to precisely configure the requied runtime.

OL3MD-M40KI

OL3MD-B3609

Features

Besides power performance, the next criteria of choice is UPS Features. The OL3MD™ 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, LBS Synchronization, Full Self protection circuitry, EPO and Comprehensive communication options.

N+X parallel redundancy

Up to 13 modules of OL3MD-M40KI can be positioned in parallel per frame and up to 4 frames can be connected in parallel redundancy mode to reach up to 2.06MW.

DSP Technology

The OL3MD™ 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 OL3MD™ UPS is capable to operate steadily under a wide input voltage range. The UPS can handle 380/400/415Vac with variations of -45% and + 25%) minimizing the use of battery in a manner to extend their life.

Frequency range is 40 to 70Hz making it compatible with both 50Hz and 60Hz grids.

Intelligent Battery Management

The OL3MD™ 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 OL3MD™ 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 OL3MD™ UPS is programmable to operate on a variable number of batteries. The OL3MD series can be programmed to operate on batteries from 384VDC to 480VDC.

Strong Overload Capability

The OL3MD™ 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 (Optional)

The OL3MD™ Series can be ordered with dry contacts to prevent the UPS of charging when the generator is operational.

Emergency Power Off (EPO)

The OL3MD™ Series is equipped with a concave red EPO button with transparent cover built into the control panel for emergency power off.

Comprehensive Communication Options

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

Features

UPS power performance relies mainly on system efficiency, input THDi and input and output power factor. In the normal online double conversion mode, the OL3MD™ UPS Series delivers class-leading efficiency of up to 96 percent, with very low input THDi while providing near to unity input power factor and 0.9 output power factor.

Efficiency:

With a transformerless design and Energy Saving Inverter Switching (ESIS) technology, the OL3MD™ UPS Series delivers high efficiency at partial and full load (up to 96 percent in double conversion online mode). This level of efficiency dramatically reduces the total cost of ownership of the UPS system during its life cycle. In addition to lower operating costs, the OL3MD UPS Series extends the service life of components, thereby greatly increasing overall power performance.

Low input current total harmonic distortion (THDi)

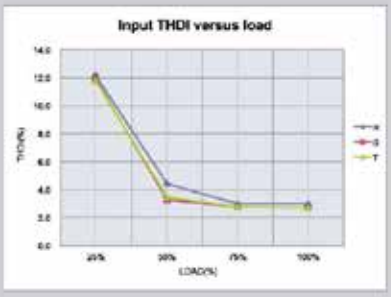
The OL3MD™ UPS Series actively manages the input current total harmonic distortion (THDi) at a low level (2 percent at 100 percent load). C-TECH's unique technology neutralizes the emission of harmonics at the input of the UPS system, providing greater reliability of operations for circuit breakers and extending the overall service life of the equipment. Low harmonic distortion saves unnecessary over sizing of gensets, cabling and circuit breakers, avoids extra heating of input transformers and extends the overall service life of all upstream components.

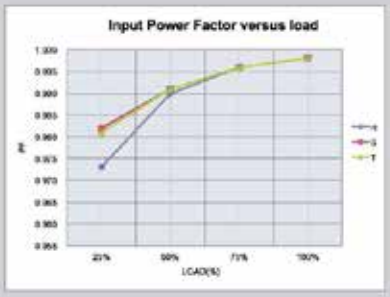
Near-to-unity input power factor

Thanks to the near-to-unity input power factor of 0.99 , even with partial loads, the OL3MD™ UPS Series reduces the input installation costs by enabling the use of smaller cables. Furthermore it avoids the unnecessary use of additional phase compensating devices, which consequently keeps the overall UPS-efficiency high.

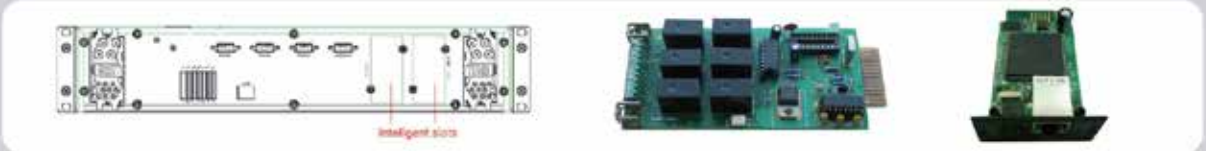
Unity Input Power Factor with Low Input Current Distortion & High Efficiency

Thanks for DSP Control technology implemented, the UPS may reach Unity Power factor , low input current THD as well as high output efficiency.





Emergency Power Off device can be operated on site or remotely



Versatile communication interfaces provided for different applications

Besides RS232 interface for the module itself, the UPS can be monitored and controlled via RS485, dry contact card or Ethernet (SNMP) card installed in the two intelligent slots.

Module Technical Specifications

CAPACITY (VA / W)	UPS Module		40 K / 36 K
Input	Phase		3 Phase / 4 Wires + Ground
	Rated Voltage		380 / 400 / 415 Vac
	Voltage Range		208~478 Vac
	Frequency Range		40~70 Hz
	Power Factor		≥0.99
	Bypass Volateg Range		Max. Voltage: +15% (optional +5%, +10%, +25%) Min. Voltage: -45% (optional -20%, -30%) Frequency Protection Range: ±10%
	Current Harmonic		≤3 (100% non-linear load)
Output	Phase		3 Phase / 4 Wires + Ground
	Rated Voltage		380 / 400 / 415 Vac
	Power Factor		0.9
	Voltage Precision		±2%
	Output Frequency	Utility Mode	±1%, ±2%, ±4%, ±5%, ±10% of the rated frequency (optional) (50 / 60 ±2.0) Hz
		Battery Mode	
	Crest Factor		03:01
	Transfer Time		Utility to Battery: 0ms Utility tp Bypass: 0ms (following)
	Overload Capacity		110% for 60min, 125% for 10min, 150% for 1 min
	THD		≤2% liner load ≤5% non liner load
Efficiency			ECO mode ≥98% ; Normal mode ≥92%
Communication Interface	UPS Module		RS232, RS485, SNMP card
Battery	Voltage		±192V / ±204V / ±216 / ±228V / ±240V DC ; Battery Quantity (optional)
	Charge Current (A)	UPS Module	Maximum Current: 20A
	Backup Time		Depends on the capacity of the external batteries
Operating Environment	Temperature		0˚C ~ 40˚C
	Humidity		0 ~ 95% non condensing
	Storage Temperature		-25˚C ~ 55˚C
	Altitude		< 1500m
Other	Unit Dimensions (W*H*D)		443 x 131 x 580 mm
	Weight (KGS)		38
Industry Standard			CE, EN/IEC 62040-2, EN/IEC 62040-1-1

Frame Technical Specifications

MODEL			OL3MD-FR5	OL3MD-FR8	OL3MD-FR13
Capacity (VA/W)	UPS Frame		40 - 200KVA / 36 - 180KW	40 - 320KVA / 36 - 288KW	40 - 520KVA / 36 - 468KW
	HPM Module		40KVA / 36KW		
Input	Phase		3 Phase 4 Wires and Ground		
	Rated Voltage		380 / 400 / 415 Vac		
	Voltage Range		208~478 Vac		
	Frequency Range		40Hz - 70Hz		
	Power Factor		≥0.99		
	Current THDi		≤3% (100% non-linear load)		
	Bypass Voltage Range		Max. Voltage: +15% (optional +5%, +10%, +25%) Min. Voltage: -45% (optional -20%, -30%) Frequency Protection Range: ±10%		
	Generator Input		Support		
Output	Phase		3 Phase 4 Wires and Ground		
	Rated Voltage		380 / 400 / 415 Vac		
	Power Factor		0.9		
	Volatge Regulation		±2%		
	Frequency	Utility Mode	±1%, ±2%, ±4%, ±5%, ±10% of the rated frequency (optional)		
		Battery Mode	(50 / 60 ±2.0%) Hz		
	Crest Factor		3:1		
	THD		≤2% liner load ≤5% non liner load		
	Waveform		Pure Sinewave		
Efficiency			≥92% at normal mode		
Battery	Voltage		384V / 408V / 432V / 456V / 480V DC; battery quantity (optional)		
	Charging Current	UPS Frame	100A Max. (charge current can be set according to battery capacity installed)	1600A Max. (charge current can be set according to battery capacity installed)	260A Max. (charge current can be set according to battery capacity installed)
		Module	20A Max. (charge current can be set according to battery capacity installed)		
Transfer Time			Utility to Battery: 0ms; Utility to bypass: 0ms		
Protection	Overload	AC Mode	Load ≤110%: last 60min, ≤125%: last 10 min, ≤150%:last 1min, ≥150% shut down UPS immediately		
		Bat. Mode	Load ≤110%: last 10min, ≤125%: last 1 min, ≤150%:last 5S, ≥150% shut down UPS immediately		
		Bypass Mode	Breaker 3 x 300A	Breaker 3 x 500A	Breaker 3 x 800A
	Short Circuit		Hold whole system		
	Overheat		Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately		
	Battery Low		Alarm and Switch off		
	Self-Diagnostics		Upon Power On and Software Control		
	EPO (optional)		Shut down UPS immediately		
	Battery		Advanced Battery Management		
	Noise Suppression		Complies with EN62040-2		
Alarms	Audible &Visual		Line Failure, Battery Low, Overload, System Fault		
Indicators	Status LED & LCD		Line Mode, Eco Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault		
	Reading On the LCD		Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature		

Communication Interface	UPS Frame	RS232, RS485, Intelligent slot x2, Dry Contact		
Environment	Operating Temperature	0˚C~40˚C		
	Storage Temperature	-25˚C~+55˚C		
	Humidity	0~95% non consdidering		
	Altitude	< 1500m		
	Noise	<60dB (at 1 meter)		
Safety Conformance		CE, EN / IEC 62040-2, EN / IEC62040-1-1		
Dimensions (WxHxD)mm		600 x 1400 x 860	600 x 2000 x 860	600 x 2000 x 860
Net Weight (kg)		270	380	560

Ordering Information

Ref Number	Description
OL3MD-FR5	Frame for up to 5 UPS Modules of 40 KVA, 3 Phase Input/Output, 380/220, 50Hz
OL3MD-FR8	Frame for up to 8 UPS Modules of 40 KVA, 3 Phase Input/Output, 380/220, 50Hz
OL3MD-FR13	Frame for up to 13 UPS Modules of 40 KVA, 3 Phase Input/Output, 380/220, 50Hz
OL3MD-M40KI	Decentralised UPS Module 40 KVA, 3Phases input / Output, 380V, 50Hz
OL3MD-B3609	Decentralised UPS Battery Module, 36x9AH

REGIONAL SALES OFFICES

North America:

1250, Rene Levesque West, #2200
Montreal, Quebec,
Canada H3B 4W8
Phone: +1-514-9893700
Sales_R1@e24solutions.com

Eurasia:

5th and 6th Floors,
14 Tsar Osvoboditel Blvd.,
1000 Sofia, Bulgaria
Phone: +359-2-811-1445
Sales_R5@e24solutions.com

Europe:

20-22 Wenlock Road
London N1 7GU
United Kingdom
Phone: +44-2038242497
Sales_R4@e24solutions.com

Middle East & Africa:

May Tabet Building,
Sin El Fil
Beirut, Lebanon
Phone: +961-1-492705
Sales_R6@e24solutions.com

AUTHORIZED RESELLER

ISO 9001:2015

QUALITY STANDARD