



## Modulera

Modular UPS 3 Phase In - 3 Phase Out / 20 - 200 kVA

- Hot Swappable Decentralized Parallel Architecture
- DSP (Digital Signal Processor) Controlled Technology
- Modular N+X Parallel Redundancy
- Plug & Play Type Hot Swappable Power Modules
- Cold Start Function
- Parallel connection availability of UPS Frames up to 4pcs
- Wide Input Voltage Window (208Vac ~ 478Vac)
- Wide input frequency range (40Hz ~ 70Hz)
- High Overall Efficiency (up to 94%)
- Increased Output Power Factor (PF: 0.9)
- Unity Input Power Factor (PF:  $\geq 0.99$ )
- Low Input Total Harmonic Distortion Level (THDi down to 3 %)
- Fit into standard 19" Rack Cabinet
- Touch-screen LCD display for user's friendly operation
- EPO (Emergency Power Off)
- Smart Fan Speed Control
- Programmable Battery Voltage (32/ 34 / 36 / 38 / 40 blocks of 12V Batteries)
- Three Level Battery Charge system with smart charge current adjustment
- Powerful charger built in each Modular UPS Power Module
- Equip with Maintenance Bypass Switch for easy maintenance
- RS232 & 485 Ports as standard communication
- Megatec/Mod Bus protocol supported
- Optional Communication Interfaces (SNMP Card or DRY contact board)



UPS ONLINE



MODULAR SYSTEM



LCD DISPLAY (20-200kVA)



SERVICE



# Modulera

## TECHNICAL SPECIFICATIONS

MODEL		MDL 3300-60K	MDL 3300-100K	MDL 3300-200K
Frame Capacity		20kVA (18kW) to 60kVA (54kW)	20kVA (18kW) to 100kVA (90kW)	20kVA (18kW) to 200kVA (180kW)
MDL Module Capacity		20KVA/18KW		
INPUT				
Phase		3Ph+N+PE		
Rated Voltage		380 / 400 / 415Vac		
Voltage Range		208 - 478Vac at 50% load, 305 - 478Vac at 100% load		
Frequency range		40Hz - 70Hz		
Power Factor		≥ 0.99		
Current THDi		down to 3%		
Generator Input		Present		
OUTPUT				
Phase		3Ph+N+PE		
Rated Voltage		380/400/415Vac		
Power Factor		0.9		
Voltage Regulation		±1%		
Frequency	Utility Mode	±1%, ±2%, ±4%, ±5%, ±10% of the rated frequency(optional)		
	Battery Mode	(50/60 ±%0.2)Hz		
Crest Factor		3:1		
THDv		≤2% with linear load		
Waveform		Pure Sinewave		
Over Load	AC Mode	100% - 110%: 60min,110% - 125%: 10min, 125% - 150%: 1min, ≥150%: immediately transfers to bypass		
	Bat. Mode	100% - 110%: 60min,110% - 125%: 10min, 125% - 150%: 1min, ≥150%: immediately shutdown		
	Bypass Mode	Breaker (40Amp)		
AC-AC Efficiency		Up to 94%		
Eco-Mode Efficiency		97%		
BATTERY				
Type		Maintenance-free lead acid batteries		
Quantity (12V VRLA batteries)		Configurable to 32/34/36/38/40 pcs per string		
Voltage (12V VRLA batteries)		384/408/432V/456V/480V DC		
Charging Current	Frame	18A Max. (charge current can be set according to battery capacity installed)	30A Max. (charge current can be set according to battery capacity installed)	60A Max. (charge current can be set according to battery capacity installed)
	MDL Module	6A Max. (charge current can be set according to battery capacity installed)		
DISPLAY				
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		
PROTECTION				
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		Line Failure, Battery Low, Overload, System Fault		
COMMUNICATION				
Standard		1xRS232 Communication port, 2xRS485 Communication ports, 1xModBus port, 2xCommunication Slot		
Optional		SNMP (Megatec Protocol), Dry Contact Board, EPO		
ENVIRONMENT				
Operating Temperature		0°C - 40°C		
Storage Temperature		-25°C - 55°C		
Humidity		0 - 95% non condensing		
Altitude		< 1500m		
Noise		<60dBA (at 1 meter)		
PHYSICAL SPECIFICATIONS				
Dimensions (WxDxH)	MDL Module	443 x 580 x 131- 3U (for all frames)		
	Frame	600x840x1400		600x1100x2000
Weight - Without Batteries (kg)	MDL Module	31		
	Frame	150	152	290
STANDARDS				
CE, EN/IEC 62040-2, EN/IEC 62040-1-1, EN/IEC 62040-3 (VFI SS 111)				