



3:3
PHASE

MULTILINE CL SERIES

Three-Phase UPS
from **10 - 20 kVA**



3 LEVEL
UPS



UPS ONLINE



TOWER



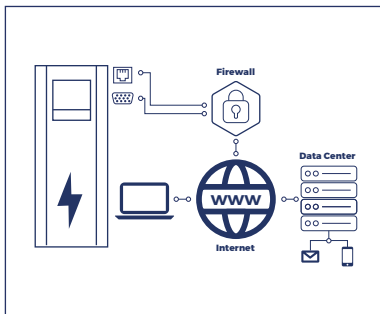
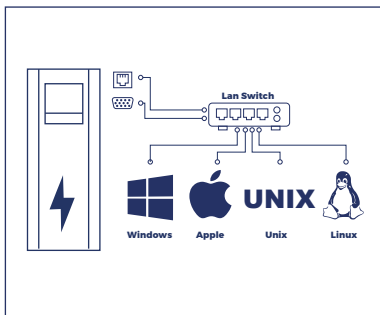
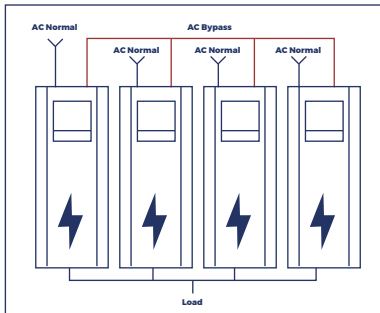
HIGH
EFFICIENCY



LI - ON
READY

THREE PHASE OUTPUT UPS FOR INDUSTRIAL APPLICATIONS

Three level Technology, Compact and Robust, Monoline is the perfect UPS to protect and supply loads in the industrial fields and critical applications.



- ◆ 3 Levels of Technology
- ◆ Online Double Conversion Technology (Class VFI-SS-111)
- ◆ High efficiency up to 96%,
- ◆ 1-1 phase 3-3 phase operation feature (Optional)
- ◆ Up to 98% efficiency with Eco mode feature
- ◆ Low input current TDH ($\leq 5\%$)*
- ◆ High input power factor (≥ 0.99)*
- ◆ Ability to start from battery with cold start
- ◆ Extending battery life up to 35% with smart charging system
- ◆ Triple charging system with temperature compensation
- ◆ Ability to connect flexible number of batteries
- ◆ Longer lasting fan run time with smart fan speed control
- ◆ Ability to work as a frequency converter (between 50 Hz / 60 Hz)
- ◆ Input operation analysis that can vary depending on the load, which reduces battery isolation (up to -40%)
- ◆ Short circuit, overload, Lightning and voltage surge protection
- ◆ Operation with common or separate battery, parallel operation
- ◆ Standard internal Static and Manual Bypass
- ◆ Remote monitoring and management software

SOFTWARE & CONNECTIVITY SOLUTIONS

- ◆ Local communication with RS232 and RS485
- ◆ 2pcs configurable input contact
- ◆ Relay board with alarms
- ◆ GenSet contact
- ◆ EPO contact
- ◆ USB
- ◆ Remote Monitoring Panel
- ◆ Battery Temperature Sensor for Temperature compensated charging
- ◆ JBUS, PROFIBUS Local connection
- ◆ SNMP IT Manager monitoring
- ◆ Environment sensors for Data Centers (Humidity, Temperature, Smoke, etc.)
- ◆ GSM, Telnet, GPRS communication
- ◆ PC & Server shutdown
- ◆ Web page remote monitoring
- ◆ Building management system
- ◆ E-mail alarm reporting
- ◆ Remote monitoring 24/7 technical Service

MULTILINE-CL SERIES

MODEL	MTL 3310U1CL MTL 3310U2CL	MTL 3315U1CL MTL 3315U2CL	MTL 3320U1CL MTL 3320U2CL
Nominal power (kVA)	10	15	20
General Specs			
Technology	Three Level On-Line double conversation VFI-111		
Waveform	Sinusoidal		
Architecture	Stand Alone or Distributed Parallel up to 8 units		
Input characteristics			
Input Voltage	220, 230, 240 V 3F+N+PE /380, 400, 415 V 3F+N+PE		
Input frequency	45-65 Hz		
Voltage Tolerance (%100 load)	(-20)% (+20)%		
Voltage Tolerance (%40 load)	(-36)% (+20)%		
Output characteristics			
Output Voltage	220, 230, 240 V 3F+N+PE /380, 400, 415 V 3F+N+PE		
Output Voltage Tolerance	±1%		
Overall Efficiency**(AC-AC)	Up to 96% (Half load)		
Ecomode Efficiency	Up to 98% (Optional)		
Nominal Output Frequency	50/ 60Hz +0,01 free run (Adjustable from LCD Panel) (Optional)		
Crest Factor	3:1		
Output Power Factor	1 (U1 model) / 0,9 (U2 model) / 0,8 (U3 model)		
THD of Output Voltage	≤2% (Linear load) & ≤5% (Non-linear load)		
Batteries			
Battery Type	VRLA-AGM / GEL / NiCd / Li-ion		
Battery Test	Automatic or Manual		
Battery Recharge Time	<6h-8h		
Bypass Characteristics			
Bypass	Built in Automatic and Maintenance Bypass		
Voltage Tolerance	±10%		
Transfer Time	0 ms		
Overload Capability	150% for 1 minutes		
Communication and management			
LCD Display	Graphical Icd screen, Led bar status		
Communication Ports (Optional)	RS485, Genset, SNMP, GSM Modem, Relay Contacts, Input Contacts, Modbus, USB, Jbus, Profibus		
Battery Temperature Sensor Contact	Available		
Emergency Power Off (Epo)	Available		
Accessories (Optional)	Galvanic Isolation Transformer, Remote Monitoring Panel		
Charger Capacity			
U1 Model (max)	1 - 13A adjustable		
U2/U3 Model (max)	1 - 4A adjustable (1 - 13A adjustable optional)		
Higher capacity charge card option	Avaible		
Battery Quanity			
With Internal Battery (12V)	20 - 32 pcs 7/9Ah	32 pcs 7/9Ah	
External Cabinet with 4A Charger Option	V1: 30 - 40 pcs (Default 30 pcs) U2 Model V2: 40 - 46 pcs (Default 40 pcs) U2 Model		
External Cabinet with 13A Charger Option	30 - 46 pcs (Default 30 pcs - Adjustable from LCD Panel)		
Physical characteristics			
Dimensions H x W x D (mm)	812 x 302 x 715		
Net Weight (kg)	41	48	
Ambient conditions			
Operating Temperature	0°C - 40°C		
StorageTempature	-15°C/+ 55°C		
Proposed Temp. To Extend Battery Life	20- 25°C		
Relative Humidity (%)	< 95% not condensing		
Altitude	< 1500m		
Noise (at 1 meter)	<55 dBA		
Protection Class	IP 20 (Higher IP Ratings are optional)		
Compliance			
Reference Product Standards	EN 62040-1-1 (Safety), EN 62040-2 (EMC), EN 62040-3 (Performance)		



INNOVATIVE ENERGY SYSTEMS

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The company reserves the right to change specifications and designs without notice.