



**3:1**

PHASE

# MONOLINE SERIES

**3 Phase Inputs  
1 Phase Output UPS  
from 10 - 40 kVA**



3 LEVEL  
UPS



UPS ONLINE



TOWER



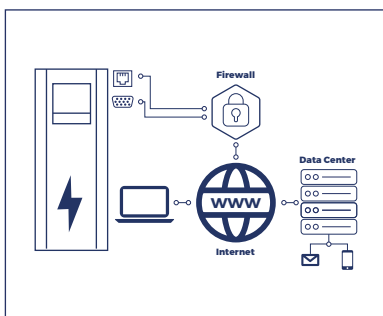
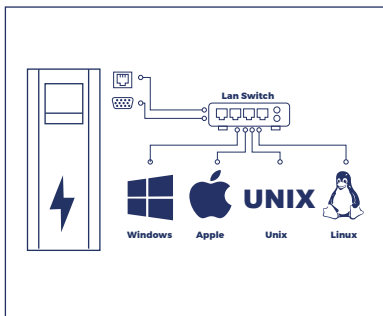
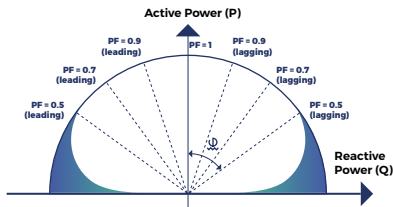
HIGH  
EFFICIENCY



Li - On  
READY

## SINGLE 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.



- ◆ Three Level Technology
- ◆ On Line-Double Conversion Technology (Class VFI-SS-111)
- ◆ IGBT PWM Rectifier & Inverter Technology
- ◆ High Efficiency up to 96%
- ◆ Higher efficiency with eco mode up to 98%
- ◆ High Input Power Factor ( $\geq 0.99$ )
- ◆ Increase battery life time up to 35% with smart charger
- ◆ Temperature compensation battery charging
- ◆ Higher fan file time with Intelligent fan speed control
- ◆ Operate as frequency converter (50 Hz / 60 Hz)
- ◆ Short Circuit, Overload, Lightning and Surge Protection
- ◆ Perfect Generator Compability
- ◆ Easy Service with Manual bypass
- ◆ Variable input low voltage depending on loading percentage (up to -40%)

Parallelable with Common or Seperate Battery Cabinet  
Realtime warnings at LCD screen

## SOFTWARE & CONNECTIVITY SOLUTIONS

- ◆ Local communication with RS232 and RS485
- ◆ 2 pcs configurable input contact
- ◆ Relay board with alarms
- ◆ Genset contact
- ◆ EPO contact
- ◆ USB
- ◆ Remote Monitoring Panel
- ◆ Battery Temperature Sensor for 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

# MONOLINE SERIES

MODEL	MNL 3110U1 MNL 3110U2	MNL 3115U1 MNL 3115U2	MNL 3120U1 MNL 3120U2	MNL 3130U1 MNL 3130U2	MNL 3140U1 MNL 3140U2
Nominal power (kVA)	10	15	20	30	40
<b>General Specs</b>					
Technology	Three Level On-Line double conversion VFI-111				
Waveform	Sinusoidal				
Architecture	Stand Alone or Optional Paralel				
<b>Input Characteristics</b>					
Input voltage	3:1 // 380, 400, 415 Vac 3PH+N+PE - 1:1 // 220, 230, 240 Vac 1PH+N+PE				
Input frequency	45-65 Hz				
Voltage Tolerance (%100 load)	(-20)% (+20)%				
Voltage Tolerance (%50 load)	(-40)% (+20)%				
Input Power Factor	1:1 ≥ 0,99 ; 3:1 ≥ 0,95				≥ 0,99
<b>Output characteristics</b>					
Output Voltage	220,230,240 Vac 1 PH + N+PE (Adjustable from front panel)				
Output Voltage Tolerance	±1%				
Overall Efficiency (AC-AC)	Up to 95% (%50 load) // Up to %94 (%100 load)				
Ecomode Efficiency	Up to 98% (Optional)				
Nominal Output Frequency	50/60Hz +0,01 free run (Adjustable from LCD Panel)				
Crest Factor	3:1				
Output Power Factor	0,9 (U2 model) / 1 (U1 model)				
THD of Output Voltage	≤2% (Linear load) & ≤5% (Non-linear load)				
<b>Bypass characteristics</b>					
Overload Capability	150% for 1 minutes				
Bypass	Built in Automatic and Maintenance Bypass				
Voltage Tolerance	±10%				
<b>Batteries</b>					
Battery Type	VRLA-AGM / (GEL - NiCd - Li-On Optional)				
Battery Test	Automatic or Manual				
Battery Recharge Time	<6h-8h				
<b>Charger Capacity</b>					
U1/U2/U3 Model (max)	1A	4A			
with Charger Option	4A / 13A				
<b>Battery Quantity</b>					
with Internal Battery (12V 7/9Ah)	16/28 (U1) pcs	28 pcs	28 pcs	2x30 pcs	—
External Cabinet with 4A Charger Option	A2: 30-40 pcs (Default 30 pcs) A3: 40-46 pcs (Default 40 pcs)				
External Cabinet with 13A Charger Option	30-46 pcs (Default 30 pcs - Adjustable from LCD Panel)				
<b>Communication and Accessories</b>					
LCD Display	Graphical lcd screen, Led Bar Status				
Communication ports (Optionals)	RS485, Genset, SNMP, GSM Modem, Relay Contacts, Input Contacts, Modbus and USB				
Accessories (Optional )	Galvanic Isolation Transformer, Remote Monitoring Panel, Parallelization				
<b>Physical Characteristics</b>					
Dimensions H x W x D (mm)	661X257X580 735X256X673(U1)	762X257X694	762X257X694 991X302X862(U1)	991X302X862	1078X895X325 1352X975X436(U1)
Net Weight (kg)	38/40*	40	50 / 65*	65 / 71*	71 / 90*
<b>Ambient Conditions</b>					
Operating temperature (°C)	0°C - 40°C				
StorageTempature	-15°C+ 55°C				
Relative Humidity (%)	< 95% not condensing				
Altitude	< 1500m				
Noise (at 1 meter)	<55 dBA				
Protection Class	IP 20 (Higher Ip Ratings are optional)				
<b>Compliance</b>					
Reference Product Standards	EN 62040-1-1 (Safety), EN 62040-2 (EMC), EN 62040-3 (Performance)				

\*at U1 & U2 model

 **INNOVASIS**

INNOVATIVE ENERGY SYSTEMS

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