

MFC

SERIES

10-1000 kVA **3:3**

PHASE

FREQUENCY CONVERTER



DATA CENTER



MEDICAL



TRANSPORT



INDUSTRY



EMERGENCY



TOWER



POWER FACTOR



SERVICE



FEATURES

- True Three Level IGBT PWM Rectifier & Inverter Technology
- Output Power Factor 0.9 (1 Optional)
- DSP Control
- Ultra High Efficiency up to 96%
- Low Input Current THD (<3%)
- High Input Power Factor (>0.99)
- Wide Input Voltage Range (Optional)
- Short Circuit and Overload Protection
- Parallellable Modules up to 8 units
- 500 Real Time Event Log with Detailed Parameters
- Static&Manual Bypass Operation
- Small Footprint and Easy Maintenance
- Advanced Communication Capabilities
- Perfect Generator Compatibility
- EPO (Emergency Power Off)
- Capacitive Kit Option
- Auto Restart

CERTIFICATES



The LevelUps Series is certified by TÜV SÜD with regard to product safety (EN 62040-1)



The LevelUps Series is attested by Bureau Veritas with regard to performance (EN 62040-3)



MODEL		10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	80kVA	100kVA	120kVA	160kVA	200kVA	250kVA	300kVA	400kVA	500kVA	600kVA	800kVA	1000kVA				
Capacity		10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	80kVA	100kVA	120kVA	160kVA	200kVA	250kVA	300kVA	400kVA	500kVA	600kVA	800kVA	1000kVA				
Power Watt		9kW	13.5kW	18kW	27kW	36kW	54kW	72kW	90kW	108kW	144kW	180kW	225kW	270kW	360kW	450kW	540kW	720kW	900kW				
INPUT																							
Nominal Voltage		400 VAC 3 Phase +N																					
Voltage Tolerance		-20% +15%																					
Frequency Tolerance		50 / 60 Hz ±10% (Selectable)																					
Power Factor		>0.99																					
Total Harmonic Distortion		THDi <3%																					
OUTPUT																							
Power Factor		1.0									0.9 (1 Optional)												
Nominal Voltage		380/400/415 VAC 3 Phase + N																					
Voltage Tolerance		Static ±1, Dynamic ±3																					
Frequency Tolerance		50Hz / 60Hz ±0,01%																					
Output THD		Linear Load <1% / Non-Linear Load <3%																					
Crest Factor		3:1																					
Overload Capacity*		At 125% Load 10min, at 150% Load 1min																					
Efficiency (Online Mode)		96%																					
Efficiency (Eco Mode)		Up to 99%																					
BYPASS																							
Nominal Voltage		380/400/415 VAC 3 Phase + N																					
Voltage Tolerance		15% (Configurable from 10% to 30%)																					
Frequency Tolerance		±5 (Selectable)																					
ENVIRONMENT																							
Running Temperature		0°C / +40°C																					
Storage Temperature		-15°C / +45°C																					
Protection Class		IP20																					
Humidity		0-95% Without Condensation																					
Altitude		<1000m, Correction Factor 1. <2000m, Correction Factor >0.92, <3000m; Correction Factor >0.84																					
Noise Level		<53 dBA	<55 dBA	<60 dBA	<65 dBA	<72 dBA	<74 dBA	<75 dBA															
COMMUNICATION																							
Communication Port		RS232 (Standart), RS485, MOD-Bus, J-Bus, Web, Tel-Net, GPRS, CAN-Bus, SNMP (Option)																					
STANDARDS																							
Quality		ISO 9001, ISO 14001, ISO 18001, TSE-HYB																					
Performance		EN62040-3 (VFI-SS-111, Bureau Veritas Certified)																					
EMC/LVD		EN62040-2, EN62040-1, EN60950, (TÜV SÜD Certified)																					
DIMENSIONS & WEIGHT																							
Cabinet Dimensions (mm)	Width	490				763				810				830				1250				1999	
	Depth	805				771				820				870				845				867	
	Height	1190				1555				1705				1800				2102				2045	
Net Weight (kg)	100	100	107	118	125	260	270	350	355	450	460	470	850	850	850	1740	1740	1990					
Packaging Dimensions (mm)	Width	600				600				900				900				1370				2150	
	Depth	900				900				970				970				870				970	
	Height	1400				1400				2040				2040				2120				2120	
Gross Weight (kg)	140	141	145	164	185	353	361	376	387	398	491	500	890	890	890	1820	1820	2070					

* under certain conditions.

3 Phase In / 1 Phase Out Version is Available. (10 to 30kVA)

Makelsan reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Makelsan products previously or subsequently sold.

Makelsan does not guarantee the items of the accuracy and completeness.