

IP

SERIES

10-120 kVA

3:3
PHASE

ONLINE UPS

- High Reliable and Robust 3 Phase UPS Solution Designed for Most Harsh Industrial Processes



TOWER



POWER FACTOR



SERVICE



FEATURES

- DSP Power Factor Corrected IGBT Rectifier
- DSP Controlled IGBT Inverter
- IP31, IP41, IP51 Protection Degree for Harsh Environments
- Replacable Dust Filters
- Frontal Access for Input/Output Cabling
- Wide Input Voltage Range: 220/380VAC -37% +22% (Optional)
- Spares Replacement and Preventative Maintenance
- Redundant Battery String
- Flexible Communication Boards for every Industrial
- Compatible with Open Vented Lead Acid, Valve Regulated Lead Acid (VRLA) and Nickel Cadmium Batteries
- Dual Input Operation

CERTIFICATES



POWER
FORLIFE

MAKELSON®
Uninterruptible Power Supplies

MODEL									
Capacity	10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	80kVA	100kVA	120kVA
Power Watt	8kW	12kW	16kW	24kW	32kW	48kW	64kW	80kW	96kW
Power Factor	0.8								
INPUT									
Input Voltage Range	220/380 VAC -15% +18% 3P+N+PE Optional 220/380 VAC -37% +22% 3P+N+PE								
Input Power Factor	>0.99								
Input Frequency Range	50 Hz ±10% / 60 Hz ±10% (Selectable)								
Rectifier	PWM IGBT Technology PFC								
Total Harmonic Distortion (THDI)	<3%								
OUTPUT									
Output Voltage Range	220/380 VAC, 230/400 VAC and 240/415 VAC 3 Phase+N ±1%								
Recovery Time	±1 Static, +3 Dynamic at 100% Load, 5msn								
Efficiency	Normal Mode up to 93% Eco Mode 98%								
Output Frequency Range	50 / 60 Hz ±0.01% (Battery Mode)								
Output THD	Linear Load <2% / Non-Linear Load <5%								
Crest Factor	3:1								
Overload Capacity*	At 125% Load 10 min. 150% Load 1min								
Protection	IGBT Controlled Electronic Short Circuit Protection								
BATTERY									
Type	VRLA / AGM / GEL								
Quantity	62								
Battery Test	Programmable without Load, Automatic Battery Test								
Battery Temperature	20°C -25°C (For Maximum Efficiency)								
BYPASS									
Bypass Input Voltage Range	230/400 VAC (220/380 VAC) 3 Phase+N ±10% (Selectable)								
COMMUNICATION									
Communication Port	RS232 / RS485 Rj11 / SNMP								
Dry Contact Alarms	7 Dry Contact Alarms (Voltage, Overload, Temperature, Pressure, Water, etc.)								
Software	MAKnet Software, Megatech, SEC, vs. Compatibility with all Protocols								
Central Service & Monitoring	Available								
SNMP Adaptor	Optional								
Advanced Communic. Options	MOD-Bus / J-Bus / Profibus / Modbus / Web / Tel-net / GPRS / CAN - Bus, SNMP								
STANDARDS									
Quality	ISO 9001, ISO 14001, ISO 18001								
Performance	EN62040 -3								
EMC/LVD	EN62040-2, EN62040-1, EN60950								
GENERAL									
Front Panel	320x240 LCD Front Panel + Mimic Diagram Turkish, English, Russian, German Menu								
Running Temperature	For UPS 0°C-40°C, For Battery 22°C-25°C								
Protections	Overload, Short Circuit, Over Temperature, High Charge, Low Charge, Over Humidity								
Protection Class	IP 31, IP41, IP51								
Humidity	0 - 95% (Non-Condensing)								
Altitude	<1000m								
Noise	<60 dBA								
Alerts	500 Event Log - Operational Status Record								
Generator Compatibility	Soft Start, Power Walk in 5-30Sec (Adjustable)								
Parallel Operation	N+1 Redundant Parallel, Unlimited Number of Parallellable Modules								
EMI / RFI	Standard								
EPO (Emergency Power Off)	Standard								
Galvanic Isolation Transformer	Optional								
Service & Maintenance	7 / 24 Tele Service								
Net Weight (Without Battery)(kg)	185	190	195	220	230	250	370	410	440
Dimensions (WxDxH) (mm)	1340 x 800 x 600					1400 x 740 x 880		1400 x 740 x 980	

* under certain conditions. 3 Phase in / 1 Phase Out Version is Available. (10 to 30kVA)
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