



# — DEPENDABLE BACKUP — FOR CRITICAL APPLICATIONS



CHOOSE FROM A WIDE RANGE OF  
ONLINE UPS: 1KVA~120KVA | LINE INTERACTIVE UPS: 650VA~2000VA  
For Large, Medium, and Small Enterprises.

[www.microtek.in](http://www.microtek.in)

# E2 SERIES

ENERGY EFFICIENT HIGH FREQUENCY ONLINE UPS

1KVA/24-1B

INTERNAL BATTERIES

1KVA/36V

EXTERNAL BATTERIES

E2 series ensures synchronization of the hardware, software, analytics and ongoing services to ensure its customers' vital applications run continuously, perform optimally as per the requirement. This series is based on High Frequency Double Conversion IGBT technology with static bypass which improves reliability and operates with configurable output voltage settings. The fixed output frequency can be synchronized with the input frequency.

## FEATURES:

- Inbuilt over voltage cut off device.
- Isolation transformer (Optional)
- Generator Compatible
- Configurable output voltage settings
- Smart display for real time information
- EMI noise filter
- Advances PFC technology
- Robust design with enhanced reliability
- Waveform (Battery Mode): Pure Sine wave



## BENEFITS:

**EFFICIENCY:** AC mode-88%, Battery mode-83%

**NOISE LEVEL:** Less than 50dBA@ 1meter (with fan speed control)

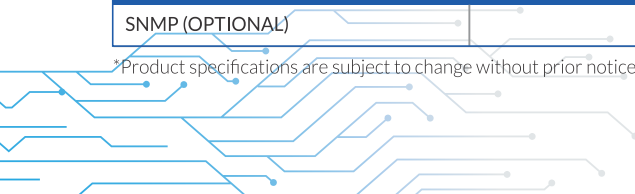
**SNMP (OPTIONAL):** Power management from SNMP manager and web browser. Over heating indication and protection.



## TECHNICAL SPECIFICATIONS

MODEL	E <sup>2</sup> 1 KVA 24V IB	E <sup>2</sup> + 1 KVA 36V EB
CAPACITY	1KVA/800W	1KVA/800W
DC VOLTAGE SYSTEM	24VDC	36VDC
INPUT		
VOLTAGE RANGE	110VAC ± 5 % ~ 300VAC ± 5 %	
FREQUENCY RANGE	40Hz ~ 70Hz	
PHASE	SINGLE PHASE WITH GROUND	
POWER FACTOR	≥0.99 @ FULL LOAD	
OUTPUT		
OUTPUT VOLTAGE	200 / 208 / 220 / 230 / 240VAC	
AC VOLTAGE REGULATION	±1%	
FREQUENCY RANGE (BATTERY MODE)	50 Hz ± 0.1 Hz OR 60Hz ± 0.1Hz	
CURRENT CREST RATIO	3:1	
HARMONIC DISTORTION	≤3% THD (Linear Load) ; 6% THD (Non-Linear Load)	
OVERLOAD CAPABILITY	105%~110%: UPS SHUTS DOWN AFTER 10 MINUTES AT BATTERY MODE OR TRANSFER TO BYPASS WHEN THE UTILITY IS NORMAL. 110%~130%: UPS SHUTS DOWN AFTER 1 MINUTE AT BATTERY MODE OR TRANSFER TO BYPASS WHEN THE UTILITY IS NORMAL. >130%: UPS SHUTS DOWN AFTER 3 SECONDS AT BATTERY MODE OR TRANSFER TO BYPASS WHEN THE UTILITY IS NORMAL.	
TRANSFER TIME	AC MODE TO BATTERY MODE: 0 / INVERTER TO BYPASS: <4 ms (Typical 2.5ms)	
WAVEFORM (BATTERY MODE)	PURE SINEWAVE	
EFFICIENCY		
EFFICIENCY (AC MODE / BATT. MODE)	88% / 83%	89% / 85.5%
BATTERY & CHARGER		
BATTERY TYPE / BATTERY NUMBERS	SMF 12V / 9AH X 2Nos. (In-Built Batteries)	SMF UPTO 65AH (External Batteries)
CHARGING CURRENT	1A	1A/2A/4A/6A (default) Selectable via LCD settings
PHYSICAL		
DIMENSION LXWXH(MM)	282 X 145 X 220	282 X 145 X 220
NET WEIGHT(KGS.)	9.8KGS.	4.5 KGS.
ENVIRONMENT		
OPERATING HUMIDITY / TEMP.	20-95% RH @ 0-40°C (Non-Condensing)	
NOISE LEVEL	LESS THAN 50 dBA @ 1 METER (WITH FAN SPEED CONTROL)	
STATUS INDICATIONS		
LED/LCD	LCD DISPLAY INDICATIONS	
MANAGEMENT		
SNMP (OPTIONAL)	POWER MANAGEMENT FROM SNMP MANAGER AND WEB BROWSER	

\*Product specifications are subject to change without prior notice.





# MAX+ SERIES

HIGH FREQUENCY HIGH PERFORMANCE ONLINE UPS

1KVA/2KVA/3KVA

INTERNAL BATTERIES

1KVA/2KVA/3KVA

EXTERNAL BATTERIES

Max+ series operates with programmable power management outlet along with the availability of hot standby feature and it's static bypass improves its reliability. The SNMP card is also available on demand as an option. This series is based on High Frequency Double Conversion IGBT technology with static bypass which improves reliability and consists of advanced PFC technology or battery management. The fixed output frequency can be synchronized with the input frequency.

## FEATURES:

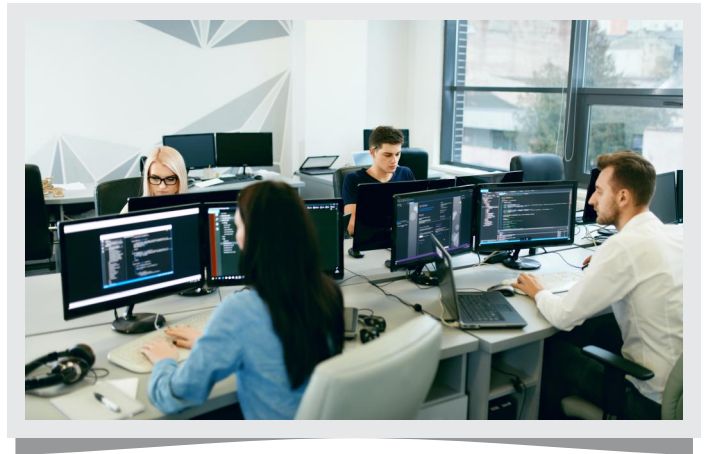
- Inbuilt charger of 9.5 Amps
- Smart display for real time information
- Inbuilt over voltage cut off device with surge protection
- Robust design with enhanced reliability
- Frequency convert mode (50Hz/60Hz)
- Generator Compatible
- External Charger: Capacity expansion to 8 Amps (Optional)
- EMI/RFI Noise Filter
- SNMP Card (Optional)
- Power Factor: 0.9
- Waveform (Battery Mode): Pure Sine wave



## BENEFITS:

- Efficient micro controller based
- Hot standby feature
- Programmable power management outlets
- Static bypass
- Over heating indication and protection.
- Noise Level: Less than 50dBa@ 1meter (with fan speed control)
- SNMP (Optional): Power management from SNMP manager and web browser.





## TECHNICAL SPECIFICATIONS

MODEL	MAX+ 1KVA36V EB/IB	MAX+ 2KVA72V EB/IB	MAX+ 3KVA72V EB/IB
CAPACITY	1KVA/900W	2KVA/1800W	3KVA/2700W
INPUT			
VOLTAGE RANGE	110VAC±5% ~ 300VAC±5%		
FREQUENCY RANGE	40Hz~70Hz		
PHASE	Single Phase with Ground		
INPUT POWER FACTOR	≥0.99 @ Full Load		
OUTPUT			
VOLTAGE RANGE	200/208/220/230/240VAC		
AC VOLTAGE REGULATION	±1%(Battery Mode)		
FREQUENCY RANGE (Battery Mode)	50Hz±0.25Hz or 60Hz±0.3Hz		
CURRENT CREST RATIO	3:1		
HARMONIC DISTORTION	≤2% THD(Linear Load); 4% THD(Non-Linear Load)		
OVERLOAD CAPABILITY	105%~110% : UPS shuts down after 10 minutes at battery mode or transfer to bypas when the utility is normal. 110%~130% : UPS shuts down after 1 minute at battery mode or transfer to bypas when the utility is normal. >130% : UPS shuts down after 3 seconds at battery mode or transfer to bypas when the utility is normal.		
TRANSFER TIME			
AC MODE TO BATTERY MODE	Zero		
INVERTER TO BYPASS	<4ms(Typical 2.5ms)		
WAVEFORM(BATTERY MODE)	Pure Sine Wave		
EFFICIENCY	85%~92%		
BATTERY			
DC VOLTAGE	36VDC/IB(3Battery 7AH inside)	72VDC/IB(6Battery 7AH inside)	72VDC/IB(6Battery 7AH inside)
TYPE AND NUMBERS	SMF/Lead Acid/Tubular depending on the capacity of the External Batteries		
CHARGE CURRENT	1.5A~9.5A		
CHARGING CURRENT(Adjustable)	2.0A/4.0A/6.0A/8.0A(Maximum) Selectable via LCD setting		
PHYSICAL			
DIMENSIONS PRODUCT(LxWxH)	397x145x220( in mm)	421x190x318( in mm)	421x190x318( in mm)
NET WEIGHT PRODUCT(KGS.)	7.8 Kgs./(IB-12.5Kgs.)	12.10 Kgs./(IB-25.8Kgs.)	12.52 Kgs./(IB-27.0Kgs.)
ENVIRONMENT			
OPERATING HUMIDITY	20-95% RH@ 0-40°C(Non-Condensing)		
NOISE LEVEL	Less than 50dBA@1Meter(With Fan Speed Control)		
LED/LCD INDICATION	LCD Indications		
MANAGEMENT			
SMART RS-232 OR USB	Supports Windows® 2000/2003/XP/Vista/2008/7/8, Linux, Unix, MAC		
OPTIONAL SNMP	Power Management from SNMP Manager and Web Browser		

\*Product specifications are subject to change without prior notice.

# MAX+<sup>+</sup>SERIES

HIGH FREQUENCY HIGH PERFORMANCE ONLINE UPS

## ONLINE UPS

6KVA/10KVA

EXTERNAL BATTERIES

Max+ series operates with the availability of hot standby feature, Load sharing parallel function and it's static bypass improves its reliability. The SNMP card is also available on demand as an option. This series is based on High Frequency Double Conversion 3-Level IGBT technology with static bypass which improves reliability and consists of advanced PFC technology and battery management. The fixed output frequency can be synchronized with the input frequency.



### SALIENT FEATURES:

- Unity Power Factor Output with 20-Battery Option
- High Efficiency up to 94%
- True Double-Conversion
- DSP technology guarantees High Performance
- Wide Input Voltage Range (110-300 VAC)
- Light Weight UPS
- Active Input Power Factor correction 0.99
- 50Hz/60Hz Frequency Converter mode
- Emergency Power Off function (EPO)
- ECO mode for Energy Saving
- SNMP/USB/RS-232 Communications
- Adjustable Battery Numbers
- Maintenance Bypass & Static Bypass Available
- Optional N+X Parallel Redundancy
- Inbuilt Surge Protection with OVCD Available
- Generator Compatible
- External Charger: Capacity expansion to 4 Amps (Optional)



## TECHNICAL SPECIFICATIONS

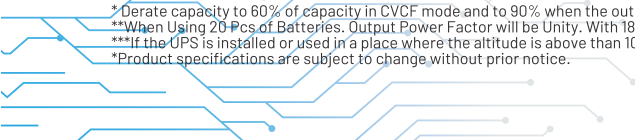
MODEL	MAX+ 6KVA	MAX+ 10KVA
CAPACITY	6000VA/4800W**	10000VA/8000W**
DC VOLTAGE	DEFAULT=192VDC, ADJUSTABLE=216VDC & 240VDC	
PHASE	1 PHASE IN ~ 1 PHASE OUT	
INPUT		
NOMINAL VOLTAGE	208/220/230/240 VAC	
VOLTAGE RANGE	110~300VAC ± 3% at 50% Load / 176~300VAC ± 3% at 100% load	
FREQUENCY RANGE	46~54 Hz	
POWER FACTOR	≥ 0.99 @100% Load	
TOTAL HARMONIC DISTORTION THD(i)	<4%@100% Load, <6%@50% Load	
OUTPUT		
OUTPUT POWER FACTOR	DEFAULT = 0.8, Optional = 0.9 With 18-Battery, 1 With 20-Battery**	
NOMINAL VOLTAGE	208*/220/230/240 VAC	
AC VOLTAGE REGULATION	±1%(Battery Mode)	
FREQUENCY RANGE	46~54Hz(Synchronized Range) / 50Hz ± 0.1 Hz (Battery Mode)	
CURRENT CREST RATIO	3:1(Max)	
HARMONIC DISTORTION	≤ 1% THD (Linear Load) ; ≤4% THD (Non-Linear Load)	
OVERLOAD CAPABILITY	AC Mode: 100%~110%: 10min ; 110%~130%: 1min ; >130% : 1sec Battery Mode: 100%~110%: 30sec ; 110%~130%: 10sec ; >130% : 1sec	
TRANSFER TIME		
AC MODE TO BATTERY MODE	Zero	
INVERTER TO BYPASS	Zero	
WAVEFORM (BATTERY MODE)	Pure Sine Wave	
EFFICIENCY	AC Mode: 94% / BATTERY Mode: 91%	
BATTERY		
BATTERY TYPE	VRLA / SMF	
NUMBER OF BATTERIES	Default: 16 Nos. Adjustable: 18 & 20 Nos.	
CHARGING CURRENT (Max.)	4.0A	
CHARGING VOLTAGE	(13.65VDC x Battery Number) ± 1%	
PHYSICAL		
DIMENSIONS PRODUCT(LxWxH)	555x250x830(in mm)	
NET WEIGHT PRODUCT(KGs.)	32.5 Kgs.	33.0 Kgs.
ENVIRONMENT		
OPERATING HUMIDITY / TEMP.	20~90%RH and Non-Condensing / 0.40oC	
NOISE LEVEL	Less than 55dB @ 1 Meter	Less than 58dB @ 1 Meter
LCD INDICATION	UPS Status, Load Level, Battery Level, Input/Output Voltage, Input/Output Freq. / Discharge Timer / Fault Status	
MANAGEMENT		
SMART RS-232 OR USB	Supports Windows® 2000/2003/XP/Vista/2008/7/8, Linux and MAC	
OPTIONAL SNMP	Power Management from SNMP Manager and Web Browser	

\*Derate capacity to 60% of capacity in CVCF mode and to 90% when the output voltage is adjusted to 208VAC or parallel system is operated.

\*\*When Using 20 Pcs of Batteries, Output Power Factor will be Unity. With 18 Pcs of Battery Output Power Factor will be 0.9.

\*\*\*If the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be derated one percent per 100m.

\*Product specifications are subject to change without prior notice.





# MAX+ SERIES

HIGH FREQUENCY HIGH PERFORMANCE ONLINE UPS

1KVA / 2KVA / 3KVA ISO TX

## EXTERNAL BATTERIES

Max+ series operates with the availability of hot standby feature on demand and its static bypass improves its reliability. The SNMP card is also available on demand as an option. This series is based on High Frequency Double Conversion IGBT technology with static bypass which improves reliability and consists of advanced PFC technology and battery management. The fixed output frequency can be synchronized with the input frequency.

## FEATURES:

- True double-conversion
- Microprocessor control optimizes reliability
- Input power factor correction
- Wide input voltage (110 V - 300V)
- 50/60Hz Frequency Converter Mode
- ECO mode for energy saving
- Emergency power off (EPO) function
- Adjustable charging current via LCD panel
- SNMP/USB/RS-232 multiple communications (SNMP is Optional)
- 3-stage smart battery charger design to optimize battery performance
- Comprehensive display allows easy monitoring and access of UPS status
- Generator compatible
- Built in galvanic isolation transformer

Online UPS Models  
With inbuilt Isolation Transformers



## BENEFITS:

- Efficient micro controller based
- Hot standby feature
- Static bypass
- Over heating indication and protection.
- Noise Level: Less than 50dBA@ 1meter (with fan speed control)
- SNMP (Optional): Power management from SNMP manager and web browser.



## TECHNICAL SPECIFICATIONS

MODEL		MAX+ 1KVA ISO TX	MAX+ 2KVA ISO TX	MAX+ 3KVA ISO TX
CAPACITY		1000VA / 900W	2000VA / 1800W	3000VA / 2700W
Input				
Nominal Voltage		200/208/220/230/240 VAC		
Voltage Range	Low Line Transfer	160 VAC / 140 VAC / 120 VAC / 110 VAC ± 3 % based on load percentage 100% - 80 % / 80 % - 70 % / 70 - 60 % / 60 % - 0		
	Low Line Comeback	175 VAC / 155 VAC / 135 VAC / 125 VAC ± 3 %		
	High Line Transfer	300 VAC ± 3%		
	High Line Comeback	290 VAC ± 3%		
Frequency Range		40Hz ~ 70Hz		
Phase		Single phase with ground		
Power Factor		≥ 0.99 @ full load		
THDi		≤5% @ 220-230VAC on Full Charged battery THDU < 1.6% @ input and full linear load condition		
OUTPUT				
Output Voltage		200/208/220/230/240 VAC		
AC Voltage Regulation (Batt. Mode)		± 2%		
Frequency Range (Synchronized Range)		50Hz system:47 ~ 53 Hz (60Hz system:57-63Hz)		
Frequency Range (Batt. Mode)		50 Hz ± 0.1 Hz (60Hz ± 0.1 Hz)		
Current Crest Ratio		3:1		
Harmonic Distortion at output		≤ 3 % THD (Linear Load) ≤ 6 % THD (Non-linear Load)		
Transfer Time	AC to DC	Zero		
	Inverter to Bypass	4 ms (Typical)		
	ECO to Battery mode	8 ms (Typical), 10 ms(max)		
Waveform (Batt. Mode)		Pure Sinewave		
EFFICIENCY				
AC Mode		78% @ full charged battery	83% @ full charged battery	84% @ full charged battery
ECO mode		84% @ full charged battery	90% @ full charged battery	90% @ full charged battery
Battery Mode		75%	81%	81%
BATTERY				
Long-run Model	Battery Type	SMFVRLA / LEAD-ACID		
	Numbers	12V x 3Pcs	12V x 6Pcs	
	Charging Current (max.)	1A/2A/4A/6A/8A (Selectable), default 8A		
	Charging Voltage	41.1VDC ± 1%	82.2VDC ± 1%	
INDICATORS				
Status on LCD		UPS status, Load level, Battery level, Input/Output voltage/Frequency, and Fault conditions Via LCD		
ALARM				
Battery Mode		Sounding every 5 seconds		
Low Battery		Sounding every 2 seconds		
Overload		Sounding every second		
Fault		Continously sounding		
PHYSICAL				
Dimension, D X W X H (mm)		421 X 190 X 318		
Net Weight (kgs)		15.3	17.8	23.3
Outlet types & Number		3-Pin 6Amp India type Sockets, 4-pcs		
Inlet type		IEC C14 10A Socket	IEC C20 16A Socket	3-Pin 50A Hard-Wire terminal
ENVIRONMENT				
Humidity & Operating Temperature		20-95 % RH @ 0 - 40°C ** (non-condensing)		
Noise Level		Less than 55dBA @ 1 Meter with Fan speed control	Less than 65dBA @ 1 Meter with Fan speed control	
Degree of Ingress Protection		IP-20		
MANAGEMENT				
Smart RS-232 or USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8/10, Linux and MAC		
Optional external Slot (for SNMP, Dry contact, ...)		Power management from SNMP manager and web browser		

\* Derate capacity to 80% of capacity in Frequency converter mode and to 80% when the output voltage is adjusted to 200VAC or 208VAC.

\*\* Above 40°C, output power shall derate to 12% of nominal power capacity for every 5°C rise in temperature upto 50°C.

\* Product specifications are subject to change without further notice



# *i*MAXX SERIES

INTELLIGENT PERFORMANCE LOW FREQUENCY ONLINE UPS

## 5.5KVA / 7.5KVA / 10KVA

### 16 / 18 BATTERY SYSTEM

iMaxx series is based on DSP technology with IGBT based inverter. It consists of built in maintenance bypass and static bypass switch along with the alarm for mute mode and SNMP card as optional addition. It is generator compatible and the required generator capacity required for the stand by source should be 2.5 times of the UPS capacity.

Online UPS Models  
With inbuilt Isolation Transformers



## FEATURES:

- Smart display for real time information
- Constant voltage constant frequency operation without battery
- Conformal coated PCV assemblies to withstand harsh environment
- Additional charger capacity expansion to 4 amps (Optional) inside UPS cabinet
- EMI Noise Filter
- Pure Sine wave Waveform
- External Charger capacity 8A & 12A (Optional available) for more Long Backup

## BENEFITS:

- Hot standby, Cold start and RS-232/USB port available
- Generator Compatible
- Display information (Load level, Battery level, AC mode, Battery mode, Bypass mode and Faults)
- Transfer time: Zero (AC to DC mode/ Inverter to Bypass mode)







## TECHNICAL SPECIFICATIONS

MODEL	i-MAXX TRANSFORMER BASED ONLINE UPS		
CAPACITY	5.5KVA   4.4KW	7.5KVA   6.0KW	10.0KVA   8.0KW
DC VOLTAGE SYSTEM	DEFAULT : 192VDC, ADJUSTABLE : 216VDC		
PHASE	SINGLE PHASE WITH GROUND		
INPUT			
NOMINAL VOLTAGE	208V AC / 220V AC / 230VAC		
ACCEPTABLE VOLTAGE RANGE	165~285V AC		
FREQUENCY RANGE	40Hz ~ 55Hz @50 Hz System		
OUTPUT			
NOMINAL VOLTAGE	208V AC / 220V AC / 230VAC		
AC VOLTAGE REGULATION	±1% (Battery Mode)		
FREQUENCY RANGE	Mains Mode(Synchronized Range) : 45Hz ~ 55Hz / Battery Mode: 50Hz 0.1Hz		
TRANSFER TIME			
AC TO DC MODE	Zero		
INVERTER TO BYPASS MODE	Zero		
BYPASS TO INVERTER MODE	<5ms		
WAVEFORM			
BATTERY MODE	Pure Sinewave		
EFFICIENCY			
AC MODE / BATTERY MODE	87% / 91%		
EXTERNAL BATTERY			
RECOMMENDED BATTERY TYPE	DEFAULT : VRLA / SMF Battery		
	Tublar Battery: OK(With Charger Cut-Off Voltage adjustable from LCD Display)		
BATTERY CHARGING AMP.	2/4 / 8 AMP. (Default : 8 AMP.)		
NO. OF BATTERIES	16 / 18 Batteries		
INDICATORS			
LCD DISPLAY	LOAD LEVEL, BATTERY LEVEL, AC MODE, BATTERY MODE, BYPASS MODE AND FAULT INDICATORS		
ALARMS	Battery Mode: Sounding every 4 Seconds Overload: Sounding twice every second		Low Battery: Sounding every second Fault: Continuously Sounding
MANAGEMENT			
RS-232 / USB & OPTIONAL SNMP	Supports Windows® 2000/2003/XP/Vista/2008/7/8, Linux and MAC		
PHYSICAL			
NET WEIGHT(Kgs.)	62.0 Kgs.	78.0 Kgs.	86.0 Kgs.
DIMENSIONS(LXWXH) mm	562 x 250 x 830		

Product specifications are subject to change without prior notice.





# **iMAXX**SERIES

INTELLIGENT PERFORMANCE LOW FREQUENCY ONLINE UPS

## **10KVA / 15KVA / 20KVA**

### **3 PHASE IN ~ 1 PHASE OUT**

iMaxx series is based on DSP technology with 6-Pulse SCR rectifier at input, IGBT based inverter and inverter transformer at output. It consists of built in maintenance bypass and static bypass switch along with the alarm for mute mode and SNMP card & Modbus card as optional addition. It is generator compatible. Robust design for harsh electrical environment.


## FEATURES:

- Smart display for real time information in 15KVA & 20KVA 3/1, 360V models.
- Constant voltage constant frequency operation without battery
- Conformal coated PCB assemblies to withstand harsh environment
- Inbuilt charger capacity expansion to 4 amps (Optional in 10KVA 3/1 model only)
- Built in maintenance bypass and static bypass switches
- Configurable Output voltage settings
- Waveform (Battery Mode): Pure Sine wave
- Immune to reverse phase sequence and No neutral operation in 360V models only
- Parallel option available in 15KVA & 20KVA 3/1, 360V models only, maximum parallel capacity 3 Nos. with separate battery banks
- Hot Standby function is available in both 192V & 360V models, but need separate battery bank for requirement with 360V models, but can be common for 192V models.

Online UPS Models  
With inbuilt Isolation Transformers



## BENEFITS:

- Hot standby, Cold start features available
  - Inbuilt charger of 20 Amps., Parallel Redundancy & Battery Reverse Protection in all 360V Models
  - Alarm for mute mode and SNMP card (Optional)
  - RS-232, USB Port and RS-485 Port available in 360V models
  - RS-232, USB Port only in 10KVA 3/1, 192V model
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## TECHNICAL SPECIFICATIONS

MODEL	i-MAXX TRANSFORMER BASED ONLINE UPS		
CAPACITY	10KVA / 8KW	15KVA / 12KW	20KVA / 16KW
DC VOLTAGE SYSTEM	192VDC	DEFAULT: 360VDC, ADJUSTABLE: 348~384VDC	
PHASE	3 PHASE IN ~ 1 PHASE OUT		
INPUT			
NOMINAL VOLTAGE	3 X 360V/380VAC 400VAC (3Ph+N+G)	3 X 380VAC/400VAC/415VAC (3P h+N+G)	
ACCEPTABLE VOLTAGE RANGE	286VAC ~ 493VAC	165VAC ~ 280VAC (Ph-N) / 285VAC ~ 485VAC (P h-Ph)	
FREQUENCY RANGE	40Hz~55Hz	50Hz/60Hz±10%	
OUTPUT			
NOMINAL VOLTAGE	DEFAULT = 230VAC ± 1%, 208VAC / 220VAC / 230VAC (A djustable)		
WAVE FORM	PURE SINEWAVE		
FREQ. RANGE SYNCHRONIZED MAINS MODE	45Hz~55Hz	50Hz ± 1%	
FREQ. RANGE BATTERY MODE	50Hz ± 0.1Hz	50Hz ± 0.1Hz	
POWER FACTOR / CREST FACTOR	0.8 / 3:1		
TOTAL HARMONIC DISTORTION	≤3% (Linear Load); ≤5% (Non-Linear Load)	≤2% (Linear Load); ≤5% (Non-Linear Load)	
TRANSFER TIME (AC TO DC)	0ms		
TRANSFER TIME (INVERTER TO BYPASS)	0ms		
OVERLOAD CAPABILITY	110% FOR 30 MIN, 125% FOR 5 MIN & 150% FOR 1 S ec	110% FOR 10 MIN; 150% FOR 60 S ec; >160% FOR 200 ms	
STATIC BYPASS			
OVERLOAD / SHORT-CIRCUIT CAPABILITY	150% FOR 1 HOUR ; 180% FOR 30 S ec ; >200% FOR 200 ms		
CONNECTION TYPE / INPUT VOLTAGE RANGE	HARDWIRE 3-WIRE (1Ph+N+G) / 220VAC		
EFFICIENCY			
OVERALL EFFICIENCY (AC MODE)	83%	≥88%	≥88%
EFFICIENCY (BATTERY MODE)	92%	90%	90%
BATTERY & CHARGER			
BATTERY TYPE	LEAD ACID/TUBULAR/SMF		
BATTERY NUMBERS	16Nos.	DEFAULT: 30Nos. (Adjustable 29, 30, 31 & 32 N umbers)	
CHARGING CURRENT	DEFAULT 8A, 2A/4A/8A (ADJUSTABLE)	DEFAULT: 5A, MAXIMUM = CAPACITY(KW) x (1-% LOAD) / BATTERY VOLTAGE	
PHYSICAL			
DIMENSION LXWXH(MM)/NET WEIGHT(Kgs.)	562X300X830/115KGS.	656X405X817/120KGS.	656X405X817/145KGS.
ENVIRONMENT			
OPERATING TEMP./HUMIDITY/NOISE LEVEL	TEMP: 0~55°C / HUMIDITY: 0~90% (N on-Condensing) / LESS THAN 60 dBA@1 METER		
MANAGEMENT			
USB AND MODBUS RS-232/RS485	SUPPORTS WINDOWS® 2000/2003/XP/VISTA/2008/7/8/10, LINUX AND MAC		
DRY CONTACTS / SNMP (OPTIONAL)	10KVA MODEL: 5 SIGNALS: AC FAILURE, LOW BATTERY, UPS ALARM, BYPASS AND UPS FAULT/ POWER MANAGEMENT FROM SNMP MANAGER AND WEB BROWSER (O ptional) 15/20KVA MODELS: 6 OUTPUTS AND 2 INPUTS/POWER MANAGEMENT FROM SNMP MANAGER AND WEB BROWSER (O ptional)		

\*Product specifications are subject to change without prior notice.







# **iMAXX**SERIES ONLINE UPS

INTELLIGENT PERFORMANCE LOW FREQUENCY ONLINE UPS

## **10KVA / 20KVA / 30KVA**

### **3 PHASE IN ~ 3 PHASE OUT**

iMaxx series is based on DSP technology with 6-Pulse SCR rectifier at input, IGBT based inverter and inverter transformer at output. It consists of built in maintenance bypass and static bypass switch along with the alarm for mute mode and SNMP card as optional addition. It is generator compatible and the required generator capacity required for the stand by source should be 2.5 times of the UPS capacity.

## FEATURES:

- DSP Technology with IGBT based inverter
- Smart LCD Display for Real-time information
- CVCF (Constant Voltage Constant Frequency) Operational without Battery
- Adjustable Battery Numbers (29,30,31 & 32 Numbers) in all 360V Models.
- Immune to Reverse Phase Sequence from Grid side & no Neutral Operation
- Built-In Maintenance Bypass & Static Bypass Switches.
- Configurable Output Voltage Settings
- Input filter for Power Factor 0.9 (Optional)
- Redundant fan design and independent ventilation enhance, durable operation under harsh environment
- Over Temperature Indication & Protection
- Output Frequency fixed at 50Hz or can be synchronized with Input frequency
- Generator Compatible. Generator Capacity required for Stand-By Source be 2.5 times of the UPS capacity
- Parallel Function is available with separate battery banks & the maximum parallel capacity is 4 Nos.
- External Backfeed Energy absorb boxes 2400W/ 3000W (available as Optional)

Online UPS Models  
With inbuilt Isolation Transformers



## BENEFITS:

- Hot standby, Cold start features available
- Inbuilt charger of 20 Amps., Parallel Redundancy & Battery Reverse Protection in all 360V Models.
- Alarm for mute mode and SNMP card (Optional)
- RS-232, USB Port and RS-485 Port available. in 360V models





## TECHNICAL SPECIFICATIONS

MODEL	i-MAXX TRANSFORMER BASED ONLINE UPS		
CAPACITY	10KVA / 8KW	20KVA / 16KW	30KVA / 24KW
DC VOLTAGE SYSTEM	DEFAULT: 360VDC, ADJUSTABLE: 348~384VDC		
PHASE	3 PHASE IN ~ 3 PHASE OUT		
INPUT			
NOMINAL VOLTAGE	3 X 380VAC/400VAC(3Ph+N)		
ACCEPTABLE VOLTAGE RANGE	285VAC ~ 485VAC(Ph-Ph)		
FREQUENCY RANGE	50Hz/60Hz ±10%		
OUTPUT			
NOMINAL VOLTAGE	3 X 380VAC/400VAC ±1%(3P h+N), 415VAC(ADJUSTABLE)		
WAVE FORM	PURE SINEWAVE		
FREQ. RANGE SYNCHRONIZED MAINS MODE	50Hz ± 1%		
FREQ. RANGE BATTERY MODE	50Hz ± 0.1HZ		
POWER FACTOR / CREST FACTOR	0.8 / 3:1		
TOTAL HARMONIC DISTORTION	≤2% (Linear Load); ≤5% (Non-Linear Load)		
TRANSFER TIME (AC TO DC)	0ms		
TRANSFER TIME (INVERTER TO BYPASS)	0ms		
OVERLOAD CAPABILITY	110% FOR 10MIN; 150% FOR 60SEC; >160% FOR 200 ms		
STATIC BYPASS			
OVERLOAD / SHORT-CIRCUIT CAPABILITY	150% FOR 1HOUR ; 180% FOR 30SEC ; >200% FOR 200 ms		
CONNECTION TYPE / INPUT VOLTAGE RANGE	SOLID STATE / 3X380VAC/400AC(3p h+N)		
EFFICIENCY			
OVERALL EFFICIENCY (AC MODE)	90%	91%	91%
EFFICIENCY (BATTERY MODE)	89%	91%	93%
BATTERY & CHARGER			
BATTERY TYPE	LEAD ACID/TUBULAR/SMF / DEFAULT: 30N os.(Adjustable 29, 30, 31 & 32 N umbers)		
CHARGING CURRENT	DEFAULT: 5A, MAXIMUM = CAPACITY(KW) X (1-% Load) / BATTERY VOLTAGE		DEFAULT: 5A, MAX. = 20A
PHYSICAL			
DIMENSION LXWXH(MM) / NET WEIGHT(Kgs.)	656X405X817 / 118Kgs.	656X405X941/179Kgs.	821X432X1159 / 241Kgs.
ENVIRONMENT			
OPERATING TEMP./HUMIDITY/NOISE LEVEL	TEMP.: 0~55°C / HUMIDITY: 0~90% (N on-Condensing) / LESS THAN 60 dBA@1 METER		
MANAGEMENT			
USB AND MODBUS RS-232/RS485	SUPPORTS WINDOWS® 2000/2003/XP/VISTA/2008/7/8/10, LINUX AND MAC		
DRY CONTACTS / SNMP (OPTIONAL)	6 OUTPUTS AND 2 INPUTS / POWER MANAGEMENT FROM SNMP MANAGER AND WEB BROWSER (Optional)		

\*Product specifications are subject to change without prior notice.

# **iMAXX**SERIES ONLINE UPS

INTELLIGENT PERFORMANCE LOW FREQUENCY ONLINE UPS

## 40KVA, 360V-384V DC

### 3 PHASE IN ~ 3 PHASE OUT

iMaxx series is based on DSP technology with IGBT based inverter. It consists of built in maintenance bypass and static bypass switch along with the alarm for mute mode and SNMP card as optional addition. It is generator compatible and the required generator capacity required for the stand by source should be 2.5 times of the UPS capacity.

## FEATURES:

- Online Double-Conversion.
- DSP Technology guarantees High Reliability.
- External Backfeed Energy absorb boxes 1200W / 2400W / 3000W (available as Optional)
- Intelligent Battery Management to prolong Battery Life-Cycles.
- Redundant fan design and independent ventilation to enhance durable operation under harsh environment conditions.
- Adjustable Battery Numbers. (29, 30, 31 & 32 numbers).
- Accept dual-mains input.
- Parallel Operation with upto 4 Units with Separate battery bank on each UPS in Parallel.
- Variety of communication options available.
- Reverse Phase Sequence operation without transfer to battery mode & No Neutral operation.
- Transformer inbuilt inside at Output side, also can function as Galvanic Isolation.

\*\* CVCF (Constant Voltage, Constant Frequency) mode available & is configurable.

Online UPS Models  
With inbuilt Isolation Transformers



## BENEFITS:

- Hot standby, Cold start features available
- Inbuilt charger of 20 Amps., Parallel Redundancy & Battery Reverse Protection in all 360V Models.
- Alarm for mute mode and SNMP card (Optional)
- RS-232, USB Port and RS-485 Port available. in 360V models





## TECHNICAL SPECIFICATIONS

MODEL	i-MAXX DSP TECHNOLOGY BASED ONLINE UPS SERIES	
CAPACITY	40KVA/32KW	
PHASE	Three Phase In / Three Phase Out	
TECHNOLOGY	6-Pulse Rectifier with DSP & MCU based Inverter Control with IGBT based Inverter	
INPUT		
Nominal Voltage	3 x 380VAC/400VAC (3Ph+N)	
Acceptable Voltage Range	285VAC ~ 475VAC	
Frequency Range	50Hz/60Hz ±10%	
INVERTER		
Nominal Voltage	3 x 380VAC/400VAC (3Ph+N)	
Wave Form	Pure Sinewave	
Precision	Stationary: ±1% / Transitory: ±5% (load variations 100-0-100%)	
Frequency	50/60 Hz synchronised ±1 % / With mains absent ±0.1 Hz	
Frequency Max. Synchronisation Speed	±1 Hz/s	
Total Harmonic Distortion (THDv)	<2% (Linear Load) ; <5% (Non-linear Load)	
Phase Displacement	120° ±1% (balanced load) ; 120° ±2% (imbalances 50% of the load)	
Dynamic Recovery Time	3 cycles at 90 % of the static value	
Admissible Overload	110% for 10min; 150% for 60sec ; >160% for 200ms	
Admissible Power Factor / Crest Factor	0.6~1 (inductive or capacitive) / 3:1	
Imbalance Output Voltage	@ 100% Unbalanced Load <1%	
Current Limit	High overload, short-circuit: RMS Voltage Limit High Crest-Factor current: Peak Voltage Limit	
STATIC BYPASS		
Type / Voltage / Frequency	Solid State / 3x380VAC/400VAC (3Ph+N) / 50/60 Hz	
Activation Criterion / Transfer Time	Microprocessor Control / 0ms	
Admissible Overload	150% for 1 hour; 180% for 30sec; >200% for 200ms	
Transfer to Bypass	Immediate, for Overloads above 160%	
MAINTENANCE BYPASS		
Available in-built through 3 Pole Board		
Type	Without Interruption	
Overall Efficiency	Line Mode: 91% / Battery Mode: 92%	
BATTERY & CHARGER		
Battery Type / Battery Numbers	SMF / VRLA / Default: 30 No. (Adjustable 29, 30, 31 & 32 Numbers)	
Nominal Battery Voltage	Default: 360V DC (Based on 30 Batteries)	
Charging Method / Charging Voltage	CC / CV , 405V DC (Based on 30 Batteries)	
Charging Current	Default: 5A, Max= 40A	
PHYSICAL		
Dimension LxWxH(mm)/Net Weight(Kgs.)	821 x 432 x 1159 MM / 278 Kgs.	
ENVIRONMENT		
Operating Temp./Humidity/Noise Level	Temp.: 0~55°C / Humidity: 0~90% (non-condensing) / Less than 70dB@1 Meter	
MANAGEMENT		
USB and Modbus RS-232/RS485	Supports Windows® 2000/2003/XP/Vista/2008/7/8/10, Linux and MAC	
Dry Contacts / Optional SNMP	6 outputs and 2 inputs / Power management from SNMP manager and web browser	

\* Product specifications are subject to change without prior notice.

# Super MAX+<sup>+</sup>SERIES

SUPER PERFORMANCE HIGH FREQUENCY ONLINE UPS

## 10KVA, $\pm 120V$ (240VDC)

### 33/31/11(Configurable)

Super Max+ series works on the principle on the principle of 3-level IGBT technology which maximizes the efficiency and the 3-stage extendable charging design optimizes the battery performance. This series is generator compatible and parallel operation up to 4 units is possible. The communication over SNMP, USM and RS-232 is available

## FEATURES:

- True double-conversion.
- UPS Model is Configurable as 3/3, 3/1 & 1/1.
- DSP Technology guarantees high performance.
- 5-inch Color Touch Panel LCD Display for interactive User interface.
- High Surge Protection available at input Stage.
- Unity Output Power Factor.
- Active Power Factor correction at input in all 3-phases.
- 50Hz/60Hz frequency Converter mode.
- ECO mode operation for Energy Saving (ECO).
- EMI Protection available (C3-Level).
- Emergency Power Off function (EPO).
- 3-Level IGBT Inverter topology design maximizes Efficiency.
- Generator compatible.
- SNMP+USB+RS-232 multiple communications.
- 3-Stage Extendable Charging design for optimized Battery Performance.
- Built-In Maintenance Bypass & Static Bypass Switches.
- Dual Input Provision for Hot-Standby feature.
- Optional Parallel Operation.



## BENEFITS:

- Smart 5" Touch Panel LCD Display for Real-time information for measurement & adjustment of maximum parameters
- EMI Protection (C3-Level) available at Input & Output
- Surge Protection available at Input across R/S/T - N & R/S/T/N - G



## TECHNICAL SPECIFICATIONS

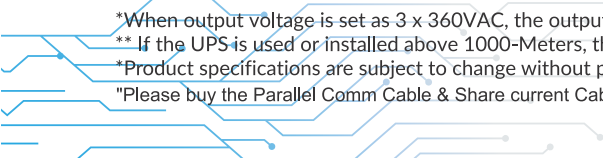
MODEL	SUPER MAX+ 10KVA, 33/31/11 (Configurable), $\pm 120\text{V}(240\text{VDC})$
CAPACITY	10KVA/10KW
DC VOLTAGE	$\pm 120\text{VDC}$ (20-Battery System)
PHASE	Default: 3 PHASE IN ~ 3 PHASE OUT ( Also, Configurable as 3/1 & 1/1)
PARALLEL CAPABILITY	4 (on a Common Battery Bank or Separate Battery Bank)
INPUT	
NOMINAL VOLTAGE	3 x 400 VAC (3Ph+N)
ACCEPTABLE VOLTAGE RANGE	190-520 VAC (3-Phase) @ 50% Load / 305-478 VAC (3-Phase) @ 100% Load
FREQUENCY RANGE	46~54 Hz or 56~64Hz
POWER FACTOR	$\geq 0.99$ @ 100% Load
INPUT CURRENT HARMONIC DISTORTION THD(i)	<4% @ 100% R-Load, <5% @ 100% RCD Load at 230VAC <6% @ 50% R-Load, < 12% @ 50% RCD Load at 230VAC
OUTPUT	
NOMINAL VOLTAGE	3 x 360*/380/400/415 VAC (3Ph+N)
AC VOLTAGE REGULATION	$\pm 1\%$ (Battery Mode)
FREQUENCY RANGE	46~54Hz or 56~64Hz (Synchronized Range)
	50 Hz $\pm 0.1$ Hz or 60 Hz $\pm 0.1$ Hz (Battery Mode)
CURRENT CREST RATIO	3:1 (Max)
HARMONIC DISTORTION	$\leq 2\%$ THD (Linear Load) ; $\leq 5\%$ THD (Non-Linear Load)
OVERLOAD CAPABILITY	AC Mode: 100-110% for 60 min, 110-125% for 10 min, 125%~150% 1min, >150% immediately Battery Mode: 100-110% for 60 min, 110-125% for 10 min, 125%~150% 1min, >150% immediately
EFFICIENCY	
AC MODE	94.5%
ECO MODE	98.5%
BATTERY MODE	93.5%
BATTERY	
BATTERY TYPE	VRLA / LEAD-ACID Type
NUMBER OF BATTERIES	20 Nos.
CHARGE CURRENT (Max.)	12A Maximum, Adjustable = 1A/2A/3A/4A/5A/6A/7A/8A/9A/10A/11A/12A, Default Setting = 4A
CHARGING VOLTAGE	+/-13.65V*N (N = 10)
DISPLAY/METERING	
5-INCH TOUCH PANEL COLORED LCD DISPLAY	UPS Status, Load Percentage, Load Amperes on each Phase, Output VA & Output Wattage per Phase, Battery level (Charging Ampere & Discharging Ampere), Input/Output Voltage (Phase to Neutral & Phase to Phase Voltage information), Input/Output Frequency, Input Line Current per Phase, Input VA & Input Wattage Per Phase, Temperature information and Data Log Events.
PHYSICAL	
DIMENSIONS PRODUCT(DxWxH)	630x250x750 (in mm)
NET WEIGHT PRODUCT(KGS.)	28 Kgs.
ENVIRONMENT	
OPERATING HUMIDITY / TEMP.	<95% and Non-Condensing / 0-40°C
OPERATIONAL ALTITUDE**	< 1000 M
NOISE LEVEL	Less than 55dB @ 1 Meter
IP RATING	IP-20
MANAGEMENT/COMMUNICATION	
SMART RS-232 / USB	Supports Windows® 2000/2003/XP/Vista/2008/7/8, Linux and MAC
OPTIONAL SNMP FOR REMOTE MONITORING	Power Management from SNMP Manager and Web Browser

\*When output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.

\*\* If the UPS is used or installed above 1000-Meters, then the Output Power shall get derated to 1% per 100-meter.

\*Product specifications are subject to change without prior notice.

"Please buy the Parallel Comm Cable & Share current Cable separately for Parallel UPS Option"



# Super MAX+<sup>+</sup>SERIES

SUPER PERFORMANCE HIGH FREQUENCY ONLINE UPS

## 20KVA

### 33/31/11(Configurable)

Super Max+ series works on the principle on the principle of 3-level IGBT technology which maximizes the efficiency and the 3-stage extendable charging design optimizes the battery performance. This series is generator compatible and parallel operation up to 4 units is possible. The communication over SNMP, USM and RS-232 is available

## FEATURES:

- True double-conversion.
- UPS Model is Configurable as 3/3, 3/1 & 1/1.
- DSP Technology guarantees high performance.
- 5-inch Color Touch Panel LCD Display for interactive User interface.
- High Surge Protection available at input Stage.
- Unity Output Power Factor.
- Active Power Factor correction at input in all 3-phases.
- 50Hz/60Hz frequency Converter mode.
- ECO mode operation for Energy Saving (ECO).
- EMI Protection available (C3-Level).
- Emergency Power Off function (EP0).
- 3-Level IGBT Inverter topology design maximizes Efficiency.
- Generator compatible.
- SNMP+USB+RS-232 multiple communications.
- 3-Stage Extendable Charging design for optimized Battery Performance.
- Built-In Maintenance Bypass & Static Bypass Switches.
- Dual Input Provision for Hot-Standby feature.
- Optional Parallel Operation.



## BENEFITS:

- Smart 5" Touch Panel LCD Display for Real-time information for measurement & adjustment of maximum parameters
- EMI Protection (C3-Level) available at Input & Output
- Surge Protection available at Input across R/S/T - N & R/S/T/N - G





## TECHNICAL SPECIFICATIONS

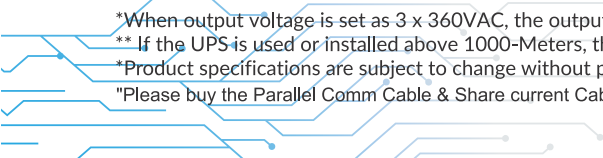
MODEL	SUPERMAX+ 20KVA 33 DUAL INPUT, with 5" Touch Panel
CAPACITY	20KVA/20KW
DC VOLTAGE	± 192 - 240 (32 to 40-Battery System)
PHASE	3 PH IN ~ 3 PH OUT ( Also, Configurable as 3-Ph in / 1-Ph out & 1-Ph in / 1-Ph out)
PARALLEL CAPABILITY	4 (on a Common Battery Bank or Separate Battery Bank)
INPUT	
NOMINAL VOLTAGE	3 x 400 VAC (3Ph+N)
ACCEPTABLE VOLTAGE RANGE	190-520 VAC (3-Phase) @ 50% Load / 305-478 VAC (3-Phase) @ 100% Load
FREQUENCY RANGE	46~54 Hz or 56~64Hz
POWER FACTOR	≥0.99@100%Load
INPUT CURRENT HARMONIC DISTORTION THD(i)	<4% @ 100% R-Load, <5% @ 100% RCD Load at 230VAC <6% @ 50% R-Load, < 12% @ 50% RCD Load at 230VAC
OUTPUT	
NOMINAL VOLTAGE	3 x 360*/380/400/415 VAC (3Ph+N)
AC VOLTAGE REGULATION	±1%(Battery Mode)
FREQUENCY RANGE	46~54Hz or 56~64Hz (Synchronized Range) / 50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz (Battery Mode)
CURRENT CREST RATIO	3:1 (Max)
HARMONIC DISTORTION	≤2%THD (Linear Load) ; ≤ 5% THD (Non-Linear Load)
TRANSFER TIME	AC mode to Battery Mode: Zero / Inverter to Bypass Mode: Zero
OVERLOAD CAPABILITY	AC Mode: 100-110% for 60 min, 110-125% for 10 min, 125%~150% 1min, >150% immediately Battery Mode: 100-110% for 60 min, 110-125% for 10 min, 125%~150% 1min, >150% immediately
EFFICIENCY	
AC MODE	94.5%
ECO MODE	98.5%
BATTERY MODE	93.5%
BATTERY	
BATTERY TYPE	VRLA / LEAD-ACID Type
NUMBER OF BATTERIES	32 to 40 Pcs (by default 32-pieces)
CHARGE CURRENT (Max.)	12A Maximum, Adjustable = 1A/2A/3A/4A/5A/6A/7A/8A/9A/10A/11A/12A, Default Setting = 4A
CHARGING VOLTAGE	+/- 13.65V*N (N = 10)
DISPLAY/METERING	
5-INCH TOUCH PANEL COLORED LCD DISPLAY	UPS Status, Load Percentage, Load Amperes on each Phase, Output VA & Output Wattage per Phase, Battery level (Charging Ampere & Discharging Ampere), Input/Output Voltage (Phase to Neutral & Phase to Phase Voltage information), Input/Output Frequency, Input Line Current per Phase, Input VA & Input Wattage Per Phase, Temperature information and Data Log Events.
PHYSICAL	
DIMENSIONS PRODUCT(DxWxH)	630x250x826 (in mm)
NET WEIGHT PRODUCT(KGS.)	43 Kgs.
ENVIRONMENT	
OPERATING HUMIDITY / TEMP.	<95% and Non-Condensing / 0-40°C
OPERATIONAL ALTITUDE**	< 1000 M
NOISE LEVEL	Less than 60dB @ 1 Meter
IP RATING	IP-20
MANAGEMENT/COMMUNICATION	
SMART RS-232 / USB	Supports Windows® 2000/2003/XP/Vista/2008/7/8, Linux and MAC
OPTIONAL SNMP FOR REMOTE MONITORING	Power Management from SNMP Manager and Web Browser

\*When output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.

\*\* If the UPS is used or installed above 1000-Meters, then the Output Power shall get derated to 1% per 100-meter.

\*Product specifications are subject to change without prior notice.

"Please buy the Parallel Comm Cable & Share current Cable separately for Parallel UPS Option"



# Super MAX+<sup>SERIES</sup>

SUPER PERFORMANCE HIGH FREQUENCY ONLINE UPS

## 30KVA / 40KVA

### 3 PHASE IN ~ 3 PHASE OUT

Super Max+ series works on the principle on the principle of 3-level IGBT technology which maximizes the efficiency and the 3-stage extendable charging design optimizes the battery performance. This series is generator compatible and parallel operation up to 4 units is possible. The communication over SNMP, USM and RS-232 is available

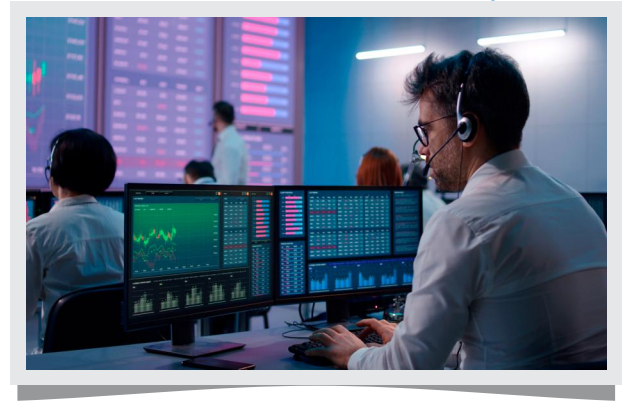
## FEATURES:

- Unity Output Power Factor
- DSP Technology with IGBT based PFC & Inverter section
- 3-Level IGBT Inverter design Maximizes Efficiency
- Active Power Factor Correction in all 3-Phases
- 50Hz/60Hz Frequency Converter mode
- ECO mode operation for Energy Saving (ECO)
- Backfeed Energy Absorption Box (OPTIONAL)
- Generator Compatible
- USB+RS-232 Multiple Communications available, SNMP (Optional)
- 3-Stage extendable Charging Design for Optimized Battery Performance
- Adjustable Battery Numbers (from 32 to 40-Batteries in pairs of 2)
- Built-In Maintenance Bypass & Static Bypass Switches
- Parallel Operation upto 4 Units (Optional). (with Common Battery Bank)
- External Isolation Transformer (Optional)



## BENEFITS:

- Smart 4.3" Touch Panel LCD Display for Real-time information for measurement & adjustment of maximum parameters
- EMI Protection (C3-Level) available at Input & Output
- Surge Protection available at Input across R/S/T - N & R/S/T/N - G



## TECHNICAL SPECIFICATIONS

MODEL	SUPER MAX+ 30KVA & 40KVA HIGH FREQUENCY ONLINE UPS	
CAPACITY	30KVA/30KW	40KVA/40KW
DC VOLTAGE	DEFAULT: ± 192VDC (32-Battery), ADJUSTABLE: ± 240VDC (40-Battery)	
PHASE	3 PHASE IN ~ 3 PHASE OUT	
INPUT		
NOMINAL VOLTAGE	3 x 400 VAC (3Ph+N)	
ACCEPTABLE VOLTAGE RANGE	190-520 VAC (3-Phase) @ 50% Load / 305-478 VAC (3-Phase) @ 100% Load	
FREQUENCY RANGE	46~54 Hz or 56~64Hz	
POWER FACTOR	≥ 0.99 @ 100% load	
INPUT CURRENT HARMONIC DISTORTION THD(i)	<4% @ 100% R-Load, <5% @ 100% RCD Load at 230VAC <6% @ 50% R-Load, < 12% @ 50% RCD Load at 230VAC	
O U T P U T		
NOMINAL VOLTAGE	3 x 360*/380/400/415 VAC (3Ph+N)	
AC VOLTAGE REGULATION	±1%(Battery Mode)	
FREQUENCY RANGE	46~54Hz or 56~64Hz (Synchronized Range)	
	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz (Battery Mode)	
CURRENT CREST RATIO	3:1 (Max)	
HARMONIC DISTORTION	≤ 2 % THD (Linear Load) ; ≤ 5% THD (Non-Linear Load)	
OVERLOAD CAPABILITY	AC Mode: 100-110% for 60 min, 110-125% for 10 min, 125%~150% 1min, >150% immediately Battery Mode: 100-110% for 60 min, 110-125% for 10 min, 125%~150% 1min, >150% immediately	
TRANSFER TIME		
AC MODE TO BATTERY MODE	Zero	
INVERTER TO BYPASS	Zero	
WAVEFORM(BATTERY MODE)	Pure Sine Wave	
EFFICIENCY	AC Mode: 95.5% / ECO Mode: 98.5% / BATTERY Mode: 94.5%	
BATTERY		
BATTERY TYPE	VRLA / LEAD-ACID Type	
NUMBER OF BATTERIES	Default:32 Nos. Adjustable: 40 Nos. (NOTE: Double Bank in Series of (16~20) + (16~20) Battery with Centre-Tapped Configuration)	
CHARGE CURRENT (Max.)	12A Maximum, Adjustable = 1A/2A/3A/4A/5A/6A/7A/8A/9A/10A/11A/12A, Factory Setting = 4A	
CHARGING VOLTAGE	+/- 13.65V*N (N = 16~20)	
INDICATORS		
LCD PANEL	UPS Status, Load Percentage, Load Amperes on each Phase, Output VA & Output Wattage per Phase, Battery level (Charging Ampere & Discharging Ampere), Input/Output Voltage (Phase to Neutral & Phase to Phase Voltage information), Input/Output Frequency, Input Line Current per Phase, Input VA & Input Wattage Per Phase, Temperature information and Data Log Events.	
PHYSICAL		
DIMENSIONS PRODUCT(LxWxH)	815x300x1000( in mm)	
NET WEIGHT PRODUCT(KGS.)	60 Kgs.	61 Kgs.
ENVIRONMENT		
OPERATING HUMIDITY / TEMP.	<95% and Non-Condensing / 0-40°C	
NOISE LEVEL	Less than 65dB @ 1 Meter	
INGRESS PROTECTION (IP Rating)	IP-20	
M A N A G E M E N T		
SMART RS-232 OR USB	Supports Windows® 2000/2003/XP/Vista/2008/7/8, Linux and MAC	
OPTIONAL SNMP	Power Management from SNMP Manager and Web Browser	

\*When output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.  
\*Product specifications are subject to change without prior notice.

# Super MAX+<sup>®</sup> SERIES

SUPER PERFORMANCE HIGH FREQUENCY ONLINE UPS

## 60KVA / 100KVA / 120KVA

### 3 PHASE IN ~ 3 PHASE OUT

Super Max+ series works on the principle of 3-level Inverter technology which maximizes the efficiency by reducing conversion heat-loss and the 3-stage extendable charging design optimizes the battery performance. This series is generator compatible and parallel operation up to 4 units is possible. The communication feature over SNMP, USB and RS-232 is available.

## FEATURES:

- True double-conversion
- DSP technology guarantees high performance
- Output power factor 1
- Active power factor correction in all phases at Input
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving (ECO)
- Emergency power off function (EPO)
- Generator compatible
- SNMP+USB+RS-232 multiple communications
- 3-stage extendable charging design for optimized battery performance
- Adjustable battery numbers 32-40 battery
- Maintenance bypass available
- Parallel can be done with either individual battery bank on each UPS, or with Common Battery Bank (But Parallel & Share current cables are Optional, need to Order separately for Parallel)
- Optional External backfeed Absorb box, for Regenerative type loads like Elevators\Lifts, some CNC Machines etc. The indication of such type of loads on UPS is, it will trip its output detecting UPS internal bus voltage high error\fault.

100\120KVA (Transformer-Less Design)



60KVA (Transformer-Less Design)



## BENEFITS:

- Smart 5" touch Panel LCD display in 60 KVA & 7" in 100\120 KVA for Real-time information for measurement & adjustment of maximum parameters.
- EMI Protection (C3-Level) available at Input & Output.
- $\pm 6$ KVA Surge Protection available at Input across R/S/T - N & R/S/T/N - G
- Swappable Power Modules in 100KVA & 120KVA, with 2 x 50KW Power modules in 100KVA & 2x 60KW Power Modules in 120KVA, with Common Control Boards, for ease of service\ maintenance.
- Dual-Input design for ease of connecting 2 UPS in hot-standby or to provide other secondary source on the bypass input.





## TECHNICAL SPECIFICATIONS

MODEL		SUPERMAX+ 3P/3P 60K~120KVA ONLINE UPS		
CAPACITY		60KL	100KL	120KL
PHASE		3-Phase in / 3-Phase out		
CAPACITY		60KVA/60KW	100KVA/100KW	120KVA/120KW
INPUT				
NOMINAL VOLTAGE		3 x 400 VAC (3Ph+N)		
VOLTAGE RANGE		190-520 VAC (3-phase) @ 50% load 305-478 VAC (3-phase) @ 100% load		
FREQUENCY RANGE		46~54 Hz or 56~64Hz		
POWER FACTOR		≥ 0.99 @ 100% load		
HARMONICS DISTORTION (THDi)		< 4% at full Linear Load		
O U T P U T				
OUTPUT VOLTAGE		3 x 360**/380/400/415 VAC (3Ph+N)		
AC VOLTAGE REGULATION (BATT. MODE)		± 1%		
FREQUENCY RANGE (SYNCHRONIZED RANGE)		46~54Hz or 56~64Hz		
FREQUENCY RANGE (BATT. MODE)		50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz		
CURRENT CREST RATIO		3:1 (max.)		
HARMONIC DISTORTION (THDv) AT OUTPUT		≤ 2 % THD (Linear Load) ≤ 5 % THD (Non-linear Load)		
TRANSFER TIME	AC MODE TO BATTERY MODE	Zero		
	INVERTER TO BYPASS	Zero		
WAVEFORM (BATT. MODE)		PURE SINE WAVE		
OVERLOAD	AC MODE	100-110% for 60 min, 110-125% for 10 min, 126%-150% for 1 min, >150% for 400ms		
	BATTERY MODE	100-110% for 60 min, 110-125% for 10 min, 126%-150% for 1 min, >150% for 400ms		
PARALLEL CAPACITY		up to 4 units in parallel with Either Common battery bank or Separate battery bank		
EFFICIENCY (peak efficiency)				
AC MODE		95.5%		
ECO MODE		98.5%		
BATTERY MODE		94.5%		
BATTERY				
BATTERY TYPE		SMF (VRLA) / LEAD-ACID BATTERIES		
NUMBERS		32~40 pcs (Adjustable)		
CHARGING CURRENT (MAX.)		2A~18A (Adjustable)	2A - 24A (Adjustable)	2A - 36A (Adjustable)
CHARGING VOLTAGE		+/-13.65V*N (N = 16~20)		
INDICATORS				
LCD PANEL (5-INCH TOUCH SCREEN LCD IN 60-80K & 7-INCH IN 100-120KVA)		UPS status, Load percentages & amperes on each phase at output, Output VA & Wattage in each phase, Battery level (Charging ampere & discharging ampere), Input/Output voltage (Phase to Neutral & phase to phase information), Input / output Frequency, Input Line Current per phase, Input VA/ Wattage/ PF per phase, Temperature information, Data Log Events (max 500-events) and Fault conditions		
ALARM				
BATTERY MODE		Sounding every 4 seconds		
LOW BATTERY		Sounding every second		
OVERLOAD		Sounding twice every second		
FAULT		Continuously sounding		
PHYSICAL				
DIMENSION, D X W X H (MM)		815 x 300 x 1000	790 x 360 x 1010	974 x 600 x 1600
NET WEIGHT (KGS)		74	113	250
ENVIRONMENT				
OPERATION TEMPERTURE		0-40°C		
OPERATION HUMIDITY		<95% and non-condersing		
NOISE LEVEL		Less than 70dBA @ 1-meter	Less then 75dBA @ 1-meter	
M A N A G E M E N T				
SMART RS-232/USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC		
POTENTIAL-FREE CONTACT (DRY-CONTACT) PORT		8-Input & 6-Output Dry-Contact port available		
OPTIONAL SNMP		Power management from SNMP manager and web browser		

\*When output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.  
\*Product specifications are subject to change without further notice.

# Super MAX+<sup>SERIES</sup>

SUPER PERFORMANCE HIGH FREQUENCY ONLINE UPS

## 60KVA / 100KVA / 120KVA

### 3 PHASE IN ~ 3 PHASE OUT

Super Max+ series works on the principle of 3-level Inverter technology which maximizes the efficiency by reducing conversion heat-loss and the 3-stage extendable charging design optimizes the battery performance. This series is generator compatible and parallel operation up to 4 units is possible. The communication feature over SNMP, USB and RS-232 is available.

## FEATURES:

- True double-conversion
- DSP technology guarantees high performance
- Output power factor 1
- Active power factor correction in all phases at Input
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving (ECO)
- Emergency power off function (EPO)
- Generator compatible
- SNMP+USB+RS-232 multiple communications
- 3-stage extendable charging design for optimized battery performance
- Adjustable battery numbers 32-40 battery
- Maintenance bypass available
- Parallel can be done with either individual battery bank on each UPS, or with Common Battery Bank (But Parallel & Share current cables are Optional, need to Order separately for Parallel)
- Optional External backfeed Absorb box, for Regenerative type loads like Elevators\Lifts, some CNC Machines etc. The indication of such type of loads on UPS is, it will trip its output detecting UPS internal bus voltage high error\fault.



## BENEFITS:

- Smart 5" touch Panel LCD display in 60 KVA & 7" in 100\120 KVA for Real-time information for measurement & adjustment of maximum parameters.
- EMI Protection (C3-Level) available at Input & Output.
- $\pm 6$ KVA Surge Protection available at Input across R/S/T - N & R/S/T/N - G
- Swappable Power Modules in 100KVA & 120KVA, with 2 x 50KW Power modules in 100KVA & 2x 60KW Power Modules in 120KVA, with Common Control Boards, for ease of service\ maintenance.
- Dual-Input design for ease of connecting 2 UPS in hot-standby or to provide other secondary source on the bypass input.



## TECHNICAL SPECIFICATIONS

MODEL		SUPERMAX+ 3P/3P 60K~120K ONLINE UPS WITH ISO TX AT OUTPUT		
CAPACITY		60KL	100KL	120KL
PHASE				
CAPACITY	Isolation Trx Inbuilt	External Isolation Transformer Optional		
	60KVA/60KW	100KVA/100KW	120KVA/120KW	
INPUT				
NOMINAL VOLTAGE		3 x 400 VAC (3Ph+N)		
VOLTAGE RANGE		190-520 VAC (3-phase) @ 50% load 305-478 VAC (3-phase) @ 100% load		
FREQUENCY RANGE		46~54 Hz or 56~64Hz		
POWER FACTOR		≥ 0.99 @ 100% load		
O U T P U T				
OUTPUT VOLTAGE		3 x 360**/380/400/415 VAC (3Ph+N)		
AC VOLTAGE REGULATION (BATT. MODE)		± 1%		
FREQUENCY RANGE (SYNCHRONIZED RANGE)		46~54Hz or 56~64Hz		
FREQUENCY RANGE (BATT. MODE)		50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz		
CURRENT CREST RATIO		2.6:1 (max.)	3:1 (max.)	
HARMONIC DISTORTION		≤ 2 % THD (Linear Load) ≤ 10 % THD (Non-linear Load)	≤ 2 % THD (Linear Load) ≤ 10 % THD (Non-linear Load)	
TRANSFER TIME	AC MODE TO BATTERY MODE	Zero		
	INVERTER TO BYPASS	Zero		
WAVEFORM (BATT. MODE)		PURE SINE WAVE		
OVERLOAD	AC MODE	100-110% for 60 min, 110-125% for 10 min, 126%-150% for 1 min, >150% for 400ms		
	BATTERY MODE	100-110% for 60 min, 110-125% for 10 min, 126%-150% for 1 min, >150% for 400ms		
PARALLEL CAPACITY		Max upto 4-Units, with either Individual battery bank OR Common battery bank		
EFFICIENCY				
AC MODE		87.5%	87.5%	
ECO MODE		93.5%	93.5%	
BATTERY MODE		86.5%	86.5%	
BATTERY				
BATTERY TYPE		Depending on the capacity of external batteries	SMF (VRLA) / LEAD-ACID BATTERIES	
NUMBERS		32~40 pcs (Adjustable)		
CHARGING CURRENT (MAX.)		2A~18A (Adjustable)	2A - 24A (Adjustable)	2A - 36A (Adjustable)
CHARGING VOLTAGE		+/-13.65V*N (N = 16~20)		
INDICATORS				
LCD PANEL (5-INCH TOUCH SCREEN LCD)		UPS status, Load percentages & amperes on each phase at output, Output VA & Wattage in each phase, Battery level (Charging ampere & discharging ampere), Input/Output voltage (Phase to Neutral & phase to phase information), Input / output Frequency, Input Line Current per phase, Input VA/ Wattage/ PF per phase, Temperature information, Data Log Events (max 500-events) and Fault conditions		
ALARM				
BATTERY MODE		Sounding every 4 seconds		
LOW BATTERY		Sounding every second		
OVERLOAD		Sounding twice every second		
FAULT		Continuously sounding		
PHYSICAL				
DIMENSION, D X W X H (MM)		790 x 720 x 1060	974 x 600 x 1600	
NET WEIGHT (KGS)		440	250	
ENVIRONMENT				
OPERATION TEMPERTURE		0-40°C		
OPERATION HUMIDITY		<95% and non-condensing		
NOISE LEVEL		Less than 75dB @ 1 Meter		
MANAGEMENT				
SMART RS-232/USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC		
OPTIONAL SNMP		Power management from SNMP manager and web browser		

\*When output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.  
\*Product specifications are subject to change without further notice.

# SuperMAX+ II

SUPER PERFORMANCE HIGH FREQUENCY ONLINE UPS

## 80KVA

### 3 PHASE IN ~ 3 PHASE OUT

Super Max+II series works on the principle of 3-level Inverter technology which maximizes the efficiency by reducing conversion heat-loss and the 3-stage extendable charging design optimizes the battery performance. This series is generator compatible and parallel operation up to 4 units is possible. The communication feature over SNMP, USB and RS-232 is available.



## FEATURES:

- Pluggable power module design with front access to decrease MTTR, parallel redundancy capability for power guarantee.
- Ease of maintenance at User Site because of PlugGable Modular design.
- Parallel operation with common battery bank.
- Dual-mains inputs for hot-Standby operation.
- Built-in 4 switches / breakers including mains input, bypass input, output and maintenance bypass switch.
- Flexible battery configuration and adjustable charging current.
- Output power factor 1.0.
- Active power factor correction in all phases.
- Built-in 7" touch LCD for comprehensive information.
- Emergency power off function (EPO).
- Generator compatible.
- 50Hz/60Hz frequency converter mode.
- Galvanic Isolation transformer Optional as External unit.







## TECHNICAL SPECIFICATIONS

UPS MODEL	SUPERMAX+ II 80KVA 33
PHASE	3-phase in/3-phase out
CABINET CAPACITY	80KVA/80KW
BATTERY TYPE	External SMF or Lead-Acid Batteries
PARALLEL CAPABILITY	Upto 4-Units
INPUT	
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)
Voltage Range	110-300 VAC @ 50% load; 190-276 VAC @100% load
Nominal Frequency	50/60Hz (Auto sensing)
Frequency Range	40Hz ~70Hz
Power Factor	≥ 0.99 @ 100% load
Harmonic Distortion (THDi)	<4% @ 100% load
OUTPUT	
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)
Voltage Reg. (Steady state)	≤± 1% Typical (balanced load) / ≤± 2% Typical (unbalanced load)
Nominal Frequency	50/60Hz
Freq. Range (Sync. range)	46Hz ~ 54Hz or 56Hz ~ 64Hz
Overload Capability	≤ 110% for 1 hour, 111% ~ 125% for 10 mins, 126%~150% for 1 min and >150% for 200ms
Harmonic Distortion	≤2% THD (Linear Load) ; ≤4% THD (Non-linear Load)
EFFICIENCY	
AC Mode	96.0%
ECO Mode	99.0%
Battery Mode	95.5%
BYPASS	
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)
Voltage Range	-30% ~ +20%
Frequency Range	46Hz ~ 54Hz or 56Hz ~ 64Hz
Overload Capability	≤ 110% for 1 hour, 111% ~ 125% for 10 mins, 126%~150% for 1 min and >150% for 200ms
BATTERY / CHARGER	
Nominal Voltage	+/- 192V ~ +/- 240V (Selectable)
Maximum Voltage	+/- 240V (12V x 40 Pcs)
Minimum Voltage	+/- 192V (12V x 32 Pcs)
Floating Charge Voltage	2.28V / Cell (2.25 ~2.33 Selectable)
Boost Charging Voltage	2.35V/Cell
Temperature Compensation	Yes
Maximum Charging Current	18A (Adjustable)
INDICATORS	
LCD Panel (7-inch touch Panel Coloured LCD)	UPS Status, Load percentage, Load amperes on each phase, Output VA, Watt & Power factor on each Phase, Battery level (Charging Amp & Discharging Amp), Input/Output Voltage (Phase to neutral Voltage information), Input/Output Frequency, Input Line Current per Phase, Input VA & Watt per phase & Data log events.
PHYSICAL	
IP Protection	IP 20
Dimension (D x W x H) mm	1000 x 430 x 1200
Net Weight (kgs)	125
ENVIRONMENT	
Operation Temperature	0 ~ 40°C
Relative Humidity	0 ~ 95% non-condensing
Altitude ***	<1000m for Nominal power
MANAGEMENT	
RS-232/USB	Supports Windows family, Linux and MAC
Optional SNMP	Power management from SNMP manager and web browser
STANDARD	
Safety	IEC/EN 62040-1
EMC	IEC/EN 62040-2 Category C3

\*When output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.

\*Product specifications are subject to change without further notice.

# MAX LiFe SERIES

ONLINE UPS FOR LITHIUM-ION BATTERY APPLICATIONS FOR LONGER BACKUP

1KVA / 2KVA / 3KVA / 5KVA

Online UPS Models  
For Lithium-ion Battery Applications

## FEATURES(1KVA & 2KVA):

- Microprocessor Control optimizes Reliability
- Comprehensive Display allows easy monitoring and access of UPS status
- Emergency Power Off (EPO) function
- ECO mode and High Efficiency Power Conversion for Energy Saving
- Advanced Battery Management (ABM)
- High Power Factor charger upto 1000W capacity with very Low Ripple Current when Charging Battery
- Lithium-ion Battery Compatible
- Low Input THDi (5%) to reduce power system pollution

## FEATURES(3KVA & 5KVA):

- Sine-wave Output
- Unity Power Factor
- Configurable Charging Current via LCD Settings
- Cold Start Capability
- Very Powerful AC Charger at 60A
- Optional Parallel Operation up to 9 units for Single Phase and Three Phase Applications
- Common 48V DC Battery Pack for the Parallel System
- Full Bridge inverter design to support half-wave load and unbalanced load

## BENEFITS:

- True double-conversion
- Generator Compatible
- Wide Input Range
- Overload & Short-circuit Protection





## TECHNICAL SPECIFICATIONS

MODEL		MAX Life ONLINE UPS 1KVA	MAX Life ONLINE UPS 2KVA	MAX Life ONLINE UPS 3KVA	MAX Life ONLINE UPS 5KVA
INPUT					
CAPACITY		1000VA / 900W	2000VA / 1800W	3000VA / 3000W	5000VA / 5000W
VOLTAGE RANGE		110-280 VAC@50%Load ; 176-280 VAC @100% Load			
PHASE		Single Phase with Ground			
FREQUENCY RANGE		40Hz ~ 70Hz	46Hz ~ 54Hz		56Hz ~ 64Hz
POWER FACTOR		≥ 0.99		≥ 0.98 @ Nominal Voltage (100% Load)	
INPUT CURRENT HARMONIC DISTORTION THD(i)		≤ 5% @ 205-245VAC		≤ 8%	
OUTPUT					
NOMINAL VOLTAGE		200*/208*/220/230/240 VAC		220/230/240 VAC	
AC VOLTAGE REGULATION		±1% (Battery Mode)			
FREQUENCY RANGE		Synchronized Range: 50Hz System: 47~53Hz / 60Hz System: 57~63Hz		Synchronized Mode: 46Hz ~ 54Hz or 56Hz ~ 64Hz	
		Battery Mode: 50Hz±0.1% or 60 Hz±0.1%		Battery Mode: 50Hz±0.1Hz or 60Hz±0.1Hz	
CURRENT CREST RATIO		3:1(Max)			
HARMONIC DISTORTION		≤ 2% THD (Linear Load) ; ≤ 4% THD (Non-Linear Load)		≤ 3% THD (Linear Load) ; ≤ 5% THD (Non-Linear Load)	
TRANSFER TIME	AC to DC	Zero			
	Inverter to Bypass	4ms (Typical)			
WAVE FORM (Battery Mode)		Pure Sine Wave		Pure Sine Wave on AC Input Mode and 54 VDC on Battery Mode	
EFFICIENCY					
ON FULL CHARGED BATTERY		ECO Mode: ≥96% / AC Mode: ≥89%	ECO Mode: ≥96% / AC Mode: ≥90%	LINE Mode: 95% / ECO Mode: 99.5% / BATTERY Mode: 92.0%	
BATTERY					
BATT. VOLTAGE		48V			
CHARGING CURRENT (MAX.)		20A max, Current Setting through LCD panel (Adjustable: 2/4/8/10/12/14/16/20A)		60 A (Configurable 10A / 20A / 30A / 40A / 50A / 60A from LCD)	
INDICATORS					
LCD PANEL		Load Level, Battery Level, AC Mode, Battery Mode, Bypass Mode and Fault Indicator Via LCD			
PHYSICAL					
DIMENSIONS PRODUCT(DxWxH)		397x145x220( in mm)	530x145x220( in mm)	465x190x318( in mm)	
NET WEIGHT PRODUCT(KGS.)		6.4Kgs.	8.6Kgs.	15.5Kgs.	
ENVIRONMENT					
OPERATING HUMIDITY / TEMP.		20-95% RH and Non-Condensing / 0-45°C		0 to 95% Relative Humidity (Non-Condensing) / 0-50°C	
MANAGEMENT					
COMMUNICATION INTERFACE		RS-232 and USB, SNMP Card / MODBUS Card (Optional)			

\*Derate capacity to 80% when the output voltage is adjusted to 200VAC/208VAC.

\*Product specifications are subject to change without prior notice.

\*By Default, This Product is Compatible with Lithium-Ion Battery. Need to Update Firmware if in case Usage is with Lead-Acid Battery Application.

\*Product specifications are subject to change without prior notice.



# TECHNOLOGY THAT PREVENTS **THE SUDDEN SHUTDOWN**







Microtek has a wide range of Line Interactive UPS from 650VA to 2000VA that provides battery back up and surge protection for Desktop computers, Workstations, Networking devices, Home entertainment systems and various other similar applications. Microtek is the only brand that has made in India Line Interactive UPS.



# LINE INTERACTIVE UPS Legend ups 650



## TOTAL PROTECTION FOR YOUR COMPUTERS

Legend 650 is a micro processor based Line Interactive UPS that gives Optimum Reliability. It has Boost and Buck AVR for ultimate voltage stabilization which ensures protection against overload, discharge and overcharge.



## FEATURES

- Auto restart while AC is recovering
- Generator Compatibility Option
- Longer Battery Life
- Top Grade Micro Processor based Line Interactive UPS - Optimum Reliability
- Boost and Buck AVR - Ultimate Voltage Stabilization
- Protection against Overload, Discharge/Overcharge
- Wide INPUT Range 140V~300V AC
- Auto Restart while AC is recovering
- Generator Compatibility Option
- Much Longer Battery Life

## BENEFITS:

- Easy off-mode charging
- Cold start function



## TECHNICAL SPECIFICATIONS

MODEL	UPS LEGEND 650	
CAPACITY	650VA / 360W	
INPUT	Voltage Range	140V~300V $\pm$ 5VAC
	Frequency	50Hz $\pm$ 10%
OUTPUT	Voltage (Batt. Mode)	230V AC Nominal
	Frequency (Batt. Mode)	50Hz $\pm$ 1Hz
	Waveform (Batt. Mode)	Modified Sinewave
	Transfer Time	Typical 4~8ms
	Rating	650VA (Max.)
BATTERY	Battery Type	SMF (Sealed Maintenance Free)
	DC V / AH / Nos.	12V / 7AH x 1 Battery
	Recharge Time (Typical)	6 Hrs to 90% capacity after complete discharge
ENVIRONMENT	0 $^{\circ}$ ~40 $^{\circ}$ C, 0~90% RH Non-Condensing Noise Level <40dB	
PHYSICAL	Dimensions (mm)	281(L) x 100(W) x 143(H)
	Weight (Kgs.)	Net: 4.16Kgs. Gross: 4.46Kgs.
TECHNICAL FEATURES	Auto Switch Off in Battery Low is In-Built. Off mode Charging & Overload Protection are In-Built.	

\* Specifications are subject to change without notice.



OTHER SENSITIVE ELECTRONICS

# LINE INTERACTIVE UPS Legend ups 750M



## UNIQUE MODEL -

### FOR LONG BACKUP TO MICRO LOADS

Like Security & Surveillance CCTV, Broadcast Studio, Medical Equipments, Wi-Fi Modems etc...

Legend 750M is based on micro processor load sensing system to sense micro power consumption devices and provides back up for Micro Load . It is also suitable for computer and other IT loads with normal back up.



Security  
& Surveillance



Medical  
Equipments



Broadcast  
Studio



WIFI  
Modems

## FEATURES

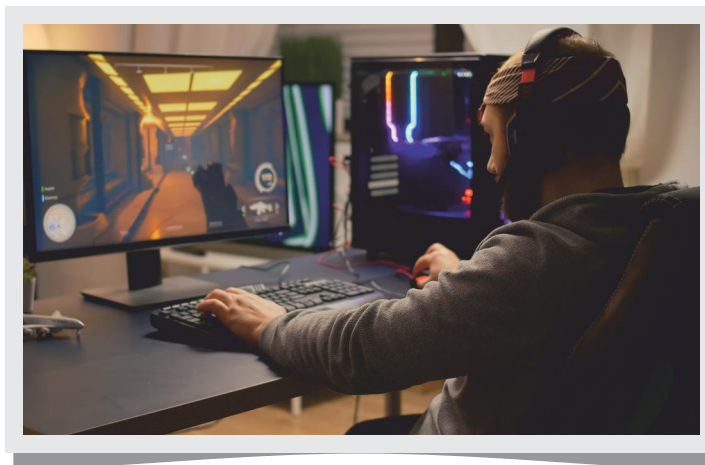
- Input range: 142V~282 V AC
- Auto re start while AC is recovering
- Micro Processor based Load Sensing System, to sense Micro Power Consumption Devices
- Also suitable for Computer & other IT loads with normal Backup
- Wide INPUT Range 142V~282V AC
- Auto Restart while AC is recovering
- Specially made Heavy Duty UPS for Indian Power Conditions
- Generator / Inverter Compatible



## BENEFITS:

- Specially designed for Micro Loads





## TECHNICAL SPECIFICATIONS

MODEL	UPS LEGEND 750M	
CAPACITY	650VA / 360W	
INPUT	Voltage Range	142V~282V AC
	Frequency	50Hz $\pm$ 10%
OUTPUT	Voltage (Batt. Mode)	230V AC Nominal
	Frequency (Batt. Mode)	50Hz $\pm$ 1Hz
	Waveform (Batt. Mode)	Modified Sinewave
	Transfer Time	Typical 4~8ms
	Rating	650VA (Max.)
BATTERY	Battery Type	SMF (Sealed Maintenance Free)
	DC V / AH / Nos.	12V / 7AH x 1 Battery
	Recharge Time (Typ.)	6 Hrs to 90% after complete discharge
ENVIRONMENT:	0°~40°C, 0~90% RH Non-Condensing Noise Level <40dB	
PHYSICAL	Dimensions (mm)	281(L) x 100(W) x 143(H)
	Weight (Kgs.)	Net: 4.16Kgs. Gross: 4.46Kgs.
TECHNICAL FEATURES	Auto Switch Off in Battery Low is In-Built. Off mode Charging & Overload Protection are In-Built.	

\* Specifications are subject to change without notice.



# LINE INTERACTIVE UPS Legend ups 1000



## TOTAL PROTECTION FOR YOUR COMPUTERS

Legend 1000 is a micro processor based Line Interactive UPS that gives Optimum Reliability. It has Boost and Buck AVR for ultimate voltage stabilization which ensures protection against overload, discharge and overcharge.

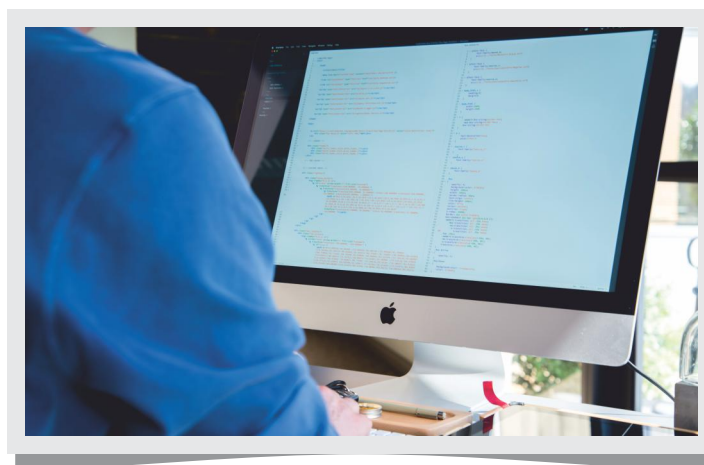


## FEATURES

- Wide Input Range: 140~300 V AC
- Auto restart while Ac is recovering
- Generator compatibility option
- Top Grade Micro Processor based Line Interactive UPS - Optimum Reliability
- Boost and Buck AVR - Ultimate Voltage Stabilization
- Protection against Overload, Discharge/ Overcharge
- Wide INPUT Range 140V~300V AC
- Auto Restart while AC is recovering
- Generator Compatibility Option

## BENEFITS:

- Much Longer Battery Life
- Easy off-Mode Charging
- Cold Start Function

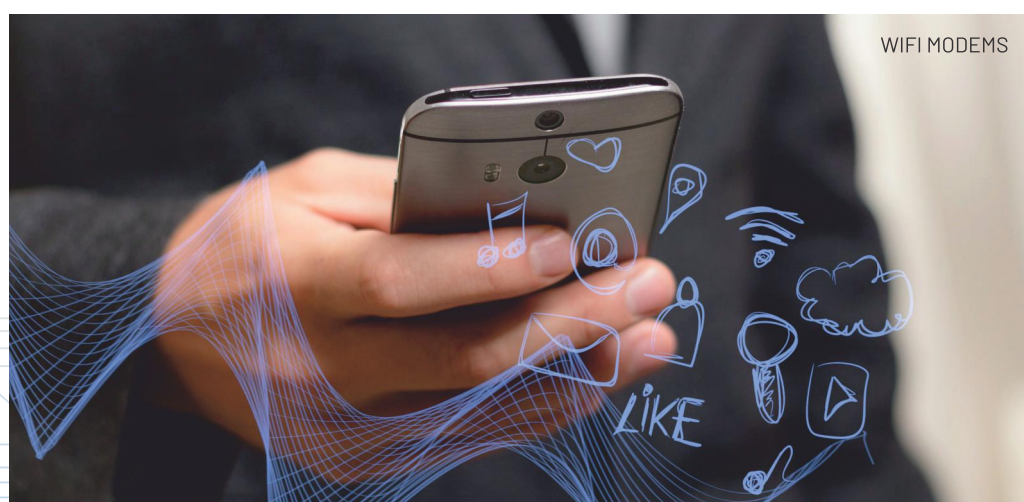


## TECHNICAL SPECIFICATIONS

MODEL	UPS LEGEND 1000	
CAPACITY	1000VA / 600W	
INPUT	Voltage Range	140V~300V AC
	Frequency	50Hz $\pm$ 10%
OUTPUT	Voltage (Batt. Mode)	230V AC Nominal
	Frequency (Batt. Mode)	50Hz $\pm$ 1Hz
	Waveform (Batt. Mode)	Modified Sinewave
	Transfer Time	Typical 4~8ms
	Rating	1000VA (Max.)
BATTERY	Battery Type	SMF (Sealed Maintenance Free)
	DC V / AH / Nos.	12V / 7AH x 2 Batteries
	Recharge Time (Typ.)	6 Hrs to 90% after complete discharge
ENVIRONMENT:	0°~40°C, 0~90% RH Non-Condensing Noise Level <40dB	
PHYSICAL	Dimensions (mm)	315(L) x 130(W) x 183(H)
	Weight (Kgs.)	Net: 8.02Kgs. Gross: 8.60Kgs.
TECHNICAL FEATURES	Auto Switch Off in Battery Low is In-Built. Off Mode Charging & Overload Protection are In-Built.	

\* Above specifications are measured under computer load.

\* Specifications are subject to change without notice.



WIFI MODEMS

# LINE INTERACTIVE UPS Legend ups 1600



## TOTAL PROTECTION FOR YOUR COMPUTERS

Legend 1600 is a top grade micro processor based Line Interactive UPS that gives Optimum Reliability. It has Boost and Buck AVR for ultimate voltage stabilization which ensures protection against overload, discharge and overcharge.

## FEATURES

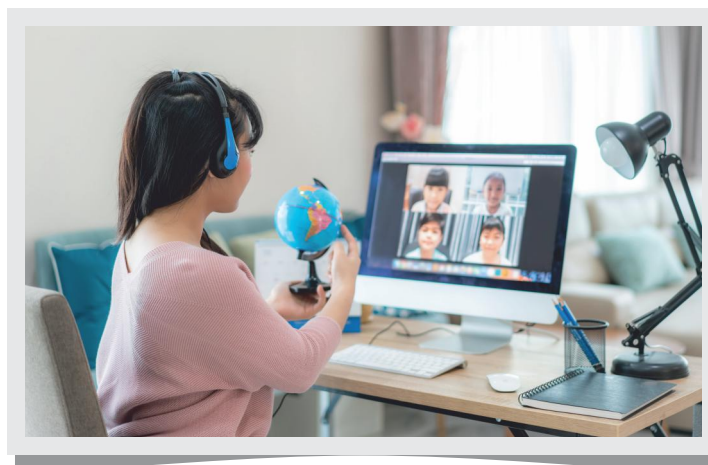
- Wide Input Range: 140V~300 V AC
- Auto restart while AC is recovering
- Generator Compatibility Option
- In-built 12V/9AH x 2 Batteries
- Top Grade Micro Processor based Line Interactive UPS - Optimum Reliability.
- Boost and Buck AVR - Ultimate Voltage Stabilization.
- Protection against Overload, Discharge/ Overcharge.
- Wide INPUT Range 140V~300V AC.
- Auto Restart while AC is recovering.
- Generator Compatibility Option



## BENEFITS:

- Much Longer Battery Life
- Easy off mode charging
- Cold start function





## TECHNICAL SPECIFICATIONS

MODEL	UPS LEGEND 1600	
CAPACITY	1600VA / 960W	
INPUT	Voltage Range	140V~300V AC
	Frequency	50Hz $\pm$ 10%
OUTPUT	Voltage (Batt. Mode)	230V AC Nominal
	Frequency (Batt. Mode)	50Hz $\pm$ 1Hz
	Waveform (Batt. Mode)	Modified Sinewave
	Transfer Time	Typical 4~8ms
	Rating	1600VA (Max.)
BATTERY	Battery Type	SMF (Sealed Maintenance Free)
	DC V / AH / Nos.	12V / 9AH x 2 Batteries
	Recharge Time (Typ.)	6 Hrs to 90% after complete discharge
ENVIRONMENT:	0 $^{\circ}$ ~40 $^{\circ}$ C, 0~90% RH Non-Condensing Noise Level <45dB	
PHYSICAL	Dimensions (mm)	315(L) x 130(W) x 183(H)
	Weight (Kgs.)	Net: 10.25Kgs. Gross: 10.81Kgs.
TECHNICAL FEATURES	Auto Switch Off in Battery Low is In-Built. Off Mode Charging & Overload Protection are In-Built.	

\* Above specifications are measured under computer load.

\* Specifications are subject to change without notice.





## 1000VA / 2000VA

### LONG BACKUP EXTERNAL BATTERY UPS

Desire Pro+ consists of an excellent microprocessor control that guarantees High Reliability, Boost and Buck AVR for voltage stabilization with selectable charging current.



## FEATURES

- Excellent Microprocessor Control Guarantees High Reliability
- Boost and Buck AVR for Voltage Stabilization
- 20Amp Charger
- Selectable Charging Current
- Auto Restart while AC is recovering
- Simulated Sine wave
- Off-mode Charging
- Cold Start function

## BENEFITS:

For Long Backup Solutions and High Reliability



## TECHNICAL SPECIFICATIONS

MODEL	UPS DESIRE PRO+ 1000		UPS DESIRE PRO+ 2000	
CAPACITY	1000VA / 600W		2000VA / 1200W	
INPUT				
Voltage	220V AC / 230V AC			
Voltage Range	140 ~ 300V AC			
Frequency Range	50Hz			
OUTPUT				
AC Voltage Regulation (Battery Mode)	220/230VAC ±10%			
Frequency Range (Battery Mode)	50 Hz ±1 Hz			
Transfer Time	Typical 4-8 ms			
Waveform (Battery Mode)	Simulated Sine Wave			
EXTERNAL BATTERY				
Battery Voltage	12V DC	24V DC		
Floating Charge Voltage	13.7V DC ± 2%	27.4V DC ± 2%		
Max. Charge Current	DEFAULT: 10A, (5A/10A/15A/20A Adjustable with Jumper Settings)			
INDICATORS				
AC Mode	Green Lighting			
Battery Mode	Yellow Flashing			
Fault	Red Lighting			
ALARMS				
Low Battery	Sounding every Second			
Overload	Sounding every 0.5 Second			
Battery Replacement Alarm	Sounding every 2 Seconds			
Fault	Continuously sounding			
PROTECTION				
Full Protection	Overload, Discharge and Overcharge Protection			
PHYSICAL				
Dimension, D x W x H (mm)	395 x 145 x 220			
OPERATING ENVIRONMENT				
Humidity / Noise Level	0-90 % RH @ 0- 40°C (non-condensing) / Less than 40dB			

\* Product specifications are subject to change without prior notice.

# LAN Cables

## Complete Networking Solution

MICROTEK Networking Cables allow devices to access high-speed networks / Internet data. The Cables are verified to the performance requirements of ISO/IEC 11801, TIA/EIA 568C.2 . Unshielded twisted pair (UTP) cable is used in many homes and business-based Ethernet networks. It has four pairs of wires that are housed inside the Lining of the cable. Microtek LAN Cables are designed to pass Fluke Test for Ethernet Cables. Each pair is twisted to prevent interference from other devices on the network.

### FEATURES

- Exceptional material properties and cable design
- High ACR values-providing low BER(Bit Error-Rate) Exceeds cat 6 Best transmission performance.
- Extremely high pair-balance-providing excellent EMC (Electromagnetic compatibility)
- Maximum noise immunity. ISO/IEC - 11801 Class E. UL-94V0 rated Plastics.
- Longer Cable segment Length. High speed data access
- Total end-to-end horizontal cabling solution
- Backwards compatible with Microtek Category 6 systems ensuring support for legacy applications
- Unshielded Twisted Cable
- Cable supports frequencies up to 250 MHZ.
- Cable supports data transfer speeds up to 1000Mbps-Gigabit
- Available in 100Mtr coil/305Mtr Box packaging.

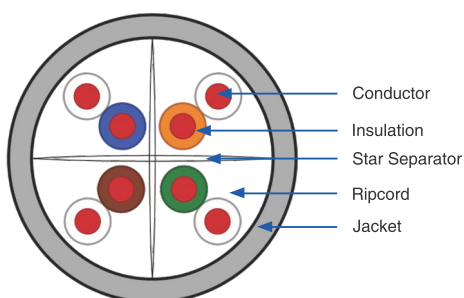
#### Colour Code

Pair 1 - White-Blue and Blue

Pair 2 - White-Orange and Orange

Pair 3 - White-Green and Green

Pair 4 - White-Brown and Brown



#### Electrical characteristics

Characteristic Impedance	100±15 :@ 1-250MHz
DC Resistance	72:/km (max)
Voltage Rating	72 Vdc max
Dielectric Strength	1500V/1minute min MHz
Insulation Resistance	500M:/km (min)@500Vdc
Nominal Velocity of Propagation (%)	69%
Conductor Resistance	93.8ohm/1000mtr@20°C
Mutual Capacitance	5.6nF/100m nominal
Resistance Unbalance	5% Max
Capacitance Unbalance	330pF/100m
Delay Skew	< 45nS/100m
Bending Radius	< 4 X Cable Diameter at -20°C ± 1°C
Operating Voltage	72V
Dielectric Strength	1.0KV dc or 0.75KV ac for 1min.

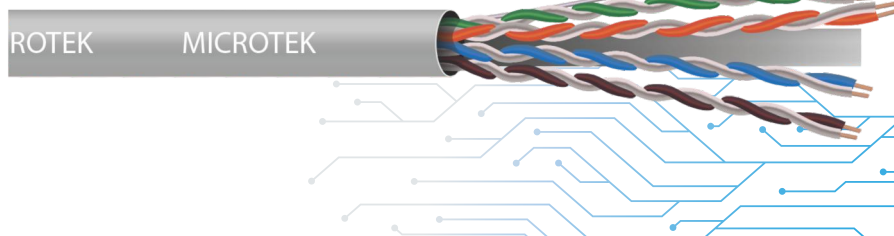
#### Construction

Conductor Metal	24 AWG Solid Bare Copper
Insulation	High Density Polyethylene
Pairs	2 Insulated conductors twisted together
Sheath	PVC
Cable Diameter	5.60 ± 0.3mm
Printing	Each meter printed with sequential Length Counter
Standard Colour	Grey

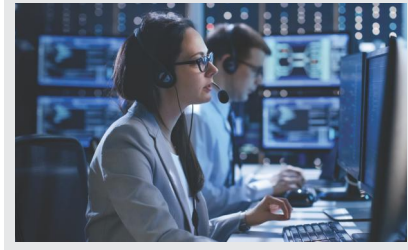
#### Mechanical and Thermal Properties

Outer Diameter	Nominal Diameter 5.60 ± 0.3 mm 4 twisted pair
Pulling Force	11.5 kg
Operating Tem. Ran.	-20°C to + 60°C
Storage Tem. Ran.	0°C to + 60°C

#### Cross Section View

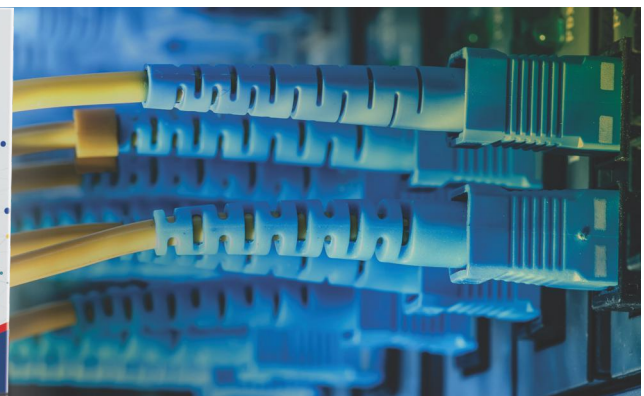






## CAT 6 LAN Cable

Transmission Parameter as per 100 Mtr.						
Frequency	Insertion Loss (DB/100M)	NEXT (DB)	PSNEXT (DB)	ACRF (DB@100M)min.	PS.ACRF (DB@100M)min.	Return Loss (DB/100M)
1	2.1	65.0	62.0	63.3	60.3	19.0
4	4.0	63.0	60.5	51.2	48.2	19.0
8	5.7	58.2	55.6	45.2	42.2	19.0
10	6.3	56.6	54.0	43.3	40.3	19.0
16	8.0	53.2	50.6	39.2	36.2	18.0
20	9.0	51.6	49.0	37.2	34.2	17.5
25	10.1	50.0	47.3	35.3	32.3	17.0
31.25	11.4	48.4	45.7	33.4	30.4	16.5
62.50	16.5	43.4	40.6	27.3	24.3	14.0
100	21.3	39.9	37.1	23.3	20.3	12.0
200	31.5	34.8	31.9	17.2	14.2	9.0
250	35.9	33.1	30.2	15.3	12.3	8.0



# CCTV Cables

MICROTEK CCTV Cables are offered in two types namely 4+1 CCTV Cable and 3+1 CCTV Cable. Coaxial cables form the carrier for video signal and the other '3 cores' or '4 cores' form the carriers for power. Co-Axial cables are designed to transmit the complete video frequency range with minimum distortion or attenuation, making them an excellent choice for CCTV.

Microtek CCTV cables are designed to optimize the quality of video signals, which are transmitted through the Coaxial cable in the CCTV.

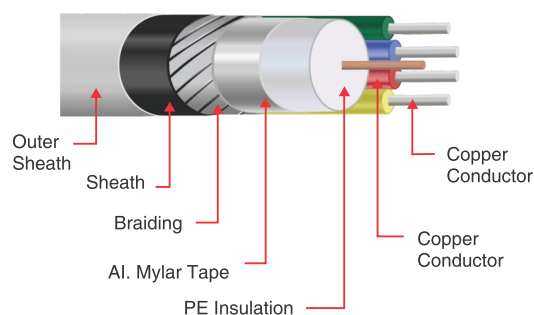
The Coaxial cable consists of solid annealed copper conductor of electrolytic grade which is insulated with foamed dielectric, aluminium foil taped, jelly flooded, braided with Alloy and then jacketed with PVC.

Top most quality of construction of coaxial cable in Microtek CCTV cables ensures distortion free video signals. Thus, providing a clear picture over complete low frequency bandwidth of transmission in such applications.

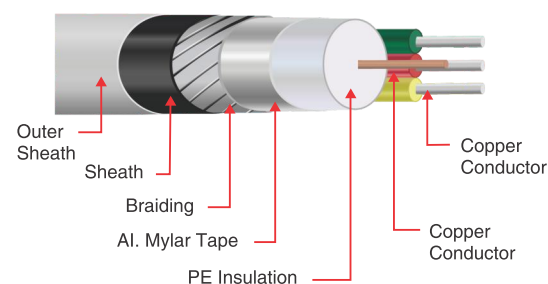
The impedance of coaxial cable is 75, which matches the CCTV equipment. This matching ensures adequate signal strength, no reflection, and best picture quality.

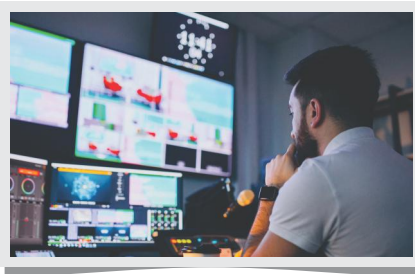
Available both in 90Mtr and 305Mtr.

**Cross Section View for 4+1 CCTV**



**Cross Section View for 3+1 CCTV**





## TECHNICAL SPECIFICATIONS

S.NO.	Particular	3+1 CCTV	4+1 CCTV
<b>Coaxial cable</b>			
<b>1.</b>	<b>Conductor</b>		
	Material	Annealed Bare Copper	Annealed Bare Copper
	Dia. of Wire (mm)/No. of Wire	0.1 / 14 + 0.52 / 1	0.1 / 14 + 0.52 / 1
<b>2.</b>	<b>Primary Insulation</b>		
	Material	HDPE	HDPE
	Thickness of Insulation	0.4 mm	0.4 mm
	Dia. of Insulation	1.35 mm	1.35 mm
<b>3.</b>	<b>Shielded</b>		
	Material of Drain Wire	Aluminum alloy wire	Aluminum alloy wire
	Material (Shielding)	Aluminum Foil - 100%	Aluminum Foil - 100%
<b>Outer Sheath</b>			
	Sheathing Co-axial Material	PVC -ST-1	PVC -ST-1
	Dia over Sheath	5 mm	5.5 mm
	Thickness of Sheath (Nom.)	0.7 mm	0.7 mm



# SUPERIOR HIGH-GRADE Spike Guard

Microtek spike guard is a product designed to protect electrical and electronic devices from voltage spikes. It comes with auto resettable overload protection, voltage surge protection and a cable length of 2.0 meter.

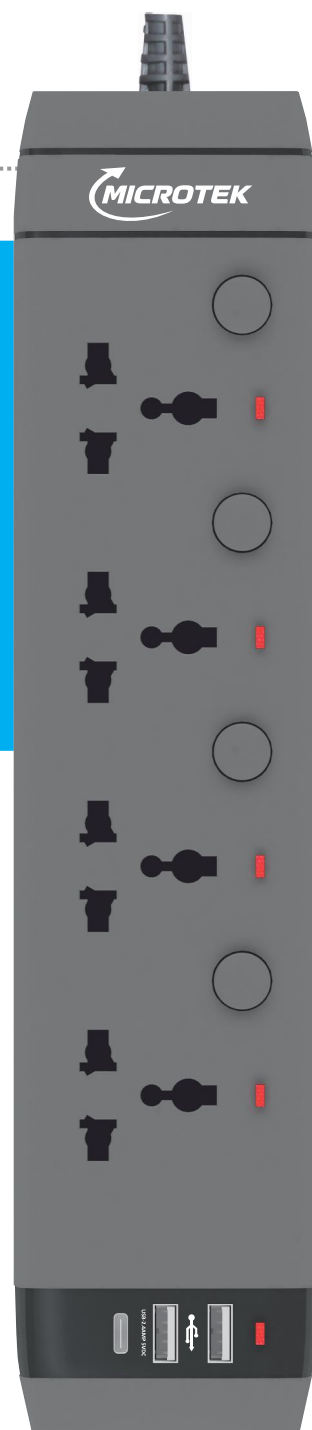
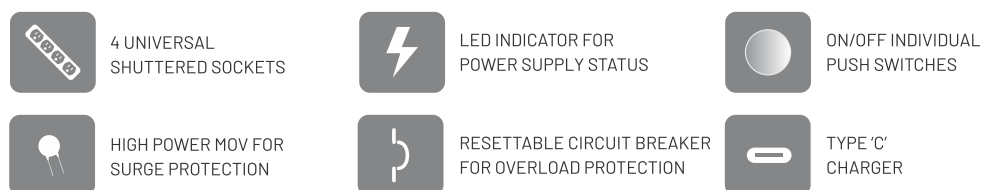
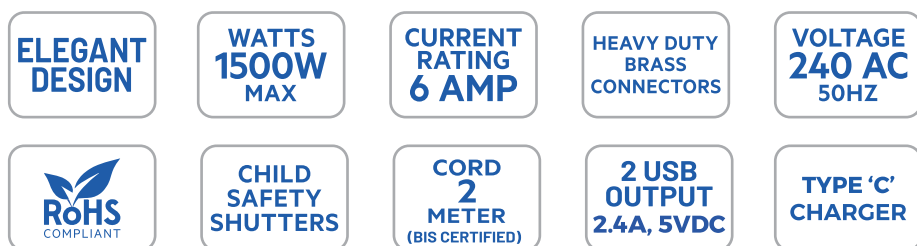
## AVAILABLE MODELS

- 4 UNIVERSAL SHUTTERED SOCKETS + 1 SWITCH WITH INDICATOR
- 4 UNIVERSAL SHUTTERED SOCKETS + 4 INDIVIDUAL SWITCHES WITH INDICATORS
- 4 UNIVERSAL SHUTTERED SOCKETS + 1 SWITCH WITH INDICATOR + 2 USB CHARGERS + 1 TYPE 'C' CHARGER
- 4 UNIVERSAL SHUTTERED SOCKETS + 4 INDIVIDUAL SWITCHES WITH INDICATORS + 2 USB CHARGERS + 1 TYPE 'C' CHARGER

High Power MOV  
for Surge Protection



## FEATURES





# Multi Plug Adaptor

Microtek Multi-Plug Adaptor is made of high quality polycarbonate that makes it robust. An amazing power output makes the adaptor an amazing source of power for all your devices and appliances



Universal  
Socket



LED  
Indicator



Nickle Plated  
Brass Pins



Fire Retardent  
Poycarbonate  
Material



6A (Max)  
240V AC, 50Hz



Elegant &  
Compact Design





## This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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