

Mars II Convertible Technical Specifications

Model	MSII4500RT	MSII6000RT	MSII6000C	MSII8000RT / 8000PRT	MSII10000RT / 10000PRT
INPUT					
Voltage Window	160 ~ 280Vac			160 ~ 280Vac (1Φ) / 277 ~ 485Vac (3Φ)*	
Frequency	45 ~ 65 Hz				
Phase / Wire	Single, Line + Neutral + Ground			Single, Line + Neutral + Ground (1Φ); Three, R, S, T + Neutral + Ground (3Φ)	
Power Factor	Up to 0.99 at 100% Linear Load				
Current THD (100% linear load)	<6% **				
OUTPUT					
Voltage Window	200 / 208 / 220 / 230 / 240Vac Selectable (208 / 120Vac optional)				
Voltage Adjustment	Nominal +1%, +2%, +3%, -1%, -2% or -3%				
Voltage Regulation	± 2%				
Capacity	4500VA / 3150W	6000VA / 4200W		8000VA / 5600W	10000VA / 7000W
Rated Power Factor	0.7 Lagging				
Wave Form	Sine Wave, THD < 3% (no load to full load)				
Frequency Stability	± 0.2% (Free Running)				
Frequency Regulation	± 1Hz ; ± 3Hz				
Transfer Time	0ms				
Crest Factor	3:1				
Efficiency (AC to AC, Normal)	Up to 90%				
Efficiency (AC to AC, ECO)	Up to 95%				
Autonomy	≧ 12 min	≧ 8 min	≧ 3 min	≧ 5 min	
DC Start	Yes				
BATTERY					
Type	Sealed Lead Acid Maintenance Free				
Capacity	12V / 7AH		12V / 5AH	12V / 7AH	12V / 9AH
Quantity	20pcs				
Voltage	240Vdc				
Recharge Time	4 hours to 90%			5 hours to 90%	
DISPLAY					
Status on LED + LCD	Line Mode, Backup Mode, ECO Mode, Bypass Supply, Battery Low, Battery Bad/Disconnect, Overload, Transferring with interruption & UPS Fault.				
Readings on LCD	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature.				
Self-Diagnostics	Upon Power-on, Front Panel Setting & Software Control, 24-hour routine checking				
ALARMS					
Audible and Visual	Line Failure, Battery Low, Transfer to Bypass, System Fault Conditions				
PROTECTION					
Overload (w/simulated thermal tripping I-T Curve)	Inverter Supply: 105%~150% for 160 seconds ~ 2 cycles before switching bypass. Bypass Supply: 105%~200% for 500 seconds ~8 cycles before stopping supply load.				
Short Circuit	Switch off Immediately				
Overheat	AC Mode: Switch to Bypass Backup Mode: Switch off the UPS				
Battery Low	Alarm and Switch Off				
Noise Suppression	Complies with EN62040-2				
Spike Suppression	Complies with EN61000-4-5				
Heat Dissipation (At Full Linear Load)***	Without Isolated Transformer Module	< 450W			10K: <600W 10KP: <550W
	With Isolated Transformer Module	< 615W			10K: <1100W 10KP: <1050W
Leakage Current	< 3mA at Full Load				
PHYSICAL					
Dimensions WxHxD (mm / inch)	440x88x680 / 17.3x3.5x26.8		440x176x680 / 17.3x7.0x26.8	440x132x680 / 17.3x5.2x26.8	
Input/Output Connection	Hardwire				
External Battery Connection	Plug-in & Play				
Net Weight (kgs / lbs)	24.0 / 52.9		52.0 / 114.6	1Φ: 26.0/57.3; 3Φ: 28.0/61.7	

Model	MSII4500RT	MSII6000RT	MSII6000C	MSII8000RT / 8000PRT	MSII10000RT / 10000PRT
ENVIRONMENT					
Operating Temperature	0 to 40°C / 32 to 104°F				
Temperature Warning	The battery design life is based on a temperature of 25°C/ 77°F. Ambient temperature above this range will affect battery life				
Altitude	0~2000M/6600ft up to 40°C/104°F, 3000M/9900ft up to 35°C/95°F				
Humidity	90% RH Maximum, Non-Condensing				
Noise	<50dB (at 1 Meter/3.3ft)				
COMPUTER INTERFACE					
Interface Type	Standard RS232 Interface				
Communication Slots	2 nd RS232, USB, RS485, Relay Contact, SNMP/WEB Card, etc.				
SAFETY CONFORMANCE					
Quality Assurance	ISO9001 Certified				
Safety Standard	EN62040-1-1, UL1778				
EMC Standard	EN62040-2, EN61000-3-2, EN61000-3-3, FCC Class A				
Marks	CE, cUL, UL				

BATTERY BANK					
Model	Battery Type	Maximum Quantity	Without Batteries kgs / lbs	With Batteries kgs / lbs	Dimension(WxHxD) mm/inch
BBC20J0007	7 AH	20pcs	18 / 39.7	68.0 / 149.8	440x132x680 / 17.3x5.2x26.8
BBC20N0009	9 AH				

- (160~176Vac for 1-phase input model or 277~305Vac for 3-phase input model at <75% load)
 -- 3-phase input model <30%
 --- reference data

Specifications are subject to change without prior notice.



Mars II Series Technical Specifications

Model		MSII4500	MSII6000	MSII8000 / 8000P	MSII10000 / 10000P
INPUT					
Voltage Window		160 ~ 280Vac		160 ~ 280Vac (1ϕ) / 277 ~ 485Vac (3ϕ)*	
Frequency		45 ~ 65 Hz			
Phase / Wire		Single, Line + Neutral + Ground		Single, Line + Neutral + Ground (1ϕ); Three, R, S, T + Neutral + Ground (3ϕ)	
Power Factor		Up to 0.99 at 100% Linear Load			
Current THD (100% linear load)		<6% **			
OUTPUT					
Capacity		4500VA / 3150W	6000VA / 4200W	8000VA / 5600W	10000VA / 7000W
Rated Power Factor		0.7 Lagging			
Wave Form		Sine Wave, THD < 3% (no load to full load)			
Frequency Stability		±0.2% (Free Running)			
Frequency Regulation		± 1Hz ; ± 3Hz			
Transfer Time		0ms			
Crest Factor		3:1			
Efficiency (AC to AC, Normal)		Up to 90%			
Efficiency (AC to AC, ECO)		Up to 95%			
Autonomy		≥ 12 min	≥ 8 min	≥ 5 min	
DC Start		Yes			
BATTERY					
Type		Sealed Lead Acid Maintenance Free			
Capacity		12V / 7AH			12V / 9AH
Quantity		20pcs			
Voltage		240Vdc			
Recharge Time		4 hours to 90%		5 hours to 90%	
DISPLAY					
Status on LED + LCD		Line Mode, Backup Mode, ECO Mode, Bypass Supply, Battery Low, Battery Bad/Disconnect, Overload, Transferring with interruption & UPS Fault.			
Readings on LCD		Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature.			
Self-Diagnostics		Upon Power-on, Front Panel Setting & Software Control, 24-hour Routine Checking			
ALARMS					
Audible and Visual		Line Failure, Battery Low, Transfer to Bypass, System Fault Conditions			
PROTECTION					
Overload (w/simulated thermal tripping I-T Curve)		Inverter Supply: 105%~150% for 160 seconds~2 cycles before switching bypass. Bypass Supply: 105%~200% for 500 seconds~8 cycles before stopping supply load.			
Short Circuit		Switch off Immediately			
Overheat		AC Mode: Switch to Bypass Backup Mode: Switch off the UPS			
Battery Low		Alarm and Switch Off			
Noise Suppression		Complies with EN62040-2			
Spike Suppression		Complies with EN61000-4-5			
Heat Dissipation (At Full Linear Load)***	Without Isolated Transformer	< 450W			10K: <600W 10KP: <550W
	With Isolated Transformer	< 615W			10K: <1100W 10KP: <1050W
Leakage Current		< 3mA at Full Load			
PHYSICAL					
Dimensions	without transformer	290x748x645 / 11.4x29.5x25.4			
WxHxD(mm / inch)	With transformer	290x748x645 / 11.4x29.5x25.4		290x881x645 / 11.4x34.7x25.4	
Input/Output Connection		Hardwire			
External Battery Connection		Plug-in & Play			
Net Weight (without transformer)	Standard Unit / Hot Swappable unit	86/112kgs (190/247 lbs)		8K: 87/113kgs (192/249 lbs) ; 8KP: 92/118kgs (203/260 lbs)	10K: 96/122kgs (215/269 lbs) 10KP: 101/127kgs (223/280 lbs)
Net Weight (with transformer)	Standard Unit / Hot Swappable unit	120/146kgs (265/322 lbs)		8K: 140/166kgs (309/366 lbs) ; 8KP: 145/171kgs (320/377 lbs)	10K: 149/175kgs (329/386 lbs) 10KP: 154/180kgs (340/397 lbs)

Model	MSII4500	MSII6000	MSII8000 / 8000P	MSII10000 / 10000P
ENVIRONMENT				
Operating Temperature	0 to 40°C / 32 to 104°F			
Temperature Warning	The battery design life is based on a temperature of 25°C / 77°F. Ambient temperature above this range will affect battery life.			
Altitude	0~2000M/6600ft up to 40°C/104°F, 3000M/9900ft up to 35°C/95°F			
Humidity	90% RH Maximum, Non-Condensing			
Noise	<50dB (at 1 Meter/3.3ft)			
SAFETY CONFORMANCE				
Quality Assurance	ISO9001 Certified			
Safety Standard	EN62040-1-1, UL1778			
EMC Standard	EN62040-2, EN61000-3-2, EN61000-3-3, FCC Class A			
Marks	CE, cUL, UL			

BATTERY BANK					
Model	Battery Type	Maximum Quantity	Without Batteries kgs / lbs	With Batteries kgs / lbs	Dimension(WxHxD) mm/inch
BBT40J0007	7 AH	40pcs	48 / 106	148 / 326	290x748x645 / 11.4x29.5x25.4
BBT40J0012	12AH			209 / 460	
BBT60J0007	7 AH	60pcs		198 / 436	
BBT40N0009	9 AH	40pcs		148 / 326	
BBT40N0012	12AH			209 / 460	
BBT60N0009	9AH	60pcs		198 / 436	

- (160~178Vdc for 1-phase input model or 277~305Vdc for 3-phase input model at <75% load)
- 3-phase input model <30%
- *** reference data

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