

## Appendix A - Specifications

### A.1 Specifications

**Table A-1, MS-PAE Specifications**

Models	MS4024PAE	MS4448PAE	MS3748PAEJ
<b>Inverter Specifications</b>			
Input battery voltage range	18.0 to 33.8 VDC	36.0 to 67.6 VDC	36.0 to 67.6 VDC
Absolute maximum DC input	50 VDC	68 VDC	68 VDC
Nominal AC output voltage	120 / 240 VAC split phase		
AC output voltage accuracy	L-N: 120 VAC ±5%, L-L: 240 VAC ±5% (continuous power)		
Output frequency and accuracy	60 Hz ± 0.04%		50 Hz ± 0.4Hz
Total Harmonic Distortion (THD)	< 5%		
Continuous power output (at 25° C with 12.5 VDC nominal)	4000 VA (L-L) (max 81% output imbalance from L-N)	4400 VA (L-L) (max 81% output imbalance from L-N)	3700 VA (L-L) (max 81% output imbalance from L-N)
Continuous AC output current	L-N: 27.0A/120VAC, L-L: 16.7A/240VAC	L-N: 29.7A/120VAC, L-L: 18.3A/240VAC	L-N: 25.0A/120VAC, L-L: 15.5A/240VAC
1 msec surge current (amps AC)	L-N: 120, L-L 70	L-N: 120, L-L 70	L-N: 120, L-L 70
100 msec surge current (amps AC)	L-N: 72, L-L 40	L-N: 75, L-L 40	L-N: 75, L-L 32
5 sec surge power (real watts)	5800	8500	6200
30 sec surge power (real watts)	5200	6000	6000
5 min surge power (real watts)	4800	5400	3600
30 min surge power (real watts)	4500	4800	3500
Maximum continuous input current	267 ADC	147 ADC	123 ADC
Inverter efficiency (peak)	93%	94%	91%
HBCO / HBCI (High Battery Cut Out / In)	>33.8 VDC / 33.2 VDC	>67.6 VDC / 66.4 VDC	>67.6 VDC / 66.4 VDC
LBCO / LBCI (Low Battery Cut Out / In)	18.0 VDC (adjustable) / 25.0 VDC	36.0 VDC (adjustable) / 50.0 VDC	36.0 VDC (adjustable) / 50.0 VDC
AC Relay Transfer time (minimum)	16 msec		
Power Consumption - searching	< 6 watts		< 10 watts
Power Consumption - inverting (no load)	27 watts	25 watts	22 watts
Output Waveform	Pure Sine Wave		
<b>Charger Specifications</b>			
Continuous charger output at 25° C	105 ADC (@28.2VDC)	60 ADC (@56.4VDC)	55 ADC (@56.4VDC)
Input current for continuous rated output	15 AAC (at 120 VAC) per leg	17.5 AAC (at 120VAC) per leg	8 AAC (at 120VAC) per leg
Charger efficiency (peak)	90%		
AC input frequency range	50 to 70 Hz		40 to 60 Hz
AC input voltage range	L-N: 60 to 140 VAC (120 VAC nominal) L-L: 120 to 280 VAC (240 VAC nominal)		
Power factor	>0.95		
<b>General Features and Capabilities</b>			
Transfer relay capability	2 legs at 30 AAC maximum per leg		
Five stage charging capability	Bulk, Absorb, Float, Equalize (requires remote) and Battery Saver™		
Battery temperature compensation	Standard with included temp sensor (battery temp 0 to 50° C)		
Internal cooling	0 to 120 cfm variable speed drive using dual 92mm brushless DC fans		
Over-current protection	with two overlapping circuits		
Over-temperature protection	on transformer, MOSFETs, and ambient temperature		
Corrosion protection	PCB's conformal coated, powder coated chassis/top, and stainless steel fasteners		
Safety Listings	ETL listed to ANSI / UL STD 1741 and CSA STD C22.2 No. 107.1-01		NA
Warranty	2 years parts and labor		
<b>Environmental Specifications</b>			
Operating temperature	-20° C to +60° C (-4° F to 140° F)		
Nonoperating temperature	-40° C to +70° C (-40° F to 158° F)		
Operating humidity	0 to 95% RH non-condensing		
<b>Physical Specifications</b>			
Unit Dimensions (h x w x d)	13.75" x 12.65" x 8.0" (34.9 cm x 32.1 cm x 20.3 cm)		
Shipping Dimensions (h x w x d)	18.5" x 17.5" x 12.5" (47 cm x 44.5 cm x 31.8 cm)		
Mounting	Shelf or wall (vents not allowed to face downward unless ME-HOOD and ME-CB are installed)		
Unit Weight	55 lbs (24.9 kg)		
Shipping Weight	60 lbs (27.2 kg)		
Max operating altitude	15,000' (4570 m)		

Specifications subject to change without notice