



Exhibit A – MAJORCHARGE Specifications Summary

Table 1: Operational – Systems

Parameter/Base Model	Majorcharge-48-3U	Majorcharge-48-WM	Majorcharge-24-3U	Majorcharge-24-WM
AC input (nominal)	208/240 V, single Ø		208/240 V, single Ø	
DC output	54V		27V	
Rated output DC voltage	43.0~57.8V		21.5V~28.8V	
Max system output current @ full load (Amps)	100A	100A	120A	160A
Type of system chassis	3U Rack Mount	Wall Mount	3U Rack Mount	Wall Mount
Controller	1	1	1	1
Switch-mode rectifier(s)	1 – 4	1 – 4	1 – 3	1 – 4
DC circuit breakers	1 for Load & 1 for Battery	1 for Load & 1 for Battery	1 for Load & 1 for Battery	1 for Load & 1 for Battery
Controller W×D×H (mm)	3×9.84×5.22 (76 ×250×132.5)	Integrated in Door	3×9.84×5.22 (76 ×250×132.5)	Integrated in Door
System Chassis	17.63x17.32x5.25 (448×440×133)	15.7”x9.6”x23.6” (400x236x600)	17.63x17.32x5.25 (448×440×133)	15.7”x9.6”x23.6” (400x236x600)
Weight – chassis only	27 lbs	49 lbs	30 lbs	49 lbs
Weight – max with rectifiers	53.4 lbs	75.4 lbs	49.8 lbs	75.4 lbs
System Order Numbers				
Standard System	MCS48/100XX-3U	MCS48/100X1-WM	MCS24/120XX-3U	MCS24/160X1-WM
Sys With Optional LVD	MCS48/100LX-3U	MCS48/100L1-WM	MCS24/120LX-3U	MCS24/160L1-WM

Table 2: Operational – Rectifier

Parameter	Rating / 25 Amps; 48 Volt	Rating / 40 Amps; 24Volt
AC input voltage – nominal	208 – 240V ±20%, single phase	
AC input voltage – full range	80 – 295 VAC 185 – 264 VAC; full load	
AC input frequency - range	45 ~ 65Hz	
AC nominal operation	185 – 264	
Power Factor	0.99; 220VAC Full Load	
THD	≤ 3%	
AC rated current	< 6 amps	< 10 amps
AC inrush current; start-up	< 8.6 amps	< 14.2 amps
Soft start time	3-6 seconds	3-6 seconds
DC output voltage – default set	54.5V	27.3V
DC output range – adjustable	43 – 58.5	21 - 29
DC rated output current	25A @ 54V, full load	40A @ 27V, full load
Overload protection	Current limit at 25A + 10%	Current limit at 40A + 10%
Over voltage protection	60 V	30 V
Over temp protection	100° C; internal heat sink	
Regulation accuracy	≤±0.6% of setting output DC voltage	
Load sharing	≤ ±5% of rated current of the rectifier@ output range: 50% ~ 100% of rated current	
Efficiency performance	η≥89%	η≥89%
Front panel indicators	AC OK – green LED Fault – red LED Standby – yellow LED	
Weight – single rectifier	6.6 lbs (3.0 kg)	
Dimensions	2.8" x 12.4" x 5.2" (71.3 x 315.0 x 132.5 mm)	
Application for Systems	MCS48/100XX-3U;MCS48/100LX-3U MCS48/100X1-WM; MCS48/100L1-WM	MCS24/120XX-3U; MCS24/120LX-3U MCS24/160X1-WM; MCS24/160L1-WM
Rectifier Order Numbers	MCR48/25	MCR24/40

Table 3: Operational - Alarm and Control Interface

Function	Measurable Output
Parameter measurement and monitoring	AC input voltage DC output voltage Individual rectifier output current Total system output current Battery charging and discharging current Battery temperature
Fault detection	AC input faults DC output faults Rectifier output current limiting Module over temp Fan failure Surge-lightning(SPD) failure Battery output voltage low Battery breaker trip Load Output breaker trip
Parameter control	Charging current Auto converting between equalizing and floating charge, Rectifier current limit Module power On/Off Primary power off.
Battery management	Current limiting for equalizing charge Temperature compensation for floating charge Accumulative number of current Amp hours
Interface screen	64X128 dots graphic LCD English, 6 key operation
Alarm warnings	Audible, LED, Dry contacts (normal close/NC) : 1) AC Faults 2) DC Faults 3) Rectifier Fail (including – output fault, fan fail, over-temp; current limit) 4) DC Load Breaker Trip/Open
Idle current draw	0.5A (controller only)

Table 4: Environmental

Working Environment	Rating
Ambient temperature	-5 ~ +45°C
Storage temperature	-40 ~ +85°C
Relative humidity	< 90%
Storage relative humidity @ 20°±5	< 95%
Altitude	0 ~ 2000m
Cooling	Forced Air; Variable Speed Control
Noise, Acoustic	≤ 55dB
Psophometric Noise, weighted	≤ 2.0 Mv
Noise, broadband	<50mV, rms
Insulation Resistance	≥2MΩ; Dielectric withstanding voltage; Primary to Secondary 3000 VAC
Leakage Current	<30mA
Isolation	AC to ground, AC to DC can bear 3000VAC/50HZ voltage for 1min DC to ground can bear 500V/50HZ voltage for 1min
Safety Conformity	This power supply is designed for incorporation within an enclosure. For user safety, the enclosure must protect the user against accidental contact with any electrical hazard, associated with the power supply. The design meets or exceeds UL60950 standard and the rectifier is EN60950 approved for use in the system.

Technical data subject to change without notice. Accurate at the time of print. v1