



Incredible functionality, scalability, and web monitoring in a 6 RU Commander II and 7 RU Commander II+ DC Power System

## **COMMANDER II DC Power System -48 Volt** **COMMANDER II+ DC Power System -48 Volt + 12 or 24V**

Complete system design and integration to your application parameters: rectifier configuration, distribution circuit breaker installation, and configuration of alarms and monitors. Installation in a relay rack with batteries and wiring also available.

### **FEATURES**

- 19", 6U or 7U rack mount shelf with integrated power distribution
- 90-250 VAC input, Power Factor Corrected
- 12 power bays accept 3000 watt, -48V modular rectifiers
- 667 amp, 36,000 watt total max. output capacity @ - 54 VDC
- Output temperature compensated for precise battery charging
- 18 DC circuit breaker distribution capacity, with tripped breaker alarm, 63 amp max. circuit breaker rating
- Master battery disconnect breakers for four battery strings, with tripped breaker alarm, 4 x 125 Amp
- Controller with digital display of system parameters with TCP/IP interface and SNMP monitoring/logging
- Alarm contacts monitor major system functions and dry contacts for user programmable alarms
- General Purpose Digital Inputs for user configured external alarms
- Low voltage disconnect built-in
- Easily configures to meet site power requirements
- Up to 4 x 560 watt DC-DC converters (Commander II+2)

## RECTIFIER SPECIFICATIONS

<b>AC Input</b>	230 V Nominal
<b>Voltage Range</b>	85 – 300 VAC (reduced power below 190V)
<b>Frequency Range</b>	45 – 65 Hz
<b>Efficiency</b>	96.3% (peak)
<b>Power Factor</b>	> .99
<b>Maximum Input Current</b>	16.5 A @ 230 VAC
<b>DC Output</b>	48 V Nominal
<b>Rated Voltage</b>	54 V
<b>Adjustable Voltage Range</b>	43 V – 60 V
<b>Maximum Rated Current</b>	55.5A @ 54.0 V, 60A Max.
<b>Maximum Rated Power</b>	3.0 kW
<b>Regulation</b>	±0.1% Line ±0.5% no load to full load
<b>Protections</b>	Power Limit - Adjustable to 50–100% of maximum rated current Over Temperature - Automatic current turn-down, backup shutdown protection (auto recovery) Polarity Reversal - Output Fuse with Crobar diode Over Voltage - adjustable limit
<b>Ripple</b>	0 to 20 MHz <100 mV Peak to Peak
<b>Isolation</b>	Input to Output 4000 VDC Input to Chassis 3500 VDC (VDR to chassis removed) Output to Chassis 2100 VDC
<b>Operating Ambient Temperature</b>	Rated 25 ± 5°C Range 20°C to +70°C Power derating above 45°C
<b>Humidity</b>	5 – 98% RH (non-condensing)
<b>Altitude</b>	< 2000 m above sea level
<b>Dimensions</b>	4.39"/111.5 mm, 1.74"/44 mm (1U), 11.11"/282 mm overall (260 mm shelf)
<b>Compliances</b>	Safety - EN 60950 Electrostatic Discharge - CISPR 24 Radiated Radio Frequency - CISPR 22 AC Harmonics - EN 61000-3-2 AC Flicker and Fluctuation - EN 61000-3-3 Other - CE & RoHS Compliant

<b>Weight</b>	3.5 Lbs.
<b>Resolution</b>	+/- .1%

## SHELF SPECIFICATIONS (CMDRII)

<b>AC Input Voltage Range</b>	85 - 300V AC
<b>AC Input Current</b>	16.5 AMPS per RM3048 Rectifier, 66 Amps max per phase @ 230V AC w/ 12 rectifiers
<b>Rectifier Capacity</b>	12 bays, 12 x RM3048 Rectifiers total Note: Use open rectifier bay
<b>Output</b>	3.0 KW per Rectifier Bay, 55 Amp each Max output: 36 kW / 667 Amp @ 54.0 VDC
<b>Watts</b>	36KW
<b>Configuration</b>	12 Commander II Rectifiers (-48 V), Controller
<b>Dimensions</b>	COMMANDER II – 19"/483mm (W), 10.5"/266.7mm (H), 15"/380mm (D) COMMANDER II+ – 19"/483mm (W), 12.25"/311.2mm (H), 15"/380mm (D)
<b>Weight</b>	35.15 Lbs.

## DC-DC CONVERTER SPECIFICATIONS (CMDRII+)

<b>DC Input Range</b>	40 - 60V DC
<b>Output Voltages/Power Available</b>	12 VDC Module: 10.5- 15V, 560 Watts (40.0 Amps) 24VDC Module: 21-30V, 1040 Watts (43.0 Amps)
<b>Peak Efficiency</b>	12 VDC: 90.3% 24 VDC: 93.9%
<b>Operating Ambient Temperature</b>	20°C to 70°C (Maximum output power is derated above 50°C/122°F)
<b>Safety</b>	EN60950-1
<b>Immunity</b>	CISPR24
<b>Emissions</b>	12 Commander II Rectifiers (-48 V), Controller
<b>Other</b>	CE & RoHS Compliant
<b>Protections</b>	Power limit, over temperature (auto recovery), forced air cooling

### DC Distribution

- **Load:** 18 breaker position capacity, available amperages (specify) 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50 and 63A tripped breaker alarm
- **Battery:** 4 x 12.5A battery circuit breakers
- **Breaker Fail Detection:** Electronic fail detection on both load and battery breakers
- **Low Voltage Battery Disconnect:** 500A battery LVD installed standard, with disconnect alarm



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