

# C&D TECHNOLOGIES

## Power Solutions

### MODULAR RECTIFIERS

**For telecommunications applications**

**48 VDC, 30 ADC per Rectifier or 180 ADC per shelf**

- Switched-mode
- Active power-factor correction, 0.997 PF
- Shelf-mounted
- Automatic load sharing
- Nominal output voltage 48 VDC
- High efficiency (89%)

**C&D TECHNOLOGIES' 48-VOLT, 30-AMPERE SWITCHED-MODE MODULAR RECTIFIER** combines advanced technology and the same high quality found in all C&D TECHNOLOGIES products to create a compact, versatile and efficient unit. Its small size is ideally suited for economical growth and use in radio and outside plant applications where space is at a premium.

- Compact size: 48 volts at 30 amperes in five rack spaces makes our rectifiers ideal for confined areas. Up to six units will fit in a single shelf, mountable in a 23" rack.
- Low-cost growth: The compact unit size allows for system expansion at a minimal cost. Units may be paralleled for redundancy or increased capacity.
- Hot-swappable modules: The lightweight modules are shelf-mounted and can be easily installed or removed while the system is operational without harm or power interruption. The rectifier contains a field-replaceable cooling fan.
- Low energy costs: Active power-factor correction of 0.997 and high efficiency of 89 percent means less AC power consumption and less heat dissipation, saving dollars in operating costs. This also means less disturbance placed back on the AC line.
- Automatic load sharing: Forced load sharing offers equal power distribution from no load to full load between modules in parallel applications.
- High-voltage shutdown reset (HVSD RESET): If an internal shutdown occurs, the rectifier may be reset via the power plant restart signal.
- Safety compliance: Designed for all applicable international safety requirements, including EMI filtering to FCC Class A limits.
- Panel Indicator LEDs: Module front-panel indicators include: Red Rectifier-Failure Alarm LED, Green Normal Operation LED, and 10-segment LED bar graph for Output Current.
- Surge Protection: Rectifiers will withstand lightning or input surges of 6000V at 3000A per IEEE 587-1980 and CG2.41-1991 standards. Surge protection assures performance under adverse conditions.



## RECTIFIER SPECIFICATIONS

### HFM48AC30, 48-VOLT, 30-AMP

#### INPUT

Voltage	120/208/220/240 VAC, single-phase; Operating range 106 to 264 VAC, no taps required
Current	16/9.8/9/8 Amps AC nominal
Frequency	50/60 Hz (45 to 65 Hz)
Protection	Dual AC fuses with on/off switch
Connections	AC input connections are made inside the shelf

#### OUTPUT

Voltage	40.0 VDC to 60.0 VDC
Protection	DC fuse and electronic current limiter
Regulation	±0.5% from 0 to 100% load, within the specified input voltage and frequency range
Filtering	Voice band: less than 32 dBnC; Wideband noise: less than 250 mV, peak-to-peak, at 20 MHz bandwidth
Overvoltage Shutdown	Fixed internally at 61±1 Volt
Turn-on	Soft start
Load Current	Modules share within ±10% from 10 to 100% rating
Connections	DC output connections are made on the rear and side of the shelf. Positive ground systems only.

#### ENVIRONMENT

Temperature	+32 to 122°F (0° to 50°C)	Altitude	0 to 7,000 Feet (0 to 2133 m)
Storage Temperature	-58 to 185°F (-50° to 85°C)	Module Weight	15 lbs (6.8 kg)
Humidity	0 to 95% noncondensing	Module Height	8.5" (21.6 cm)
Rectifier Heat Dissipation	686 Btu/hr at 54V	Module Depth	13.5" (34.3 cm)
Power Factor	0.997	Module Width	3.3" (8.4 cm)
Efficiency	89%	For ordering information, please refer to the C&D TECHNOLOGIES 48V Power Plant Brochures.	
EMI	FCC Part 15, Subpart J for Class A equipment		
Audible Noise	Less than 55 dBA, two feet from any vertical surface		



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