

C&D TECHNOLOGIES

Power Solutions

48Vdc, 200 AMP **Switchmode Rectifier** **1200 Amp Rectifier Cabinet**

DESCRIPTION

The 1200 Amp, -48Vdc Rectifier Cabinets are ideally suited for Central Office and wireless MTSO/MSA applications where switchmode technology is preferred. With Parallel Rectifier Cabinets and C&D Technologies' line of supplemental distribution bays, BDFBs, overhead bussing and powerboard panels, the power engineer can configure a Power Plant for virtually any Central Office application. Due to the Cabinet's modular design, future DC power expansion can be accomplished with ease.

FEATURES

- Up to 1200 Amps of -48Vdc Power in 84" (213.36 cm) of Vertical Space and in a 23" (58.4 cm) Mounting Cabinet
- Compatible with C&D Technologies' Full Line of Distribution Bays, BDFBs and Power board Panels.
- Reliable Telecom Switchmode Rectifiers
- Ease of Installation and Expansion
- Power Factor Corrected
- High Efficiency
- 480 Vac 3 Phase Operation
- Input and Output Circuit Breaker Protection
- Individual Rectifier Volt and Current Meter
- Sequential Start Capability
- Internal and Remote HVSD
- Alarm and Status LEDs and Form C Relay Contacts

48Vdc, 200 AMP SWITCHMODE RECTIFIER DETAILED FEATURES AND BENEFITS

- REMOTE SENSE
- INTERNAL HIGH VOLTAGE SHUTDOWN
- REMOTE SELECTIVE HIGH VOLTAGE SHUTDOWN AND RESTART
- LOCAL AND REMOTE ON/OFF
- PRE-CHARGING OF OUTPUT CAPACITORS
- INPUT/OUTPUT CIRCUIT BREAKER PROTECTION
- SEQUENTIAL START-UP CAPABILITY
- SLOPE OR FORCED LOAD SHARING
- REDUNDANT FANS
- OUTPUT VOLTAGE TEST JACKS
- LOCAL AND REMOTE EQUALIZE CONTROL
- RECTIFIER METER:
3-1/2 DIGIT RECTIFIER OUTPUT CURRENT AND SENSE VOLTAGE

- RECTIFIER LEDs:

RFA	Rectifier Fail Alarm - RED
HVSD	High Voltage Shutdown - RED
THSD	Thermal Shutdown - RED
SEN FAIL	Remote Sense Fail - RED
AC ON	Input Voltage Valid - RED
FAN FAIL	Fan Fail Alarm - RED
CL	Rectifier in Current Limit - YELLOW
EQU	Rectifier in Equalize Mode - YELLOW

- RECTIFIER ALARM OUTPUTS:

RFA	Rectifier Fail Alarm - Isolated Form C Relay Contacts
FAN FAIL	Fan Fail Alarm - Isolated Form C Relay Contacts

- RECTIFIER REMOTE CONTROL INPUTS:

HVSD	High Voltage Shutdown - Bat (+)
HVSDR	High Voltage Shutdown Reset - Bat (+)
TR	Remote Inhibit - Bat (+)
EQL	Remote Equalize - Bat (+)

48Vdc, 200 AMP SWITCHMODE RECTIFIER SPECIFICATIONS

PHYSICAL SPECIFICATIONS

	-48Vdc/1200 Amp Cabinet	Rectifier
HEIGHT	84" (213.36cm)	10.0" (25.4cm)
WIDTH	27" (68.58cm)	20.5" (52.1cm)
DEPTH	30" (76.20cm)	22.0" (55.9cm)
WEIGHT	251 lbs. (114 kgm)	101 lbs. (46 kgm)

ENVIRONMENTAL SPECIFICATIONS

	-48Vdc/1200 Amp Cabinet
OPERATING TEMPERATURE	0 C to +50 C (+32 F to +122 F) 0 C to +40 C (+32 F to 104 F) with air filters
STORAGE TEMPERATURE	-55 C to +60 C (-67 F to +140 F)
HUMIDITY	0 to 95% Non-Condensing
ALTITUDE	7,000 ft. (2,100 m)
HEAT DISSIPATION	29,076 BTU/hr. Maximum @ 1200 Amps and -58Vdc
COOLING	Forced Air - Individual Rectifiers - Redundant Fans
SEISMIC	Zone 4 Capability
AUDIBLE NOISE	<65 dBa @ 2 ft. (0.5 m) in Front of Plant and 5 ft. (1.5 m) above floor

ELECTRICAL SPECIFICATIONS

	48Vdc/1200 Amp Cabinet
EMI	FCC Part 15 for Class A Equipment; CISPR 22 Class A; EN55022 for conducted and radiated
LIGHTNING	No Damage with input Voltage Surges of 6000 Volts/3000 Amps and waveshapes of: a) 1.2 x 50 us impulse b) 0.5 us - 100 kHz ring wave as referenced in ANSI/IEEE C62.41-1980
ELECTRICAL NOISE: VOICE BAND	25 dBnC
ELECTRICAL NOISE: WIDE BAND	10 mv rms: in any 3 kHz band: 10 kHz to 20 MHz
ELECTRICAL NOISE:	Peak to Peak 250mv @ 100 MHz Band Width

POWER SPECIFICATIONS

	48Vdc/1200 Amp Cabinet
INPUT VOLTAGE	430+/-5Vac to 520+/-5Vac, 3 Phase, 47 to 63 Hz
INPUT CURRENT	17 Amps rms Worst Case: 25 Amp, 3 Phase Circuit Breaker recommended
OUTPUT MAX. POWER	69,600 watts: 1200 Amps @ 58 Vdc

48Vdc, 200 AMP SWITCHMODE RECTIFIER SPECIFICATIONS

PHYSICAL SPECIFICATIONS

HEIGHT	10.0" (25.4cm)
WIDTH	20.5" (52.07cm)
DEPTH	22.0" (55.9cm)
WEIGHT	101 lbs. (41 kgm)

ENVIRONMENTAL SPECIFICATIONS

OPERATING TEMPERATURE	0 C to +50 C (+32 F to +122 F) 0 C to +40 C (+32 F to 104 F) with fan filters
STORAGE TEMPERATURE	-55 C to + 60 C (-67 F to +140 F)
HUMIDITY	0 to 95% Non-Condensing
ALTITUDE	7,000 ft. (2,133m)
HEAT DISSIPATION	4846 BTU/hr. Maximum @ 200 Amps and -58Vdc
COOLING	Forced Air - Individual Rectifiers - Redundant Fans
SEISMIC	Zone 4 Capability
AUDIBLE NOISE	Does not exceed 65 dBa @ 2 ft. in Front of Plant

ELECTRICAL SPECIFICATIONS

EMI	FCC Part 15 for Class A Equipment; CISPR 22 Class A; EN55022 for conducted and radiated
LIGHTNING	No Damage with Voltage Surges of 6000 volts/3000 Amps and waveshapes of: a) 1.2 x 50 us impulse b) 0.5 us - 100 kHz ring wave as referenced in ANSI/IEEE C62.41-1980
ELECTRICAL NOISE: VOICE BAND	25 dbrnc over entire operating range
ELECTRICAL NOISE: WIDE BAND	10mv rms: in any 3 kHz band: 10 kHz to 20 MHz
ELECTRICAL NOISE: Peak to Peak	250mv Peak to Peak measured with 100 MHz Band Width Oscilloscope
CONNECTIONS	Buss Connection in rear of Cabinet

POWER SPECIFICATIONS

INPUT VOLTAGE	430+/-5Vac to 520+/-5Vac, 3 Phase, 47 to 63 Hz
INPUT CURRENT	17 Amps rms Worst case
OUTPUT VOLTAGE	Float: -46 to -58Vdc, Equalize: 0 to 4Vdc Above Float Setting
OUTPUT REGULATION	+/- 0.5% of Voltage Setting for all input/output variations. +/- 1% of Voltage Setting for any input, output and environmental conditions
OUTPUT CURRENT	210 Amps
OUTPUT MAX. POWER	11,600 watts: 200 Amps @ -58Vdc
CURRENT LIMIT	Adjustable from 50 to 105% Full Load
LOAD SHARE	+/- 10% Slope or +/- 2% Forced
POWER FACTOR	>.99 for output loads > 80 Amps
EFFICIENCY	>89% at nominal input voltage of 480Vac and an output load > 80 Amps

PROTECTION

INPUT PROTECTION	25 Amp, 3 Phase AC Input Circuit Breaker
OUTPUT PROTECTION	250 Amp Circuit Breaker
OUTPUT OVERVOLTAGE SHUTDOWN	Adjustable from - 52Vdc to -60Vdc
TURN-ON	Soft-Start

AGENCIES

UL1950/cUL/VDE 0805/EN60950

POWERCOM DIVISION

1400 Union Meeting Road
P.O. Box 3053
Blue Bell, PA 19422-0858
(215) 619-2700 FAX (215) 619-7899
(800) 543-8630
www.cdpowercom.com

Specifications are subject to change without notice. Contact your nearest C & D sales office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty or responsibility of any kind, express or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement, and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated, or that other measures may not be required. Unless made explicitly in writing to the customer, C&D makes no representations or warranties regarding whether any product/technology purchased and/or specifications and/or literature regarding same are the most current or advanced version thereof; and C&D assumes no obligation to inform its customers of any revisions and/or improvements to such product, technology, specifications and/or literature.

Copyright 2000 C&D TECHNOLOGIES, INC. printed in U.S.A.