Cordex HP[™] 4.0kW

Modular Switched Mode Rectifier



Your Power Solutions Partner

- > High performance 83.3A rectifier for 48V telecom applications
- > 95.3% efficiency for increased OpEx savings and reduced carbon footprint
- > High power density 4RU compact design delivering up to 24kW per 23" shelf
- > Power limiting and wide range AC input for global installation requirements
- > Extended operating temperature range up to 75°C for deployment in the harshest outdoor environments
- > Backwards compatibility with Cordex 3.6kW rectifier shelves and power solutions providing cost effective upgrade path

Cordex High-Performance switched mode rectifiers make a proven, reliable platform even better, with significant advancements in efficiency and performance. In a compact, fan-cooled design, Alpha's HP rectifiers open the possibility for immediate Opex/Capex savings, reducing total cost of ownership and impact on the environment, and are useable under a wider range of applications.

The Cordex HP 4.0kW is a perfect solution for various 48Vdc capacity applications from small remote sites to large power systems at CO's, MTSO's and Data centers. Unlike other rectifiers in its category, the Cordex HP 4.0kW provides 100% nominal power up to 55°C and at least 3600W up to 65°C. With a high operating efficiency (95.3%) and wide temperature operation (-40 to 75°C), HP series rectifiers are ideal for harsh outside plant enclosure installations.

The Cordex HP 4.0kW is a backwards compatible solution with existing Cordex 3.6kW shelves and systems, providing users an easy upgrade path to greater power density and reduced OPEX.

Local and remote setup, adjustment and control is a simple singlestep process with Cordex CXC system controllers. By utilizing TCP/ IP technology, complete configuration and monitoring of power equipment is possible through a network web browser.





Cordex HP™ 4.0kW Modular Switched Mode Rectifier

Part Number: 010-623-20

ELECTRICAL

>4.0kW Rectifier Module(s)

Input voltage:

Extended:187 to 90Vac (de-rated power)

Input frequency:.....45 to 66Hz

Power factor:>0.99 (50 to 100% load) THD:<5% (@ 208Vac)

Output current:74A @ 54Vdc (83.3A max 48V)

Load regulation:<±0.5% (static) **Line regulation:**<±0.1% (static)

Transient response:±3% for 40 to 90% load step,

Noise:

Voice band:<38dBrnC

Wide band:.....<30mV RMS (10kHz to 10MHz)

<150mV pk to pk (10kHz to 100MHz)

Psophometric:....<2mV

Acoustic:....<60dBa@1m(3ft)

PERFORMANCE / FEATURES

Indicators:AC mains OK — green LED

 $\operatorname{\mathsf{Module}}\operatorname{\mathsf{OK}}-\operatorname{\mathsf{green}}\operatorname{\mathsf{LED}}$

Module fail — red LED

Controls: CAN interface to CXC Adjustments:Float voltage

(via CXC controller) Equalize voltage

High/low voltage alarm High voltage shutdown

Current limit

Slope

Start delay **Protection:** Current limit/short circuit

Start delay Input/output fuses

Output high voltage shutdown

Power limiting

Thermal foldback/shutdown

Input transient

AC low line foldback shutdown

MECHANICAL

Dimensions:

ENVIRONMENTAL

Temperature:

Operating:-40 to 75°C (-40 to 176°F); full rated output up

to 55°C (131°F); >3600W @ 65°C (149°F)

Storage:-40 to 85°C (-40 to 185°F) **Humidity:**0 to 95% RH non-condensing **Elevation:**-500 to 4000m (-1640 to 13120ft)

Heat dissipation:....<1150 BTU per hour

SHELVES

> Mechanical

19"/23" shelf (5 modules)

Dimensions:

Weight:.....8.5kg (19lbs)

Mounting:Fits 19" rack flush/center mount

Fits 23" rack center mount only

23" shelf (6 modules)

Dimensions:

Weight:.....9.5kg (21lbs)

Mounting: Fits 23" racks only flush/center mount

> Connections

Input:Box type terminal block

6 to 16mm² (10 to 6AWG)

Output:Bus adapters with 3%" studs on 1" centers

Chassis ground:.....Compression lug

\$6\$ to $16 mm^{2}$ (10 to 6AWG) **CAN communication:**RJ 12 offset

STANDARDS

Safety:......CSA C22.2 No 60950-1-03

UL 60950-1 CE marked IEC/EN 60950-1

EMC:ETSI 300 386

Emissions:.....CFR47 (FCC) Part 15 Class B

ICES-03 Class B

EN55022 (CISPR 22) Class B

C-Tick (Australia) EN 61000-3-2, 3-3

Immunity:EN 61000-4-2, 4-3, 4-4, 4-5, 4-6, 4-11

ANSI/IEEE C62.41 Cat B3

NEBS: GR-1089 CORE GR-63 CORE

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