Power

Cordex HP™ 4.0kW

Modular Switched Mode Rectifier

Cordex HP™ 4.0kW Rectifier

> High performance switches mode rectifier offers near 95% efficiency for reduced operating expenses and carbon footprint

> Available in 75A @ 48Vdc

> High power density, over 23kW per 23" shelf

> Power limiting and wide range AC input

> Hot swappable, 4RU ultra compact design

> Backwards compatibility with Cordex 3.6kW rectifier shelves and power solutions providing cost effective upgrade path

Cordex High-Performance 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. With a high operating efficiency and wide temperature operation, HP series rectifiers are also 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 single-step 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.

Your Power Solutions Partner

alpha TECHNOLOGIES™

Cordex HP™ 4.0kW Modular Switched Mode Rectifier
Part Number: 010-623-20

Electrical

⋗ 4.0kW Rectifier Module(s)
Input voltage:
   Nominal: ....208 to 277Vac
   Operating: ....187 to 312Vac
   Extended: ....187 to 90Vac (de-rated power)

Input frequency: ....45 to 66Hz
Power factor: ....>0.99 (50 to 100% load)
THD: ....<5% (@ 208Vac)
Efficiency:..........................>94.9% peak
Output voltage:..................42 to 60Vdc
Output power:....................4000W continuous/module
Float voltage:....................48 to 58Vdc
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
                          Module OK — green 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:
   mm:................................160H x 87W x 300D
   inches:............................6.3H x 3.4W x 11.8D
Weight: 3.9kg (8.6lbs)

Environmental

Temperature:
   Standard:.........................-40 to 55°C (-40 to 149°F)
   Extended: ....-40 to 75°C (-40 to 167°F)
                                  derated power (~3600W @ 65ºC (149ºF))
   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:
   mm:................................177H x 442W x 389D
   inches: ....6.9H x 17.4W x 15.3D
Weight: 8.5kg (19lbs)
Mounting: ....Fits 19" rack flush/center mount
                             Fits 23" rack center mount only

23" shelf (6 modules)
Dimensions:
   mm:................................177H x 530W x 389D
   inches: ....6.9H x 20.8W x 15.3D
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 ⅜" studs on 1" centers
Chassis ground: ....Compression lug
                              6 to 16mm² (10 to 6AWG)
CAN communication: ....RJ 12 offset

Standards

Safety: ....CSA C22.2 No 60950-1-03
                              UL 60950-1 1st edition
                              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
                              EN 61000-3-3
   Immunity:........................EN 61000-4-2
                              EN 61000-4-3
                              EN 61000-4-4
                              EN 61000-4-5
                              EN 61000-4-6
                              EN 61000-4-11
                              ANSI/IEEE C62.41 Cat B3
NEBS:................................GR-1089 CORE
                              GR-63 CORE