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.
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 (derated power)

- **Input frequency:** 45 to 66Hz
- **Power factor:** >0.99 (50 to 100% load)
- **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:** 4% for 40 to 90% load step,
- **Noise:** Voice band: <38dBmC
  - 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
  - Equalize voltage
  - High 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)
  - 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**

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)

23” shelf (6 modules)

- **Dimensions:**
  - mm: 177H x 530W x 389D
  - inches: 6.9H x 20.8W x 15.3D
  - Weight: 9.5kg (21lbs)

**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
  - 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
  - GR-63 CORE