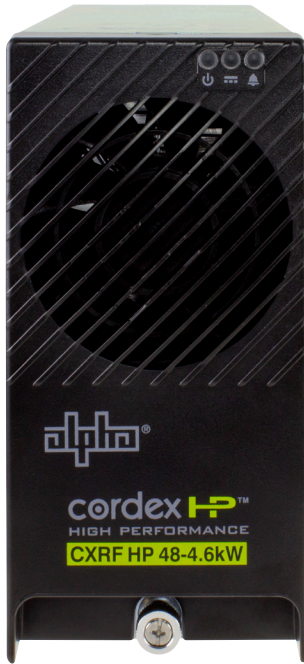




an EnerSys® company

# Cordex® HP 4.6kW

## Modular Switched Mode Rectifier



- High performance 95.8A 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 27.6kW 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® 3.6/4.0kW 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 4.6kW 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 4.6kW provides 100% nominal power up to 40°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 4.6kW 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 HP system controllers. By utilizing TCP/IP technology, complete configuration and monitoring of power equipment is possible through a network web browser.

# Cordex® HP 4.6kW 48V Modular Switched Mode Rectifier

P/N: 0100044-001

| Electrical                                      |   |
|---|---|
| <b>Input Voltage:</b>                           | <b>Nominal:</b> 208 to 277VAC<br><b>Operating:</b> 195 to 305VAC<br><b>Extended:</b> 95 to 195VAC (de-rated power)  |
| <b>Input Frequency:</b>                         | 45 to 66Hz  |
| <b>Power Factor:</b>                            | >0.99 (50 to 100% load)   |
| <b>THD:</b>                                     | <9% @ Nominal input 100% load   |
| <b>Efficiency:</b>                              | 95.3%   |
| <b>Output Voltage:</b>                          | 44 to 58VDC   |
| <b>Output Power:</b>                            | 4600W continuous  |
| <b>Output Current:</b>                          | 85A @ 54VDC (95.8A max 48V)   |
| <b>Load Regulation:</b>                         | <±0.5% (static)   |
| <b>Line Regulation:</b>                         | <±0.1% (static)   |
| <b>Transient Response:</b>                      | ±3% for 40 to 90% load step   |
| <b>Noise:</b>                                   | <b>Voice Band:</b> <42dBmC<br><b>Wide Band:</b> <30mV RMS (10kHz to 10MHz)<br><150mV pk to pk (10kHz to 100MHz)   |
| <b>Psophometric:</b>                            | <2mV  |
| <b>Acoustic:</b>                                | <64dBA @ 1m (3ft)   |
| Performance/Features                            |   |
| <b>Indicators:</b>                              | AC mains OK — green LED<br>Module OK — green LED<br>Module fail — red LED   |
| <b>Controls:</b>                                | CAN interface to CXC  |
| <b>Adjustments:<br/>(via CXC HP controller)</b> | <ul style="list-style-type: none"> <li>• Float voltage</li> <li>• Equalize voltage</li> <li>• High/low voltage alarm</li> <li>• High voltage shutdown</li> <li>• Current limit</li> <li>• Slope</li> <li>• Start delay</li> </ul>   |
| <b>Protection:</b>                              | <ul style="list-style-type: none"> <li>• Current limit/short circuit</li> <li>• Start delay</li> <li>• Input/output fuses</li> <li>• Output high voltage shutdown</li> <li>• Power limiting</li> <li>• Thermal foldback/shutdown</li> <li>• Input transient</li> <li>• AC low line foldback shutdown</li> </ul> |
| Mechanical - Rectifier                          |   |
| <b>Dimensions:</b>                              | <b>mm:</b> 160H x 87W x 300D<br><b>inches:</b> 6.3H x 3.4W x 11.8D  |
| <b>Weight:</b>                                  | 3.9kg (8.6lbs)  |

| Environmental             |  |
|---------------------------|--|
| <b>Temperature:</b>       | <b>Operating:</b> -40 to 75°C (-40 to 176°F); full rated output up to 40°C (104°F);<br>>3600W @ 65°C (149°F)<br><b>Storage:</b> -40 to 85°C (-40 to 185°F)   |
| <b>Humidity:</b>          | 0 to 95% RH non-condensing   |
| <b>Elevation:</b>         | -500 to 4000m (-1640 to 13120ft)   |
| <b>Heat Dissipation:</b>  | 1347 BTU per hour / 395 Watts (Worst Case)   |
| Mechanical - Shelves      |  |
| 19"/23" Shelf (5 modules) |  |
| <b>Dimensions:</b>        | <b>mm:</b> 177H x 442W x 389D<br><b>inches:</b> 6.9H x 17.4W x 15.3D   |
| <b>Weight:</b>            | 8.5kg (19lbs)  |
| <b>Mounting:</b>          | Fits 19" rack flush/center mount<br>Fits 23" rack center mount only  |
| 23" Shelf (6 modules)     |  |
| <b>Dimensions:</b>        | <b>mm:</b> 177H x 530W x 389D<br><b>inches:</b> 6.9H x 20.8W x 15.3D   |
| <b>Weight:</b>            | 9.5kg (21lbs)  |
| <b>Mounting:</b>          | Fits 23" racks only flush/center mount   |
| Connections               |  |
| <b>Input:</b>             | Box type terminal block 6 to 16mm <sup>2</sup> (10 to 6AWG)  |
| <b>Output:</b>            | Bus adapters with 3/8" studs on 1" centers   |
| <b>Chassis Ground:</b>    | Compression lug 6 to 16mm <sup>2</sup> (10 to 6AWG)  |
| <b>CAN Communication:</b> | RJ 12 offset   |
| Standards                 |  |
| <b>Safety:</b>            | <ul style="list-style-type: none"> <li>• CSA C22.2 No 60950-1-03</li> <li>• UL 60950-1</li> <li>• CE marked</li> <li>• IEC/EN 60950-1</li> </ul>   |
| <b>EMC:</b>               | ETSI 300 386<br><b>Emissions:</b> <ul style="list-style-type: none"> <li>• CFR47 (FCC) Part 15 Class B</li> <li>• ICES-03 Class B</li> <li>• EN55022 (CISPR 22) Class B</li> <li>• C-Tick (Australia)</li> <li>• EN 61000-3-2, 3-3</li> </ul> <b>Immunity:</b> <ul style="list-style-type: none"> <li>• EN 61000-4-2, 4-3, 4-4, 4-5, 4-6, 4-11</li> <li>• ANSI/IEEE C62.41 Cat B3</li> </ul> |
| <b>NEBS:</b>              | <ul style="list-style-type: none"> <li>• GR-1089 CORE (Pending)</li> <li>• GR-63 CORE (Pending)</li> </ul>   |



**Alpha Technologies Services, Inc.** USA: 3767 Alpha Way, Bellingham, WA 98226 Canada: 7700 Riverfront Gate, Burnaby, BC V5J 5M4  
Toll Free North America: +1 800 322 5742 Outside US: +1 360 647 2360 Technical Support: +1 800 863 3364  
For more information visit [www.alpha.com](http://www.alpha.com)

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