

Power

Cordex HP™ 4.0kW

Modular Switched Mode Rectifier



Cordex HP™ 4.0kW Rectifier

- › Near 95% efficiency for increased OPEX savings and reduced carbon footprint
- › High temperature tolerance for installation in harsh outdoor environments
- › Backwards compatibility with Cordex 3.6kW rectifier shelves and power solutions provides cost effective upgrade path
- › Wide AC input operating range that satisfies a variety of global installation requirements

Cordex High-Performance rectifiers make a proven, reliable platform even better, with significant advancements in efficiency and performance. In a compact, fan-cooled design, HP rectifiers open the possibility to wider ranges of applications and immediate Opex/Capex savings, reducing total cost of ownership and impact on the environment.

The Cordex HP 4.0kW is a perfect solution for various 48Vdc capacity applications from small remote sites up to large power systems at CO's, MTSO's and Data centers. With a high operating efficiency and 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.

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Rectifier Module(s)

> Electrical

| | |
|----------------------------|---|
| Input voltage: | |
| Nominal: | 208 to 277Vac |
| Operating: | 187 to 320Vac |
| Extended: | 187 to 90Vac (derated power) |
| Input frequency: | 45 to 66Hz |
| Power: | 4000W continuous/module |
| Power factor: | >0.99 (50 to 100% load) |
| THD: | <5% |
| Efficiency: | 94.9% peak @ 240Vac |
| Output voltage: | 42 to 60Vdc |
| 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: | ±2% for 40 to 90% load step |
| Noise: | |
| Voice band: | <38dBnC |
| Wide band: | <30mV RMS (10kHz to 10MHz) <150mV pk to pk (10kHz to 100MHz) |
| Psophometric: | <2mV |
| Acoustic: | <60dBa @ 1m (3ft) |

> Mechanical

| | |
|--------------------|---------------------|
| Dimensions: | |
| mm: | 160H x 87W x 300D |
| inches: | 6.3H x 3.4W x 11.8D |
| Weight: | 5kg (11lb) |

> Features

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|-----------------------------|---|
| Indicators: | AC mains OK—green LED DC output OK—green LED Module fail—red LED |
| Controls: | CAN interface to CXC Controller |
| Adjustments: | Float voltage |
| (via CXC Controller) | Equalize voltage High voltage alarm Low voltage alarm High voltage shutdown Current limit Slope Start delay timers |
| 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 AC high voltage shutdown |

Environmental

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|--------------------------|--|
| Temperature: | |
| Standard: | -40 to 55°C (-40 to 131°F) |
| Extended: | -40 to 75°C (-40 to 167°F) (derated power) ~ 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: | <751 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 (19lb) |
| 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 (21lb) |
| Mounting: | Fits 23" racks only flush/center mount |

> Connections

| | |
|---------------------------|--|
| Input: | Box type terminal block 6 to 16mm ² (10 to 6AWG) |
| Output: | Bus adapters with 3/8" studs on 1" centers |
| Chassis ground: | Compression lug 6 to 16mm ² (10 to 6AWG) |
| CAN communication: | RJ 12 offset |

Standards

The Cordex 4.0kW is designed to meet the following:

| | |
|-------------------|--|
| Safety: | CSA C22.2 No 60950-1-03 UL 60950-1 1 st 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 |