an EnerSys company

Cordex HP™ 4.0kW

Modular Switched Mode Rectifier

- 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 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™ 4.0kW 48V Modular Switched Mode Rectifier

09/2019

P/N: 010-623-20-040

Electrical	
Input Voltage:	**Nominal:** 208 to 277Vac **Operating:** 187 to 312Vac **Extended:** 90 to 187Vac (de-rated power)
Input Frequency:	45 to 66Hz
Power Factor:	>0.99 (50 to 100% load)
THD:	<5% (@ 208Vac)
Efficiency:	95.3%
Output Voltage:	42 to 60Vdc
Output Power:	4000W continuous
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: **(via CXC HP controller)**	• Float voltage • 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 - Rectifier	
Dimensions:	**mm:** 160H x 87W x 300D **inches:** 6.3H x 3.4W x 11.8D
Weight:	3.9kg (8.6lbs)

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
Mechanical - 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)
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 • 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