



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	
Input Voltage:	Nominal: 208 to 277VAC Operating: 195 to 305VAC Extended: 95 to 195VAC (de-rated power)
Input Current:	Nominal: 24 to 18A Max: 25.6A @ 195VAC
Input Frequency:	45 to 66Hz
Power Factor:	>0.99 (50 to 100% load)
THD:	<9% @ Nominal input 100% load
Efficiency:	95.3%
Output Voltage:	44 to 58VDC
Output Power:	4600W continuous
Output Current:	85A @ 54VDC (95.8A max 48V)
Load Regulation:	<±0.5% (static)
Line Regulation:	<±0.1% (static)
Transient Response:	±3% for 40 to 90% load step
Noise:	Voice Band: <42dBmC Wide Band: <30mV RMS (10kHz to 10MHz) <150mV pk to pk (10kHz to 100MHz)
Psophometric:	<2mV
Acoustic:	<64dBA @ 1m (3ft)
Performance/Features	
Indicators:	AC mains OK — green LED Module OK — green LED Module fail — red LED
Controls:	CAN interface to CXK
Adjustments: (via CXK HP controller)	<ul style="list-style-type: none"> • Float voltage • Equalize voltage • High/low voltage alarm • High voltage shutdown • Current limit • Slope • Start delay
Protection:	<ul style="list-style-type: none"> • 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 40°C (104°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:	1347 BTU per hour / 395 Watts (Worst Case)
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 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	
Safety:	<ul style="list-style-type: none"> • CSA C22.2 No 60950-1-03 • UL 60950-1 • CE marked • IEC/EN 60950-1
EMC:	ETSI 300 386 Emissions: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • EN 61000-4-2, 4-3, 4-4, 4-5, 4-6, 4-11 • ANSI/IEEE C62.41 Cat B3
NEBS:	<ul style="list-style-type: none"> • GR-1089 CORE (Pending) • GR-63 CORE (Pending)



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