

380VDC EcoTower

DC Power System

Integrating state-of-the-art, high efficiency, switch-mode rectifier technology with Eltek's feature-rich Smartpack2 control and monitoring unit, the high-performance EcoTower system provides 380VDC power for Data Centers using single-phase Flatpack2 HE rectifiers. The power system offers configurations up to 720KW using a maximum 5 144KW bays.



380VDC EcoTower

DC Power Supply System, 144KW-720KW

Doc 370037. DS3 – rev1

APPLICATIONS

- Data Centers
- 380VDC Telco Central Offices
- 380VDC Cable transport centers
- Co-Located facilities

CONFIGURATIONS

- System design contains one main bay with master controller
- Additional bays can be connected together with bus bar or wire.
- Can be used with a variety of additional distribution/DC-DC Converter bays.



Flatpack2 HE Rectifier

RECTIFIER SECTION

- Four 36KW Power Cores provided.
 - 12-3000W rectifiers per core
- Four-3Ø AC Input feeds, two configurations available
- Internal DC bus capability 1200/2400A.
- Rectifier bay delivers up to 500A

DISTRIBUTION

- Load distribution available (2 pole circuit breakers).
 - 4 x 250A.

CONTROL SYSTEM

- Based upon distributed Smartpack 2 control system.
- Interactive controller display on main bay.
- Supports ±190VDC operation with high-impedance mid-point grounding.
- Ground fault detection.

KEY FEATURES

- VERSATILITY
- SCALABLE
- HIGH EFFICIENCY
- SAFETY
- RUGGED DESIGN

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FLATPACK2 HE 208/240V/144KW, 1200A OR 2400A CONFIGURATION		FLATPACK2 277/480V/144KW, 1200A OR 2000A CONFIGURATION	
MECHANICAL			
Dimensions		26" W x 84" H x 24" D (26.5" D with doors)	
Weights	System	Without rectifiers installed, the system weighs more than 500 lbs (227 kg).	
	Rectifier	4.19 lbs (1.9 kg) each	
Clearances		Zero clearance needed below, left or right of unit. 24" suggested minimum rear clearance for access for connections and maintenance. 26" suggested minimum front clearance for access for connections and maintenance. Cable egress from top rear.	
ELECTRICAL			
Input	Voltage Range	Full power input : 208/240VAC, 3 wire + GND, 3 phase Operational range: 85 – 300 VAC	Full power output : 277/480 VAC, 4 wire + GND, 3 phase Operational range: 85 – 300 VAC
	Nominal Full Power Current Rating (per rectifier)	18.5 A _{rms} max at 176 VAC input and full load	11.5A _{rms} max at nominal input and full load
	Nominal Full Power AC Phase Current (per rectifier)	126.A	54A
	Frequency	45-66 Hz	
Output	Voltage Range	300-400 VDC (381 VDC Nominal)	
	Maximum Current per rectifier	7.9A at 336 VDC and nominal input (208VAC)	
	Ripple and Noise	< 100 mV peak to peak, 30 MHz bandwidth, < 2.0 mV _{rms} psophometric	
DISTRIBUTION OPTION			
DC Distribution Panels		4-Position thermal-magnetic circuit breakers	
CONNECTIONS			
AC Input		Up to four, 208-240 VAC, 3Ø, 3-wire + GND feeds	Up to four 277/408 VAC, 3Ø, 4-wire + GND feeds
Chassis Ground		4 positions for two-hole lug, 1/4" on 5/8" center	
Battery		Shunt-monitored bus with eight connection points	
ENVIRONMENTAL			
Operating Temperature		-40° to +40° C (-40° to +104° F), de-rating above 40°C (115°F)	
Storage Temperature		-40° to +70° C (-40° to +158° F)	
Relative Humidity		0-95%, non-condensing	
Cooling - Rectifier		One fan, front-to-rear airflow	
Acoustic Noise		< 65dBA	
TCP/IP		GUI WebPower interface, using standard Web Browser, and SNMP	
INTERFACE			
Alarm Relays		Six configurable form-C output relays Six configurable digital inputs	
APPLICABLE STANDARDS (Pending)			
Electrical safety		IEC 60950-1, CSA/UL 60950-1	
EMC		GR-3160-CORE	
Environment		GR-3160-CORE	

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Specifications are subject to change without notice.