Flatpack2 Front End Shelves

High Efficiency DC Power System

Overview

The Flatpack2 Front End DC power system delivers up to 12kW to applications where space is limited. The highly-efficient and reliable Flatpack2 Front End rectifier and the NIC-series controller make for compact system design and cost-effective deployment for front end applications.

FLATPACK2 FRONT END

HIGH-EFFICIENCY DC POWER SYSTEM

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APPLICATIONS

The Eltek Flatpack Front End system is a high-efficiency power solution with an optimal footprint for up to 12kW applications where space is limited.

The Flatpack Front End shelf is a one rack-unit high system that delivers 48V DC power to blade servers, voice over IP/power over Ethernet and other enterprise data center equipment.

PRODUCT DESCRIPTION

The compact size of the system makes it perfect for use in 19″ wide racks. And at 1U high, it reduces vertical space requirements.

Eltek's Flatpack 2 Front End high-efficiency rectifiers power the system, and typically achieve efficiency levels above 95 percent.

When combined with Eltek's NIC-series controller, the system provides remote monitoring, maintenance and data collection through SNMP, Telnet, or HTTP interfaces.

KEY FEATURES

- COMPACT DESIGN
  Small overall dimensions.
- REAR ACCESS CONNECTIONS
  The AC connections, DC loads and controller connections (alarms, communication, etc.) are rear access. Horizontal cabling reduces vertical space requirements.
- DIGITAL CONTROLLER
  The NIC-series controller system provides comprehensive monitoring through a web based graphical interface.
- HEAT MANAGEMENT
  Flatpack 2 Front End modules feature front-to-back airflow and chassis-integrated heat-sinks, supplementing high-efficiency energy conversion with excellent heat management.
- COST-EFFICIENCY
  A true plug-and-play system, the Front End system reduces both time-to-install and overall costs.

FLATPACK2 FRONT END

ELTEK
A Delta Group Company

INPUT SPECIFICATIONS

Input Voltage	100V – 277V AC (full output power at 176 V or higher*)
Input Connections	Four (4) individual feeds using terminal blocks or Molex input connectors

OUTPUT SPECIFICATIONS

Adjustable Voltage Range	43.5 – 56.00 V DC
Maximum Power (Input at >185 V)	12 kW†
Maximum Current	250A

PHYSICAL ATTRIBUTES

Shelf Dimensions (H x W x D)	1.75" x 19.00" x 19.46"
Rack Requirements	19" ANSI/EIA 310-D
Weight	11.5 lbs without rectifiers or controller

OUTPUT DISTRIBUTION SPECIFICATIONS

Bulk	Ungrounded, unprotected single output with ¼"-20 studs on 5/8" centers

OTHER SPECIFICATIONS

Operating temperature	-40°C to +50°C (-40°F to +122°F) full output power below +45°C (+113°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)

STANDARDS

Electrical Safety	UL/CSA 60950-1, 2nd edition IEC 60950-1, 2nd edition
EMI/EMC	GR-1089-CORE
Environment	GR-63-CORE Directive 2011/65/EU (RoHS2)

COMMUNICATION AND CONTROL

I2C	Communication port to communicate between two shelves or external controller
Ethernet	Ethernet communication between computer and controller (required for feature)
Alarm	Communication port for Eltek alarm cable (opto-coupled signals)
CAN1/CAN2	Communication port to communicate between multiple shelves or external controller
48V, 3A	Power port to power external controller

SHELF PART NUMBERS

295278	Flatpack 2 48U shelf with terminal block AC input connection
302693	Flatpack 2 48U shelf with terminal block AC input connection, NIC controller ready‡
302242	Flatpack 2 48U shelf with Molex AC input connection
302694	Flatpack 2 48U shelf with Molex AC input connection, NIC controller ready‡

CONTROLLER PART NUMBERS (SOLD SEPARATELY)

NIC2001-Z01-10VV§	NIC-Series Controller, Front RS-232 thru RJ12 Port and Ethernet thru RJ45 Port on the rear of the shelf

RECTIFIER PART NUMBERS (SOLD SEPARATELY)

380875	Flatpack 2 48V, 3KW Front End RECT HE
384793	Blank Slot Filler

OPTIONAL MULTI-SHELF KITS (SOLD SEPARATELY)

302783	Two shelf bus bar kit, bus bar cover (full access), CANBUS cable, CANBUS terminator, I2C cable
338338	Two shelf bus bar kit, bus bar cover (full cover), CANBUS cable, CANBUS terminator, I2C cable

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* Full output power requires an ambient temperature of 45°C or less; for temperatures above 45°C full output power requires 200 VAC or higher.
† Actual value depends on the rectifiers installed; see rectifier datasheet.
‡ NIC-series controller sold separately.
§ Use of the NIC-series controller requires a NIC controller ready shelf.