

# Flatpack DC/DC 24/48 |

DC/DC Converter



POWERFUL TECHNOLOGY



**The Flatpack DC/DC 24/48 is a modular hot plug-in DC/DC converter prepared for stand-alone use, or for working in parallel as part of a DC/DC rack system.**

The converter is specially designed to provide a high quality and highly reliable DC output voltage.

Switch mode technology with soft switching and high switching frequency is used to minimise volume and weight, and to obtain fast output voltage regulation.

The module has a soft start power-up. When working in parallel, the converters provide active current sharing. An internal blocking diode allows hot plug-in and isolates any faults in the converter output from the DC-bus.

Several internal protection circuits ensure safe operation, even outside specified limits for normal operation.

A module failure alarm is given if the module shuts down due to high/low input voltage, high output voltage (selective), or in case of an internal failure.

Converters connected in parallel will exhibit active load sharing, even without a Monitoring and Control Unit.

Front LEDs show power ON/OFF and alarm status in addition to a LED bar graph for output current indication.

The Flatpack DC/DC 24/48 will operate in ambient temperatures up to +75°C (+167°F). At temperatures above +65°C (+149°F), the output power may be derated.



# FLATPACK DC/DC 24/48 SPECIFICATIONS

## INPUT

Input Voltage range	19.8-32 VDC
Maximum Current	73 Amps at 19.8 VDC input
Protection	Soft start Internal fuse Automatic shutdown for input voltages < 19.5 VDC and > 30 VDC

## OUTPUT

Output Voltage	55 VDC (43-59 VDC adjustable)
Output Power	1250 W
Output Current	23 Amps
Current Share	± 1 Amp
Static Voltage Regulation	±0.5% from 0 to full load
Dynamic Voltage Regulation	±1.0% for 10-90% or 90-10% load variation
Ripple and Noise	<100 mV peak to peak, 30 MHz bandwidth
Protection	Blocking diode Non-destructive short circuit operation and selective high output voltage shutdown (59.5V)

## OTHER SPECIFICATIONS

Isolation Voltages	Input/ Earth: 600 VDC Input/ Output: 600 VDC Output/ Earth: 600 VDC
Converter alarms	No output voltage Overvoltage shutdown Fan failure High temperature shutdown Short circuit/ fold back activated
Converter warnings	DC input voltage out of range Single fan failure High temperature/ derating activated Current limit
Visual indications	Green LED: ON, no faults Red LED: No output, converter failure Yellow LED bargraph: measuring output current (0-100%)
Efficiency	90% at full load
Operating Temp	-40 to +65°C (-40 to +149°F) +65 to +75 °C (+149 to +167°F): Temperature dependent power limiting may occur
Storage Temp	-40 to +85 °C (-40 to +185°F)
Cooling	Speed controlled fans
Acoustic Noise	<60dBA
Dimensions	218 x 43 x 240mm (wxhxd) (8.58 x 1.69 x 9.45")
Weight	< 3kg (< 6.6lbs)

## APPLICABLE STANDARDS

Electrical safety	EN 60950, UL 60950
EMC	ETSI EN 300 386 V.1.3.1 (telecommunication network) EN 61000-6-3 (emission, light industry) EN 61000-6-2 (immunity, industry) EN 61000-6-4 (emission, industry) EN 61000-6-1 (immunity, light industry) Telcordia GR1089 CORE
Environment	ETSI EN 300 019-2 ETSI EN 300 132-1 ETSI EN 300 132-2 Telcordia GR63 CORE Zone 4 ETSI EN 300 753 class 3.1 (acoustic noise)

Specifications are subject to change without notice.

## ORDERING INFORMATION

Part no.	Description
241114.500	Flatpack DC/DC 24/48 converter

241114.500. DS3 v.02

Location	Company	Telephone	Fax
Europe	Eltek Energy AS	+47 32 20 32 00	+47 32 20 32 10
Americas	Eltek Energy, LLC	+1 815 459 9100	+1 815 459 9118
Asia/Pacific	Eltek Energy Pte Ltd.	+65 6 7732326	+65 6 7753602
China	Eltek Energy Ltd.	+852 28982689	+852 28983189
Middle East	Eltek Middle East	+971 4 887 1176	+971 4 887 1175