

Flatpack S 3U 3x2kW DC System

3 flexible systems in a 3U high rack

Compact DC System

The combination of innovative design, efficiency and reliability makes the Flatpack S a perfect choice for Marine & Offshore and Industrial applications.

With a system depth of only 250mm the Flatpack S systems will fit in most cabinets.

With its flexible alarm and monitoring options combined with bulk output, this 3U system is a superb building block for various Marine applications.



FLATPACK S 3U 3X2KW DC SYSTEM

MARINE & OFFSHORE

Doc CA0603.00x.DS3 – rev3M

APPLICATIONS

MARINE & OFFSHORE

Applications in these markets demand state of the art, reliable and safe DC power systems. Flatpack S delivers an industry leading power density in its segment, many safety functions, wide operating temperature range and superb reliability in its small housing.

The AC input filters assures compliance to DnV Rules for Classifications of ships, High Speed & Light Craft and DnV Offshore standards.

FLATPACK S RECTIFIERS

The Flatpack S family will include models covering most applications in terms of output voltage and power, efficiency and special requirements. All rectifiers have intelligent self-protective features like reduced output power at high temperatures or low mains.

Models with increased output overvoltage protection are also available. The Flatpack S 24/1000 SIL3 OVP, has SIL3 on output voltage exceeding 30V. It is capable of handling double fail and has a proof test interval exceeding 15 years.

DC SYSTEM

The Flatpack S 3U 3x2kW rack has 3 separate DC systems consisting of 2 redundant rectifiers and 1 controller. For flexibility two of these systems can be paralleled to create a system with 4 rectifiers for greater out power or increased redundancy. All rectifiers have separate AC feeding allowing for redundant AC sources for each output.

A relay output DC okay signal is available for each pair of rectifiers. For increased monitoring and control one Smartpack S controller can be plugged in for each rectifier pair and output. In additions to more warning and alarm relay outputs, it provides setup, status and logs through the display or the Ethernet port.

Global compliance

Eltek is among the market leaders in all regions in the world, and designs the core products to be compliant to all relevant standards and customer requirements. The Flatpack S 3U 3x2kW is CE marked and UL recognized.

KEY FEATURES

- COMPACT AND SHALLOW
- HIGH POWER DENSITY
- HIGH EFFICIENCY
- 3 SEPARATE SYSTEM
- SMARTPACK S CONTROLLERS
- SIL3 RATED OUTPUT VERSIONS AVAILABLE
- FLEXIBILITY



ABS



DNV

FLATPACK S 3U DC SYSTEM

AC INPUT

Individual feed	Single Phase for each rectifier
Voltage	230 V _{AC} /DC nominal, max 300 V _{AC/DC} *
Maximum Current	5.9 A _{RMS} for each feed*
Connection	2 x 2.5mm ² for each rectifier; L + N 3 x M6 cable lug rear; PE

* For details see datasheet for the applicable rectifier.

DC OUTPUT

Voltage	24 V _{DC} /48 V _{DC} *
Maximum Current	3 x 83 A / system *
Connection	6 x 16/25mm ² (3 x VDC+ and 3 x VDC-) Can be paralleled by links.

* For details see datasheet for the applicable rectifier.

OTHER SPECIFICATIONS

# rectifiers	2 positions for each output (4 if paralleled)
# controller	1 positions for each output
Isolation	3.0 kVAC – input to output, 1.5 kVAC – input to earth 0.5 kVDC – output to earth
Operating temp.	-40 to +85°C (-40 to +185°F) *
Storage temp.	-40 to +85°C (-40 to +185°F)
Mounting	Rear mounted onto a 19" frame or mounting plate (default) Front flush mounted onto a 19" frame (optional, p/n 278626)
MTBF	> 500, 000 hours Telcordia SR-332 Issue I, method III (a) (T _{ambient} : 45°C)
IEC Prot. Cl.	IP20
Dimensions	Height: 132.5 mm (3U) Width: 482.6 mm (to fit into 19" mounting) Depth: 300 mm including rear mounting brackets, 252 mm without brackets. 300 mm depth required in enclosed cabinets for air flow
Weight	CS0603.000 7.8 kg (17.2 lbs) excluding modules CS0603.001 6.0 kg (13.2 lbs) excluding modules

* see rectifier datasheet for details on temperature derating

CONTROL, MONITORING AND ALARMS

Without controller	Series connected rectifier alarm for each rectifier pair ⁽¹⁾
Connection	2 x 1.5mm ² ; COM, NC (To be loaded with maximum 30V and 100mA)
With Smartpack S	Battery current sense ⁽²⁾
	Battery and load fuse sense ⁽²⁾ , 2 LVDs ⁽²⁾
Connection	10 x 1.5mm ² Temp, input and alarm output connections on controller ⁽²⁾

(1) see rectifier datasheet for details

(2) see Smartpack S datasheet for details

APPLICABLE STANDARDS

Electrical safety	IEC 60950-1/-3 rd edition UL 60950-1/-3 rd edition
EMC	ETSI EN 300 386 V.1.4.1 EN 61000-6-1 (immunity, light industry) EN 61000-6-2 (immunity, industry) EN 61000-6-3 (emission, light industry) EN 61000-6-4 (emission, industry) FCC Part 15 Subpart 109
Mains Harmonics	EN 61000-3-2
Marine	ABS (Pending) DNV-OS-D202, Ch.2 Sec. 4 (DNV 2.4) Temperature Cl. B Humidity Cl. B Vibration Cl. A EMC Cl. B*)
Environment	ETSI EN 300 019-2-1 Class 1.2 ETSI EN 300 019-2-2 Class 2.3 ETSI EN 300 019-2-3 Class 3.2 ETSI EN 300 132-2 RoHS compliant

*) Class A for CA0603.001

FLATPACK S 3U DC SYSTEM

PART NUMBER

Part No.	Description
CA0603.000	FPS 24V 3x2kW 6x230V BULK W/FILTER
CA0603.001	FPS 24V 3x2kW 6x230V BULK

MODULES & ASSESSORIES PART NUMBERS

Part No.	Description
242100.410M	Smartpack S
241122.930	Flatpack S Blind panel
278626	KIT FPS 3U Mounting 35 mm

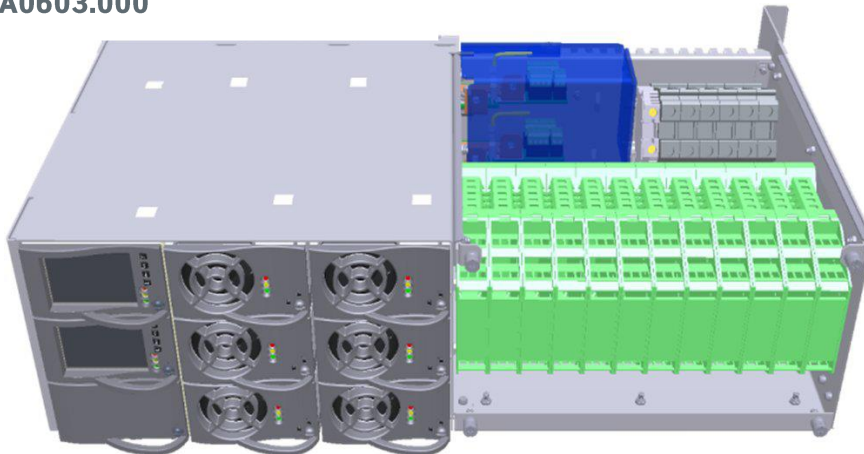
AVAILABLE 24/48V RECTIFIERS

Part Number	Description	Voltage Range	Efficiency	Maximum Current				Output protection
				1 Module	2 Module	4 Module	6 Module	
241122.205M	FlatpackS 24V/1000W HE	21.5 – 28 V	> 92,5%	41,7 A	83,4 A	166,8 A	250,2 A	Blocking diode
241122.290M	FlatpackS 24V/1000W HE SIL	21.5 – 28 V	> 92,5%	41,7 A	83,4 A	166,8 A	250,2 A	SIL 3 / Diode
241122.215M	FlatpackS 24V/500W HE	21.75 – 28 V	> 92,5%	19 A	38 A	76 A	114 A	Blocking diode
241122.105M	FlatpackS 48V/1000W HE	43,5 – 57,6 V	> 95,5%	20,9 A	41,8 A	83,6 A	125,4 A	FET
241122.125M	FlatpackS 48V/1800W HE	43,5 – 57,6 V	> 95,8%	37,5 A	75 A	150 A	225 A	FET

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Specifications are subject to change without notice

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