

## Flatpack2 24V<sub>DC</sub> 8kW - All in One

Based on the successful FLATPACK 2 rectifier module, this system can provide up to 8KW 24VDC with comprehensive distributions, terminations, and battery room, all housed in a 1,4m high cabinet.



# FLATPACK2 24V<sub>DC</sub> 8kW

## MARINE & OFFSHORE

Doc CIE20425.401.DS3 – rev1M

### PRODUCT DESCRIPTION

The Flatpack2 24V 8kW has been specifically designed to meet the demand for higher density and more compact power solutions for the marine application worldwide. It is suitable for applications needing an expandable, easily serviceable and reliable power supply, fitting within a minimal space.

The modular concept of the Flatpack2 systems makes it easy to scale the Flatpack2 24V/48kW to fit specific power needs up to 8kW. A system with unused rectifier positions can be expanded later simply by adding more rectifiers.

The power system is monitored by Smartpack2 controller which has all the functionality required for present and future applications.

It contains 2U of PRs (power rack) which can house 4 Flatpack2 rectifier modules, and a battery compartment.

### APPLICATION MARINE & OFFSHORE

- Control and protection
- SAS system
- Communication
- Emergency lighting

### KEY FEATURES

- DNV / ABS APPROVED(PENDING)
- SCALABLE
- HOT SWAPPABLE MODULAR RECTIFIER UNITS
- HIGH EFFICIENCY
- DIGITAL CONTROLLERS
- HEAT MANAGEMENT
- DISTRIBUTION SECTION
- BATTERY COMPARTMENT



# FLATPACK2 24VDC 8kW

Doc C22438.401.DS3 – rev2M



MODEL	
Part number	CIE20425.401
<b>INPUT DATA</b>	
Connection	2 x 3phase + PE terminals with Automatic Transfer Switch
Nominal voltage	176V <sub>AC</sub> – 275V <sub>AC</sub>
Maximum current (1 Module included)	Max. 13 A <sub>rms</sub> at 176V <sub>rms</sub> input and full load (9,8 A <sub>rms</sub> at 230V)
Input protection	Marine AC filter (no protection device)
Input protection in each rectifier	<ul style="list-style-type: none"><li>o Varistors for transient protection</li><li>o Mains fuse in both lines</li><li>o Disconnect above 300 V</li></ul>
Connection data	10 mm <sup>2</sup> terminals
<b>OUTPUT DATA</b>	
Maximum voltage	36 V <sub>DC</sub>
Output current (1 Module included)	84 Amps at 24 VDC and nominal input
Output power	8 kW maximum within nominal input
Output protection in rectifiers	Overvoltage shutdown and fuse OR-ing diode (241115.200M)
Battery protection connection	1 x C120H D125A 2P 15kA MCB
Load distribution	30 MCBs (1xB63A 2P, 14xB16A 2P, 15xB10A 2P, Ics=15kA)
<b>MONITORING</b>	
Controller	Smartpack2
User interfaces	3.2" display and keys, Ethernet port for access to Web pages and SNMP, SD card
Ethernet Protocols	SNMPv2vc/v3, HTML, MODBUS TCP (pending)
Protocols with Smartnode	MODBUS RTU on RS-485 port, modem support: call-back and SMS on RS-232 port
Digital inputs	6 (Aux Sw: NO/NC)
Temperature	3 inputs (NTC probes) (optional)
Relay outputs	6 (Switching capacity max 2A/75V/60W)
Customer Connections	Tension clamp (0.5 – 1.5mm <sup>2</sup> )
<b>OTHER SPECIFICATIONS</b>	
Temperature	Operating: -40 to +45°C (-40 to +113°F) Storage: -40 to +85°C (-40 to +185°F)
Isolation	3.0 KVAC – input to output 1.5 KVAC – input to earth 1.5 KVDC – output to earth
Dimensions (HxWxD)	1200 x 600 x 500 mm (47.2x23.6x19.6") with plinth+100mm
Battery compartment dimensions (HxWxD)	4x(340mm x 110mm x 395mm) Space for up to 4x100Ah VRLA battery
Weight	Net weight: 130 kg, Gross weight: 140 kg (without batteries)
IP grade specification	IP23 outside cabinet IP20 inside cabinet

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Specifications are subject to change without notice

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# FLATPACK2 24VDC 8kW

Doc C22438.401.DS3 – rev2M



<b>MODEL</b>	<b>FLATPACK2 24VDC 8kW – ALL IN ONE</b>
Part number	CIE20425.401
<b>DESIGN STANDARDS</b>	
Electrical safety	IEC 60950-1 IEC 60945
EMC	ETSI EN 300 386 V.1.3.3 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) EN 61000-3-2
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 RoHS compliant
Marine	ABS (Pending) DNV-OS-D202, Ch.2 Sec. 4 (DNV 2.4) (PENDING) o Temperature Cl. A o Vibration Cl. A o Humidity Cl. A o Enclosure Cl. A
<b>ORDERING INFORMATION</b>	
CIE20425.401	FP2 24V 8kW 2x2p230V BCE XP

AVAILABLE 24/30V RECTIFIERS								
Part Number	Description	Voltage	Efficiency	Maximum Current				Output protection
		Range		1 Module	2 Module	3 Module	4 Module	
241115.205M	Flatpack2 24V/1800W HE	21.7 – 28.8 V	> 95% (30-65% load)	75 A	150 A	225 A	300 A	Fuse
241115.200M	Flatpack2 24V/2000W	21 – 29 V	> 89% (25-100% load)	84 A	168 A	252 A	336 A	Blocking diode
241115.250M	Flatpack2 24V/2000W WOR	21.5 – 36 V	> 91% (25-85% load)	70 A	140 A	210 A	280 A	Fuse

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