

## COMPACT WALL MOUNTED POWER SUPPLY SYSTEM

The Flatpack S Wallbox is built around our Flatpack S rectifier and its compact and simple installation makes it a powerful wall-mounted DC power supply package.

Its mechanical design and electrical connections are fully compatible with our previous SMPS 700 system, for retrofit of older systems.

Comprehensive monitoring, LVBD, load and battery fuses are included as standard parts. AC input filters assures compliance with DnV standards for marine applications.



# Flatpack S Wallbox

24VDC Marine

Doc MFGS0208.002.DS3 – rev3

### MODULAR ARCHITECTURE

The modular architecture, efficiency, compact design and comprehensive monitoring and control features provide significant benefits over the current industry standard.

The Flatpack S rectifiers have intelligent self-protective features like reduced output power at high temperatures or low mains.

The optional Flatpack S 24/1000 SIL3 OVP is targeted Safety and Automation Systems (SAS) where SIL rated overvoltage protection is required.



### APPLICATIONS

AC input filters assures compliance to DnV rules for Classifications of ships, High Speed & Light Craft, DnV Offshore standards and other demanding industries.

#### Offshore and process industry

- Safety and Automation Systems (SAS)

#### Marine

- Communication systems onboard ships
- Certified to be located on the bridge:
  - DnV 2.4
  - EN 60945 (EMC cl.B)

### KEY FEATURES

- 24 VDC SYSTEM
- AC OR DC INPUT
- AC INPUT FILTERS
- HOT PLUGGABLE RECTIFIERS
- MODULAR ARCHITECTURE
- UP TO 63 A DC OUTPUT
- RETROFIT FOR SMPS 700
- EASY REMOVABLE COVER
- EASY ACCESS FOR INSTALLATION
- PROTECTION CLASS IP23
- INTEGRATED LVBD
- INTEGRATED LOAD BREAKER
- INTEGRATED BATTERY BREAKER
- GRAPHICAL 2.2" TFT DISPLAY
- ETHERNET
- WEB INTERFACE
- SNMP
- MODBUS TCP/IP (RTU)
- COMPACT DESIGN

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## FLATPACK S WALLBOX INCLUDED PARTS

The Flatpack S Wallbox Marine is a complete, ready to install system

All cable entries and terminals are located at the bottom of the system for easy access and connectivity. The design allows cables to be routed behind the Wallbox. AC input and signaling cables are connected to terminal blocks while DC output is connected directly on the MCB.

### Parts included

- Two position power rack for Flatpack S rectifiers
- AC input filters
- Smartpack S controller
- Two pole Load and Battery breakers
- LVBD (Low Voltage Battery Disconnection)
- Battery shunt

## FLATPACK S WALLBOX (WITHOUT COVER)



### RECTIFIER\*

Flatpack S

#### INPUT DATA

Voltage range	85-305 V <sub>AC</sub> /300 V <sub>DC</sub>
Frequency	0-66 Hz
Maximum current	5,9Arms
Power factor	0,99, 50-100% load

#### OUTPUT DATA

Nominal voltage	24 V <sub>DC</sub>
Maximum current	41,7 A
Maximum power	1000 W
Output protection	Blocking OR-ing FET or Diode

#### OTHER SPECIFICATIONS

Efficiency	>93 %
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\*) see applicable datasheet for details

Specifications are subject to change without notice

## FLATPACK S RECTIFIER



### CONTROLLER\*

Smartpack S

#### INPUT DATA

Voltage sense input	10-75 V <sub>DC</sub>
Current sense input	20-60 mV shunts
Battery/load fuse sense	NO/NC
Earth fault detection	1* isolation input

#### OUTPUT DATA

LVD contactor outputs	Latched/non latch
Relay outputs	NO-C-NC, 0-75 V
Web	Web interface
Networking	SNMP

#### OTHER SPECIFICATIONS

Display	65k colour TFT
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\*) see applicable datasheet for details

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## SMARTPACK S CONTROLLER



# Flatpack S Wallbox

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MODEL	MARINE
Part number	MFGS0208.002
<b>INPUT DATA</b>	
Voltage (range)	85V <sub>AC/DC</sub> - 305V <sub>AC</sub> / 300V <sub>DC</sub> , (45-66Hz)
Input protection	Individual fuse in rectifier modules
Current (maximum) @ nominal input full load	2 x 5,9 A <sub>RMS</sub>
Connection	Terminals 2,5 mm <sup>2</sup>
<b>OUTPUT DATA</b>	
Voltage (nominal)	24V <sub>DC</sub>
Power (maximum) @ nominal input	2000 W
Current (maximum) @ nominal input	83,4 A @ 24 VDC output, (63 A load breaker output)
Protected battery output	2 pole MCB, 63 A, D characteristics with fuse trip alarm
Protected load outputs	2 pole MCB, 63 A, B characteristics
LVBD (Low Voltage Battery Disconnection)	80 A
Integrated battery shunt	100 A
Load & Battery connection	Directly on MCB, max 25 mm <sup>2</sup>
Output Protection in rectifiers	Blocking OR-ing FET or Diode , Short circuit proof & High temperature protection
<b>CONTROL AND MONITORING</b>	
Monitoring Unit	Smartpack S Panel Mount
Local Operation	Display and keys, WEB interface via standard browser
Remote Operation	WEB Interface, SNMP protocol and email
Alarm Relays (Connection: terminals ≤ 1.5 mm <sup>2</sup> )	3 x Potential free change over contacts (NO, NC, C) [Max 75V/2A/60W]
Inputs (Connection: terminals ≤ 1.5 mm <sup>2</sup> )	3 x Configurable (digital, analog max 75V) and 1 temperature
Currents displayed	Rectifier current, battery current and load current
Alarms	Low & high output voltage alarms (Minor and major levels), Earth fault alarm, Temperature alarm, Mains outage alarm, Battery remaining capacity/low quality alarms, Battery breaker tripped alarm and much more
<b>OTHER SPECIFICATIONS</b>	
Isolation	3.0 kV <sub>AC</sub> - input to output 1.5 kV <sub>AC</sub> - input to earth 0.5 kV <sub>DC</sub> - output to earth
Protection Class	IP 23
Color	RAL 7035
Operating temperature	-20 to +55°C (-4 to +131°F), humidity 5 - 95% RH non-condensing Output power de-rates at high temperature, see datasheet for applicable rectifier
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing
Dimensions[WxHxD]	273 x 371 x 211mm (10.75 x 14.61 x 8.31")
<b>DESIGN STANDARDS</b>	
Electrical safety	EN 60945, EN 60950-1-3 <sup>rd</sup> edition
EMC	ETSI EN 300 386 V.1.3.2 EN 61000-6-1 / -2 / -3 / -4 / -5 FCC Part 15 Subpart 109
Mains Harmonics	EN 61000-3-2 DNV-OS-D202, Ch.2 Sec. 4 (DNV 2.4) <ul style="list-style-type: none"><li>○ Temperature Cl. B</li><li>○ Humidity Cl. B</li><li>○ Vibration Cl. A</li></ul> EMC Cl.B

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