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.

Flatpack S Wallbox
24VDC & 48VDC

Doc MFGS0208.001.DS3 – rev2

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.
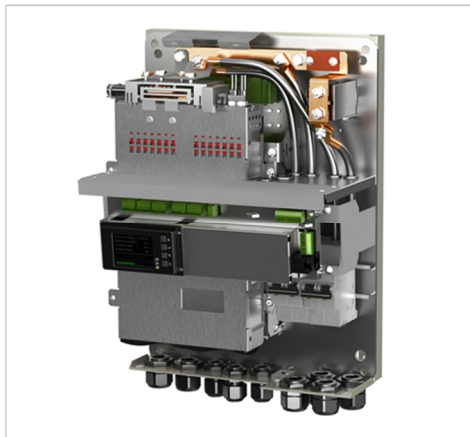
APPLICATIONS

POWER UTILITIES

- Control & protection
- SCADA Communication
- Emergency lighting
- Diesel start applications

OFFSHORE AND PROCESS INDUSTRY

- Safety and Automation Systems (SAS)

MARINE

- Communication systems onboard ships

RAILWAY & METRO INFRASTRUCTURE

- Control & protection
- Power conversion
- Signaling
- Safety Systems
- Communication systems

KEY FEATURES

- 24 & 48 VDC SYSTEM
- AC OR DC INPUT
- HOT PLUGGABLE RECTIFIERS
- MODULAR ARCHITECHTURE
- 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

Flatpack S Wallbox

FLATPACK S WALLBOX INCLUDED PARTS

The Flatpack S Wallbox 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
- Smartpack S controller
- Two pole Load and Battery breakers
- LVBD (Low Voltage Battery Disconnection)
- Battery shunt

FLATPACK S WALLBOX (WITHOUT COVER)
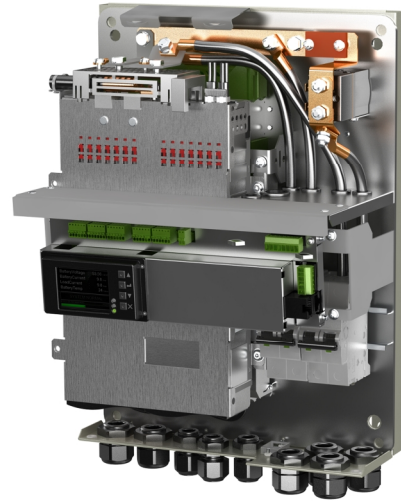
RECTIFIER*

Flatpack S	$24V_{DC}$ / $48V_{DC}$

INPUT DATA

Voltage range	85-305 V_{AC} /300 V_{DC}
Frequency	0-66 Hz
Maximum current	5,9Arms / 9,9Arms
Power factor	0,99, 50-100% load

OUTPUT DATA

Nominal voltage	24 / $48V_{DC}$
Maximum current	41,7 A / 37,5A
Maximum power	1000 W / 1800W
Output protection	Blocking OR-ing FET or Diode

OTHER SPECIFICATIONS

Efficiency	>93 % / >95,8%

*) see applicable datasheet for details

FLATPACK S RECTIFIER

CONTROLLER*

Smartpack S

INPUT DATA

Voltage sense input	10-75 V_{DC}
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

*) see applicable datasheet for details

SMARTPACK S CONTROLLER

Specifications are subject to change without notice

Flatpack S Wallbox

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MODEL	24V$_{DC}$ & 48V$_{DC}$
Part number	MFGS0208.001
INPUT DATA	
Voltage (range)	85V$_{AC/DC}$- 305V$_{AC}$ / 300$_{DC}$, (45-66Hz)
Input protection	Individual fuse in rectifier modules
Current (maximum) @ nominal input full load	2 x 9,9 A$_{RMS}$
Connection	Terminals 2,5 mm^2
OUTPUT DATA	
Voltage (nominal)	24 & 48V$_{DC}$
Power (maximum) @ nominal input	2000 W (24V$_{DC}$), 3600W (48V$_{DC}$)
Current (maximum) @ nominal input	83,4 A @ 24 V$_{DC}$, 75A @ 48V$_{DC}$ (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^2
Output Protection in rectifiers	Blocking OR-ing FET or Diode , Short circuit proof & High temperature protection
CONTROL AND MONITORING	
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^2)	3 x Potential free change over contacts (NO, NC, C) [Max 75V/2A/60W]
Inputs (Connection: terminals ≤ 1.5 mm^2)	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
OTHER SPECIFICATIONS	
Isolation	3.0 kV$_{AC}$ - input to output 1.5 kV$_{AC}$ - input to earth 0.5 kV$_{DC}$ - output to earth
Protection Class	IP 23
Color	RAL 7035
Operating temperature	-20 to +55°C (-4 to +113°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")
DESIGN STANDARDS	
Electrical safety	EN 60950-1-3rd 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