

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

24V, 36V & 48V

Doc MFGS0208.001.DS3 – rev4

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, 36 & 48 VDC SYSTEMS
- AC OR DC INPUT
- 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

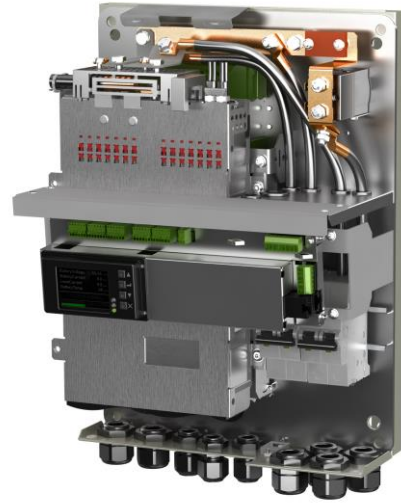
The Flatpack S Wallbox is a complete, ready to install system

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 / 36V / 48V

INPUT DATA

| | |
|-----------------|--|
| Voltage range | 85-305 V _{AC} / 300 V _{DC} |
| Frequency | 0-66 Hz |
| Maximum current | 5.9 / 5.9 / 9.9 Arms |
| Power factor | 0.99; 50-100% load |

OUTPUT DATA

| | |
|-------------------|---------------------------------|
| Nominal voltage | 24 / 36 / 48 V _{DC} |
| Maximum current | 41.7 / 27.8 / 37.5 A |
| Maximum power | 1000 / 1000 / 1800 W |
| Output protection | Blocking OR-ing FET or Diode |

OTHER SPECIFICATIONS

Efficiency >93 / >95 / >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 | 36V | 48V |
|-------------|---------------|------------|---------------|
| Part number | CIOS0208.nnnn | On request | CIOS0208.nnnn |

INPUT DATA

| | | | |
|------------------------------------|--|-------------------------|-------------------------|
| Voltage (range) | 85 to 305 V _{AC} (45-66 Hz) / 85 to 300 V _{DC} | | |
| Input protection | Individual fuse in rectifier modules | | |
| Current @ nominal input, full load | 2x 5.9 A _{RMS} | 2x 5.9 A _{RMS} | 2x 9.9 A _{RMS} |
| Connection | Terminals 2.5 mm ² | | |

OUTPUT DATA

| | | | |
|--|---|--------------------|--------------------|
| Voltage (nominal) | 24 V _{DC} | 36 V _{DC} | 48 V _{DC} |
| Power (maximum) @ nominal input | 2000 W | 2000 W | 3600 W |
| Current (maximum) @ nominal input | 83.4 A | 55.6 A | 75 A |
| | (max. 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 \leq 1.5 mm ²) | 3 x Potential free change over contacts (NO, NC, C) [Max 75V/2A/60W] |
| Inputs (Connection: terminals \leq 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 211 mm (10.75 x 14.61 x 8.31") |

DESIGN STANDARDS

| | |
|-------------------|--|
| Electrical safety | EN 60950-1 3 rd 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 |
| Environment | Normal operating conditions as per IEC 62040-5-3:2016 clause 4.2. Other operating conditions, as per IEC 62040-5-3:2016 clause 4.3, must be advised |