# Micropack Wallbox

## Power Supply System 12V/480W, 24V/960W or 48V/1000W

### Compact wall mounted power supply system

The Micropack wallbox have been designed for industrial and telecom applications with power requirements in the range of 120- 1000W. With its compact design and simple installation and optional internal backup batteries, it makes it a really "micro" DC backup system.

# MICROPACK WALLBOX
## POWER SUPPLY SYSTEM

Doc CTOU0410.DS3 – rev7

## APPLICATIONS

**Telecom - Wireless, fiber and broadband**
Today's communications demand state of the art, cost efficient and compact DC power systems. The Micropack delivers a cost- efficient power solution that can be easily adapted for applications where there is limited space.

**Industrial – Power utilities, process industry, marine and offshore**
Increasing demand for reliable DC power with or without battery backup makes Micropack Wallbox the ideal choice in the small power range

## PRODUCT DESCRIPTION

The basic power core has 4 rectifier positions, and can be configured as a bulk DC output feed, or integrated 1 or 2 pole distribution.

The power core is prepared for any Micropack rectifier module and the system output can be either of the following: (based on module choice)

· 12V/120 – 480W / 10 – 40A
· 24V/240 – 960W / 10 – 40A
· 48V/250 – 1000W / 5.2 – 21A

The system have two options for monitoring and control, by the Compack controller, or if display or extended controller functionality is needed it can be configured with Smartpack2 controller In the lower left side of the box there is space for optional backup batteries (4x12V/7Ah, only with bulk DC output)

Simple removable front cover gives good access for installation and connections

## KEY FEATURES

- **COMPACT DESIGN**
The small system dimensions are ideal locations with limited space

- **BULK-FEED OR INTEGRATED DISTRIBUTION**
The system can be configured as a bulk DC output feed, or integrated load and battery distribution to meet your power solution requirements.

- **DIGITAL CONTROLLERS**
The controller is digitalized, enabling excellent monitoring and regulation characteristics, included Ethernet for remote monitoring.

- **HEAT MANAGEMENT**
The box is optimized for Micropack with its natural convection cooling.

- **UNIQUE INSTALL ABILITY**
Simple removable front cover gives good access for installation and connections. Combined with true plug-and play modules, this gives short cost effective time-to-install.

- **GLOBAL APPROVALS**
Micropack Wallbox is CE marked for worldwide installation.

# MICROPACK WALLBOX

## RECTIFIERS

### Plug and play

The Wallbox comes with power core and controller. Set the output voltage of the system by inserting the proper rectifier type. The controller will automatically set default settings for the selected output voltage range. The power core is coded to prevent a rectifier with an incorrect output voltage being inserted into the system.

### Redundancy and features

The rectifiers communicates over the internal CAN bus for active current sharing. Redundancy is achieved by installing more rectifiers than needed for supplying the load. The controller has an efficiency mode that shuts down spare rectifiers when load is low to save power. Energy supplied by the rectifiers can viewed in the controller Web pages. Details on rectifier status, firmware and serial number are also available. The controller can be set up to give alarms or warnings if the system is loaded at configurable levels of its total capacity (based on installed functional rectifiers).

## AVAILABLE RECTIFIERS FOR THE MICROPACK WALLBOX

| Part number | Description | Voltage range | Efficiency | # cells supported | | Output protection |
| --- | --- | --- | --- | --- | --- | --- |
| | | | | Pb | NiCad | |
| 241120.300 | Micropack 12V/120W WOR | 10.7 – 18.0 V | > 88% (50-100% load) | 6 or 7 | 10 or 11 | Fuse |
| 241120.200 | Micropack 24V/240W WOR | 21.5 – 36.0 V | > 92% (50-90% load) | 12 or 15 | 20 to 22 | Fuse |
| 241120.100 | Micropack 48V/250W | 43.5 – 57.6 V | > 93% (55-100% load) | 24 | - | Fuse |

Specifications are subject to change without notice
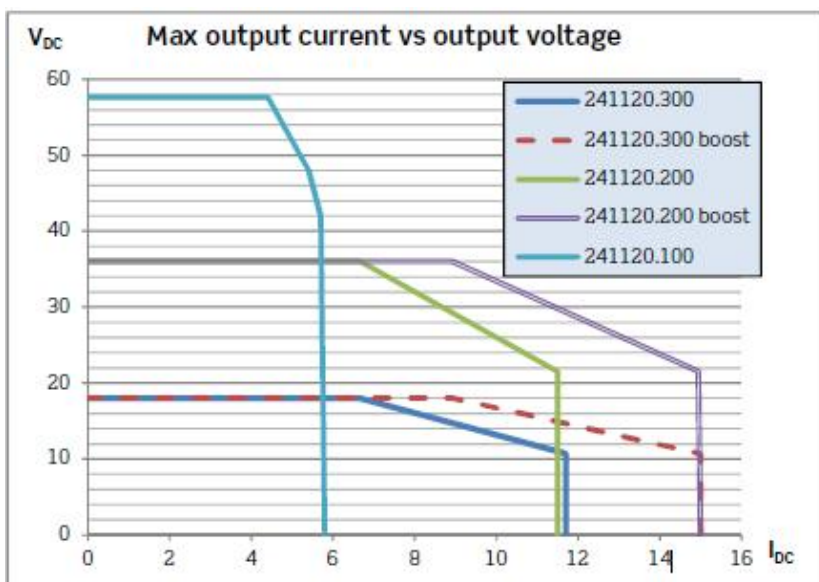
## MICROPACK PERFORMANCE

### Constant power and short circuit proof

The Micropack rectifiers have a constant power characteristic in their supported output voltage range. The output current is limited if the output is short-circuited and voltage falls below the rectifier output voltage range.

### Power boost

The 12V and 24V rectifiers are allowed to enter a boost mode for up to 60s. During boost they can deliver 30-40% more power than rated (maximum 15A). This helps starting up capacitive loads.

### Selective fuse tripping (SBF)

In a multi-branch, battery-less system it is vital that the rectifiers can provide enough current for tripping the load fuses. If there is a short in one branch, its fuse needs to be tripped quickly in order for the other branches to operate unaffected. The 12V and 24V rectifier will give a 50 to 55A pulse duration of 35ms to help tripping fuses. This is initiated by a sudden drop in the output voltage exceeding 5V.
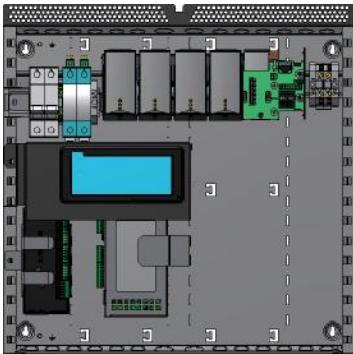
# MICROPACK WALLBOX

## MICROPACK WALLBOX IN FIVE DIFFERENT VERSIONS
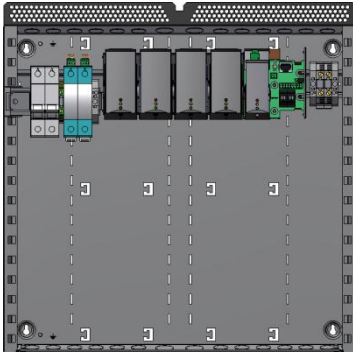
### Micropack Wallbox bulk feed DC Output with Compack controller
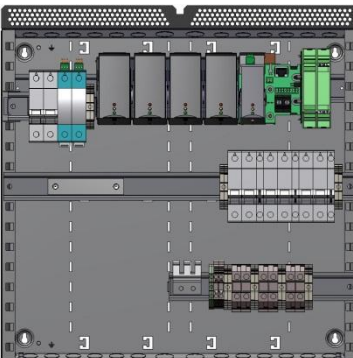Designed for 12, 24, 48, $V_{DC}$
- Power core for 4pcs Micropack rectifiers
- Common feed AC-input with SPD (option)
- Compack DC System controller
- Ethernet and Web interface for remote monitoring
- 3 Digital inputs for external alarm
- 3 Relay outputs NO, COM, NC for remote alarm
- 40 A DC bulk feed output, wired to terminals

### Micropack Wallbox bulk feed DC Output with Smartpack2 controller
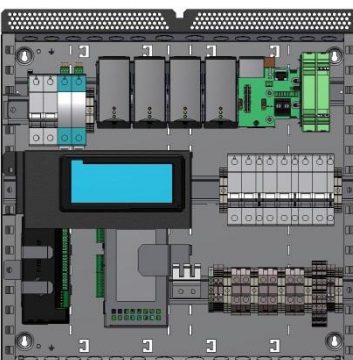Designed for 24, 48, $V_{DC}$
- Power core for 4pcs Micropack rectifiers
- Common feed AC-input with SPD (option)
- Smartpack2 DC System controller with 3,2″ TFT color display
- Ethernet and Web interface for remote monitoring
- 6 Digital inputs for external alarm
- 6 Relay outputs NO, COM, NC for remote alarm
- 40 A DC bulk feed output, wired to terminals

### Micropack Wallbox 2 pole distribution with Compack controller
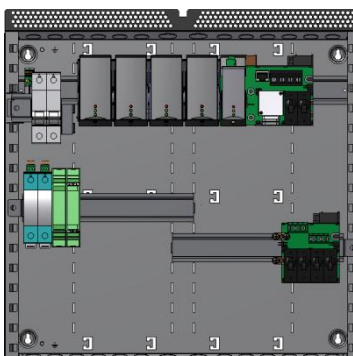Designed for 12, 24, 48, $V_{DC}$
- Power core for 4pcs Micropack rectifiers
- Common feed AC-input with SPD (option)
- Compack DC System controller
- Ethernet and Web interface for remote monitoring
- 3 Digital inputs for external alarm
- 3 Relay outputs NO, COM, NC for remote alarm
- 1*2 pole battery fuse, 16-50 A, 2*2 pole load fuses, 1-32 A
- Battery and load fuse alarm
- AC, battery and load connections to terminals

### Micropack Wallbox 2 pole distribution with Smartpack2 controller
Designed for 24, 48, $V_{DC}$
- Power core for 4pcs Micropack rectifiers
- Common feed AC-input with SPD (option)
- Smartpack2 DC System controller with 3,2″ TFT color display
- Ethernet and Web interface for remote monitoring
- 6 Digital inputs for external alarm
- 6 Relay outputs NO, COM, NC for remote alarm
- 3 Relay output connected to terminals
- 1*2 pole battery fuse, 16-50 A, 2*2 pole load fuses, 1-32 A
- Battery and load fuse alarm
- AC, battery and load connections to terminals
- Temperature sense interface to terminals

### Micropack Wallbox 1 pole distribution with Compack controller
Designed for - 48, $V_{DC}$
- Power core for 4pcs Micropack rectifiers
- Common feed AC-input with SPD (option)
- Compack DC System controller
- Ethernet and Web interface for remote monitoring
- 3 Digital inputs for external alarm
- 3 Relay outputs NO, COM, NC for remote alarm
- 2*1 pole battery fuse, 16-30 A, 4*1 pole load fuses, 2-30 A
- Battery and load fuse alarm
- Integrated battery shunt
- Integrated LVBD contactor

# MICROPACK WALLBOX

ELTEK

| Model | Bulk Feed Compack | Bulk Feed SP2 | 2 - pole dist. Compack | 2 - pole dist. SP2 | 1 - pole dist. Compack |
|---|---|---|---|---|---|
| Part number | CTOU0410.XXXX | CTOU0410.XXXX | CTOU0410.XXXX | CTOU0410.XXXX | CTOU0410.XXXX |
| **INPUT DATA** | | | | | |
| Voltage (range) | 1x single phase feed (85 - 300) $V_{AC}$ | | | | |
| Single AC feed | • | • | • | • | • |
| Single AC feed with SPD ( OVP Class 2) | Option | Option | Option | Option | Option |
| Recommended input breaker | 10 A | | | | |
| Protection | Individual fuse in rectifier module On/Off MCB | | | | |
| Connection | Directly on input MCB, up to 25mm$^2$ | Directly on input MCB, up to 25mm$^2$ | Terminal, max 4mm$^2$ | Terminal, max 4mm$^2$ | Directly on input MCB, up to 25mm$^2$ |
| **OUTPUT DATA** | | | | | |
| Voltage | 12-48 $V_{DC}$ | 24-48 $V_{DC}$ | 12-48 $V_{DC}$ | 24-48 $V_{DC}$ | - 48 $V_{DC}$ |
| NiCad, number of cells supported | 10-11 / 20-22 | 20-22 | 10-11 / 20-22 | 20-22 | - |
| Pb, number of cells supported | 6/12/24 | 12/24 | 6/12/24 | 12/24 | 24 |
| Power (maximum) @ nominal input | 1000 W | | | | |
| Current (maximum) @ nominal input | 40 A | | | | |
| Unprotected bulk output | • | • | - | - | - |
| Protected battery outputs | - | - | 1 x 2 pole (16 - 50 A) | 1 x 2 pole (16 - 50 A) | 2 x 1 pole (16 - 30A) |
| Protected load outputs | - | - | 2 x 2 pole (1 - 32 A) | 2 x 2 pole (1 - 32 A) | 4 x 1 pole (2 - 30A) |
| Integrated battery shunt and LVBD | - | - | - | - | 50A |
| Connection | Terminal, max 16mm$^2$ | Terminal, max 16mm$^2$ | Terminal, max 16mm$^2$ | Terminal, max 16mm$^2$ | Terminal, max 4mm$^2$ |
| Output Protection in rectifiers | Fuse | | | | |
| **CONTROL AND MONITORING** | | | | | |
| Monitoring Unit | Compack | Smartpack 2 | Compack | Smartpack 2 | Compack |
| Local Operation | WEB Interface | Display and keys | WEB Interface | Display and keys | WEB Interface |
| Remote Operation | WebPower (WEB Interface, SNMP protocol and email) | | | | |
| Number of Alarm Relays (NO, COM, NC) | 3 | 6 | 3 | 6 | 3 |
| Number of configurable inputs | 3 | 6 | 3 | 6 | 3 |
| Current measurements | Rectifier current and if battery shunt is used; 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/load breaker tripped alarm and much more | | | | |

## OTHER SPECIFICATIONS

| | |
|---|---|
| Isolation | 3.0 kV$_{AC}$ - input to output<br>1.5 kV$_{AC}$ - input to earth<br>0.5 kV$_{DC}$ - output to earth |
| Operating temperature | -40 to +45°C (-40 to +113°F), humidity 5 - 95% RH non-condensing<br>Output power de-rates at high temperature, see datasheet for applicable rectifier |
| Protection Class | IP21, (IP22, with additional cover PN: 298484) |
| Storage temperature | -40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing |
| Dimensions[WxHxD] / Weight | 452 x 450 x 200mm (17.8 x 17.7 x 7.9") / 7 kg (excluding rectifiers) |

## DESIGN STANDARDS

| | |
|---|---|
| Electrical safety | IEC/EN 60950-1 |
| EMC | ETSI EN 300 386 V.1.3.2<br>EN 61000-6-1 / -2 / -3 / -4 /-5* |
| Environment | ETSI EN 300 019, ETSI EN 300 132 - 2 |

* Only valid for Wallbox with 12 and 24 V rectifiers