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USER MANUAL

Uninterruptible power supply in wall box Cameleon BOX

IP42 box

10.01.2018

Warnings

- **Read this manual carefully before operation.**
- **Do not touch internal elements of the working device – danger of shock or burn.**
- **Protect device against penetration of its interior by any object or liquid – danger of shock and damage of the device.**
- **Do not cover ventilation holes – danger of damage of the device.**
- **Ensure there is a free space of at least 10 cm at sides of the device to allow proper ventilation.**
- **It is forbidden to carry the device with mounted and connected batteries.**
- **The device must be powered from the mains with a protective earth terminal.**
- **The device can interfere with sensitive radio or TV devices operating nearby.**

1. Technical description

1.1. Purpose

The Cameleon BOX power supplies for battery cooperation supply the uninterruptible voltage from the mains or when it fails from the internal lead-acid sealed VRLA battery of the AGM type. When switching from the mains operation into the battery operation and vice versa, there is no temporary voltage drop at the output.

Type	Output voltage	Max. output current	Max. battery capacity	Box dimensions [mm]
ZMS-1-12V10A	12V	10A	Up to 36Ah*	395 x 356 x 96
ZMS-1-12V16A	12V	16A		
ZMS-3-12V10A	12V	10A	Up to 80Ah*	455 x 356 x 187
ZMS-3-12V16A	12V	16A		
ZMS-1-24V6A	24V	6A	18Ah	395 x 356 x 96
ZMS-1-24V12A	24V	12A		
ZMS-3-24V6A	24V	6A	40Ah	455 x 356 x 187
ZMS-3-24V12A	24V	12A		
ZMS-1-48V3A	48V	3A	5Ah	395 x 356 x 96
ZMS-1-48V6A	48V	6A		
ZMS-3-48V3A	48V	3A	18Ah	455 x 356 x 187
ZMS-3-48V6A	48V	6A		

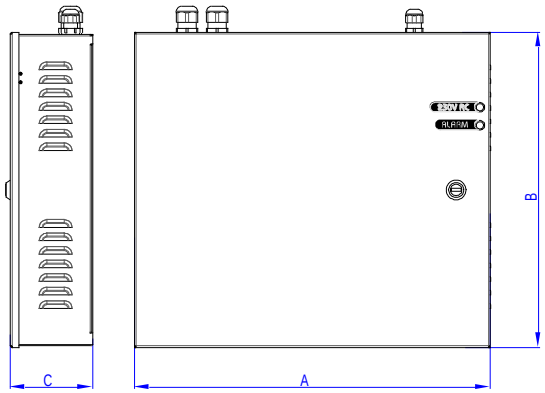
* In the 12V version it is possible to connect battery in parallel.

1.2. Technical parameters

Basic electrical and environmental parameters

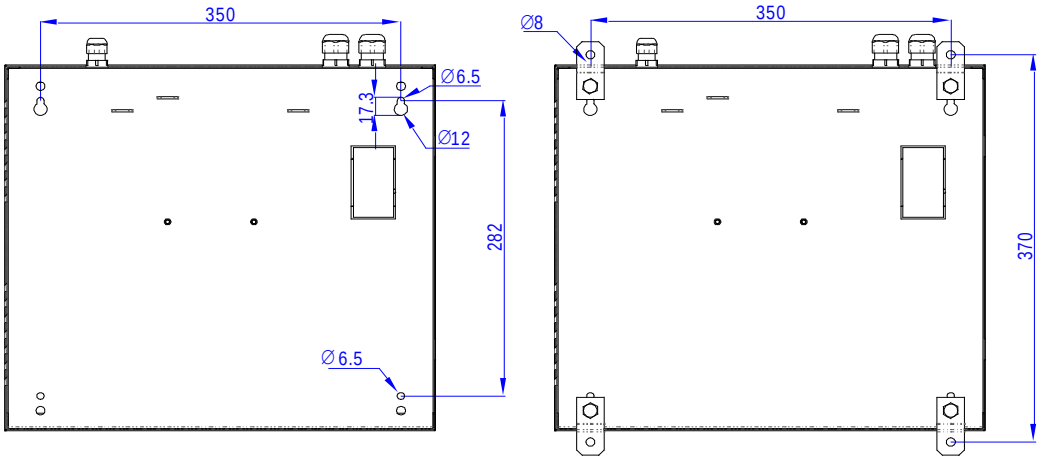
Rated mains ac voltage	184…230…253Vac 50Hz
Rated power dc voltage	165…220…297Vdc
Operating temperature	-33…+50°C
Protection degree EN 60529:2003	IP 42
Protection class EN 60950-1:2007	I

The detailed electrical data of the power supply are included in the User Manual on the modular power supplies of the ZM Series supplied with the device.



Box type	A [mm]	B [mm]	C [mm]
1	395	356	96
3	455	356	187

Fig. 1. Dimensional drawing of ZMS box.



Box type	A [mm]	B [mm]	C [mm]	D [mm]
1	350	282	350	370
3	410	282	410	370

Fig. 2. Exemplary spacing of holes for fixing ZMS box type 1.

2. Installation and connection

- **Please, follow the Manual while assembling and mounting the device.**
- **Mount the device in the place which is not exposed to the direct sunlight.**
- **Mounting and connecting are allowed only when batteries are taken out.**
- **Observe proper polarity when connecting batteries.**
- **The device must be powered from the mains with a protective earth terminal.**
- **Check the reliability of all connections before switching the device on**.

2.1. Installation

The power supply should be mounted in a carefully selected place, to minimize the risk of mechanical damages and not to exceed the allowable ambient temperature and humidity. Power supplies of fire protection devices should be mounted nearby this equipment to minimize voltage drops.

The box should be mounted at the wall, using the four holes in the rear side of the box. The box should be fixed at the wall with 4 wall plugs and steel screws. Due to the heavy load (battery banks), it is recommended to use steel dowels and steel screws.

If it is necessary to move the back panel of the box away from the wall surface (e.g. to lead the cables through the hole in the back panel, without using glands), please order additional holders at the MERAWEX sp. z o.o. company: manufacturer's symbol A ZSP W-1. The set of holders includes bolts and nuts for fixing in additional holes in the corners of the back panel of the box. Spacing of the box surface from the wall is 8mm.

The location of the fixing holes is mentioned in the item 1.2. Technical data.

After installing the batteries, the temperature sensor tip (connected to the ZM power supply) should be placed near the batteries. **It is recommended to place the sensor tip between the side walls of adjacent batteries.**

2.2. Connection

It should be remembered that the device must be connected to a fixed installation by using a protective conductor. It is recommended to equip the installation with a surge protection system. The approach with the installation cables is possible from above or from the left side via the attached glands after removing factory-made plugs. All connections should be made in accordance with the drawing placed inside the device on the door of the cabinet. The unused plugs should not be removed.

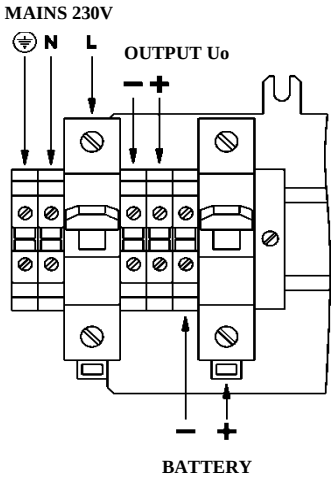


Fig. 3. Connection of ZMS.

3. Signalization

3.1. Introductory information

The output voltages as well as signalization thresholds are factory set. The power supplies after installation require current supervision related to the alarm states only that may occur during the operation of the device.

Signalization of ZMS statuses

- LED on
- LED off

Operation status	LED signalization	
	230V AC green	**ALARM** yellow
No voltage	○	○
Operation when mains is on	☼	○
Battery operation	○	☼
Battery fault when mains is on	☼	☼

If it is necessary to determine the operation status of the power supply more accurately, after opening the cabinet door, there are the LEDs - green **MAINS**, yellow **OCP**, yellow **FLT**, yellow **CHRG** and yellow **BAT** placed on the front panel of the ZM component power supply.

Mains status indication (LED on the front panel of the ZM power supply)

green LED **MAINS**	**Mains status**
○	No mains
☼	Mains on. Converter OK
○	Mains on. Converter faulty

Power supply load status indication (LED on the front panel of the ZM power supply)

yellow LED **OCP**	**Overload status**
○	Operation OK
☼	Converter overloaded

Failure status indication (LED on the front panel of the ZM power supply)

yellow LED **FLT**	**Fault states**
○	No faults
☼	Battery operation (no mains or converter fault) Low battery voltage No battery No battery circuit continuity Battery fuse blown No temperature sensor or temperature sensor faulty

Battery charging status indication (LED on the front panel of the ZM power supply)

yellow LED **CHRG**	**Battery charging statuses**
○	Charging completed
☼	Bulk charging in progress
☼	1s/1s charging in floating mode
☼	0.5s/0.5s converter overheated

Battery indication (LED on the front panel of the ZM power supply)

yellow LED **BAT**	**Battery statuses**
○	No faults
☼	No battery (only before activation of the LVDD) (Ubat<1.8V/cell)
☼	1s/1s battery operation

3.2. Maintenance

The device does not require any special maintenance. During normal operation, only care should be taken to ensure proper cleanliness around the cabinet.

It should be noted that the battery life declared by the manufacturer is 10 years at 20°C, reaches 6 years at 25°C and drops twice when the temperature increases by further 8°C.

4. Service

- **A user can independently exchange only the battery fuse located on the front panel of the power supply, placed inside the box, into the fuse of the same type and current value.**
- **All warranty and post-warranty repairs are performed by the manufacturer's Service Department or a specialized unit authorized by the manufacturer.**

5. Handling of packages, used products and batteries.

The packaging of the product is made of non-hazardous materials (wood, paper, cardboard, plastics) that can be recycled.

Unnecessary packaging should be handed over to the waste recipient after sorting.

The used product is non-hazardous waste that should not be thrown into a general container for municipal waste, but should be handed over to the local recipient of waste electrical and electronic equipment.

Professional handling of the waste electric and electronic equipment will limit negative effects of improper storage and processing of this waste on human health and environment.

The used out batteries must be disposed of in accordance with the provisions of the "Batteries and Accumulators Act" of 24 April 2009 (Journal of Laws of 2009, No. 79, item 666). They are sealed (equipped with unidirectional self-sealing valve), maintenance-free lead acid batteries VRLA classified according to the industrial batteries category, which, after use, is hazardous waste of the code 16 06 01* (Regulation of the Minister of Infrastructure dated 27 Sept. 2001 on the waste catalog - Journal of Laws 2001 No. 112 item 1206).