

D-IPS[®]-BM-BAT(-OC) Manual

Battery Pack with integrated, active temperature sensor – Accessory for D-IPS[®]-(I)BM and D-IPS[®]-BM-EC UPS Battery Management Systems



D-IPS[®]-BM-BAT-OC - open housing with integrated, active temperature sensor

D-IPS[®]-BM-BAT-OC-12-7Ah / Article: 101820

- contains 12V/7Ah AGM lead based battery; fuse: 30A

D-IPS[®]-BM-BAT-OC-12-14Ah / Article: 101821

- contains two 12V/7Ah AGM lead based batteries; fuse: 30A

D-IPS[®]-BM-BAT-OC-24-7Ah / Article: 101822

- contains two 12V/7Ah AGM lead based batteries; fuse: 30A

D-IPS[®]-BM-BAT - closed housing with integrated, active temperature sensor

D-IPS[®]-BM-BAT-12-14Ah / Article: 101823

- contains two 12V/7Ah AGM lead based batteries; fuse: 30A

D-IPS[®]-BM-BAT-24-7Ah / Article: 101824

- contains two 12V/7Ah AGM lead based batteries; fuse: 30A

D-IPS[®]-BM-BAT-24-14Ah / Article: 101825

- contains four 12V/7Ah AGM lead based batteries; fuse: 2x30A

Scope of delivery D-IPS[®]-BM-BAT and D-IPS[®]-BM-BAT-OC:

1 piece	sensor cable: active temperature sensor integrated in BAT container
1 piece	red cable: 1,5m (4 mm ²), assembled
1 piece	black cable: 1,5m (4 mm ²), assembled
2 pieces	ring terminals M5 for D-IPS [®] -BM-EC
1 (or 2) piece	FK2- fuse 30A
1 (or 2) piece	fuse cover

Notice: Please take care to use a corresponding fuse if a different battery type is used!

Please read the manual carefully before operating the battery pack and use the device in accordance with the instructions!

Only special trained and qualified staff is allowed to install the device and put it into operation!

Instruction manual for VRLA batteries

Battery types included:

Only high quality VRLA batteries are used in the D-IPS[®]-BM-BAT and D-IPS[®]-BM-BAT-OC battery packs.

Temperature range:

The recommended operating temperature for valve controlled lead batteries is 10-30°C (ideal 20°C +/-5°C). Higher temperatures reduce the life time of the battery. The technical data are valid for a nominal temperature of 20°C. Lower temperatures reduce the available capacity. The maximum of 50°C (Thermal Runaway) may not be exceeded. The average operating temperature mustn't exceed 40°C. This temperature datas can be read by Deutronic temperature sensor.

Addition and compensation charging after storage:

To reach an optimal life time of the battery, we recommend an addition charging before putting into operation

- *if the batteries were stored longer than 6 month*
- *if the first use is > 9 months after production date*
- *at an open circuit voltage (=OCV) < 2,1V/cell*
- *at an OCV ≤ 2.0V/cell batteries should not be re-charged and must be disposed*

Battery maintenance and inspection:

Keep the battery always clean and dry to avoid leakage currents. The plastic parts of the battery should be cleaned only with water without solvent. Use of organic solvents is forbidden.

The following values have to be recorded at least every 12 months:

- *terminal voltage (= OCV) of the battery system and all cells*
- *(visual) check of the connection on strength*

Besides a general visual inspection the following values have to be recorded at least every 6 months:

- environmental and battery temperature
- standby/ trickle charge voltage

Testing:

Tests have to be done acc. to EN50272-2:2001. To ensure a reliable UPS-system, the complete battery should be replaced at the end of the life time.

Take out of operation and storage:

If batteries are took out of operation or stored for some time, then these have to be put fully charged in a dry, frost-protected room. The previously described addition charging is recommended to avoid damages.

IMPORTANT! Remove the fuse from D-IPS[®]-BM-BAT or D-IPS[®]-BM-BAT-OC or disconnect the battery by a switch from the electronics when take it out of operation for a longer time (example calculation: 5mA current through the electronics leads to discharging by approx. 3.6Ah within 30 days).

Indications for use and safety

The battery modules D-IPS[®]-BM-BAT and D-IPS[®]-BM-BAT-OC are primary designed for applications in the industrial area. To ensure a safe and clean operation, correct transport as well as professional storage, mounting and installation has to be required! Very high currents can appear during the operation particularly at short circuit behaviour for a short time.

Before operation is started please following these notes:

- instruction manual battery pack D-IPS[®]-BM-BAT and D-IPS[®]-BM-BAT-OC
- instruction manual of the power supply (e.g. UPS management D-IPS[®])
- all security warnings on the used components

Improper use of the DC-UPS module and its attached components, may cause considerable damages. Deutronic is not liable at any improper operation.

Mounting

Fuse:

Before connecting the cables to the UPS-system remove the fuse (30A) from the battery pack! The fuse should be inserted only at initial use

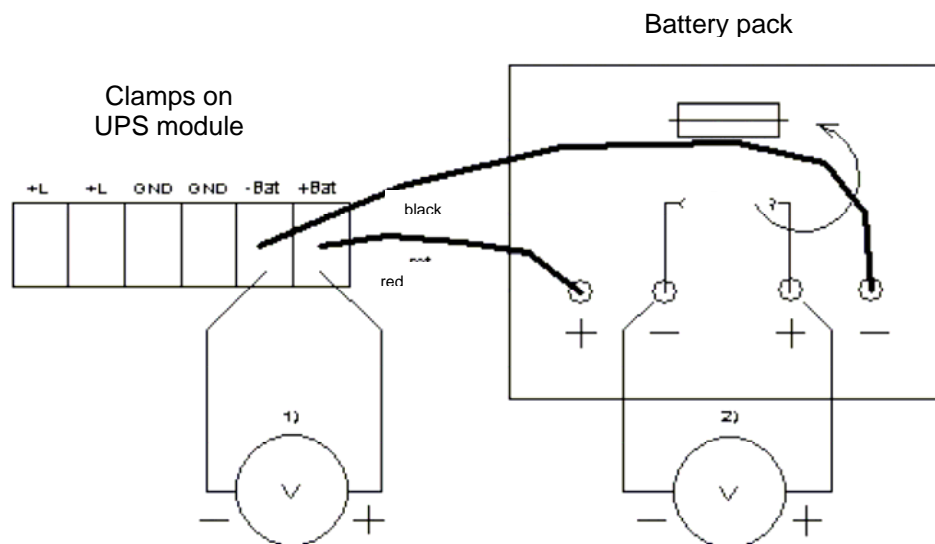
Battery pack:

- Mounting on the bottom of the cabinet if possible
- Mount it vertically
- Fixation with 4 screws M5x8

Wiring:

- Connect the UPS-module with the battery pack
 - Red lead to the plus pole [+BAT]
 - Black lead to the minus pole [-BAT]
 - When using different cables please make sure that the diameter is big enough
 - When connected to D-IPS®-(I)BM is recommended to put wire end sleeves on the leads
 - When connected to D-IPS®-BM-EC please install the ring terminals M5
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- Max. cable length between UPS module and battery pack: 2,5m
 - If the cables diameter is $> 2.5 \text{ mm}^2$, please use cable lugs to taper the leads

Connection outline of battery pack:



Initial start of operation

!!! Only allowed for special qualified personnel !!!

Attention: Before initial start of operation the battery must be fully charged!!!

- Make sure the fuse is removed from the battery pack before connection
- Start of operation – for more details see the instruction manual of UPS-management D-IPS®-(I)BM
- Before put the fuse in, make sure that the connection is in the right polarity (typ. voltage on the fuse holder should be app. 1..2VDC)