

CERTIFICATE

Issued to:
Applicant:
Lampec AG
Stauseestrasse 73
5314 Kleindöttingen, Switzerland

Licensee:
Sander Elektronik AG
Stauseestrasse 73
5314 Kleindöttingen, Switzerland

Product : Electronic emergency units for LED lighting (self-contained)
Trade name(s) : EMCU
Type(s)/model(s) : EMCU KS ..., EMCU K ..., EMCU TDS ..., EMCU TS ..., EMCU TxS ... and EMCU T ...

The product and any acceptable variation thereof as specified in the Annex to this certificate and the documents referred to therein.

DEKRA hereby declares that the above-mentioned product has been certified based on:

- a type test according to EN 61347-2-7:2012, EN 61347-2-7:2012/A1:2019, EN 61347-2-7:2012/A2:2022, EN 61347-1:2015 and EN 61347-1:2015/A1:2021
- an inspection of the factory location according to CENELEC Operational Document CIG 021
- a DEKRA certification agreement with the number 2109045

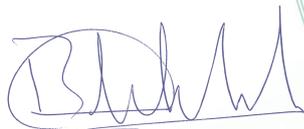
DEKRA hereby grants the right to use the ENEC certification mark.

The ENEC certification mark may be applied to the product as specified in this certificate for the duration and under the conditions of the ENEC certification agreement.

This certificate is issued on 20 November 2025 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 88-167692

DEKRA Certification B.V.



B.T.M. Holtus
Managing Director



Miranda Zhou
Certification Manager

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SPECIFICATION OF THE CERTIFIED PRODUCT**Product data**

Product	: Electronic emergency units for LED lighting (self-contained)
Trade name(s)	: EMCU
Type(s)/model(s)	: EMCU KS ..., EMCU K ..., EMCU TDS ..., EMCU TS ..., EMCU TxS ... and EMCU T ...
Voltage	: 220-240 V
Max. power	: 5 W
Rated frequency	: 50-60 Hz
Max. case temperature	: tc = 65 °C
Classification of installation	: Built-in
Ambient temperature range	: +5 °C ... +50 °C

Product data – type EMCU K ... and EMCU KS ...

Housing	: Sheet-steel
Output power	: 1 W to 3 W
Rated duration of emergency operation	: 1h / 3h / 8 h
Output voltage	: 12 V - 55 V / 20 V – 105 V / 100 V – 220 V
Max Output voltage	: 60 V / 120 V / 300 V
Description	: Emergency lighting units with earthing for LED luminaires class I For specific rating refer to test report.

Product data – type EMCU T ..., EMCU TDS ..., EMCU TS ... and EMCU TxS ...

Housing	: PC
Output power	: 1 W to 7 W
Rated duration of emergency operation	: 1h / 3h / 8 h
Output voltage	: 12 V - 55 V / 20 V – 105 V / 100 V – 220 V
Max Output voltage	: 60 V / 120 V / 350 V
Description	: Emergency lighting units with double or reinforced insulation for LED luminaires class II For specific rating refer to test report.

TESTS**Test requirements**

EN 61347-2-7:2012
EN 61347-2-7:2012/A1:2019
EN 61347-2-7:2012/A2:2022
EN 61347-1:2015
EN 61347-1:2015/A1:2021

Test result

The test results are documented in DEKRA test file 343663700.

Additional information

Type designation

example EMCU TS DALI 55V-5W/6x1865/180Li

(none) [EL]

standard emergency lighting units

-S (-SG)[EL-T]

emergency lighting units with automatic self-test (ATS)

The letter "G" in the model designation indicates the unit is shipped without accessories (e.g. status indicators have to be ordered separately).

-DA (-DALI)

adressable emergency lighting units (partially) compatible to DALI standard IEC 62386-101, -102, -202.

-MIRO

is the designation for non-DALI Alliance members in order to take into account the legally protected wording DALI.

-MIROP

The "P" in the model designation indicates the unit is equipped with a push button (e.g. for local address assignment).

-...G

The letter "G" in the model designation indicates the unit is shipped without accessories (e.g. status indicators have to be ordered separately).

-OPG

can be equipped by the luminaire manufacturer with any of the following modules, enabling communication to a central monitoring device:

MIRO, MIRO4, MIROP, SMB, SRM, SRMMB, SFE, SFI, SFX, SFY, SNE, SNI, SNX, SNY, WMA, WMU, WMEA, WMEU, WMA1, WMU1, WMEA1, WMEU1

Tests were accomplished in conjunction with a MIRO4 (DALI) module.

HLi

The H before the Li indicates that the unit is intended for the use with 26650 LFP-cells.

...O

The tailing letter "O" in the type designation indicates the unit is delivered as bare PCB (housings have to be ordered separately).

The list of components is laid down in test report 3436637.50.

Conclusion

The examination has confirmed that all requirements were met.

Factory location

Sander Elektronik AG

Stauseestrasse 73

5314 Kleindöttingen, Switzerland

Type list

Serie	Type	Mains	Battery	Min Power	Min EOFp	operating time	Output min	Output max	U-OUT
EMCU K	55V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	12V	55V	60V
EMCU K	55V/2W/3h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	1,3 W	3,3%	3h	12V	55V	60V
EMCU K	55V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5%	1h	12V	55V	60V
EMCU K	55V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	2 W	5%	3h	12V	55V	60V
EMCU K	55V/1W/8h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	0,75 W	1,9%	8h	12V	55V	60V
EMCU K	105V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1,5Ah	1 W	2,5%	1h	20V	105V	120V
EMCU K	105V/2W/3h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	1,5 W	3,8%	3h	20V	105V	120V
EMCU K	105V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2,25 W	5,6%	1h	20V	105V	120V
EMCU K	105V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2,25 W	5,6%	3h	20V	105V	120V
EMCU K	105V/1W/8h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	0,75 W	1,9%	8h	12V	55V	60V
EMCU K	220V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1,5Ah	1 W	2,5%	1h	100V	220V	300V
EMCU K	220V/2W/3h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	1,5 W	3,8%	3h	100V	220V	300V
EMCU K	220V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2,25 W	5,6%	1h	100V	220V	300V
EMCU K	220V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2,25 W	5,6%	3h	100V	220V	300V
EMCU K	220V/1W/8h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	0,75 W	1,9%	8h	100V	220V	300V

Serie	Type	Mains	Battery	Min Power	Min EOFp	operating time	Output min	Output max	U-OUT
EMCU KS	55V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	12V	55V	60V
EMCU KS	55V/2W/3h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	1,3 W	3,3%	3h	12V	55V	60V
EMCU KS	55V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5%	1h	12V	55V	60V
EMCU KS	55V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	2 W	5%	3h	12V	55V	60V
EMCU KS	55V/1W/8h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	0,75 W	1,9%	8h	12V	55V	60V
EMCU KS	105V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1,5Ah	1 W	2,5%	1h	20V	105V	120V
EMCU KS	105V/2W/3h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	1,5 W	3,8%	3h	20V	105V	120V
EMCU KS	105V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2,25 W	5,6%	1h	20V	105V	120V
EMCU KS	105V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	2,25 W	5,6%	3h	20V	105V	120V
EMCU KS	105V/1W/8h/3hLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	0,75 W	1,9%	8h	20V	105V	120V
EMCU KS	220V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1,5Ah	1 W	2,5%	1h	100V	220V	300V
EMCU KS	220V/2W/3h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	1,5 W	3,8%	3h	100V	220V	300V
EMCU KS	220V/3W/1/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2,25 W	5,6%	1h	100V	220V	300V
EMCU KS	220V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	2,25 W	5,6%	3h	100V	220V	300V
EMCU KS	220V/1W/8h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	0,75 W	1,9%	8h	100V	220V	300V
EMCU T	55V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	12V	55V	60V

Serie	Type	Mains	Battery	Min Power	Min EOFp	operating time	Output min	Output max	U-OUT
EMCU T	55V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5,0%	1h	12V	55V	60V
EMCU T	55V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2 W	5,0%	3h	12V	55V	60V
EMCU T	55V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	12V	55V	60V
EMCU T	55V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	12V	55V	60V
EMCU T	55V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	12V	55V	60V
EMCU T	105V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	20V	105V	120V
EMCU T	105V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5,0%	1h	20V	105V	120V
EMCU T	105V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2 W	5,0%	3h	20V	105V	120V
EMCU T	105V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	20V	105V	120V
EMCU T	105V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	20V	105V	120V
EMCU T	105V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	20V	105V	120V
EMCU T	220V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	100V	300V	350V
EMCU T	220V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2,25 W	5,6%	1h	100V	300V	350V
EMCU T	220V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2,25 W	5,6%	3h	100V	300V	350V
EMCU T	220V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	100V	300V	350V
EMCU T	220V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	100V	300V	350V

Serie	Type	Mains	Battery	Min Power	Min EOFp	operating time	Output min	Output max	U-OUT
EMCU T	220V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	100V	300V	350V
EMCU TS	55V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	12V	55V	60V
EMCU TS	55V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5,0%	1h	12V	55V	60V
EMCU TS	55V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2 W	5,0%	3h	12V	55V	60V
EMCU TS	55V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	12V	55V	60V
EMCU TS	55V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	12V	55V	60V
EMCU TS	55V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	12V	55V	60V
EMCU TS	105V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	20V	105V	120V
EMCU TS	105V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5,0%	1h	20V	105V	120V
EMCU TS	105V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2 W	5,0%	3h	20V	105V	120V
EMCU TS	105V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	20V	105V	120V
EMCU TS	105V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	20V	105V	120V
EMCU TS	105V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	20V	105V	120V
EMCU TS	220V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	100V	300V	350V
EMCU TS	220V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2,25 W	5,6%	1h	100V	300V	350V
EMCU TS	220V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2,25 W	5,6%	3h	100V	300V	350V

Serie	Type	Mains	Battery	Min Power	Min EOFp	operating time	Output min	Output max	U-OUT
EMCU TS	220V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	100V	300V	350V
EMCU TS	220V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	100V	300V	350V
EMCU TS	220V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	100V	300V	350V
EMCU TDS	55V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	12V	55V	60V
EMCU TDS	55V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5,0%	1h	12V	55V	60V
EMCU TDS	55V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2 W	5,0%	3h	12V	55V	60V
EMCU TDS	55V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	12V	55V	60V
EMCU TDS	55V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	12V	55V	60V
EMCU TDS	55V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	12V	55V	60V
EMCU TDS	105V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	20V	105V	120V
EMCU TDS	105V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5,0%	1h	20V	105V	120V
EMCU TDS	105V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2 W	5,0%	3h	20V	105V	120V
EMCU TDS	105V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	20V	105V	120V
EMCU TDS	105V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	20V	105V	120V
EMCU TDS	105V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	20V	105V	120V
EMCU TDS	220V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	100V	300V	350V

Serie	Type	Mains	Battery	Min Power	Min EOFp	operating time	Output min	Output max	U-OUT
EMCU TDS	220V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2,25 W	5,6%	1h	100V	300V	350V
EMCU TDS	220V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2,25 W	5,6%	3h	100V	300V	350V
EMCU TDS	220V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	100V	300V	350V
EMCU TDS	220V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	100V	300V	350V
EMCU TDS	220V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	100V	300V	350V
EMCU TxS	55V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	12V	55V	60V
EMCU TxS	55V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5,0%	1h	12V	55V	60V
EMCU TxS	55V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2 W	5,0%	3h	12V	55V	60V
EMCU TxS	55V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	12V	55V	60V
EMCU TxS	55V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	12V	55V	60V
EMCU TxS	55V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	12V	55V	60V
EMCU TxS	105V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1.5Ah	1 W	2,5%	1h	20V	105V	120V
EMCU TxS	105V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2 W	5,0%	1h	20V	105V	120V
EMCU TxS	105V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	2 W	5,0%	3h	20V	105V	120V
EMCU TxS	105V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	5 W	12,5%	3h	20V	105V	120V
EMCU TxS	105V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4.5Ah	3,5 W	8,8%	3h	20V	105V	120V

Serie	Type	Mains	Battery	Min Power	Min EOFp	operating time	Output min	Output max	U-OUT
EMCU TxS	105V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	20V	105V	120V
EMCU TxS	220V/1W/1h/1Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 1,5Ah	1 W	2,5%	1h	100V	300V	350V
EMCU TxS	220V/3W/1h/2Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 3Ah	2,25 W	5,6%	1h	100V	300V	350V
EMCU T	220V/3W/3h/3Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	2,25 W	5,6%	3h	100V	300V	350V
EMCU TxS	220V/5W/3h/6Li	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	5 W	12,5%	3h	100V	300V	350V
EMCU TxS	220V/3.5W/3h/2HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 4,5Ah	3,5 W	8,8%	3h	100V	300V	350V
EMCU TxS	220V/7W/3h/4HLi	220V-240V 50Hz-60Hz	LiFePO4 3.2V / 12,5Ah	6 W	15,0%	3h	100V	300V	350V