

# DC2412-UPS-LD

## 60 Watt | Load Dump Version

- ✓ DC/DC converter with backup function
- ✓ Supercaps for energy storage
- ✓ Inrush current limiter
- ✓ High overvoltage protection up to 123 VDC according to ISO 7637-2 „load dump“
- ✓ Ignition function
- ✓ Maintenance-free
- ✓ High cycle stability > 500 000
- ✓ Charge time <60 sec at maximum charge current
- ✓ Extended temperature range -20...+70 °C
- ✓ Compact design
- ✓ Active reverse polarity protection
- ✓ Power Fail signal via relay, RS232 connection



Technical data	
Input voltage	24 VDC (16...32 VDC)
Inrush current	<10 A
Input current	2.8 A nom.
Output power	60 W
Output voltage	12 VDC ±2 %
Output current	5 A
Output ripple	≤30 mV
Efficiency	94 % typ.
Charge current	Depending on load up to 5 A
Charging method	CC
Storage type	Supercaps 4x 100 F
Charging time	<60 sec at maximum charge current
Backup time	See diagram
Protection	Overvoltage protection – LATCH Overcurrent protection – Non LATCH Active reverse polarity protection
Temperature	Operating: -20...+70 °C / Storage: -20...+70 °C
Humidity	Operating: 10...85 % RH, non-condensing / Storage: 10...90 % RH, non-condensing
Dimensions (WxDxH)	135 x 79.5 x 35 mm incl. supercaps
Weight (net)	0.17 kg

## Optional Accessories

▷▷▷ For detailed information please visit our website [www.bicker.de](http://www.bicker.de) and refer to the article number.

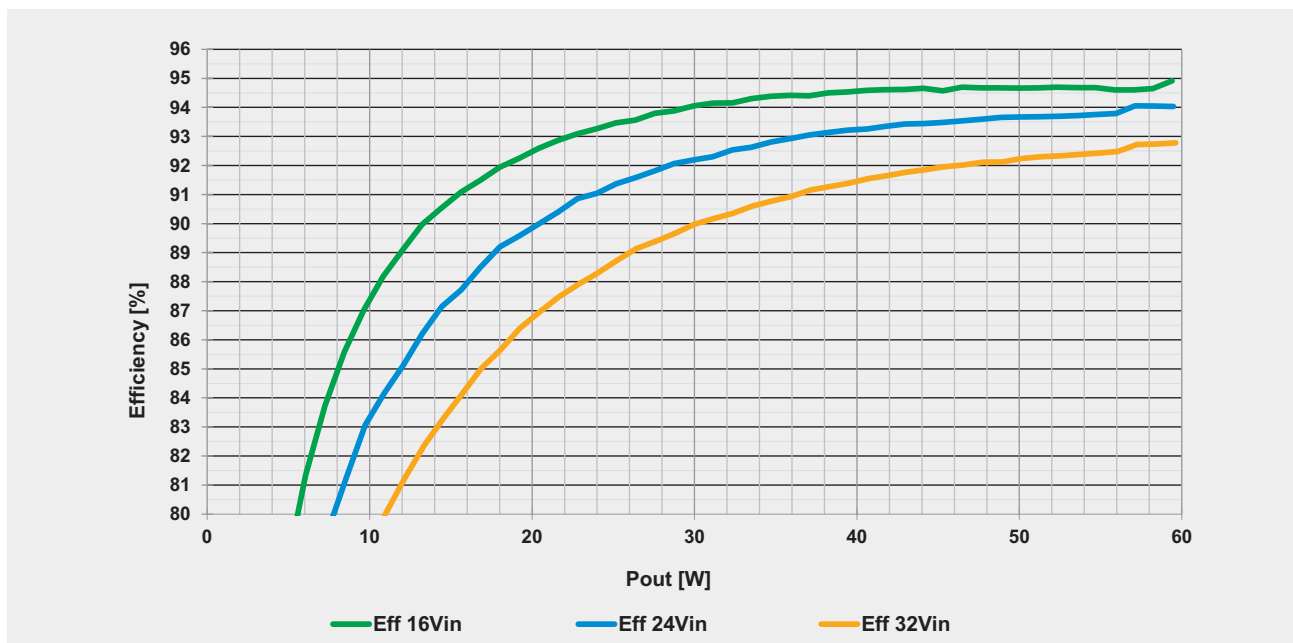
**PSZ-1036 | Input cable**  
3-pole, length 500mm, AWG 18, ends open

**PSZ-1037 | Output cable**  
2-pole, length 500mm, AWG 18, ends open

**PSZ-1009 | Male adapter**  
DCplug: 2.5 x 5.5 mm, AWG 26-12

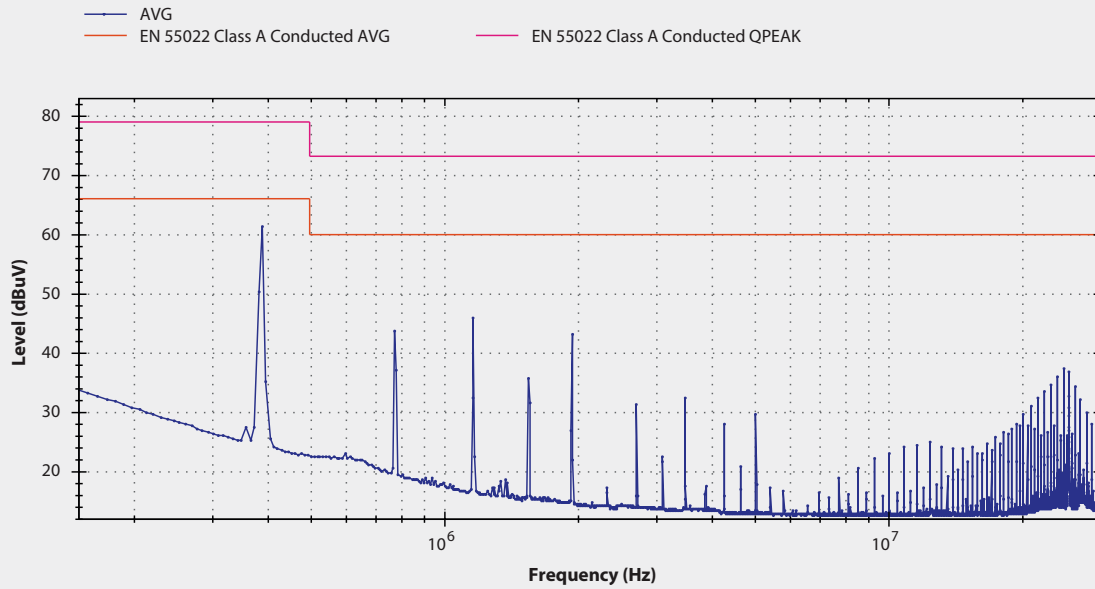
**PSZ-1046 / PSZ-1048 | Interface cable**  
Interface cable for UPSIC and DC2412,  
PSZ-1046: IDC 2.0 to SUB-D 9 pin female,  
PSZ-1048: IDDC 2.0 to IDC 2.54

## Efficiency curve

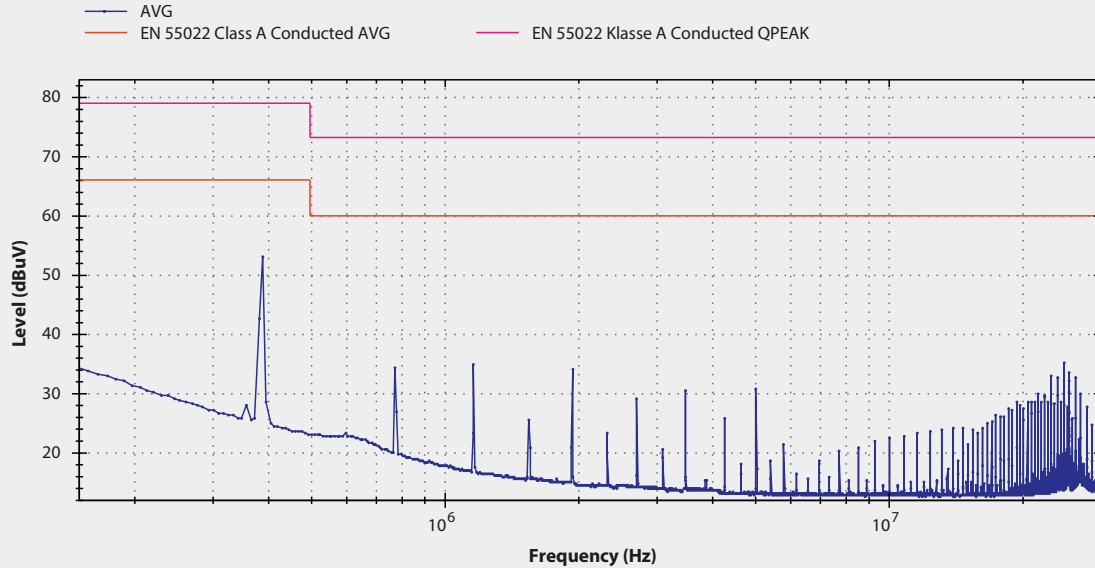


## EMC curves

## Path 0

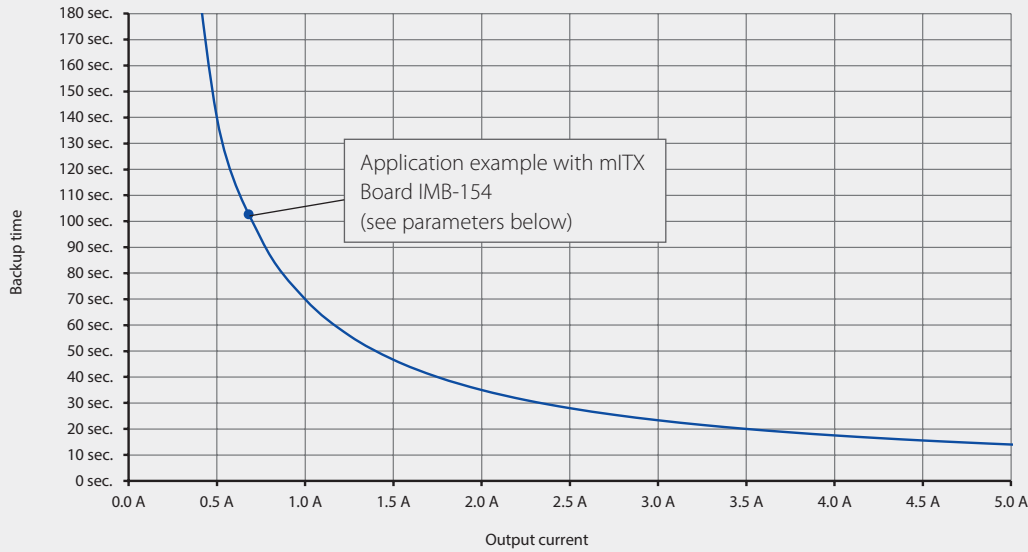


## Path 1

**Measurement conditions**

$V_{in} = 24 \text{ V}$   
 $I_{out} = 5 \text{ A full load}$   
 $T_{amb} = 21 \text{ }^\circ\text{C}$

## Backup time



Standby@No Load >30 min  
 — @ nom. Cap. & 25 °C

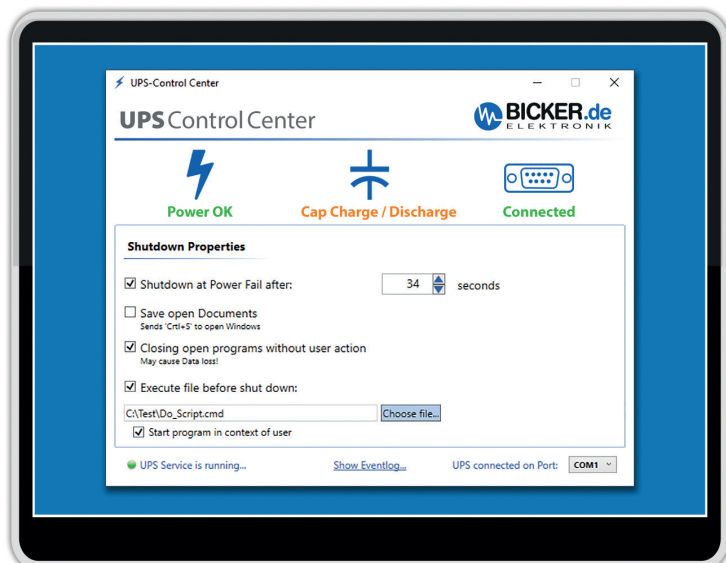
### Parameters of the test system for the backup curve

<b>Board</b>	IMB-154 L0.36 SN: 59M0X2003883 CPU: Braswell N3150; 4x 1.60GHz	<b>ROM</b>	1x mSATA 32GB Type: CIE MSM300M JB032GS SN: CIE164905767
<b>RAM</b>	2 x 4 GB / DDR3 SO-DIMM 1600MHz FB Type: CIR-S3SUSKA 1604G SN: CIR 154630106 CIR 154630106	<b>OS</b>	Microsoft Windows 10 Enterprise Evaluation Version 1511 Build 10586.589 (2016/09/16)
		<b>Test Software</b>	BurnInTest V7.1 Pro
		<b>Test results</b>	100% load: 1 min. 43 sec. = 103 sec

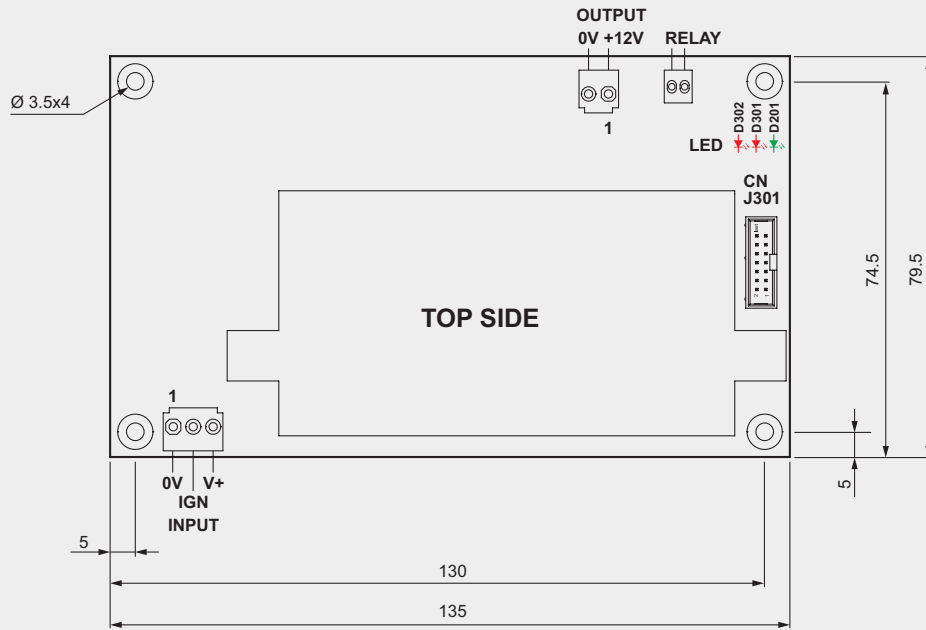
## Software UPS Control Center

### UPS Control Center

The UPS software is available for free download directly on the product page at [www.bicker.de](http://www.bicker.de).



Drawing DC2412-UPS-LD



**CN J301 – Pin assignment**

**RS232**

01	DCD signal
02	DSR signal (Low = Cap >90%; High = Cap <90%)
03	NC
04	RTS signal (Supply voltage, max. 12V)
05	NC
06	CTS signal (Low = Power Fail; High = Power OK)
07	NC
08	NC
09	GND

**I<sup>2</sup>C**

10	SMB alert
11	GND
12	XSDA I <sup>2</sup> C
13	+12V
14	XSCL I <sup>2</sup> C

**Connectors**

INPUT	VHR-3N (1: 0V, 2: IGN, 3: V+)
OUTPUT	VHR-2N (1: V+, 2: 0V)
CN J301	WR-BHD 62501021621 (pitch 2.0 mm)
RELAY	WR-691210910002

**LED**

D302	RED	Caps charging state < 90%
D301	RED	Power fail, backup mode
D201	GREEN	Normal mode

Tolerance ±0.5 mm

**Recommended power supplies from Bicker Elektronik** >>> *Additional recommendations on [www.bicker.de](http://www.bicker.de)*

BEO-1024M	BEO-1524M	BET-0924	BET-1024M	BED-12024	BEN-10024
100 Watt	150 Watt	90 Watt	100 Watt	120 Watt	100 Watt



Specification is subject to change without notice. Errors excepted. Status as at: 19.09.2017