

DC2412-UPSDP2

12 VDC / 5 A

- ✓ **DC UPS with wide range input 16...32 VDC and uninterruptible 12 VDC output**
- ✓ **DIN Rail version**
- ✓ **Already integrated Supercap as energy storage (5.1 kJ) on the PCB**
- ✓ **Temperature range -20...+65 °C**
- ✓ **Maintenance-free**
- ✓ **Active reverse polarity protection**
- ✓ **Power-fail signal via relay**
- ✓ **Additional features to open frame version:**
 - Reboot function
 - Operation of UPS at host without software possible
 - Output release from 90% Supercap capacity



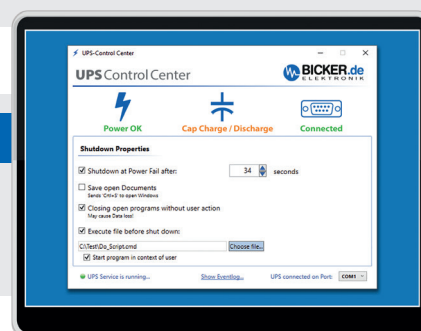
**Including
Software**
UPS Control Center

Technical Data

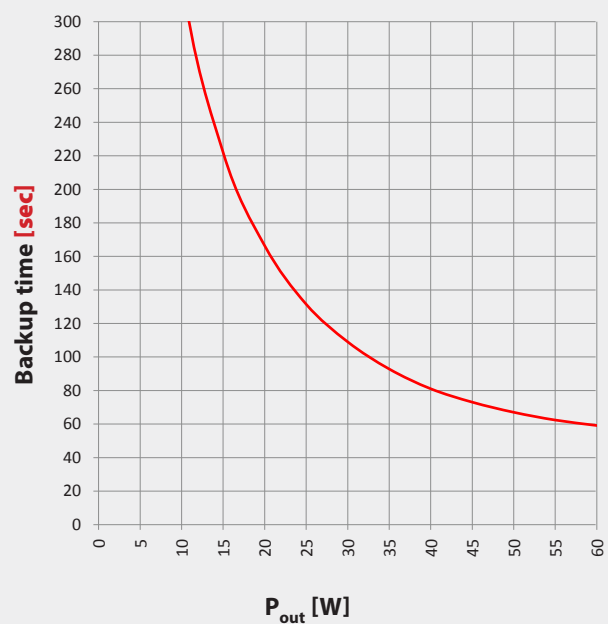
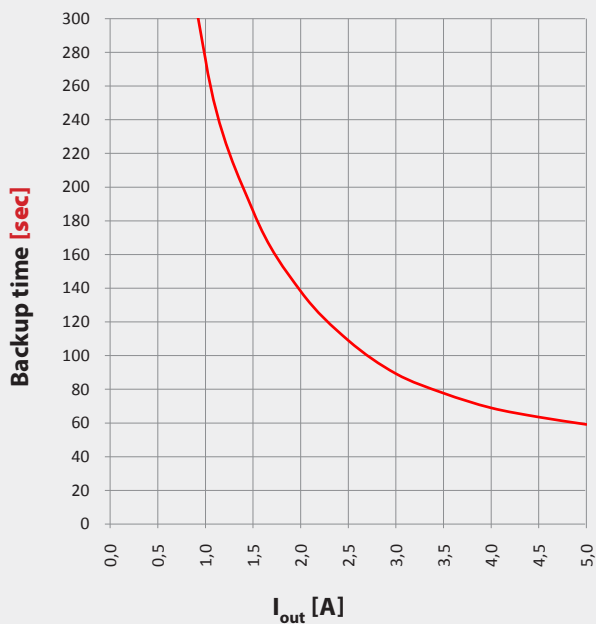
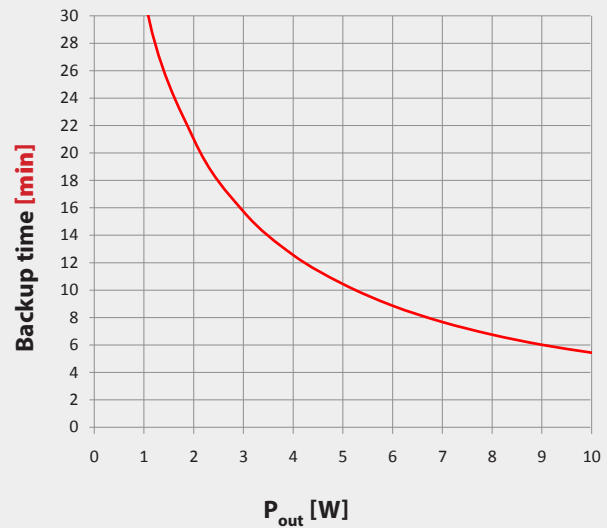
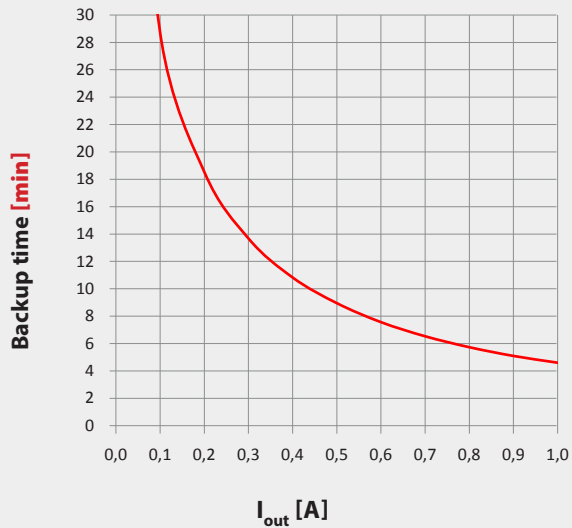
Input voltage	24 VDC (16...32 V)
Input current	2.9 A max.
Output voltage	12...11.8 VDC (depending on load)
Output current	5 A nominal
Charging method	CC – Constant Current
Protection	Overcurrent protection (non latch) Active reverse polarity protection
Interface	RS232
Battery technology	EDLC (Supercaps): 5.1 kJ (3.8 kJ useful) / 1.4 Wh (1.1 Wh useful)
Ambient temperature	Operating: -20...+65 °C Storage/Transport: -30...+65 °C
Operating altitude	≤4000 m
Max. permitted humidity	Operating: 10...85 % RH Storage: 10...90 % RH (no dew)
Dimensions W / H / D	67 x 147 x 122 mm (without front connectors and DIN Rail mounting bracket)
Weight	0.72 kg

UPS CONTROL CENTER

The software „UPS Control Center“ is available for free.
Download directly on the product page at
www.bicker.de/dc2412-upsdp2



Backup time* DC2412-UPSDP2



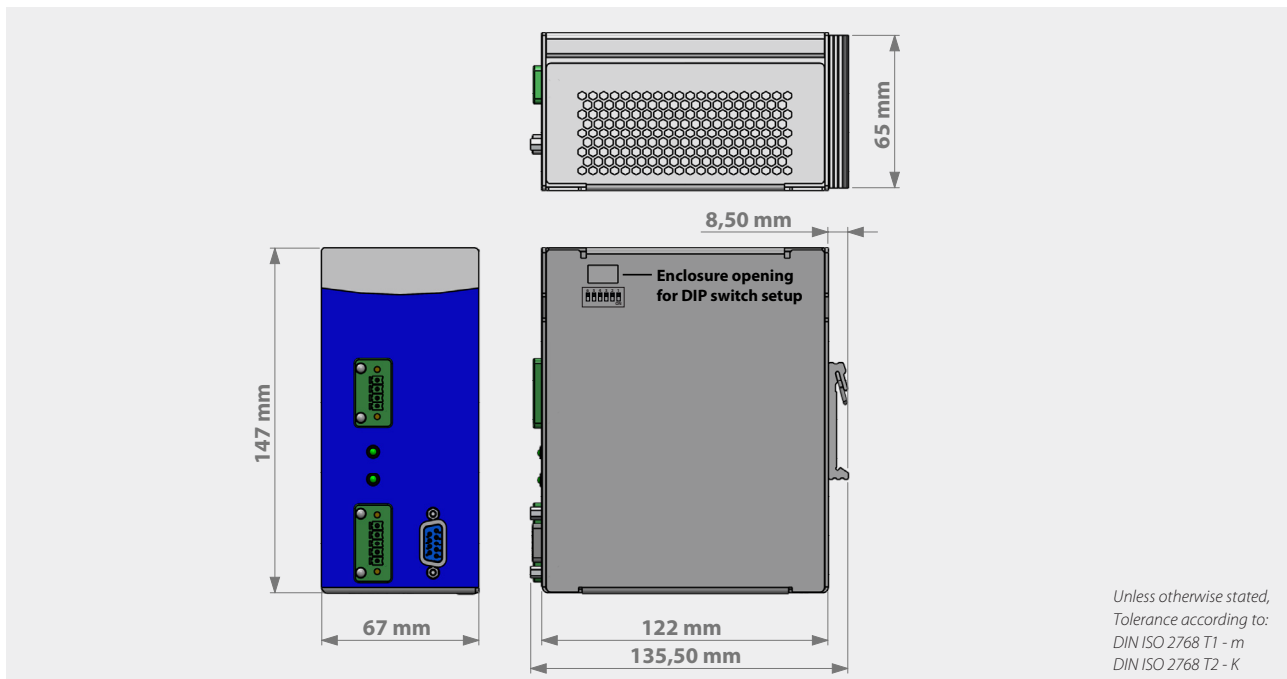
*Backup time depends on battery capacitance, load and temperature. At very high or low temperatures a reduction of backup time occurs. Unless otherwise specified, the values apply to measurements at +25 °C

SHORT OVERVIEW – TECHNICAL DATA

Unless otherwise stated, all specifications apply to 25°C ambient temperature, 24 VDC input voltage and nominal output current (I_N).

Input current consumption	
I_N (U_N , $I_{OUT} = I_N$, $I_{CHARGE} = 0$)	2.7 A
I_{MAX} (U_N , $I_{OUT} = I_N$, $I_{CHARGE} = \max$)	2.9 A
$I_{NO-LOAD}$ (U_N , $I_{OUT} = 0$, $I_{CHARGE} = 0$)	<100 mA
I_{CHARGE} (U_N , $I_{OUT} = 0$, $I_{CHARGE} = \max$)	2.17 A
Input Power consumption	
P_N (U_N , $I_{OUT} = I_N$, $I_{CHARGE} = 0$)	65 W
P_{MAX} (U_N , $I_{OUT} = I_{STAT.BOOST}$, $I_{CHARGE} = \max$)	70 W
P_{CHARGE} (U_N , $I_{OUT} = 0$, $I_{CHARGE} = \max$)	52 W
Output current	
I_N	5 A
Output power	
P_N (U_N , $I_{OUT} = I_N$, $I_{CHARGE} = 0$)	60 W
Undervoltage threshold	13.8 V
Overcurrent shutdown	7.0...7.5 A
Charging time ($I_{CHARGE} = \max$, $I_{OUT} = 0$)	Approx. 3 min
Buffer time ($I_{OUT} = I_N$)	Approx. 58 sec

Drawing DC2412-UPSDP2



Pin assignment DC2412-UPSDP2

RS232

01	DCD at PC – Detection cable connected
02	TXD (is connected to RXT at PC)
03	RXD (is connected to TXD at PC)
04	Shutdown signal detection
05	GND
06	DSR at PC – Detection caps loading status
07	RTS at PC – Supply voltage
08	CTS at PC – Power Fail detection
09	N/A

RL / PBR

RL	Relay connection
RL	Relay connection
PBR –	(V–) Shutdown-Signal (Impulse 200-400 ms)
PBR +	(V+) Shutdown-Signal (Impulse 200-400 ms)

IN / IGN / OUT

IN +	V+ Input
IN –	V– Input
IGN	n.c.
OUT +	V+ Output
OUT –	V– Output

COUNTERPART RELAY CONNECTOR

Dinkle EC381VM-04P

COUNTERPART POWER IN-OUT CONNECTOR

Dinkle EC381VM-05P

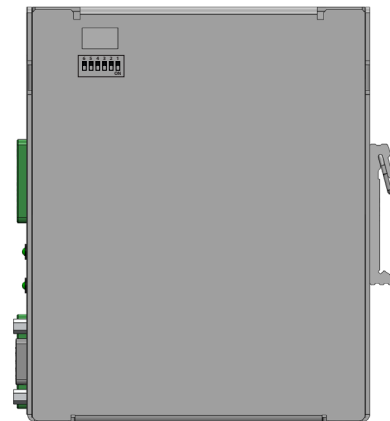
Counterparts included in scope of delivery

RELAY CONTACT FOR POWER FAIL

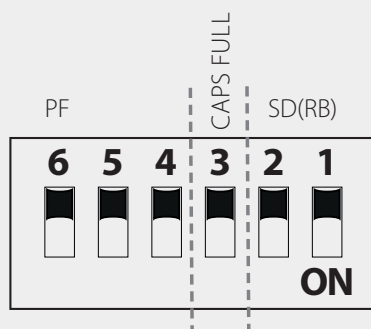
Power Fail $\triangleq$ 0 Ω / NC (Normally Closed)

0.5 A @ 125 VAC

1 A @ 24 VDC



DIP SWITCH SETUP



POWER FAIL (PF) - TIMER

6	5	4	PIN
ON	ON	ON	Software
OFF	ON	ON	3s
ON	OFF	ON	8s
OFF	OFF	ON	20s
ON	ON	OFF	40s
OFF	ON	OFF	60s
ON	OFF	OFF	100s
OFF	OFF	OFF	150s

OUTPUT RELEASE

PIN 3	
ON	Output released when V_{CAP} over 90%

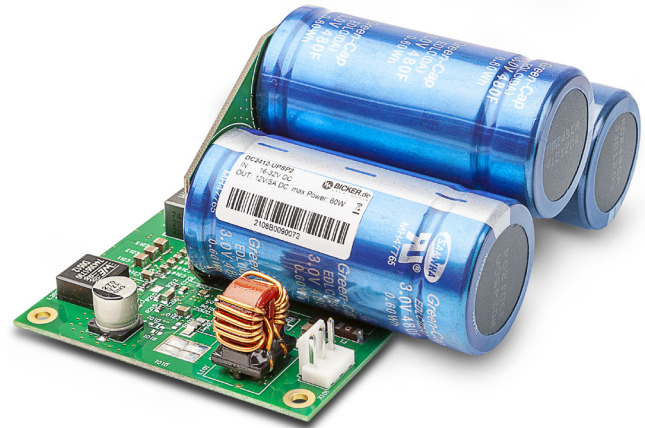
SHUTDOWN TIMER

PIN	2	1
No Reboot	ON	ON
Reboot after 10s	OFF	ON
Reboot after 30s	ON	OFF
Reboot after 60s	OFF	OFF

DC2412-UPSP2

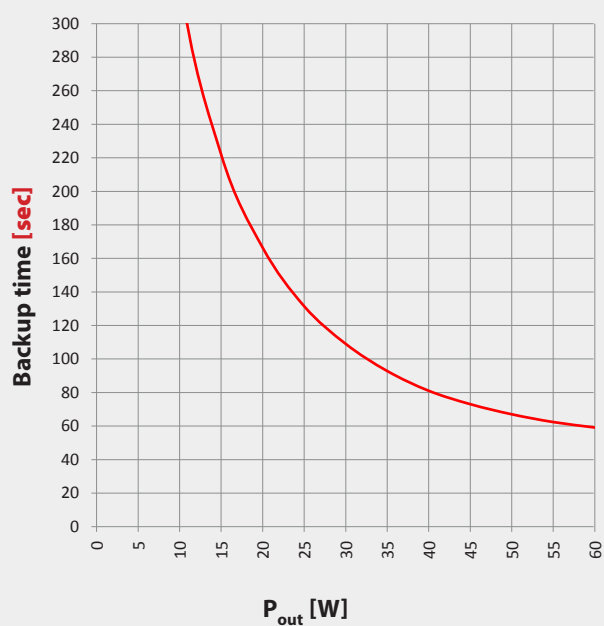
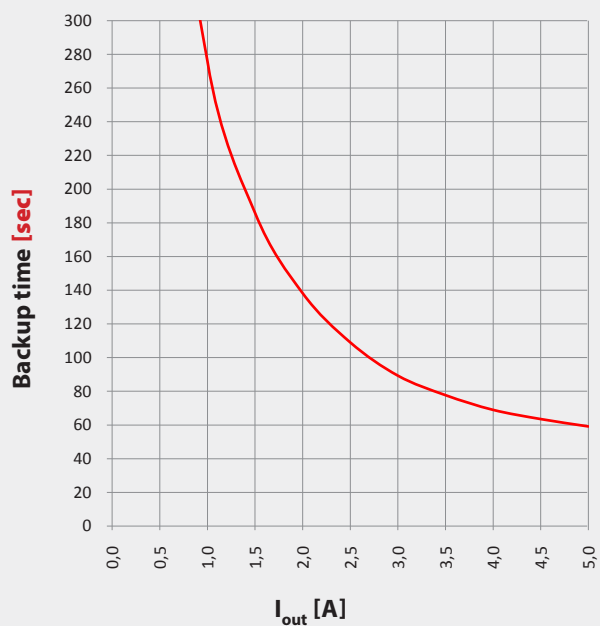
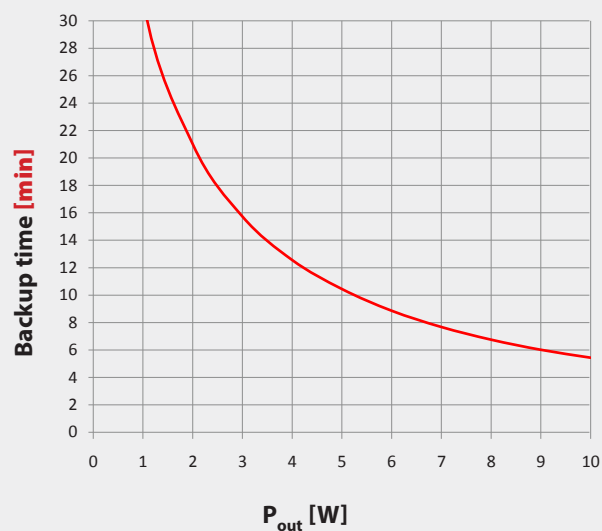
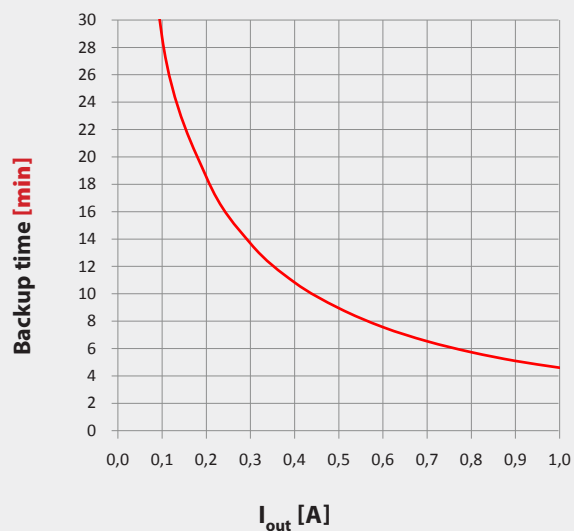
12 VDC / 5 A

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- ✓ Open frame version
- ✓ Already integrated Supercap as energy storage (5.1 kJ) on the PCB
- ✓ Temperature range -20...+70 °C
- ✓ Maintenance-free
- ✓ Active reverse polarity protection
- ✓ Power-fail signal via relay



Technical Data	
Input voltage	24 VDC (16...32 V)
Input current	2.9 A max.
Output voltage	12...11.8 VDC (depending on load)
Output current	5 A nominal
Charging method	CC – Constant Current
Protection	Overcurrent protection (non latch) Active reverse polarity protection
Interface	RS232
Battery technology	EDLC (Supercaps): 5.1 kJ (3.8 kJ useful) / 1.4 Wh (1.1 Wh useful)
Ambient temperature	Operating: -20...+70 °C Storage/Transport: -30...+70 °C
Operating altitude	≤4000 m
Max. permitted humidity	Operating: 10...85 % RH Storage: 10...90 % RH (no dew)
Dimensions W / H / D	135 x 60.5 x 79.5 mm (incl. Supercaps)
Weight	0.35 kg

Backup time* DC2412-UPSP2



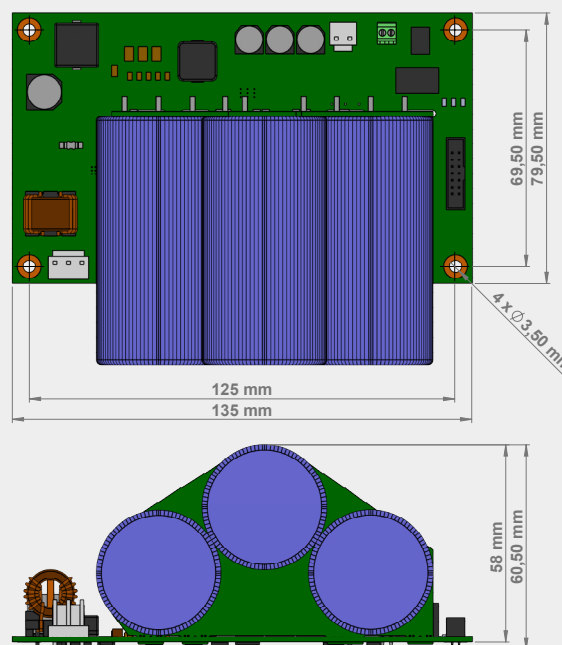
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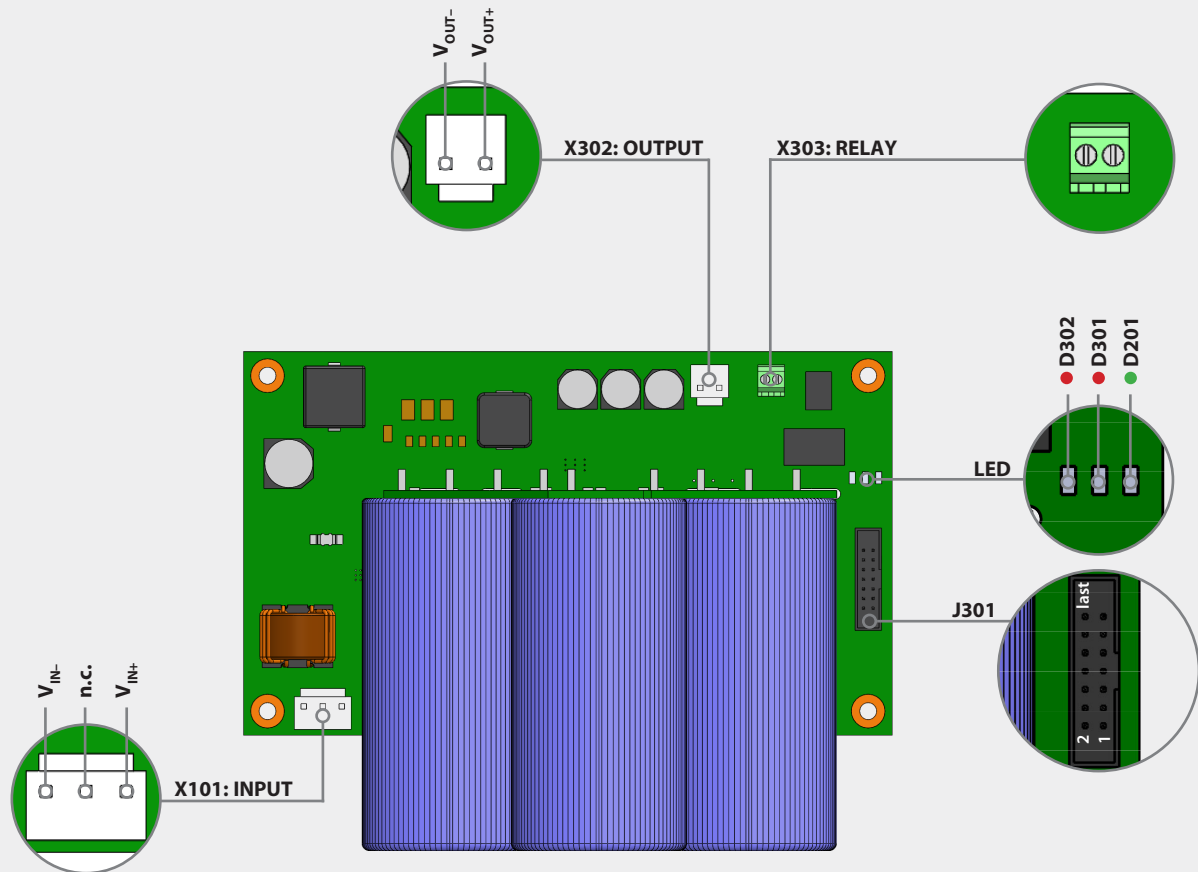
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Drawing DC2412-UPSP2



Unless otherwise stated,
Tolerance according to:
DIN ISO 2768 T1 - m
DIN ISO 2768 T2 - K

Pin assignment DC2412-UPSP2



J301 – RS232

01	DCD signal
02	DSR signal (Low = Cap >90%; High = Cap <90%)
03	n.c.
04	RTS signal (Supply voltage, max. 12 V)
05	n.c.
06	CTS signal (Low = Power Fail; High = Power OK)
07	n.c.
08	$\overline{OD}$ (Output Disable)
09	GND

J301 – I²C

10	SMB alert
11	GND
12	XSDA I ² C
13	+12V
14	XSCL I ² C

CONNECTORS

INPUT	JST-B3P-VH
OUTPUT	JST-B2P-VH
J301	WE 62501021621
RELAY	WE 691210910002

LEDs

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

RELAY CONTACT FOR POWER FAIL

Power Fail $\triangleq$ 0 Ω / NC (Normally Closed)

0.5 A @ 125 VAC

1 A @ 24 VDC

Interface schematic J301

