



### DC-UPS

#### NCPA0727G01002

(C-TEC 2403-1)

#### Short-description

The DC-UPS of the series **C-TEC** includes ultra-capacitors as energy storage inside the housing. During normal operation the power supply supplies the connected loads and charges at the same time the capacitors. In case of an interruption of the mains supply, the energy of the ultra-capacitors is released regulated. The load is supplied by the back-up module until the ultra-capacitors are discharged. The back-up time depends on the state of charge of the capacitors and on the discharge current.

#### The DC-UPS has the following characteristics:

- Maintenance-free because of long-life ultra-capacitors
- Microcontroller based charging and discharging of the ultra-capacitors
- Control of operation and status of charge with potential-free contacts and LED
- Communication with an IPC via USA or RS232 cable possible
- partly compatible to **TECControl** shutdown-software
- Capacity extension possible with external capacitor extension modules
- Cyclic capacitor test during mains operation
- Big temperature range -20 C up to 60 C

# Technical Datasheet

## C-TEC 2403-1



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### Technical Data

<b>Input</b>	
Nominal input voltage	24 V DC
Input voltage range	21 V – 27 V DC
Min. nominal input voltage for charging operation	23,4 V DC
Max. nominal input current	3 A DC
Fusing input	4 A (internal)
<b>Output</b>	
Nominal output voltage (in mains operation)	Input voltage – 0,5 V
Output voltage range (in back-up operation)	23,2 V DC
Max. nominal output current	3 A DC
Max. power loss 'worst-case'	7 W
Efficiency U <sub>a</sub> = 23,5 V DC, I <sub>a</sub> = I <sub>Anom</sub>	> 90 %
Internal device protection	3,15 A (T) (external)
Energy	1 kJ
Back-up time	38 s @ 1 A / 12 s @ 3 A
<b>General Information</b>	
Max. load message contact 'U <sub>e</sub> o.K.'	30 V DC max. 0,5 A
Parallel operation	No
Serial operation	No
Protective system	IP20
Operational temperature	-20 ... 60 °C
Storage temperature	-20 ... 60 °C
Relative humidity	< 95 % condensation not permissible
Max. mounting height (without load reduction)	2000 m above sea level
Dimensions (H x W x D)	93 mm, 60 mm, 116 mm
Weight	0,58 kg


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### Norms and regulations

Total unit	EN 50178 / EN 60950 UL-LISTED (UL508 / CSA 22.2), File E237077  <b>Industrial Control Equipment</b> <b>2VD5</b>
Terminal voltage	SELV / PELV according to EN 60950 / EN 50178
Ermited interference	EN 61000-3-2 and EN 61000-3-3 class A, EN 55011 class B, EN 62040-2
Noise immunity	EN 62040-2, EN 61000-6-2 EN61000-4-2 (Static Discharge ESD) 8 kV / 4 kV EN61000-4-3 (Electromagnetic fields) 10 V / m 27 – 1000 MHz 3 V / m 1400 – 2700 MHz EN61000-4-4 (Burst) DC IN, DC OUT 2 kV (Sonstige 1 kV) EN61000-4-5 (Surge) DC IN 0.5 kV EN61000-4-6 (conducted noise immunity) 10 V 150 kHz – 80 MHz EN61000-4-11 (voltage interruptions) back-up with ultra capacitors