



DC-UPS

NCPA0727G01002

1 Short description

The DC-UPS of the series **C-TEC** includes ultra-capacitors as energy storage inside the housing. This capacitor is charged with the system voltage (U_e) during normal operation. The connected loads are supplied as well from the system voltage. In case of an interruption of the system voltage the energy of the ultra-capacitors is released in a regulated way. With a dc dc converter, the load is supplied by the capacitor until it is 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
- Capacity extension possible with external capacitor extension modules

2 Technical Data

Input	
Nominal input voltage	24 V DC -1,2 % / +15 % (SELV/PELV)
Input voltage range	23,7...27,6 V DC \pm 0 %
Min. charging voltage	23,7 V DC
Nominal input current	3 A
Output	
Output voltage in back-up operation	23,0 V DC \pm 2 %
Nominal output current	3 A
Energy (typical)	1,5 kJ @ (U_a = 22,8 V DC, I_a = 0,6 A)
Current limitation	See section 5.5 short-circuit
Max power loss 'worst-case'	7 W
efficiency	93,9% @ (U_e =24,0 V DC; U_a =23 V DC; I_a = 3 A)
Fusing	
Internal device protection (internal)	4 A (T)
Fusing DC-output circuit (external)	3 A (T)
General	
Protective system	IP20
Operational temperature	-40 °C ... 60 °C
Storage temperature	-40 °C ... 60 °C
Rel. humidity	\leq 95% no condensation
Max. mounting height (without load reduction)	2000 m
Dimensions (HxWxD)	92,5 mm x 60 mm x 116 mm
weight	0,6 kg

3 Norms and regulations

Terminal voltage	SELV / PELV according to EN 60204-1
Emitted interference	EN 6100-3-2 EN 6100-3-3 class A EN 55011 class B EN 62040 -2
Noise immunity	EN 61000-6-2 EN 62040-2 EN 61000-4-2 (Static discharge ESD) 8kV/6kV EN 61000-4-3 (Electromagnetic fields) 10V/m 27 – 1000MHz 3V/m 1400 - 2700MHz EN 61000-4-4 (fast transients / Burst) DC IN, DC OUT 2kV others 1kV EN 61000-4-5 (Surge) DC IN 0.5kV EN 61000-4-6 (conducted immunity) 10V 150kHz – 80MHz EN 61000-4-11 (voltage interruptions) back-up with ultra capacitor
Total unit	EN 50178 EN 61010-1 / EN 61010-2-201 EN 62368-1 UL 508