

Technical Datasheet

C-TEC 1203-1



DC-UPS

NCPA0727G10002

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 backup 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
- U_e o.k. message via potential-free relay contact
- Capacity extension possible with external capacitor extension modules (CEM)

2 Technical Data

Nominal input voltage	12 V DC -15 % / 10 %
Input voltage range	10,2 V ... 13,2 V DC
Min. charging voltage	11,8 V DC
Nominal input current (at 24,0 V DC) C charged 3 A load	3,1 A DC
Output voltage in back-up operation	11,5 V DC \pm 2 %
Nominal output current Max	3 A DC (at 0,94 kJ)
Nominal output current at maximum energy	2 A DC (at 1,0 kJ)
Current limitation	1,05 ... 1,2 x I_{Nom}
Power loss at $U_c >$	2,5 W
Power loss at 100 % load and charge	7 W (max. 60 seconds)
Efficiency at $U_c >$	>96% @ ($U_e=12,0$ V DC; $U_a=11,5$ V DC; $I_a=I_{Nom}$)
Internal device protection (internal)	4 A (T)
fusing DC-output circuit (external)	3 A (T)
Type of connection: input U_e	Spring terminal max. 1,0 mm ²
Type of connection: output U_a	Spring terminal max. 1,0 mm ²
Type of connection: message contacts	Spring terminal max. 1,0 mm ²
Max. load message contact (U_e -OK ¹)	30 V / 0,5 A potential-free relay-contact
Protective system	IP20 u. EN 60529
Operational temperature	-20 °C ... 60 °C
Storage temperature	-20 °C ... 60 °C
Rel. humidity	\leq 95% no condensation

¹ The message contacts are coupled with LED display. (see section 4.1). The illumination of a LED effects the activation of the corresponding relay.