



DC-UPS

NCPA0727G20001

1 Short description

The buffered DC power supply of the **C-TEC** series includes ultra-capacitors as energy storage inside the housing. During normal operation this capacitor is charged from the system voltage (Ue). The connected DC consumers are supplied as well from the system voltage. In case of an interruption of the system voltage, the energy of the ultra-capacitor is released regulated. With a dc/dc converter the load is supplied from the capacitor until it is discharged. The backup time depends on the state of charge of the capacitor and the discharge current.

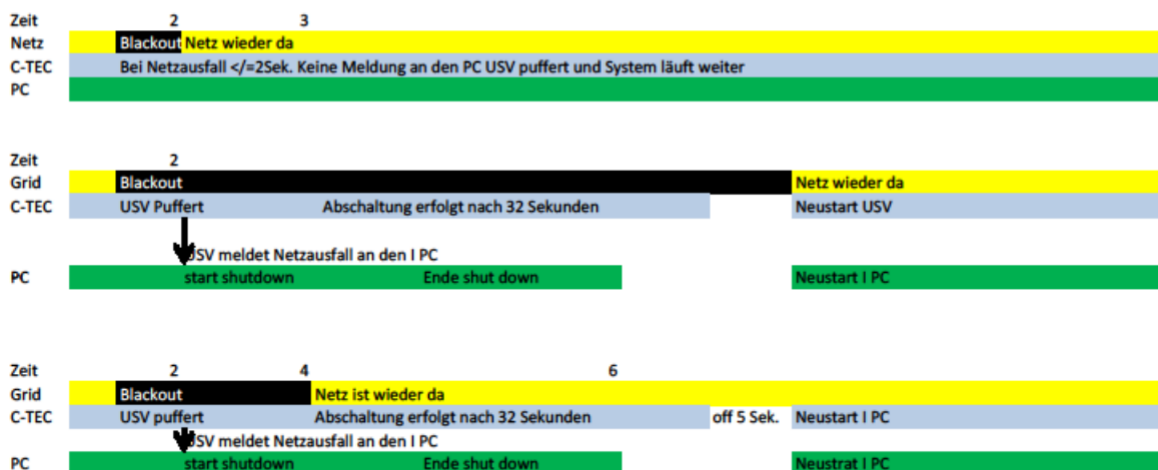
The power supply has the following characteristics:

- Maintenance-free because of long-life ultra-capacitors
- Mikrocontroller 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
- „Ue-o.k.“ message via USB

The **TECControl** software (optional) monitors permanently the mains. The **C-TEC** equalizes mains disturbances (blackout) or short time drops of the input voltage (brownout).

In case of mains failures > 2 Sekunden the **C-TEC** signalizes the mains failure to the PC, which conducts a system shutdown after an adjustable time. Subsequently the **C-TEC** as well as the IPC are switched off. In case of mains return, the **C-TEC** releases the output voltage, so that the system is able to restart automatically. If the mains returns during the shut down procedure, the **C-TEC** separates nevertheless the PC supply for a short time, so that the PC can restart afterwards without error.

With this function all mains failures can be handled without problems, even complete systems may be switched off only with the main switch and the **C-TEC** respectively the **TECCONTROL** take over the complete internal switch off routine of the system. So downtimes and damages because of an uncontrolled process stop are avoided.



CAUTION: if the mains failure is > 2 seconds, the C-TEC switches off at the latest 40 seconds afterwards for at least 5 seconds.

Technical Datasheet

C-TEC 2403-1



J. Schneider
Elektrotechnik

2 Technical Data

| | |
|---|---|
| Nominal input voltage | 24 VDC-1,2%/+10% SELV/PELV 60204-1 |
| Input voltage range | 23,7 V ... 26,4 V DC |
| Min. charging voltage | 23,7 V DC |
| Nominal input current | 2,6 A DC |
| Output voltage in back-up operation | 23,0 V DC \pm 2 % |
| Max. nominal output current | 2 A DC (mit Nennkapazität) |
| Current limitation | 1,05 ... 1,2 x I _{Nenn} |
| Max power loss ‚worst-case‘ | 7 W |
| efficiency | >90% @ (U _s =24,0 V DC; U _a =22,9 V DC; I _a =I _{Nenn}) |
| Internal device protection (internal) | 4A(T) |
| fusing DC-output circuit (external) | 3A(T) |
| Parallel operation | yes |
| Serial operation | yes |
| Protective system | IP20 u. EN 60529 |
| Operational temperature | -20 °C ... 60 °C |
| Storage temperature | -20 °C ... 60 °C |
| Rel. humidity | \leq 95% condensation not permissible |
| Max. mounting height (without load reduction) | 1000 above sea level |
| dimensions (HxWxD) | 92,5 mm, 60 mm, 116 mm |
| weight | 0,6 Kg |

3 Norms and regulations

| | |
|-----------------------|--|
| Terminal voltage | SELV / PELV according to EN 60204-1 |
| Ermitted 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 (Stoßstrombelastung / Surge) DC IN 0.5kV EN 61000-4-6 (conducted noise immunity) 10V 150kHz – 80MHz EN 61000-4-11 (voltage interruptions) back-up with ultra capacitors |
| Total unit | EN 50178 EN 61010-1 / EN 61010-2-201 EN 62368-1 |