Technical data sheet
CAP*TEC* 2410

DC-UPS

NCPA1905G01001

1 Short Description

The DC-UPS of the series **CAP***TEC* includes ultra-capacitors as energy storage inside the housing. This capacitor is charged with the system voltage 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 capacitor 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
- Parameterizable via USB interface with the *TEC***Control**-Software
- Control of operation and status of charge with LED's and signal contacts

2 Standarts and Regulations

Terminal voltage	SELV / PELV according to EN 60950 / EN 50178
Ermitted interference	EN 61000-3-2 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 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-11
Total unit	EN 50178 / EN 60950 UL 508 / C22.2 Nr.107-01

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3 Technical Data

Input	
Nominal input voltage	12 V DC / 24 V DC
Input voltage range	11,4 V DC - 27 V DC
Nominal input current	10,0 A
Max. inrush current	35 A / 2 ms
Energy[1] @ I_{out}= 2 A	14 kJ ±4 %
Minimum charging voltage	System voltage + 0,2 V DC
Output	
Output voltage in back-up operation (System voltage) Nominal voltage 12 V Nominal voltage 24 V	 11,2 V DC ±4 % 23,0 V DC ±2 %
Nominal output current	10 A
Monitoring of limiting current	10,3 A ±0,1 A
Switch off if limiting current is exceeded	after 1,5 s
Current limitation (in back-up operation)	1,05...1,2 x I_{outNom}
Efficiency in mains operation (if capacitors are charged) @ I_{out}= 10 A	98 %
power loss in mains operation (if capacitors are charged) @ I_{out}= 10 A	5,4 W
Power loss in charge and discharge operation	20 W
Fuse	
Fusing input	15 A (FK2) (device internal)
Fusing DC- output circuit	15 A (FK2) (device internal)
Fusing DC- output circuit	25 A (FK2) (device internal)
Overall	
Type of connection input IN X1(1, 2)	Spring-clamp technique max. 6,0 mm² (AWG 24-10)
Type of connection output OUT X1(3, 4, 5)	
Type of connection messages SD X3(1, 2), IN OK X3(3, 4), REL X2(1, 2, 3)	Spring-clamp technique max. 2,5 mm² (AWG 24-12)
Type of connection USB X4	USB-B socket
Protective system	IP20
Dimensions (H x W x D)	4.86 in x 6.5 in x 5.96 in (124 mm x 165 mm x 151 mm)
Weight	2,0 kg
Storage temperature / environmental temperature	-40 °C...+60 °C
Humidity	95 % condensation not permissible

[1] in new condition of the device at 25 °C ambient temperature