



DC-UPS

NBUA1530Gxxxx

1 Short description

The DC-UPS UPSOTEC includes a charging and monitoring system inside the housing, which charges the externally connected batteries or Ultra capacitors. An external regulated DC power supply supplies the UPS. In case of an interruption of the DC supply, the energy of the batteries or ultra capacitors is switched on the output in an unregulated way. The load is supplied from the energy storage via the UPS until the voltage drops below the deep discharge limitation or another defined abortion event occurs. The back-up time depends on the state of charge of the batteries or capacitors and on the discharge current.

The power supply has the following characteristics:

- Microcontroller based charging and discharging of the accumulators
- Charging of accumulators or ultra-capacitors is possible
- Mains failure message with potential-free contact, LED and USB
- Display of state of charge with signal light
- Vibration secured wiring with spring-type technique
- High efficiency
- Wide temperature range -25 °C up to 50 °C
- Shutdown input for early stop of the buffering
- Battery monitoring (internal resistance ,fusing, Presence)
- Protected against reverse polarity
- USB interface for monitoring, IPC operation and parameterisation
- Monitoring of operating hours of the energy storage

Technical Datasheet

UPSOTEC 2420



2 Technical Data

U _{IN} nom.	Nominal input voltage	24 V DC -6,3% +20,8% (SELV/PELV)
U _{IN}	Input voltage range	22,5 ... 30 V DC ± 2% (SELV/PELV)
	Minimum nominal input voltage for charging operation	22,5 V DC ± 2%
f nom.	Nominal frequency	DC
I _{IN} nom.	Nominal input current	20 A
I _{IN} max.	Max. input current (incl. charging current)	23 A DC
U _{BAT}	Voltage range battery	19,8 ... 28,4 V DC ± 2%
U _{BAT} UC	Voltage range UC module	0 ... 28,4 V DC ± 2%
I _{BAT} max	Max. charging current in battery mode, (U _{bat} >19V)	2,5 A
I _{BAT} max UC	Max. . charging current in Ultra Cap Mode	6 A
U _{OUT}	Output voltage range (= U _{IN} or U _{BAT})	19,8 ... 30 V DC ± 2%
U _{OUT} nom.	Nominal output voltage in mains operation (= U _{IN})	24 V DC
	Output voltage range in back-up operation, with temperature tracking	19,8 ... 28,4 V DC ± 2%
	Output voltage range in back-up operation, without temperature tracking	19,8 ... 26,7 V DC ± 2%
I _{OUT} nom.	Nominal output current	20 A DC
	Max. output fusing	20 A (z.B. FK3)
P _V nom.	Power loss (at battery charged)	5,6 W (24 V / 20 A)
η nom.	efficiency (at battery charged)	98,8 %
	Switch in parallel	yes (max. 2)
	Switch in series	no
	Protection class	III
	Overvoltage category	CAT I
	Degree of pollution	II
	Temperature Sensor	MTIAQ33G3Mxx
	Battery type	Lead acid accumulator closed max. 40 Ah
	UC module size	max. 200 F
	Protective system	IP20
ta /	Operation temperatur / storage temperatur	-25 ... +50 °C
	Relative humidity	Max. 95%, no condensation permissible
	Max. mounting height (without load reduction)	2000 m above sea level
	Dimensions (H x W x D)	123 mm x 65 mm x 141 mm (±0,5mm)
	Weight	appr. 0,65 kg

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3 Norms and Regulations

Test specification	Norm	Class / testing accuracy
Total unit	EN 50178 EN 62368-1 / EN 61010-1/ EN 61010-2-201 UL 508	
Ermited interference	EN 61000-6-3 (residential area)	B
	EN 55011 (ISM-devices)	B
Noise immunity	EN 61000-6-2 (Industrial area)	
	EN 62040-2 (UPS)	C1
	EN 61000-4-2 (ESD)	
	EN 61000-4-3 (EM - fields)	
	EN 61000-4-4 (Burst)	
	EN 61000-4-5 (Surge)	
	EN 61000-4-6 (Induced HF-fields)	
	EN 61000-4-8 (Magnetic fields)	
Mechanical Test	EN 60068-2-6 (vibrations (sin))	
	EN 60068-2-27 (Shocks)	