



DC-UPS

NBUA1530G10001

1 Short description

Die DC-UPS UPSOTEC includes a charging and monitoring system inside the housing, which charges the externally connected energy store. The UPS is supplied by an external regulated DC power supply. In case of an interruption of the DC supply, the energy of the energie store is released unregulated. The load is supplied from the UPS until the voltage drops below the deep discharge limitation. The back-up time depends on the state of charge of the energie store and on the discharge current.

The power supply has the following characteristics:

- Mikrocontroller based charging and discharging
- Charging of battery and ultra capacitor possible
- Monitoring of the mains with potentialfree contacts, 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
- Monitoring of the battery (internal resistance, fuse, presence)
- reverse polarity protection
- USB interface for monitoring, IC mode and parameterization
- Monitoring of the energy store operating hours

Technical Datasheet

UPSOTEC 2420



J. Schneider
Elektrotechnik

2 Technical Data

Nominal input voltage	24 V DC (22 ... 30 V DC)
Min. nominal input voltage for charging operation	22,5 V DC \pm 2%
Nominal frequency	DC
Max. nominal input current	24 A DC
Max. inrush current	150 A for 200 μ s
Max. charging current (battery mode)	ca. 2 A
Max. charging current (ultra cap. mode)	ca. 4,5 A
Nominal output voltage mains operation	24 V DC (22 ... 30 V DC)
Nominal output voltage back-up operation (with Temp. tracking)	27,7 ... 19,2 V DC
Nominal output voltage back-up operation (without Temp. tracking)	26,8 V DC \pm 2%
Max. Nominal output current	20 A DC
Short circuit current	-
Overload capable (typical values)	40 A for 20 ms
Max. power loss (with charged battery)	5,6 W (@ 24 V 20 A)
efficiency (with charged battery)	> 98,5%
Derating	-
Residual ripple	no
Switch in parallel	yes (max. 2)
Switch in series	No
Load message contacts Max. / Min	30 V DC / 100 mA 5 V DC @ 1 mA
Isolation voltage message contact	1500 V RMS
Shutdown input	Potentialfree switch input, switch level 24 V DC (6 ... 45 V DC)
Isolation voltage Shutdown input	5300 V RMS
Overvoltage category	CAT I
Degree of pollution	II
Temperature sensor	KTY 81-210
Battery type	Lead acid accumulator closed max. 40 Ah
Protective system	IP20
Operational temperature	-25 ... 50 °C
Storage temperature	-40 ... 70 °C
Relative humidity	95% Betauung nicht zulässig
Max. mounting height (without load reduction)	2000 above sea level
Dimensions (H x W x D)	123 mm x 65 mm x 143 mm
weight	approximately 0,65 kg

3 Norms and regulations

Total unit	EN 50178 / EN 62368-1 UL 508
Ermitted interference EN 61000-6-4 EN 50011	EN61000-6-4 ermitted interference for industrial area EN55011 Industrial, academic and medical high frequency de- vices (ISM-device); radio interference with limiting values and measuring method Target limiting value class B
Noise immunity EN 61000-6-2	EN61000-4-2 (Static discharge / ESD) Air discharge 8kV / contact discharge 4 kV EN61000-4-3 (Elektromagnetic fields) 10 V / m 80 - 2000 MHz 3 V / m 1400 - 2700 MHz EN61000-4-4 (fast transients) DC IN, DC OUT 2 kV others 1 kV EN61000-4-5 (Surge DC IN 0.5kV EN61000-4-6 (Conducted noise immunity) 10 V 150 kHz - 80 MHz
Mechanical Test	IEC60068-2-6:2008-10 environmental influences part 2-6: Test method-Test Fc: vibrations (sinus soidal) (IEC60068-2-6:2007) 2Hz-500Hz 1,6mm 2g EN 60068-2-27:2009 DIN EN 60068-2-27:2010-02, environmental influences - part 2- 27: Test method-Test Ea and guideline: Shocks (IEC 60068-2-27:2008) acceleration: 15g and 30g; pulse width: at both tests 11ms, number of shocks: each with 3 shocks in each direction = 18 shocks operation mode: passiv The 30g test is only made when the 15g test was successfull and must not be kept mandatory.