Technical Datasheet
AKKU*TEC* 2403 VdS

DC-UPS

*NBPA0844G01****

VdS-Nummer G209168

0786-CPD-20872

Short Description

The **AKKU***TEC* 2403 VdS is a battery-buffered power supply and operates according to the stand-by principle in parallel. In the event of a mains failure, it guarantees safe delivery of DC voltage for a certain period of time without interruption.

The **AKKU***TEC* 2403 VdS is characterized by the following properties:

- Primary clocked switching power supply with I/U loading characteristic
- Micro-controller supported battery management
- RS232-interface for monitoring and paramerterization
- Temperature adjustment of the charging voltage by external sensor

Norms and regulations

Complete device	2014/35/EU (Low voltage directive) EN 50178 EN 54-4 + A1 + A2 EN 12101-10 + B1 VdS 2541 EV Type 1 Environmental class III VdS 2344 UL 508 / C22.2 No. 107.1
EMC	2014/30/EU (EMC directive) EN 62040-2 limit class C1 EN 50130-4 + A1 + A2 EN 55011+ A1 limit class B group 1 EN 61000-6-2 AC EN 61000-6-4 + A1
Optocoupler ensuring insulation between primary /secondary side	EN 60747-5-1, fulfilled SELV / PELV
Optocoupler ensuring insulation between primary /secondary side	EN 61558-2-16, fulfilled SELV / PELV

- **EN 55011 Limit class B**: “Class B devices are devices which are suitable for use in residential areas and in areas directly connected to a low-voltage supply network which supplies (also) residential buildings.”

- **EN 55011 group 1**: “Group 1 includes all equipment... in which HF energy is not intentionally... generated in the radio frequency range 9 kHz to 400 GHz.”

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Technical Data

Input	
Input voltage VdS tested	115 V AC…230 V AC ±15 % (98 V AC…265 V AC) 230 V AC +10 % / -15 % (196 V AC…253 V AC)
Frequency	47 Hz…63 Hz
Maximum input current	1,1 A @ 110 V AC / 0,5 A @ 230 V AC
Inrush current	≤ 35 A/2 ms
Nominal input power	96 W @ (Vin = 230 V AC, Vout = 27,35 V DC, Iout = 3 A, ϑ = 77 °F (+25 °C))
Input power standby mode	5 W @ (Vin = 230 V AC, Vout = 27,35 V DC, ϑ = 77 °F (+25 °C))
Output	
Nominal output voltage	24 V DC
Output voltage (with temperature tracking) VdS	20,9 V DC…28,6 V DC ±0,4 %
Output voltage (without temperature tracking) VdS	20,9 V DC…26,4 V DC ±0,4 %
Fully charged voltage (with temperature tracking) Fully charged voltage (without temperature tracking)	26,4 V DC…28,6 V DC ±0,4 % 26,4 V DC ±0,4 %
Load shedding (Measure value with fuse board) VdS*	20,9 V DC
Overvoltage protection	30 V DC
Residual ripple	< 100 mVeff
Nominal output current	3 A
Self-current consumption (in buffer mode)	100 mA
Maximum power loss ‚worst-case'	14 W
Efficiency	85,9 % @ (Vin = 230 V AC, Vout = 27,35 V DC, Iout = 3 A, ϑ = 77 °F (+25 °C))
Charge characteristic	IU characteristic curve DIN 41773
Fuse	
Internal fuse	2 A (T), 250 V
Fuse battery circuit (external)	5 A (T, UL-248)
Fuse output circuit (external)	5 A (T, UL-248)
Overall	
Protection class of the housing	IP20
Overvoltage category	II
Pollution degree	2
Battery type	VRLA lead battery
Dimensions (H x W x D)	6.29 in x 2.87 in x 5.2 in (160 mm x 73 mm x 132 mm)
Weight (without batteries)	2.21 lbs (1 kg)
Operating temperature / storage temperature Operating temperature VdS tested Operating temperature UL tested	14 °F(-10 °C)...122 °F (+50 °C) 23 °F(-5 °C)...104 °F(+40 °C) 50 °F (+10 °C)...104 °F (+40 °C)
Relative humidity	≤95 % no condensing
Maximum altitude (without power reduction)	6561.1 ft (2000 m)