



DC-UPS

NBPG0901G01***

VdS-Nummer G209169

0786-CPD-20873

1 Short Description

The **AKKUTEC 2412 / 2424 VdS P** 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 **AKKUTEC 2412 / 2424 VdS P** is characterized by the following properties:

- Primary clocked switching power supply with I/U loading characteristic
- Active power factor correction (PFC)
- Micro-controller supported battery management
- RS232-interface for monitoring and parameterization
- Temperature adjustment of the charging voltage by external sensor

2 Norms and regulations

Complete device	2014/35/EU (Niederspannungsrichtlinie) EN 54-4 + A1 + A2 EN 12101-10 + B1 EN 50178 EN 61010-1 / EN 61010-2-201 EN 62368-1 VdS 2541 EV-Typ 1 Umweltklasse III VdS 2344
EMC	2014/30/EU (EMV-Richtlinie) EN 50130-4 + A1 + A2 EN 55011+ A1 Grenzwertklasse B Gruppe 1 EN 61000-6-2 AC EN 61000-6-4 + A1 EN 62040-2 Grenzwertklasse C1
Optocoupler to ensure safe primary/sec- ondary separation	EN 60747-5-1, complies with SELV / PELV
Power HF transmitter to ensure safe pri- mary/secondary separation	EN 61558-2-16, complies with 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."

Technical Datasheet

AKKUTEC 2412 VdS P

3 Technical Data

Input	
Input voltage	230 V AC $\pm 15\%$ (196 V AC...265 V AC)
VdS tested	230 V AC $+10\%/-15\%$ (196 V AC...253 V AC)
Frequency	47 Hz...63 Hz
Max. input current	1.8 A @ 230 V AC
Current at make	≤ 35 A/2 ms
Nominal input power	375 W @ ($V_{in} = 230$ V AC, $V_{out} = 27.35$ V DC, $I_{out} = 12$ A, $\vartheta = 25$ °C)
Input power in standby mode	7 W @ ($V_{in} = 230$ V AC, $V_{out} = 27.35$ V DC, $\vartheta = 25$ °C)
Output	
Nominal output voltage	24 V DC
Output voltage (with temperature tracking) VdS	20.7 V DC...28.6 V DC $\pm 0.4\%$
Output voltage (without temperature tracking) VdS	20.7 V DC...26.4 V DC $\pm 0.4\%$
Charging end voltage (with temperature tracking)	26.4 V DC...28.6 V DC $\pm 0.4\%$
Charging end voltage (without temperature tracking)	26.4 V DC $\pm 0.4\%$
Load shedding (measured value with fuse board) VdS*	20.7 V DC
Overvoltage protection	>30 V DC
Residual Ripple	<150 mVeff
Nominal output current	12 A
Own power consumption (in buffer mode)	75 mA @ 24 V DC
Nominal output power	327 W @ ($U_e = 230$ V AC, $U_a = 27.35$ V DC, $I_a = 12$ A, $\vartheta = 25$ °C)
Max. power dissipation "worst-case"	40 W
Efficiency	87.3 % @ ($V_{in} = 230$ V AC, $V_{out} = 27.35$ V DC, $I_{out} = 12$ A, $\vartheta = 25$ °C)
Charging characteristic	IU characteristic DIN 41773
Fuse	
Internal device protection AKKUTEC 2412 VdS	2 A (T), 250 V
Fuse	5 A (T), 250 V
Battery circuit fuse (external)	FK2 15 A
Output circuit fuse (external)	15 A (T, UL-248)
General	
Parallel connectivity	Yes (max. 2)
Protection class of the cabinet	IP54
Overvoltage category AKKUTEC 2412 VdS	II
Degree of contamination AKKUTEC 2412 VdS	2
Battery type	VRLA lead battery
Dimensions (H x W x D) cabinet variation 1	19.69 in x 19.69 in x 12.09 in (500 mm x 500 mm x 307 mm)
Dimensions (H x W x D) cabinet variation 2 / 3	39.37 in x 31.5 in x 12.09 in (1000 mm x 800 mm x 307 mm)
Weight (without batteries) cabinet variation 1	60.63 lbs (27.5 kg)
Weight (without batteries) cabinet variation 2 / 3	142.2 lbs (64.5 kg)
Operating temperature/storage temperature	14 °F (-10 °C)...122 °F (+50 °C)
Operating temperature VdS tested	23 °F (-5 °C)...104 °F (+40 °C)
Operating temperature UL tested	50 °F (+10 °C)...104 °F (+40 °C)
Relative humidity	$\leq 95\%$ non-condensing
Max. height above sea level (without power reduction)	2000 m