



## AKKUTEK 2412 VdS P-45 /-200

**NBPG2015G40\*\*\* / NBPG2015G50\*\*\*  
VdS approval number G209167**

### 1 Brief description

The **AKKUTEK** is a battery-buffered power supply and it works in accordance with the standby parallel principle. The batteries are charged in grid mode. The connected consumers are supplied simultaneously. At grid failure the **AKKUTEK** in conjunction with the batteries ensures that a safe supply of direct current remains intact for a specific period of time.

The **AKKUTEK** has the following properties:

- Primary clocked, switched-mode supply with I/U charging curve
- Active power factor correction (PFC)
- Microcontroller-supported battery management
- Temperature tracking of the charging voltage via a sensor

### 2 Standards and regulations

Overall device	2014/35/EU (Low Voltage Directive) 2011/65/EU with 2015/863/EU (RoHS) 1907/2006/EC (REACH) 2009/125/EC (Eco Design) EN 54-4 + A1 + A2 EN 12101-10 + AC EN 61010-1 / EN 61010-2-201 EN 62368-1 VdS 2541 EV-Typ 1 Umweltklasse III VdS 2593
EMC	2014/30/EU (EMC Directive) EN 62040-2 Limit Value Class C1 EN 50130-4 + A1 + A2 EN 55011 Limit Class B Group 1 EN 61000-6-2 EN 61000-6-4
Batteries	EN 62485-2



### 3 Technical data

<b>Input</b>		
Rated input voltage		100 V AC – 130 V AC / 210 V AC – 240 V AC
Perm. Input voltage tolerance		±10 %
Input voltage VdS verified		230 V AC -15 % / +10 %
Frequency		50 / 60 Hz ±3 Hz
Rated input current		1,7 A
Switch-on current		≤35 A / 2 ms
Rated input power		366 W @ (U <sub>e</sub> = 230 V AC, U <sub>a</sub> = 27,4 V DC, I <sub>a</sub> = 12 A, θ = 25 °C)
<b>Output</b>		
Rated output voltage		24V DC (SELV / PELV)
Output voltage		20,6 – 28,6 V DC
Plateau charging voltage		26,5 – 28,6 V DC @ (θ = -10 – +50 °C)
Load shedding (measured value with fuse board) VdS*		20,6 V DC
Residual ripple**		≤200 mVpp @ (U <sub>e</sub> = 230 V AC, U <sub>a</sub> = 27,4 V DC, I <sub>a</sub> = 12 A)
Rated output current		12 A
Internal consumption	<b>AKKUTEK 2412 VdS</b>	~36 mA
in buffer mode	Fuse board	~12 mA
Power loss		38 W @ (U <sub>e</sub> = 230 V AC, U <sub>a</sub> = 27,4 V DC, I <sub>a</sub> = 12 A, θ = 25 °C)
Efficiency		89,5 % @ (U <sub>e</sub> = 230 V AC, U <sub>a</sub> = 27,4 V DC, I <sub>a</sub> = 12 A, θ = 25 °C)
Charging characteristics		IU-curve DIN 41773-1
<b>Fusing</b>		
Pre-fusing		5 A (T)
Fusing battery circuit FKS / FK2		Max. 15 A (T)
Fusing output FKS / FK2		Total of all outputs used: max. 12 A Total of all used outputs per fuse board: max. 12 A
<b>General</b>		
Protection rating of the enclosure		IP54
Overvoltage category		II
Pollution degree		2
Battery type		Lead-acid battery
Dimensions (H x W x D)	<b>AKKUTEK 2412 VdS P-45</b>	500 mm x 500 mm x 307 mm
	<b>AKKUTEK 2412 VdS P-200</b>	1000 mm x 800 mm x 307 mm
Weight (without batteries)	<b>AKKUTEK 2412 VdS P-45</b>	24 kg
	<b>AKKUTEK 2412 VdS P-200</b>	64 kg
Storage temperature		-10 – +50 °C
Operation temperature		-10 – +40 °C
Operation temperature VdS verified		-5 – +40 °C
Relative humidity		≤95 % non-condensing
Max. elevation above sea-level		2000 m

\*Measurement at 100 % load

\*\*Measurement at 20 MHz band width with 30 cm twisted pair cable and 10 µF-capacitor