



DC-UPS NBPAP33G1M01

1 Short description

The battery backed up DC power supply in the **AKKUTEK** range uses the standby-parallel principle of operation and, in conjunction with a lead accumulator, ensures that the DC power supply is reliably maintained in the case of a mains power failure.

The power supply has the following features:

- Switched primary, switched power supply with I/V charging characteristic
- Microcontroller-based battery management
- Temperature compensation for charging voltage by means of external sensor module (optional module)
- Display and control panel for switch cupboard door installation or surface mounting (option)
- TEC-Bus on RS 232-Interface (optional module)

2 Norms and regulations

Safety of power transformers, power supply units and similar Particular requirements for transformers for switch mode power supplies	EN 61558 2-17 (VDE 0570 2-17)
Optocouplers for protective separation against electric shock, requirements - tests	VDE 0884
EMC	EN 55011/..Klasse A Group 1 EN 61000-3-2 und EN 61000-3-3 / Klasse A EN 50082-2
Total unit	EN 50178 / EN62368-1 EN61010-1 / EN61010-2-201 UL508 / CSA 22.2

Technical Datasheet

AKKUTEC 2440

3 Technical Data

Input	
Input voltage	400...500 V AC -15 % / +10 % (340...550 V AC)
Frequency	47...63 Hz
Input current	2,75A@400VAC/2,2A@500VAC
Inrush current	≤ 65 A/5 ms
Nominal input power	1151 W @ (U _e = 400 V AC, U _a = 26,4 V DC, I _a = 40 A)
Output	
Nominal output voltage	24VDC
Output voltage (without temperature tracking)	19,8...26,8 V DC ±0,4 %
Output voltage (with temperature tracking)	19,8...28,0 V DC ±0,4 %
Output voltage (boost charging)	28,6 V DC
Final charging voltage (without/with temperature tracking)	26,8 V DC ±0,4 % / 26,5...28,0 V DC ±0,4 %
Load shedding	19,8 V DC ±0,4 %
Nominal output current	40 A
Constant current limitation	1,05...1,1*I _{Nom}
Self-consumption current (in back-up operation)	135 mA
Max. power loss ,worst-case'	115 W
Efficiency	91,5 % @ (U _e = 400 V AC, U _a = 26,4 V DC, I _a = 40 A)
Charging characteristics	IU-characteristics DIN 41773-1
Fusing	
Fusing battery circuit (external)	40 A (T), 250 V
Fusing output (external)	40 A (T), 250 V
Pre-fusing	4 A (T), 250 V
In General	
Protective systeme housing	IP20
Overvoltage category	II
Degree of pollution	2
Battery type	Lead accumulator*
dimensions (H x WB x D) standard unit	180 mm x 290 mm x 150 mm
weight standard unit (witout batteries)	
Operational temperature	0°C...+40°C
operational temperature UL tested	+10 °C ... +40 °C
Storage temperature	0°C...+50°C
Relative humidity	≤95 % non-condensing
Max. height above sea level (without load reduction)	2000 m

Display

mains operation	LED green Illuminates at: • Mains operation (U _E >U _{Emin} and T _{Int} <T _{Intmax})
\overline{U}	LED green (battery voltage within the monitoring window 21,6< U _{Batt} < 27,9V DC)
\underline{U}	LED green (battery voltage above the monitoring window U _{Batt} >27,9 V DC)
Fehler	LED red LED illuminates at: * Battery operation (during mains operation LED is not illuminated) * Battery circuit interrupted respective high-ohmic (Testintervall 60s) * Battery low * Battery reverse poled * Battery-over-temperature (only in connection with temperature tracking)

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AKKUTEK 2440



J. Schneider
Elektrotechnik

Operation

Terminal IO-2	External operation and display panel for the display of operation parameters and for device parameterisation (option)
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Signal In- and Outputs

Mains operation ¹⁾	potentialfree relay-contact, closer, max. contact load 30 V DC/ 0,5A
Fehler ¹⁾	potentialfree relay-contact, changer, max. contact load 30 V DC/ 0,5A
\overline{U} ¹⁾	potentialfree relay-contact, closer, max. contact load 30 V DC/ 0,5A
\overline{U} ¹⁾	potentialfree relay-contact, closer, max. contact load 30 V DC/ 0,5A
Shut-Down	Shut down of UPS mode Switch input, referring to earth, switch level: 24V DC (16-80 V DC)
Starkladung (Boost charging)	Activation of boost charging (boost charging voltage 28.6 V DC) Switched input referenced to earth, switching level: 24V DC (16-80V DC)

General

fixation	Top hat rail according to DIN EN 50022-35 Alternativ: assembly kit for direct screw fastening on the cabinet installation plate (option)
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