

Q.PS-ADB-2405, Single phase power supply with battery charging module

- Input: Single-phase 115 ÷ 230 VAC
- Battery Charger
- Output 1: Load power supply 24 VDC; 5 A
- Output 2: Battery charging 24 VDC; 5 A
- Suited for the following battery types: Open Lead Acid, Sealed Lead Acid, lead Gel and Ni-Cd (option)
- Automatic diagnostic of battery status. Charging curve UI, constant voltage and constant current Battery Life Test function
- Switching technology, output voltage 22-28,8VDC Three charging levels: Boost, Trickle and Recovery
- Protected against short circuit and inverted polarity
- Signal output (contact free) for discharged or damaged battery
- Signal output (contact free) for mains or Back-UP
- Protection degree IP20 - DIN rail or bracket mounting



Technical features

The ADB series is a range of microprocessor control battery chargers able to optimize charging and discharging cycles while ensuring extended battery life. Boost and trickle charging are under micro-processor supervision. Continuous monitoring of battery efficiency reduces battery damage risk and allows a safe operation also in case of permanent connection. They are suited for several battery types, Open Lead Acid, Sealed Lead Acid, Lead Gel and Ni-Cd. They are programmed for two charging levels, boost and charge, but they can be changed to single charging level by the user. Suitable for recharging, supply and recharging, supply and Back-Up battery module. A rugged casing with bracket for DIN rail mounting provide IP20 protection degree

Charging curve selection

By means of jumpers. Predefined curves for Open Lead Acid, Sealed Lead Acid, Gel, Ni-Cd (option) or Single charging level

Input Data

Rated voltage	115 - 230 VAC
Voltage range	93 ÷ 264 VAC
Frequency	47 ÷ 63 Hz
Internal fuse (not replaceable)	Yes

Output Data

Output Voltage (V_n) / Nominal Current (I_n)	24 VDC / 5A
Minimum Load requirement	No
Efficiency (at 50% of rated current)	≥ 82 %
Short-circuit protection	Yes
Over Load protection	Yes
Over Voltage Output protection	Yes

Battery Output (Battery Type 3 - 50Ah)

Boost charge (25 °C) (at I_n)	28.8 VDC
Trickle charge (25 °C) (at I_n)	27.5 VDC
Output 2: Battery Charging current max I_{batt}	5A ± 5%
Setting range of charging current	20 ÷ 100 % of I_n
Recovery Charge	Yes
Jumper Charging Configuration	Yes
Reverse battery protection	Yes
Sulfated battery check	Yes
Detection of element in short circuit	Yes

Load Output

Output voltage (at I_n)	22 ÷ 28.8 VDC
Max Nominal current $I_n = I_{load} + I_{batt}$ (120 W)	1.1 x 5 A ± 5%
Output 1: Load current (Main) I_{load}	15 A max.
Output 1: Load current (Back Up) I_{load}	10 A max.

Signal Output (free switch contacts)

Switching capacity	1 A – 30 VDC
Main or Backup Power	Yes
Low Battery	Yes
Fault Battery	Yes

Climatic Data

Range of ambient working temperature	-10 ÷ +50°C
Range of ambient stocking temperature	-25 ÷ +85°C
Max. relative humidity, without condensation	95% at +25°C

General Data

Insulation voltage (IN/OUT)	3000 VAC
Insulation voltage (input / ground)	1605 VAC
Insulation voltage Output / ground)	500 VAC
Protection degree	IP20
Protection class	I, with PE connected
Dimensions (w-h-d)	65x115x135 mm
Weight	0.68 kg approx.

Installation

The device must be installed according to EN 60950 norm, with a proper isolation switch.

Norms and Certifications

Conforming with:

- IEC/EN 60335-2-29 Battery chargers
- EN60950 / UL1950 Electrical safety
- 89/336/EEC EMC Directive
- 93/68/EEC (Low Voltage)
- DIN41773 (Charging cycle)
- EN 61000-3-2 (Current harmonics).
- EN50082-2 level 3 criteria B (immunity to EMC interference)
- EN55011 Class B (Suppression of radio interference for industrial and residential environment)

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All specifications are subject to change without notice
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