

Voltage converter from 24V to 12V, 50A, 600W, IP67, slim

Reference: AM5221
EAN13: -
HS code: 85044090



Product attributes:

Product features:

Input voltage: 18-36 V DC
Output voltage: 24 V DC
Output current: 50 A
Output power: 600 W
Waterproof grade: IP67
Lifetime: 100,000 hours
Inverter type: Buck (step-down)

Product description:

DC-DC converter for stabilizing the power supply of 12V devices from 24V on-board systems. It is designed for applications with variable input voltage in the range of 18-36V DC, where a high output current of up to 50A is required. The design in an aluminum finned housing allows natural cooling and the design with increased resistance is suitable even for more demanding operating conditions.

Technical specifications

- Model: WG-24S1250M
- Type: non-isolated DC-DC converter (common ground input/output)
- Input voltage: 18-36V DC (24V DC)
- Output voltage: 12V DC
- Output current: max. 50A
- Maximum power: 600W
- Efficiency: 96.9% (at V_{in} 24V, 25 °C)
- Switching frequency: 100 kHz (± 10 kHz)
- Output ripple and noise: typ. 50 mVp-p, max. 200 mVp-p (V_{in} 18-36V, I_{out} 50A, oscilloscope bandwidth 20 MHz)
- Control accuracy: $\pm 2\%$
- Line regulation: $\pm 2\%$
- Load regulation: $\pm 2\%$
- Operating ambient temperature: -40 to +50 °C
- Case temperature: -40 to +80 °C
- Storage temperature: -55 to +100 °C
- Operating humidity: 5-95% RH, non-condensing
- Cooling: natural cooling
- Dimensions: 100 x 80 x 36 mm
- Weight: $\leq 580g$
- MTBF: $\geq 200,000$ h (V_{in} 24V, I_{out} 50A)
- Protection level: IP67

Functions and features

- Synchronous rectification for high efficiency and power density
- Protections: against short circuit, overload and undervoltage
- Automatic undervoltage recovery
- Integrated fuse on input positive pole: 60A
- Possibility of remote ON/OFF control (optional depending on version)
- RoHS and CE compliance

Ideal for

- Vehicles and mobile equipment with 24V on-board network (power supply for 12V appliances)
- Industrial applications and automation
- Telecommunications equipment
- Marine installations and outdoor applications with increased durability requirements
- Powering 12V LED systems and other 12V devices with high power consumption

Package contents

- DC-DC converter WG-24S1250M

Why choose this product?

- Wide input range of 18–36V DC for 24V systems with voltage fluctuations
- 12V DC output up to 50A for powering power-hungry 12V devices
- High efficiency up to 96.9% under defined conditions
- Compact dimensions 100 x 80 x 36 mm (slim design)
- Durable aluminum housing with natural cooling and IP67 protection

Installation and operating instructions

- Observe the correct polarity of the input and output and ensure a firm mechanical mounting of the converter.
- For currents up to 50A, use wires of the appropriate cross-section and minimize the length of the line; for longer wires, it is advisable to choose a larger cross-section.
- Ensure heat dissipation from the housing and installation in a location with sufficient airflow; cooling is designed to be natural.
- The output is non-isolated, so it is necessary to consider a common ground between the input and output.

Safety notice

- The device operates with DC voltage up to 36V and high currents; in case of a short circuit or incorrect installation, the wires may heat up significantly and there is a risk of damage to the installation.
- Perform the installation with the power disconnected and use wires and fuses rated for the given current.
- In environments with increased humidity, follow the principles of proper sealing of cabling and bushings to maintain the resistance of the entire installation.

