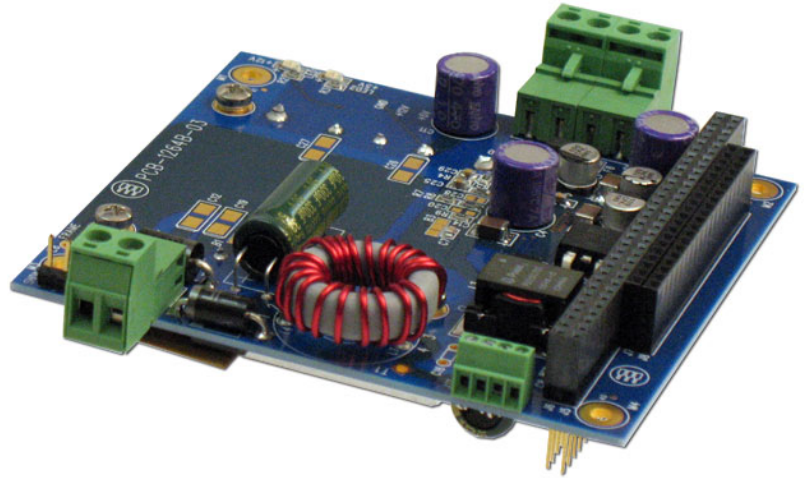


ACS-5161

PC104 60 Watt Isolated DC/DC Supply,
Vin= 18-36VDC, Vout= +5, +12VDC

Features



FUNCTION: Isolated PC/104 DC-DC Converter Vehicle Power Supply

VOLTAGE INPUT:

- Vin: +18V to +36V DC Input Range
- Transient and Reverse Voltage Protection
- Input Protected with Automotive Transient Voltage Suppressor, 6600W 10/1000us Ideal for 24V Battery Installations

VOLTAGE OUTPUT:

- VOut: +5V, +12V DC
- 5V Overload Protected; Over temperature Shutdown @ 105°C for Base plate

POWER OUTPUT:

- Output Power: +5V @ 12A (20A peak), +12V @ 2.5A
- 60 Watt Combined Output Power (-40°C to +85°C)
- 100 Watt Peak Output Power up to +70°C
- Note: Derating occurs if not structurally heatsinked

ISOLATION:

- Galvanic Isolation Input-to Output and Input to Base-Plate 1500V
- Galvanic Isolation Output to Base-Plate 500V

EMI FILTER: Onboard Input Filter Designed for Compliance to MIL-STD-461, CE, and EN-55022 class B Conducted and Radiated Emissions as Part of Overall System Design

STATUS: Status LED Indicators, Remote Shutdown Capability




The ACS-5161 is a galvanically-isolated dual-output DC/DC power converter in the PC/104 form factor. Providing up to 100 watts of peak power (minimum 60 watts continuous at extended temps if not structurally heatsinked), the ACS-5161 features a special mechanical design hardened for extreme temperatures and high levels of shock and vibration, making it ideal for aircraft, rail, ship or industrial installations. All heavy or big components are securely fixed to the board for shock/vibration resistance.

Intended to be bottom board of a PC/104 card stack, the power supply incorporates a DC/DC converter module placed on its bottom side, so that it can be structurally heatsinked to a thermally conductive base or enclosure wall - to enable reliable extended temperature operation (-40C to +85C) without any active cooling (fanless). The output voltages are driven into the PC/104 bus and can also be accessed from easily removable terminal blocks on the side of the module. Indicator LEDs show the status of the power outputs. The power supply can be switched ON/OFF remotely with a switch or ignition key of a vehicle.

Input protected and filtered, the ACS-5161 is ideal for battery-operated +24V DC nominal systems. It offers reverse protection up to -45VDC and short-term tolerance of spikes up to 50V (1ms). It also supports configurable timing for power sequencing, as well as remote shutdown. The onboard common mode input filter and protection circuitry is designed to meet the requirements of the EC low voltage directives for CE compliance EN55022-B and EN61000 and MIL-STD-461 for conducted and radiated emissions. Integration of the filter stage on-board makes system integration easier, eliminating external pre-filter boards. Emissions are reduced by optimal board layout, as well as EMI filtering of all the outputs of the board including the power that is supplied into the PC/104 bus.

ACS-5161

Specifications

 <p>Bottom DC-DC Converter for Optimal Heatsinking</p>  <p>ACS-5161 Top View</p>  <p>ACS-5161 Angle View</p>	DC/DC Conversion	<ul style="list-style-type: none"> Efficiency: 85% Typical for +5V (at full load) Switching Frequency: 230kHz
	Physical	<ul style="list-style-type: none"> Weight: 0.436 lbs (0.198 kg) Dimensions: PC/104 Form Factor Compliant 3.550" x 3.775" x 1.06 (90 x 96 x 27 mm); DC/DC converter mounts below the board Power Connectors: PC/104 Bus; Screw Clamp Terminal Blocks; HDD Terminal Block
	Environmental	<ul style="list-style-type: none"> Operating Temperature: -40°C to +85°C (-40°F to +185°F) if structurally heatsinked; 100°C base plate temperature (max) Cooling: Conduction Cooling (fanless) Shock / Vibration: Designed for mobile environments; all heavy/big components are securely fixed to board Humidity: up to 95%, Non-Condensing @ 40C
	Application Compatibility	<ul style="list-style-type: none"> Airborne, shipboard and industrial installations where galvanically isolated power is required/desired RoHS (2002/95/CE) Compliant Replacement for ACS-5160
	Thermal Interface	For reliable extended temperature operation, this product's bottom-mounted DC/DC converter module facilitates conduction cooling to a system enclosure. A thermally conductive gap pad or coupling compound should be utilized. Suggested gap pad suppliers include The Bergquist Company or AOS Thermal Compounds.
	Reliability	MTBF: 166,732 hours (calculated per MIL-HDBK-217F @ 40°C, Ground Benign, Controlled GB, GC)
	Warranty	1 Year RTF Warranty (Extended Service Contracts Available)
	Options	Conformal Coating

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