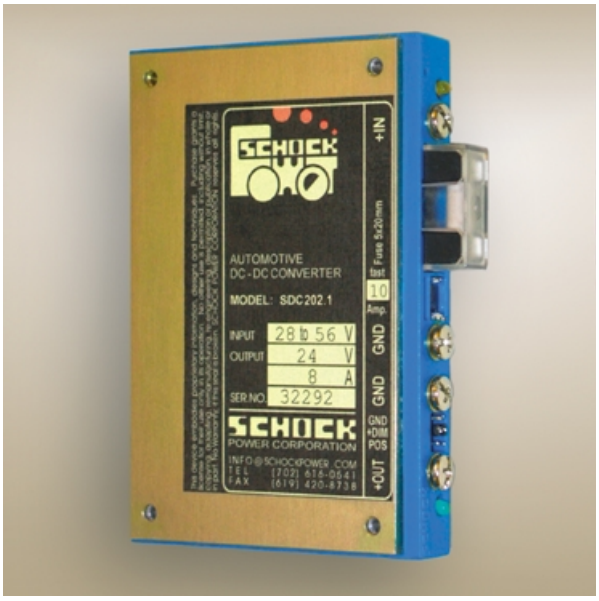

AUTOMOTIVE
DC-DC CONVERTER
SDC202.1
(200 WATTS)

APPLICATION:

* Industrial Electric Vehicles
* Public Transportation
* Recreational vehicle lighting
* Position and control equipment
* Navy and aerospace
* Motor-controller for DC Motors
* Communication equipment
* Mobile equipment
* Global Positioning Systems GPS

Description: The SDC 202.1 is a very high efficient and high density DC-DC Converter for electric vehicle applications. The unit features a unique design for optimum heat transfer and mounting. Wide input voltage range from 28 to 56 Volt (other voltages on request) allows the use with 36 and 48V batteries. It works with the new 42V standard onboard voltage, as used on new car models. The unit is a down-converter without galvanic isolation. The input and output share the same ground connection for simplicity, low cost and highest efficiency.

Highlights:

* Light weight
* High power density
* Output dimmable
* Transient protection
* Compact Package
* Wide input voltage range
* Over-temperature Limit
* Water spray protection
* Vibration resistant
* Humidity protection
* Wide temp. range
* High Efficiency
* LED for visual Input Voltage Indication
* LED for visual Output Voltage Indication

Features:

Input Filter and Transient Protection: Unique input filtering with rigid transient protection enable this unit to be used in severe transient and high noise environments. These situations are present in electric powered vehicles, as used in industrial, automotive and aerospace applications.

High Frequency Switching: The module features a proprietary near zero loss high frequency switching method, with no RF ringing and no switching transients. This feature provides highest efficiency (94%). RF compliance with low interference and low noise outputs. Remarkable power density of 30 Watts / in3.

Over-temperature Limit: Even though the unit has very high efficiency (94%), it is heating up during operation. An internal over-temperature control limits the output power, so that the internal dissipation is reduced and overheating prevented.

Input Overvoltage and Transient Protection: The input filter allows for filtering of transients and also limits the magnitude of transients. Should a lasting overvoltage condition occur (56 V input), the unit is switched off and stops operation. When the input voltage is reduced to the operating voltage, it resumes operation.

Input Fuse and Reverse Polarity Protection: The converter features a built-in input fuse. If the polarity is accidentally reversed on the input, a protective diode on the input protects the input voltage from reversing. The input fuse would then "blow" because of the "short circuit" created.

Output Overcurrent and Short Circuit Protection: If the output current is increased due to a heavy load or due to a short circuit, the maximum output current is limited to 10 Amperes. The Voltage reduces automatically and the maximum output power is reduced. The unit turns off completely and a new start cycle is initiated.

Connection: Heavy duty screw terminals provide for input and output connections.

Control: Six pins on the output provide for external adjustment of the output voltage. A potentiometer (10 to 20 kOhm) can be connected to those pins. The output voltage can be gradually reduced to about 15 Volts. This feature can be used to dim lights that are connected to the output. If a switch is connected, the output can be switched between a low or high state for controlling the high or low beam.

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SCHOCK TM

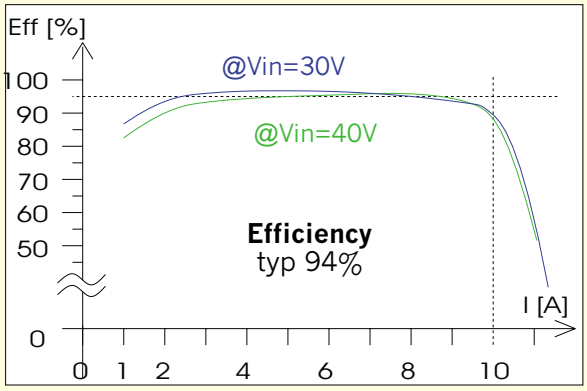
SPECIFICATIONS - SDC 202.1:

INPUT: + 28 V MIN. + 56 V MAX.
(other voltages up to 96V on request)
OUTPUT: + 24.4 V / 8 A (max. 200W)
(other voltages on request)

Protection Circuits:

* Input Transient Protection:
  1.5kW with 10 / 1000us; repetition rate 0.01%
  (6kW optional on request)
* Input Over-Voltage Shutdown
* Reverse Polarity Protection
* Input Fuse
* Over-temperature Protection
* Output Overcurrent Limit

Efficiency: 94% typ; 96% max



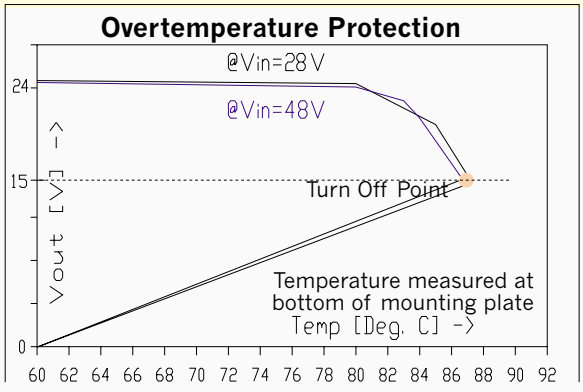
Operational Temperature: - 40°C to + 80°C

Weight: 8.4 ozs. (0.525 lb), 240 grams

Dimensions:

3.950"	x	2.613"	x	0.671"
100.3mm	x	66.4mm	x	17.0 mm

Mounting: 4 x M3 or 4-40 screw holes



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