

# SDC-Series

New Generation Step Down Converters (Non-Isolated)



## Description

This new generation of SDC- 5200 series of voltage reducers offer regulated 13.8 V DC power from 20-30VDC source such as Land Rovers, commercial vehicles, recreation vehicles, farming equipment and other diesel power vehicles.

The very compact, lightweight and no vent hole casing construction is possible because of the highly efficient, switch mode design with surface mount devices.

Low heat output and low standby current take out the need for an external power on-off switch.

The plastic clip-on mounting system makes the installation easy even in awkward to reach spot. The unit is tamper and dust proof because of no vent holes and no external fuse construction. The PCB component layout is designed and built for vibration loosening resistant, and with moisture proof coating making it ideal for off-road and harsh environments.

The advanced switching mode circuit design results a cool, silent, no humming and no high frequency noise operation. Electronic safeguards and fail-safe feature such as OVP ensure good protection to expensive connected equipments even when there is a fault in the unit.

The 13.8VDC output can be used as a source for float charge for 12V auxiliary battery.

Typical applications for this new generation of DC-DC converters are: Radio communications, car entertainment such as DVD player, printers, on board computers, security system, GPS, auxiliary lights, spot lights, charging of 12V auxiliary battery, and etc.

## Features

- Slim, compact and light construction due to high efficiency & low heat output.
- Dust and tamper proof due to extruded aluminum casing of no vent hole & no external fuse.
- Reliable clip-on mounting bracket construction for easy installation even in hard to get to spot.
- Vibration loosening resistant & coated PCB assembly, ideal for off road vehicles environment.
- Advanced switching mode design & SMT components for high efficiency & cool operation.
- Low standby current takes out the need for an external on-off switch.
- Over Voltage Protection against excessive output voltage in case of wrong installation or fault.
- Auto-reset loss of earth protection.
- Auto-reset over power protection.
- Auto-reset reverse polarity protection.
- Separate LED indicator for operation and fault status.
- Meet e-Mark and CE standards.

## Specifications

| Models                                | SDC - 5205  | SDC - 5208                        | SDC - 5212                        | SDC - 5220                        |
|---------------------------------------|---|-----------------------------------|-----------------------------------|-----------------------------------|
| Input Voltage Range                   | 18 - 38VDC  |                                   |                                   |                                   |
| Output Voltage                        | 13.8VDC   |                                   |                                   | 13.2VDC                           |
| Continuous Output Current             | 5A  | 7A                                | 12A                               | 18A                               |
| Max. Output Current at 30% duty cycle | 7A  | 12A                               | 16A                               | 20A                               |
| No Load Current                       | <20mA   | <30mA                             | <50mA                             | <100mA                            |
| Ripple & Noise (peak-peak)            | 100mV   |                                   |                                   | 300mV                             |
| Ripple & Noise (r.m.s.)               | 10mV  | 10mV                              | 15mV                              | 25mV                              |
| Load Regulation                       | 80mV  |                                   |                                   | 100mV                             |
| Line Regulation (20-30V variation)    | 50mV  |                                   |                                   |                                   |
| Efficiency                            | >89%  | >90%                              | >90%                              | >90%                              |
| Protections                           | OVP (Output Over Voltage Protection), Loss of earth protection self reset protection:<br>a) Reverse Polarity, b) Overload, c) Short Circuit |                                   |                                   |                                   |
| Indicators                            | Green LED: Operate    Red LED: Fault  |                                   |                                   |                                   |
| Input & Output Connection Type        | Push-on Flat Blade Connectors   |                                   |                                   |                                   |
| Cooling System                        | Natural Convection  |                                   |                                   |                                   |
| Max. Operating Temperature            | -10°C to 50°C   |                                   |                                   |                                   |
| Internal Input Fuse (glass type)      | 8A  | 12A                               | 20A                               | NIL                               |
| Approvals                             | CE EN 61000-6-3 ;<br>EN 61000-6-1   | CE EN 61000-6-3 ;<br>EN 61000-6-1 | CE EN 61000-6-3 ;<br>EN 61000-6-1 | CE EN 61000-6-3 ;<br>EN 61000-6-1 |
| Dimensions (WxHxD)                    | 77x75x32 mm<br>3x3x1.3 inch   | 96x75x32 mm<br>3.8x3x1.3 inch     | 142x75x32 mm<br>5.6x3x1.3 inch    | 162x75x32 mm<br>6.3x3x1.3 inch    |
| Weight                                | 190g    6.7oz.  | 230g    8oz.                      | 380g    13.4oz.                   | 365g    13oz.                     |
| Accessory                             | Clip-on Mounting Bracket set and Screw, Slip-on Receptacles   |                                   |                                   |                                   |

■ All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

■ SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE