

DCDC Converter S600 12V/28V/20A

This type of DCDC converter is designed to be used in vehicles in applications where electrical isolation between input and output is not necessary (common minus pole).

FEATURES:

- closed solid eloxal coated heatsink case
- common minus pole for input and output
- overheat protection - current limit decrease (no turn-off)
- water-resist - up to IP54 ¹⁾
- LED at the output ¹⁾

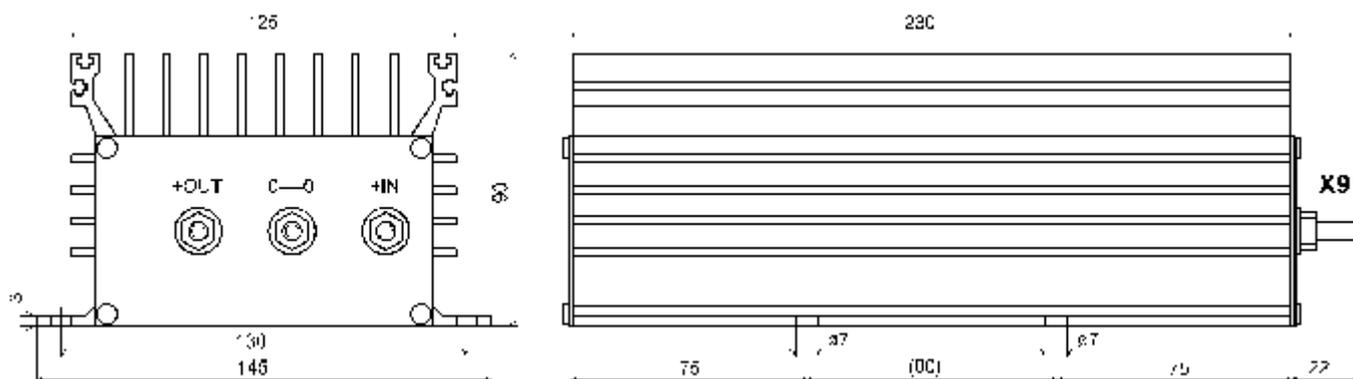
SPECIFICATIONS:

Input voltage (nom.):	12 V
Input voltage range:	10,5 V – 16 V
Shutdown voltage (UVLO):	10,5 V ²⁾
Output voltage:	28,0 V (adjustable)
Nom. output current:	20 A (inp. 12V/outp. 26V)
Max. output current (decreases with temp.):	24 A (16V/24V)
Protections:	
Incorrect input connection & breakdown	built-in fuse 2x30A/32V at the input
Incorrect output connection (battery)	built-in fuse 30A/32V, 6x32 mm at the output
Short-circuit	output fuse ³⁾
Input undervoltage	electronical circuit
Overload	electronic output current limit
Overheat	electronical current limit decrease
Output voltage ripple (0 – 50 MHz):	< 100 mV p-p
Line / load regulation:	< 1 %
Output to case isolation:	100 V DC
EMC - conducted emissions:	EN 55022 level A
Efficiency (nom. input, cont. current, typ.):	93 %
Switching frequency:	65 kHz
No load consumption:	max. 1 W
Connection:	see Options
Ambient temperature range (cont. current):	-25 °C .. +45 °C (no convection, vertical pos.)
Max. ambient temperature (derated power):	+60 °C
Storage temperature:	-40 °C - +70 °C
Dimensions (WxHxD):	145x90x254 mm (depends on connection)
Weight:	2.5 kg

Notes:

1. see Options
2. In case of UVLO (shutdown), input voltage slightly lowered appears at the output !!
3. In case of short-circuit, output fuse blows out (standard type 6x32 mm, 30A/32V). The fuse is accessible under a lid.

DIMENSIONS:



OPTIONS:

B - Battery at the output (battery charger)

Cn - Case environmental protection

C0 - IP40

C1 - IP42 - silicon stick, moulded rubber grommet

C2 - IP54 - silicon stick, compression type cable gland (PG11)

F2 – standard EMI suppression (EN 55022 – A), other upon customer's request

Ln - Indication LED between heatsink fins

L1 - connected to output

L2 - converter work indication (independent on accu connected)

Sn - Built-in fuse

S1 - input fuse

S2 - output fuse (against reverse battery current or short circ.)

V - Pot for output voltage adjustment (between profile fins)

Xn - Special requirements (connectors, mounting etc.)

X0 - crimp ferrules ended wires

X2 - standard screw terminals

X9 - isolated screw bolts M6 on a lid
others upon customer's request.

Yn - alternative colors of wires (at X0)

	+IN	-IN	+OUT	-OUT	GND
<input checked="" type="checkbox"/> Y0	red	black	red	black	
<input type="checkbox"/> Y1	red	blue	black	brown	

INSTALLATION NOTES:

1. The converter is mounted by four screws preferably vertically (wires at the bottom) or horizontally (in this case the power capability of the converter may be slightly reduced).
2. It's not recommended to mount the converter directly to the motor or to the gearbox. Case environmental protection must be considered in case of possible water influence.
3. **When connecting the converter into the electric circuitry, it is necessary to keep proper polarity (+/- poles) !** In case of reverse connection input and/or fuse can blow. The fuses (accessible under lid) can be replaced only by the same type and the same value.
4. It is recommended to apply input power prior to connecting the output battery to avoid the sparkle due to discharged output capacitors.