

DCDC Converter B400 48 V/12 V/35 A

This type of DCDC converter is widely employed in the electrical vehicle industry in applications where electrical isolation between input and output is not necessary (common minus pole). The converter can work as charger. Battery back current at converter switch-off is less 4 mA and saves battery charge.

FEATURES:

- closed solid eloxal coated heatsink case
- overheat protection - current limit decrease (no turn-off)
- short-circuit proof
- water-resist - up to IP54 ¹⁾
- LED at the output ¹⁾
- EMC ensured
- designed to work with a board battery 12 V nom. at the output
- output voltage reset possible

SPECIFICATIONS:

Input voltage (nom.):	48 V
Input voltage range:	32 V – 63 V
Shutdown voltage (UVLO):	32 V
Output voltage:	12 V ¹⁾ (opt. V: 11.5 V -14.5 V adjustable, opt .U: factory set 13.8 V ± 1 %)
Cont. output current:	32 A or 400 W
Output current limit:	35 A (32 A at opt. B ¹⁾)
Protections:	
Incorrect input connection & breakdown	fuse 16 A/ 250V
Incorrect output connection & breakdown ¹⁾	fuse 2x30 A (DIN 72581), soldered
Input undervoltage	electronical circuit
Overload and output short-circuit	electronic output current limit
Overheat	electronical current limit decrease
Output voltage ripple (0 – 50 MHz):	<10 mVrms
Line / load regulation:	<1 %
EMC - conducted emissions:	EN 55022 level A
Efficiency (nom. input, cont. current, typ.):	88 %
Switching frequency:	65 kHz
No load / UVLO current consumption:	max. 50 mA/ 22mA
Connection:	see Options
Ambient temperature range (output 400W):	-25 °C .. +35 °C (no convection, vertical pos.)
Max. ambient temperature (derated power):	+50 °C
Storage temperature:	-40 °C - +70 °C
Dimensions (WxHxD):	145x90x160 mm ¹⁾
Weight:	1.5 kg

Notes:

1) see Options

OPTIONS:

B – Battery on the output

Cn - Case environmental protection

C0 - IP40 (except terminals)

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 under the window in the upper lid

L1 - connected to output

L2 - converter work indication (independent on accu connected)

Sn - Built-in fuse

S1 - input fuse

S2 – output fuse (against failed reverse battery current)

T – Thyristor crowbar at the output

U - Output voltage option 13.6 V – 14,0 V

V - Pot for output voltage adjustment (under lid)

Xn - Special requirements (connectors, mounting etc.)

X0 - crimp ferrules ended wires

X2 – standard screw terminals 10 mm² on a lid

X3 - panel screw terminals (4 mm², 6 mm²) on a lid

X9 – screw bolts M6 on a lid, brass (+input, -com, +output)
others upon customer’s request.

Yn - alternative colors of wires (X0 option)

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

Standard options: B400 48/12 L1S12UX9

DIMENSIONS (OPT. X2):

