

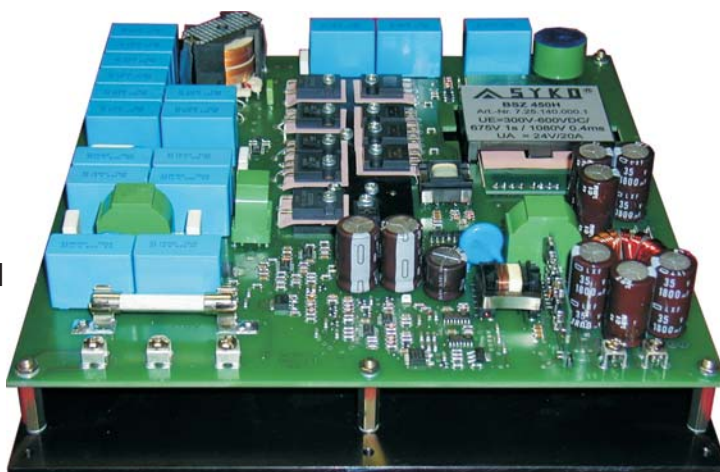
Single output
up to 480 Watt

High voltage converters
with isolation



- For fuel cells 220V or 450V
- Intermediate circuits 600V
- High long term transient strength
- Input noise suppression EN 55022.B
- 6 mm air and creepage distances
- High ambient temperature with chassis mounting
- Requirements of Stanag / Germ. Lloyd
- Parallel switchable

for naval, railway, vehicle applications



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Series BSZ U

Use on high voltage fuel cells in submarines

Main points:

Output:

- Regulation $\Sigma (U_{in} + I_{out} + T_U) < \pm 2\%$
- Accuracy absolute $\pm 2\%$
- Ripple $< 200 \text{ mV}_{pp}$ (over T_U)
- Spikes $< 300 \text{ mV}_{pp}$ (T 1:1/50MHz)
- Response time $\Delta I = 50\% \leq 2 \text{ ms}$
- Constant current limitation $< 1,2 I_{Amax}$
- Output spike filter (C - L² - C)
- No-load, over load, short circuit proof
- Optical power-good-signal, LED yellow (intermediate circuit)
- Option: parallel switching

Input:

- Starts without auxiliary voltage
- Input reverse pol. protection / length diode
- Input filter acc. to EN 55022.B
- Input fuse 8x50 mm, adapted melt flow characteristic
- Inrush current + run-up current limitation (AFI)

In general:

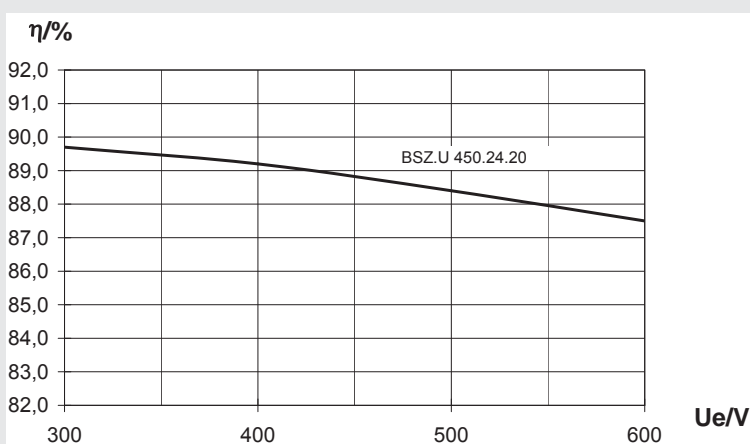
- Efficiency typ. 88% /360W or 480W
- Connection with M4 - screw terminal
- Clock frequency variable - 120 kHz
- Isolation test voltage 4 KV DC 1 min
- 6 mm air and creepage distances VDE 0110 part 1 and 2
- Ambient temperature $-40^\circ\text{C} / +85^\circ\text{C}$
- No derating
- Limit temperature on heat sink-★: 95°C
- Security acc. to EN60950 (customer)
- MTBF on request
- Shock/vibration acc. to EN50155/121
- Weight approx. 3,1Kg (with base plate)
- Dimension approx. 250 x 250 x 60 mm
- CE-conformity certificate on request

<u>U_{in}</u> V	<u>P_{out}</u> W	<u>U_{out}</u> V	<u>I_{out}</u> A	Model number
150 - 300	360	12	30	BSZ.U220.12.30
340V / 1s	450	15	30	BSZ.U220.15.30
600V / 0,4ms	480	24	20	BSZ.U220.24.20
300 - 600	360	12	30	BSZ.U450.12.30
675V / 1s	450	15	30	BSZ.U450.15.30
1080V / 0,4 ms	480	24	20	BSZ.U450.24.20
400 - 850	360	12	30	BSZ.U650.12.30
1050V / 2ms	450	15	30	BSZ.U650.15.30
	480	24	20	BSZ.U650.24.20

Modification costs for possible changes above values:

on request

Efficiency

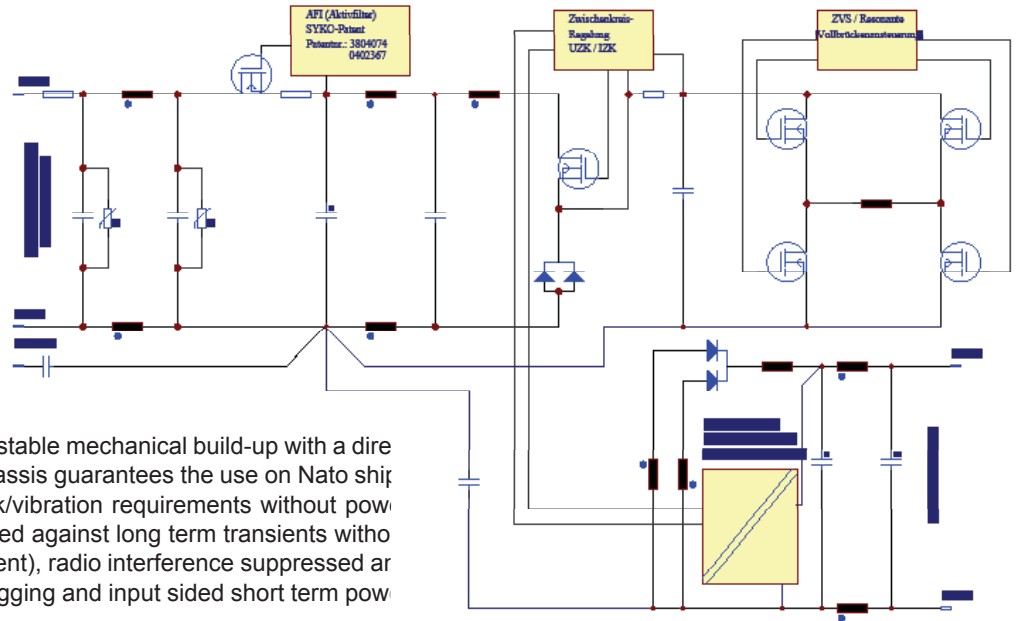


The **BSZ.U** series has been designed for the use on high voltage batteries, fuel cells and high voltage intermediate circuits in vehicles, ships and submarines with an output power of 500W.

The chosen switching concept allows high efficiencies and wide input voltage ranges at high voltage levels.

The limited inrush current (soft start) and the integral power activating allow the unproblematic use with

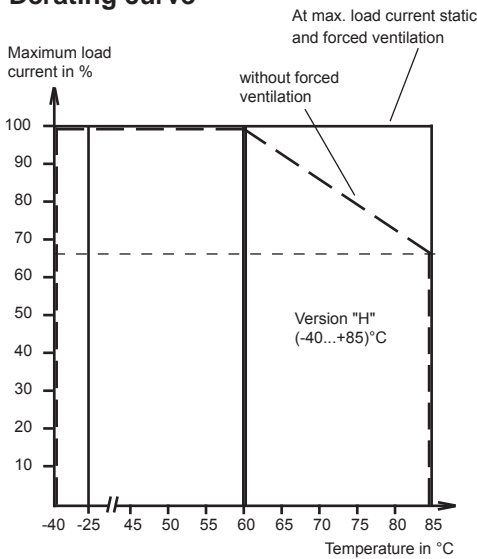
low system perturbation. The stable mechanical build-up with a direct thermal connection to the chassis guarantees the use on Nato ships and vehicles with high shock/vibration requirements without power derating. The input is protected against long term transients with current reflection (SYKO-patent), radio interference suppressed and deals with chattering overplugging and input sided short term power failures (auto start).



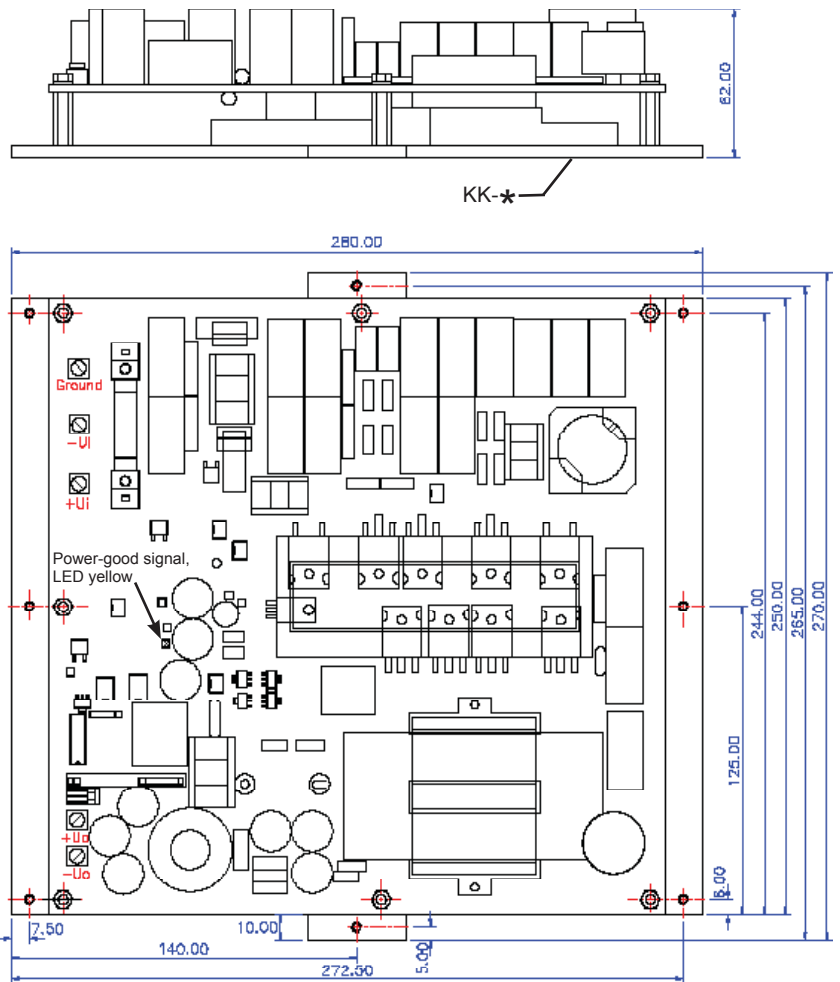
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The switching topology, the choice of components, the auto run-up with the input voltage and running interface capability up to limit values result a high system security for the customer. With the adapted regulation parameters the output can be switched parallel with a very good power sharing.

Derating curve



Mechanics



Measurement of radio interference

