

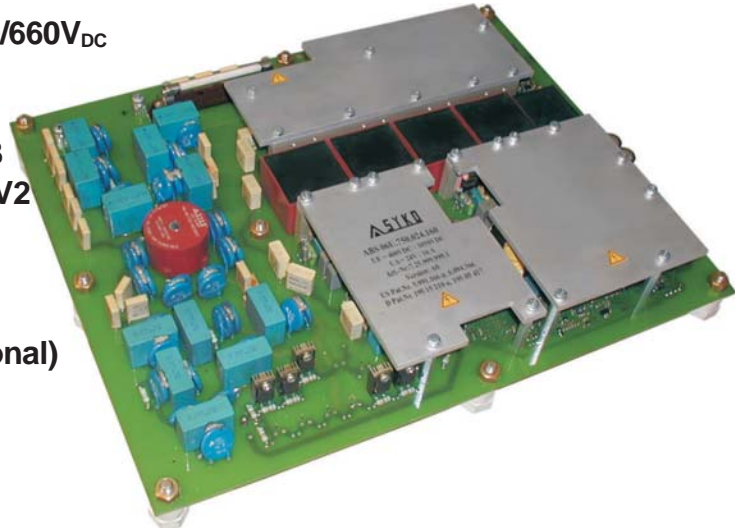
single output
up to 400/550 Watt

High voltage converters
with isolation



for railway / vehicles / high voltage batteries

- Use on traction line 600/750V_{DC}
- Batterie / intermediate circuits 220/450/660V_{DC}
- Burst/Surge EN 61000-4-4/5 level X
- Over voltages acc. to IEC1287 Level 2
- Noise suppression EN 55022.A + 20dB
- 20 mm air and creepage distances / OV2
- acc. to EN50124-1 / PD2
- LES-DB / Railway EN 50155 / 121
- Battery charging / system supply
- Power factor correction 16/50Hz (optional)
- DC and optional AC input with PFC



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Series ABS 06

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 $< 300 \text{ mV}_{pp}$ ($T: 1:1/50\text{MHz}$)
- Response time $\Delta I = 50\% \leq 3 \text{ ms}$
- Constant current limitation $< 1,2 I_{out \text{ max}}$
- Output spike filter (C - L² - C)
- No-load, over load, short circuit proof
- Options:
U-out change over charg.end voltage(KV4)
I-short circuit change over (KV5)
- Switch off at over load $< 0,6 \times U_{out}$
- Dynamical over load 30s¹⁾ (optional)
- Decoupling diode for re-feeding voltage
- Relay, closing from approx. 0,8 x U_o nom
- Screw terminal M4

Input:

- No-load power approx. 13 Watt
- Input filter EN 55022.A +20db
- Disturbances
Burst EN 61000-4-4 level 4
Surge EN 61000-4-5 6kV / 2Ω / 50μs
- Input fuse 1,2kV 8x50 mm
with adapted melt flow characteristic
- Inrush current + run-up current limitation
- No external high frequency interference¹⁾
- Reverse pol. protection with
transient adapted series diodes
- Power factor control at AC (sin, sq, tr)
- Screw terminal M4

In general:

- Auto run-up with input voltage U_{in}
- Efficiency typ. 88%
- Clock frequency $> 80 \text{ kHz}$
- Cascaded Regenerator-topology (Patent)
- Isolation test voltage 4,8 KV_{AC} 10s / 100%
- 20 mm air and creepage distances
(PCB/transformer)
- coated PCB
- Ambient temperature -25°C / +70°C
forced air convection¹⁾
- Option: -40°C / +85°C
- Derating 1,2% / °C $> 60^\circ\text{C}$
- MTBF on request
- Shock/vibration acc. to EN50155
- Weight approx. 4 kg
- Dimension 420 x 338 x 65 mm³
- CE-conformity certificate on request

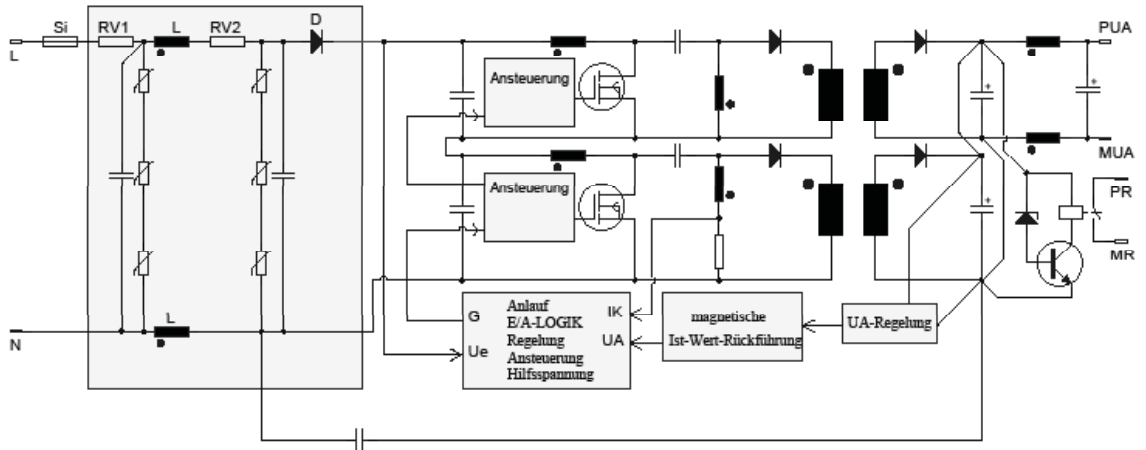
U _i V	P _o W	U _o V	I _o A	Model- number
150 - 330	400	24	16,7	ABS 06.U220.024.167
665V / 2ms	450	36	12,5	ABS 06.U220.036.125
220V-Battery	500	72	6,9	ABS 06.U220.072.069
	500	110	4,5	ABS 06.U220.110.045
180 - 560	340	24	14	ABS 06.U300.024.140
1065V / 2ms	360	36	10	ABS 06.U300.036.100
220/450V-Battery	400	72	5,5	ABS 06.U300.072.055
	400	110	3,6	ABS 06.U300.110.036
	Option 400	220	1,8	ABS 06.U300.220.018
340 - 560	400	24	16,7	ABS 06.U450.024.167
1065V / 2ms	450	36	12,5	ABS 06.U450.036.125
450V-Battery	500	72	6,9	ABS 06.U450.072.069
	500	110	4,5	ABS 06.U450.110.045
460 - 900 DC	450	24	18,8	ABS 06.U660.024.188
1050V / 10ms	500	36	13,9	ABS 06.U660.036.139
660V DC-Intermediate Circuit	550	72	7,6	ABS 06.U660.072.076
	550	110	5,0	ABS 06.U660.110.050
400 - 1000 DC	400	24	16,7	ABS 06.U750.024.167
1270 V/100 ms	450	36	12,5	ABS 06.U750.036.125
1950 V/2 ms	500	72	6,9	ABS 06.U750.072.069
750 V DC-Traction line	500	110	4,5	ABS 06.U750.110.045
Start-up operation				on request
Battery charging to charging end voltage				on request
Version H	-40°C up to 85°C			additional charge
Modification costs for possible changes above values:				on request
1) clarification with SYKO				

Stand: 10/16

The **ABS06** series is designed for the mobile and stationary use especially for traction line and high voltage battery applications with an output power of 500W.

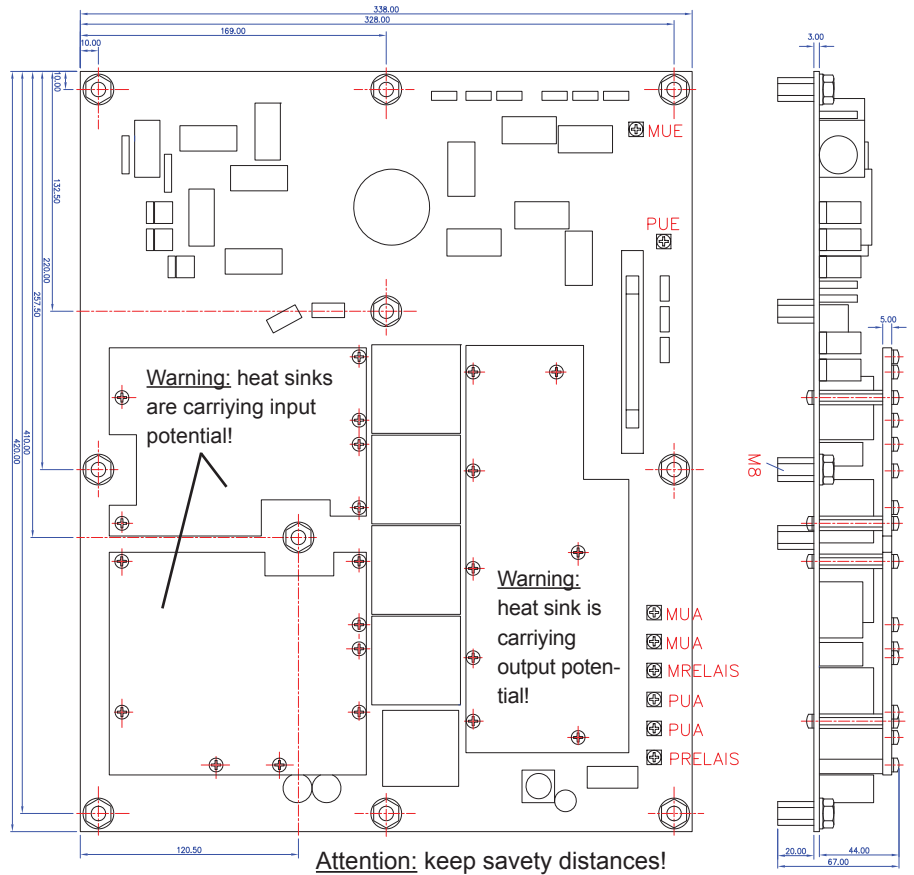
The patented switching topology allows extremely high input-output isolation with 20 mm air and creepage distances on the PCB and in the transformer. The robust and stable mechanical build-up for extreme shock and vibration demands is ideal for traffic applications e.g. trams, hybrid-vehicles and long distance trains.

This standard power supply is protected and filtered against over voltages and disturbances at the input and output side. The power supply produces a regulated, short circuit proof, no-load proof and isolated low voltage with the according maximum dynamical power directly out of the high voltage network. This low voltage can be used for system supplies or battery charging. The output voltage can be switched-over from the nominal voltage to the maximum charging end voltage (customs demand) for batteries. An external output length diode is necessary in the case of output sided re-voltages (e.g. battery) and prevents the energy re-flow or allows the parallel connection for security reasons / power increase.

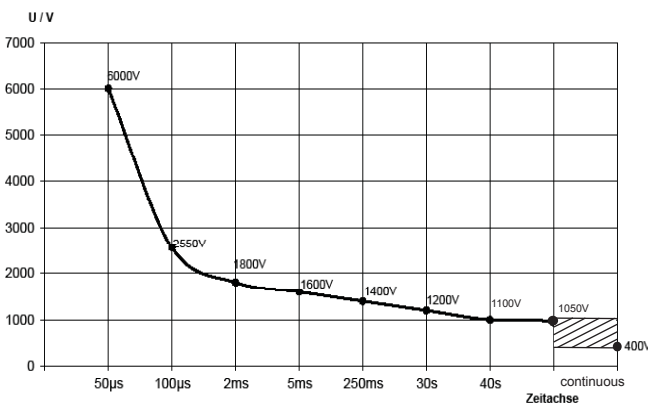


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Mechanic



Dynamical over voltage for 750V traction line applications



Efficiency

