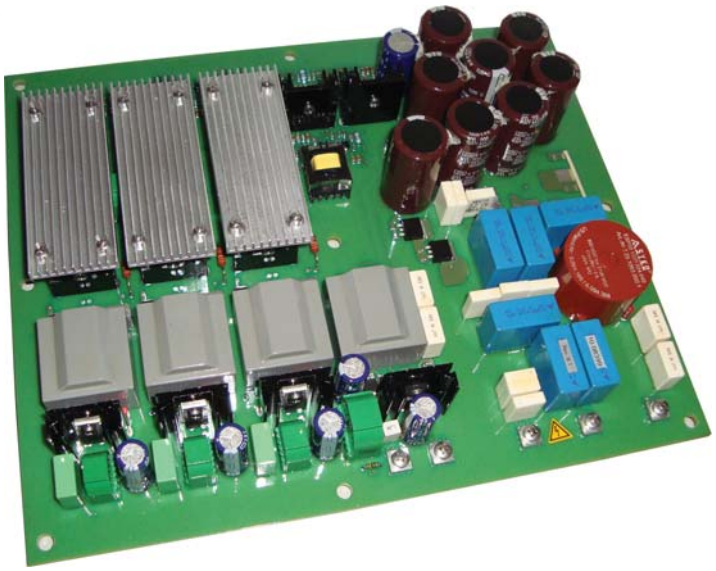
for railway / car applications / high voltage batteries

- **Use on traction line and high voltage intermediate circuits**
- **Transient strength 3,6kV / 2ms**
- **Noise suppression EN 50121-3-2**
- **Hold-up time >100ms from Ui-min (external expandable)**
- **21 mm air and creepage distances**
- **LES-DB / Railway EN 50155 / 121**
- **Battery charging / system supply**



Series UIC01
(preliminary)

Main points:

Output:
- Regulation Io=40-90%: <500mV
- Accuracy absolute ± 2%
- Ripple <100 mV_{pp} (over T_a)
- Spikes <4300 mV_{pp} (T 1:1/50MHz)
- Response time ΔI=50% ≤ 3 ms
- Constant current limitation < 1,2 $I_{o\text{-}max}$
- Output spike filter (C - L^2 - C)
- No-load, over load, short circuit proof
- Battery charging to charging end voltage (optional)
- Switch off at over load <0,7 x Uout 3 times re-start cycle
- Dynamical over load[1] 30s (optional)
- Screw terminal M4

Input:
- Monitoring: over load, turn-on/off point, over voltage
- No-load power approx. 15 Watt Input filter EN 50121-3-2
- Disturbances EN 61000-4-4 level 4 Burst EN 61000-4-5 level X Surge 6 kV on 2Ω / 50µs
- Input fuse external (customer sided)
- Run-up current limitation integral
- Passive hold-up time >100ms internal (Ui=1500V / Po=100W) expandable with external capacitor-block (screw connection M4 X3.1 / 3.2)
- Screw terminal M4

In general:
- Auto run-up with input voltage Uin
- Efficiency typ. 82%
- Clock frequency > 60 kHz
- Cascaded Regenerator-topology (Patent)
- Isolation test voltage 3,6 KV_{DC}
- 21 mm air and creepage distances
- Ambient temperature -25°C / +70°C
- Option H: -40°C / +85°C
- Derating 1,5% / °C >55°C
- MTBF on request
- Shock/vibration acc. to EN50155
- Weight approx. 2 kg (without screw bolts)
- Dimension 300 x 250 x 45 mm³
- CE-conformity certificate on request

Ui	Po	Uo	Io	Model number
V	W	V	A stat./dyn.[1]	
800 - 1400 V AC	**110** / 55°C	24	4 / 4,5	UIC01.U10AC.024.045
16 $^2/_3$ / 50Hz	**100** / 70°C	36	2,6 / 3,0	UIC01.U10AC.036.030
only sinus	natural	72	1,3 / 1,5	UIC01.U10AC.072.015
	convection	110	0,9 / 1,0	UIC01.U10AC.110.010
800 - 2600 V DC	**110** / 55°C	24	4 / 4,5	UIC01.U15DC.024.045
3600V / 2ms	**100** / 70°C	36	2,6 / 3,0	UIC01.U15DC.036.030
	natural	72	1,3 / 1,5	UIC01.U15DC.072.015
	convection	110	0,9 / 1,0	UIC01.U15DC.110.010

Limited transient strength and single isolation

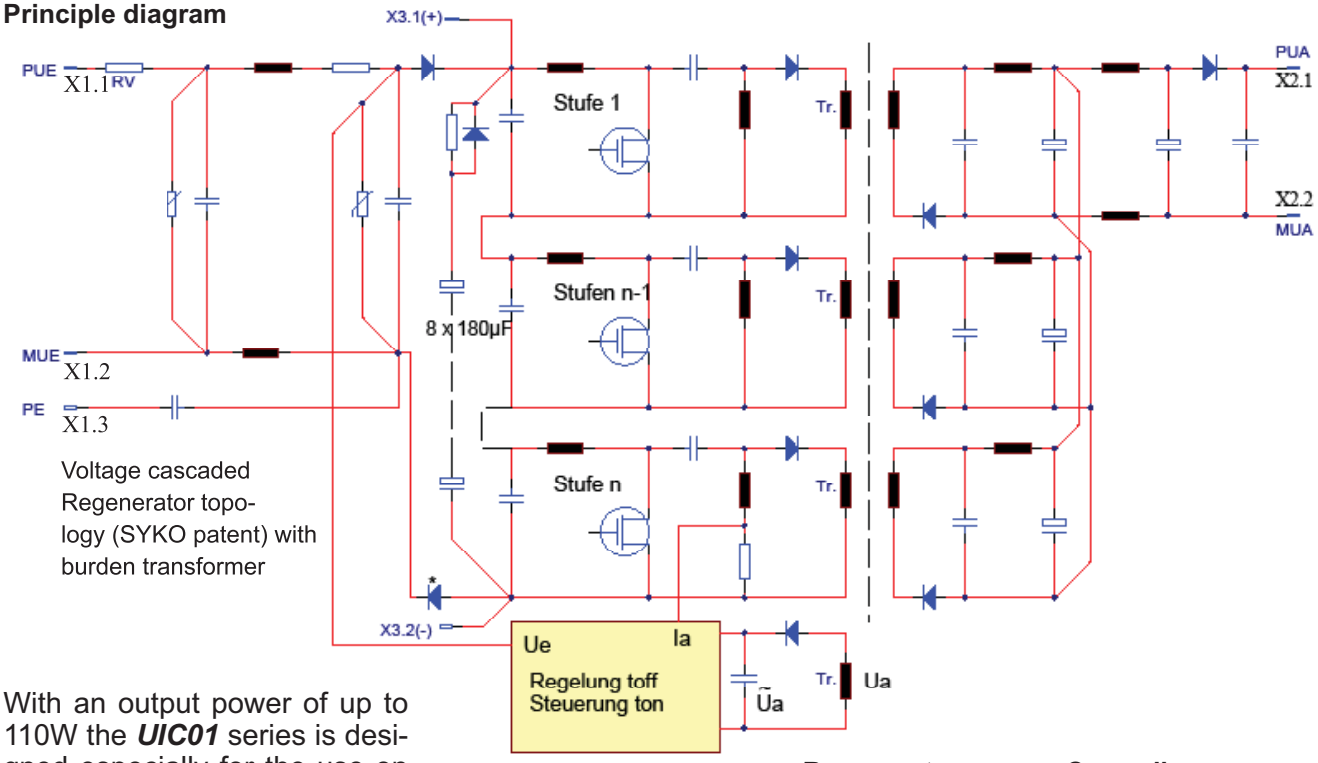
110 Watt available up to Ta = 70°C with forced ventilation (Option)

Start-up operation exklusive sales by Schaltbau München / www.schaltbau.de		on request
U_{out} for charging as charging end voltage		on request
Version H	-40°C up to 85°C	additional charge

Modification costs for possible changes above values: on request

Distance isolating bolts are not part of delivery (option)

Principle diagram



Voltage cascaded Regenerator topology (SYKO patent) with burden transformer

With an output power of up to 110W the ***UIC01*** series is designed especially for the use on high voltages circuits (DC/AC) and high voltage batteries.

High isolation with air and creepage distances of 21 mm, high output voltages and wide input voltage ranges are possible with this patented switching topology. The robust and stable mechanical build-up for extreme shock and vibration demands is ideal for traffic applications e.g. the use on the railway high voltage bus.

This standard power supply is interference suppressed and protected against over voltages as well as disturbances input and output sided. The customer can use the isolated, regulated, short circuit protected and no-load stable low voltage level, which is generated directly out of the high voltage level , to supply systems or to charge batteries. To charge batteries the output voltage can be adjusted to the according charging end voltage level optionally. An external output length diode prevents the battery's energy re-flow while charging and allows the parallel connection for security reasons or for power increase.

Regenerator
US Pat. No. 5.991.166
D Pat.No. 195 15 210

Cascading
US Pat. No. 6.094.366
D Pat. No. 195 05 417

Mechanic

Distance isolating bolts are not part of delivery (option)