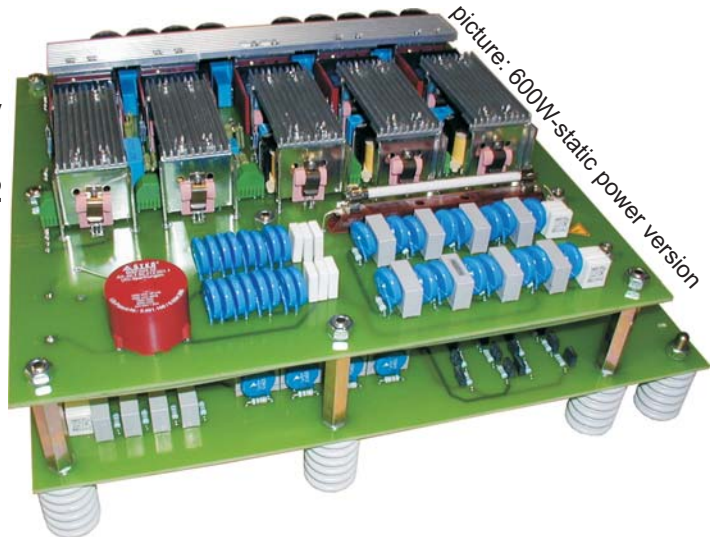


- Use on UIC-high voltage bus
- Universal-Input voltage acc. to UIC 550
1000V_{AC}, 1500V_{DC}, 1500V_{AC} and 3000 V_{DC}
- Transient strength acc. to UIC 550 / 14kV
- Noise suppression EN 55022.A +20db
- 80 mm Air and creepage distances / OV2
- acc. to EN50124-1/increased Isolation/PD2
- Partial discharge voltage >6 kV / 10pC
- LES-DB / Railway EN 50155 / 121
- Battery charging / system supply
- Power factor correction 16/50Hz
on sinus, rectangular, trapeze



Series UIC06

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 $\Delta I = 50\% \leq 3 \text{ ms}$
- Constant current limitation $< 1,2 I_{o,max}$
- Output spike filter (C - L² - C)
- No-load, over load, short circuit proof
- Battery charging to charging end voltage (optional)
- Switch off at over load $< 0,7 \times U_{out}$
3 times re-start cycle
- Dynamical over load 30s (optional) 1)
- Relay, closing from approx. $0,7 \times U_o \text{ nom}$
- Screw terminal M4

Input:

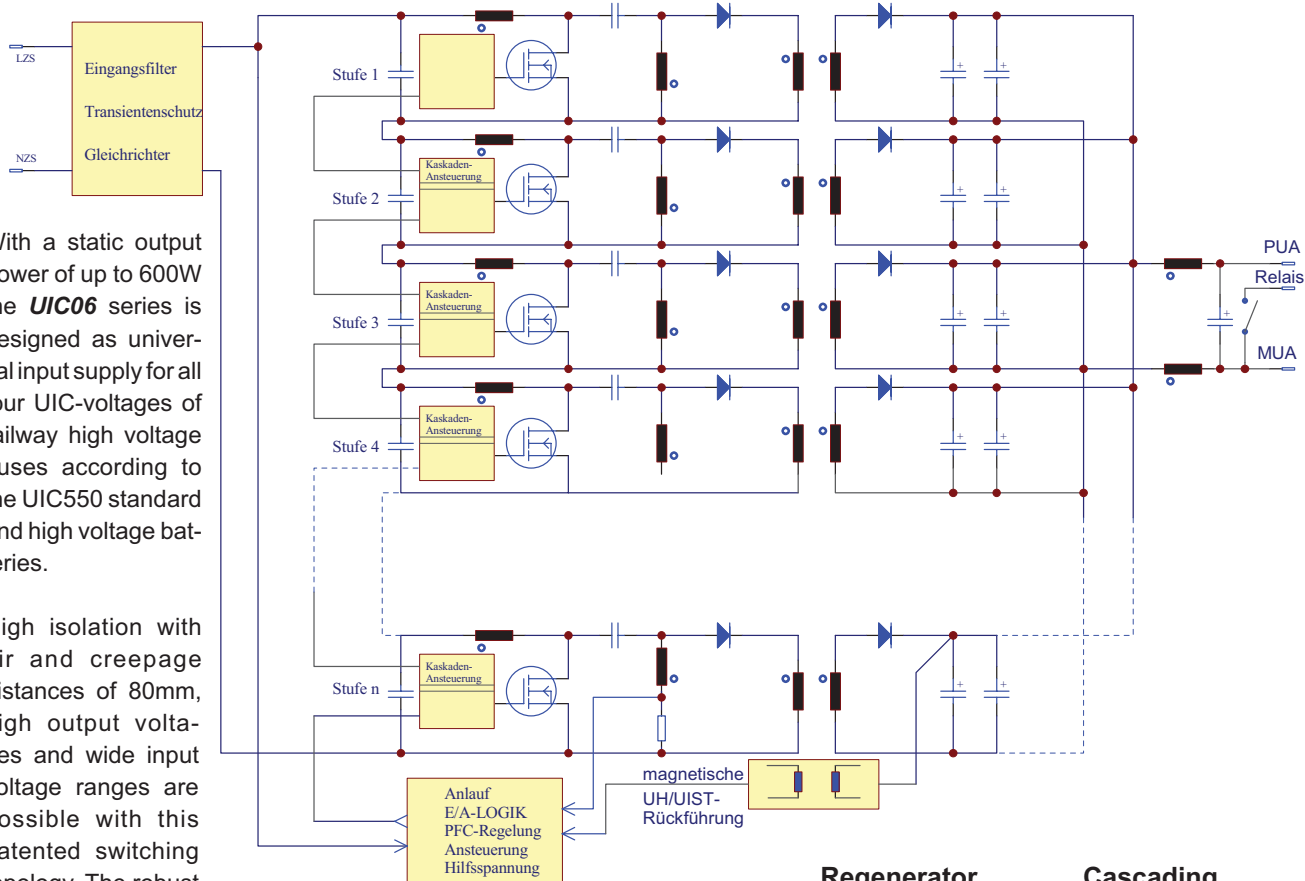
- No-load power approx. 20 Watt
- Input filter EN 55022.A +20db
- Disturbances
EN 61000-4-4 level 4 Burst
EN 61000-4-5 level X
Surge 6,6 kV on $2\Omega / 50\mu\text{s}$
- Input fuse 6kV 8 x 120 mm
with adapted melt flow characteristic
- Inrush current + run-up current limitation
- Reverse pol. protection over bridge rectifier
- Screw terminal M4
- Power factor correction at AC (sin, sq, tr)

In general:

- Auto run-up with input voltage U_{in}
- Efficiency typ. 86%
- Clock frequency $> 80 \text{ kHz}$
- Cascaded Regenerator-topology (Patent)
- Isolation test voltage 10 KV_{AC} 10s / 100%
- 40/80 mm air and creepage distances
- Ambient temperature $-25^\circ\text{C} / +70^\circ\text{C}$
- Option: $-40^\circ\text{C} / +85^\circ\text{C}$
- Derating: 1,5% / $^\circ\text{C} > 55^\circ\text{C}$
Dynamical load 1s / $^\circ\text{C} > 55^\circ\text{C}$
- MTBF 200.000 h acc. to SN29500 / 40°C
- Shock/vibration acc. to EN50155
- Weight approx. 7,5 kg
- Dimension:
40mm air/creepage: 417 x 353 x 100 mm³
80mm air/creepage: 417 x 393 x 100 mm³
- CE-conformity certificate on request

U_{in} V	P_{out} W	U_{out} V	I_{out} A	Model number
			stat./dyn. ¹⁾	
900 - 5000 V DC	275 / 55°C	24	11,5 / 15,0	UIC06.U1030.024.115
700 - 1860 V AC	200 / 70°C	36	7,6 / 10,0	UIC06.U1030.036.076
16,3 - 60 Hz	no air convection	72	3,8 / 5,0	UIC06.U1030.072.038
Sinus, rectangular, trapeze		110	2,5 / 3,3	UIC06.U1030.110.025
UIC 550 Universal input				
1000V AC / 1500V AC			By forced air convection 275 Watt are available	
1500V DC / 3000V DC			up to $T_U = 70^\circ\text{C}$ (Option)	
900 - 5000 V DC	330 / 55°C	24	14,0 / 18,0	UIC06.U1530.024.140
UIC 550 Multiple voltage	240 / 70°C	36	9,2 / 12,0	UIC06.U1530.036.092
1500V DC		72	4,6 / 6,0	UIC06.U1530.072.046
3000V DC		110	3,0 / 3,9	UIC06.U1530.110.030
			By forced air convection 330 Watt are available	
			up to $T_U = 70^\circ\text{C}$ (Option)	
Use with forced air convection (Rücksprache) and increased heat sinks				
900 - 5000 V DC	600 / 70°C	24	25	UIC06.U1030.024.250
700 - 1860 V AC		36	16,7	UIC06.U1030.036.167
16,3 - 60 Hz		72	8,4	UIC06.U1030.072.084
Sinus, rectangular, trapeze		110	5,5	UIC06.U1030.110.055
UIC 550 Universal voltage				
1000V AC / 1500V AC			Parallel operation possible with external output diode	
1500V DC / 3000V DC				
Start-up operation as Series ESP1 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 circuit



With a static output power of up to 600W the **UIC06** series is designed as universal input supply for all four UIC-voltages of railway high voltage buses according to the UIC550 standard and high voltage batteries.

High isolation with air and creepage distances of 80mm, 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 UIC-level, to supply systems or to charge batteries with increased isolation. To charge batteries the output voltage can be adjusted to the according charging end voltage level optionally. An external output length diode (compulsory) prevents the battery's energy re-flow while charging and allows the parallel connection for security reasons or for power increasing.

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

Distance isolating bolts are not part of delivery (option)

