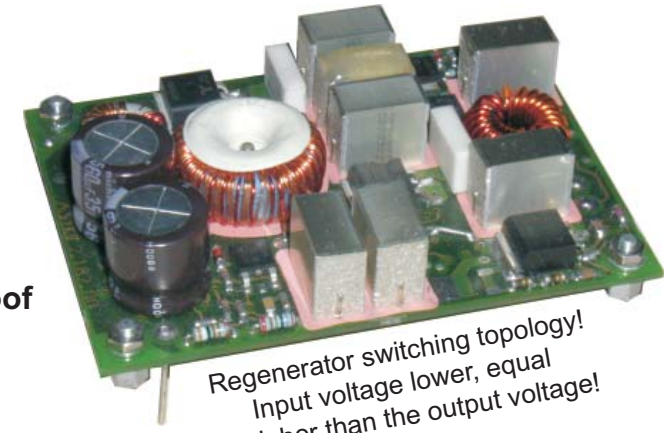
single output
up to 40 Watt

DC/DC-Regenerators
without potential isolation

SYKO®

for Railway / Roadcar / Telecommunications /Industry

- **Wide input voltage range**
- **Uin lower and higher as Uout**
- **Security relevant topology**
- **Very high efficiency (90%)**
- **Transient adapted input**
- **Especially for mobile use**
- **EN 7637T1/3 / VG 96916 T5 / surge proof**
- **Transient adapted**



Regenerator switching topology!
Input voltage lower, equal
or higher than the output voltage!

Series PSR·V

US Pat. no. 5.991.166
D Pat. no. 195 15 210

Main points:

Output:

- Accuracy absolute ± 1%
- Regulation $\Sigma(U_{in}+I_{out}+T_U)$ ±1,0%
- Ripple <10 mV_{pp}(const. über T_U)
- Spikes <100 mV_{pp} (T 1:1/50MHz)
- Regulation time ΔI=50% ≤ 2 ms
- Current limit < 1,3 $I_{out\ max}$
- Dyn. and stat. short circuit protected
- Load compensated
- No-load-, over-load-, short circuit proof
- Over voltage protection (Thyristor)

Input:

- No-load power 0,5 Watt
- ON-OFF-Remote (Inhibit) (I_{in}<10mA)
- Noise suppression EN 55022 A
- Transient adapted
- Capable for defined transients
- Switch-on current limited / integral

General:

- Ambient temperature -25°C / +70°C
- Option -40°C / +85°C
- Derating 1,0%/°C >70°C only 1)
- Air convection cooled
- MTBF: SN29500 2,5 Mio h / 40°C
- Schock / Vibration annex V
- Weight approx. 110 g
- Screwable PCB-module
- Dimension 91 x 65 x 22,5 mm³
- Other pin-assignment on request
- No breakthrough input-output

Uin	Uout	Iout	Eff.	Model	
V	V	A	%	number	
9 - 34	12	2,5	88	PSR·V 20·12·25	
50 V/ 50ms	24	1,25	90	PSR·V 20·24·12	
70 V/ 2ms					
16 - 36	12	2,5	88	PSR·V 23·12·25	
9V / 500ms	24	1,25	90	PSR·V 23·24·12	
50 V/ 50ms					
70 V/ 2ms					
18 - 34	12	3,3	91	PSR·V 24·12·33	1)
	15	2,7	91	PSR·V 24·15·27	1)
	24	1,7	91	PSR·V 24·24·17	1)
13,5 - 52	12	2,5	89	PSR·V 30·12·25	
Surge proof	24	1,25	91	PSR·V 30·24·12	
level 3 / 2Ohm	48	0,63	91	PSR·V 30·48·06	
	60	0,5	90	PSR·V 30·60·05	
35 - 154	24	1,25	90	PSR·V 80·24·12	
Surge proof	48	0,63	89	PSR·V 80·48·06	
level 3 / 2Ohm	60	0,5	89	PSR·V 80·60·05	
19 - 85	24	1,25	91	PSR·V 03·24·12	
dyn 110V	48	0,63	90	PSR·V 03·48·06	
	60	0,5	90	PSR·V 03·60·05	
(H)	-40°C up to +85°C			Additional charge	
Option	BER			Additional charge	

Modification costs for possible changes above values: on request

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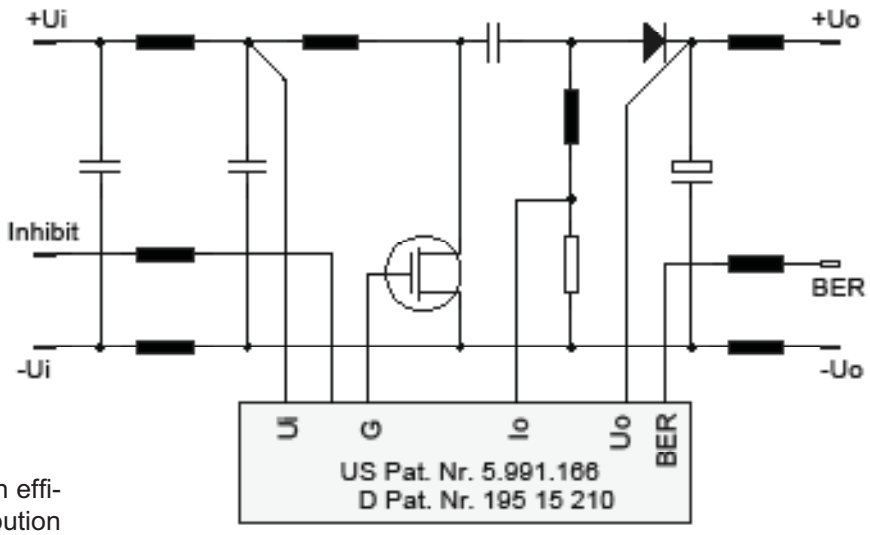
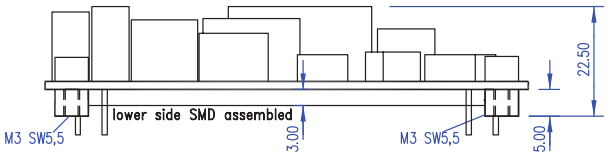
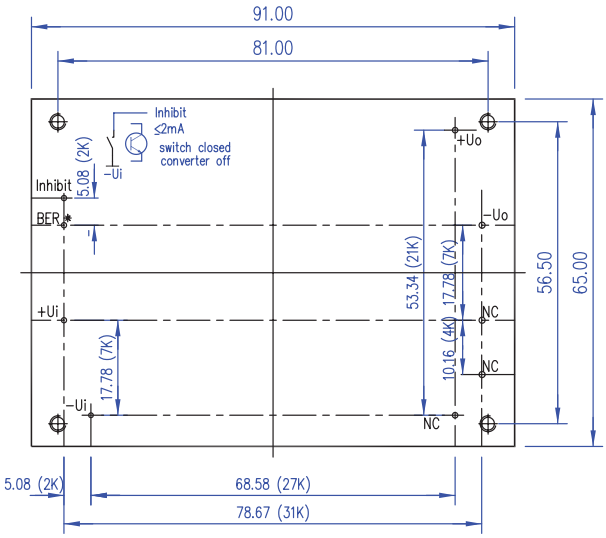
The patented Regenerator-topology can regenerate input voltages, which can be lower, equal or higher than the regulated and adjustable output voltage (0-$U_{out\ max}$). The ***PSR.V*** series can be used as pre-regulating converter (front-end) on DC-networks with extreme fluctuating input voltage ranges. These pre-regulation converters are ideal for the supply of systems, following isolating DC/DC converters, current regulated (over-lied control-loop to BER) inductivities or for battery charging. The primary sided topology is not-current breaking, choke-valuated and simple adaptable in accordance to all EMC standards. The extremely high efficiency (>90%) and the good heat distribution allow the use in high requirement applications (temperature, shock, vibration). The very good system suitability in over-load or short circuit situations should be emphasized.

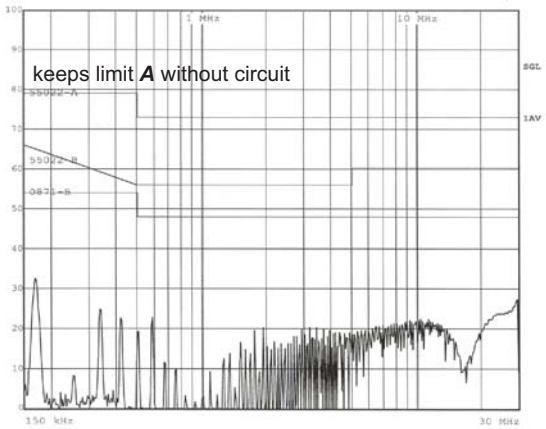


With the external set-point value (0-5)V at the optionally available BER-pin the output voltage can be adjusted between 0V and the nominal voltage.





Measurement of radion interference
with external circuit



Application (constant current-output)