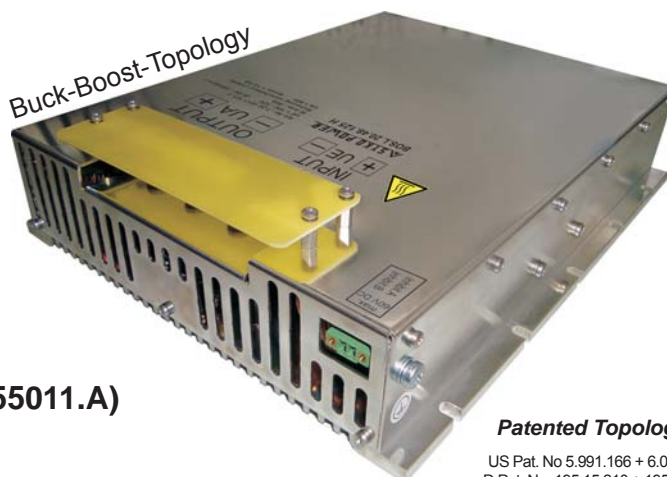


- **No continuous breakthrough U_i/U_o**
- **Safety relevant topology**
- **Regeneration of battery-networks including Diesel-start operation**
- **Front-end supply as central drivers cab power supply**
- **U_{in} lower-equal-higher as U_{out}**
- **Dyn./continuous short circuit proof Buck/Boost-topologie (Patent)**
- **High-Caps/Battery charging to charging end-voltage**
- **Input/Output interference suppr. (EN55011.A)**

Railway / Automotive / Systems



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Patented Topologies

US Pat. No 5.991.166 + 6.094.366
D Pat. No. 195 15 210 + 195 05 417
Pat. No. DE 3804 074 C2 / EP 0402 367 B1

Series BOS-REG

Main points:

Output:

- Regulation $\Sigma(U_{in} + I_{out} + T_U) \pm 1,5\%$
- Voltage accuracy $\pm 1,5\%$
- Ripple $< 50 \text{ mV}_{pp}(\text{const. over } T_U)$
- Spikes $< 400 \text{ mV}_{pp} (T 1:1/50\text{MHz})$
- Response time $\Delta I = 50\% 40 \text{ ms} (>> \text{CA})$
- Current limit $< 1,2 \times I_{out,max}$ up to $U_{out}=0V$
- Output filter EN55011. A
- No load-, over load-, short circuit proof
- Over voltage protection (logic)
- parallel operation I-Bus (Option)
- Connection screw clamp M5(-) / M6(+)

Input:

- Diesel cold start capable ($0,4 \times U_{nom}$)
- 30s start operation monitoring (Option)
- Long time over voltage proof
- On-Off-Remote floating
- On-Off-hysteresis at under voltage and timed re-start-delay
- Input filter EN50121.3.2 (55011.A)
- Switch-on-current limiting integral
- Connection screw clamp M5(-) / M6(+)

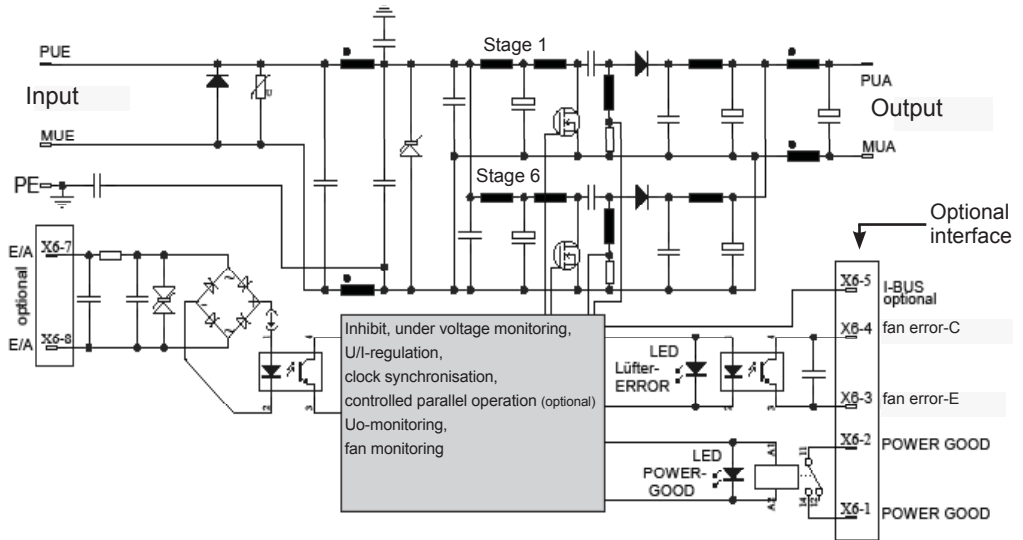
General:

- Sleep mode function ($< 0,5\text{mA}$)
- Ambient temperature $-40^\circ\text{C}/+70^\circ\text{C}$
- Option: $-40^\circ\text{C}/+85^\circ\text{C}$
- Derating $1\%/^\circ\text{C} \geq 60^\circ\text{C}$
- Limit temperature at KK-point 95°C
- external fans
- 24V auxiliary supply for fans (fans external)
- Power-good-Signal (Relay contact)
- LED Power-good
- Chassis mountable, housing IP20
- PE/Ground connection M5
- Filter frequency 540kHz
- Isolation voltage to ground 1,5KVAC
- Shock / vibration EN 50155
- MTBF / CE-conformity on request
- Weight approx. 6kg
- Dimension: 332 x 250 x 64mm
- Signal connector: Phoenix MC 1.5/8-GF-3.81

* external auto-circuit breaker

	U_i	P_o	U_o	I_o	Eff.	Model number	
	V	W	V	A	%		
	16,8 - 34	750	24	31	94	BOS-REG 24.024.31	
	9,5V Start operation max 30s	750	36	21	93	BOS-REG 24.036.21	
	24V-network	720	72	10	92	BOS-REG 24.072.10	
		720	110	6,5	92	on request	
	25 - 52	850	24	35	93	BOS-REG 36.024.35	
	14V Start operation max 30s	860	36	24	93	BOS-REG 36.036.24	
	36V-network	850	72	12	93	BOS-REG 36.072.12	
		750	110	6,5	91	on request	
	50 - 101	850	24	35	92	BOS-REG 72.024.35	
	29V Start operation max 30s	860	36	24	93	BOS-REG 72.036.24	
	72V-network	850	72	12	93	BOS-REG 72.072.12	
		750	110	6,5	92	on request	
	77 - 154	850	24	35	92	on request	
	44V Start operation max 30s	860	36	24	92	on request	
	110V-network	850	72	12	93	on request	
		750	110	6,5	92	on request	
	(H)		-40°C up to $+85^\circ\text{C}$			additional charge	
		Prices for chassis mounting as open frame:					on request
		Modification costs for possible changes above values:					on request

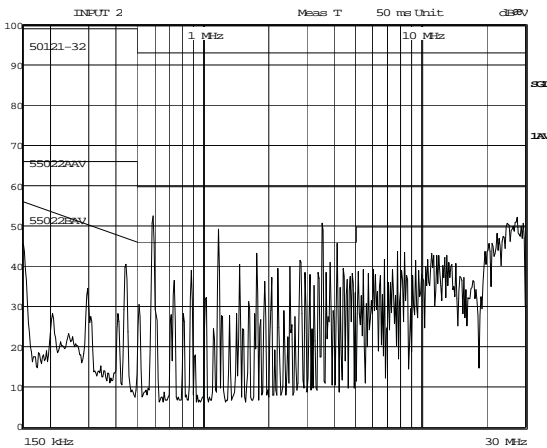
The **BOS-REG** series is designed to supply mobile and stationary platforms as front-end supply. Strongly varying on-board networks (U_i) with a range of 0,4 - 1,4 times nominal voltage level are regenerated to the new platform voltage level (U_o) with the patented Regenerator topology as constant voltage without isolation. With energy carriers on both sides this safety relevant topology prevents the breakthrough from Input to output. Input and output are EMC filtered.



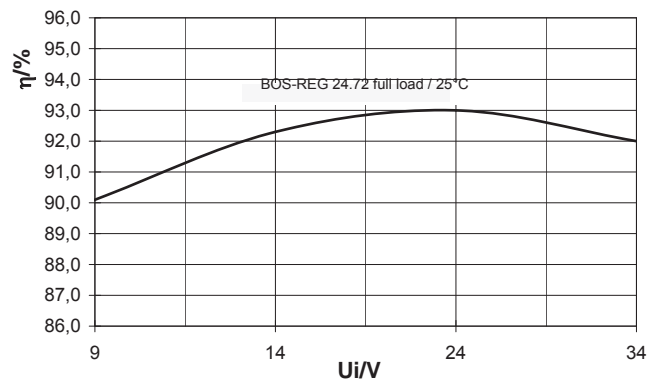
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The output is dynamic and continuous short circuit proof up to zero Volt. Hence High-CAPs and batteries can be charged to charging end voltage. Occurring long term voltage drops of mobile land, water and air applications caused by e.g. Diesel cold start operation in the range of seconds (30s) are compensated that motor control systems, radio communication, diver information systems, process control units and systems with long re-start delays in general are not interfered. High chopping currents are generally processed with foil or ceramic capacitors and electrolytic capacitors are used for the control loop's stability. Logic over voltage monitoring de-activates the internal auxiliary supply and power gate drive. The power-good as floating opening contact (as LED on PCB) signals under voltage ($<0,9 U_o$). With an optional I-Bus-connection and after consultation several units can work in parallel without de-coupling diode.

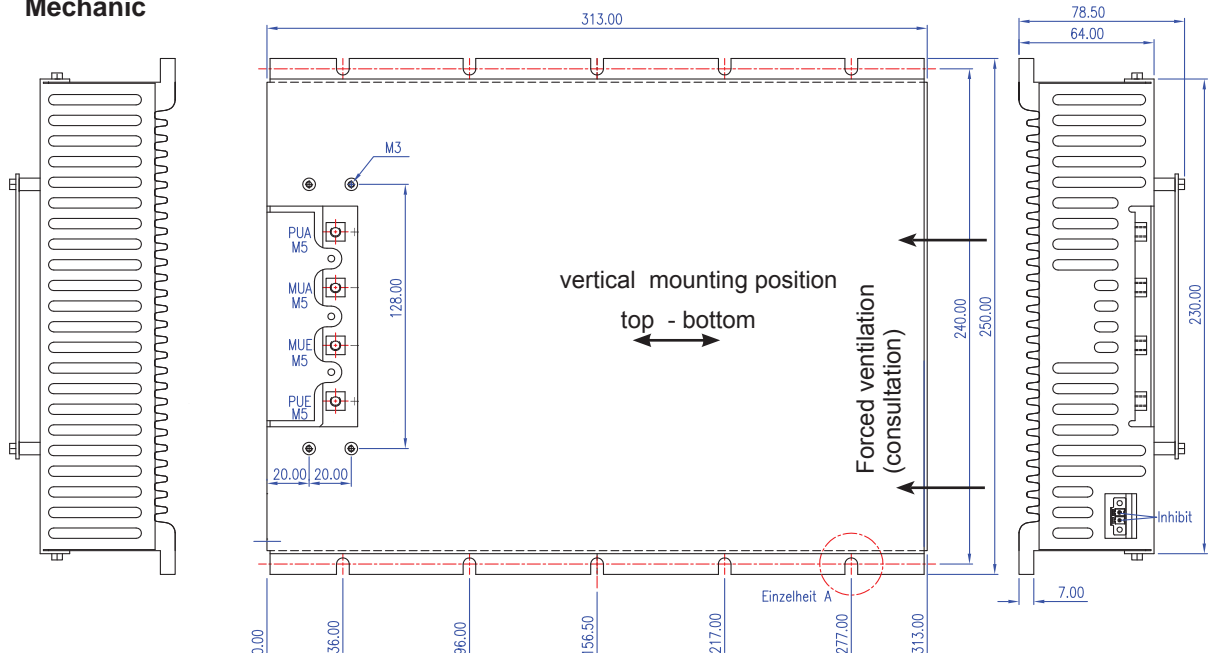
Measurement of radio interference



Efficiency



Mechanic



Stand: 10/08