- **No continuous breakthrough Ui/Uo**
- **Safety relevant topology**
- **Regeneration of battery-networks**
  including Diesel-start operation
- **Front-end supply as central drivers cab power supply**
- **Uin lower-equal-higher as Uout**
- **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

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-BNV

Main points:

Output:

- Regulation $\Sigma(U_{in}+I_{out}+T_U)$ ± 1,5%
- Voltage accuracy ± 1,5%
- Ripple <50 mV_{pp}(const. over T_U)
- Spikes <400 mV_{pp} (T 1:1/50MHz)
- Response time ΔI=50% 40 ms (>>CA)
- Current limit < 1,2 x $Iout_{max}$ up to Uout=0V
- Output filter EN55011. A
- No load-, over load-, short circuit proof
- Over voltage protection (logic)
- parallel operation I-Bus (Option)
- Connection screw clamp M6(-) / M8(+)

Input:

- Diesel cold start capable (0,4 x Unom)
- 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 M6(-) / M8(+)

General:

- Sleep mode function (<0,5mA)
- Ambient temperature -40°C/+70°C
- Option: -40°C/+85°C
- Derating 1%/°C ≥60°C
- Limit temperature at KK-*point 95°C
- Temperature regulated fans
- Fan monitoring (Error C-E) floating Open collector 1mA/≤25V
- Power-good-Signal (Relay contact)
- LED fans + Power-good
- Chassis mountable, housing IP20
- PE/Ground connection M5
- Filter frequency 580kHz
- Isolation voltage to ground 1,5KVAC
- Shock / vibration EN 50155
- MTBF / CE-conformity on request
- Weight approx. 9,1kg
- Dimension: 491 x 250 x 85 mm
- Signal connector (E-A/Power good/fans): Phoenix MC 1.5/8-GF-3.81

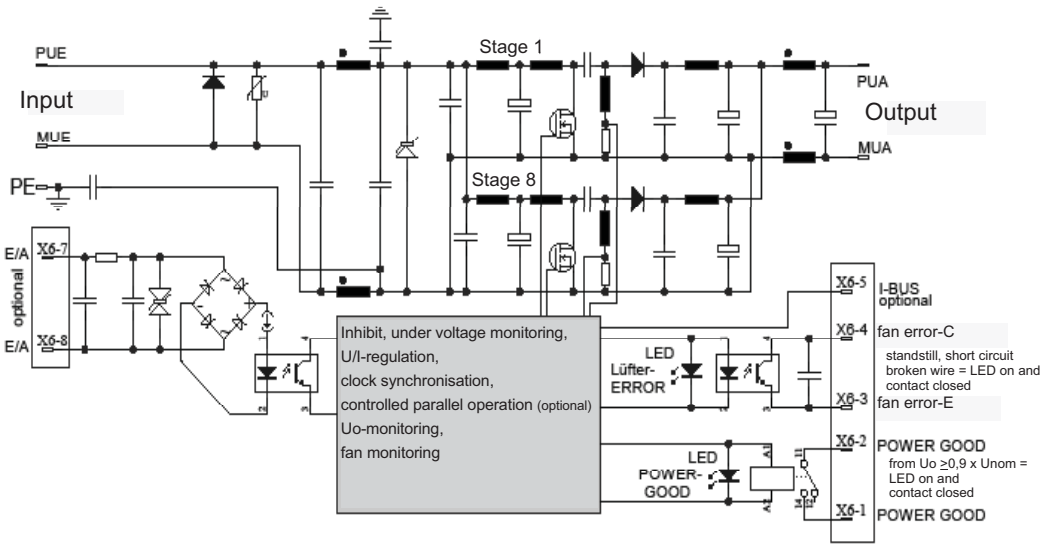
* external auto-circuit breaker

Ui	Po	Uo	Io	Eff.	Model number
V	W	V	A	%	
16,8 - 34	1000	24	42	94	BOS-BNV 24.024.42
9,5V start operation max 30s	1000	36	28	93	BOS-BNV 24.036.28
24V network	1000	72	14	92	BOS-BNV 24.072.14
	1000	110	9	92	BOS-BNV 24.110.09
25 - 52	1000	24	42	93	BOS-BNV 36.024.42
14V start operation max 30s	1200	36	33	93	BOS-BNV 36.036.33
36V network	1200	72	17	93	BOS-BNV 36.072.17
	1100	110	10	91	BOS-BNV 36.110.10
50 - 101	1100	24	46	92	BOS-BNV 72.024.46 [1]
29V start operation max 30s	1440	36	40	93	BOS-BNV 72.036.40 [1]
72V network	2000	72	27	94	BOS-BNV 72.072.27
	1550	110	14	93	BOS-BNV 72.110.14
77 - 154	1100	24	46	92	BOS-BNV 10.024.46 [1]
44V start operation max 30s	1300	36	36	92	BOS-BNV 10.036.36 [1]
110V network	1550	72	21	93	BOS-BNV 10.072.21
	1550	110	14	93	BOS-BNV 10.110.14

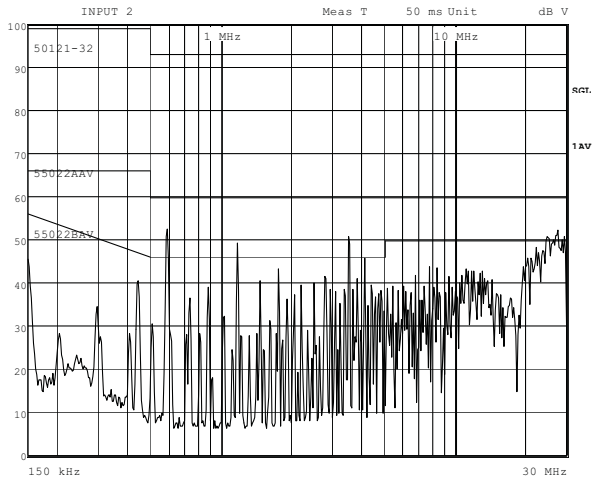
1) optional the QSR series can be used / is preferable
(Product line A / only Buck-Topology)

(H)	-40°C up to +85°C	additional charge
Prices for chassis mounting as open frame		on request
Modification costs for possible changes above values:		on request

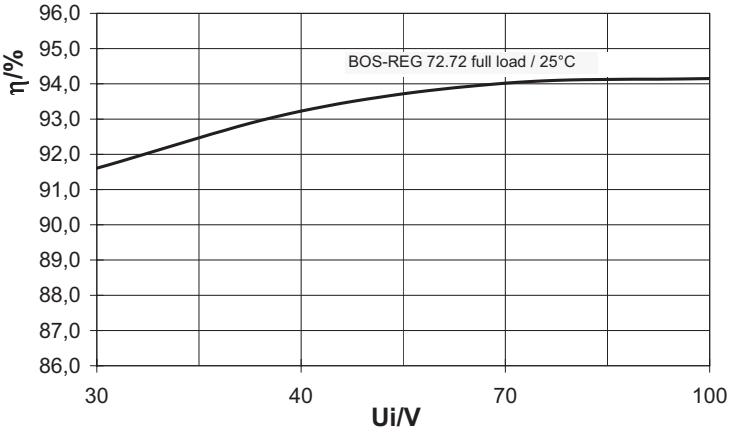
The ***BOS-BNV*** series is designed to supply mobile and stationary platforms as front-end supply. Strongly varying on-board networks (Ui) with a range of 0,4 - 1,4 times nominal voltage level are regenerated to the new platform voltage level (Uo) with the patented Regenerator topology as constant voltage 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. 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 Uo). Defective fans will be signalled (as LED on PCB) with a floating open collector output (1mAmax / 25V max). With an optional I-Bus-connection and after consultation several units can work in parallel without de-coupling diode.



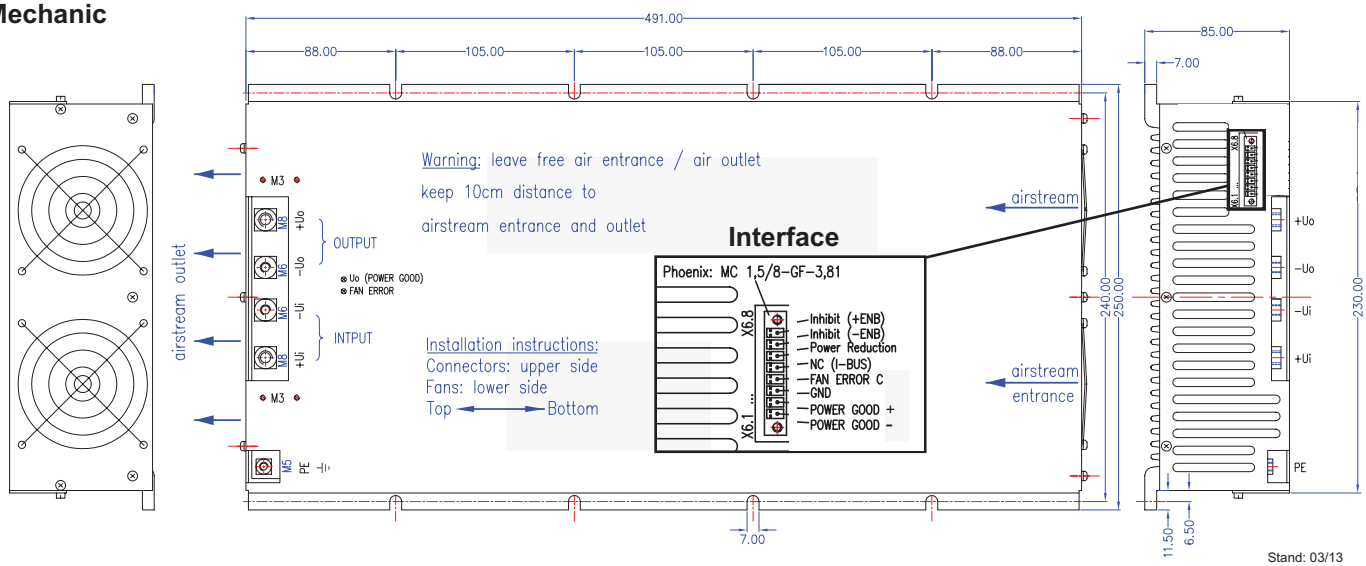
Measurement of radio interference



Efficiency



Mechanic



Stand: 03/13