

single output
up to 50 Watt

DC/DC converters
with isolation



- Input voltage range up to 4:1
- Open build-up / chassis mounting
- Over voltage protection (Thyristor)
- Input current filter C-L-C
- Output spike filter C-L²-C
- Heat sink with flange (option)
- Dyn. and stat. short circuit proof

For Telecommunications / Automotive applications /
Industrial applications / Railway applications

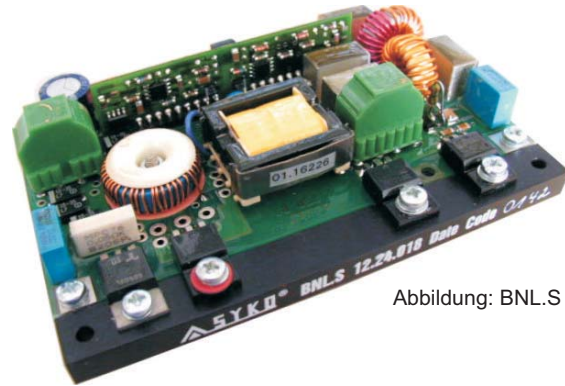


Abbildung: BNL-S

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Series **BNM-S** (SUB-D-Plug) **BNL-S** (flat-plug)

General:

Output:

- Accuracy absolute $\pm 1\%$
- Regulation factor $\Sigma(U_{in}+I_{out}+T_U)<\pm 1,5\%$
- Ripple $<20\text{ mV}_{pp}(\text{const. over } T_U)$
- Spikes $<50\text{ mV}_{pp}(T\ 1:1/50\text{MHz})$
- Response time $\Delta I=50\% \leq 500\ \mu\text{s}$
- Current limiting approx. $1,1 I_{outmax}$
- Output spike filter (C - L² - C)
- Load compensation/sense lines (FP/FM)
- Over voltage protection (Thyristor)
- No-load-, over-load-, short circuit proof

Input:

- No-load power approx. 1 W
- ON-OFF-application (Inhibit)
- Reverse polarity diode (square, fuse)
- Input filter C - L² - C - L - C
- Low input capacity $< 10\mu\text{F}$
- Noise suppression (see application)

General:

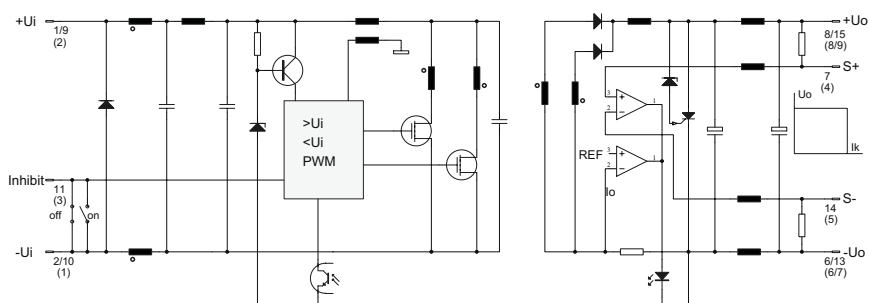
- Connection:
9-pol. flat plug (BNL)
15-pol. SUB-D-Plug (BNM)
- Isolation test voltage $1,5\text{ kV}_{AC}\ 1\text{ Min.}$
- Ambient temperature $-25^\circ\text{C} / +70^\circ\text{C}$,
Option: $-40^\circ\text{C} / +85^\circ\text{C}$
- Derating $1\% / ^\circ\text{C} >60^\circ\text{C}$
- Converter temperature $<90^\circ\text{C}$ (★-point)
- Cooling with distant bolts for screw-mounting
- MTBF $> 350000\text{ h}$ ($G_F\ 40^\circ\text{C}$)
- Shock test in acc. to EN 50155
- Vibration in acc. to EN 50155
- Weight approx. 250g
- Dimensions: $115 \times 76 \times 28\text{ mm}^3$

U _{in}	U _{out}	I _{out}	Eff.	Model number
V	V	A	%	
8 - 20	5,1	7,0	81	BNL/M-S 12-05-070
	12	3,5	83	BNL/M-S 12-12-035
	15	2,7	84	BNL/M-S 12-15-027
	24	1,8	85	BNL/M-S 12-24-018
9,5 - 38	3,3	7,0	78	BNL/M-S 20-03-070
45V dyn	5,1	7,0	79	BNL/M-S 20-05-070
	12	3,5	82	BNL/M-S 20-12-035
	15	2,7	83	BNL/M-S 20-15-027
	24	1,8	84	BNL/M-S 20-24-018
14,4 - 38	3,3	8,0	80	BNL/M-S 24-03-080
45V dyn	5,1	8,0	81	BNL/M-S 24-05-080
	12	4,0	84	BNL/M-S 24-12-040
	15	3,5	85	BNL/M-S 24-15-035
	24	2,0	86	BNL/M-S 24-24-020
36 - 76	3,3	8,0	79	BNL/M-S 48-03-080
85V dyn	5,1	8,0	80	BNL/M-S 48-05-080
	12	4,0	82	BNL/M-S 48-12-040
	15	3,5	83	BNL/M-S 48-15-035
	24	2,0	84	BNL/M-S 48-24-020
45 - 158	3,3	8,0	79	BNL/M-S 10-03-080
170V dyn	5,1	8,0	80	BNL/M-S 10-05-080
	12	4,0	82	BNL/M-S 10-12-040
	15	3,5	83	BNL/M-S 10-15-035
	24	2,0	84	BNL/M-S 10-24-020
(H)	-40°C up to +85°C			Additional charge
Modification costs for possible changes above values:				On request

DC/DC-converters of the series ***BNM-S/BNL-S*** are specially designed for the use in industrial and mobile applications (chassis mounting). All power components are isolated mounted on a flange heat sink which realizes the direct heat conduction to the chassis.

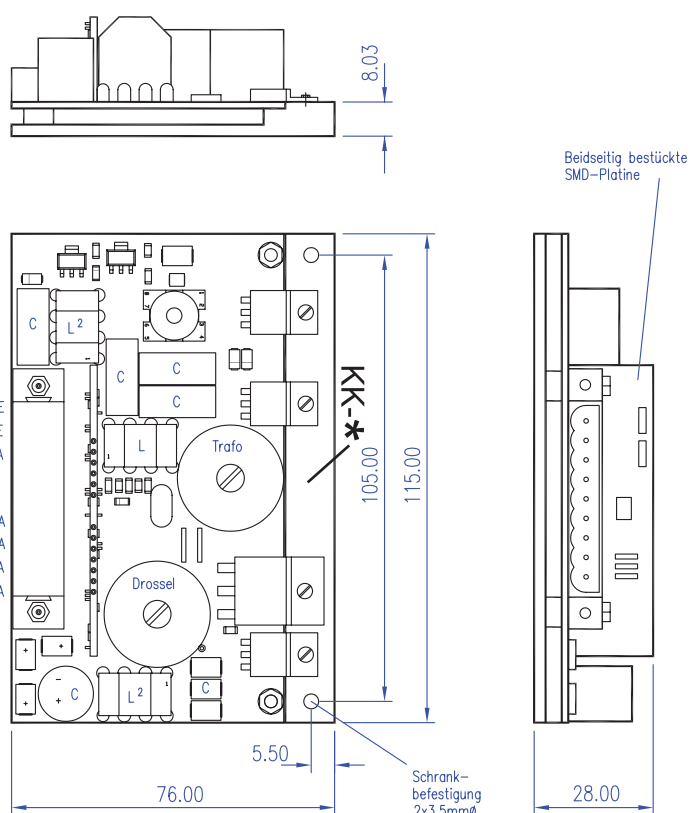
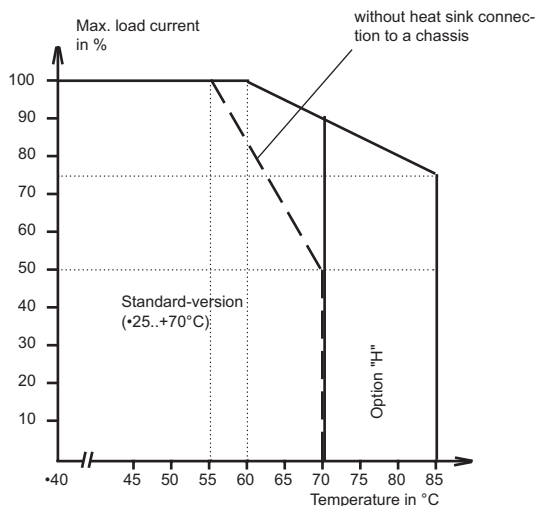
Through this a power density of more than 200 W / dm³ was achieved. The converter can run unproblematic in Extreme temperature ranges up to 90°C at the measuring point (*) with sufficient cooling.

The very wide input voltage range, the component's low load limit, the reliable functionality as well as the renunciation of wet-electrolytical capacitors in the chopper circuit (input) opens a wide application range in the fields of automotive- and industrial- technology.

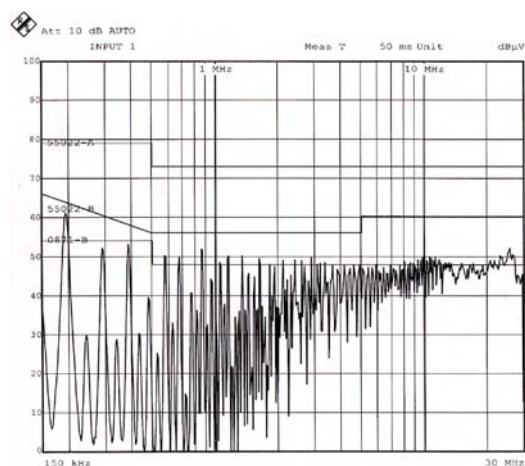


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Derating-curve



Measurement of radio interference



On request: plugs for higher requirements in gold plated version

Application

