- **Euro card 3U / 8 TE**
- **8TE front panel (Option)**
- **Remote control (inhibit)**
- **Over voltage protection (logic)**
- **Input noise suppression EN 55022.B**
- **Input / output spike filter**
- **Wide input voltage range**
- **Shock/vibration acc. to EN 50155**
- **No basic load necessary**
- **Active transient protection filter**
  (SYKO-Patent no. 3804074 and 0402367)

for
- Railway
- Special technology
- Industrial applications

CE - conformity

Series RAB5.B

Main points:

Output:

- Regulation $\Sigma(U_{in}+I_{out}+T_U)<\pm1,5\%$
- Accuracy absolute ± 1%
- Ripple <20 mV_{pp} over T_U
- Spikes <100 mV_{pp} (T 1:1/50MHz)
- Response time ΔI=50% ≤ 100 µs
- Constant current limitation < 1,2 I_{Amax}
- Output spike filter
- No-load, over load, short circuit proof
- Parallel operation
- No crosswise interference

Input:

- Stand-by power approx. 3 Watt
- ON-OFF-application (inhibit)
- On-Off switch hysteresis at
  under voltage and time delay
- Low input capacity
- Input filter acc. to EN 55022.B
- Reverse polarity protection (fuse)
- Input fuse on PCB
- Inrush current limitation (ICL)
- Active transient absorption (TK)

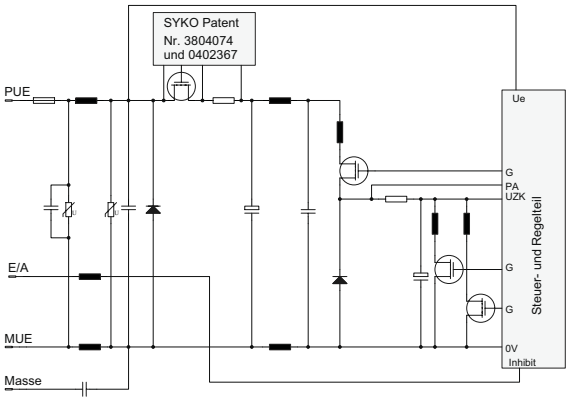
In general:

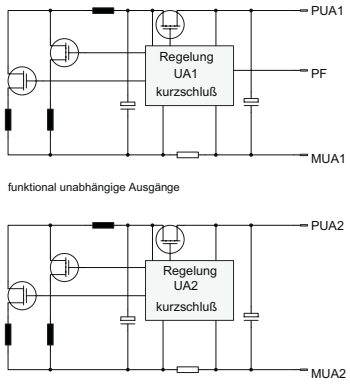
- Topology-Cascading
- Clock frequency 100 kHz
- Isolation test voltage 1,5 KV_{AC} 1 min
- Ambient temperature -25°C / +70°C
  Option: -40°C / +85°C acc. to LES-DB
- Derating 1,5%/°C >70°C
- Disturbance strength:
  EN 61000-4-4 (level 4) Burst
  EN61000-4-5 (level 3) Surge
- MTBF 193000 h (MIL 217 F, G_F 45°C)
- Shock/vibration acc. to EN 50155
- Weight approx. 720g
- CE-conformity certificate on request
- Limit temperature on KK-*: 95°C

Uin	Pout	Uout1·2	Iout1·2	Model
V	W	V	A	number
8 - 38	**40**	5,1·12	4,0·1,6	RAB5.B20·05·12·40·16 VG
50V50ms		5,1·24	4,0·0,8	RAB5.B20·05·24·40·08 VG
70V2ms		12·12	1,7·1,7	RAB5.B20·12·12·17·17 VG
VG 96 916 T5		15·15	1,3·1,3	RAB5.B20·15·15·13·13 VG
ISO 7637 T1/3		24·24	0,8·0,8	RAB5.B20·24·24·08·08 VG
without VG-transients 60 Watt				
14,4 - 36	**50**	5,1·12	5,0·2,0	RAB5.B24·05·12·50·20
surge proof		5,1·24	5,0·1,1	RAB5.B24·05·24·50·11
1 kV / 2Ω		12·12	2,1·2,1	RAB5.B24·12·12·21·21
1,8 kV / 5Ω		15·15	1,7·1,7	RAB5.B24·15·15·17·17
		24·24	1,0·1,0	RAB5.B24·24·24·10·10
14,4 - 158	**50**	5,1·12	5,0·2,0	RAB5.B03·05·12·50·20
surge proof		5,1·24	5,0·1,0	RAB5.B03·05·24·50·10
1 kV / 2Ω		12·12	2,1·2,1	RAB5.B03·12·12·21·21
1,8 kV / 5Ω		15·15	1,7·1,7	RAB5.B03·15·15·17·17
		24·24	1,0·1,0	RAB5.B03·24·24·10·10
19 - 80 [2]	**50**	5,1·12	5,0·2,0	RAB5.B50·05·12·50·20
surge proof		5,1·24	5,0·1,0	RAB5.B50·05·24·50·10
1 kV / 2Ω		12·12	2,1·2,1	RAB5.B50·12·12·21·21
1,8 kV / 5Ω		15·15	1,7·1,7	RAB5.B50·15·15·17·17
		24·24	1,0·1,0	RAB5.B50·24·24·10·10
45 - 158	**50**	5,1·12	5,0·2,0	RAB5.B10·05·12·50·20
surge proof		5,1·24	5,0·1,0	RAB5.B10·05·24·50·10
1 kV / 2Ω		12·12	2,1·2,1	RAB5.B10·12·12·21·21
1,8 kV / 5Ω		15·15	1,7·1,7	RAB5.B10·15·15·17·17
		24·24	1,0·1,0	RAB5.B10·24·24·10·10

RAB5.B (H) [1]	-40°C up to +85°C	additional charge
Modification costs of possible changes above values:		on request
Highr output power with limitation of ambient temperature or input voltage range:		on request
Changed power distribution:		on request

The ***RAB5.B*** series with an output power up to 50 W is developed for mobile applications and high operational reliability. The converter's stand-by mode (inhibit-function) requires a current consumption of just typically 3 mA, which is ideal for the use in battery networks.



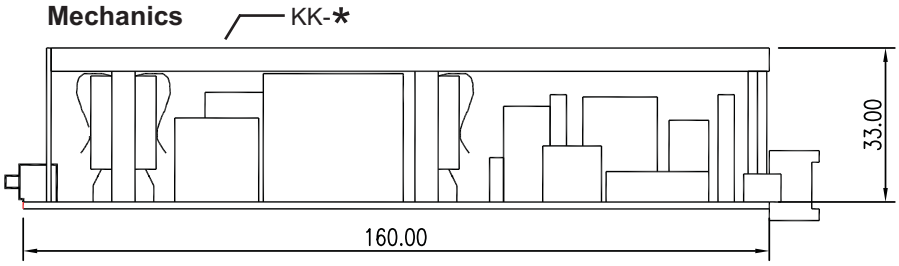


The ultra-wide input voltage range of >1:10 allows the use on weak and transient flawed networks and the global use in all international mobile on-board networks. The mechanically stable and ordered build up can be used in mobile applications with high shock/vibration requirements (special vehicles, short distance traffic, railway).

The functionality is secured in the whole operational range up to limit values based on the chosen components, filters, security circuits, dynamical and statically current limitation and over voltage protection. An active transient protection filter prevents dynamical inrush currents also by transients. Long term transients acc. to VG/MIL/DO/DIN-ISO-standards are absorbed.

The functional independent outputs, which are not interfering each other from no-load, load change up to short circuit, makes this converter interesting fro security relevant applications.

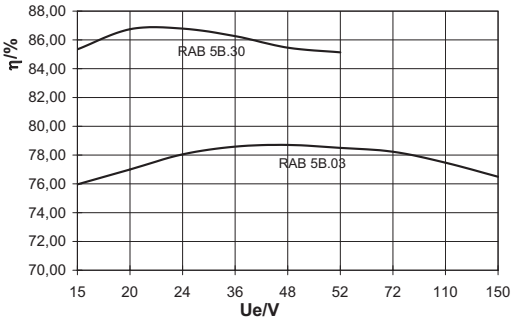
Mechanics

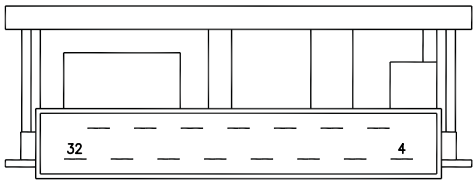


Pin assignment

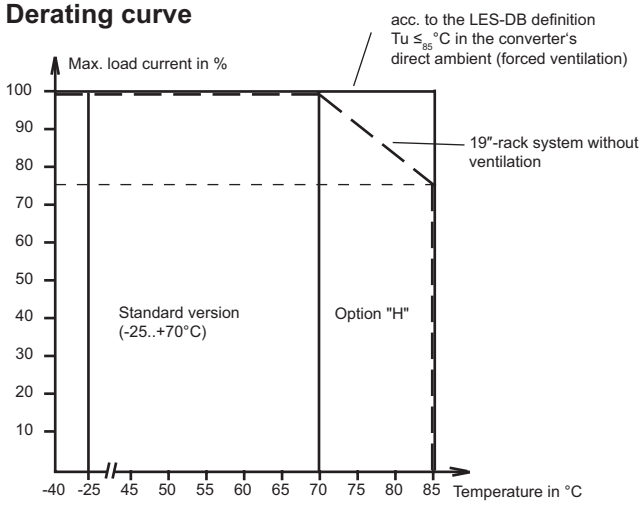
Function	RAB 5B
+Uo1	4/6
-Uo1	8/10
PF	12
-Uo2	16
+Uo2	18
+Ui	26
inhibit	28
-Ui	30
Ground	32

Efficiency





Derating curve



Measurement of radio interference