

single output
up to 180/300 Watt

DC/DC system converters
isolated



- Chassis mounting height 58 mm
- Connection with screw terminal
- Wide input voltage range
- inrush current limitation (ICL)
Active transient protection filter
(SYKO-Patent no. 3804074 and 0402367)
- Input noise suppression EN 55022.B
- On- / Output spike filter
- Shock/vibration EN 50155

for

- Railway
- Vehicles
- Instrumentation



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Series HC30.U

Main points:

Output:

- Regulation $\Sigma (U_{in} + I_{out} + T_U) < \pm 1\%$
- Accuracy absolute $\pm 1\%$
- Ripple $< 20 \text{ mV}_{pp}$ (over T_U)
- Spikes $< 200 \text{ mV}_{pp}$ (T 1:1/50MHz)
- Response time $\Delta I = 50\% < 2 \text{ ms}$
- Constant current limitation $< 1,2 I_{o \text{ max}}$
- Output spike filter (C - L² - C)
- No-load, over load, short circuit proof

Input:

- Burst/Surge EN61000-4-4/5 level 3 2Ω
- Stand-by power $< 5 \text{ Watt}$
- ON-OFF-application (inhibit)
- On-Off switching hysteresis at under voltage and delayed restart
- Input filter acc. to EN 55022.B
- Low input capacity
- Dyn. rev. polarity protection (square diode)
- Inrush current limitation (active)
- Emergency fuse on PCB

In general:

- Screw terminal
- LED for $U_{in}/U_{out} = \text{OK}$
- Buck regulator + push-pull topology
- Clock frequency 60 kHz/80kHz
- Isolation test voltage 1,5 KV_{AC} 1 min
- Ambient temperature -25°C / +70°C
- Option: -40°C / +85°C EN50155 TX
- Derating 1,2%/°C $> 60^\circ\text{C}$ with good heat contacting
- MTBF on request
- Shock/vibration acc. to EN50155
- Weight approx. 1340g
- CE-conformity on request
- With pre-switched storage unit SPK01: 10ms bridging acc. to EN50155 of $> 10 \text{ ms}$ from $1,1 U_{i \text{ min}}$ without interruption (application)
- Limit temperature on KK-★ 95°C

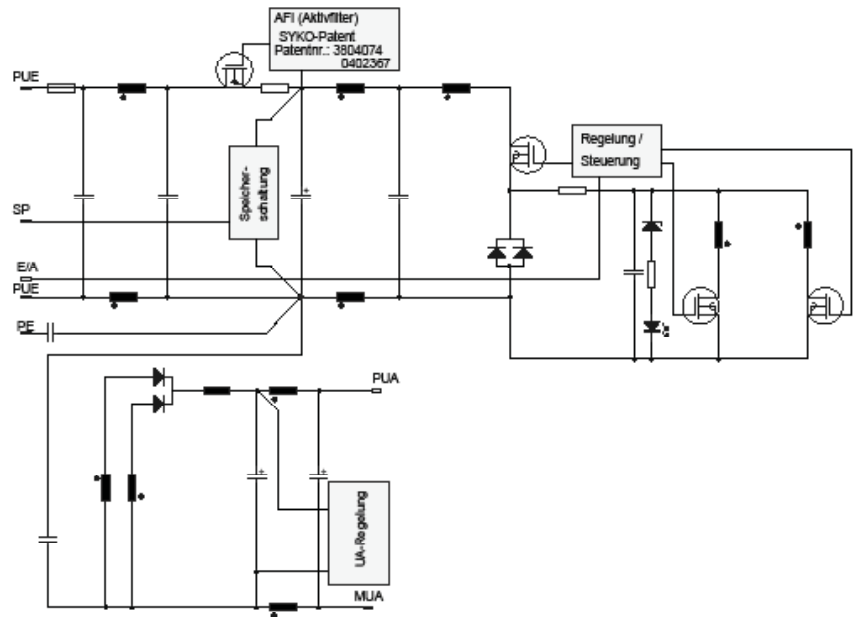
<u>U_{in}</u>	<u>P_{out}</u>	<u>U_{out}</u>	<u>I_{out}</u>	<u>Eff.</u>	<u>Model</u>
V	W	V	A	%	number
14,4 - 34	180	12	15,0	88	HC30·U24·12·150
surge proof		15	12,0	88	HC30·U24·15·120
1kV / 2Ω		24	7,5	89	HC30·U24·24·075
1,8kV / 5Ω		48	3,8	89	HC30·U24·48·038
		110	1,6	88	HC30·U24·110·16
21 - 51	200	12	16	89	HC30·U36·12·160
surge proof		15	13	89	HC30·U36·15·130
1kV / 2Ω		24	8,3	89	HC30·U36·24·083
1,8kV / 5Ω		110	1,8	on request	HC30·U36·110·18
36 - 76	220	12	16,0	90	HC30·U60·12·160
surge proof		15	14,0	90	HC30·U60·15·140
1kV / 2Ω		24	9,2	90	HC30·U60·24·092
1,8kV / 5Ω		48	4,6	84	HC30·U60·48·046
42 - 154	200	12	15	88	HC30·U80·12·150
surge proof		15	12	88	HC30·U80·15·120
1kV / 2Ω		24	8,3	88	HC30·U80·24·083
1,8kV / 5Ω		36	6,7	88	HC30·U80·36·067
66 - 154	300	12	20,0	89	HC30·U10·12·200
surge proof		15	20,0	89	HC30·U10·15·200
1kV / 2Ω		24	12,5	90	HC30·U10·24·125
1,8kV / 5Ω		48	6,3	90	HC30·U10·48·063
Version H		-40°C up to +85°C			additional charge
Modification costs of possible changes above values:					on request

The chassis mountable **HC30.U** series with an output power up to 300W is developed for mobile applications and high operational reliability.

Inrush currents are limited and long term transients are absorbed with the used SYKO-Patent of an active filter. The converter works with low input capacity and the chopping capacitors are chosen as high current capable foil capacitors.

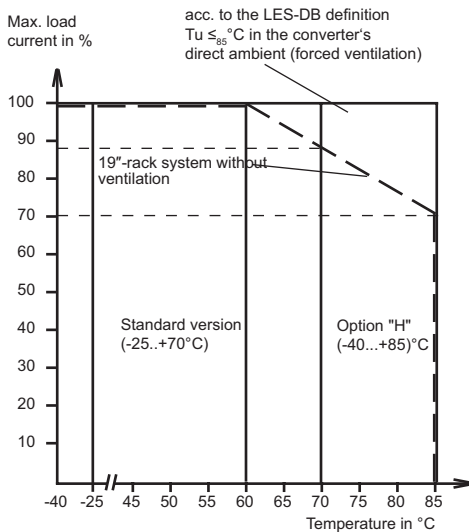
The clever mechanical build up allows the heat conduction to the heat sink. The direct chassis mounting is possible with very good heat connection based on the the extended flange heat sink. The converter is equipped with an under voltage monitoring function with amplitude- and time hysteresis. The integral switch on current limitation is done with an internal power limitation.

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 (logic).

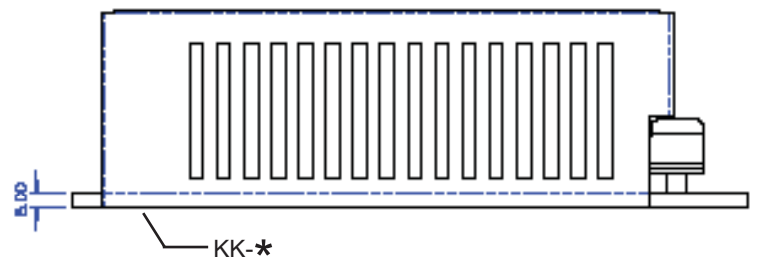
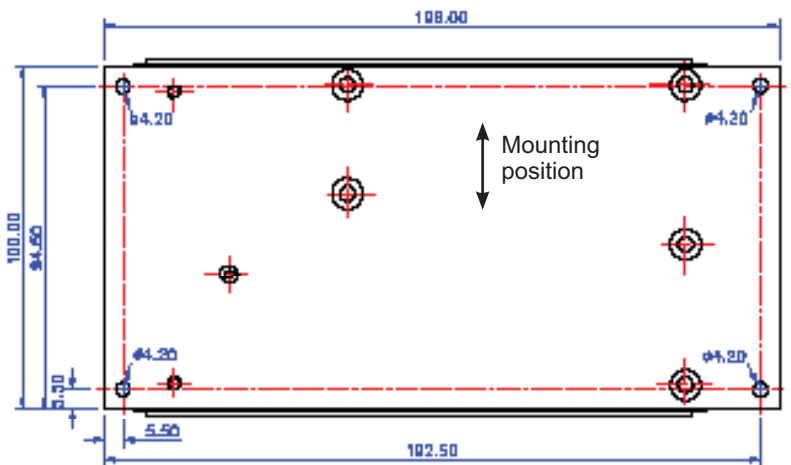


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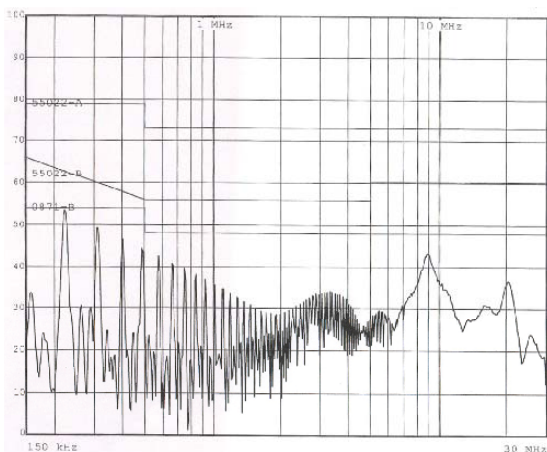
Derating curve



Mechanics



Measurement of radio interference without external circuits



Application
external circuit with storage unit SPK01

see datasheet HL30

