

single output  
up to 150 Watt

DC/DC system converters  
isolated



- Chassis mounting height 50 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
- Input / output spike filter
- Shock/vibration EN 50155

- for
- Railway
  - Vehicles
  - Instrumentation



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## Series HC15.U

### Main points:

#### Output:

- Regulation  $\Sigma (U_{in} + I_{out} + T_U) < \pm 2\%$
- Accuracy absolute  $\pm 2\%$
- Ripple (over  $T_U$ )  $I_{out} > 100\text{mA}$ :  $< 20\text{ mV}_{pp}$   
 $I_{out} < 100\text{mA}$ :  $< 100\text{mV}_{pp}$
- Spikes  $< 200\text{ mV}_{pp}$  (T 1:1/50MHz)
- Response time  $\Delta I = 50\% < 2\text{ ms}$
- Constant current limitation  $< 1,2 I_{o,max}$
- Output spike filter (C - L<sup>2</sup> - C)
- No-load, over load, short circuit proof

#### Input:

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

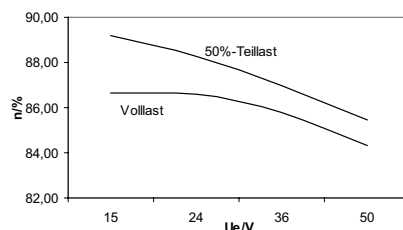
#### In general:

- Screw clamp connection 8 pol.  
(option with cover)
- LED for  $U_{in}/U_{out}$  OK
- Buck regulator + push-pull
- Clock frequency 60 kHz/80kHz
- Isolation test voltage 1,5 KV<sub>AC</sub> 1 min
- Ambient temperature  $-25^\circ\text{C} / +60^\circ\text{C}$   
Option:  $-40^\circ\text{C} / +85^\circ\text{C}$  EN50155 TX
- Derating: 1,0%/ $^\circ\text{C}$   $> 60^\circ\text{C}$   
1,3%/ $^\circ\text{C}$   $> 70^\circ\text{C}$   
at good heat connection
- MTBF SN29500/40 $^\circ\text{C}$ :  $> 1,7\text{ mio h}$
- Shock/vibration acc. to EN50155
- Weight approx. 1000g
- CE-certificate on request
- Limit temperature on KK- $\star$  95 $^\circ$

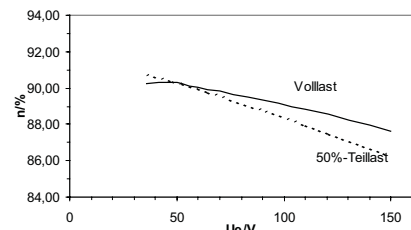
<u>U<sub>in</sub></u>	<u>P<sub>out</sub></u>	<u>U<sub>out</sub></u>	<u>I<sub>out</sub></u>	<u>Eff.</u>	Model
V	W	V	A	%	number
16,8 - 34	100	5	15,0	88	HC15-U24-05-150
50V/10ms	120	12	10	87	HC15-U24-12-100
70V/2ms		15	8	86	HC15-U24-15-080
		24	5,5	86	HC15-U24-24-055
		48	3,1	87	HC15-U24-48-031
13,5 - 52	150	12	12	87	HC15-U30-12-120
surge proof		15	10	86	HC15-U30-15-100
1kV / 2 $\Omega$		24	6,3	86	HC15-U30-24-063
1,8kV / 5 $\Omega$		48	3,1	87	HC15-U30-48-031
		110	1,3	87	on request
19 - 80	150	12	12	88	HC15-U50-12-120
surge proof		15	10	87	HC15-U50-15-100
1kV / 2 $\Omega$		24	6,3	87	HC15-U50-24-063
1,8kV / 5 $\Omega$		48	3,1	88	HC15-U50-48-031
		110	1,3	88	on request
36 - 154	150	12	12	89	HC15-U80-12-120
surge proof		15	10	88	HC15-U80-15-100
1kV / 2 $\Omega$		24	6,3	89	HC15-U80-24-063
1,8kV / 5 $\Omega$		48	3,1	89	HC15-U80-48-031
		110	1,3	89	on request
Version H			-40 $^\circ\text{C}$ up to +85 $^\circ\text{C}$		additional charge
Modification costs of possible changes above values:					on request

### Efficiency

HC15.U30.24.063



HC15.U80.24.063

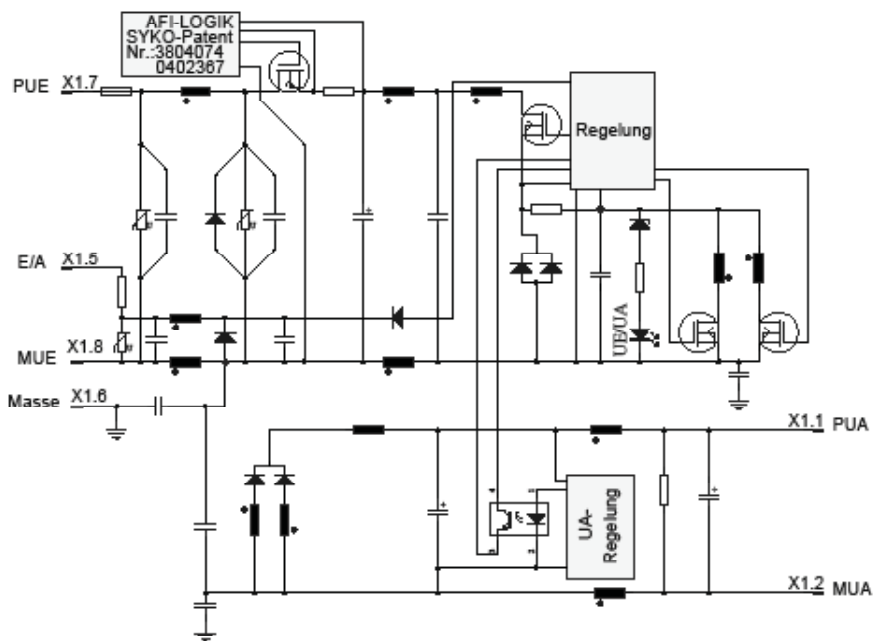


The **HC15.U** series with an output power up to 150 Watt is designed for mobile applications and high operational reliability.

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 capacitors.

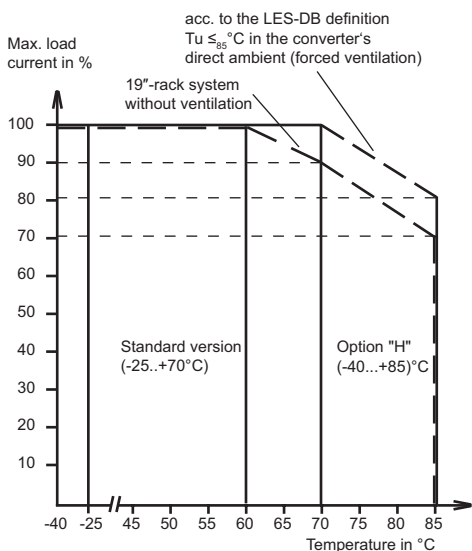
The clever mechanical build up allows the heat conduction to the heat sink. The direct chassis mounting allows very good heat transmission over the extended flange heat sink. The converter is equipped with an under voltage monitoring function with amplitude- and time hysteresis. The integral switch on 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.

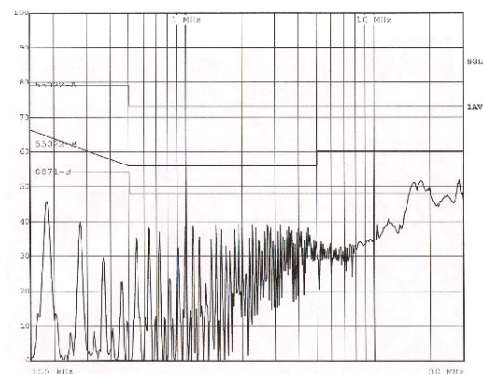


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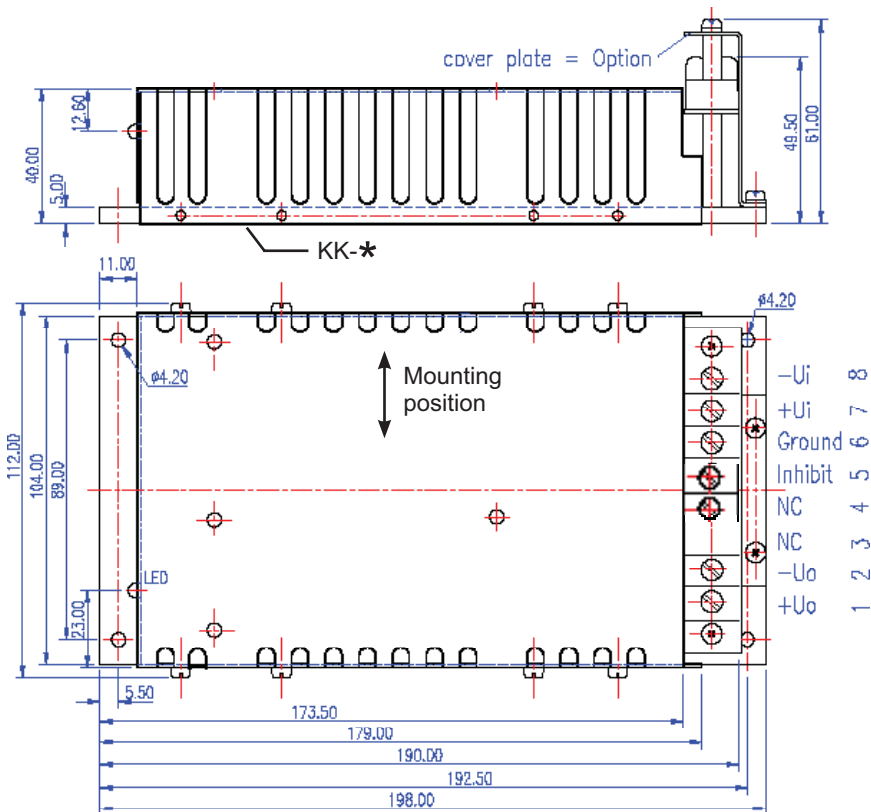
### Derating curve



### Measurement of radio interference



### Chassis mountable version



Option: also available for DIN rail mounting  
as HC15.UXX.XX.XX S