

single output  
up to 50 Watt

DC/DC-Regenerators  
without potential isolation



- Input range 6 - 34 V / 9 - 60 V
- Load dump / VG 96916 part 5
- Connection to cigarette lighter or on-board vehicle plug
- Security relevant topology
- Over voltage protection (Thyristor)
- Noise suppression EN 55022.B (- 10 dB)
- Input fuse
- CE- and E1-certification

Laptop-supply for vehicle applications



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## Series LSV-V Car-Adapter

US Pat. no. 6.094.366  
D Pat. no. 195 05 417

### Main points:

#### Output:

- Accuracy absolute  $\pm 1\%$
- Regulation  $\Sigma(U_{in} + I_{out} + T_U) < \pm 1,5\%$
- Ripple  $< 40 \text{ mV}_{pp}$  über  $T_U$
- Spikes  $< 60 \text{ mV}_{pp}$  (T 1:1/50MHz)
- Regulation time  $\Delta I=50\% \leq 3 \text{ ms}$
- Current limit  $< 1,2 I_{outmax}$  ( $U_{out} = 0 \text{ V}$ )
- Output spike filter (C - L<sup>2</sup> - C)
- Over voltage protection 1,2  $U_{outmax}$

#### Input:

- No-load power approx. 3 Watt
- extreme input voltage range
- Input fuse internal
- Input-reverse pol. protection (fuse)
- Input filter EN 55022.B (-10 dB)
- Disturbances  
EN 61 000-4-4 level 3  
EN 61 000-4-5 level 3  
DIN ISO 7637-1 and 3  
VG 96916 50V/50ms 70V/2ms
- Inrush current reduced
- Switch-on current limited / integral
- Capable for defined transients
- Plug for cars and trucks without change<sup>1)</sup> level on request
- EMC-limit LA01G3 according to MIL on request

#### General:

- Ambient temperature -25°C / +70°C,
- Option: -40°C / +85°C  
Derating 1% / °C > 70°C
- Air convection cooled
- Common 0V input - output (DC)
- MTBF on request
- Weight approx. 200 g without cable/housing  
approx. 560 g incl. cable/housing
- No break through of  $U_{in}$  to  $U_{out}$
- Option: without housing, cable and plug for chassis mounting

<u>U<sub>in</sub></u> V	<u>U<sub>out</sub></u> V	<u>I<sub>out</sub></u> A	Model number
<b>8 - 38</b> 6V dyn.	12	3,0	LSV-V 19-12-030
	15	2,5	LSV-V 19-15-025
	24	1,6	LSV-V 19-24-016
<b>9 - 34</b> ISO 7637-1 / 3 or VG 96916 T5	12	4,0	LSV-V 20-12-040
	15	3,0	LSV-V 20-15-030
	24	2,0	LSV-V 20-24-020

Option: LSV.V 19. bzw. 20.XX.XXX O

without housing, plug and cable  
with screw terminal / for chassis mounting

<b>10 - 48</b> 9-60 V dyn. 3-voltage-on-board network 12/24/42V	12	4,0	LSV-V 26-12-040
	15	3,0	LSV-V 26-15-030
	24	2,0	LSV-V 26-24-020

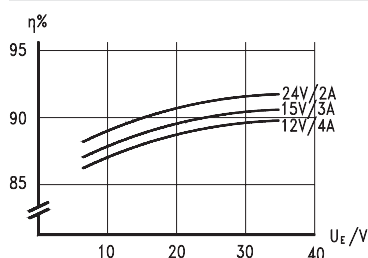
Option: LSV.V 26.XX.XXX O

without housing, plug and cable  
with screw terminal / for chassis mounting

Output adaption to any laptop-voltage/current with modification possible

The needed laptop plug must be defined

(H)	-40°C up to +85°C	Additional charge
Other output plugs		Additional charge
Modification costs for possible changes above values:		on request

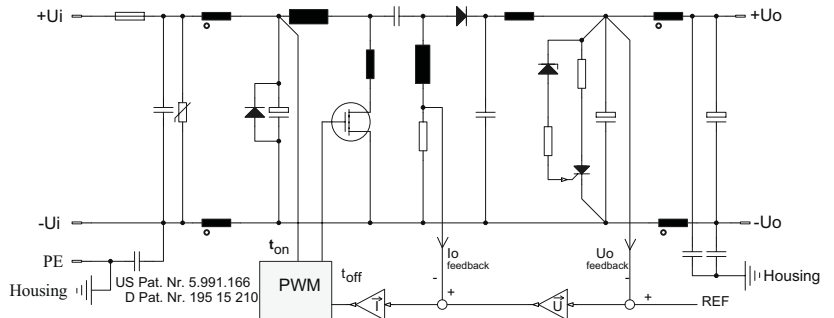


The **LSV-V** series is designed for the supply of Notebooks and Laptops in mobile applications. Extreme climatic and mechanic requirements allow the use in automotive measurement systems and special technology. The automotive EMC and disturbance standards are also kept.

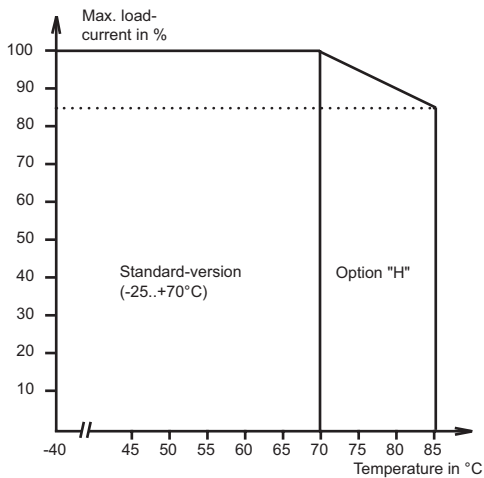
With the universal input voltage range this series can be used in cars and utility vehicles and is ideal to bridge the motor's start situation. The LSV.V26 series supports the new 42V on-board vehicle network additionally.

The topology prevents the break through of the input voltage to the output side, especially for extreme security requirements at high input voltages, even in the case of a defect switching transistor (a normal step-down converter does not prevent the break through). Also eliminated are the disadvantages of the step-up topology, which allows the reach-through to the blocking capacitor (high inrush currents) and the non-existing short circuit protection.

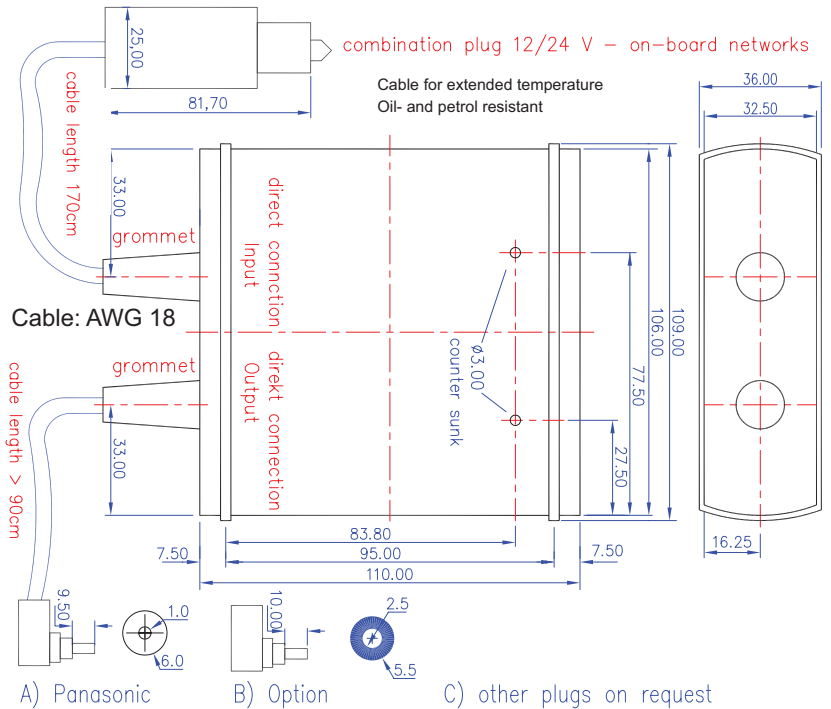
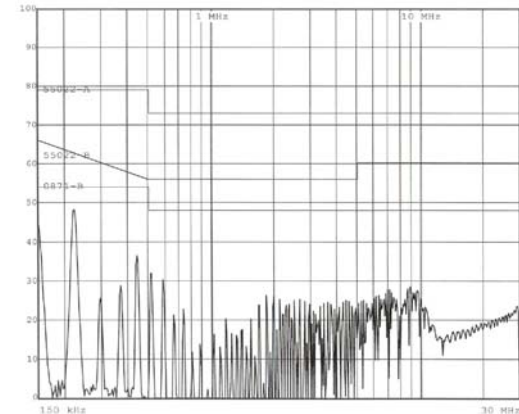
Just small input filter-capacitors are used to keep the noise suppression according to the EN55022. B (-10dB). An active over voltage protection prevents an output sided over voltage in the case of a defect control-loop. The output is over load and short circuit protected. Low no-load currents of <12mA allow the stand by-operation without separating relay.



**Derating-curve**



**Measurement radio interference with housing (improved EMC)**



Option: without housing, with screw terminal with Phoenix connector

