

single / double output
12/15 Watt

DC/DC converters
with isolation



- Input voltage range > 1:4
- Transient range up to $2 \times U_{in \max}$
- Surge- and long term transient adapted
- PCB-mountable
for high Shock/Vibration applications
- Extreme good radio interference adjustable
- High and constant efficiency
- Option: -40°C up to +85°C
- 1,5kV test voltage / 1 Min

for railway / roadcar / telecommunication / industry



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Series SRI · 1 / SRI · 2

single output / double output-symmetrical

Main Points:

Output:

- Accuracy absolute $\pm 1\%$ single output
- Accuracy absolute $\pm 1,5\%$ double output
- Regulation factor single output
 $\Sigma (U_{in} + I_{out} + T_U) \pm 1\%$
- Regulation factor double output
 $\Sigma (U_{in} + I_{out} + T_U) \pm 3\%$
- Ripple < 10 mV_{pp} (T 1:1 / 50MHz)
- Response time $\Delta I = 50\% < 1$ ms
- Current limiting < $1,2 I_{out \max}$ single output
- Current limiting > $2 I_{out \max}$ double output
- Dyn. and stat. short circuit proof
- Double output:
regulated over $\pm U_{out}$ / common 0V

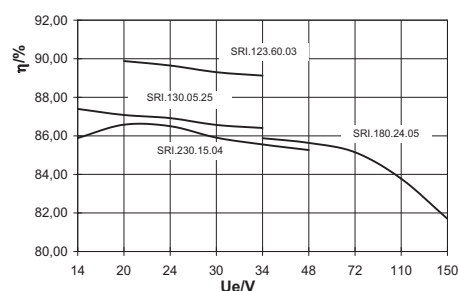
Input:

- No-load power 0,9 Watt
- ON-OFF-application (Inhibit)
- ICL-circuit (application)
- Noise suppression better then EN 55022 A
Transient- and EMC-application
on request

General:

- Over voltage protection (Logic)
- Isolation test voltage 1,5 kV_{AC} / 1 Min
- Ambient temperature -25°C / +70°C
- Derating 1,5%/°C > 70°C
1) 1%/°C > 60°C
- Ambient temperature -40°C / +85°C
1) only up to +70°C
- Convection cooled
- MTBF: SN29500 2,6Mio h / 40°C
- Shock / Vibration see annex V
- Weight approx. 95 g
- Dimension: 70,5 x 50,5 x 20 mm³
- Other pin-assignment on request

Efficiency:



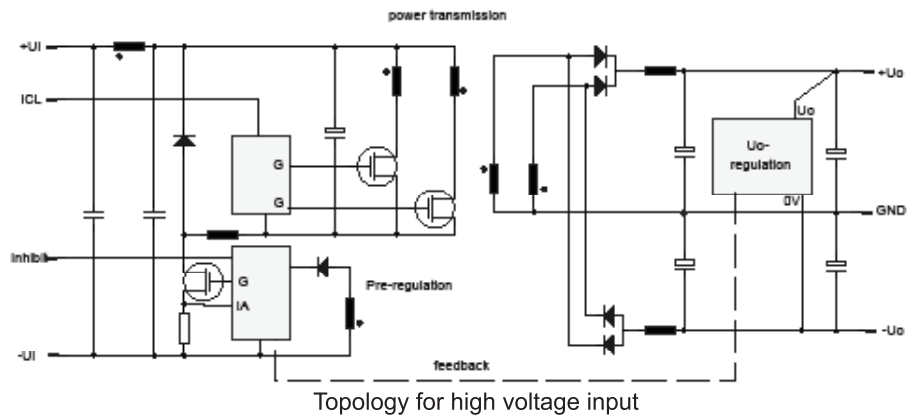
<u>U_{in}</u> V	<u>U_{out}</u> V	<u>I_{out}</u> A	Model- number
8 - 34 50V/100ms	±12	±0,5	SRI·2 20·12·05
	±15	±0,4	SRI·2 20·15·04
	5,1	2,5	SRI·1 20·05·25
	12	1,0	SRI·1 20·12·10
	15	0,8	SRI·1 20·15·08
	24	0,5	SRI·1 20·24·05
16,8 - 34 50V/100ms 1)	±12	±0,62	SRI·2 23·12·06
	±15	±0,5	SRI·2 23·15·05
	3,3	3,0	SRI·1 23·03·30
	5,1	3,0	SRI·1 23·05·30
	12	1,25	SRI·1 23·12·12
	15	1,0	SRI·1 23·15·10
13,5 - 52 80V/10ms	24	0,62	SRI·1 23·24·06
	±12	±0,55	SRI·2 30·12·05
	±15	±0,44	SRI·2 30·15·04
	3,3	2,5	SRI·1 30·03·25
	5,1	2,5	SRI·1 30·05·25
	12	1,1	SRI·1 30·12·11
35 - 154 210V/10ms	15	0,88	SRI·1 30·15·08
	24	0,55	SRI·1 30·24·05
	±12	±0,55	SRI·2 80·12·05
	±15	±0,44	SRI·2 80·15·04
	3,3	2,5	SRI·1 80·03·25
	5,1	2,5	SRI·1 80·05·25
25 - 82 300V/10ms	12	1,1	SRI·1 80·12·11
	15	0,88	SRI·1 80·15·08
	24	0,6	SRI·1 80·24·06
	±12	±0,62	SRI·2 50·12·06
	±15	±0,5	SRI·2 50·15·05
	3,3	3,0	SRI·1 50·03·30
8 - 72 13,5 - 154 (H)	5,1	3,0	SRI·1 50·05·30
	12	1,25	SRI·1 50·12·12
	15	1,0	SRI·1 50·15·10
	24	0,62	SRI·1 50·24·06
	10 Watt		SRI·1[2] 27·XX·XX on request
	10 Watt		SRI·1[2] 03·XX·XX on request
	-40°C up to +85°C		Additional charge
Modification costs for possible changes above values:			On request

Stand: 03/11

C-16

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Modules of the **SRI.1/2** series are not potted. The high and constant efficiency and the in details patented system topologies with the result of high functionality are ideal for the use at extreme requirements. Transients are regulated because of the high dynamical voltage strength and absorbed in accordance to SYKO's application reports respectively. The use in accordance to railway, road car as well as standards of special technology is given.

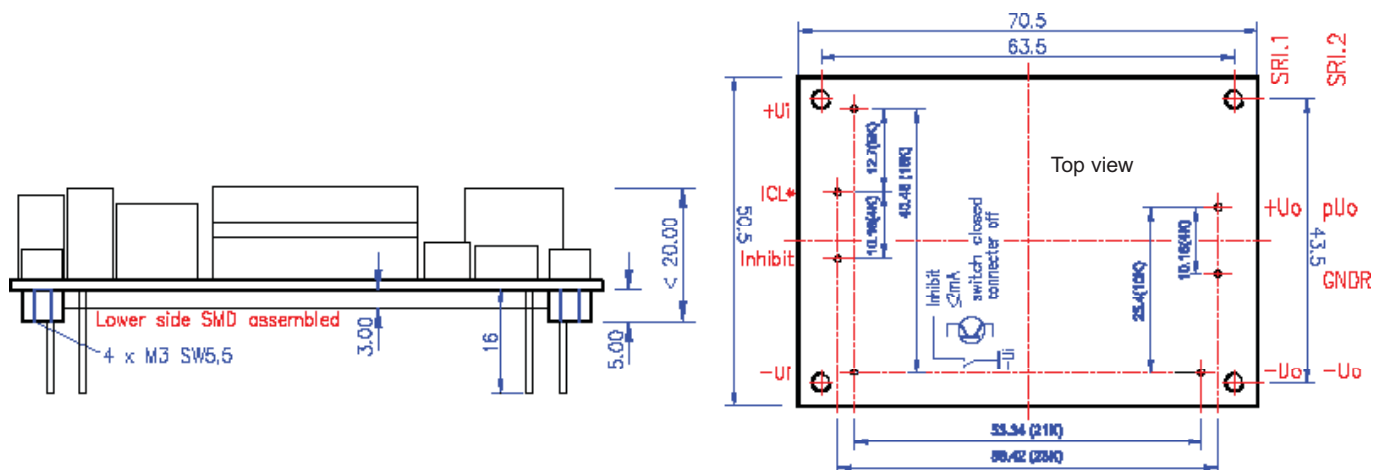


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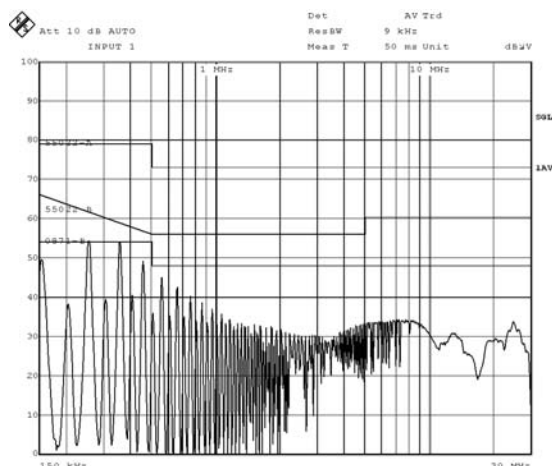
The single output is over load protected and static short circuit proof. The symmetrical double output can be used with an un-symmetrical load up to 1,5-times of the nominal current. The outputs are short circuit proof.

The outputs run-up against a short circuit (defined capacitive loads) and turn into a hick up mode by static over load (Please request).

The Inhibit-function (Inhibit) switches the input-no-load current to $< 2\text{mA}$. The ICL-option (Inrush Current Limiting-SYKO Patent-no. D 3804074 and EU 0402367) can limit the inrush current to any size of capacitors and long term transients can active be limited (application). A thermal distribution of the power-hot spots is done with special designed PCB. So the whole converter's surface is used for heat emission. An application report for an active reverse polarity protection (minimizing power losses), an active transient protection and inrush-current limiting as well as passive hold up time is available on request.

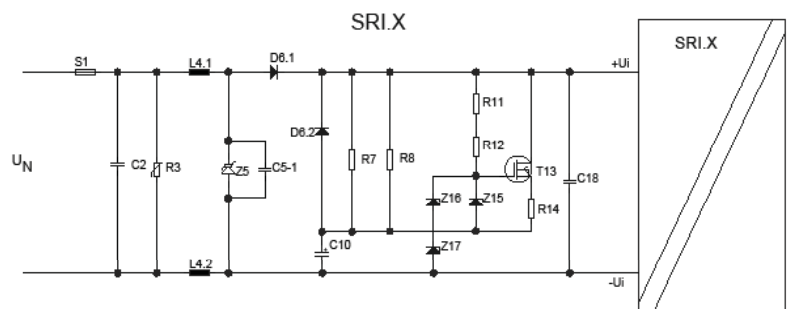


Measurement of radio interference with ext. filter



Application Noise suppression / EMV

with reverse polarity protection, transient protection, hold-up time 10ms



Transient protection application according to: Ask for details
EN 61000-4-5 / Rlout12 A-L / VDE 0160 / MIL 461 / VG96916