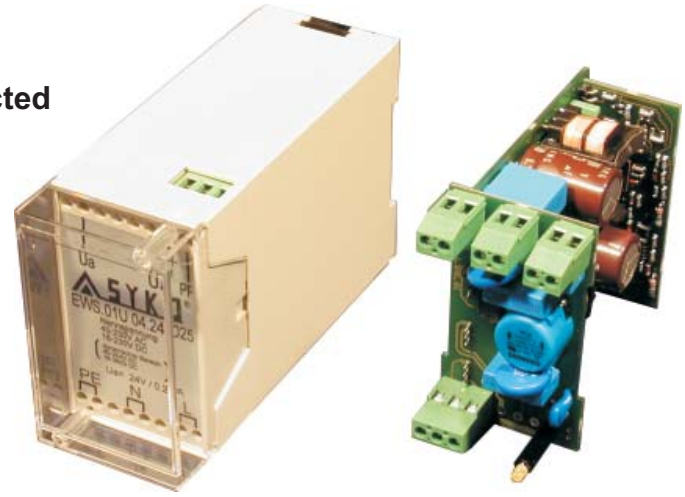
- **Universal operation on 24V DC- up to 230V AC-networks without switch-over**
- **CE-conformity declaration on request**
- **EN55011.B / EN61000-4-4/5**
- **Short circuit, no-load, over load protected**
- **DIN rail mounting EN 50022**
- **Closed housing (security)**
- **Hold-up time > 50 ms**
- **Active transient protection filter**
  (SYKO patent no. 3804074 and 0402367)

for construction / automation
and railway, public energy supply



Series EWS 01

Main points:

Outputs:

- Accuracy absolute ± 1%
- Regulation ± 1% $\Sigma(U_{in} / I_{out} / T_U)$
- Short circuit and no-load proof
- Ripple <10 mV_{pp} (const. over T_U)
- Spikes <60 mV_{pp} (T 1:1/50MHz)
- Response time ΔI = 50% ≤ 250 µs

Input:

- Universal input voltage range
- Input filter EMC EN 55011.B
- Disturbance protection
  EN61000-4 (Burst) level 3
  EN61000-5 (Surge) level 3
- Active Transient protection (SYKO-patent)
  Active Inrush current limitation
- Hold-up time > 50 ms
  also at minimum input voltage
- Fuse external (application on request)
- Option: external extendable up to 500 ms
- VDE 0160 / long term transients (Option)

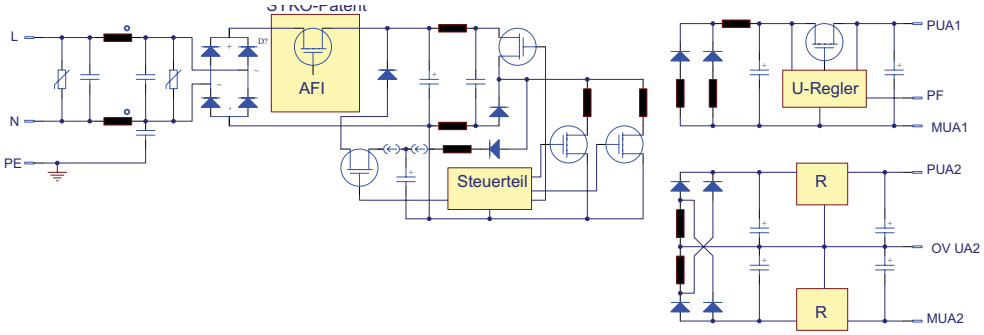
General:

- Isolation test voltage
  Input - Output 3,75 KV AC
  (5 mm air and creepage distances)
  Input - Ground 2,50 KV AC
  Output - Output 0,50 KV AC
  Security requirements EN 60950
- CE conformity proofed
- Power-Fail-Signal (network interruption)
- Ambient temperature -20°C / +60°C
  without Derating
- Free air convection
- MTBF on request
- Weight approx. 230 g
- Housing 45 x 75 x 110 mm³

Uin	Uout1·2	Iout1·2	Model
V	V	A	number
40 - 264 V AC	5,1	1,2	EWS 01 U·04·05·12
18 - 350 V DC	24	0,25	EWS 01 U·04·24·25
surge proof			
	12·12	0,2·0,2	EWS 01 B·04·12·12·02·02
	15·15	0,2·0,2	EWS 01 B·04·15·15·02·02
	5,1·±12	0,7·±0,10	EWS 01 T·04·05·12·07·10
	5,1·±15	0,7·±0,10	EWS 01 T·04·05·15·07·10
	24·±12	0,15·±0,10	EWS 01 T·04·24·12·15·10
	24·±15	0,15·±0,10	EWS 01 T·04·24·15·15·10
82 - 264 V AC	5,1	2,0	EWS 01 U·06·05·20
36 - 350 V DC	24	0,5	EWS 01 U·06·24·05
surge proof			
	12·12	0,5·0,5	EWS 01 B·06·12·12·05·05
	15·15	0,4·0,4	EWS 01 B·06·15·15·04·04
	5,1·±12	1,0·±0,15	EWS 01 T·06·05·12·10·15
	5,1·±15	1,0·±0,15	EWS 01 T·06·05·15·10·15
	24·±12	0,25·±0,15	EWS 01 T·06·24·12·25·15
	24·±15	0,25·±0,15	EWS 01 T·06·24·15·25·15
45 - 158 V DC	5,1	1,5	EWS 01 U·10·05·15
polarity free	24	0,4	EWS 01 U·10·24·04
RIA 12 A-L			
Railway network	12·12	0,4·0,4	EWS 01 B·10·12·12·04·04
	15·15	0,3·0,3	EWS 01 B·10·15·15·03·03
	5,1·±12	0,8·±0,10	EWS 01 T·10·05·12·08·10
	5,1·±15	0,8·±0,10	EWS 01 T·10·05·15·08·10
	24·±12	0,2·±0,10	EWS 01 T·10·24·12·02·10
	24·±15	0,2·±0,10	EWS 01 T·10·24·15·02·10

Modification costs for possible changes above values: on request

The ***EWS01*** series is developed as ultra wide input range supply for the use on battery and AC-networks for highest requirements to security and functionality.



Corresponding standards are kept: safety regulations EN 60950, radio interference EN 55011/EN 55022 (level B), disturbances IEC 801-2/3/4/5 with level 4.

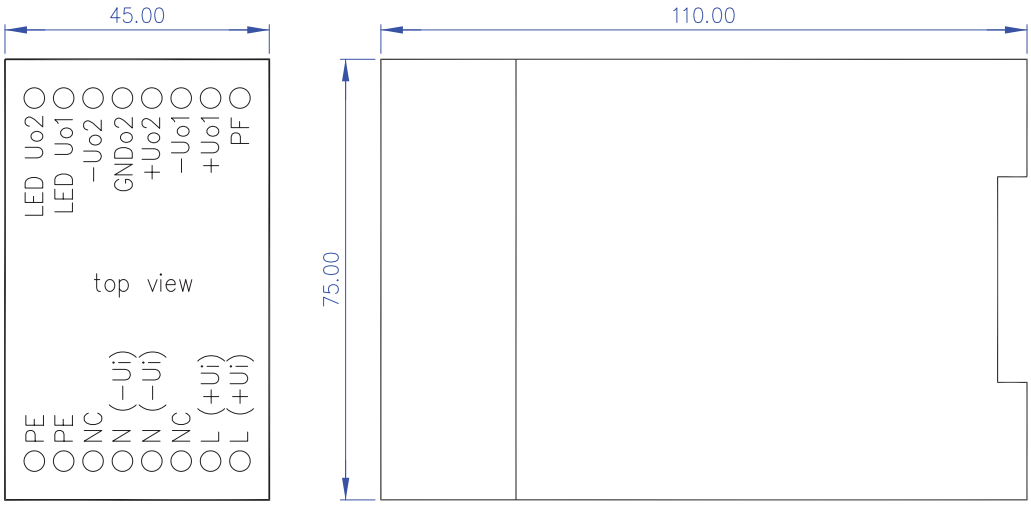
Symmetrical disturbances of surge pulses are handled with the combination of passive and active transient filters AFI (SYKO-patents no. 3804074 and 0402367). Also an active inrush current limitation (ICL) prevents switch-on currents and fast transients. The input is not loaded with high capacitive intermediate- and storage capacitors Czk.

Unsymmetrical disturbances based on burst and surge pulses have no consequences because of the secured air- and creepage distances of > 5 mm on the PCB and in the special transformer. Loose coupling and the neutral operation of the transformer's windings effect a very good EMC-behaviour (better VDE 0871.B).

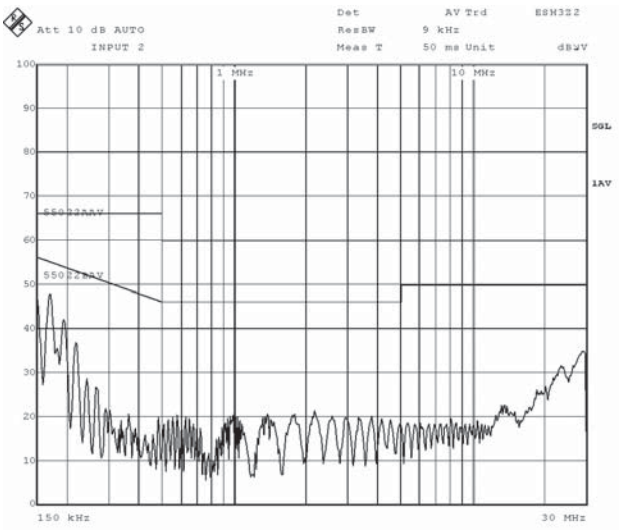
All outputs are regulated with a tolerance of ±1% over all parameters. The outputs are independent in functionality from no-load up to short circuit. The 5V-output does not need sense lines because of positive coupling.

The storage energy of the active hold-up time circuit (SYKO-concept) is constant for > 50 ms starting from the minimum input voltage. The power-fail-signal (active low) indicates the supplying voltage's fall below the minimum input voltage limit Uimin.

Optionally all output voltages can be switched individually. With a potential isolated battery, based on the 0V-potential after the network rectifying, an intelligent UPS-operation can be done.



Measurement of radio interference



Hold-up time-diagram

(t = const. > Uin min)