

10ms Hold-up time
for 300 Watt

Hold-up time units
Filter / Transient protection



- External storage unit for 10ms hold-up time
- With C-L²-C pre-filter
- Disturbance proof EN61000-4-4/5
- Low input capacity
- Active access to intermediate circuit
- Screw mounting
- Fuse and energy re-flow protection

Railway applications



Sample without cover

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Series SPK 01

Hold-up time for series HL30/HC30

Main points

Input:

- Input fuse
- Input capacity <4μF
- Burst/Surge EN61000-4-4/5 1,8kV/5Ω
- Radio suppression EN5022.B
- Input reverse pol. protection and energy re-flow protection

General:

- Hold-up time 10ms for max. 300W f=constant (TU/ΔC/aging)
- Storage element 3 x electrolytic
- Limited charging end voltage ±5V
- Charging time/repeat time : <3s / >10s
- formula of hold-up time:
 $C = ((2 * P_{in}) / (\eta * T_h)) / (U_{C_{ext}}^2 - U_{in_{min}}^2)$
- Storage C:
- not at access of U_{in}
- for access of converter's U_{zk}
- Ambient temperature -25°C / +70°C
- Option H: -40°C / +85°C
- Isolation test voltage:
Input-housing: 1,5kV AC 1min
- Shock/vibration EN50155
- Connection 6,3mm flat plug
- Weight approx. 160g
- Cover aluminium / to ground
- Dimension:
LxWxH: approx. 98 x 76 x 44 mm³

U _{nom} V	Storage C μF / V	Charging end voltage V	Model number
24	3 x 1800 / 50V	36	SPK01.24.200.010
60	3 x 390 / 100	75	SPK01.60.300.010
72	3 x 390 / 120	100	SPK01.72.300.010
110	3 x 330 / 160	140	SPK01.10.300.010
Version H		-40°C up to +85°C	additional charge
Modification costs for possible changes above values:			on request

According to the functional principle circuit, an additionally filtering for high frequent disturbances is included. With this filter the distance to the EN5022.B limit is extended. The transient protection limits surge disturbances according to EN61000-4-5 level 3 / 2Ω or EN50155 (1,8kV / 5Ω) standards. In the case of a network interruption or input sided short circuit, the energy re-flow out of the converter into the source is prevented with a reverse polarity protection. Storage elements CS (electrolytic capacitors) are charged with a pre-stabilised, to the source voltage adapted charging voltage, which uses the extreme high CU²-energy factor. After an network interruption the storage elements need a re-charging time of approx. 3 s and the repeat time should be > 10 s.

Principle circuit

