

20ms Hold-up time
for 425 Watt

Hold-up time units
Filter / Transient protection



- External storage unit from nominal voltage for 20ms hold-up time
- With transient protection and C-L²-C pre-filter
- Disturbance proof EN61000-4-4/5
- Low input capacity
- Passive pre-switch module with soft start
- Chassis mounting / 19"-cassette style

Railway applications



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Series SPK 02

Passive hold-up time for DC/DC-converters

Main points

Input:

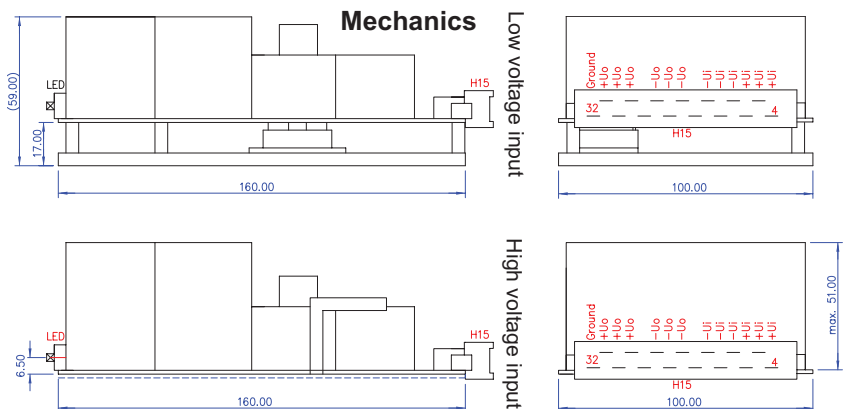
- Input fuse
- Low input capacity
- Low inrush currents
- Burst/surge EN61000-4-4/5 1,8kV/5Ω
- Radio suppression EN55022.B
- Input reverse pol. protection and energy re-flow protection

General:

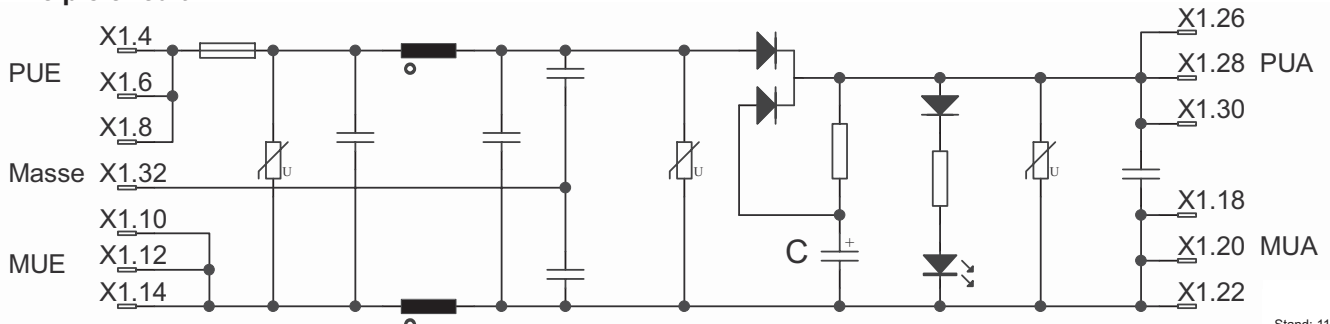
- Hold-up time 20ms for max. 425W
 $f = \text{constant} (TU/\Delta C/\text{aging})$
- Storage element electrolytic capacitor
- Charging time constant: <0,2s
- Repeat constant: >10s
- Formula of hold-up time:
 $C = ((2 \cdot P_{in}) / \eta \cdot T_{SP}) / (U^2_{Cext} - U^2_{lmin})$
- Storage C not at access of U_{in}
- 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-Chassis: M4 screw clamps
Connection-19": H15 conector (displaced)
- Dimension LxWxH: 100x160 mm³
12TE / 50mm

U _{in} V	Storage C μF	Charging voltage V	Model number
14,4 - 52	19mF ±20%	24	SPK01.30.425.020
40 - 158 170 dyn.	4mF ±20%	110	SPK02.80.425.020
Version H		-40°C up to +85°C	additional charge on request
Modification costs for possible changes above values:			

According to the functional principle circuit, an additionally filtering for high frequent disturbances is included. With this filter the distance to the EN55022.B limit is extended about >8db (not fundamental wave). The transient protection limits surge disturbances according to EN61000-4-5 level 3 (1000V/2Ω) or EN50155 (1800V / 5Ω) standards to system suitable values to the output. 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. Optionally an active storage unit is available with constant bridging time >U_{in} min.



Principle circuit



Stand: 11/06