

# DCDC Converter DCDC900-110-30-K2

## Ultracap Charger for Rail and Industrial Applications

### Specification

#### General

Electrical safety EN 60950, VDE 0805  
overload- and short-circuit protected

#### Electrical Data

##### Input

Nominal voltage  $U_N = 110 (77-143) V_{DC}$

##### Output

Nominal voltage Ultracap charging  
 $29.5V_{DC} (20 - 30 V \text{ programmable})$   
Recharge voltage  $27.5V_{DC}$   
( $17.5 - 29.0 V \text{ programmable}$ )

Stability  $\pm 1\%$   
Efficiency  $> 88\%$   
Maximum output power 1450W  
Max. output current 50A

Current limitation constant current, without disconnection, but temperature limited

**Ultracap Protection** two-stage, redundant and divers

#### Environmental conditions

Ambient temperature  $-40$  to  $+70^\circ C$ , according to EN 50155

Relative humidity  $< 75\%$  average per year

Shock and vibration according to EN 61373 cat. 1B

#### EMC

Burst according to EN50121-3-2  
2 kV, crit. A, directly coupled

Surge 1.8 kV / source 100 Ohm,  
1.0 kV / source 2 Ohm,  
(test is not valid for alarm contac)

Conductive HF 3 V RMS 1 kHz AM, 80 %, 150 kHz – 80 MHz

ESD 8 kV air, 6 kV contact

Emitted disturbance immunity 10V/m 80 MHz – 1GHz, 80 % AM, 900 MHz pulse modulated

Conducted interference emission 99 dB $\mu$ V QP 150 kHz – 500 kHz, 93 dB $\mu$ V 500 kHz – 30 MHz

Radiated interference emission 30 – 230 MHz 47 dB $\mu$ V/m QP, 230 MHz – 1 GHz 40 dB $\mu$ V/m QP. 10 m measuring distance



Picture may differ from actual device

#### Isolation

Input 1500 V  
Output 500 V  
Input to output 1500 V

#### Signals

Test port 1/3 output voltage (0 – 10 V)  
current limited by Poly-Switch  
0.1 A, RXE 010  
Alarm contact potential-free  
Interface RS232 interface

#### Mechanical Data

Case material stainless steel  
Size (W x D x H) 270 x 254 x 115 mm  
Weight approx. 6.5 kg  
Classification IP 54  
Cooling convection via heat sink on wall side. The cooling fins must run vertically to guarantee an optimal air flow.  
Connector height The extent of the connector plugs (incl. mating plug) is 90 mm + bending radius of the connecting cables.

#### Connection

Input: -X1 Harting HANQ5, male, Ag 4 mm<sup>2</sup>  
Signal 1: -X2 Harting HAN8U, female, Au 0.75 mm<sup>2</sup>  
Output: -X3 Harting HANQ2, female, 4 – 6 mm<sup>2</sup> (recommended: 6 mm<sup>2</sup>)  
Signal 2: -X4 D-SUB 9-pole, female

#### Grounding

Ground bolt M6 x 25 on the case's side.  
Cable cross section at least 4 mm<sup>2</sup>.

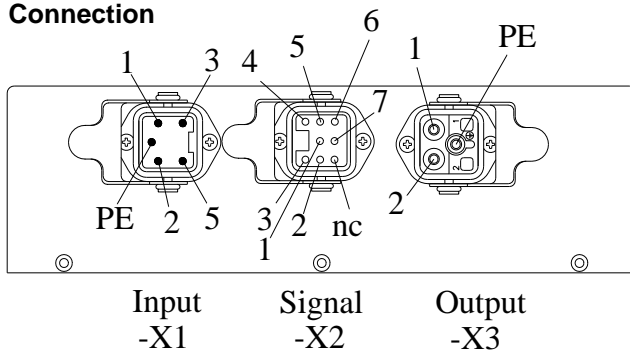
Input and output of the device are isolated to chassis.

# DCDC Konverter DCDC900-110-30-K2

Ultracap Charger for Rail and Industrial Applications

## Specification

### Connection



Input and output of the device are not connected to the case.

### Input: -X1

1	Input voltage reference 0V
2	Input voltage reference 0V
3	Input voltage positive +U <sub>IN</sub>
5	Input voltage positive +U <sub>IN</sub>

### Signal 1: -X2

2	Measurement voltage converter output reference (I<100 mA)
3	Measurement voltage converter output positive (I<100 mA)
4	Not connected
5	Not connected
6	Alarm normal open (NO, device off)
7	Alarm normal close (NC, device on)
1	Alarm common (C)

### Output: -X3

1	Output voltage reference 0V
2	Output voltage positive +U <sub>OUT</sub>

### Signal 2: -X4

RS232 interface for parameterization of the voltage thresholds.

### Mounting direction

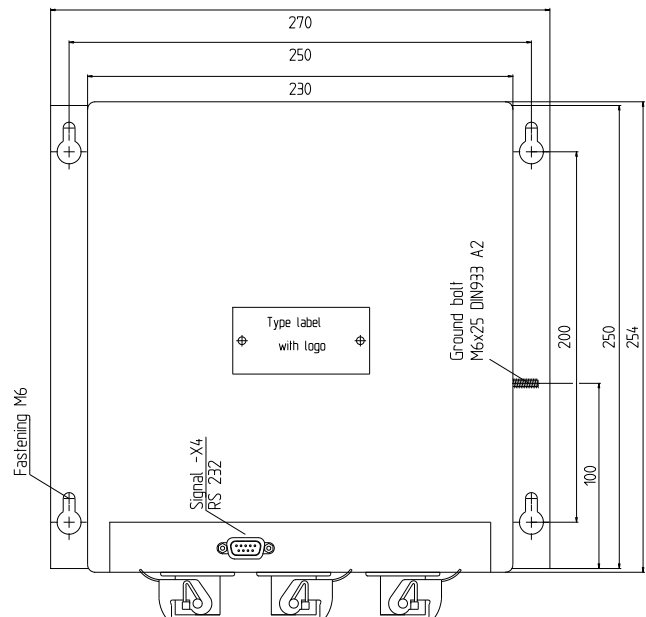
The cooling fins must run vertically to guarantee an optimal air flow and the circuit points -x1, -x2 and -x3 come off downward.

### Ground bolt

The DCDC converter has a ground bolt M6 x 25 on the case's side. A cable cross section of at least 4 mm<sup>2</sup> is recommended for the connection. The ground bolt is not connected to the negative pole of the device.

### Mechanical Data

All dimensions in mm.



**Warranty**      24 months

**Order Code**      DCDC900-110-30-K2