

# DC-DC Converter DCDC900-24-30-K2/K4

## 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  $U_N = 24 (16-32) V_{DC}$

##### Output

##### Ultracap. charging

Nominal voltage 29,5 V<sub>DC</sub> (10-30V programmable)  
Recharge voltage 27,5 V<sub>DC</sub> (17,5-29,5V programmable)  
Stability +/- 1%  
Efficiency >85%  
Maximum output power 900W  
Output current 30A

Current limitation constant current, without disconnection,  
but temperature limited

**Ultracap protection** two-stage, redundant and divers  
OVP (via software), 31V hardware OVP

#### Environmental conditions

Ambient temperature -40 to +70°C, according to EN50155

Relative humidity <75% average per year

Shock and vibration according to EN50155, „mounted into  
the frame“  
frequency range: 5-150 Hz  
transfer frequency: 8,2 Hz

Amplitude below transit frequency: 7,5 mm  
Amplitude acceleration above transit frequency: 20 m/s<sup>2</sup>

#### Isolation

Input 500V  
Output 500V  
Input to output 1500V

#### EMC

Burst according to EN50121-3-2,  
2 kV, crit. A, direct coupled  
Surge 1,8 kV / source 100 Ohm,  
1,0 kV / source 2 Ohm,  
(test is not valid for alarm contact)  
Conductive HF 3V RMS 1kHz AM, 80%,  
150 kHz - 80 MHz

ESD 8 kV air, 6 kV contact



Picture may differ from actual device.

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

Conductive disturbance emitted 99 dB $\mu$ V QP 150 kHz- 500 kHz,  
93 dB $\mu$ V 500 kHz-30 MHz

Conductive disturbance emitted 30-230 MHz 47 dB $\mu$ V/m QP.  
230MHz-1GHz 40 dB $\mu$ V/m QP.  
10m measuring distance

#### Signals

Measurement output 1/3 output voltage (0-10V),  
current limited by Poly-Switch  
0,1 A, RXE 010  
Alarm contact Interface potential free, Power Good  
RS232 interface

Remote on/off (Version -K4) 16 – 40 V<sub>DC</sub>

#### Mechanical Data

Case material stainless steel  
Size (W x D x H) 270 x 255 x 115 mm  
Weight approx. 6,5 kg  
Classification IP 54  
Cooling convection via heat sink on wall side

#### Connection

Input: -X1 Harting HANQ5, male, Ag 4mm<sup>2</sup>  
Signal 1: -X2 Harting HAN8U, female, Au 0,75mm<sup>2</sup>  
Output: -X3 Harting HANQ2, female, 4-6mm<sup>2</sup>  
Signal 2: -X4 D-SUB 9-polig, female

**Warranty** 24 months

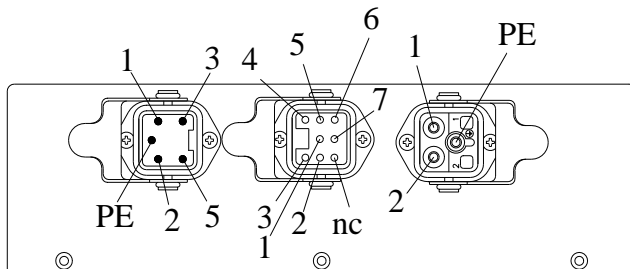
**Order code** DCDC900-24-30-K2  
DCDC900-24-30-K4

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### Specification

#### Connection



Input -X1      Signal -X2      Output -X3

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	K4 – Remote on/off positive (24V <sub>DC</sub> / <20mA)
5	K4 – Remote on/off reference (0V <sub>DC</sub> / <20mA)
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.

#### Connector height

The extent of the connector plugs (incl. mating plug) is 90 mm + bending radius of the connecting cables.

#### Ground bolt

The DCDC converter has a ground bolt M6 x 25 on the case's side. A cable diameter 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

