



*Let's talk!*

# DC-DC Converter DCDC330-110-110

For Rail & Industrial Applications

## Specification



Picture may differ from actual device

### General

Safety DIN EN 60950, VDE 0805  
Overload- and short-circuit protected

### Electrical Characteristics

#### Input

Input voltage nominal  $U_E = 110V_{DC}$   
Stat. voltage tolerance  $\pm 30\%$  (77-143V<sub>DC</sub>)  
Dyn. Voltage tolerance  $\pm 40\%$  (66-154V<sub>DC</sub>)  
Ripple 15%

#### Output

Output voltage 110V<sub>DC</sub>, isolated, "floating"  
Voltage tolerance  $< \pm 1\%$   
Dyn. regulation tol.  $< \pm 2\%$   
Ripple  $< 100mV_{PP}$  (50MHz 50 Ohm)  
Noise  $< 200mV_{PP}$  (200MHz 50 Ohm)  
Start-up delay time  $< 200ms$   
Output current  $I_A = 0-3A$   
Current limitation  $I_S = 1,2 \times I_{A\ MAX}$   
Overload characteristic permanently short-circuit-proof  
Parallel operation possible for output power upgrade  
Output power 300W  
Efficiency  $> 85\%$  at  $U_{NOM}$

### Ambient Characteristic

Ambient temperature -40 to +85 °C, class TX according to DIN EN50155  
Relative humidity max. 95%, condensation tolerable from time to time (with optional coating)  
Cooling external forced cooling / e.g. fan level below module carrier  
Derating without external cooling from +45 °C / 2,5% per 1 °C  
Protection input current = fuse 6,3AT (high breaking capability); reverse polarity protection at the input; OVP at the output =  $U_A + tol. + 10\%$

### EMC-Emission

Conductive according to DIN EN 50121-3-2

Radiated according to DIN EN 50121-3-2

### EMC-Immunity

Transient/Surge 1,8kV according to DIN EN 50121-3-2, 12 Ohm

Burst 2kV according to DIN EN 50121-3-2

Electromagnetic field 20V/m according to DIN EN 50121-3-2

### Insulation Test

Input to ground 1500V<sub>EFF</sub> 1min.  
Output to ground 1500V<sub>EFF</sub> 1min.  
Input to output 1500V<sub>EFF</sub> 1min.

Creepage distance  $> 2,5mm$  according to DIN EN 50124 PD3

### Shock and Vibration

Vibration reliability according to DIN EN 50155 and EN 61373

Frequency range 5-150Hz  
Transfer frequency 8Hz

Amplitude acceleration below the transfer frequency 2mm

Amplitude acceleration above the transfer frequency 5m/s<sup>2</sup>

Shock reliability 50m/s<sup>2</sup> all 3 axes according to DIN EN 61373 (extended)

MTBF  $> 750.000h$  at 40 °C



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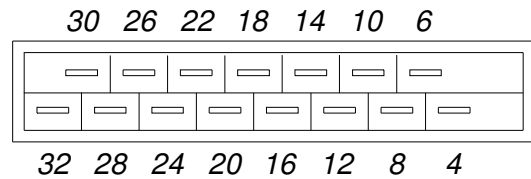
For Rail & Industrial Applications

## Specification

### Signal

Alarm contact	optocoupler signal contact for output voltage o.k.
Optical signals	LEDs (green) for $U_E$ ; $U_A$
Remote ON/OFF	inhibit ON >13V to $U_N$ or open; OFF <5V to 0V
Test point for $U_A$	2mm test jacks at the front panel

### Pin Assignments



### Connection Characteristics

Connector	H15 DIN 41612; rear side
Pin assignments	see table 1

### Mechanical Characteristic

Dimensions	19"-alu cassette, 3U, 14TE
Weight	935g
Protection	IP 20

### Warranty Time

24 months

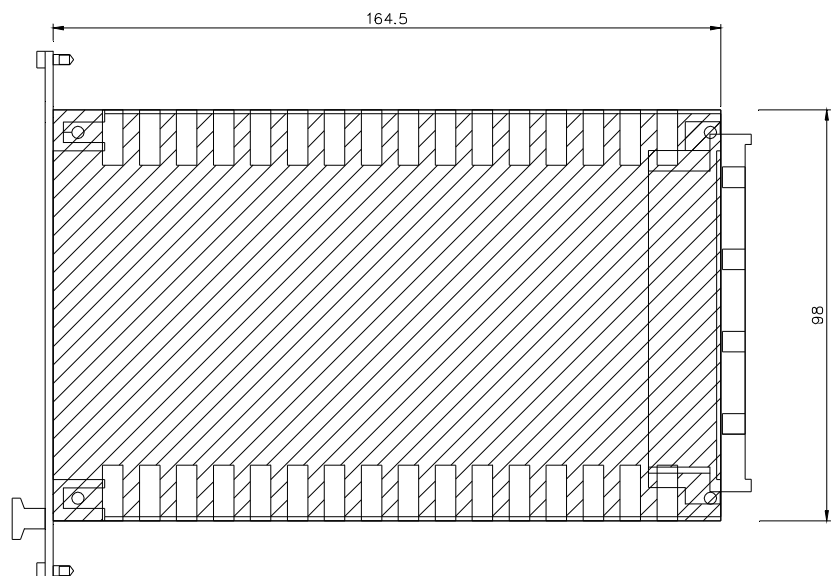
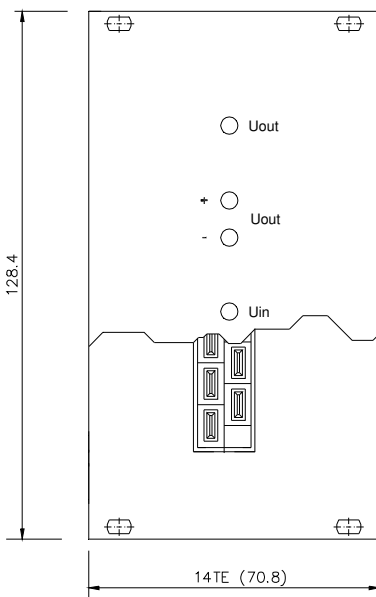
### Order Code

DCDC330-110-110

(Optional formal coating and add. glued components.)

Table 1

Pin	Function	Abbreviation
4	Output voltage positive	+ $U_A$
6	Output voltage positive	+ $U_A$
8	Output voltage reference	0V $U_A$
10	Output voltage reference	0V $U_A$
12	Not connected	n.c.
14	Not connected	n.c.
16	Signal contact emitter	$U_A$ o.k. / E
18	Signal contact collector	$U_A$ o.k. / C
20	Not connected	n.c.
22	Remote ON/OFF	Inhibit E/A
24	Protective earth	PE
26	Input voltage positive	+ $U_E$
28	Input voltage positive	+ $U_E$
30	Input voltage reference	0V $U_E$
32	Input voltage reference	0V $U_E$



All dimensions in mm