

Technical data sheet

Power supply · Compact DC/DC–Converter, 240 W

Programmable DC/DC–Converter

Input: wide-range input DC 12–48 V

Output: DC 5–55 V



Identification

Type	CUDC-240-55
Part No.	723300

Product version

Datasheet version	01
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Description

Description	- Up to 240 W output power (voltage dependent) - Converts any voltage between 11 V and 55 V to any voltage between 5 V and 55 V - High efficiency and compact size - Overload protection by current limitation or hiccup mode, adjustable - Digital Power regulation - Isolated topology (DC 4.2 kV) - USB interface for control and monitoring - Multiple integrated protections - Suitable for parallel or for redundancy operation (integrated ORing circuitry) - Free POWERMASTER software
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Input

Rated voltage U_N	DC 12–48 V
Operation voltage range	DC 11–55 V
Rated current I_N	Max. 12 A
Inrush current	<40 A
Internal fuse	20 A (not user replacable)
External protection	Mini-circuit breaker: C 20 A

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Power factor correction P.F.C.	>0.6
Protection device Input	Overvoltage protection, > 60 V Cut-off
Reverse voltage protection	Yes

Output

Output voltage/current	DC 5 – 55 V
Rated voltage U_N	DC 5–55 V
Rated current I_N	10 A
Max. output current (limited current)	11 A (264 W)
Max. output current (HICCUP, 5 sec)	15 A (360 W)
Power Dissipation	<28 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 5–55 V
Load regulation	≤4 % @ DC 5 V ≤2 % @ DC 12 V ≤1.5 % @ ≥ DC 24 V
Ripple and noise	<200 mV
Hold up time	≥5 ms
Parallel / redundant mode	yes
Efficiency	77 % – 92 %, depending on the input/output voltage
Overtemperature protection	Yes
Over voltage protection	120% of the output voltage
Short circuit	Current limit Hiccup Mode
Communication	Mini USB-B Type
Measurement accuracy	Output voltage: ± 1 %, ± 1 digit Output current: ± 3 %, ± 1 digit Input voltage: ± 3 %, ± 1 digit

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 24 V
Switching current	AC/DC 1 A
Switching capacity	24 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>60 °C: -2.4 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>600000 h: MIL-HDBK-217F

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Degree of protection	IP20 (EN 60529)
Protection class	I
Status indication	7 segment display, 2 digits 3 keys for parameterization
Weight/unit	0.4 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 12 Plug-in
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 132.2 mm
PU (units)	1

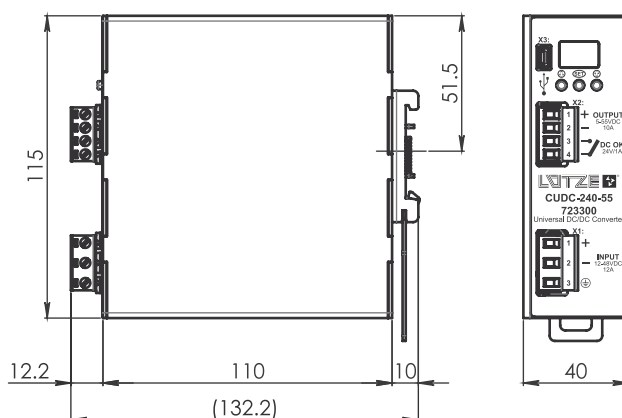
General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +60 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	I (EN 70178)
Degree of pollution	2 (IEC 60664-1)
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

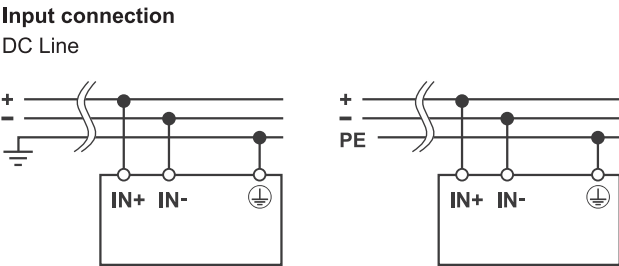
Certifications/Standards

Conformity	CE UKCA
Certifications	cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 61000-6-2 EN 61000-6-3 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

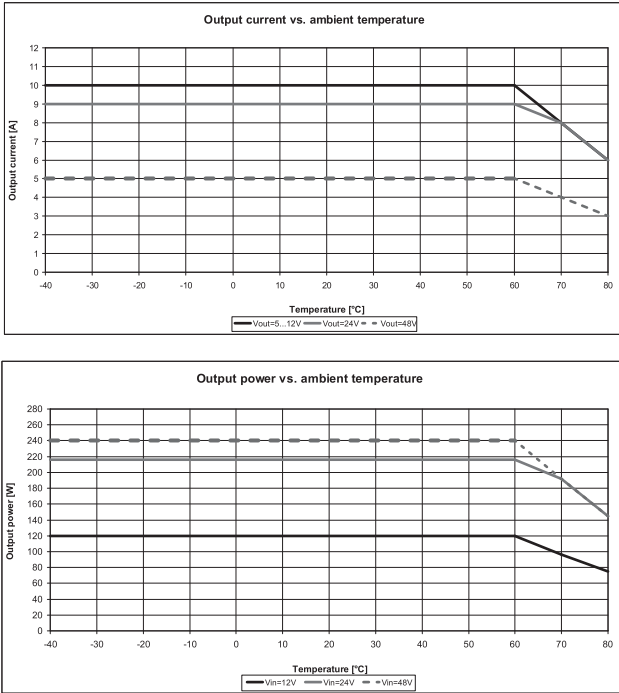
Dimensions



PIN assignment



Derating



Short circuit characteristics

