

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	00
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Description

Description	Up to 240 W output power (voltage dependent) Converts any voltage between 11V 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 4.2kV) 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 fuse	Mini-circuit breaker: C 20 A

United Kingdom: LÜTZE Ltd.

Unit 3, Sandy Hill Park
Sandy Way, Amington • GB-Tamworth, Staffs B77 4DU
Tel. +44 (0)1827 31333-0 • Fax +44 (0)1827 31333-2
www.lutze.com • sales.gb@lutze.co.uk

Germany: Friedrich Lütze GmbH

Postfach 12 24 (PLZ 71366) • Bruckwiesenstraße 17-19 • D-71384 Weinstadt
Tel. +49 (0)7151 6053-0 • Fax +49 (0)7151 6053-277(-288)
www.luetze.de • info@luetze.de

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SYSTEMATIC TECHNOLOGY

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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

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)
Heat dissipation	<28 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 5–55 V
Load regulation	$\leq 4\%$ @ DC 5 V $\leq 2\%$ @ DC 12 V $\leq 1.5\%$ @ \geq 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: $\pm 1\%$, ± 1 digit Output current: $\pm 3\%$, ± 1 digit Input voltage: $\pm 3\%$, ± 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
Operation temperature range	-40 °C ... +70 °C (UL approved up to +60 °C)
Storage temperature range	-40 °C ... +80 °C
Relative air humidity	5 – 95 %, non-condensing
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)

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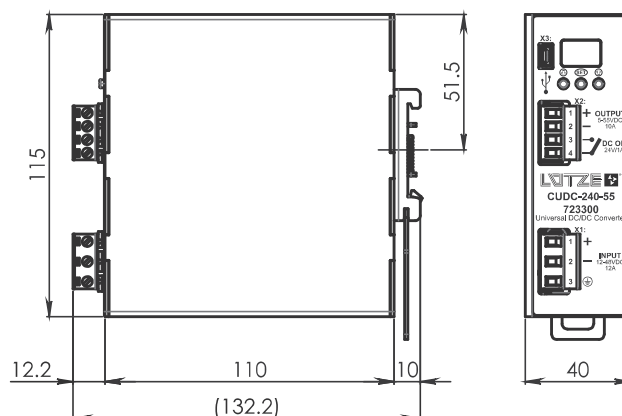
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Installation position	Vertical
MTBF	>600000 h: MIL-HDBK-217F
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27:2008
Vibration resistance	5 – 17.8 Hz: ± 1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6:2007
Protection class	IP20 (EN 60529)
Protection class	I
Over voltage category	I (EN 70178)
Degree of pollution	2 (IEC 60664-1)
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

Certifications/Standards

Certifications	cULus (E249179) UL 508
Standards	IEC/EN 61010-1:2010 IEC/EN 61010-2-201:2018 EN 55011 Class B EN 55022 Class B EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 2 EN 61000-4-5 Level 1 EN 61000-6-3:2007 EN 61000-6-2:2005

Dimensions



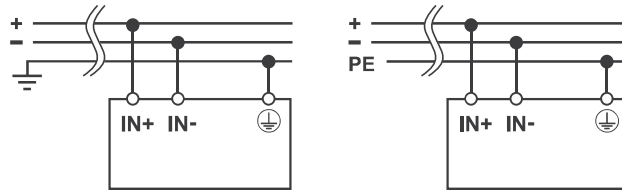
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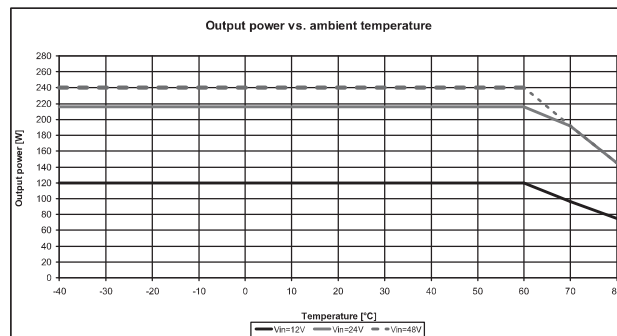
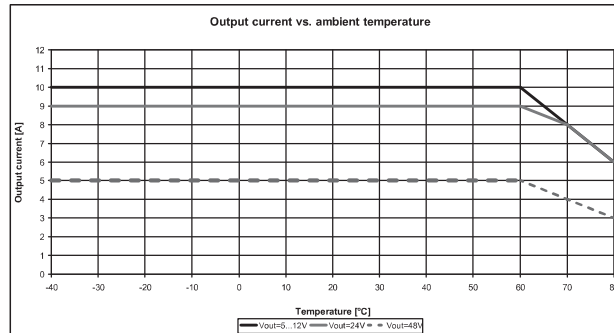
PIN assignment

Input connection

DC Line



Derating



Short circuit characteristics

