

# LDD240 Series

## 240W DIN Rail DC-DC Converter

The LDD family of DC/DC converters is an optimal response to the applications where compactness and high reliability are requested. All are isolated and offer a wide range of input voltages.

Simple but elegant look and ease of installation make them ideal for various industrial applications.



### Key Features & Benefits

- High efficiency and compact size
- Wide Input voltage range
- Isolated topology
- Overload 150%
- Excellent reliability

### Applications

- Industrial machine control
- Process control
- Energy management
- Remote control systems



**bel** POWER SOLUTIONS & PROTECTION

a bel group

[belpowersolutions.com](http://belpowersolutions.com)

## 1. MODEL SELECTION

MODEL	INPUT VOLTAGE	INPUT CURRENT	OUTPUT VOLTAGE	OUTPUT CURRENT
LDD240-11024	110 VDC (90 - 148 VDC)	2.6 A – 3.6 A	24 VDC	10 A

## 2. INPUT SPECIFICATIONS

Technical parameters are typical, measured in laboratory environment at 25°C at 110 VDC and nominal values, after minimum 5 minutes of operation.

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Input DC Voltage Range	Rated Operating	110 VDC 90 - 148 VDC
Input DC Current	$V_{in} = \text{Min}$ $V_{in} = \text{Max}$	3.6 A 2.6 A
Input Overvoltage Protection	Active shutdown	> 150 VDC
Inrush Peak Current		< 150 A
Internal Protection Fuse	Not user replaceable	Fuse AT 5 A
Recommended External Protection	Use DC rated devices	MCB 6 A C curve

## 3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Output Power		240 W
Rated Voltage (Adjustable Voltage Range)		24 VDC (23 – 27.5 VDC)
Continuous Current		10 A
Overload Limit		15 A
Short Circuit Peak Current		21 A
Load Regulation		≤ 1.5%
Ripple & Noise <sup>1</sup>		≤ 50 mVpp
Hold up Time		≥ 10 ms
Protections	Overload/short circuit: Hiccup mode Thermal protection Output overvoltage	
Output Over Voltage Protection		≥ 33 VDC
Status Signals	DC OK - green LED OVERLOAD - red LED DC OK - dry contact (NO, 24 VDC / 1 A)	
Parallel Connection	Possible for power or redundancy (includes internal ORing circuit)	
Efficiency		> 88 %
Dissipated Power		< 31 W

<sup>1</sup> Ripple and Noise are measured with 20 MHz bandwidth, probe terminated with a 0.1 μF MKP parallel capacitor.

**NOTE:** Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.

#### 4. ENVIRONMENTAL, EMC & SAFETY SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION	
Operating Temperature	Overtemperature protection (Start-up type tested: - 40°C) <sup>2</sup>	- 40 to + 70°C	
Storage Temperature		- 40 to + 80°C	
Derating		- 3 W/°C over 50°C	
Humidity	Non-condensing	5 - 95% RH	
Life time expectation	At 25°C ambient	64000 h (7.3 years)	
Overtoltage Category		I (EN50178)	
Pollution Degree		2 (IEC60664-1)	
Protection Class		Class I	
Isolation Voltage	Input to Output	2.1 kVDC	
	Input to Ground Output to Ground	1.41 kVDC 0.75 kVDC	
Safety Standards & Approvals	UL508 (reference) EN60950 (reference) EN50178 (reference)		
EMC Standards	Emission	Class A	
	Immunity	EN55022 (CISPR11)	Class A
		EN55011 (CISPR22)	Level 3
		EN61000-4-2	Level 3
		EN61000-4-3	Level 2
EN61000-4-4	Level 2		
EN61000-4-5	Level 2		
EN61000-4-11	Level 2		
Protection Degree	EN60529	IP20	
Vibration sinusoidal	IEC 60068-2-6	5-17.8 Hz: ±1.6 mm; 17.8-500 Hz: 2 g 2Hours / axis (X,Y,Z)	
Shock	IEC 60068-2-27	30 g 6 ms, 20 g 11 ms; 3 bumps / direction, 18 bumps total	

<sup>2</sup> Possible at nominal voltage with load deration.

#### 5. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Weight		800 g
Dimensions		69 x 115 x 110 mm
Mounting Rail		IEC 60715/H15/TH35-7.5(-15)
Connection Terminals	Screw type pluggable (24 - 12 AWG)	2.5 mm <sup>2</sup>
Case Material	Aluminum	

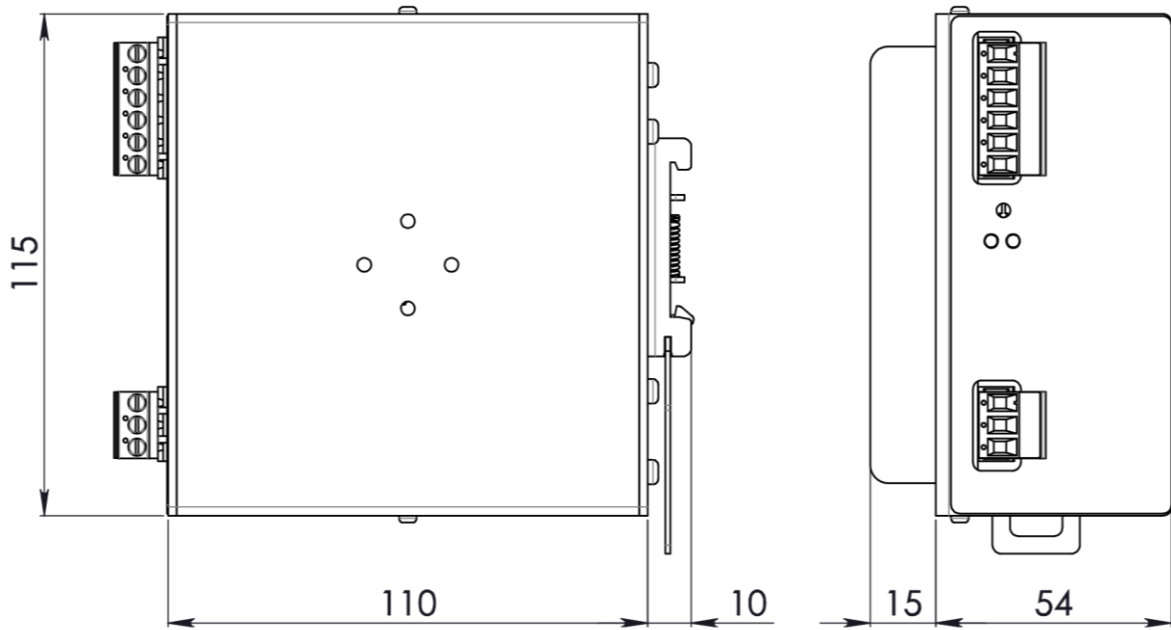
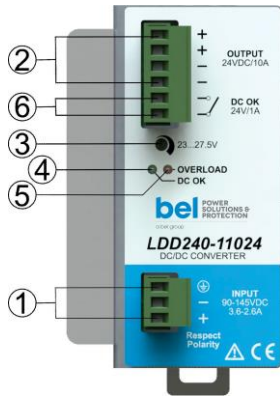


Figure 1. Mechanical Drawing

6. PIN LAYOUT & DESCRIPTION



PIN	DESCRIPTION
1	DC input
2	DC output (Load)
3	Output voltage adjustment
4	Green LED: Output OK
5	Red LED: Overload
6	Diagnostic Output (dry contacts, NC out OK)

INPUT CONNECTION	OUTPUT CONNECTION
+ = Positive DC	+ = Positive DC
- = Negative DC	- = Negative DC
⊕ = Earth ground	
	Signaling: DC OK (dry contact) NO COM

For more information on these products consult: [tech.support@psbel.com](mailto:tech.support@psbel.com)

**NUCLEAR AND MEDICAL APPLICATIONS** - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

**TECHNICAL REVISIONS** - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Isolated DC/DC Converters](#) category:*

*Click to view products by [Bel Fuse](#) manufacturer:*

Other Similar products are found below :

[ESM6D044440C05AAQ](#) [FMD15.24G](#) [PSL486-7LR](#) [PSR152.5-7IR](#) [Q48T30020-NBB0](#) [AVO240-48S12B-6L](#) [AVO250-48S28B-6L](#) [NAN-0505](#) [HW-L16D](#) [JAHW100Y1](#) [217-1617-001](#) [22827](#) [SPB05C-12](#) [SQ24S15033-PS0S](#) [18952](#) [19-130041](#) [CE-1003](#) [CE-1004](#) [GQ2541-7R](#) [PSE1000DCDC-12V](#) [RDS180245](#) [MAU228](#) [419-2065-201](#) [449-2075-101](#) [TME 0303S](#) [TME 0505S](#) [TME 1205S](#) [TME 1212S](#) [TME 2405S](#) [TME 2412S](#) [V300C24C150BG](#) [419-2062-200](#) [419-2063-401](#) [419-2067-101](#) [419-2067-501](#) [419-2068-001](#) [DCG40-5G](#) [DFC15U48D15](#) [449-2067-000](#) [XGS-0512](#) [XGS-1205](#) [XGS-1212](#) [XGS-2412](#) [XGS-2415](#) [XKS-1215](#) [033456](#) [NCT1000N040R050B](#) [SPB05B-15](#) [SPB05C-15](#) [TME 0509S](#)