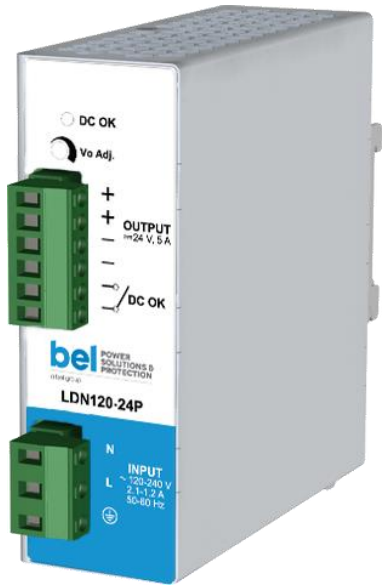
LDN120 Series

120W DIN Rail Switching Power Supply



RoHS Compliant

LDN120 Series are single phase DIN Rail Switching Power Supplies, suitable for worldwide applications such as process control, heavy duty applications, but also building automation.

These units have received excellent market approval for their high efficiency, excellent reliability and compactness. Simple but elegant look and ease of installation due to pluggable connectors make them ideal for various industrial applications.

LDN120 Series are Class I isolation devices suitable for SELV and PELV circuitry and are designed to be mounted on DIN rail and installed inside a protective enclosure.

Key Features & Benefits

- Single phase AC input 90 – 264 VAC (110 - 345 VDC)
- High efficiencies and in compact size
- 150% overload capability
- Only 40 mm width aluminum enclosure
- Up to 60°C operating temperature with no derating
- Short circuit, overload and over temperature protection
- RoHS Compliant

Applications

- Automation
- Process Control
- Communication
- Instrumentation Equipment

1. MODEL SELECTION

MODEL	INPUT VOLTAGE	# of PHASES	OUTPUT VOLTAGE	OUTPUT CURRENT	REDUNDANCY
LDN120-12	120 - 240 VAC (110 - 345 VDC)	1	12 VDC	7 A	No ORing diode
LDN120-24	120 - 240 VAC (110 - 345 VDC)	1	24 VDC	5 A	No ORing diode
LDN120-24P	120 - 240 VAC (110 - 345 VDC)	1	24 VDC	5 A	Internal ORing diode
LDN120-48P	120 - 240 VAC (110 - 345 VDC)	1	48 VDC	2.5 A	Internal ORing diode

2. INPUT SPECIFICATIONS

Technical parameters are typical, measured in laboratory environment at 25°C and 240 VAC / 50 Hz, at nominal values, after minimum 5 minutes of operation.

PARAMETER	DESCRIPTION / CONDITION		SPECIFICATION
Input AC Voltage Range	Rated, UL certified Operating		120 - 240 VAC 90 - 264 VAC
Input DC Voltage Range	Rated		110 - 345 VDC
Input Frequency Range			47 - 63 Hz
Input AC Current	LDN120-12	Vin = 120 VAC Vin = 240 VAC	1.9 A 1.1 A
	LDN120-24 / LDN120-24P / LDN120-48P	Vin = 120 VAC Vin = 240 VAC	2.1 A 1.2 A
Input DC Current	LDN120-12	Vin = 110 VDC Vin = 345 VDC	1.3 A 0.5 A
	LDN120-24 / LDN120-24P / LDN120-48P	Vin = 110 VDC Vin = 345 VDC	1.4 A 0.6 A
Inrush Peak Current			≤ 40 A
Touch (Leakage) Current			≤ 0.45 mA
Internal Protection Fuse	Not user replaceable		Fuse 3.15 AT
External Protection on AC Line	It is strongly recommended to provide external surge arresters (SPD) according to local regulations		Fuse 6AT or MCB 6 A C curve

3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION		SPECIFICATION
Output Power			120 W
Rated Voltage (Adjustable Voltage Range)	LDN120-12 LDN120-24 / LDN120-24P LDN120-48P		12 VDC (12 – 15 VDC) 24 VDC (23 – 28 VDC) 48 VDC (45 – 55 VDC)
Continuous Current	LDN120-12 LDN120-24 / LDN120-24P LDN120-48P		7 A 5 A 2.5 A
Overload Limit	LDN120-12 LDN120-24 / LDN120-24P LDN120-48P		11 - 9.5 A 7 A 3.7 A
Short Circuit Peak Current			30 A
Load Regulation	LDN120-12 LDN120-24 LDN120-24P LDN120-48P		≤ 2% ≤ 1% ≤ 2.5% ≤ 1.5%
Ripple & Noise[1]	LDN120-12 LDN120-24 / LDN120-24P / LDN120-48P		≤ 120 mVpp ≤ 60 mVpp
Hold up Time	LDN120-12	Vin = 120 VAC Vin = 240 VAC	≥ 10 ms ≥ 60 ms

	LDN120-24	Vin = 120 VAC Vin = 240 VAC	≥ 20 ms ≥ 50 ms
	LDN120-24P / LDN120-48P	Vin = 120 VAC Vin = 240 VAC	≥ 10 ms ≥ 50 ms
Protections	Overload, short circuit: Hiccup mode Thermal protection Output overvoltage		
Output Over Voltage Protection	LDN120-12 LDN120-24 / LDN120-24P LDN120-48P		≥ 18 VDC ≥ 33 VDC ≥ 68 VDC
Status Signals	DC OK - green LED DC OK - dry contact (NO, 24 VDC / 1 A)		
Parallel Connection	Possible for redundancy (with external ORing module) P (models) - include internal ORing circuit		
Efficiency	LDN120-12 LDN120-24 LDN120-24P LDN120-48P		> 84% > 87% > 85% > 86%
Dissipated Power	LDN120-12 LDN120-24 LDN120-24P LDN120-48P		< 20 W < 18 W < 21 W < 19 W

[1] Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF 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	UL certified up to 60°C (Start-up type tested: - 40°C)[2]	- 40 to + 70°C
Storage Temperature		- 40 to + 80°C
Derating		- 2.4 W / °C over 60°C
Humidity	Non-condensing	5 - 95% RH
Life Time Expectation	At 25°C ambient full load	106880 h (12.2 years)
Overvoltage Category Pollution Degree		III (EN50178) 2 (IEC60664-1)
Protection Class		Class I
Isolation Voltage	Input to Output Input to Ground Output to Ground	4.2 kVDC 2.2 kVDC 0.75 kVDC
Safety Standards & Approvals	UL508 (certified) EN60950 (reference) EN50178 (reference)	
EMC Emission	EN55011 (CISPR11) EN55022 (CISPR22)	Class A Class A
EMC Immunity	EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-11	Level 3 Level 3 Level 3 Level 3 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 2 Hours / axis (X, Y, Z)
Shock	IEC 60068-2-27	30 g 6 ms, 20 g 11 ms; 3 bumps / direction, 18 bumps total

[2] Possible with load derating.

5. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Weight		450 g
Dimensions		40 x 115 x 110 mm
Mounting Rail		IEC 60715/H15/TH35-7.5(-15)
Connection Terminals	Screw type pluggable (24 - 12 AWG)	2.5 mm²
Case Material	Aluminum	

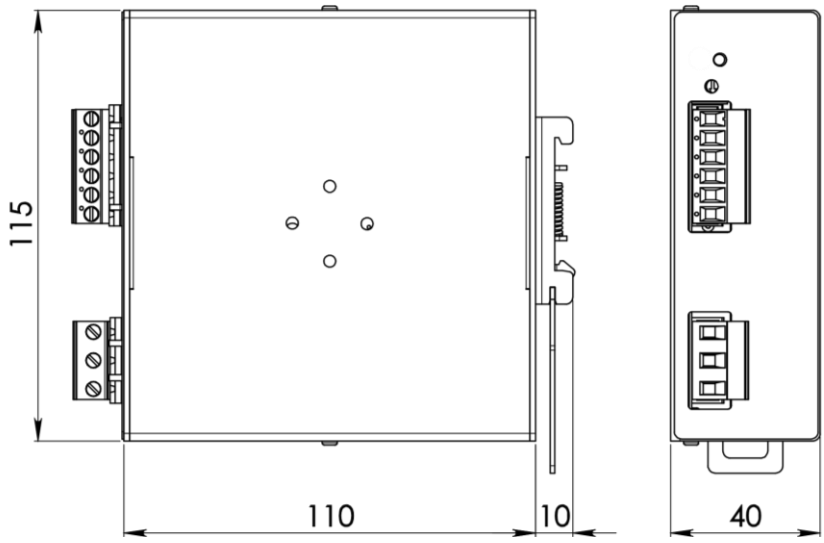
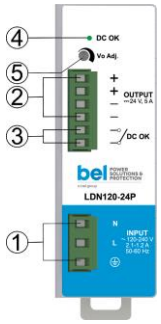


Figure 1. Mechanical Drawing

6. PIN LAYOUT & DESCRIPTION



PIN	DESCRIPTION
1	AC/DC input
2	DC output (load)
3	Diagnostic Output (dry contact, NC output OK)
4	Green LED: Output OK
5	Output voltage adjustment

INPUT CONNECTION	OUTPUT CONNECTION
Single phase: L = Line N = Neutral ⏚ = Earth ground	+ = Positive DC - = Negative DC
DC: L = + Positive DC N = - Negative DC ⏚ = Earth ground	Signaling: DC OK: dry contact NO COM

For more information on these products consult: 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.

LifeElectronics
Живое партнерство

ООО «ЛайфЭлектроникс» **“LifeElectronics” LLC**

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

Тел: +7 (812) 336 43 04 (многоканальный)
Email: org@lifeelectronics.ru

www.lifeelectronics.ru