

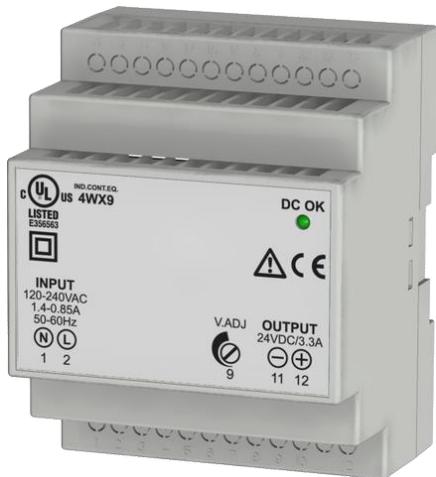
# LDN80 Series

## 80W DIN Rail Switching Power Supply

LDN80 Series are single phase DIN Rail Switching Power Supplies, ideal for home automation, simple automation in machines, survey systems, telecom, but also the renewable energy field.

Its compact size, high efficiency, excellent reliability and excellent power/volume ratio, together with easy installation due to pluggable connectors makes it market leader for various industrial and renewable applications.

LDN80 Series are Class II 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 120 - 240 VAC (110 - 345 VDC)
- Output range 12-15 VDC/6-5 A; 24 VDC/3.3 A
- High efficiencies and compact size
- Class II (simplified wiring)
- Short circuit, overload and over temperature protection
- Plastic enclosure
- RoHS Compliant

### Applications

- Automation
- Telecom
- Survey Systems
- Renewable

## 1. MODEL SELECTION

MODEL	INPUT VOLTAGE	# of PHASES	OUTPUT VOLTAGE	OUTPUT CURRENT
LDN80-12	120 - 240 VAC (110 - 345 VDC)	1	12 - 15 VDC	6 - 5 A
LDN80-24	120 - 240 VAC (110 - 345 VDC)	1	24 VDC	3.3 A

## 2. INPUT SPECIFICATIONS

Specifications are measured at 25°C, at 230 VAC, typical unless otherwise stated.

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION	
Input AC Voltage	Rated (UL certified) Range	120 - 240 VAC 90 - 264 VAC	
Input DC Voltage	Rated (UL certified up to 300 VAC)	110 - 345 VDC	
Input Frequency		47 - 63 Hz	
Input AC Current	LDN80-12 LDN80-24	Vin = 120 VAC Vin = 240 VAC Vin = 120 VAC Vin = 240 VAC	1.50 A 0.85 A 1.40 A 0.85 A
Input DC Current		Vin = 110 VDC Vin = 345 VDC	1.0 A 0.4 A
Inrush Peak Current			< 85 A
Internal Protection Fuse	Not user replaceable		Fuse 2AT / 250 VAC
External Protection on AC Line	It is strongly recommended to provide external surge arresters (SPD) according to local regulations		MCB 6A C curve

## 3. OUTPUT SPECIFICATIONS

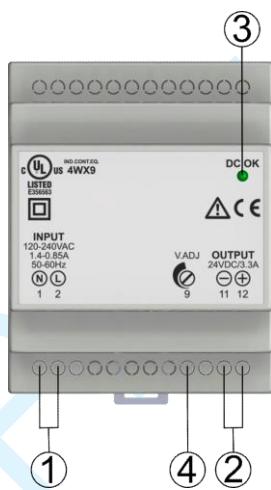
PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION	
Output Power		80 W	
Rated Voltage (Adjustable Voltage Range)	LDN80-12 LDN80-24	12 - 15 VDC (12 - 15 VDC) 24 VDC (23 - 28 VDC)	
Continuous Current	LDN80-12 LDN80-24	6 - 5 A 3.3 A	
Overload Limit	LDN80-12 LDN80-24	7.5 A @ 12 VDC 6.5 A @ 15 VDC	
Short Circuit Peak Current	LDN80-12 LDN80-24	20 A 25 A	
Load Regulation		≤ 0.5% ≤ 1.0%	
Ripple	LDN80-12 LDN80-24	≤ 100 mVpp ≤ 50 mVpp	
Hold up Time		> 30 ms	
Efficiency	LDN80-12 LDN80-24	> 86% > 87%	
Dissipated Power	LDN80-12 LDN80-24	< 12.5 W < 12 W	
Output Over Voltage Protection	LDN80-12 LDN80-24	> 18 VDC > 33 VDC	
Parallel Connection		Possible with external ORing diode	
Protections		Hiccup at the overload limit with auto reset Over temperature Overtoltage	
Status Signals		Green LED = DC OK	

Note: Power rating, losses, efficiency, ripple, thermal behaviour may change outside of the nominal rated input range.

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

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Operating Temperature	Overtemperature protection UL certified up to 50°C for LDN80-12 and up 55°C for LDN80-24 (Start-up type tested: - 40°C)	- 40 to + 70°C
Storage Temperature		- 40 to + 80°C
Derating	LDN80-12 LDN80-24	- 1.2 W/°C over 50°C - 0.9 W/°C over 55°C
Humidity	Non-condensing	5 - 95% RH
Overvoltage Category		II
Pollution Degree		2 (IEC 664-1)
Isolation Voltage	Input to Output	4.2 kVDC
EMC Emission	EN55022:2010 (CISPR22) EN55011:2009 /A1:2010 EN61000-4-2:2008 EN61000-4-3:2006 /A2:2010	Class A Class A Level 3 Level 3
EMC Immunity	EN61000-4-4:2012 EN61000-4-5:2014 EN61000-4-11:2004 /A1:2010	Level 3 Level 3 Level 3 Level 2
Safety Standards & Approvals	UL508 (certified) EN60950	
Protection Degree	EN60529:1989 / A:2013	IP20
Vibration sinusoidal	IEC 60068-2-6:2007	5-17.8 Hz: ±1.6 mm; 17.8-500 Hz: 2g 2Hours / axis (X,Y,Z)
Shock	IEC 60068-2-27:2008	30 g 6 ms, 20 g 11 ms; 3 bumps / direction, 18 bumps total

#### 5. PIN LAYOUT & DESCRIPTION



PIN	DESCRIPTION
1	AC/DC input
2	DC output (load)
3	Green LED: Output OK
4	Output voltage adjustment

INPUT CONNECTION	OUTPUT CONNECTION
Single phase: L = Line (2) N = Neutral (1)	+ = Positive DC (12) - = Negative DC (11)
DC: L = +/- (2) N = -/+ (1)	

## 6. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Weight		230 g
Dimensions (W x H x D)		72.0 x 90.0 x 61.5 mm
Mounting Rail		IEC 60715/H15/TH35-7.5(-15)
Connection Terminals	Screw type Header (24...12 AWG)	2.5 mm <sup>2</sup>
Case Material	Flame retardant UL 94 V-0 plastics	

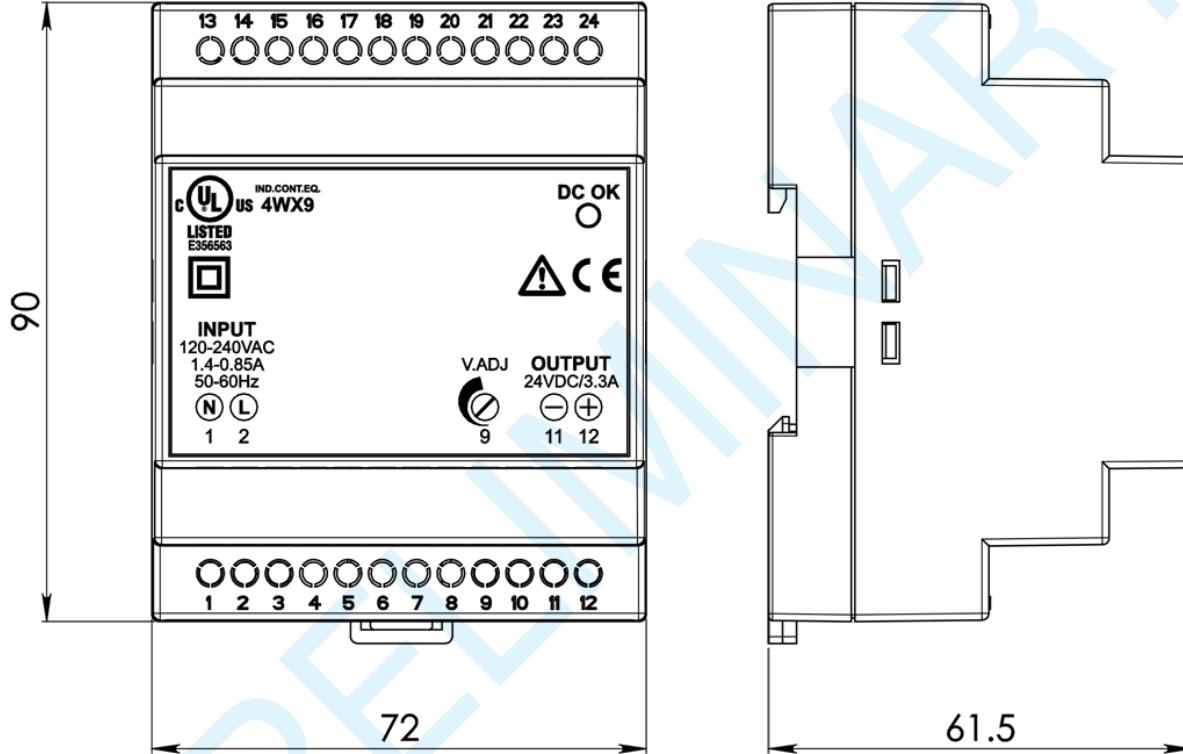


Figure 1. Mechanical Drawing

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.