

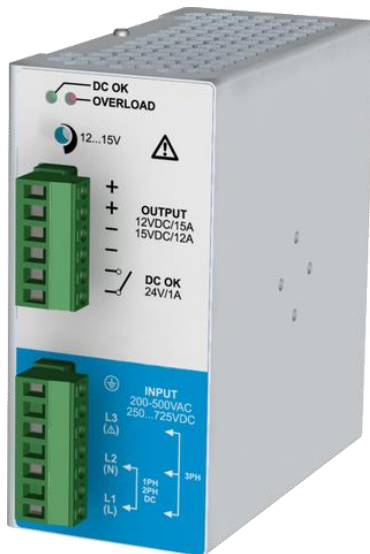
LDW240 Series

240W DIN Rail Switching Power Supply

LDW240 Series are single, two or three phase DIN Rail Switching Power Supplies.

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

LDW240 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

- High efficiency
- Wide input range
- Power boost of 150% during overload
- Threshold controlled alarm contact
- Electronic protection against overload and short circuit
- Front pluggable screw terminals for easier wiring and maintenance
- Thermal protection
- RoHS Compliant

Applications

- Industrial Control
- Communication
- Instrumentation Equipment
- Renewable



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1. MODEL SELECTION

MODEL	INPUT VOLTAGE	# of PHASES	OUTPUT VOLTAGE	OUTPUT CURRENT	REDUNDANCY
LDW240-12	200 - 500 VAC (250 - 725 VDC)	1 / 2 / 3	12 - 15 VDC	15 - 12 A	No ORing diode
LDW240-24	200 - 500 VAC (250 - 725 VDC)	1 / 2 / 3	24 VDC	10 A	No ORing diode
LDW240-48P	200 - 500 VAC (250 - 725 VDC)	1 / 2 / 3	48 VDC	5 A	Internal ORing diode
LDW240-72P	200 - 500 VAC (250 - 725 VDC)	1 / 2 / 3	72 VDC	3.5 A	Internal ORing diode

2. INPUT SPECIFICATIONS

Specifications are measured at 25°C, at 3x 400 VAC, typical unless otherwise stated.

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Input AC Voltage	Nominal 1 - 2 - 3 Phases (UL certified) Range	200 - 500 VAC 187 - 550 VAC
Input Frequency		47 - 63 Hz
Input DC voltage	Rated (UL certified)	250 - 725 VDC (300 - 500 VDC)
Input AC Current	1-2-Phase @ 200 VAC	2.2 A
	1-2-Phase @ 500 VAC	1.1 A
	3-Phase @ 200 VAC	1.5 A
	3-Phase @ 500 VAC	0.8 A
Input DC Current	LDW240-12	Vin = 250 VDC 0.9 A
		Vin = 725 VDC 0.4 A
	LDW240-24, LDW240-48P, LDW240-72P	Vin = 250 VDC 1.4 A
		Vin = 725 VDC 0.5 A
Inrush Peak Current		< 60 A
Internal Protection Fuse	None, external fuse must be provided	
External Protection on AC Line	It is strongly recommended to provide external surge arresters (SPD) according to local regulations.	Fuse AT 6.3A or MCB 6A C curve or 4A D curve

3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Output Power		240 W
Rated Voltage (Voltage Adjustment Range)	LDW240-12	12 - 15 VDC (12 - 15 VDC)
	LDW240-24	24 VDC (23 - 28 VDC)
	LDW240-48P	48 VDC (45 - 55 VDC)
	LDW240-72P	72 VDC (72 - 85 VDC)
Continuous Current	LDW240-12	15 - 12 A
	LDW240-24	10 A
	LDW240-48P	5 A
	LDW240-72P	3.5 A
Overload Limit	LDW240-12	> 20 A per 6 s
	LDW240-24	> 15 A per 6 s
	LDW240-48P	> 7.5 A per 6 s
	LDW240-72P	> 5 A per 6 s
Short Circuit Peak Current	LDW240-12	34 A
	LDW240-24	38 A
	LDW240-48P	18 A
	LDW240-72P	13 A
Load Regulation	LDW240-12	≤1%
	LDW240-24	≤1%

	LDW240-48P LDW240-72P	≤1.5% ≤1.5%
Ripple		≤ 100 mVpp
Hold up Time	Vin = 230 VAC Vin = 500 VAC	> 15 ms > 100 ms
Efficiency	LDW240-12 LDW240-24 LDW240-48P LDW240-72P	> 89% > 93% > 91% > 92%
Dissipated Power	LDW240-12 LDW240-24 LDW240-48P LDW240-72P	< 22.5 W < 18 W < 23.5 W < 22 W
Output Over Voltage Protection	LDW240-12 LDW240-24 LDW240-48P LDW240-72P	> 18 VDC > 33 VDC > 68 VDC > 100 VDC
Redundant Parallel Connection		(P) models include internal ORing circuit
Protections	Hiccup at the overload limit with auto reset Over temperature Overvoltage	
Status Signals	Green LED = DC OK Red LED = Overload Dry contact (1 A / 30 V)	

Note: Power rating, losses, efficiency, ripple, thermal behavior 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 (Start-up type tested: - 40°C ¹)	- 40 to + 70°C
Derating		- 4.2 W/°C over 50°C
Storage temperature		- 40°C - + 80°C
Humidity	Non-condensing	5 - 95% RH
Overvoltage Category		III
Pollution Degree		2 (IEC 664-1)
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) UL60950 (certified for LDW240-24 model) EN60950	
EMC Standards	Emission	EN55022:2010 (CISPR22)
		EN55011:2009/A1:2010
		EN61000-4-2:2008
	Immunity	EN61000-4-3:2006 /A2:2010
		EN61000-4-4:2012
		EN61000-4-5:2014
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)	

¹ Possible at nominal voltage with load deration.

Notes:

Technical parameters are typical, measured in laboratory environment at 25°C and 400Vac / 50Hz.

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

Data may change without prior notice in order to improve the product.

5. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Weight		650 g
Dimensions		54.0 x 115.0 x 110.0 mm
Mounting Rail		IEC 60715/H15/TH35-7.5(-15)
Connection Terminals	Screw type pluggable (24 - 12 AWG)	2.5 mm ²
Case Material	Aluminum	

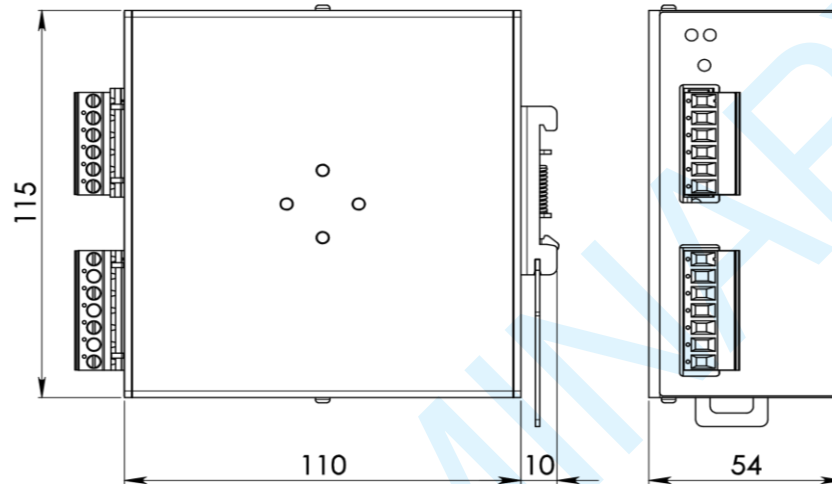
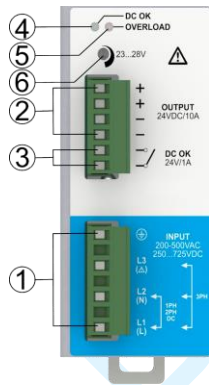


Figure 1. Mechanical Drawing

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	Red LED: Overload
6	Output voltage adjustment

INPUT CONNECTION	OUTPUT CONNECTION
Single phase: L = Line N = Neutral I = Earth ground	+ = Positive DC - = Negative DC Dry contact = NC
2 phase: L1 = Phase 1 L2 = Phase 2 I = Earth ground	
3 phase: L1 = Phase 1 L2 = Phase 2 L3 = Phase 3 I = Earth ground	
DC: L1(N) = +/- L2(L) = -/+ L3 = do not connect I = Earth ground	

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.