

LDT480-24

480W DIN Rail Switching Power Supply

LDT480-24 is a high power switching mode power supply with three phase input voltage 400 – 500 VAC, delivering 480 W of output power.

Its compact size, high efficiency and excellent reliability together with easy installation due to pluggable connectors makes it fit demanding applications where compactness and high power are needed.

LDT480-24 is a Class I isolation device suitable for SELV and PELV circuitry and is designed to be mounted on DIN rail and installed inside a protective enclosure.



Key Features & Benefits

- 3 phase AC input 400 – 500 VAC
- Wide DC input range 470 – 725 VDC
- High efficiency
- Compact Size
- Active PFC for optimal efficiency
- Easy parallelable for power increase
- Overload 150%

Applications

- Industrial
- Telecom
- Renewable



1. MODEL SELECTION

MODEL	INPUT VOLTAGE	# of PHASES	OUTPUT VOLTAGE	OUTPUT CURRENT
LDT480-24	400 - 500 VAC / 470 - 725 VDC	3	24 VDC	20 A

2. INPUT SPECIFICATIONS

Technical parameters are typical, measured in laboratory environment at 25°C and 400 VAC / 50 Hz, at nominal values, after minimum 5 minutes of operation.

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Input AC Voltage Range	Rated, three phase (UL certified) Operating	400 – 500 VAC 340 – 550 VAC
Input DC Voltage Range		470 – 725 VDC
Input Frequency		47 - 63 Hz
Input AC Current		V _{in} = 400 VAC 1.3 A V _{in} = 500 VAC 1.1 A
Input DC Current		V _{in} = 470 VDC 1.2 A V _{in} = 725 VDC 0.8 A
Power Factor Correction	Active	> 0.9
Inrush Peak Current		≤ 60 A
Touch (Leakage) Current		≤ 0.5 mA
Internal Protection Fuse	None, external fuse must be provided	
Recommended External Protection	It is strongly recommended to provide external surge arresters (SPD) according to local regulations	Fuse 3x 6.3 AT or 3x MCB 6 A C curve or 3x 4 A D curve

3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Output Power		480 W
Rated Voltage (Adjustable Voltage Range)		24 VDC (23 – 28 VDC)
Continuous Current		20 A
Overload Limit		28 A
Short Circuit Peak Current		50 A
Load Regulation		≤ 1.0%
Ripple & Noise ¹		≤ 50 mVpp
Hold up Time		≥ 20 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 redundancy (with external ORing module)	
Efficiency		> 92%
Dissipated Power		< 42 W

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

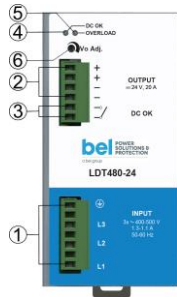
NOTE: Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.

4. ENVIRONMENTAL, EMC & SAFETY SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION	
Operating Temperature	Over temperature protection, UL certified up to 45°C (Start-up type tested: - 40°C) ²	- 40 to + 70°C	
Storage Temperature		- 40 to + 80°C	
Derating		- 10 W/°C over 45°C	
Humidity	Non-condensing	5 - 95% RH	
Life Time Expectancy	At 25°C ambient full load	65496 h (7.4 years)	
Overvoltage Category		III (EN50178)	
Pollution Degree		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	
Standards & Approvals	UL508 (certified) EN60950 (reference) EN50178 (reference)		
EMC Standards	Emission	EN55011 (CISPR11)	Class A
		EN55022 (CISPR22)	Class A
	Immunity	EN61000-3-2	Class A
		EN61000-4-2	Level 3
		EN61000-4-3	Level 3
		EN61000-4-4	Level 3
EN61000-4-5	Level 3		
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: 2g 2Hours / 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 at nominal voltage with load derating.

5. PIN LAYOUT & DESCRIPTION



INPUT CONNECTION	OUTPUT CONNECTION
3 phase: L1 = Phase 1 L2 = Phase 2 L3 = Phase 3 ⊕ = Earth ground	+ = Positive DC - = Negative DC
DC: L1 = + Positive DC L2 = - Negative DC L3 = do not connect ⊕ = Earth ground	Signaling: DC OK: dry contact NO COM

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

6. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Weight		1.0 kg
Dimensions		73 x 140 x 125 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	



Asia-Pacific
+86 755 298 85888

Europe, Middle East
+353 61 225 977

North America
+1 408 785 5200

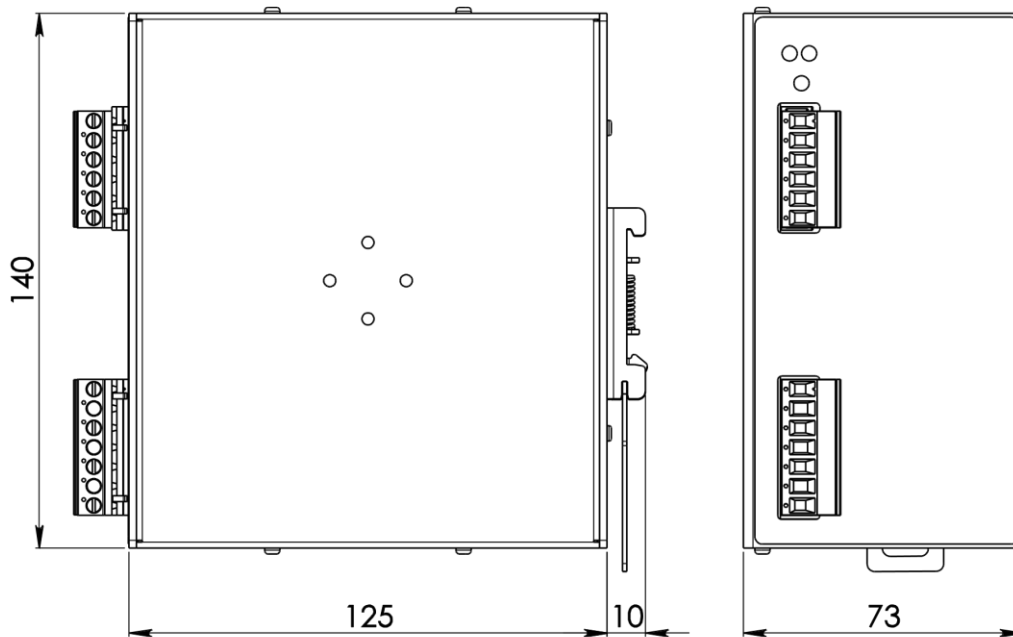


Figure 1. Mechanical Drawing

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.

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Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9