

PBB2P-480W Series

AC/DC Din Rail Power Supply with IEC Input



FEATURES

- 480W output power
- 24/48 Vdc output voltages
- Universal AC input voltage range
- Built-in constant current circuit for reactive loads
- High power density
- Operate from -30°C to +70°C with -40°C Cold Start
- Reduced no-load power consumption
- Compliance with DOE VI Energy Standard
- Compliance to SEMI F47 @ 200 Vac

DESCRIPTION

Powerbox's PBB2P-480W Series DIN rail power supply series is designed for cost sensitive users who need to fulfill essential features needed for many general industrial applications, without compromising on quality and reliability. The convection-cooled PBB2P Series will operate full power from -30°C to +50°C, then de-rating up to +70°C at 230 Vac. It can operate in constant current mode, making it suitable for inductive and capacitive loads.

SPECIFICATIONS

MODEL	PBB2P-480W-IEC-24V	PBB2P-480W-IEC-48V
INPUT		
Input Voltage Range	90-264 Vac	
Nominal Input Frequency	50-60 Hz	
Input Current	4.7 A typ. @ 115 Vac, 2.4 A typ. @ 230 Vac	
Efficiency at 100% Load	93.0% typ. @ 230 Vac	93.5% typ. @ 230 Vac
Leakage Current	< 1.5 mA @ 240 Vac	
OUTPUT		
Output Voltage	24 Vdc	48 Vdc
Output Voltage Range	24 - 28 Vdc	48 - 55 Vdc
Output Current	20.0 A	10.0 A
Output Power	480 W max	
Line Regulation	± 0.5% @ 115 Vac & 230 Vac	
PARD (20MHz)	< 150 mVpp @ 0°C to +70°C < 450 mVpp @ -30°C to 0°C	< 200 mVpp @ 0°C to +70°C < 600 mVpp @ -30°C to 0°C
Hold-up Time	25 ms typ. @ 115 Vac & @ 230 Vac (100% load)	

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SPECIFICATIONS

MODEL	PBB2P-480W-IEC-24V	PBB2P-480W-IEC-48V
MECHANICAL		
Case Cover / Chassis	Aluminum	
Dimensions (L x W x D)	151 x 61 x 159 mm (5.94 x 2.40 x 6.26 inch)	
Mounting Rail	Standard TS35 DIN Rail in accordance with EN 60715	
Input Connector	IEC Socket (with 2M IEC power cable)	
Output Connector	4 Pins (Rated 300 V / 20 A)	
Wire Output	AWG 18-12 (Current rating can refer to "AWG Wire Table")	
Unit Weight	0.97 kg (2.14 lb)	
ENVIRONMENTAL		
Operating Temperature	-30°C to +70°C (-40°C Cold Start)	
Storage Temperature	-40°C to +85°C	
Power De-rating	> 40°C de-rate power by 1.67 % / °C @ 115 Vac > 50°C de-rate power by 2.5 % / °C @ 230 Vac	
Cooling System	Convection	
Operating Humidity	20 to 90% RH (Non-Condensing)	
Operating Altitude	0 to 5,000 Meters (16,400 ft.)	
PROTECTIONS		
Overvoltage	< 34.0 V, SELV Output,Latch Mode	< 68.0 V, SELV Output,Latch Mode
Overload / Overcurrent	105 - 150% of rated load current, Auto-recovery Continuous current limit Mode*5 (Vo > 80%)	
Over Temperature	Latch Mode	
Short Circuit	Hiccup Mode, Non-Latching (Auto-Recovery when the fault is removed)	
Protection Against Shock	Class I with PE*6 connection	
Galvanic Isolation	Input to Output	3.0 KVac
	Input to Ground	2.0 KVac
	Output to Ground	1.0 KVac
RELIABILITY		
MTBF	Telcordia > 700,000 hrs SR-332 I/P: 115 Vac & 230 Vac, O/P: 100% load, Ta: 25°C	
Expected Cap Life Time	10 years (230 Vac, 50% load @ 40°C)	

*5 Constant current limit protection for inductive and capacitive load applications

*6 PE: Primary Earth

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Powering Progress

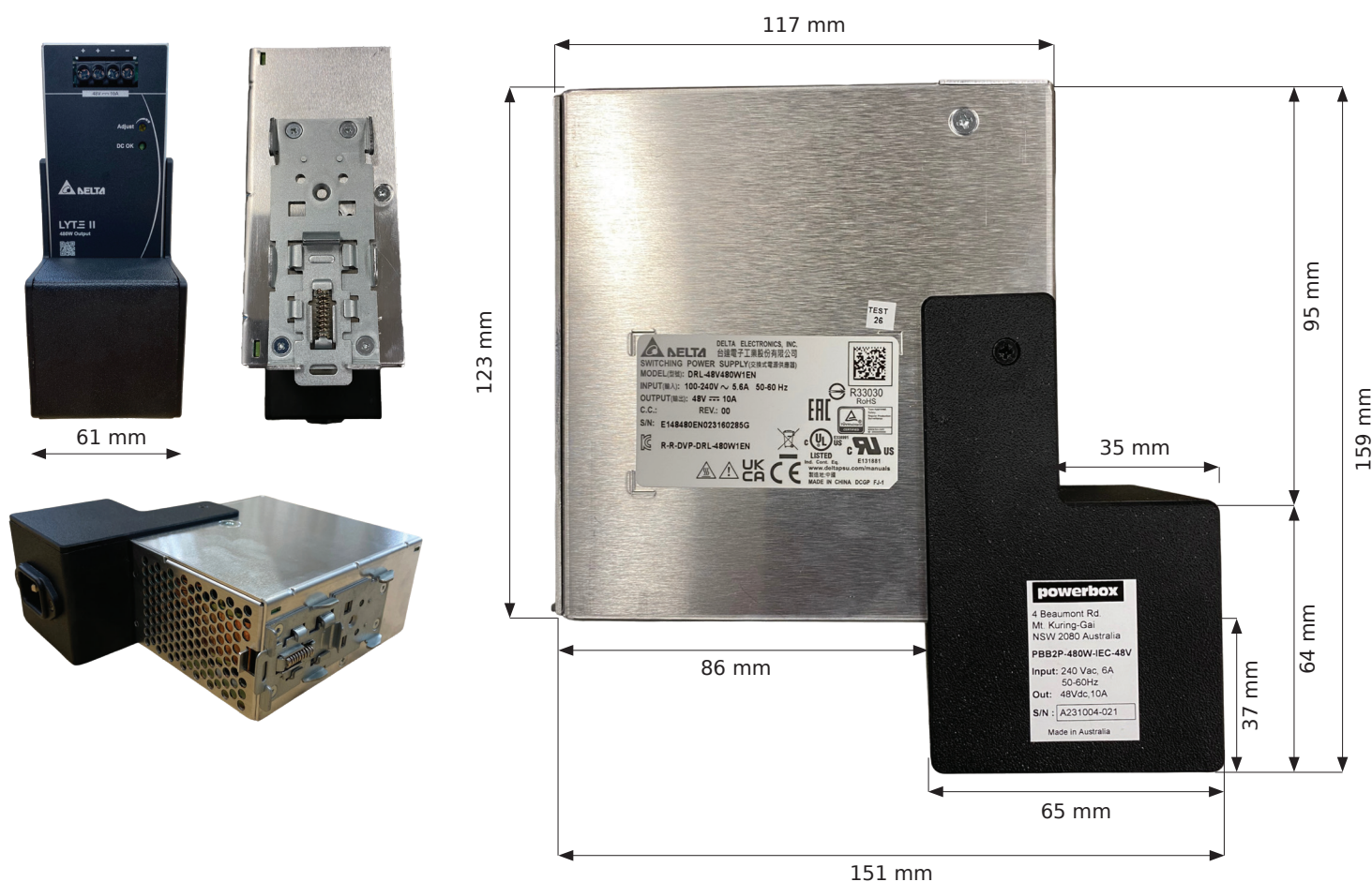
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MODEL	PBB2P-480W-IEC-24V	PBB2P-480W-IEC-48V
STANDARDS		
EMC	AS/NZS CISPR32	
Electrical Safety	IEC 62368-1, IEC 61010-1 & -2 -201	
CE	In conformance with EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU	

SELECTION TABLE

MODEL	OUTPUT	IEC SOCKET	DELTA POWER SUPPLY
PBB2P-480W-IEC-24V	24V / 20A	Y	DRL-24V480W1EN
PBB2P-480W-IEC-48V	48V / 10A	Y	DRL-48V480W1EN

ILLUSTRATIONS



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