

75 to 240W, 24V Output DIN Rail Mount Power Supplies

Features

- ◆ UL508 Listed
- ◆ Conducted and Radiated EMI, Class B
- ◆ Input Transient Protection, IEC61000-4
- ◆ Semi F47 Compliant (DLP180 & 240 only)



Key Market Segments & Applications



Specifications

Model		DLP75-24-1/E	DLP100-24-1/E	DLP120-24-1/E	DLP180-24-1/E	DLP240-24-1/E
Output Voltage	V	24	24	24	24	24
Output Current	A	3.1	4.1	5.0	7.5	10
Output Power	W	75	98.4	120	180	240
Output Voltage Adjustment	V	21.6 - 28				
Load Regulation	-	192mV				
Line Regulation	-	120mV				
Ripple/Noise (0-600C)	mV	240				
AC Input Voltage & Frequency	-	85-132/170-265VAC, 47-63Hz Auto select			85-265VAC (47-63Hz) or 120-370VDC ⁽¹⁾	
Input Current 100/230VAC	A	1.7/0.8	2.3/1.2	2.4/1.3	2.3/1.0	3.0/1.3
Efficiency 100/230VAC	%	81/83	82/85	83/85	84/87	82/86
Power Factor	-	Meets EN61000-3-2 (DLP180, 240: >0.95)				
Inrush Current (Typ) 100/230VAC	A	20/45				
Leakage Current	mA	Less than 0.75mA				
Hold-up Time 100/230VAC	ms	20/30 (Semi F47 Compliance, DLP 180 & 240 only)				
Overcurrent Protection	-	>105%,Fold Back	>105%, Constant Current (/C2 3.75A)			
Overvoltage Protection	-	30-35V, latching, cycle AC line to reset				
LED Indicators	-	Green LED = DC ok Red LED = overcurrent				
Operating Temperature (2)	°C	Convection cooled, -10°C to 60°C, derate linearly to 60% load from 50 to 60°C				
Storage Temperature	°C	-30°C~+85°C				
Humidity (Non-Condensing)	%RH	30-90% operating 10-95% non operating				
Withstand Voltage	-	Input - Ground 2kVAC, Input to Output 3kVAC, Output - Ground 500VAC				
Vibration	-	9.8m/s ² (1.0G) at DIN rail; (10-55Hz: 9.8m/s ² Constant, X,Y, Z each 1 hour)				
Shock	-	196m/s ² (20G)				
Safety Agency Approvals	-	UL508, IEC/UL/CSA/EN62368-1, 60950-1, EN50178 Cat III (Pri), CE Mark				
Conducted EMI	-	FCC-B, EN55011/EN55022-B, VCCI-B; Meets IEC61000-4-1				
Radiated EMI	-	EN55011/EN55022-B, FCC-Class B, VCCI-B				
ESD	-	IEC61000-4-2 ±10kV (Air), ±5kV (Contact)				
Radiated RFI	-	IEC61000-4-3 80-1000MHz,12V/m 80% AM 1kHz				
Fast Transient Burst	-	IEC61000-4-4 2.4kV 5kHz				
Lightning Surge	-	IEC61000-4-5 4.4kV, 1.2x50µs (Common Mode) 2.4kV 1.2x50µs (Normal)				
Conducted RFI	-	IEC61000-4-6 150kHz-80MHz, 12V, 80% AM 1kHz				
Magnetic Field	-	IEC61000-4-8 36A/m				
Voltage Dips	-	IEC61000-4-11 70% 10ms, 40% 100ms, 0% 5s				
Size	mm	50 x 97 x 110	60 x 97 x 110	60 x 97 x 110	80 x 97 x 110	120 x 97 x 110
Weight	g	470	540	540	780	1000
Warranty	yrs	3 Years				

(1) DC input is not safety approved

(2) DLP240-24-1/E, 170-265VAC: -10°C~+70°C, derated linearly to 60% load from 50° to 70°C.

[illegible]

NOTES :

A : 3-M3 EMBOSSED TAPPED & COUNTERSUNK HOLES ARE FOR CUSTOMER CHASSIS MOUNTING.
SCREW MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 4mm.

B : MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE AND NOMINAL OUTPUT CURRENT ARE ON NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS.

C : COUNTRY OF MANUFACTURE WILL BE SHOWN HERE.

Figure 1: Dimensions of the device. The figure consists of three views: a top view, a front view, and a side view. The top view shows overall dimensions: 113 mm height, 47.5±0.5 mm width, and 56.5±0.5 mm width. It also shows a 2.5 mm hole spacing and a 19±0.5 mm section. The front view shows a 2-M3 hole, a 2.5 mm hole, a 1.6 mm hole, and a 12.6 mm distance. It also shows a 2.5 mm hole, a 2.5 mm hole, and a 2.5 mm hole. The side view shows a 110±1 mm width and a 65±1 mm height. Various labels and callouts are present, including 'VOLTAGE ADJUSTMENT', 'ON INDICATOR', 'POWER LED', 'A.M. INDICATOR (RED LED)', 'NAME PLATE', 'INPUT CONNECTOR', 'PIN RAIL REMOVAL HOLE', 'OUTPUT CONNECTOR', and 'PIN RAIL REMOVAL PUSHING BUTTON'. A '3-SEE NOTE A' callout points to a specific feature on the top view.

NOTES :

A : 3- ϕ S EMBOSSED TAPPED & COUNTERSUNK HOLES ARE FOR CUSTOMER CHASSIS MOUNTING. SCREW MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 4mm.

B : MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE AND NOMINAL OUTPUT CURRENT ARE HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

C : COUNTRY OF MANUFACTURE WILL BE SHOWN HERE.

[illegible]

NOTES:

A. MS EMBOSSED TAPPED & COUNTERSUNK HOLES(6)
ARE FOR CUSTOMER CHASSIS MOUNTING.
SHEAR WELD NOT PROVIDE INSURE POWER SUPPLY
BY MORE THAN 4mm.

**B. MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL
OUTPUT VOLTAGE, AND NOMINAL OUTPUT CURRENT**
ARE ON NAME PLATE IN ACCORDANCE WITH THE
SPECIFICATIONS.

C. COUNTRY OF MANUFACTURE WILL BE SHOWN HERE.

D. RECOMMENDED WIRE IS SOLID AND STRANDED
AWG12-20 (0.5-3.5mm)

E. WIRE STRIP LENGTH = 7mm

F. RECOMMENDED SCREW TORQUE = 0.48N-m

Figure 1: Dimensions of the L30000-24-100. The figure consists of four views: a front view (top left), a top view (top right), a side view (bottom left), and a rear view (bottom right). The front view shows a rectangular unit with a control panel on the right side. The top view shows the top surface with various mounting points and dimensions. The side view shows the profile of the unit. The rear view shows the back panel with mounting holes and dimensions. Dimensions are given in inches and millimeters. Key features include the L30000-24-100 label, the L30000-24-100 label, the L30000-24-100 label, and the L30000-24-100 label.

NOTES:
A) 6-143 EMBOSSED TAPPED & COUNTERSUNK HOLES ARE FOR CUSTOMER CHASSIS MOUNTING. SCREW MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 4mm.
B) MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, AND NOMINAL OUTPUT CURRENT ARE ON NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS.
C) COUNTRY OF MANUFACTURE WILL BE SHOWN HERE.

Figure 10 is a graph showing Load (%) versus Ta (°C) for DLP240 models. The y-axis represents Load (%) from 0 to 100, and the x-axis represents Ta (°C) from -10 to 70. The graph includes four curves:

- 85~170VAC DLP240** (Solid black line): Load starts at 100% at 50°C and drops to 60% at 60°C.
- 85~265VAC all models** (Dashed black line): Load starts at 100% at 50°C and drops to 80% at 60°C.
- 170~265VAC DLP240 only** (Solid green line): Load starts at 100% at 50°C and drops to 60% at 70°C.
- DLP100/C2** (Dashed green line): Load starts at 100% at 50°C and drops to 80% at 60°C.

DPP/DSP	10W to 480W Single Output DIN Rail
DRB/DRF	15W to 480W high Efficiency
DPX	DC-DC Din Rail
HWS	15W to 1800W Single Output

For Additional Information, please visit
<https://product.tdk.com/info/en/products/power/index.html>

