

W Key Features

- 120-277 Vac Input
- Constant Voltage Output
- 0-10 Dimming with PWM output
- UL Listed
 - o UL 8750
 - o Class 2 LED power supply
 - o Dry and damp locations
- Very High Efficiency 90% typical above 50% load
- Low THD (<20% from 50-100% load)
- AC Input and DC Output wiring compartments
- Long life
- 5 year warranty
- Wide temperature range (-40°C to 90°C case)
- RoHS Compliant

MODEL CODING AND OUTPUT RATINGS

	-ŏ	U		Œ
NR TY	LED LIGHTING	ENERGY	E330583	

100W, 24V CONSTANT VOLTAGE

TBSL-DIM/PS-HP-100W-UNV



ME YE

The T-BAR LED power supply provides a single 24V constant voltage output with PWM dimming from a 0-10V input. Junction boxes are provided for both AC Input and DC Output connections.

Model Number		Rating	
Base Model Number	Pout Max (W)	Vout (VDC)	lout Max (mA)
TBSL-DIM/PS-HP-100W-UNV	100	24	40001

Note 1: This PSU meets NEC Class 2 requirement

Mechanical Details

Ingress Protection:	IP20
Weight:	0.80 kg (1.75 lbs)
Volume:	199.1 cm3 (11.85 in3)
Dimensions:	317 x 63.5 x 38.0mm (12.50 x 2.50 x 1.50in)
I/O Connections:	AC Input and DC output connections are made inside the wiring junction boxes

SAFETY AGENCIES APPROVALS

Certification Body	Safety Standards
cULus	UL Listed ANSI / UL8750, CSA C22.2 No.250.13,UL and CSA approval as Class 2 output UL 2043: Fire Test for Heat and Visible Smoke Release for Discrete Products and their Accessories Installed in Air Handling Spaces
LISTED	UL2577: Suspended Ceiling Grid Low Voltage Lighting Systems LED Driver suitable for dry and damp location
Œ	Directive 2014/35/EU (Electrical Safety: low-voltage electrical equipment- LVD) Directive 2014/30/EU (Electromagnetic Compatibility - EMC) Directive 2009/125/EC (Eco-Design) Commission Regulation (EU)No.1194/2012 Directive 2015/863/EU (RoHS 3) To obtain the "CE Declaration of Conformity" please contact info@enedopower.com

Page 1



Efficiency and PFC performance

EFFICIENCY AND PFC PERFORMANCE

Gelo power Supply shows good efficiency and power fact or performance even when operating at low loads. Following are the characteristic plots. Typical efficiency value is 90%, while the PF is >0.9 from 20% max load at 120Vac, 30% max load at 230Vac, 60% max load at 277Vac. They are performed connecting the Gelo power supply to an active load in resistance mode.

RGLD100-24







Page 2



M INPUT SPECIFICATIONS

Specification	٦	est Conditions / Notes	Min.	Nominal	Max.	Units
AC Input Voltage	120-250V _{AC} for Europ	e; 120-277V _{AC} for USA and Canada	90	120-277	305	V _{AC}
Input Frequency			47	50/60	63	Hz
	120VAc Rated Load		-	-	0.95	
Input Current	230Vac Rated Load	Page 2	-	-	0.48	А
	277V _{Ac} Rated Load		-	-	0.40	
	120VAC	Half Value time: 150µs	-	-	20.8	
Inrush Current	230VAC	Half Value time: 150µs	-	-	40.6	Apk
	277VAC	Half value time: 150µs	-	-	47.3	
	120VAC		-	-	16.2	
Inrush Current	230VAC		-	-	29.8	Apk/200µs
	277VAC		-	-	37.6	
	120V _{AC} Rated Load		5	-	7	
THD	230VAc Rated Load		8	-	11	%
	277V _{Ac} Rated Load		10	-	14	
	120VAc Rated Load		88	-	89	
Efficiency	230VAc Rated Load		90	-	91	%
	277V _{Ac} Rated Load		90	-	91	
No. Lond Damas	120V _{AC}		-	-	4.2	
No Load Power	230V _{AC}		-	-	3.5	W
Consumption	277V _{AC}		-	-	3.5	
	120V _{AC} Rated Load		0.98	-	0.99	
Power Factor	230VAc Rated Load		0.96	-	0.98	
	277VAc Rated Load		0.94	-	0.95	
Harmonic Current	Complies with EN-610	000-3-2, Class C load >25W.				

W OUTPUT SPECIFICATIONS

Specification	Test Conditions / Notes	Min.	Nom.	Max.	Units
Output Power Rating	Power limiting	-	-	100	W
Output Voltage		-	24	-	V _{DC}
Output Current		-	-	4000	mA
Ripple Voltage	Measured (Vout_Pk-pk/RMS)	-	-	1	%
Output Voltage Regulation		-	-	±3	%Vout
Start-up time		-	-	500	ms
Output Current in Dimming	Duty Cycle vs 0-10V dim input – See graph	1		100	%
Maximum 0-10 sourcing current				500	uA
Isolation DC Output – 0-10 Input			100		V _{DC}





M PROTECTION FEATURES

Specification	Test Conditions / Notes	Min.	No minal	Max.	Units
Output Over Current	Shut-down, auto Recovery		4.1		А
Output Short-Circuit	Shut-down, auto Recovery	-	-	-	-
Over-Temperature Top Case	Shut-down, auto Recovery		90		°C
Isolation Primary-to-Secondary	Reinforced/double Insulation meets IEC/EN61347-2-13 Class II				

W ENVIRONMENTAL SPECIFICATIONS

Specification	Test Conditions / Notes	Min	Nom	Max	Units
Top Case Temperature Range	Refer to the Top Case measurement point	-40	-	90	°C
Ambient Temperature Range		-40		50	°C
Storage Temperature		-40	-	85	°C
Operating Relative Humidity	Non-condensing	5	-	95	%
Surface Temperature	Exposed surfaces temperature under all operating conditions	-	-	90	°C
Cooling	Convection cooled				
Shock EN 60068-2-27	Operating: Half sine, 30 g, 18 ms, 3 axes, 6x each (3 positive and 3 negative). Non-Operating: Half sine, 50 g, 11 ms, 3 axes, 6x each (3 positive and 3 negative).				
Vibration EN 60068-2-64	Operating: 5 – 500Hz, 1gRMS (0.02 g2/Hz), 3 axes, 30 min. Non-Operating: 5 – 500Hz, 2.46gRMS (0.0122 g2/Hz), 3 axes, 30 min.				
Vibration EN 60068-2-6	Operating Sine, 10 – 500Hz, 1g, 3 axes, 1 oct/min., 60 min.				
MTBF	Full Load, 40°C Ambient, 80% Duty cycle, Telcordia SR-332 Issue 2	- 50	0k	-	Hours
Useful Life	Nominal V _{AC} , 40°C Ambient.	-	44k	-	Hours

B ELECTROMAGNETIC COMPATIBILITY (EMC) – EMISSIONS

Phenomenon	Conditions / Notes	Standard	Performance Class
Conducted Emission	Test at 120/277V _{AC}	EN55032	Class A
Conducted and Radiated Emission	Test at 120/277V _{AC}	FCC CFR47-part 15/subpart B	Class A
Harmonic Current Emissions		EN61000-3-2	Class C
Voltage Changes, Fluctuation and Flicker		EN61000-3-3	

B Electromagnetic Compatibility (EMC) – Immunity

Phenomenon	Conditions / Notes	Standard	Note
Equipment for general lighting purposes -EMC Immunity Req.		EN 61547	
ESD (Electrostatic Discharge)		EN 61000-4-2	
Radiated Radio-Frequency electromagnetic field		EN 61000-4-3	
Electric Fast Transient / Burst	±1kV L-L	EN 61000-4-4	
Surge	Level ±4.0kV L-N/L-GND	EN 61000-4-5	
Conducted disturbances induced by Radio-Frequency fields		EN 61000-4-6	
Voltage Dips, short interruptions and Voltage Variations		EN 61000-4-11	
Non repetitive damped oscillatory transient, Ring wave	2.5kV	ANSI C.62.41	Category A