

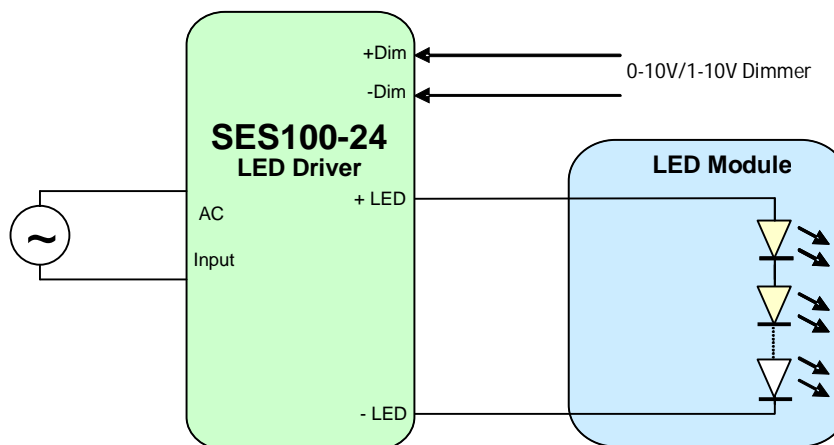
MAIN FEATURES

- Wide input range: 120 – 277 V_{AC}
- Constant voltage output
- IP 20 package
- 0-10V dimming with PWM output
- UL Listed (UL8750, Class 2 LED Power Supply, suitable for dry and damp locations)
- Very high efficiency (up to 90%)
- Low THD (<20% from 50-100% load)
- AC Input and DC Output wirings compartments
- Suitable for suspended ceiling grid low voltage
- Long life
- Wide operating temperature range -40°C up to 90°C T_c
- 5-year warranty under useful life condition
- RoHS compliant
- Compliance with Regulation (EU) 2019/2020 (Ecodesign)



DESCRIPTION

The SES100-24-C LED power supplies provide a single 24V constant voltage output with and without PWM dimming from a 0-10V input. Junction boxes are provided for both AC Input and DC Output connections in a UL Listed enclosure. This product is not allowed to work in standby mode and is not intended for no-load operation.



MODEL CODING AND OUTPUT RATINGS

Model number	P _{OUT} Max (W)	Rating V _{OUT} (V _{DC})	I _{OUT} Max (mA)
SES100-24-C (eng. Code: RHPS526B)	100	24	4000 ¹

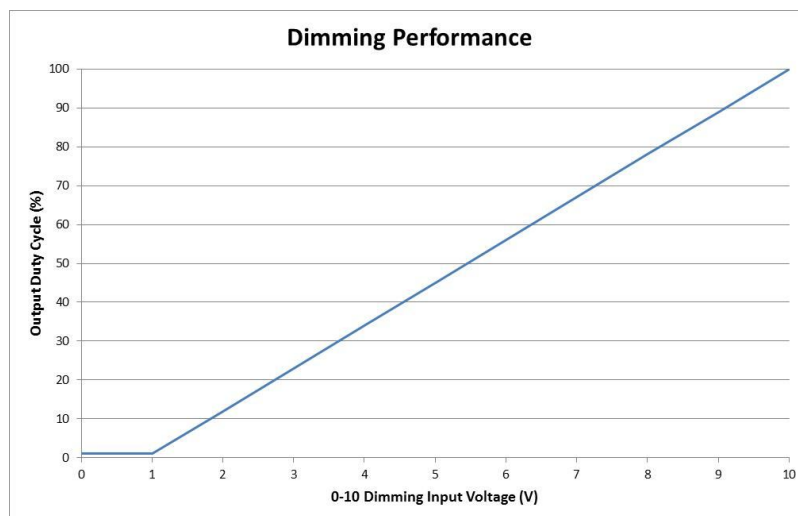
Note 1: this PSU meets NEC Class 2 requirements

INPUT SPECIFICATION

Specification	Test Conditions / Notes	Min	Nom	Max	Units
AC Input Voltage	120-250 V _{AC} for Europe; 120-277 V _{AC} for USA and Canada	90	120 – 277	305	V _{AC}
Input Frequency		47	50/60	63	Hz
Input Current	120 V _{AC} Rated Load	-	-	0.95	A
	230 V _{AC} Rated Load	-	-	0.48	
	277 V _{AC} Rated Load	-	-	0.40	
Power Factor	120 V _{AC} Rated Load	0.98	-	0,99	
	230 V _{AC} Rated Load	0.96	-	0,98	
	277 V _{AC} Rated Load	0.94	-	0,95	
THD	120 V _{AC} Rated Load	5	-	7	%
	230 V _{AC} Rated Load	8	-	11	
	277 V _{AC} Rated Load	10	-	14	
Inrush Current (peak)	120 V _{AC} Half Value time: 200 μs	-	-	16.2	A
	230 V _{AC} Half Value time: 200 μs	-	-	29.8	
	277 V _{AC} Half Value time: 200 μs	-	-	37.6	
Efficiency	120 V _{AC} Rated Load	88	-	89	%
	230 V _{AC} Rated Load	90	-	91	
	277 V _{AC} Rated Load	90	-	91	
Harmonic Current	Complies with EN-61000-3-2, Class C load >25 W				

OUTPUT SPECIFICATIONS

Specification	Test Conditions / Notes	Min	Nom	Max	Units
Output Power Rating		-	-	100	W
Output Voltage		-	24	-	V
Output Current		-	-	4000	mA
Ripple Voltage	Measured (V _{OUT_pk-pk} /RMS)	-	-	1	%
Output Voltage Regulation				±3	%V _{OUT}
Output Current in Dimming	Duty cycle vs 0-10 V dim input – see graph	1	-	100	%
Maximum 0-10 sourcing current		-	-	500	μA
Isolation DC Output – 0-10 Input		-	100	-	V _{DC}
Start-up time	With no dimmer connected	-	-	500	ms



PROTECTION FEATURES

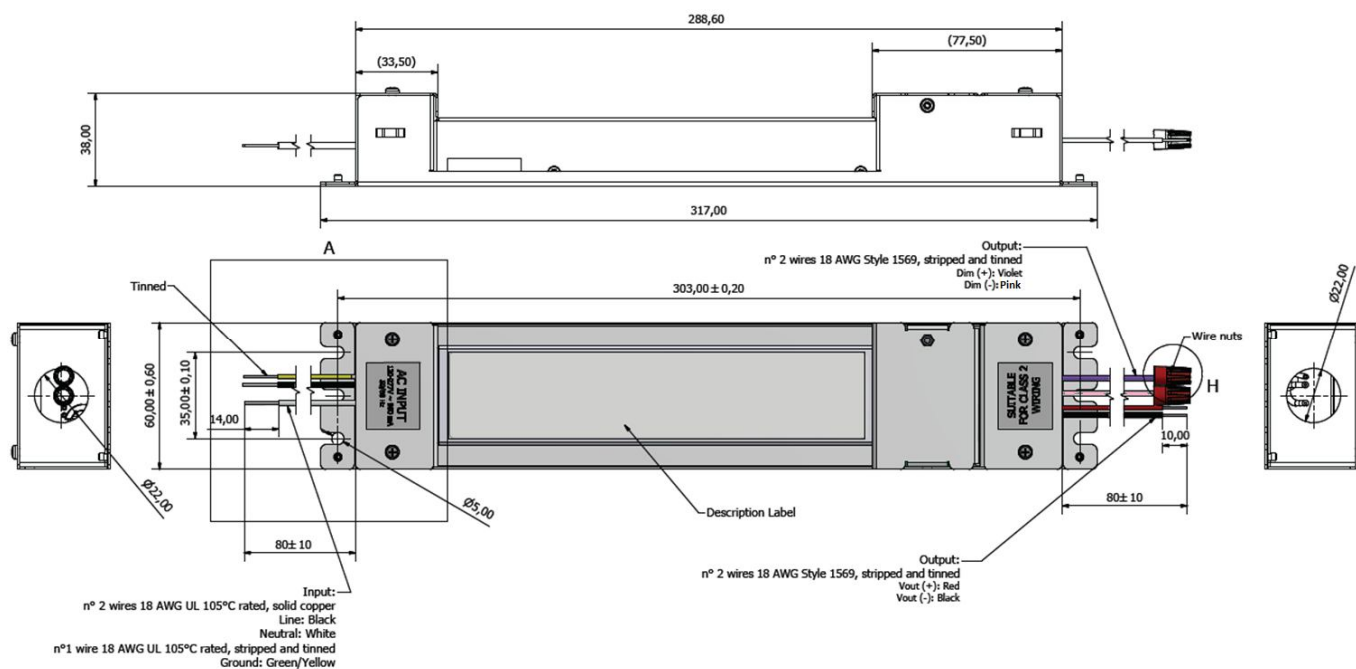
Specification	Test Conditions / Notes	Min	Nom	Max	Units
Output Over Current	Shout-down, auto Recovery	-	4.1	-	A
Output Short-Circuit	Shout-down, auto Recovery	-	-	-	-
Over-Temperature Tc	Shout-down, auto Recovery		90		°C
Isolation Primary-to-Secondary	Reinforced/double Insulation meets IEC/EN61347-2-13 Class II				

MECHANICAL DETAILS

Packaging:	Partially encapsulated with full metal enclosure
Color:	White RAL9010
I/O Connections:	AC Input and DC output connections are made inside the wiring junction boxes
Input wires:	n°2 wires 18 AWG UL 105°C rated (L/N), Black/White, solid copper, 80 mm long n°1 wire 18 AWG UL 105°C rated (Ground), Green-Yellow, stripped and thinned, 80 mm long
Output wires	n°2 wires 18 AWG Style 1569 (LED+/LED-), Red/Black, stripped and thinned, 80 mm long
Control wires	n°2 wires 18 AWG Style 1569 (+DIM/-DIM), Violet/Pink, stripped and thinned, 80 mm long (with wire nuts) All wires are stripped at least 10 mm.
Ingress Protection:	IP20
Mounting Details:	4 mounting locations

OUTLINE DRAWINGS

Package:	Metal enclosure	Box:	Carton Box
Dimensions:	317 x 60 x 38 mm (12.48 x 2.36 x 1.49 in)	Dimensions:	583 x 383 x 335 cm (22.95 x 15.07 x 13.19 in)
Volume:	199.1 cm ³ (11.85 in ³)	Units per Box:	30 pcs
Mass:	800 g (1,76 lbs)	Mass:	24 kg (52.92 lbs)



ENVIRONMENTAL SPECIFICATIONS

Specification	Test Conditions / Notes	Min	Nom	Max	Units
Reference Case Temp. (T _c)	Refer to the Top Case measurement point	-40	-	90	°C
Ambient Temperature		-40	-	50	°C
Storage Temperature	Relative Humidity 95% non-condensing	-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 30g/18ms, 3 axes, 6x each (3 positive and 3 negative) Non-Operating: Half sine, 50g/11ms, 3 axes, 6x each (3 positive and 3 negative)				
Vibration EN 60068-2-64	Operating: 5-500Hz, 1gRMS (0.02 g ² /Hz), 3 axes, 30 min Non-Operating: 5-500Hz, 2.46gRMS (0.0122 g ² /Hz), 3 axes, 30 min				
Vibration EN 60068-2-6	Operating Sine, 10-500Hz, 1g, 3 axes, 1 Oct/min., 60 min				
MTBF	MAX Load, 40 °C Ambient, Telcordia SR-332 Issue 2, D 80 %.	-	500.000	-	Hours
Useful Life	Nominal V _{AC} , 40 °C Ambient	-	44.000	-	Hours

ELECTROMAGNETIC COMPATIBILITY (EMC) – EMISSIONS

Phenomenon	Conditions / Notes	Standard	Performance Class
Conducted Emission	Test at 120/277 V _{AC}	EN55032	Class A
Radiated Emission	Test at 120/277 V _{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	

ELECTROMAGNETIC COMPATIBILITY (EMC) – IMMUNITY

Phenomenon	Conditions / Notes	Standard	Note
Equipment for general lighting purposes - EMC Immunity Requirements		EN61547	
ESD (Electrostatic Discharge)		EN61000-4-2	
Radiated Radio-Frequency electromagnetic field		EN61000-4-3	
Electric Fast Transient / Burst	Level ±1.0kV L-L	EN61000-4-4	
Surge	Level ±4.0kV L-N/L-GND	EN61000-4-5	
Conducted disturbances induced by Radio-Frequency fields		EN61000-4-6	
Voltage Dips, short interruptions and Voltage Variations		EN61000-4-11	
Non-repetitive damped oscillatory transient, Ring wave	2.5kV	ANSI C.62.41	Category A

SAFETY AGENCY APPROVALS

Certification Body	Safety Standards
	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 UL2577: Suspended Ceiling Grid Low Voltage Lighting Systems LED Driver suitable for dry and damp location
	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

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