



12W DC Class 2 Power Supply DS12W Series 90-305V



Efficiency	higher than 85%
Power Factor	>92%
Case TC*	85°C Max
Protection	Input / Output
Storage	-40°C / +85°C
Humidity	95% RH max
IP Rating	IP 66
Class	Class 2 power supply
Dimming	0 -10 Dimming
Optional Dimming	Phase Dimming



FCC Part 15
Class B compliant



FEATURES

- UL8750, EN61347, UL1310, UL48, cUL, CE, TUV, KAMA, CQC compliant
- FCC Part 15/18 Class B and EN55015 compliant
- Meet the RoHS directive; IP66 compliant,
- Suitable for high-temperature, high-dust location
- Suitable for indoor or outdoor applications
- Suitable in standard electrical junction boxes
- Compact, lightweight
- Single output, ranged from 4VDC up to 114VDC
- Active PFC reduces power consumption
- Isolation between primary and secondary

ENVIRONMENTAL SPECIFICATIONS

1. Operating temperature: -30 to +60°C
2. Storage temperature range: -40 to +85°C
3. Humidity (non-condensing): 5% - 95%RH
4. Cooling: Free air cooling Convection
5. Vibration Frequency: 5-55Hz/2g, 30 minutes
6. Impact resistance: 1g/s
7. MTBF: 482,000 hours at full load and 40°C ambient conditions
8. EMC:

Compliant to CISPR 22 CLASS B, CISPR 14-1 CLASS B, GB4343. 1-2003, GB17625.1-2003

- Continuous interference voltage test conforming to GB4343-2003+A1, CISPR 14-1: 1997, EN55014-1:1997-5
- Intermittent interference voltage test conforming to GB4343-2003+A1, CISPR 14-1: 1997, EN55014-1:1997-5
- Interference power test conforming to GB4343-2003+A1, CISPR 14-1:1997, EN55014-1:1997-6
- Harmonic currents test conforming to GB4343-2003+A1, CISPR 14-1:EN 61000-3-2:1995
- RF Electromagnetic Field Immunity test conforming to GB/T13926.3, IEC61000-4-3, PrEN55014-2 Section 6.5
- Electrical fast transient/burst immunity test conforming to GB/T13926.4, IEC61000-4-4, PrEN55014-2 section 6.2
- Voltage dips and short interrupts immunity test conforming to IEC61000-4-11
- Voltage variations immunity test conforming to IEC61000-4-11
- Electrostatic discharge immunity test conforming to IEC61000-4-11

* Under confirmed thermal condition



ELECTRICAL SPECIFICATIONS

- Input range: 90 to 305VAC
- Frequency: 47- 63HZ
- Power Factor: > 92% at full load
- Inrush current: <10A at 25C, 230V, cold start
- Input current: 0.3A at 120V
- Efficiency: 85% (typical at maximum load)
- Maximum power: 12W
- Current accuracy: ±3%, Load regulation accuracy: ±4%
- Optional DC Dimming control: 0-10Vdc, 2mA, 2-wire.
- Optional RD Dimming control: 3-wire 50KΩ Resistance Dimming
- Leakage current: 400uA (typical)
- Hold up time: half cycle
- Output over-voltage protection function: Less than 1.3 times the maximum output voltage;
- Output over-current protection: Less than 1.1 times the maximum output current;
- Output short circuit protection: Unlimited short-circuit, or long-term short-circuit, self-recovery after withdrawal;

Constant Current						
Model #	Output Voltage	Output Current	Current Accuracy	Power Factor	Output Power	Max Efficiency
DS12W0250C	15-48V DC	250mA	±3%	95%	12W	87%
DS12W0280C	15-43V DC	280mA	±3%	95%	12W	87%
DS12W0350C	15-34V DC	350mA	±3%	95%	12W	87%
DS12W0500C	10-24V DC	500mA	±3%	95%	12W	87%
DS12W0550C	10-22V DC	550mA	±3%	95%	12W	87%
DS12W0600C	10-20V DC	600mA	±3%	95%	12W	87%
DS12W0700C	10-17V DC	700mA	±3%	95%	12W	87%
DS12W01000C	4-12V DC	1000mA	±3%	95%	12W	87%

Dimming Guide	
Model #	Dimming Code
DS12W-XX-CXXX-D010	0 - 10 Dimming
DS12W-XX-CXXX-PD	PWM Dimming



Constant Voltage							
Model #	Output Voltage	Max. Output Current	Min. Output Current	Voltage Accuracy	Power Factor	Output Power	Max. Efficiency
DS12W36V	36V DC	330mA	55mA	±5%	95%	12W	87%
DS12W24V	24V DC	500mA	83mA	±5%	95%	12W	87%
DS12W18V	18V DC	670mA	110mA	±5%	95%	12W	86%
DS12W12V	12V DC	1000mA	166mA	±5%	95%	12W	85%

Note: refer to 220V input power factor and maximum output. At 120V input and maximum output, power factor is 98%.

DIMMING SPECIFICATIONS

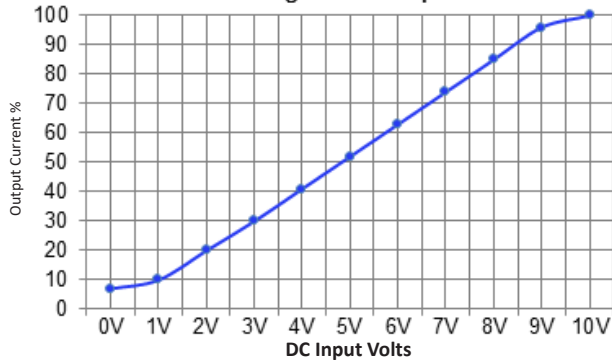
- Optional 0-10V Dimming control:
 - Directness Dimming Mode;
 - Input Voltage Range 0-10Vdc, When Output constant current Adjustable range: 10%-MAX; When input >10V, Costant current output for maximum value; When input ≤ 0V (Include input open circuit), Constant current output for 10%;
 - Input impedance 5KΩ, dimming response time : 20ms;
 - Input Current: MAX. 2mA;

PD 2-Wire PWM Positive Dimming Scheme			
Parameters	Minimum	Typical	Maximum
10V Source Output	9.2V	10.0V	10.8V
Absolute Voltage Range on PWM Input	-2.0V	12V	+28V
Input LOW Level Voltage Range	+2.0V	---	+7.5V
Input HIGH Level Voltage Range	+9.0V	---	+28V

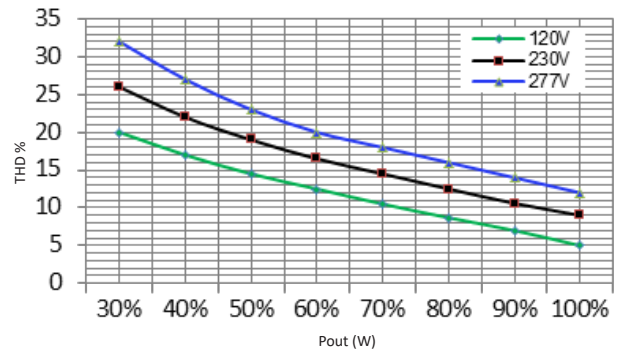


TECHNICAL SPECS.

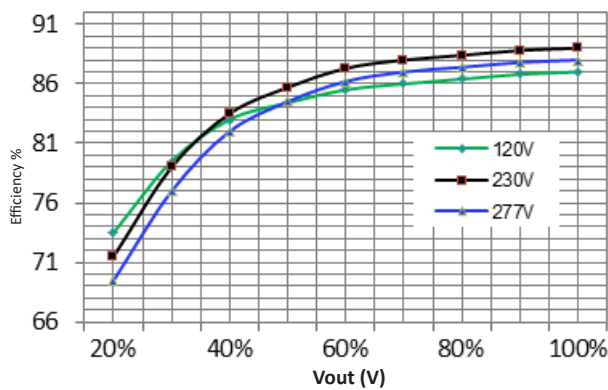
Dimming vs. 0-10V Input



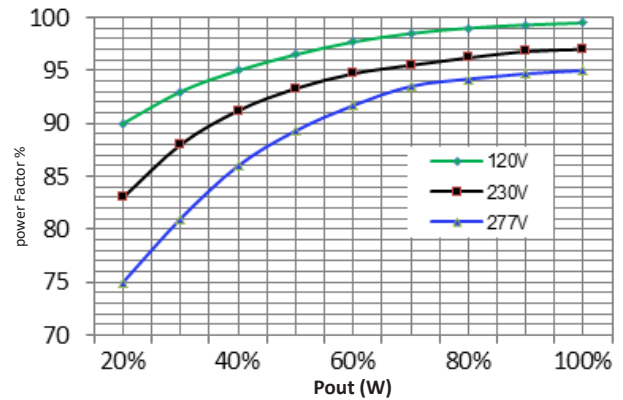
THD vs. Pout



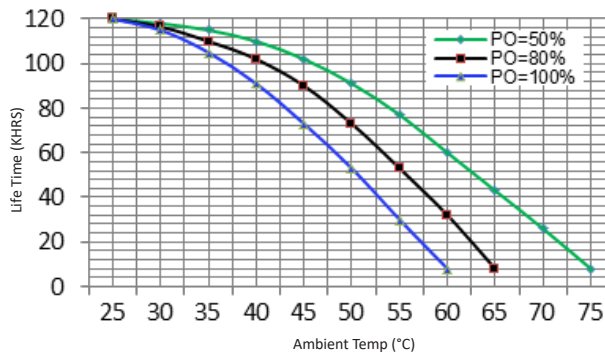
Efficiency vs. Vout at 80°C case



PF vs. Pout at 80°C case



Life Time vs. Ambient Temp





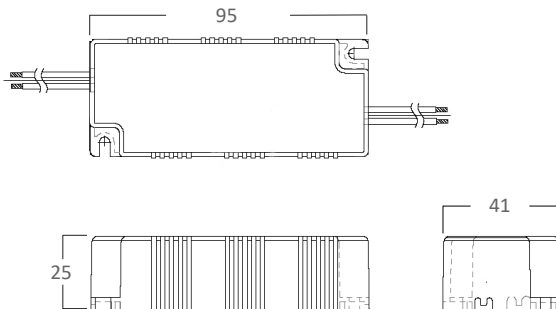
INSTALLATION SPECIFICATIONS

- Plastic enclosure, Used with thermal conductivity and flame retardant glue potting.
- AC input for connection the two core ANSI/UL1015/AWG18 temperature 105 °C core copper wire connection, Cable Length: 150mm, Stripping on the tin: 10mm.
- DC output for connection the two core ANSI/UL1569/AWG14 temperature 105 °C core copper wire, Cable Length: 150mm, Stripping on the tin: 10mm.
- The dimmer control input is the two copper wires, ANSI/UL1569/AWG24 & temperature 105 ° C, Cable Length: 150mm, Stripping on the tin: 10mm.
- Where: 0-10V (or PWM) input — Purple wire, GND — Grey wire.
- This product has two $\Phi 3.6$ mm mounting holes.

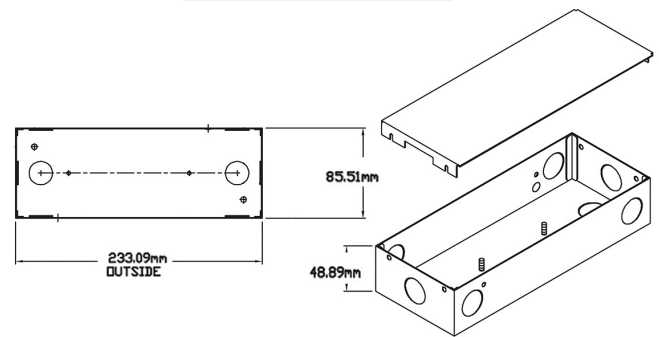
MECHANICAL SPECS.

Available Form Factors	Dimensions
"L5"	95x41x25mm
Remote Enclosure	
"G2"	233.1X85.5X48.9mm
"G3"	280X103X56mm

L5



G2 : -RE MODELS



G3 : -REO MODELS

