

DMV-60D-12 series

60W PWM output LED Power supply with dimming 2 in 1 function



■ Features:

- Constant voltage PWM style output (280Hz)
- Built-in active PFC function
- Universal AC input / Full range
- Protections: Short circuit / Over current / Over voltage
- Built-in 2 in 1 dimming function (voltage / resistance)
- Cooling by free air convection
- Class 2 power unit
- IP54 design

IP54 c **SELV** equivalent **Class 2**

ELECTRICAL SPECIFICATION

MODEL	DMV-60D-12
OUTPUT	
RATED VOLTAGE	12V
RATED CURRENT	5A
RATED POWER	60W
TOLERANCE [3]	± 5%
FREQUENCY (typ.)	280Hz
RIPPLE & NOISE (max.) [2]	600mV _{p-p}
INPUT	
VOLTAGE RANGE	90 ÷ 277VAC; 127 ÷ 390VDC
FREQUENCY RANGE	47 ÷ 63Hz
EFFICIENCY (typ.)	80%
AC CURRENT (typ.)	0.85A/115VAC, 0.45A / 230VAC
POWER FACTOR	PF > 0.95 / 230VAC; PF > 0.98 / 115VAC at full load
PROTECTIONS	
OVER CURRENT	Range: 95 ÷ 120% rated current Type: hiccup mode, auto-recovery.
SHORT CIRCUIT	Type: shut down output voltage. Re-power on to recovery.
OVER VOLTAGE	Max. 20V Type: shut down output voltage. Re-power on to recovery.
WORKING ENVIRONMENT	
WORKING TEMPERATURE	-30°C ÷ 60°C
WORKING HUMIDITY	20 ÷ 95% RH non-condensing
STORAGE TEMPERATURE AND HUMIDITY	-40°C ÷ 80°C, 10 ÷ 95% RH non-condensing

DMV-60D-12 series

60W PWM output LED Power supply with dimming 2 in 1 function



SAFETY AND EMC REGULATIONS

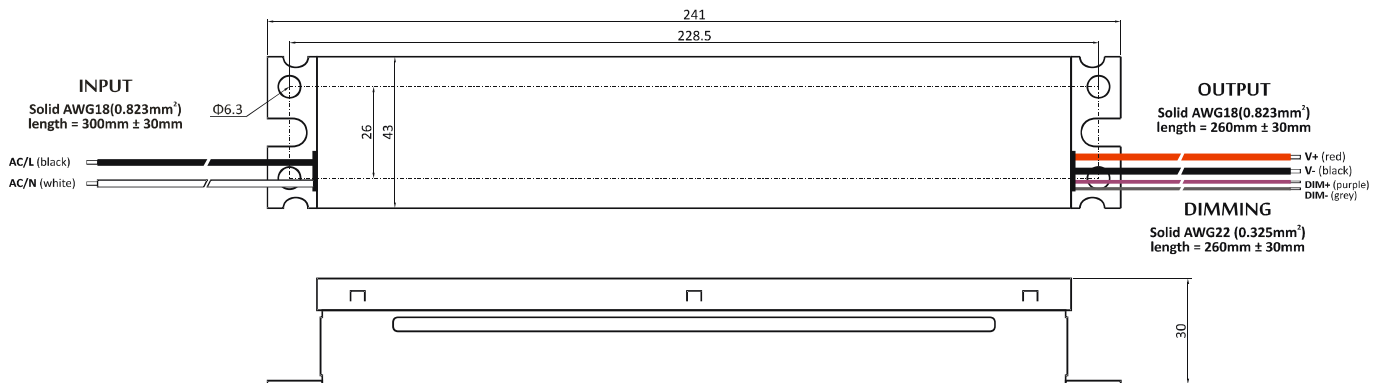
SAFETY STANDARDS	Compliance to EN 61347-1, EN 61347-2-13, UL 8750
WITHSTAND VOLTAGE	I-P/O-P: 3.75kVAC; I-P/GND: 1.5kVAC; O-P/GND: 0.5kVAC
ISOLATION RESISTANCE	I-P/O-P, I-P/GND, O-P/GND: 100MΩ/500VDC/25°C/70%
EMC EMISSION	Compliance to EN 55015
EMC IMMUNITY	Compliance to EN 61547; IEC 61000-4-2, -3, -4, -5, -6, -8, -11
HARMONIC CURRENT	Compliance z EN61000-3-3; EN61000-3-2 class C

OTHERS

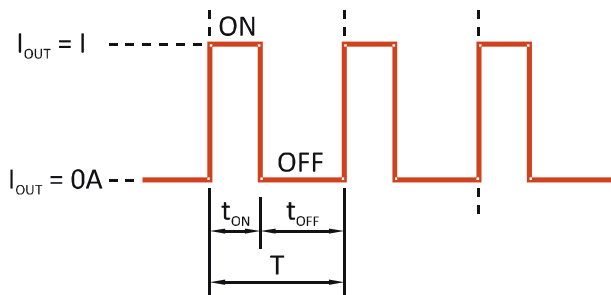
LIFETIME	50 000 h (40°C)
MTBF	975 000 h, Telcordia SR-332 (40°C)
DIMENSIONS	241 x 43 x 30mm (L x W x H)
WEIGHT	0.64kg

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF i 47μF parallel capacitor.
3. Tolerance includes set up tolerance, line regulation and load regulation.
4. Power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment must be re-qualify to comply with EMC Directives.

MECHANICAL SPECIFICATION



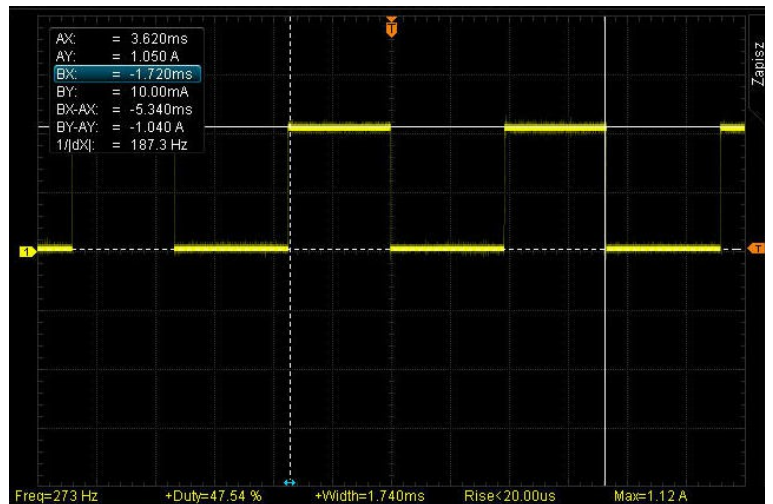
PWM STYLE OUTPUT



$$t_{ON} + t_{OFF} = T$$

$$\frac{t_{ON}}{T} \times 100\% = d \rightarrow \text{Duty Cycle(\%)}$$

$$\frac{1}{T} = f = 280\text{Hz} \rightarrow \text{PWM frequency}$$



DMV-60D-12 series

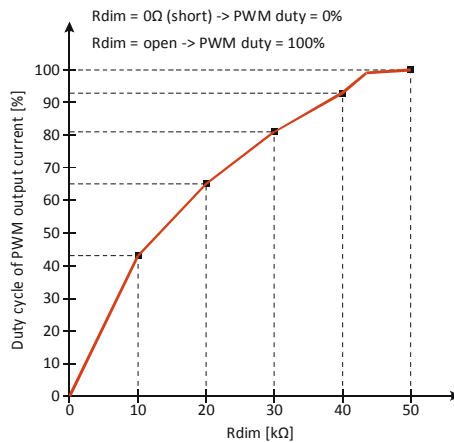
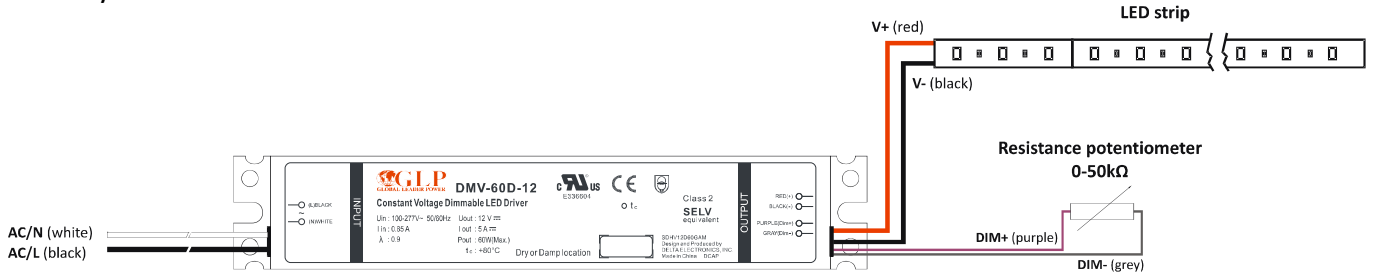
60W PWM output LED Power supply with dimming 2 in 1 function



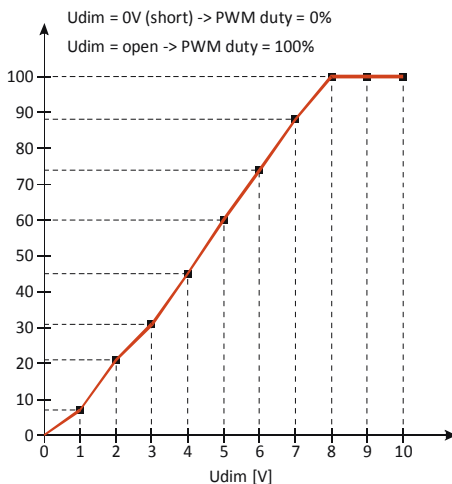
DIMMING FUNCTION

For use dimming function connect dimmer to DIM+ and DIM- terminals. Dimming effect is achieved by changing duty of output PWM style in 0%÷100% range. You can use dimming function by one of two ways:

1. By variable resistance 0kΩ ÷ 50kΩ.



2. By variable DC voltage 1÷10V.



Compatible dimmers
• OSRAM DIM MCU
• BERKER 2891 10
• Other 1-10V dimmers