

# **150W High Efficiency Dimmable Driver**

- $\cdot$  For LED Outdoor & Industrial Application
- · Wide Input Range for Worldwide use (up to 305Vac)
- · Built-in PFC Function: up to PF 0.99
- $\cdot$  IP67 Design for Outdoor Installation
- · Suitable to Dry, Damp, Wet Location
- · High Surge Protection: 4kV/6kV(IEC61000-4-5)
- · 1-10V / PWM Dimming Function
- · Dim-to-off Function (only 2.8A/3.15A)
- · High Reliability & Long Life 50,000hrs
- · Constant Current Design/ Low Ripple Current
- · Isolation Class II Design, No F.G
- · Type HL LED Driver for use in Class I Division 2 hazardous location luminaires.
- · All-Round Protections: Short Circuit/ Over Power / Over Voltage/ Over Temperature
- · Safety: Meet IEC61347-2-13, UL8750 & EMI EN55015



V Type: IP67 rated with 1-10V Dimming Function

M Type: IP67 rated with 1-10V, PWM Dimming Function (only 2.8A/3.15A)

Blank Type: IP67 rated and without Dimming Function

R Type: IP65 rated and output current can be adjusted through internal potentionmeter

								Type
<b>IP67</b>	9	F	110	(	c <b>511</b> us	<b>SELV</b>	TL	HL

Model Name		FSP150OUCS215M	FSP150OUCS107M	FSP150OUCS071M	FSP150OUCS054M	FSP150OUCS048M					
	Rated Power	150W	150W	150W	150W	150W					
Output	Output Voltage	165-215V	66-107V	51-71V	30-54V	30-48V					
	Rated Current	700mA	1.4A	2.1A	2.8A	3.15A					
	CURRENT ADJ. RANGE	350 ~ 700mA	700 ~ 1400mA	1050 ~ 2100mA	1400 ~ 2800mA	1575 ~ 3150mA					
		Can be adjusted by internal potentiometer for R Type only									
	Output Current Accuracy	±5%	±5%	±5%	±5%	±5%					
	Output Ripple Current[2]	±5%	±5%	±5%	±5%	±5%					
	Line Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	Turn On Delay Time, Rise time	≤1s max ;≤300ms max									
	Input Voltage/ Frequency[3]	90~305Vac/ 47~63Hz (Please refer to Static Curve)									
	Power Factor (typ.)	PF≥0.99/120Vac, PF≥0.97/230Vac, PF≥0.94/277Vac at full load									
	Efficiency (max.)	91.5%	91%	91%	91%	91%					
Input	Total Harmonic Distortion[4]	THD <20% (Output Loading ≧50% at 120Vac/230Vac, Output Loading ≧75% at 277Vac)									
•	AC Current (typ.)	≦1.5A /120Vac; ≤0.8A /230Vac; ≤0.8A /277Vac									
	Inrush Current (typ.)	50A at 230Vac, 25°C cold start									
	Leakage Current	≤0.75mA/277Vac									
Environment	Operating Temperature	-40°C ~ +70°C (Please Refer to "Derating Curve")									
	Operating Humidity	10~95% RH non-condensing									
	Storage Temperature, Humidity	-40°C~+85°C, 10~95%RH									
	Vibration	0.02g <sup>2</sup> /Hz at 5 Hz sloping to 0.04g <sup>2</sup> /Hz at 20 Hz, and maintaining 0.04g <sup>2</sup> /Hz from 20 Hz to 500 Hz at a constant acceleration of 4.43G for 30 minutes per axis for all three axes									
	Over Voltage Protection	<250V	<135V	<100V	<80V	<70V					
Protection -		Protection Type: Shut down and latch off, re-power on to recover  Recovers automatically after fault condition is remove									
	Short Circuit Protection	Shut down and latch off, re	e-power on to recover		Recovers automatically after fault condition is remove						
	Over Temperature Protection	Shut down and latch off, re	e-power on to recover	Recovers automatically after fault condition is remove							
Safety & EMC	Safety Standards	UL8750, Type HL, CSA-C22.2 No. 250.13, EN61347-1, EN61347-2-13 Approved.									
	EMC Standard	Compliant with EN55015/CISPR22 CLASS B, Compliant with EN61000-3-2 Class C (≥60% load), EN61000-3-3									
	Surge Protection	Differential Mode: 4KV; Common Mode: 6KV									
	Withstand Voltage (Hipot)	I/P-O/P 3750Vac, I/P-CASE 3000Vac, O/P-CASE 3000Vac									
	Isolation Resistance	I/P-CASE ,O/P-CASE: 100M ohm @ 500Vdc/ 25°C									
	Type TL	78/55°C	78/59°C	79/58°C	82/57°C	77/56°C					
Others	Life Time [5]	50,000 hours at Tcase of ≤ 75°C									
	MTBF	≥ 200,000 hours, MIL-HDBK-217F(25°C)									
	Dimension (LxWxH)	250 x 60.5 x 38 mm									
	Net Weight / Packing	1100g; 10 pcs / box									

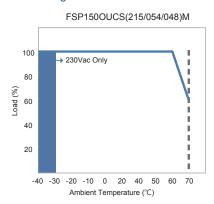
- 1. All data NOT specially mentioned are measured at 230Vac/ 50Hz input, full load and 25°C of ambient temperature
- 2. The ripple current must be measured under the condition of AC coupling & 20MHz bandwidth. (Rated input and rated output)
- 3. Derating may be needed under low input voltages. Please check the static characteristics for more details.
- 4. Measured at rated output voltage.
- 6. Measured at 230Vac/50Hz input, rated load.
  6. The 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 manufacturers must re-qualify EMC Directive on the complete installation again.



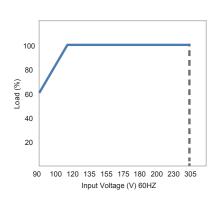
## **Derating Curve**

# FSP150OUCS(215/107/071)M 100 80 40 20 -40 -30 -20 -10 0 20 40 50 60 70 Ambient Temperature (°C)

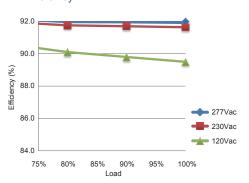
# **Derating Curve**



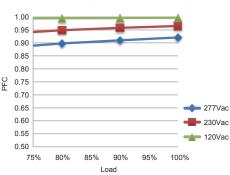
## Static Curve



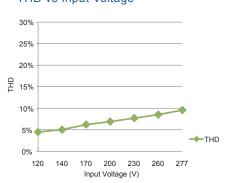
Efficiency



PFC vs Loading



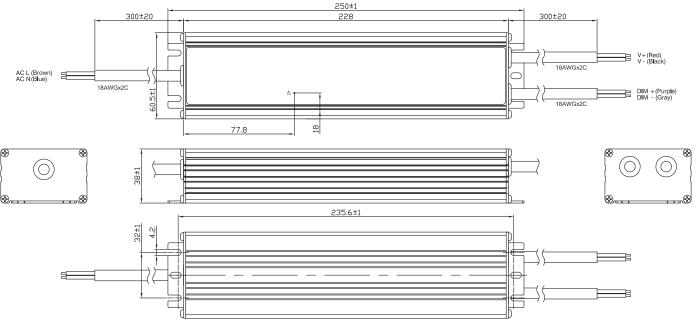
THD vs Input Voltage



Unit: mm

## **MECHANICAL DIMENSION**

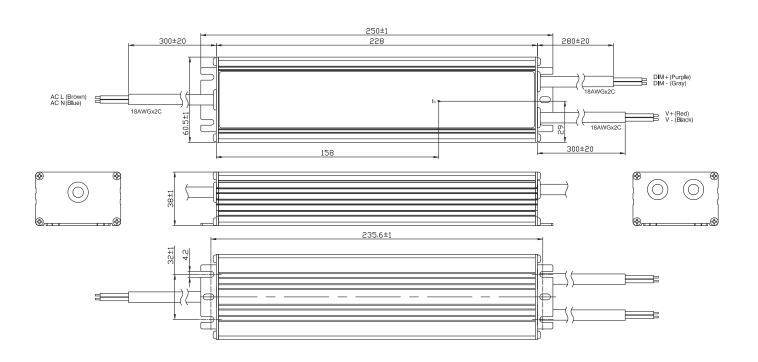
V Type: FSP150OUCS(215/107/071)M





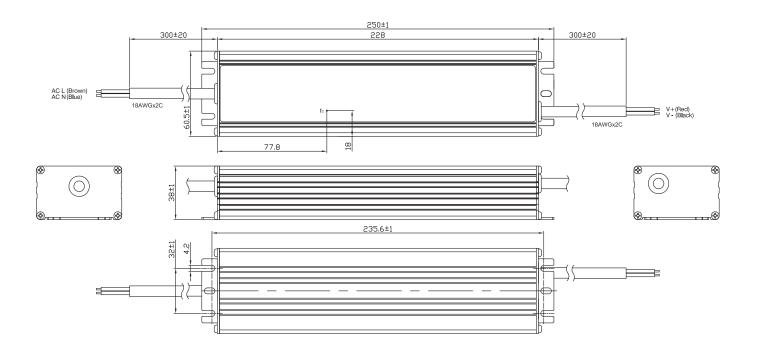
**M Type:** FSP150OUCS(054/048)M

Unit: mm



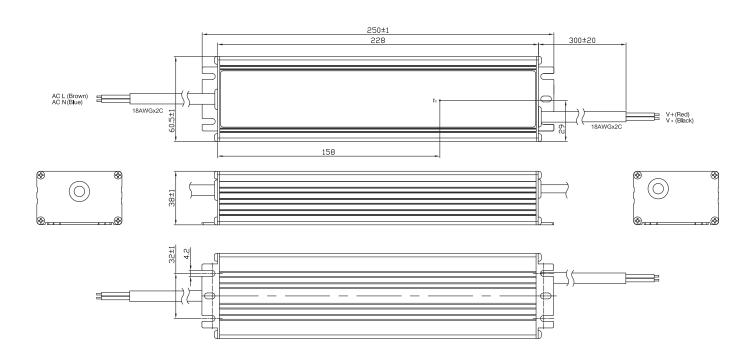
Blank Type: FSP150OUCS(215/107/071)M

Unit: mm





Blank Type:



R Type:

