SAE1 Series

120W High Efficiency Constant Current Dimmable Driver

Features

- For LED Outdoor & Industrial Application
- Wide Input Range for Worldwide use (up to 305Vac)
- Auxiliary 12V/0.2A output Available
- Built-in PFC Function: up to PF 0.99
- IP67 Design for Outdoor Installation
- Suitable to Dry, Damp, Wet Location
- High Surge Protection: 6kV/6kV(IEC61000-4-5)
- Built-in 3 in 1 dimming function (1-10VDC, PWM signal or resistance)
- Dim to off function
- High Reliability & Long Life 50,000hrs
- Constant Current Design/ Low Ripple Current
- Type HL LED Driver for use in Class I Division 2 Hazardous Location Luminaires
- All-Round Protections: Short Circuit/ Over Voltage/ Over Temperature
- Safety: Meet IEC61347-2-13, UL8750 & EMI EN55015

FSP120-FZAE(XXX) [M]G
M Type: IP67 rated with 1-10V, PWM Dimming Function
R Type: IP65 rated and output current can be adjusted through internal potentiometer

IP65 IP67 F 110 M M CE c UL us LISTED SELV Type HL Class P

SPECIFICATION

Model Name		FSP120-FZAE1(230)MG	FSP120-FZAE1(250)MG	FSP120-FZAE1(340)MG	FSP120-FZAE1(500)MG
Output	Rated Power	120W	120W	120W	120W
	Output Voltage	24-54V	24-48V	18-36V	16-24V
	Rated Current	2300mA	2.55A	3.4A	5.0A
	CURRENT ADJ. RANGE	1150 ~ 2300mA	1275 ~ 2550mA	1700 ~ 3400mA	2500 ~ 5000mA
		Can be adjusted by internal potentiometer for R Type only			
	Auxiliary DC Output	12V(11.4~12.6V)@0.2A			
	Output Current Accuracy	±5%	±5%	±5%	±5%
	Output Ripple Current (typ.)[2]	±5%	±5%	±5%	±5%
	Line Regulation	±0.5%	±0.5%	±0.5%	±0.5%
	Turn On Delay Time,Rise time	≤1s max ;≤300ms max			
Input	Input Voltage/ Frequency[3]	90~305Vac/ 47~63Hz (Please refer to Stactic Curve)			
	Power Factor (typ.)	PF≧0.99/120Vac, PF≧0.96/230Vac, PF≧0.95/277Vac at full load			
	Efficiency (max.)	93.5%	93.5%	93.5%	93%
	Total Harmonic Distortion[4]	THD <20% (Output Loading ≧50% at 120Vac, Output Loading ≧50% at 230Vac, Output Loading ≧75% at 277Vac)			
	AC Current (typ.)	≦1.5A /100Vac ; ≦0.7A /230Vac ; ≦0.7A /277Vac			
	Inrush Current (typ.)	≦60A 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	20~95% RH non-condensing			
	Storage Temperature, Humidity	-40°C~+80°C, 10%~95%RH			
	Vibration	0.02g²/Hz at 5 Hz sloping to 0.04g²/Hz at 20 Hz, and maintaining 0.04g²/Hz from 20 Hz to 500 Hz at a constant acceleration of 4.43G for 30 minutes per axis for all three axes			
Protection	Over Voltage Protection	<80V	<63V	<63V	<35V
		Protection Type: Recovers automatically after fault condition is removed			
	Short Circuit Protection	Recovers automatically after fault condition is removed			
	Over Temperature Protection	Recovers automatically after fault condition is removed			
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: 6KV; Common Mode: 6KV			
	Withstand Voltage (Hipot)	I/P-O/P 3000Vac, I/P-FG 1500Vac, O/P-FG 500Vac			
	Isolation Resistance	I/P-CASE ,O/P-CASE: 25M ohm @ 500Vdc/ 25°C			
Others	Life Time [5]	50,000 hours at Tcase of ≤ 75°C			
	MTBF	200,000 hours, MIL-HDBK-217F(25°C)			
	Dimension (LxWxH)	220 x 68 x 38.8 mm			
	Net Weight / Packing	1000g; 10 pcs/ box			

Notes:
1. All data NOT specially mentioned are measured at 230Vac/ 50Hz input, full load and 25℃ 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
5. 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.

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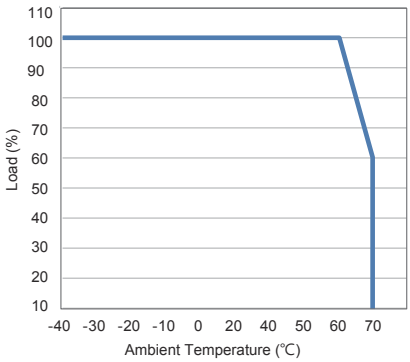
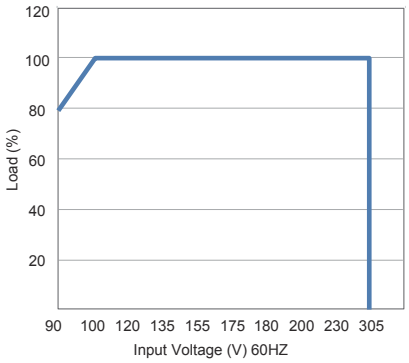
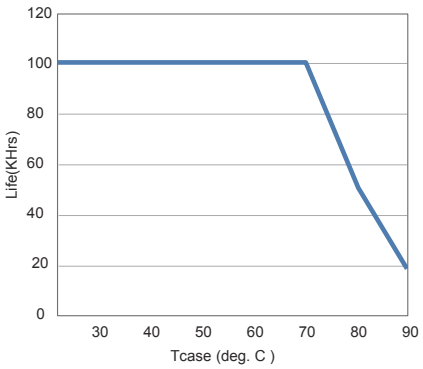
Derating Curve



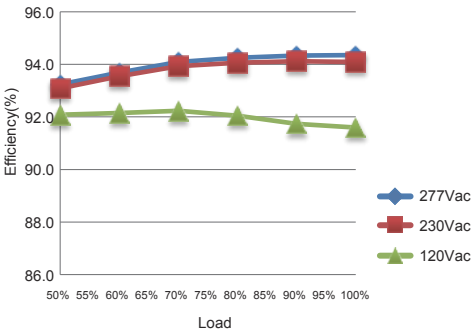
Static Curve



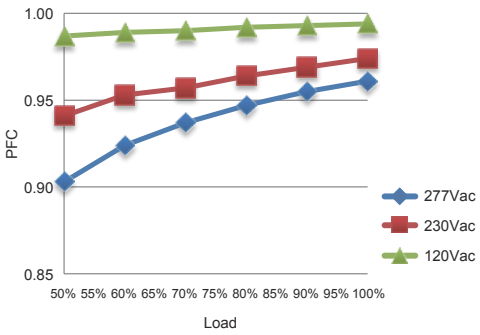
Life Time



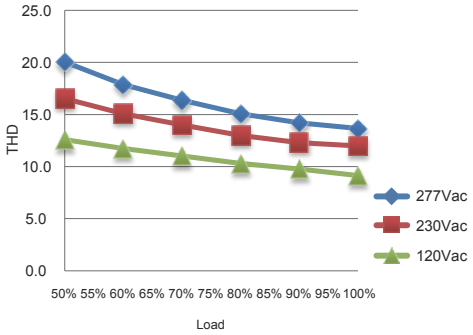
Efficiency



PFC vs Loading

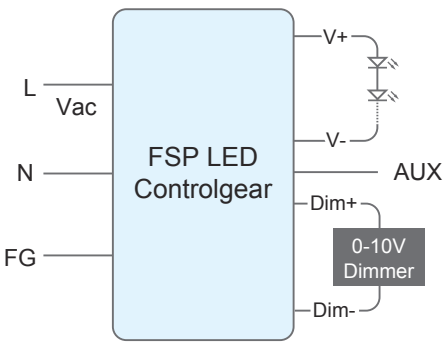


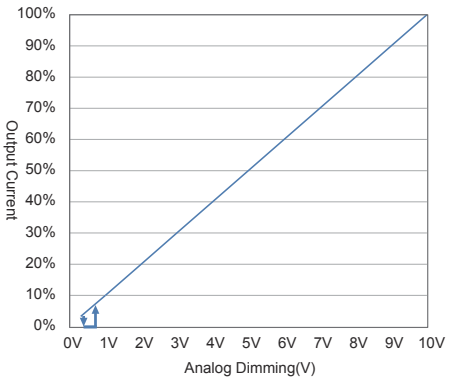
THD vs loading



0-10V Dimming Curve

*Direct connecting to LEDs is suggested
*Dim off Voltage: 0.3V (typical)
*Dim on Voltage:0.7V (typical)





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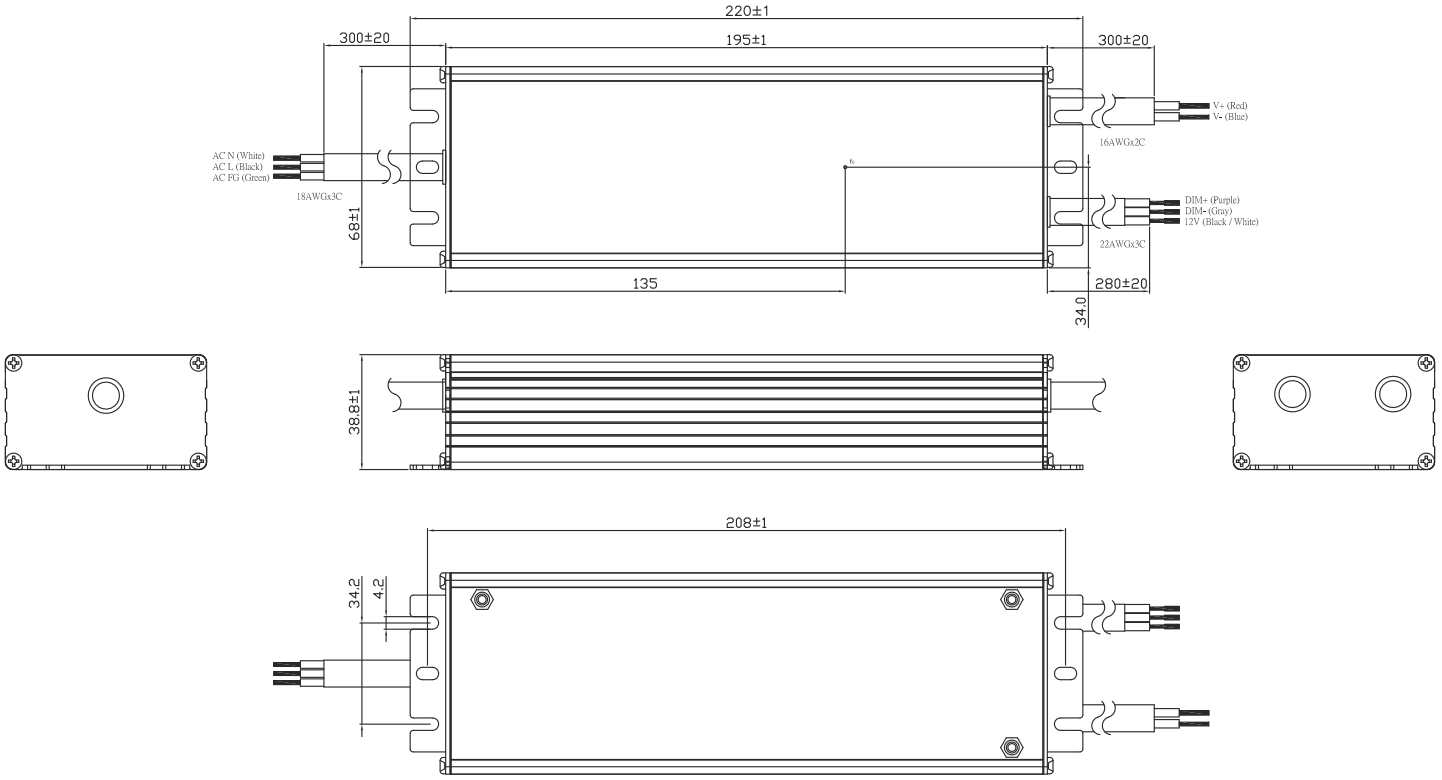
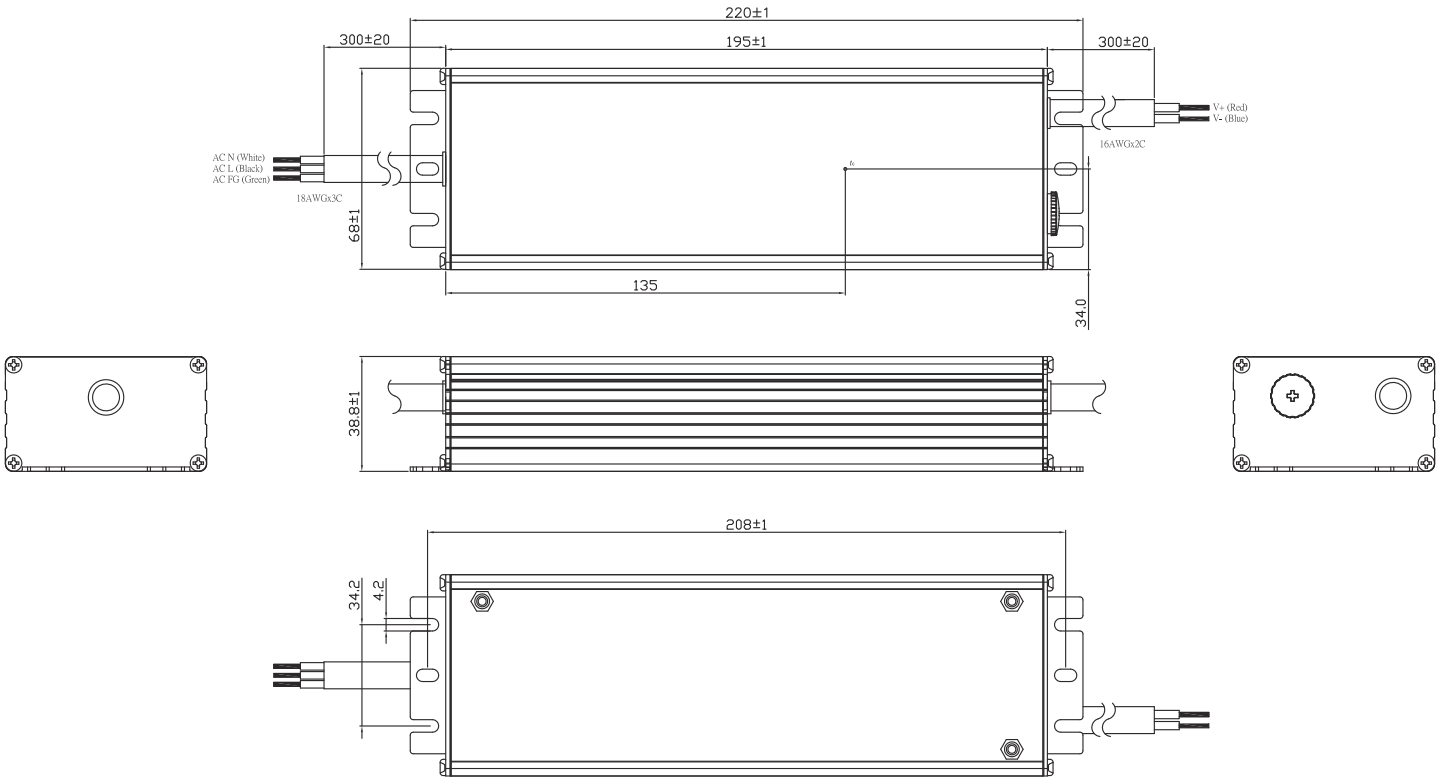
MG Type: (FSP120-FZAE1(XXX)MG)

Unit: mm



RG Type: (FSP120-FZAE1(XXX)RG)



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