

KEY FEATURES

- Open Frame Switching Power Supply
- Universal Input: 90-264 VAC
- Single & Dual Output
- 3000 VAC Input to Output Isolation
- 2-Years Product Warranty
- Low Cost
- Ultra Compact Size: 4.0 x 2.0 x 1.01 Inches
- 2-Years Product Warranty



ELECTRICAL SPECIFICATIONS

Model No. (Single Output)	ZQ60-5S	ZQ60-12S	ZQ60-15S	ZQ60-24S	ZQ60-48S	
Max output wattage (W)	50W	60W	60W	60W	60W	
Input	Voltage					90-264 VAC or 100-375 VDC
	Frequency (Hz)					47-440 Hz
	Current (Full load)					2.0A max. (115 VAC) / 1.0A max. (230 VAC)
	Inrush current (<2ms)					30 A max. (115 VAC) / 60 A max. (230 VAC)
	Leakage Current					< 0.5 mA max
	External fuse (recommend)					3.15 A slow blow type
Output	Voltage (V.DC.)					5V 12V 15V 24V 48V
	Voltage set accuracy					±2%
	Current (mA) max					10,000 5000 4000 2500 1250
	Maximum capacitive load					470-23,000µF depending on model
	Line regulation (Typ.)					0.5%
	Load regulation (1-100%) (Typ.)					1%
	Minimum load					0%
	Maximum capacitive load					470-23,000µF depending on model
	Ripple & Noise					< 1% Vout
	Efficiency (Typ)					80% 84% 84% 85% 84%
	Hold-up time					18 ms min.
	Switching frequency					65 KHz
Protection	Over current protection					Above 105% rated output power
	Over voltage protection					Zener diode clamp
	Short circuit protection					Hiccup mode, indefinite (automatic recovery)
Isolation	Input-Output (V.AC)					3000V
	Input-FG (V.AC)					1500V
	Output-FG (V.AC)					500V
Environment	Operating temperature					-10°C...+70°C (with derating)
	Storage temperature					-40°C...+100°C
	Temperature coefficient					0.01%/°C
	Humidity					95% RH
	MTBF					>200,000 h @ 25°C (MIL-HDBK-217F)
Physical	Dimension (L x W x H)					4.0 x 2.0 x 1.01 Inches (101.6 x 50.8 x 26.0 mm) Tolerance ±0.5 mm
	Case Material					Plastic resin + Fiberglass (flammability to UL 94V-0)
	Weight					150 g
	Cooling method					Free air convection
Safety	Agency Approvals					UL , cUL , CE (Pending)
EMC	EMI (Conducted & Radiated Emission)					EN 55022 class B (Pending)
	EMS (Noise Immunity)					EN 55024 (Pending)

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

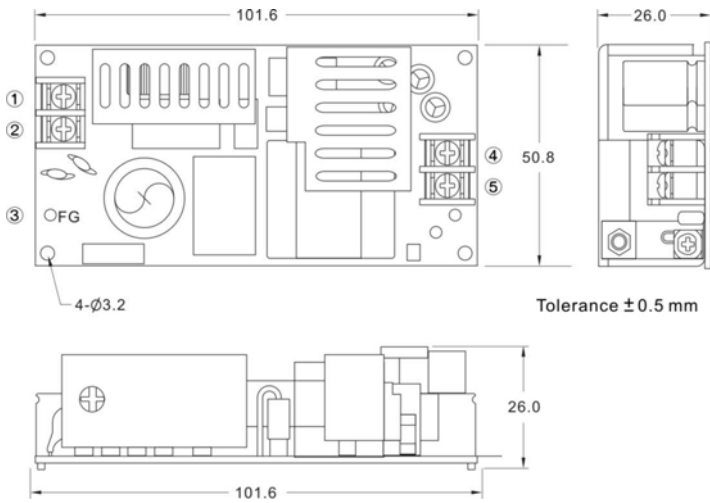
ZQ60 SERIES

60 Watts

Model No. (Dual Output)	ZQ60-5S12S	ZQ60-5S24S			
Max output wattage (W)	60W	60W			
Input	Voltage	90-264 VAC or 100-375 VDC			
	Frequency (Hz)	47-440 Hz			
	Current (Full load)	2.0A max. (115 VAC) / 1.0A max. (230 VAC)			
	Inrush current (<2ms)	30 A max. (115 VAC) / 60 A max. (230 VAC)			
	Leakage Current	< 0.5 mA max			
	External fuse (recommend)	3.15 A slow blow type			
Output		Output 1	Output 2	Output 1	Output 2
	Voltage (V.DC.)	5V	12V	5V	24V
	Voltage set accuracy	±2%	±5%	±2%	±5%
	Current (mA) max	5000	2080	5000	1040
	Maximum capacitive load	470-23,000µF depending on model			
	Line regulation (Typ.)	0.5%	1%	0.5%	1%
	Load regulation (10-100%) (Typ.)	2% (symmetric load)	6% (symmetric load)	2% (symmetric load)	6% (symmetric load)
	Minimum load	1%	7%	1%	7%
	Minimum load	25%			
	Maximum capacitive load	470-23,000µF depending on model			
	Ripple & Noise	< 1% Vout			
	Efficiency (Typ)	81%		82%	
	Hold-up time	18 ms min.			
	Switching frequency	65 KHz			
Protection	Over current protection	Above 105% rated output power			
	Over voltage protection	Zener diode clamp			
	Short circuit protection	Hiccup mode, indefinite (automatic recovery)			
Isolation	Input-Output (V.AC)	3000V			
	Input-FG (V.AC)	1500V			
	Output-FG (V.AC)	500V			
Environment	Operating temperature	-10°C...+70°C (with derating)			
	Storage temperature	-40°C...+100°C			
	Temperature coefficient	0.01%/°C			
	Humidity	95% RH			
	MTBF	>200,000 h @ 25°C (MIL-HDBK-217F)			
Physical	Dimension (L x W x H)	4.0 x 2.0 x 1.01 Inches (101.6 x 50.8 x 26.0 mm) Tolerance ±0.5 mm			
	Case Material	Plastic resin + Fiberglass (flammability to UL 94V-0)			
	Weight	150 g			
	Cooling method	Free air convection			
Safety	Agency Approvals	UL , cUL , CE (Pending)			
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B (Pending)			
	EMS (Noise Immunity)	EN 55024 (Pending)			

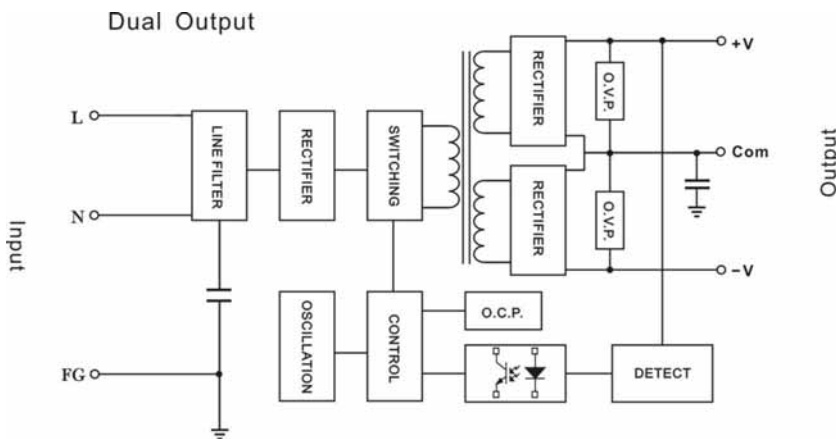
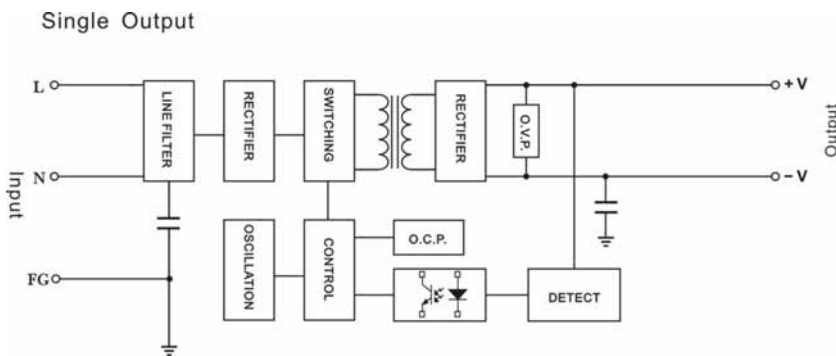
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MECHANICAL DIMENSION (Top View)



PIN#	SINGLE
1	AC IN (N)
2	AC IN (L)
3	FG
4	+DC OUT
5	-DC OUT

BLOCK DIAGRAM



DERATING

