

KEY FEATURES

- Low Cost But High Reliability
- With Constant Current
- Isolation Class II
- Open Frame Switching Power Supply
- Universal Input: 90-264 VAC
- Single and Dual Output
- 3000 VAC Input to Output Isolation
- 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(10-100%) (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.

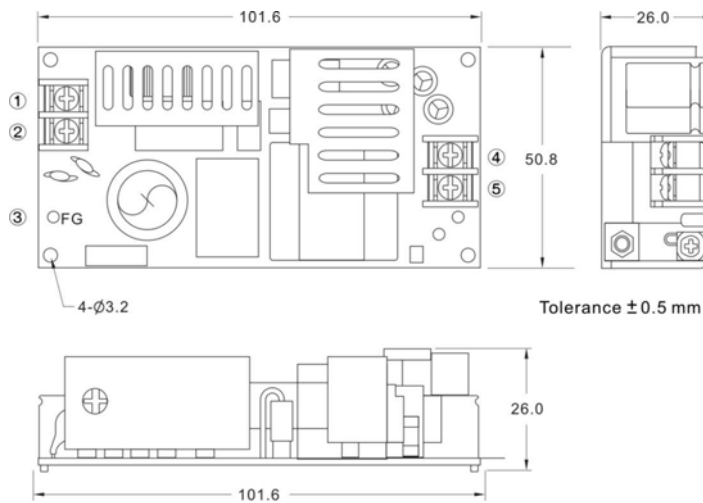
ZQ60 SERIES

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%
	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)			

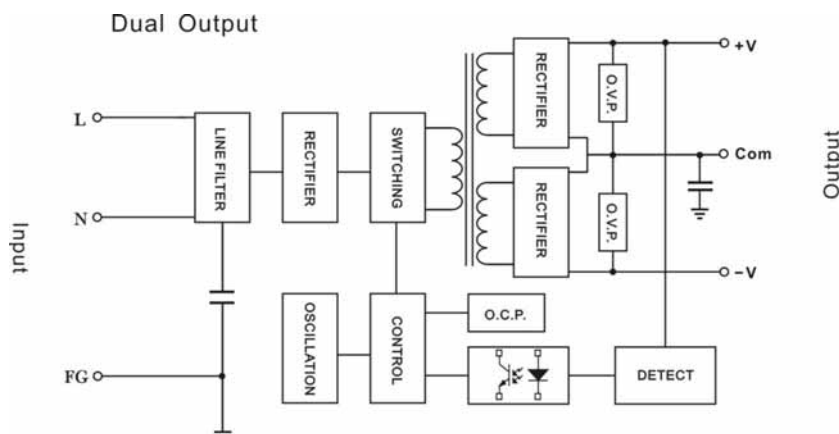
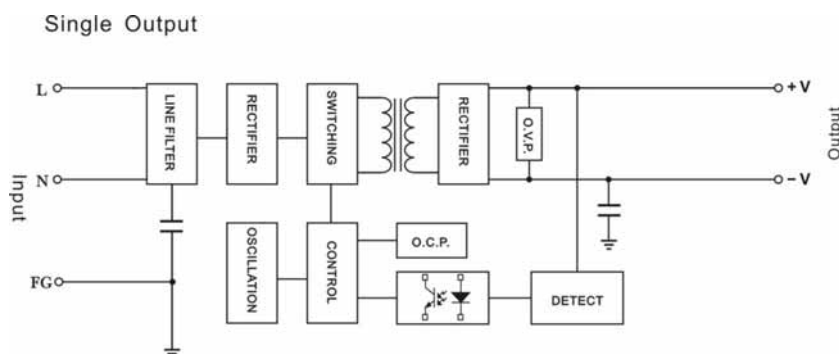
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

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

