

60W Quad Output Switching Power Supply

Q-60 series



■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 35KHz
- 2 years warranty

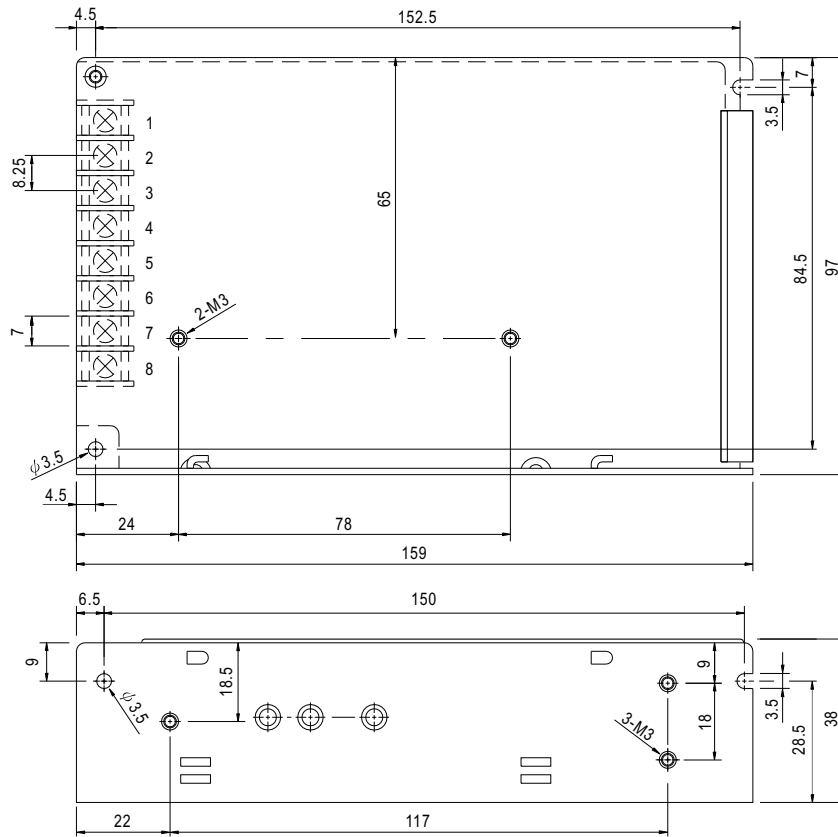


SPECIFICATION

MODEL		Q-60B				Q-60C				Q-60D			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
	DC VOLTAGE	5V	12V	-5V	-12V	5V	15V	-5V	-15V	5V	12V	24V	-12V
	RATED CURRENT	5.5A	2A	0.5A	0.5A	5.5A	1.5A	0.5A	0.5A	4A	1A	1A	0.5A
	CURRENT RANGE	0.5 ~ 8A	0.1 ~ 3A	0 ~ 1A	0 ~ 1A	0.5 ~ 8A	0.1 ~ 3A	0 ~ 1A	0 ~ 1A	0.5 ~ 8A	0.1 ~ 3A	0.1 ~ 1.5A	0 ~ 1A
	RATED POWER	60W				60W				62W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p	120mVp-p	100mVp-p	120mVp-p	100mVp-p	120mVp-p	100mVp-p	120mVp-p	100mVp-p	120mVp-p	150mVp-p	120mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V				CH1: 4.75 ~ 5.5V				CH1: 4.75 ~ 5.5V			
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±5.0%	±5.0%	±2.0%	+8,-4%	±5.0%	±5.0%	±2.0%	±6.0%	+8,-4%	±5.0%
	LINE REGULATION	±0.5%	±1.0%	±0.5%	±0.5%	±0.5%	±2.0%	±0.5%	±0.5%	±0.5%	±1.0%	±2.0%	±0.5%
	LOAD REGULATION	±0.5%	±4.0%	±1.0%	±1.0%	±0.5%	±4.0%	±1.0%	±1.0%	±0.5%	±4.0%	±4.0%	±1.0%
SETUP, RISE TIME	800ms, 20ms/230VAC				1600ms, 20ms/115VAC at full load								
HOLD UP TIME (Typ.)	70ms/230VAC				15ms/115VAC at full load								
INPUT	VOLTAGE RANGE	85 ~ 264VAC		120 ~ 370VDC									
	FREQUENCY RANGE	47 ~ 63Hz											
	EFFICIENCY (Typ.)	70%				72%				75%			
	AC CURRENT (Typ.)	2A/115VAC		0.8A/230VAC									
	INRUSH CURRENT (Typ.)	COLD START 15A/115VAC		30A/230VAC									
LEAKAGE CURRENT	<1mA / 240VAC												
PROTECTION	OVERLOAD	105 ~ 150%/115VAC rated output power											
		Protection type : Hiccup mode, recovers automatically after fault condition is removed											
	OVER VOLTAGE	5V: 5.75 ~ 6.75VDC											
		Protection type : Hiccup mode, recovers automatically after fault condition is removed											
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing											
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C) on +5V output											
VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes												
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1 Approved											
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC		I/P-FG:1.5KVAC		O/P-FG:0.5KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC											
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B											
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3											
EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, light industry level, criteria A												
OTHERS	MTBF	284.8K hrs min. MIL-HDBK-217F (25°C)											
	DIMENSION	159*97*38mm (L*W*H)											
	PACKING	0.56Kg; 24pcs/14.4Kg/0.75CUFT											
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</p>												

Mechanical Specification

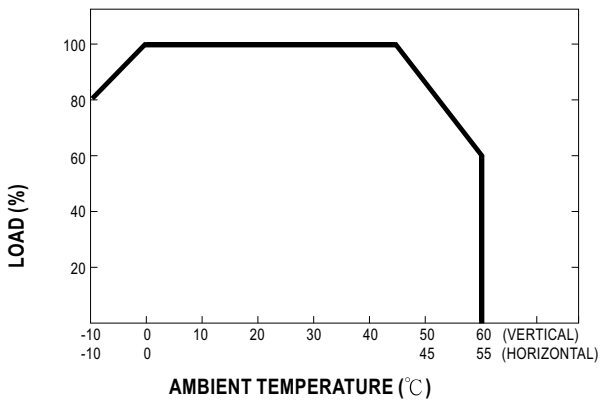
Case No. 901 Unit:mm



Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V1	7	DC OUTPUT COM
2	AC/N	5	DC OUTPUT -V2	8	DC OUTPUT +V1
3	FG \perp	6	DC OUTPUT +V2		

Derating Curve



Static Characteristics

