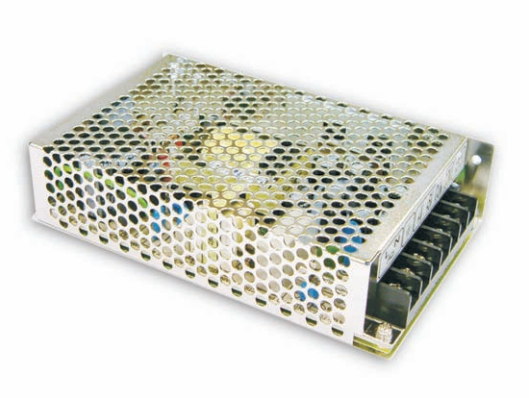
60W Dual Output Switching Power Supply

D-60 series



■ Features :

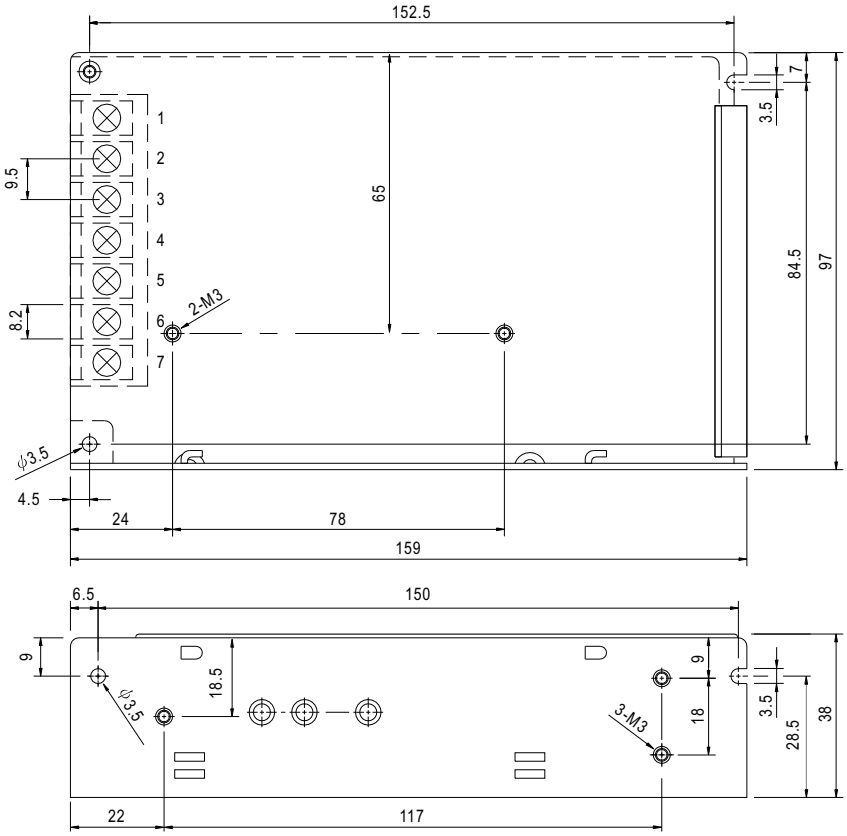
- Universal AC input/Full range
- Protections:Short circuit/Over load/Over voltage
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 54KHz
- 2 years warranty

SPECIFICATION

MODEL		D-60A		D-60B	
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH1	CH2
	DC VOLTAGE	5V	12V	5V	24V
	RATED CURRENT	4A	3A	3A	1.8A
	CURRENT RANGE	0.3 ~ 6A	0.2 ~ 4A	0.3 ~ 6A	0.2 ~ 2.2A
	RATED POWER	56W		58W	
	RIPPLE & NOISE (max.) Note.2	75mVp-p	150mVp-p	75mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	CH1 : 4.75 ~ 5.5V		CH1 : 4.75 ~ 5.5V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±2.0%	±5.0%
	LINE REGULATION	±0.5%	±1.0%	±0.5%	±0.5%
	LOAD REGULATION	±0.5%	±4.0%	±0.5%	±4.0%
	SETUP, RISE TIME	300ms, 50ms / 230VAC 800ms, 50ms / 115VAC at full load			
	HOLD TIME (Typ.)	80ms/230VAC 10ms/115VAC at full load			
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY(Typ.)	73%		76%	
	AC CURRENT (Typ.)	2A/115VAC 1A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC 40A/230VAC			
	LEAKAGE CURRENT	<3.5mA / 240VAC			
PROTECTION	OVER LOAD	105 ~ 150% rated output power			
		Protection type : Hiccup mode, recovers automatically after fault condition is removed.			
	OVER VOLTAGE	5V : 5.75 ~ 6.75V			
		Protection type : Hiccup mode, recovers automatically after fault condition is removed.			
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃) on +5V output			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL1012, UL60950, TUV EN60950 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, EN55024, Light industry level, criteria A			
OTHERS	MTBF	301.2K hrs min. MIL-HDBK-217F (25℃)			
	DIMENSION	159*97*38mm (L*W*H)			
	PACKING	0.54Kg; 24pcs/13.8Kg/0.75CUFT			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 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.				

■ Mechanical Specification

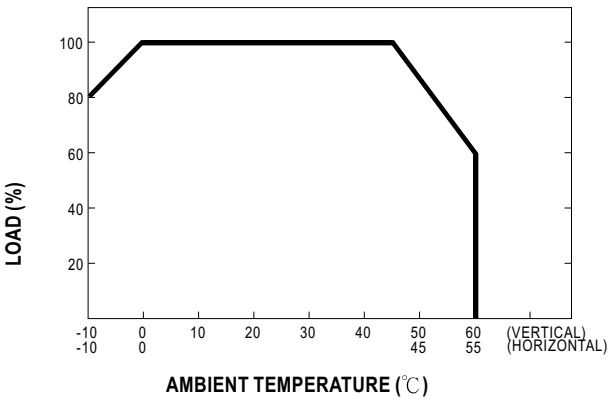
Case No. 901 Unit:mm



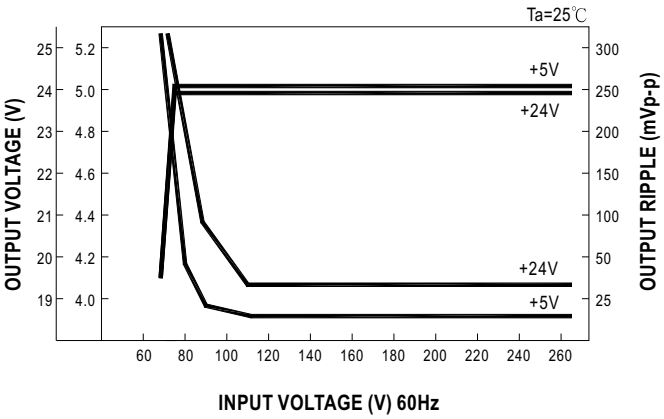
Terminal Pin. No Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT +V2
2	AC/N	5	DC OUTPUT +V1
3	FG ⏚	6,7	DC OUTPUT COM

■ Output Derating

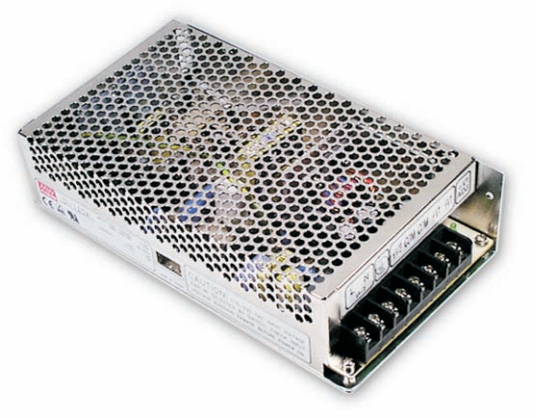


■ Static Characteristics (B)



120W Dual Output Switching Power Supply

D-120 series



Features :

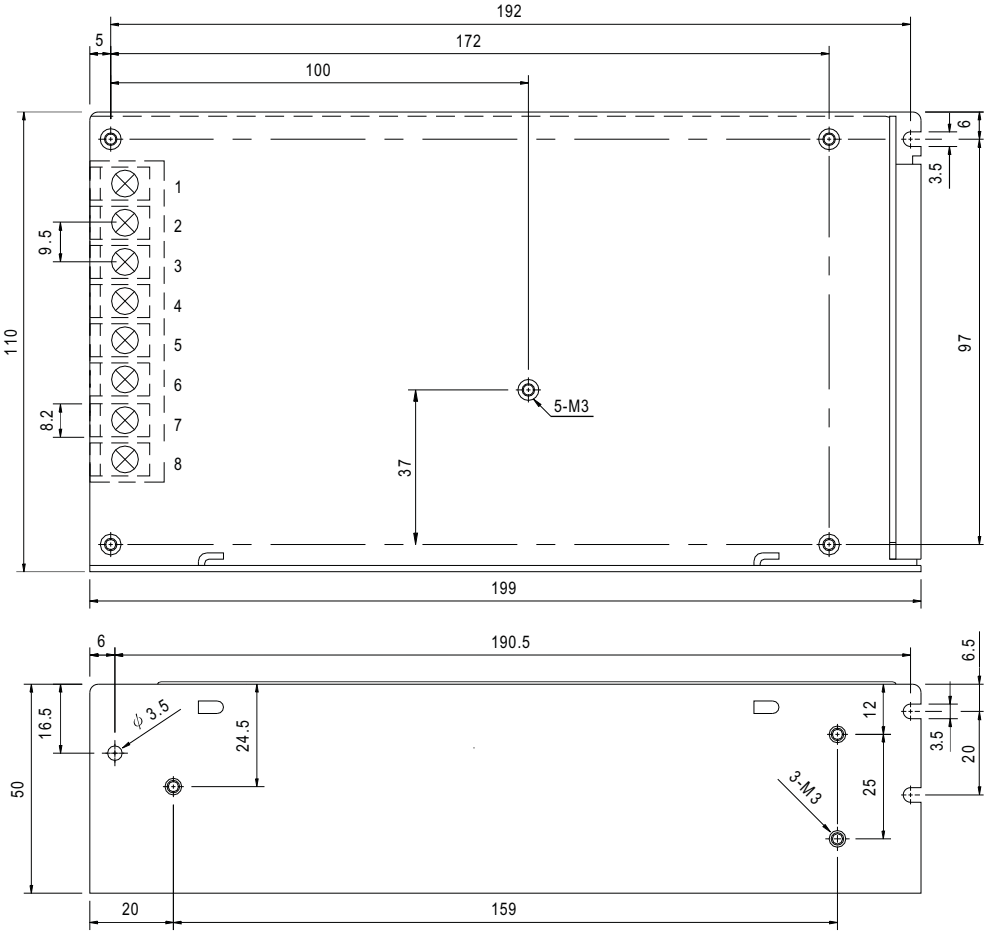
- AC input range selected by switch
- Protections:Short circuit/Over load/Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 28KHz
- 2 years warranty

SPECIFICATION

MODEL		D-120A		D-120B	
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH1	CH2
	DC VOLTAGE	5V	12V	5V	24V
	RATED CURRENT	12A	5A	6A	4A
	CURRENT RANGE	2 ~ 12A	0.5 ~ 5A	2 ~ 10A	0.4 ~ 4A
	RATED POWER	120W		126W	
	RIPPLE & NOISE (max.) Note.2	60mVp-p	120mVp-p	60mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V			
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±2.0%	±7.0%
	LINE REGULATION	±0.5%	±1.0%	±0.5%	±1.0%
	LOAD REGULATION	±0.5%	±5.0%	±0.5%	±6.0%
	SETUP, RISE, HOLD TIME	200ms, 50ms, 20ms at full load			
INPUT	VOLTAGE RANGE	88 ~ 132VAC/176 ~ 264VAC selected by switch 248 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY (Typ.)	78%		80%	
	AC CURRENT	2.8A/115VAC 1.6A/230VAC			
	INRUSH CURRENT (max.)	COLD START 35A			
	LEAKAGE CURRENT	<3.5mA / 240VAC			
PROTECTION	OVER LOAD	105 ~ 135% rated output power			
		Protection type : Shut down o/p voltage, re-power on to recover			
	OVER VOLTAGE	CH1:5.75 ~ 6.75VDC			
		Protection type : Shut down o/p voltage, re-power on to recover			
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃) on +5V output			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 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, EN55024, Light industry level, criteria A			
OTHERS	MTBF	272.8K hrs min. MIL-HDBK-217F (25℃)			
	DIMENSION	199*110*50mm (L*W*H)			
	PACKING	0.82Kg; 16pcs/14.2Kg/0.95CUFT			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 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.				

■ Mechanical Specification

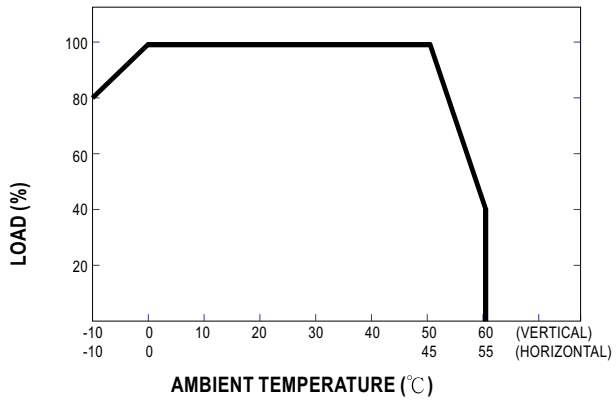
Case No. 906 Unit:mm



Terminal Pin. No Assignment

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

■ Derating Curve



■ Static Characteristics(B)

