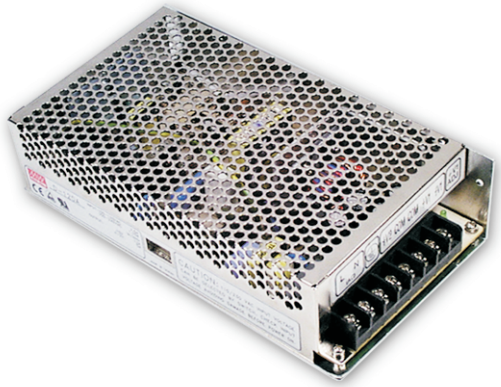
ASTRODYNE

120W Dual Output Switching Power Supply

AD-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		AD-120A		AD-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.				

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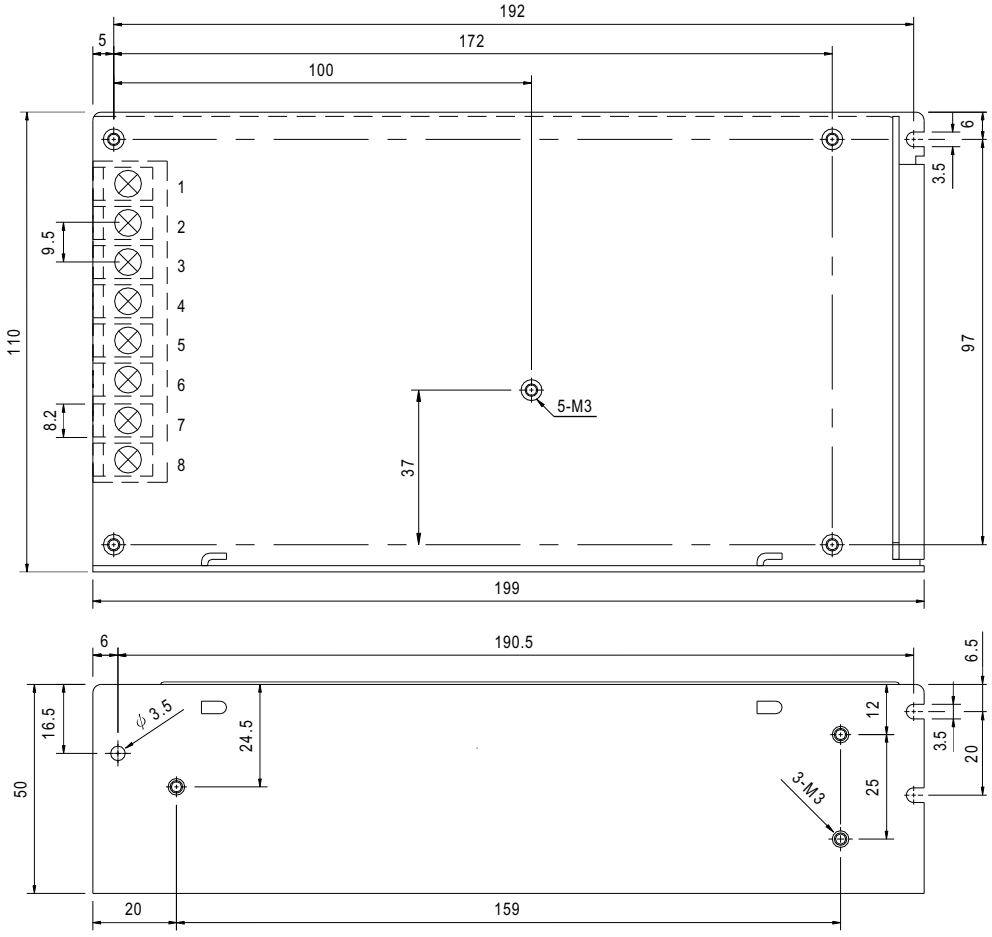
ASTRODYNE

120W Dual Output Switching Power Supply

AD-120 series

■ Mechanical Specification

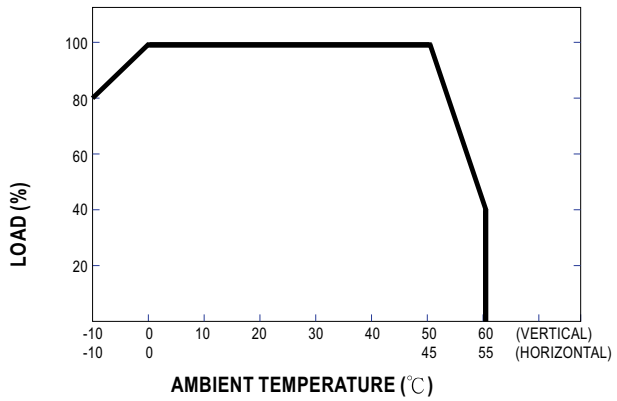
Case No. 906 Unit:mm



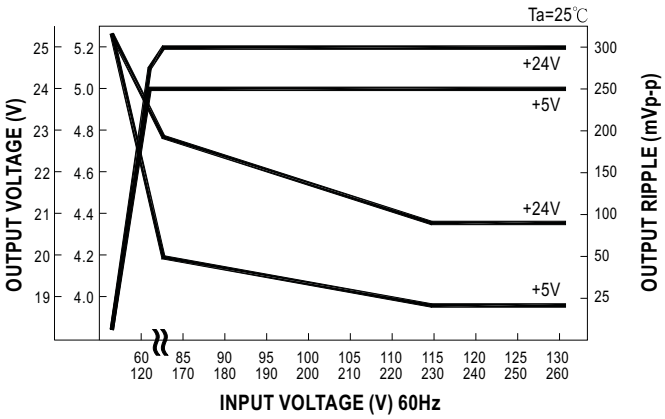
Terminal Pin. No Assignment

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



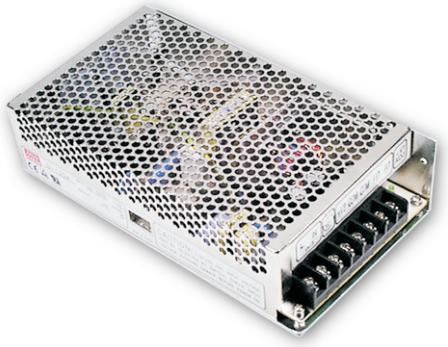
■ Static Characteristics(B)



ASTRODYNE

120W Triple Output Switching Power Supply

AT-120 series



■ Features :

- AC input range selected by switch
- Protections:Short circuit/Over load/Over voltage
- 100% full load burn-in test
- Fixed switching frequency at 25KHz
- 2 years warranty

SPECIFICATION

MODEL		AT-120A			AT-120B			AT-120C			AT-120D		
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3
	DC VOLTAGE	5V	12V	-5V	5V	12V	-12V	5V	15V	-15V	5V	12V	24V
	RATED CURRENT	11A	5A	1A	11A	4.5A	1A	10A	3.5A	1A	8A	2.5A	2A
	CURRENT RANGE	2 ~ 12A	0.5 ~ 5A	0.2 ~ 1A	2 ~ 12A	0.5 ~ 5A	0.2 ~ 1A	2 ~ 12A	0.5 ~ 5A	0.2 ~ 1A	2 ~ 12A	0.2 ~ 5A	0.2 ~ 2A
	RATED POWER	120W			121W			117.5W			118W		
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	80mVp-p	80mVp-p	120mVp-p	120mVp-p	80mVp-p	150mVp-p	150mVp-p	80mVp-p	120mVp-p	180mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V											
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±6.0%	±2.0%	±6.0%	±6.0%	±2.0%	+10,-5%	+10,-5%	±2.0%	±6.0%	±6.0%
	LINE REGULATION	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%
	LOAD REGULATION	±0.5%	±5.0%	±5.0%	±0.5%	±5.0%	±5.0%	±0.5%	±6.0%	±6.0%	±0.5%	±5.0%	±5.0%
	SETUP, RISE, HOLD TIME	800ms, 20ms, 20ms/230VAC 1600ms, 20ms, 12ms/115VAC at full load											
INPUT	VOLTAGE RANGE	88 ~ 132VAC/176 ~ 264VAC selected by switch 240 ~ 370VDC											
	FREQUENCY RANGE	47 ~ 63Hz											
	EFFICIENCY (Typ.)	77%			77%			76%			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℃)											
	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	274.5K hrs min. MIL-HDBK-217F (25℃)											
	DIMENSION	199*110*50mm (L*W*H)											
	PACKING	0.83Kg; 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.												

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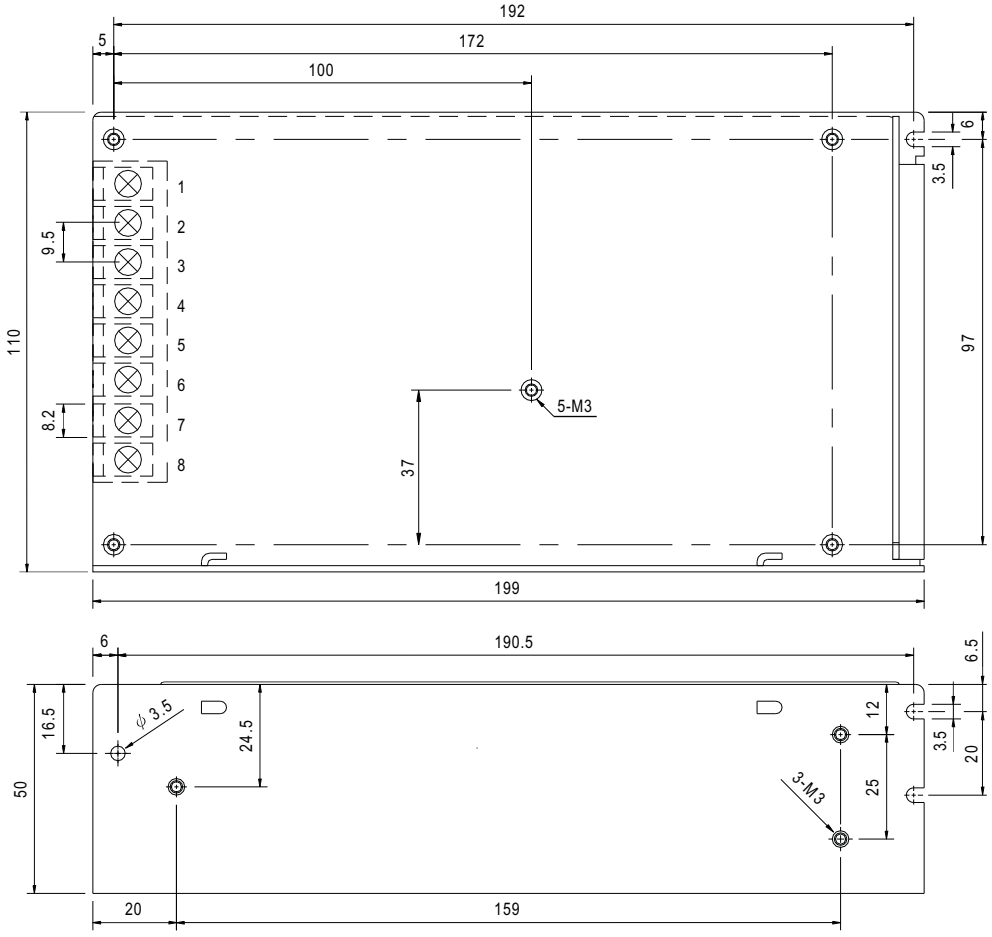
ASTRODYNE

120W Triple Output Switching Power Supply

AT-120 series

■ Mechanical Specification

Case No. 906 Unit:mm

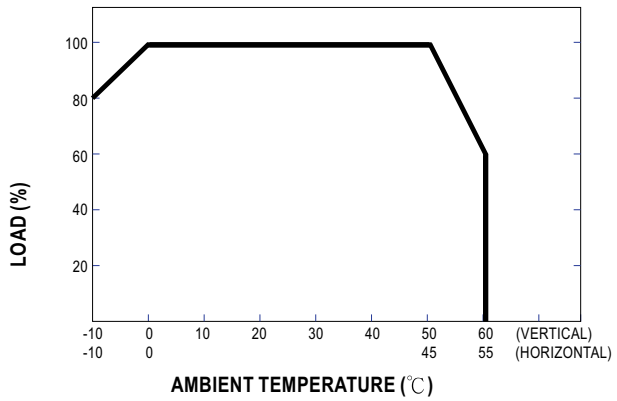


Terminal Pin. No Assignment

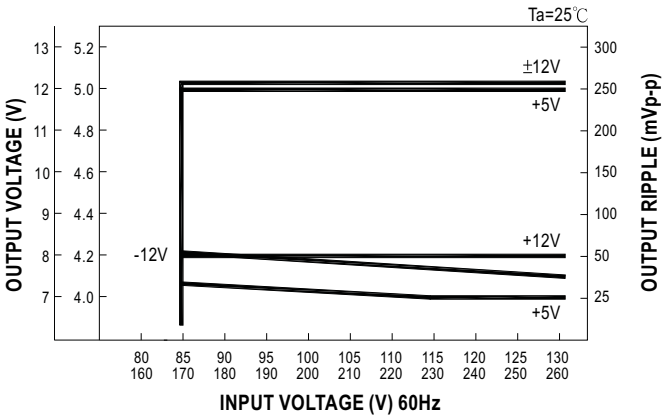
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5,6	DC OUTPUT
2	AC/N	7	DC OUTPUT COM
3	FG ⏚	8	DC OUTPUT +5V

Pin No. \ MODEL	T-120A	T-120B	T-120C	T-120D
4	+12V	+12V	+15V	+24V
5	NC	-12V	-15V	+12V
6	-5V	NC	NC	NC

■ Derating Curve



■ Static Characteristics(B)



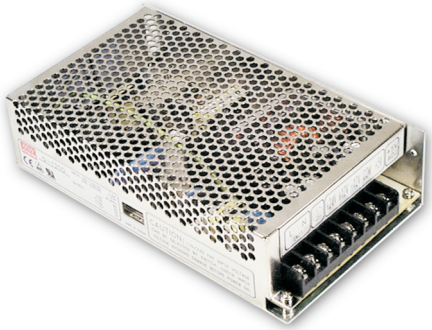
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ASTRODYNE

120W Quad Output Switching Power Supply

AQ-120 series



■ Features :

- AC input range selected by switch
- Protections:Short circuit/Over load/Over voltage
- 100% full load burn-in test
- Fixed switching frequency at 25KHz
- 2 years warranty

SPECIFICATION

MODEL		AQ-120B				AQ-120C				AQ-120D			
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	11A	4A	1A	1A	10A	3.5A	1A	1A	8A	2A	2A	1A
	CURRENT RANGE	2 ~ 12A	0.5 ~ 5A	0.2 ~ 1A	0.2 ~ 1A	2 ~ 12A	0.5 ~ 5A	0.2 ~ 1A	0.2 ~ 1A	2 ~ 12A	0.2 ~ 5A	0.2 ~ 2A	0.2 ~ 1A
	RATED POWER	120W				122.5W				124W			
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	80mVp-p	120mVp-p	80mVp-p	150mVp-p	80mVp-p	150mVp-p	80mVp-p	120mVp-p	180mVp-p	120mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V											
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±6.0%	±6.0%	±2.0%	+10,-5%	±6.0%	+10,-5%	±2.0%	±6.0%	±6.0%	±6.0%
	LINE REGULATION	±0.5%	±1.0%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±0.5%	±5.0%	±5.0%	±5.0%	±0.5%	±6.0%	±5.0%	±6.0%	±0.5%	±5.0%	±5.0%	±5.0%
	SETUP, RISE, HOLD TIME	200ms, 50ms, 20ms at full load											
INPUT	VOLTAGE RANGE	88 ~ 132VAC/176 ~ 264VAC selected by switch 240 ~ 370VDC											
	FREQUENCY RANGE	47 ~ 63Hz											
	EFFICIENCY (Typ.)	77%				76%				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℃)											
	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	261.4K hrs min. MIL-HDBK-217F (25℃)											
	DIMENSION	199*110*50mm (L*W*H)											
	PACKING	0.86Kg; 16pcs/14.7Kg/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.												

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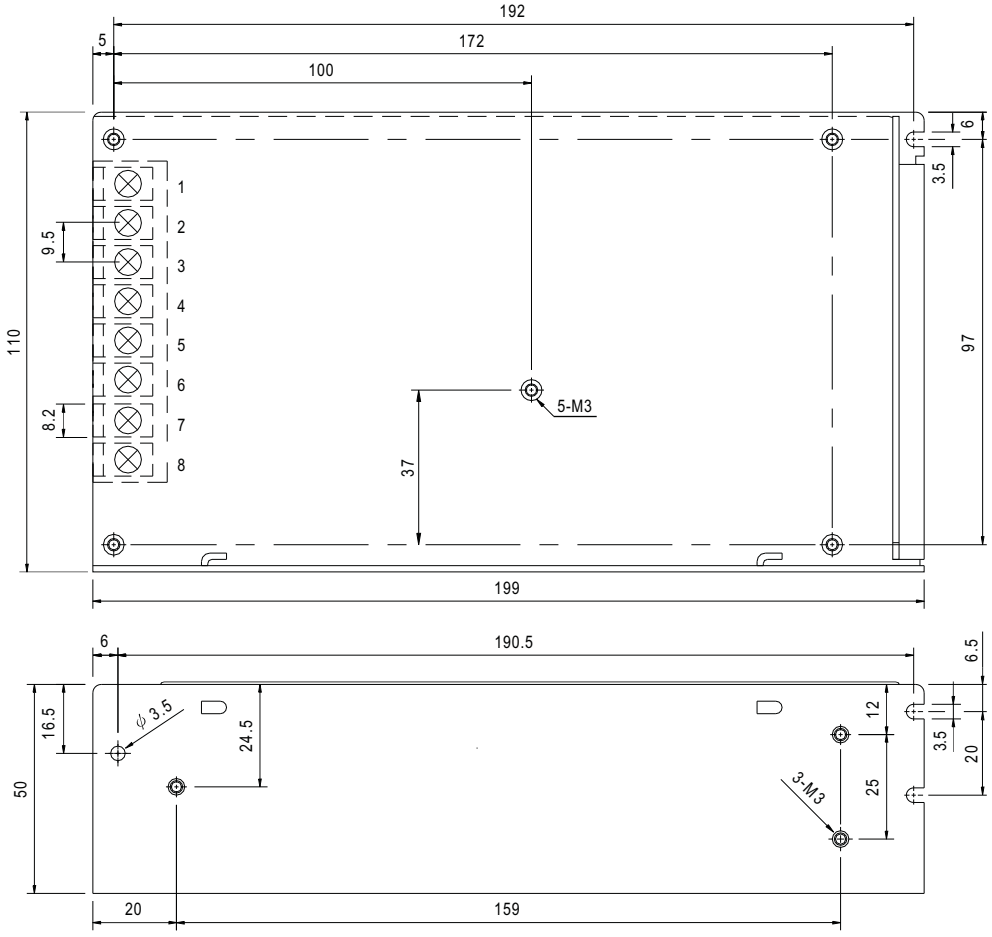
ASTRODYNE

120W Quad Output Switching Power Supply

AQ-120 series

■ Mechanical Specification

Case No. 906 Unit:mm

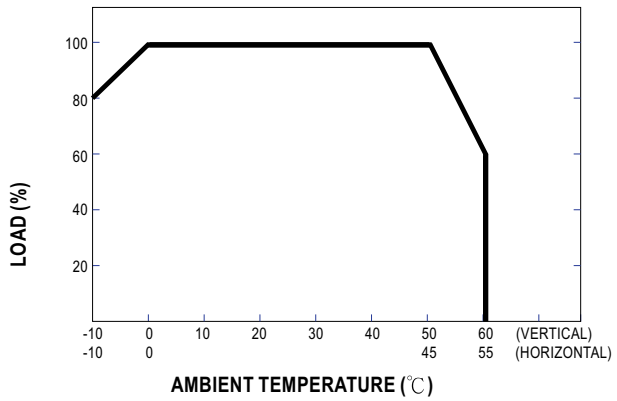


Terminal Pin. No Assignment

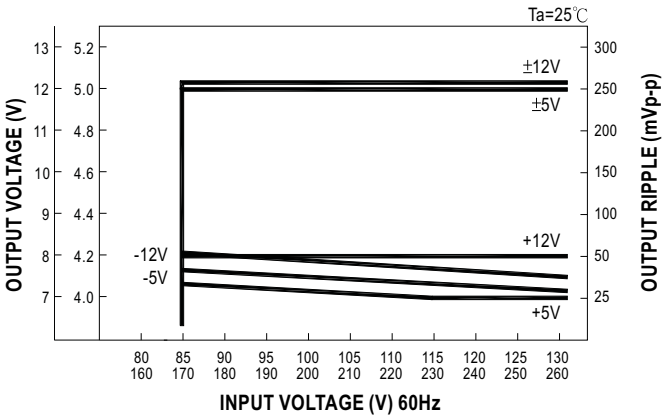
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	6	DC OUTPUT -V1
2	AC/N	7	DC OUTPUT COM
3	FG ⏚	8	DC OUTPUT +V1
4,5	DC OUTPUT		

MODEL / Pin No.	Q-120B	Q-120C	Q-120D
4	+12V	+15V	+24V
5	-12V	-15V	+12V

■ Derating Curve



■ Static Characteristics (B)



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