

# Блоки питания AC-DC

❖ <u>Серия – S</u> .....	2 стр.
➤ преобразователи мощностью от 15Вт до 600Вт. Выход – один канал с напряжением: 5В, 7,5В, 9В, 12В, 13,5В, 15В, 24В, 27В, 30В и 48В в зависимости от типа.	
❖ <u>Серия – D</u> .....	29 стр.
➤ преобразователи мощностью от 30Вт до 120Вт. Выход - два канала с напряжением: 5В, 12В и 24В в зависимости от типа.	
❖ <u>Серия – T</u> .....	36 стр.
➤ преобразователи мощностью от 30Вт до 150Вт. Выход - три канала с напряжением: 3,3В, 5 В, 12В, 15В, 24В, -5 В, -12В или -15В в зависимости от типа.	
❖ <u>Серия – Q</u> .....	43 стр.
➤ преобразователи мощностью от 60Вт до 200Вт . Выход - четыре канала с напряжением: 3,3В, 5 В, 12В, 15В, 24В, -5 В, -12В или -15В в зависимости от типа.	
❖ <u>Серия – DR</u> .....	48 стр.
➤ преобразователи мощностью от 30Вт до 480Вт для монтажа на DIN рейку. Выход - один канал с напряжением: 5 В, 12В, 24В или 48В в зависимости от типа.	
❖ <u>Другие серии</u> .....	65 стр.

А также любые другие блоки питания по Вашему желанию!

- от 5 Ватт до 2400 Ватт;
- открытые и в корпусе;
- модульные с возможностью параллельного включения;
- с функцией источника бесперебойного питания;
- с функцией АТХ, для питания компьютерной техники;
- для монтажа на DIN рейку;
- сетевые адаптеры для питания радиоаппаратуры;
- драйверы светодиодов.

**Наша компания продает комплектующие, которые использует в собственном производстве. Благодаря прямым поставкам из Китая, мы готовы предложить необходимые Вам комплектующие по ценам на 20-30% ниже средних по данным товарам!**

## AC/DC преобразователи серий S и SE

AC/DC преобразователи серий S и SE мощностью от 15Вт до 600Вт имеют защитный перфорированный корпус. Мощные преобразователи имеют встроенный вентилятор для принудительного охлаждения. Диапазон входных напряжений переменного тока от 85В до 264В частотой от 47Гц до 63Гц или от 120В до 370В постоянного напряжения. Выходные напряжения: один канал из комбинации напряжений: 5В, 7.5В, 9В, 12В, 13,5В, 15В, 24В, 27В, 30В и 48В в зависимости от типа. Регулировка выходного напряжения  $\pm 10\%$ . Электрическая прочность изоляции 3000В, защита от короткого замыкания и перенапряжения по выходным цепям с автоматическим восстановлением. Ограничение пускового тока и мягкий старт.



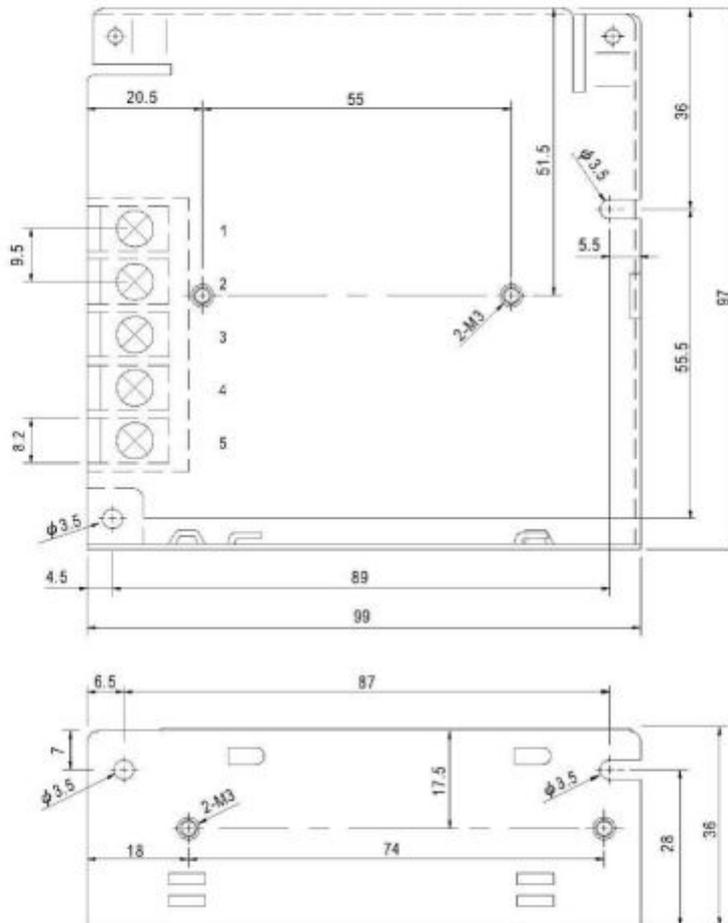
- Features :
  - AC input range selected by switch
  - Protections: Short circuit/Over load
  - Cooling by free air convection
  - 100% full load burn-in
  - Fixed switching frequency at 37KHz
  - Low cost
  - High reliability
  - 1 year warranty

## SPECIFICATION

MODEL	S-15-5	S-15-12	S-15-24	
OUTPUT	DC VOLTAGE	5V	12V	24V
	RATED CURRENT	3A	1.3A	0.7A
	CURRENT RANGE	0 – 3A	0 – 1.3A	0 – 0.7A
	RATED POWER	15W	15.6W	16.8W
	RIPPLE & NOISE (max.) Note.2	50mVp-p	50mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	4.75 – 5.5V	10.8 – 13.2V	21.6 – 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%
LOAD REGULATION	±1.0%	±0.5%	±0.5%	
SETUP, RISE, HOLD TIME	200ms, 100ms, 30ms at full load			
INPUT	VOLTAGE RANGE	85 – 132VAC / 170 – 264VAC selected by switch		240 – 370VDC
	FREQUENCY RANGE	47 – 63Hz		
	EFFICIENCY(Typ.)	65%	68%	72%
	AC CURRENT	0.5A/115VAC    0.25A/230VAC		
	INRUSH CURRENT(max.)	COLD START 15A/115VAC    30A/230VAC		
LEAKAGE CURRENT	<0.5mA / 240VAC			
PROTECTION	OVER LOAD	105 – 150% rated output power		Protection type : Fold back current limiting, recovers automatically after fault condition is removed
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)		
ENVIRONMENT	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	±0.02%/°C (0 ~ 50°C)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes		
SAFETY & EMC	SAFETY STANDARDS	Design refer to UL1012		
	WITHSTAND VOLTAGE	I/P-O/P: 1.5KVAC    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	Design refer to FCC Part15 J Conduction Class B			
OTHERS	MTBF	522.1K hrs min.    MIL-HDBK-217F (25°C)		
	DIMENSION	99*97*36mm (L*W*H)		
	PACKING	0.31Kg: 45pcs/15Kg/0.9CUFT		
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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.			

■ Mechanical Specification

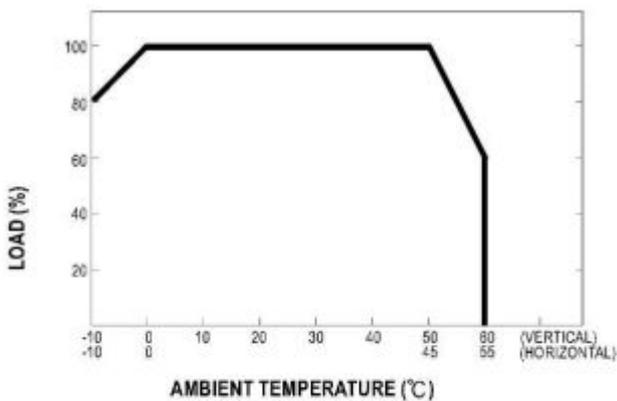
Case No. 905 Unit:mm



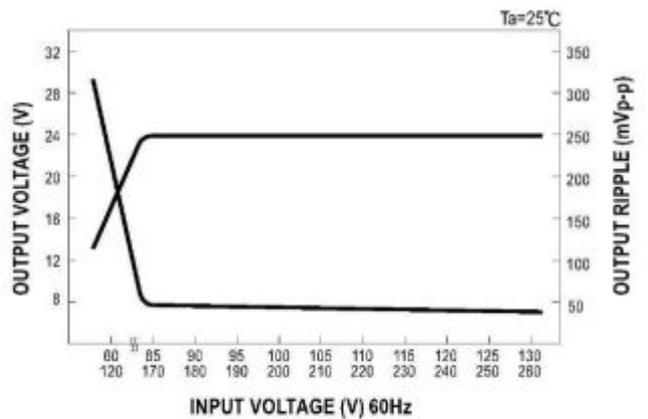
Terminal Pin. No Assignment

Pin No.	Assignment	Pin No.	Assignment
1	DC OUTPUT +V	3	FG
2	DC OUTPUT -V	4.5	AC INPUT

■ Derating Curve



■ Static Characteristics (24V)





### ■ Features :

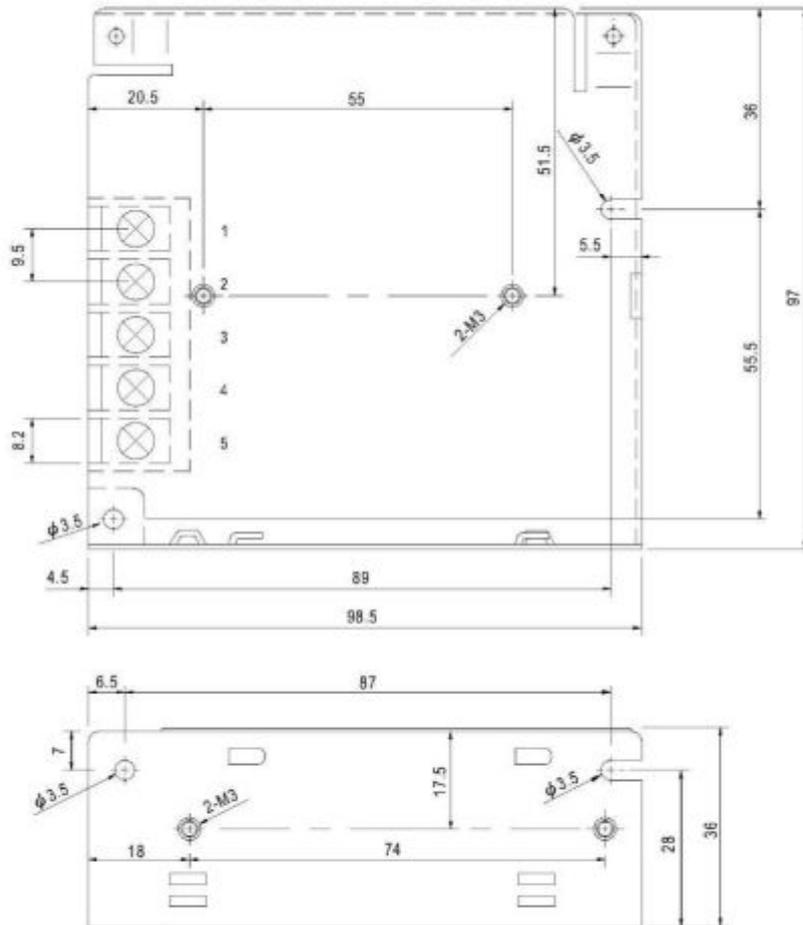
- Universal AC input / Full range
- Protections: Short circuit/Over load/Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 56KHz
- 2 years warranty

### SPECIFICATION

MODEL	S-25-5	S-25-12	S-25-15	S-25-24	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	5A	2.1A	1.7A	1.1A
	CURRENT RANGE	0 – 5A	0 – 2.1A	0 – 1.7A	0 – 1.1A
	RATED POWER	25W	25.2W	25.5W	26.4W
	RIPPLE & NOISE (max.) Note.2	50mVp-p	100mVp-p	100mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	300ms, 50ms/230VAC      800ms, 50ms/115VAC at full load			
HOLD TIME (Typ.)	90ms/230VAC      12ms/115VAC at full load				
INPUT	VOLTAGE RANGE	85 ~ 264VAC      120 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY(Typ.)	72%/115VAC	76%/115VAC	77%/115VAC	80%/115VAC
	AC CURRENT (Typ.)	0.6A/115VAC      0.35A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 13A/115VAC      25A/230VAC			
	LEAKAGE CURRENT	<0.75mA / 240VAC			
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed.			
	OVER VOLTAGE	5.75V ~ 6.75V	13.8V ~ 16.2V	17.25V ~ 20.25V	27.6V ~ 32.4V
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)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL1012, 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; ENV50204, EN55024, Light industry level, criteria A			
OTHERS	MTBF	330.8K hrs min.    MIL-HDBK-217F (25°C)			
	DIMENSION	99*97*36mm (L*W*H)			
	PACKING	0.39Kg; 45pcs/18Kg/0.9CUFT			
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF &amp; 47uF parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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.</li> </ol>				

■ Mechanical Specification

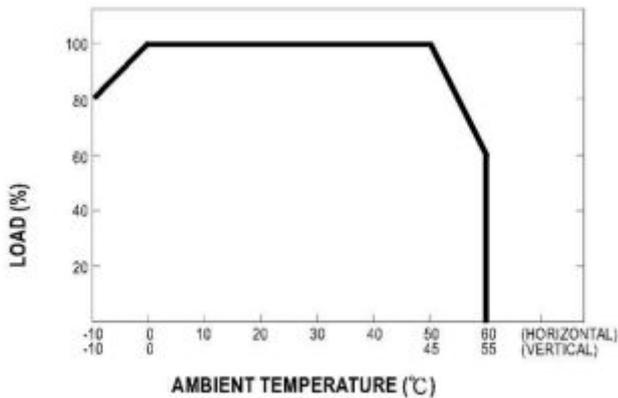
Case No. 905 Unit:mm



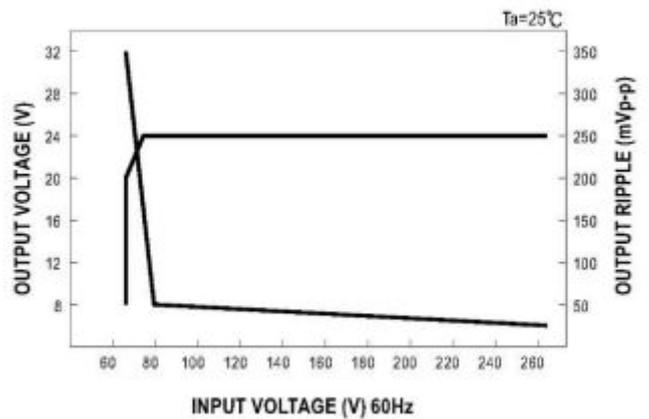
Terminal Pin. No Assignment

Pin No.	Assignment	Pin No.	Assignment
1	DC OUTPUT -V	3	FG ±
2	DC OUTPUT +V	4.5	AC INPUT

■ Derating Curve



■ Static Characteristics (24V)





### ■ Features :

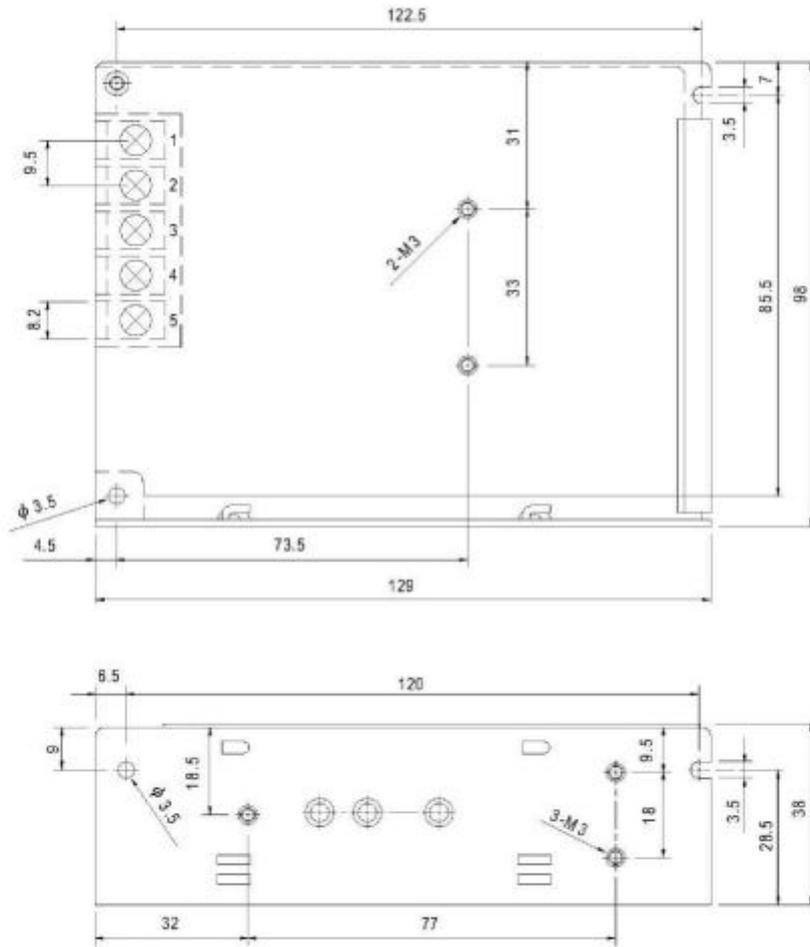
- AC input range selected by switch
- Protections: Short circuit/Over load
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 37KHz
- 1 year warranty

### SPECIFICATION

MODEL	S-35-5	S-35-12	S-35-15	S-35-24	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	7A	3A	2.4A	1.5A
	CURRENT RANGE	0 ~ 7A	0 ~ 3A	0 ~ 2.4A	0 ~ 1.5A
	RATED POWER	35W	36W	36W	36W
	RIPPLE & NOISE (max.) Note.2	75mVp-p	100mVp-p	100mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	22.6 ~ 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±0.5%	±0.5%	±0.5%
SETUP, RISE, HOLD TIME	200ms, 100ms, 30ms at full load				
INPUT	VOLTAGE RANGE	85 ~ 132VAC / 170 ~ 264VAC selected by switch      240 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY(Typ.)	70%	76%	78%	78%
	AC CURRENT	0.8A/115VAC      0.45A/230VAC			
	INRUSH CURRENT(max.)	COLD START 18A/115VAC      36A/230VAC			
	LEAKAGE CURRENT	<2mA / 240VAC			
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Fold back current limiting, recovers automatically after fault condition is removed			
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)			
ENVIRONMENT	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
	SAFETY STANDARDS	Design refer to UL1012			
SAFETY & EMC	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC    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	Design refer to FCC Part15 J Conduction Class B			
OTHERS	MTBF	435.2K hrs min.    MIL-HDBK-217F (25°C)			
	DIMENSION	129*98*38mm (L*W*H)			
	PACKING	0.41Kg; 30pcs/13.4Kg/0.86CUFT			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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.				

■ Mechanical Specification

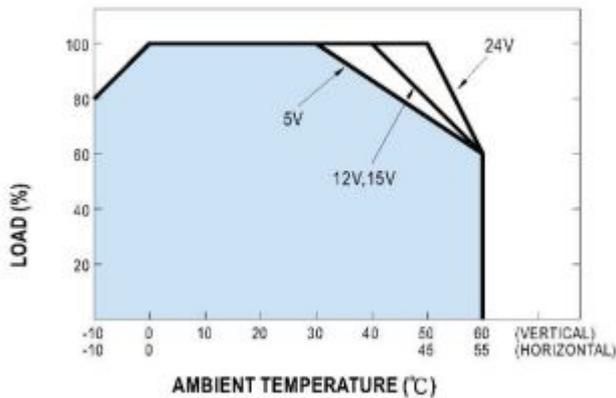
Case No. 903 Unit:mm



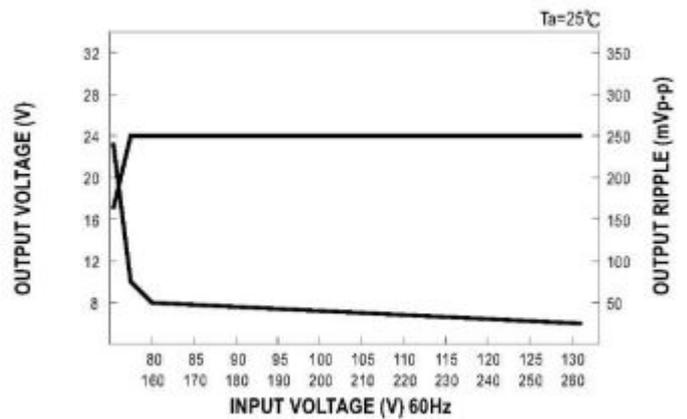
Terminal Pin. No Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V
2	AC/N	5	DC OUTPUT +V
3	FG $\oplus$		

■ Output Derating



■ Static Characteristics (24V)





### ■ Features :

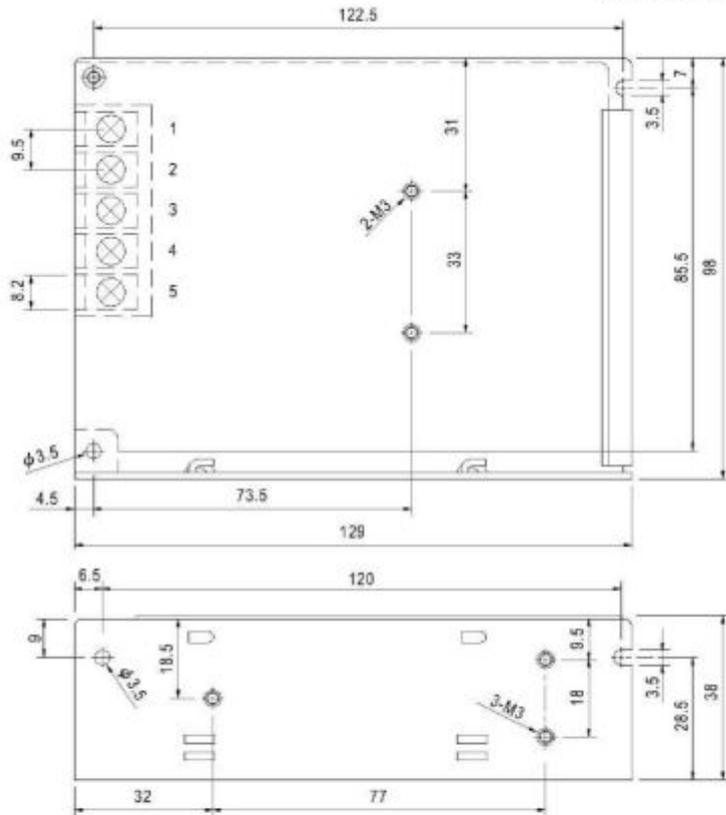
- Universal AC input / Full range
- Protections: Short circuit/Over load/Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 36KHz
- 2 years warranty

### SPECIFICATION

MODEL	S-40-5	S-40-12	S-40-15	S-40-24	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	8A	3.5A	2.8A	1.8A
	CURRENT RANGE	0 - 8A	0 - 3.5A	0 - 2.8A	0 - 1.8A
	RATED POWER	40W	42W	42W	43W
	RIPPLE & NOISE (max.) Note.2	75mVp-p	100mVp-p	100mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	4.75 - 5.5V	10.8 - 13.2V	13.5 - 16.5V	21.6 - 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	300ms, 50ms/230VAC      800ms, 50ms/115VAC at full load			
HOLD TIME (Typ.)	70ms/230VAC      15ms/115VAC at full load				
INPUT	VOLTAGE RANGE	85 - 264VAC      120 - 370VDC			
	FREQUENCY RANGE	47 - 63Hz			
	EFFICIENCY (Typ.)	72%/115VAC	76%/115VAC	76%/115VAC	78%/115VAC
	AC CURRENT (Typ.)	1.2A/115VAC      0.6A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 25A/115VAC      50A/230VAC			
	LEAKAGE CURRENT	<1mA / 240VAC			
PROTECTION	OVER LOAD	105 - 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed			
	OVER VOLTAGE	5.75 - 6.75V	13.8 - 16.2V	17.25 - 20.25	27.6 - 32.4V
		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)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL1012, 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; ENV50204, EN55024, Light industry level, criteria A			
OTHERS	MTBF	314.1K hrs min.    MIL-HDBK-217F (25°C)			
	DIMENSION	129*98*38mm (L*W*H)			
	PACKING	0.44Kg; 30pcs/13.9Kg/0.86CUFT			
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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.</li> </ol>				

■ Mechanical Specification

Case No. 903 Unit:mm

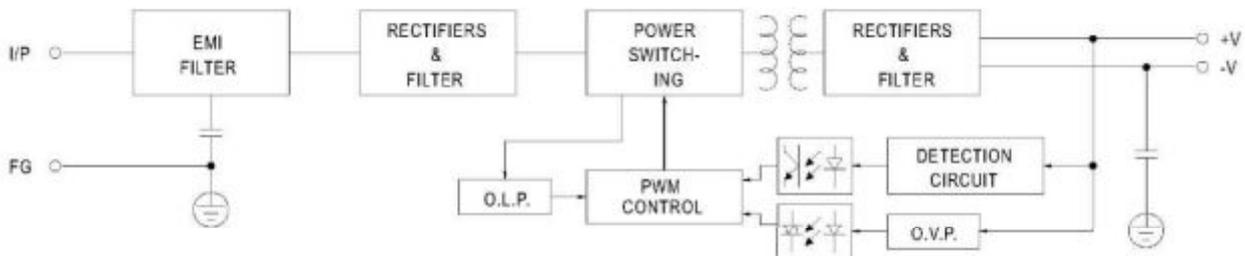


Terminal Pin. No Assignment

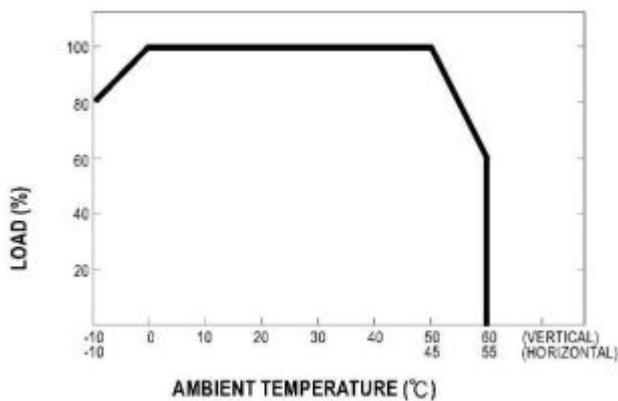
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V
2	AC/N	5	DC OUTPUT +V
3	FG $\perp$		

■ Block Diagram

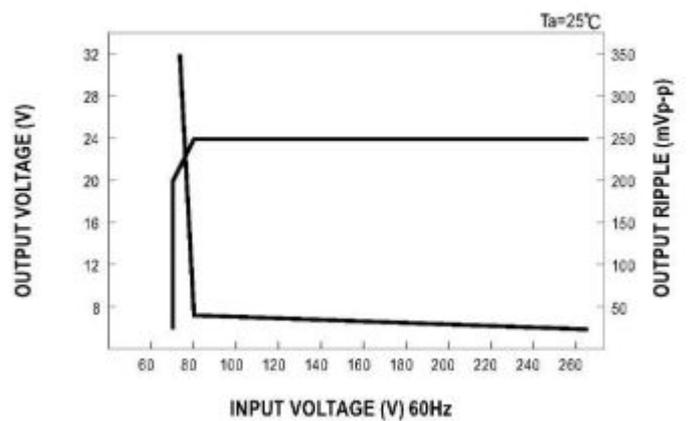
fosc : 36KHz



■ Derating Curve



■ Static Characteristics (24V)





### ■ Features :

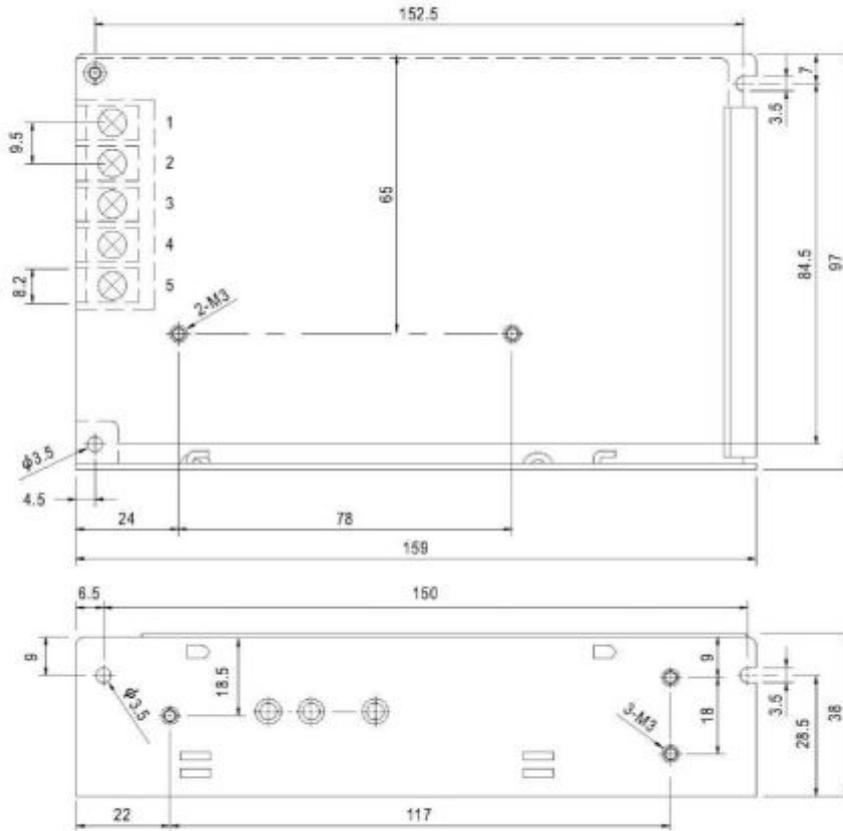
- AC input range selected by switch
- Protections: Short circuit/Over load
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 27KHz
- 1 year warranty

### SPECIFICATION

MODEL	S-50-5	S-50-12	S-50-15	S-50-24	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	10A	4.2A	3.4A	2.1A
	CURRENT RANGE	0 – 10A	0 – 4.2A	0 – 3.4A	0 – 2.1A
	RATED POWER	50W	50.4W	51W	50.4W
	RIPPLE & NOISE (max.) Note.2	75mVp-p	100mVp-p	100mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	4.75 – 5.5V	10.8 – 13.2V	13.5 – 16.5V	22.6 – 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±0.5%	±0.5%	±0.5%
SETUP, RISE, HOLD TIME	200ms, 100ms, 20ms at full load				
INPUT	VOLTAGE RANGE	85 – 132VAC / 170 – 264VAC selected by switch			240 – 370VDC
	FREQUENCY RANGE	47 – 63Hz			
	EFFICIENCY(Typ.)	71%	78%	78%	82%
	AC CURRENT	1.3A/115VAC    0.65A/230VAC			
	INRUSH CURRENT(max.)	COLD START 18A/115VAC    36A/230VAC			
	LEAKAGE CURRENT	<1mA / 240VAC			
PROTECTION	OVER LOAD	105 – 150% rated output power			Protection type : Fold back current limiting, 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)			
	VIBRATION	10–500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC	SAFETY STANDARDS	Design refer to UL1012			
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC    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	Design refer to FCC Part15 J Conduction Class B			
OTHERS	MTBF	408.3K hrs min.    MIL-HDBK-217F (25°C)			
	DIMENSION	159*97*38mm (L*W*H)			
	PACKING	0.51Kg; 24pcs/13.1Kg/0.7CUFT			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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.				

■ Mechanical Specification

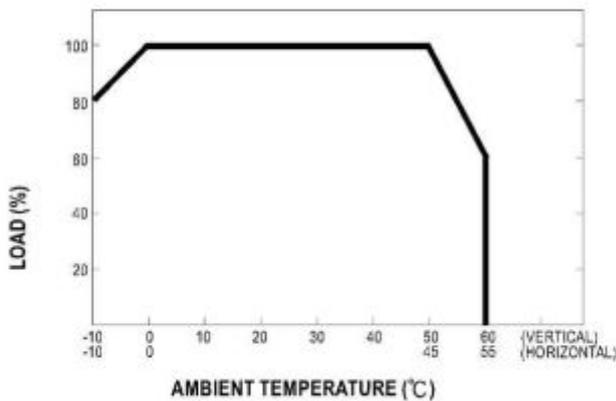
Case No. 901 Unit:mm



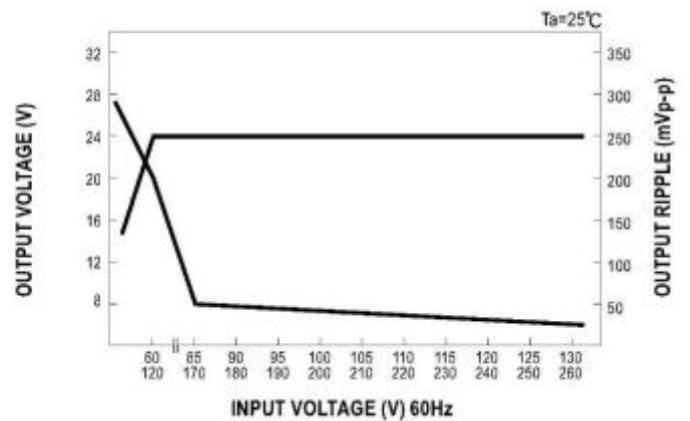
Terminal Pin. No Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V
2	AC/N	5	DC OUTPUT +V
3	FG $\pm$		

■ Output Derating



■ Static Characteristics (24V)





■ Features :

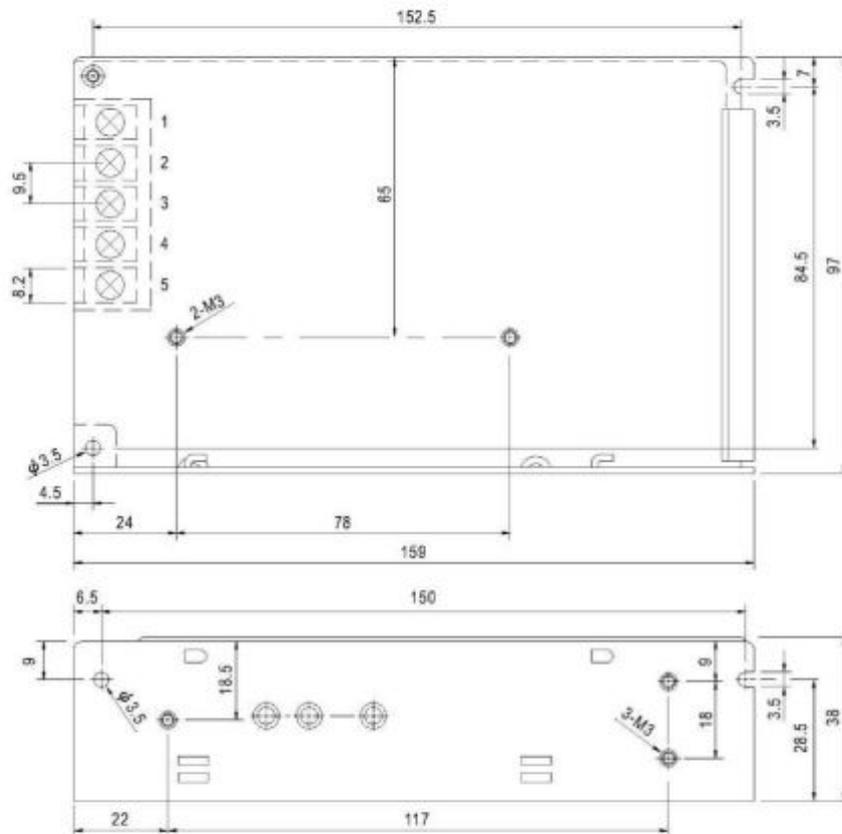
- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 50KHz
- 2 years warranty

## SPECIFICATION

MODEL	S-60-5	S-60-12	S-60-15	S-60-24	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	12A	5A	4A	2.5A
	CURRENT RANGE	0 ~ 12A	0 ~ 5A	0 ~ 4A	0 ~ 2.5A
	RATED POWER	60W	60W	60W	60W
	RIPPLE & NOISE (max.) Note.2	120mVp-p	120mVp-p	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	300ms, 50ms/230VAC      800ms, 50ms/115VAC at full load			
HOLD UP TIME (Typ.)	80ms/230VAC      12ms/115VAC at full load				
INPUT	VOLTAGE RANGE	85 ~ 264VAC      120 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY(Typ.)	73%	76%	77%	79%
	AC CURRENT (Typ.)	2A/115VAC      1A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC      40A/230VAC			
	LEAKAGE CURRENT	<3.5mA / 240VAC			
PROTECTION	OVERLOAD	105 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed.			
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25	27.6 ~ 32.4V
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)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL1012, 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			
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A			
	MTBF	316.2K hrs min.    MIL-HDBK-217F (25°C)			
	DIMENSION	159*97*38mm (L*W*H)			
	PACKING	0.51Kg; 24pcs/13.1Kg/0.7CUFT			
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF &amp; 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

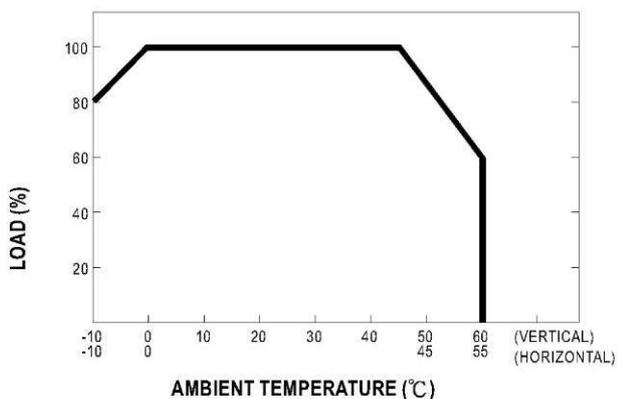
Case No. 901 Unit:mm



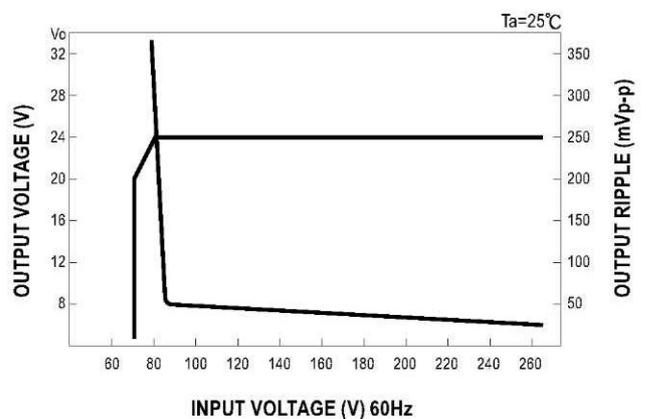
Terminal Pin No. Assignment

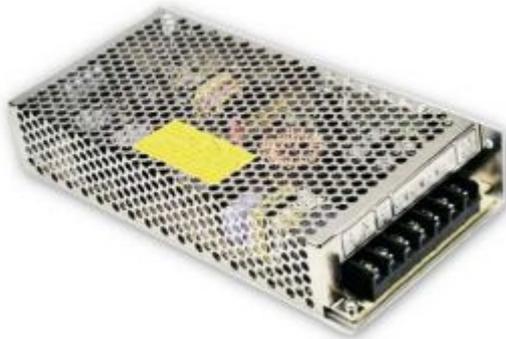
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V
2	AC/N	5	DC OUTPUT +V
3	FG $\oplus$		

■ Derating Curve



■ Static Characteristics (24V)





■ Features :

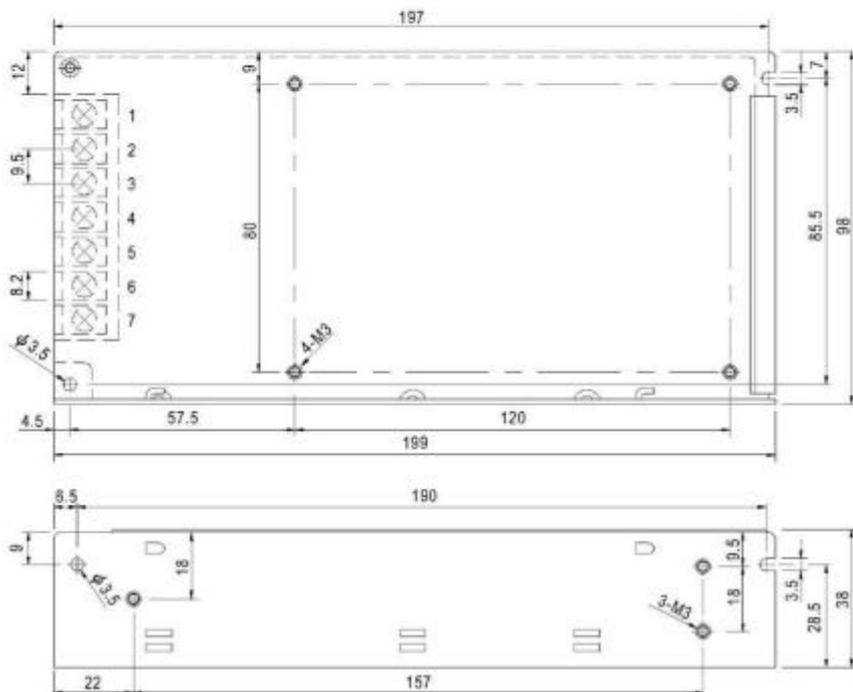
- AC input range selectable by switch
- Protections: Short circuit / Overload
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 25KHz
- Low cost
- High reliability
- 1 year warranty

**SPECIFICATION**

MODEL	S-100-3	S-100-5	S-100-7.5	S-100-10	S-100-12	S-100-15	S-100-18	S-100-24	S-100-27	S-100-36	S-100-48		
OUTPUT	DC VOLTAGE	3V	5V	7.5V	10V	12V	15V	18V	24V	27V	36V	48V	
	RATED CURRENT	20A	20A	13.6A	10A	8.5A	6.7A	5.6A	4.5A	3.7A	2.7A	2A	
	CURRENT RANGE	0 – 20A	0 – 20A	0 – 13.6A	0 – 10A	0 – 8.5A	0 – 6.7A	0 – 5.6A	0 – 4.5A	0 – 3.7A	0 – 2.7A	0 – 2A	
	RATED POWER	60W	100W	102W	100W	102W	100.5W	100.8W	108W	99.9W	97.2W	96W	
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	
	VOLTAGE ADJ. RANGE	2.85 – 3.3V	4.75 – 5.5V	6.75 – 8.25V	9 – 11V	10.8 – 13.2V	13.5 – 16.5V	16.2 – 19.8V	21.6 – 26.4V	26 – 32V	32.4 – 39.6V	43.2 – 52.8V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%	±0.2%	
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%	±0.2%	
	SETUP, RISE TIME	200ms, 80ms at full load											
HOLD UP TIME (Typ.)	24ms at full load												
INPUT	VOLTAGE RANGE	85 – 132VAC/180 – 264VAC selected by switch      255 – 370VDC											
	FREQUENCY RANGE	47 – 63Hz											
	EFFICIENCY (Typ.)	70%	78%	80%	80%	81%	81%	82%	84%	84%	84%	84%	
	AC CURRENT (Typ.)	1.9A/115VAC		0.96A/230VAC									
	INRUSH CURRENT (Typ.)	COLD START 27A/115VAC			54A/230VAC								
	LEAKAGE CURRENT	<1mA / 240VAC											
PROTECTION	OVERLOAD	105 – 150% rated output power (130 – 180% of rated output power for S-100-5, S-100-36 ; 150 – 200% of rated output power for S-100-7.5 ) Protection type : Shut down o/p voltage, re-power on to recover											
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)											
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes											
SAFETY & EMC	SAFETY STANDARDS	Design refer to UL1012											
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC    I/P-FG:1.5KVAC    O/P-FG:0.5KVAC											
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC											
	EMI CONDUCTION & RADIATION	Design refer to FCC Part15 J Conduction Class B											
OTHERS	MTBF	322.4K hrs min.    MIL-HDBK-217F (25°C)											
	DIMENSION	199*98*38mm (L*W*H)											
	PACKING	0.62Kg; 20pcs/13.6Kg/0.8CUFT											
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p>												

**Mechanical Specification**

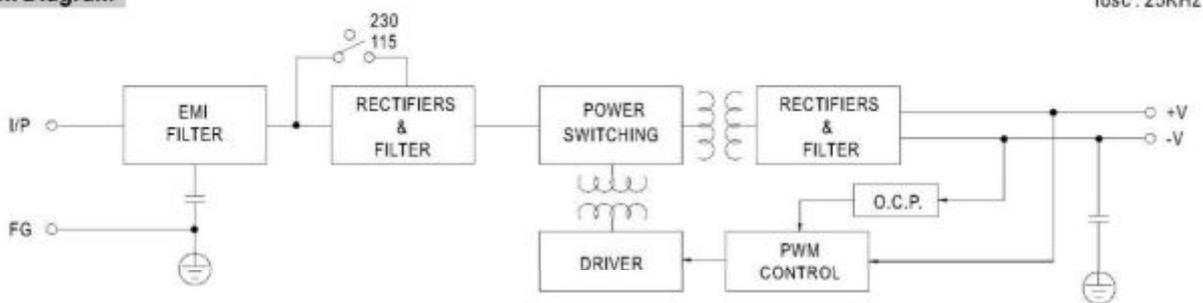
Case No. 902 Unit:mm



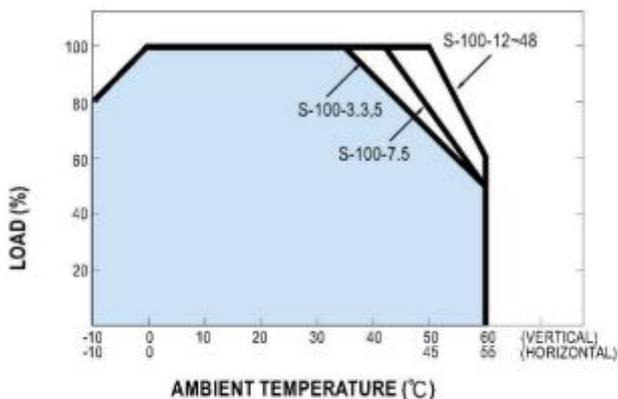
Terminal Pin No. Assignment

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

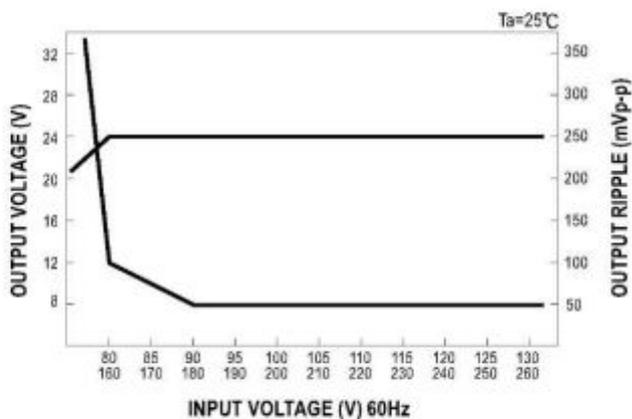
**Block Diagram**



**Derating Curve**



**Static Characteristics (24V)**





### ■ Features :

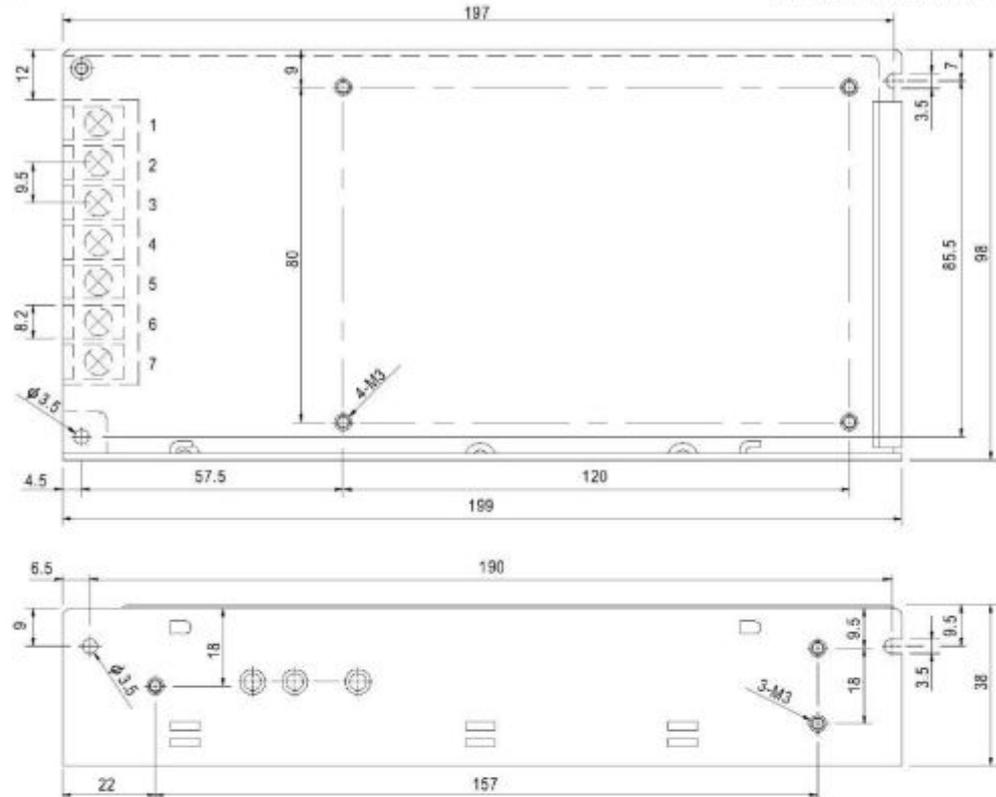
- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 25KHz
- LED indicator for power on
- Made in China for low cost
- High reliability
- 1 year warranty

### SPECIFICATION

MODEL	S-145-5	S-145-7.5	S-145-12	S-145-15	S-145-24	S-145-27	S-145-48	
OUTPUT	DC VOLTAGE	5V	7.5V	12V	15V	24V	27V	48V
	RATED CURRENT	25A	18A	12A	9.6A	6A	5.3A	3A
	CURRENT RANGE	0 – 25A(30A max.)	0 – 18A(21A max.)	0 – 12A(14A max.)	0 – 9.6A(11A max.)	0 – 6A(7A max.)	0 – 5.3A	0 – 3A
	RATED POWER	125W	135W	144W	144W	144W	143.1W	144W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p	200mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	4.5 – 5.5V	6 – 8.3V	10.6 – 13.2V	13.2 – 16.5V	21 – 28V	24.5 – 29.5V	43.2 – 52.8V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	100ms, 50ms at full load						
HOLD UP TIME (Typ.)	24ms at full load							
INPUT	VOLTAGE RANGE	88 – 132VAC/176 – 264VAC selected by switch			248 – 370VDC			
	FREQUENCY RANGE	47 – 63Hz						
	EFFICIENCY (Typ.)	78%	80.5%	80.5%	81%	83.5%	85%	83.5%
	AC CURRENT (Typ.)	2.6A/115VAC		1.3A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 32A						
LEAKAGE CURRENT	<3.5mA / 240VAC							
PROTECTION	OVERLOAD	125 – 165% rated output power Protection type : Shut down o/p voltage, re-power on to recover						
	OVER VOLTAGE	5.6 – 6.8V	8.6 – 10V	13.8 – 16.2V	17.3 – 20.3V	29 – 32V	31.05 – 36.45V	55.2 – 64.8V
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)						
	VIBRATION	10 – 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes						
SAFETY & EMC	SAFETY STANDARDS	Design refer to UL1012						
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC 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 / 25°C / 70% RH						
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B						
OTHERS	EMS IMMUNITY	Compliance to IEC801-2,3,4, light industry level, criteria A						
	MTBF	286.7K hrs min. MIL-HDBK-217F (25°C)						
	DIMENSION	199*98*38mm (L*W*H)						
PACKING	0.71Kg/ 30pcs/22.5Kg/1.22CUFT							
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p>							

**Mechanical Specification**

Case No. 902 Unit:mm

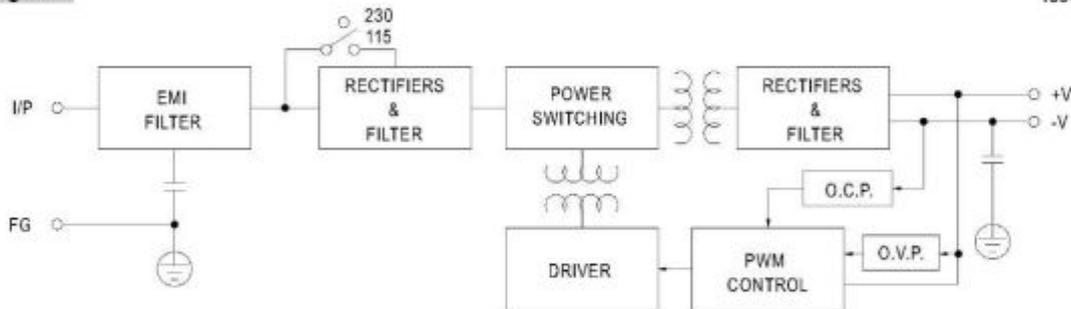


Terminal Pin No. Assignment

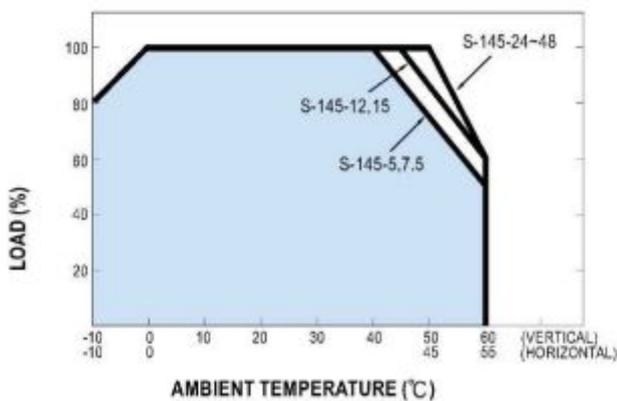
Pin No.	Assignment
1	AC/L
2	AC/N
3	FG $\pm$
4.5	DC OUTPUT -V
6.7	DC OUTPUT +V

**Block Diagram**

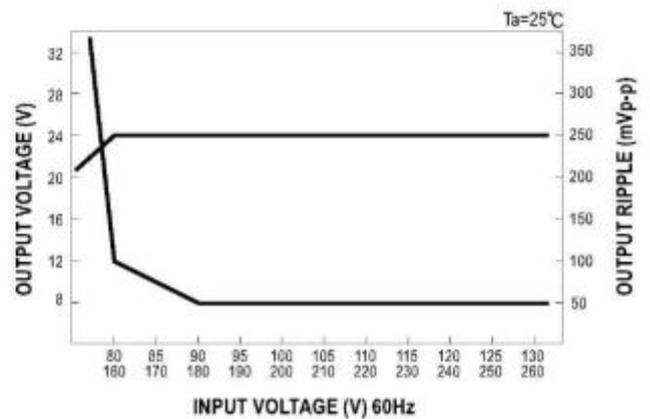
fosc : 25KHz



**Derating Curve**



**Static Characteristics (24V)**





### ■ Features :

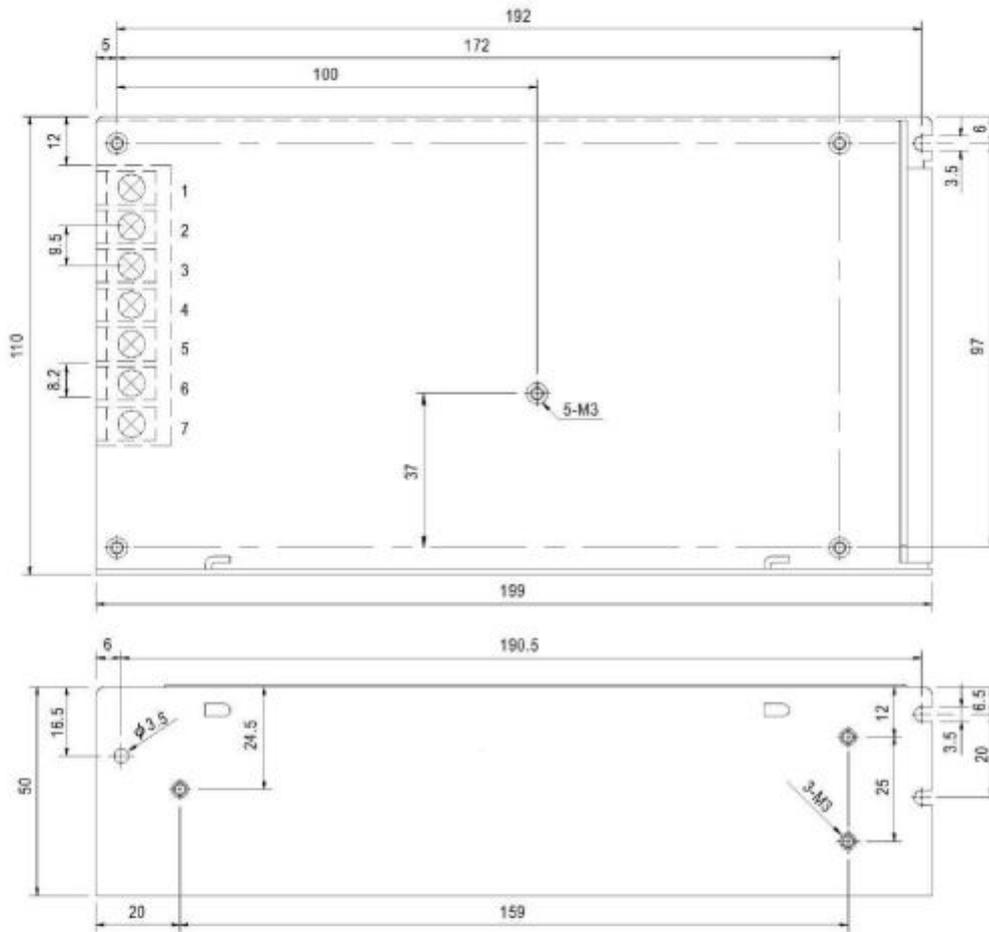
- AC input range selectable by switch
- Protections: Short circuit/Over load/Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 25KHz
- 2 years warranty

### SPECIFICATION

MODEL	S-150-5	S-150-7.5	S-150-9	S-150-12	S-150-13.5	S-150-15	S-150-24	S-150-27	S-150-48		
OUTPUT	DC VOLTAGE	5V	7.5V	9V	12V	13.5V	15V	24V	27V	48V	
	RATED CURRENT	30A	20A	16.7A	12.5A	11.2A	10A	6.5A	5.6A	3.2A	
	CURRENT RANGE	0 ~ 30A	0 ~ 20A	0 ~ 16.7A	0 ~ 12.5A	0 ~ 11.2A	0 ~ 10A	0 ~ 6.5A	0 ~ 5.6A	0 ~ 3.2A	
	RATED POWER	150W	150W	150.3W	150W	151.2W	150W	156W	151.2W	153.6W	
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	180mVp-p	180mVp-p	180mVp-p	180mVp-p	240mVp-p	240mVp-p	240mVp-p	
	VOLTAGE ADJ. RANGE	4.5 ~ 5.5V	6 ~ 8.3V	8 ~ 10.4V	10.6 ~ 13.2V	12 ~ 15V	13.5 ~ 16.5V	21 ~ 28V	24 ~ 30V	43 ~ 53V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%	
	LOAD REGULATION	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%	
	SETUP, RISE TIME	100ms, 50ms at full load									
HOLD TIME (Typ.)	28ms at full load										
INPUT	VOLTAGE RANGE	88 ~ 132VAC/176 ~ 264VAC selected by switch      248 ~ 370VDC									
	FREQUENCY RANGE	47 ~ 63Hz									
	EFFICIENCY (Typ.)	78%	80%	80%	82%	83%	84%	85%	86%	87%	
	AC CURRENT (Typ.)	3.2A/115VAC		1.6A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 35A									
	LEAKAGE CURRENT	<3.5mA / 240VAC									
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Shut down o/p voltage, re-power on to recover									
	OVER VOLTAGE	5.75 ~ 6.75V	8.63 ~ 10.13V	10.35 ~ 12.2V	13.8 ~ 16.2V	15.53 ~ 18.2V	17.25 ~ 20.3V	30 ~ 34.8V	31.1 ~ 36.45V	55.2 ~ 64.8V	
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)									
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes									
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL1012, 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									
OTHERS	EMM IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A									
	MTBF	286.7K hrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	199*110*50mm (L*W*H)									
PACKING	0.8Kg; 16pcs/13.8Kg/0.95CUFT										
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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.</li> </ol>										

■ Mechanical Specification

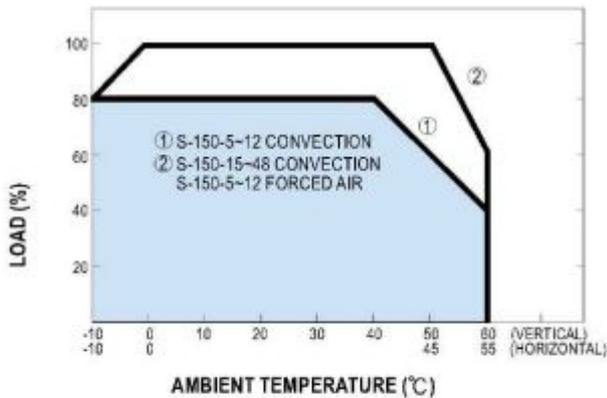
Case No. 906 Unit:mm



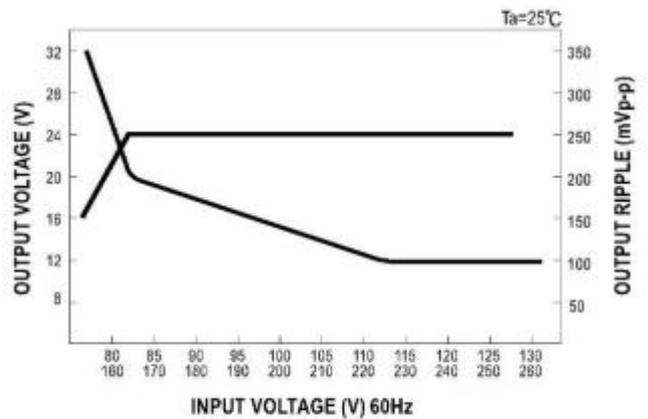
Terminal Pin. No Assignment

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

■ Derating Curve



■ Static Characteristics (24V)





■ Features :

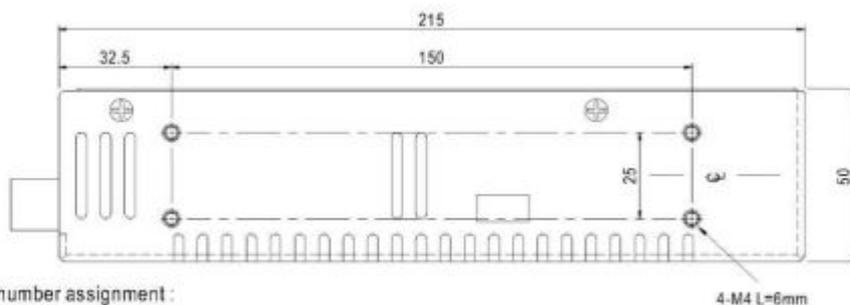
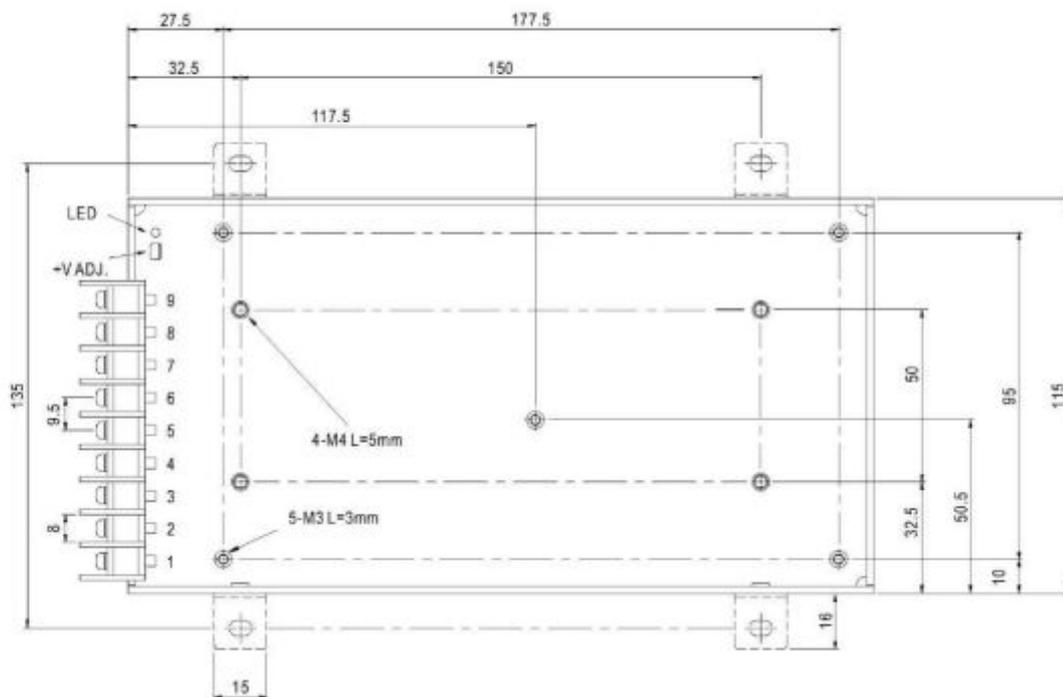
- AC input range selectable by switch
- Protections: Short circuit/Over load/Over temperature
- Cooling by free air convection
- 100% full load burn-in test
- Compact size, light weight
- Fixed switching frequency at 25KHz
- Low cost
- High reliability
- 1 year warranty

**SPECIFICATION**

MODEL	S-201-5	S-201-7.5	S-201-12	S-201-13.5	S-201-15	S-201-24	S-201-27	S-201-48		
OUTPUT	DC VOLTAGE	5V	7.5V	12V	13.5V	15V	24V	27V	48V	
	RATED CURRENT	40A	26.5A	16.5A	14.7A	13A	8.3A	7.4A	4.2A	
	CURRENT RANGE	0 ~ 40A	0 ~ 26.50A	0 ~ 16.5A	0 ~ 14.7A	0 ~ 13A	0 ~ 8.3A	0 ~ 7.4A	0 ~ 4.2A	
	RATED POWER	200W	198.75W	198W	198.45W	198W	199.2W	199.8W	201.6W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p	
	VOLTAGE ADJ. RANGE	4.5 ~ 5.6V	6 ~ 9V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	41 ~ 56V	
	VOLTAGE TOLERANCE <small>Note.3</small>	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
LOAD REGULATION	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
SETUP, RISE, HOLD TIME	200ms, 100ms, 20ms at full load									
INPUT	VOLTAGE RANGE	90 ~ 132VAC / 180 ~ 264VAC by switch			254 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY (Typ.)	74%	79%	80%	80%	81%	83%	83%	84%	
	AC CURRENT	4.5A/115VAC		2.5A/230VAC						
	INRUSH CURRENT (max.)	50A/115VAC		50A/230VAC						
LEAKAGE CURRENT	<3.5mA / 240VAC									
PROTECTION	OVER LOAD	105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	5.75 ~ 6.75V	9.4 ~ 10.9V	13.8 ~ 16.2V	15.5 ~ 18.2V	18 ~ 21V	27.6 ~ 32.4V	33.7 ~ 39.2V	57.6 ~ 67.2V	
	OVER TEMPERATURE	≥90°C(RTH3) Detect on inside ambient temperature Protection type : Shut down o/p voltage, recovers automatically after temperature goes down								
ENVIRONMENT	WORKING TEMP.	-10 ~ +50°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)								
SAFETY & EMC	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes								
	SAFETY STANDARDS	Design refer to UL1950								
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC			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								
OTHERS	EMI CONDUCTION & RADIATION	Design refer to FCC Part15 J Conduction Class A								
	MTBF	271.9K hrs min.		MIL-HDBK-217F (25°C)						
	DIMENSION	215*115*50mm (L*W*H)								
NOTE	PACKING	0.93Kg; 12pcs/12Kg/0.92CUFT								
		1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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.								

■ Mechanical Specification

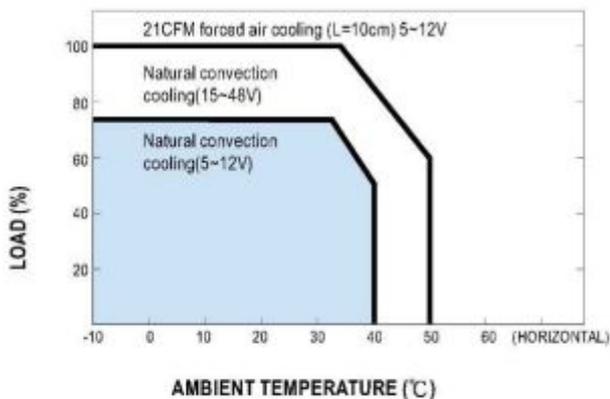
Case No. 912 Unit:mm



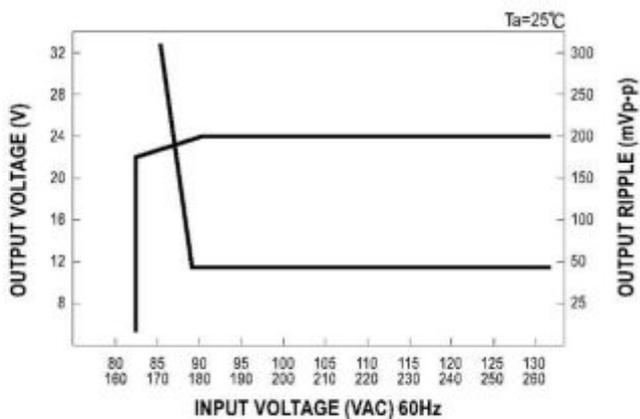
Terminal pin number assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4-6	DC OUTPUT -V
2	AC/N	7-9	DC OUTPUT +V
3	FG $\oplus$		

■ Derating Curve



■ Static Characteristics (24V)





■ Features :

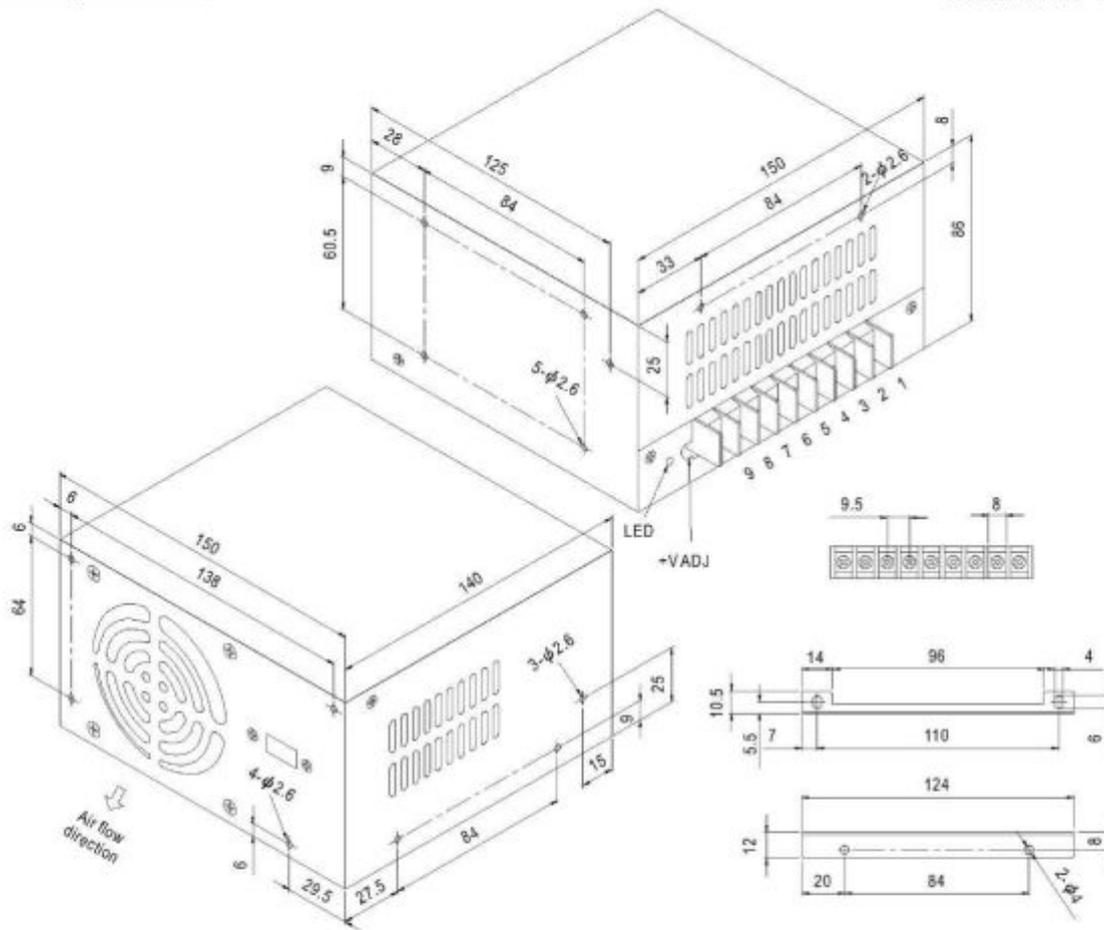
- AC input range selected by switch
- Protections: Short circuit/Over load/Over voltage
- Forced air cooling by built-in DC fan
- 100% full load burn-in test
- Fixed switching frequency at 60KHz
- Low cost
- High reliability
- 2 years warranty

**SPECIFICATION**

MODEL	S-250-5	S-250-12	S-250-15	S-250-24	S-250-27	S-250-48	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	27V	48V
	RATED CURRENT	40A	18A	15A	10A	9A	5.2A
	CURRENT RANGE	0 ~ 40A	0 ~ 18A	0 ~ 15A	0 ~ 10A	0 ~ 9A	0 ~ 5.2A
	RATED POWER	200W	216W	225W	240W	243W	249.6W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V	24.3 ~ 29.7V	43.2 ~ 52.8V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	800ms, 50ms at full load					
HOLD TIME (Typ.)	19ms at full load						
INPUT	VOLTAGE RANGE	90 ~ 132VAC / 176 ~ 264VAC Selected by switch    248~370VDC					
	FREQUENCY RANGE	47 ~ 63Hz					
	EFFICIENCY (Typ.)	74%	79%	80%	81.5%	82%	82%
	AC CURRENT (Typ.)	4.8A/115VAC    2.8A/230VAC					
	INRUSH CURRENT (Typ.)	COLD START 45A/230VAC					
	LEAKAGE CURRENT	<2mA / 240VAC					
PROTECTION	OVER LOAD	105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	31.05 ~ 36.45V	55.2 ~ 64.8V
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)					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes					
SAFETY & EMC	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					
OTHERS	MTBF	238.9K hrs min.    MIL-HDBK-217F (25°C)					
	DIMENSION	150*140*86mm (L*W*H)					
	PACKING	1.3Kg; 8pcs/11Kg/0.97CUFT					
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p>						

■ Mechanical Specification

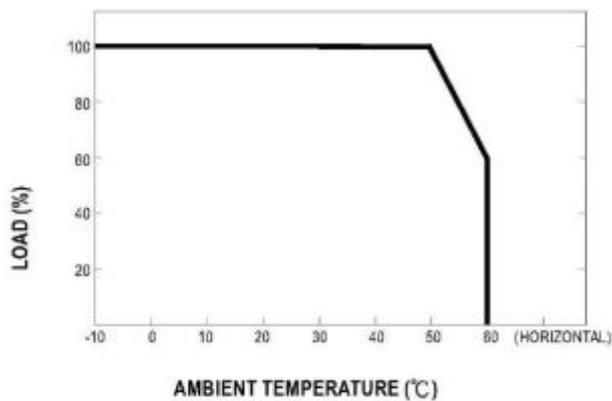
Case No. 907C Unit:mm



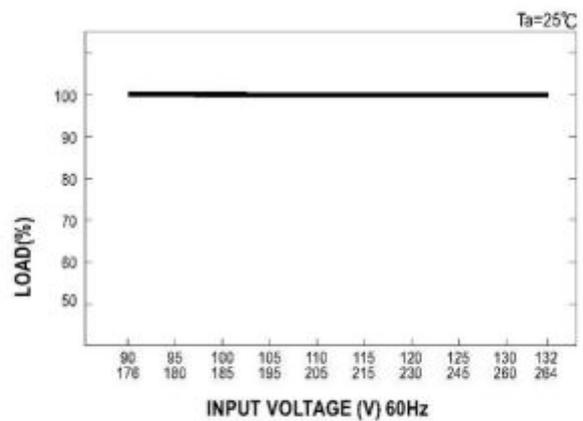
Terminal Pin. No Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5,6	DC OUTPUT -V
2	AC/N	7,8,9	DC OUTPUT +V
3	FG ±		

■ Derating Curve



■ Static Characteristics





### ■ Features :

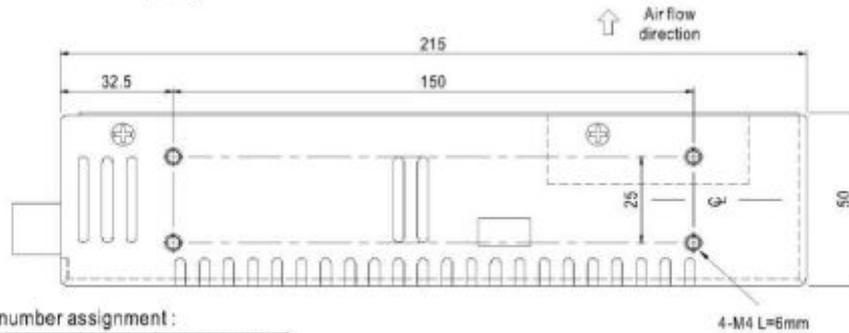
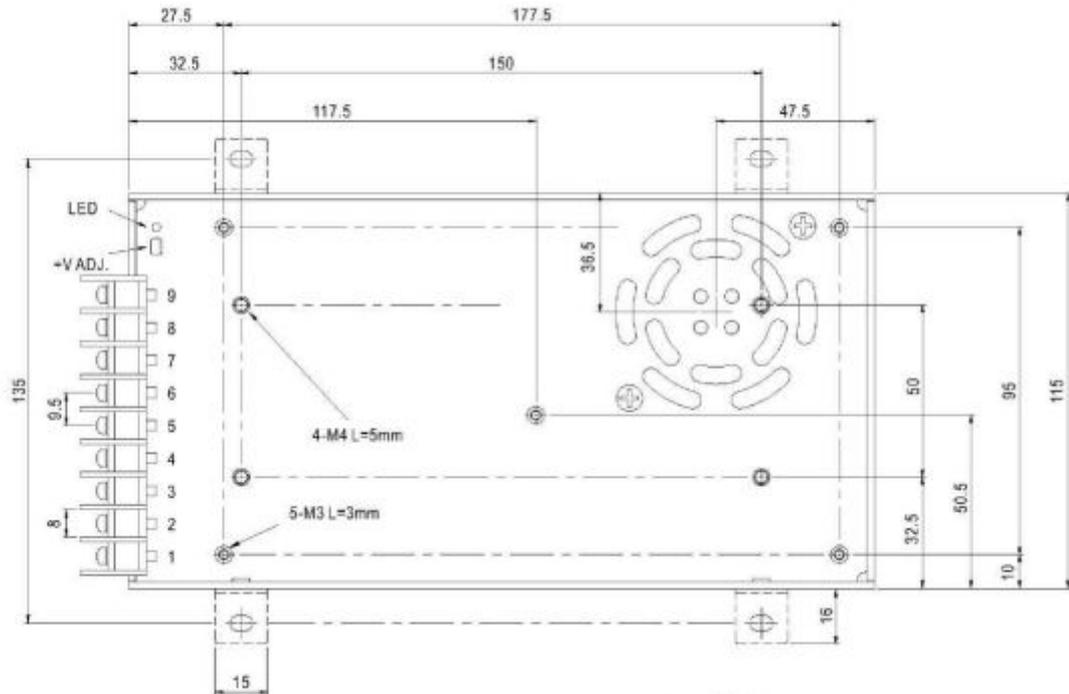
- AC input range selectable by switch
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Forced air cooling by built-in DC fan
- Cooling Fan ON-OFF auto control
- 100% full load burn-in test
- Fixed switching frequency at 90KHz
- 2 years warranty

### SPECIFICATION

MODEL	S-320-5	S-320-7.5	S-320-12	S-320-13.5	S-320-15	S-320-24	S-320-27	S-320-48		
OUTPUT	DC VOLTAGE	5V	7.5V	12V	13.5V	15V	24V	27V	48V	
	RATED CURRENT	50A	36A	25A	22A	20A	12.5A	11A	6.5A	
	CURRENT RANGE	0 ~ 50A	0 ~ 36A	0 ~ 25A	0 ~ 22A	0 ~ 20A	0 ~ 12.5A	0 ~ 11A	0 ~ 6.5A	
	RATED POWER	250W	270W	300W	297W	300W	300W	297W	312W	
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p	
	VOLTAGE ADJ. RANGE	4.5 ~ 5.7V	6 ~ 9V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	41 ~ 56V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME	2000ms, 20ms at full load								
HOLD TIME (Typ.)	24ms at full load									
INPUT	VOLTAGE RANGE	88 ~ 132VAC / 176~264VAC by switch			248 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY(Typ.)	77%	80%	82%	83%	84%	86%	86%	87%	
	AC CURRENT (Typ.)	6A/115VAC	3.5A/230VAC							
	INRUSH CURRENT (Typ.)	18A/115VAC	36A/230VAC							
	LEAKAGE CURRENT	<3.5mA / 240VAC								
PROTECTION	OVER LOAD	105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	5.75 ~ 6.75V	9.4 ~ 10.9V	13.8 ~ 16.2V	15.5 ~ 18.2V	18 ~ 21V	27.6 ~ 32.4V	33.7 ~ 39.2V	57.6 ~ 67.2V	
	FAN CONTROL O.T.P.	RTH1 ≥ 65°C FAN ON, ≤ 55°C FAN OFF, ≥ 70°C (5 ~ 15V)								
		RTH1 ≥ 70°C FAN ON, ≤ 65°C FAN OFF, ≥ 80°C (24 ~ 48V) 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)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, Period for 60min. each along X, Y, Z axes								
SAFETY & EMC	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								
OTHERS	MTBF	188.7K hrs min. MIL-HDBK-217F (25°C)								
	DIMENSION	215*115*50mm (L*W*H)								
	PACKING	1.08Kg; 12pcs/13.8Kg/0.92CUFT								
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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.									

## Mechanical Specification

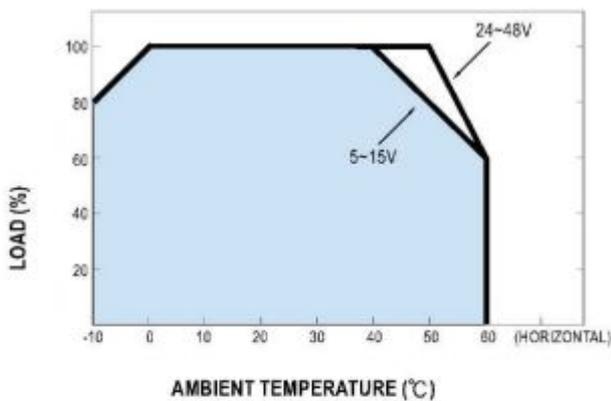
Case No. 912A Unit:mm



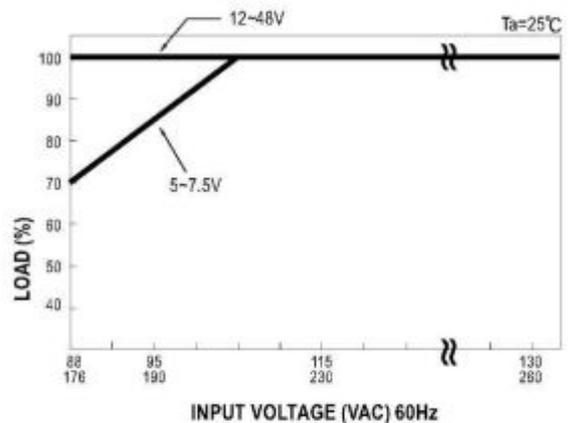
Terminal pin number assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4-6	DC OUTPUT -V
2	AC/N	7-9	DC OUTPUT +V
3	FG ⊕		

## Derating Curve



## Static Characteristics





### ■ Features :

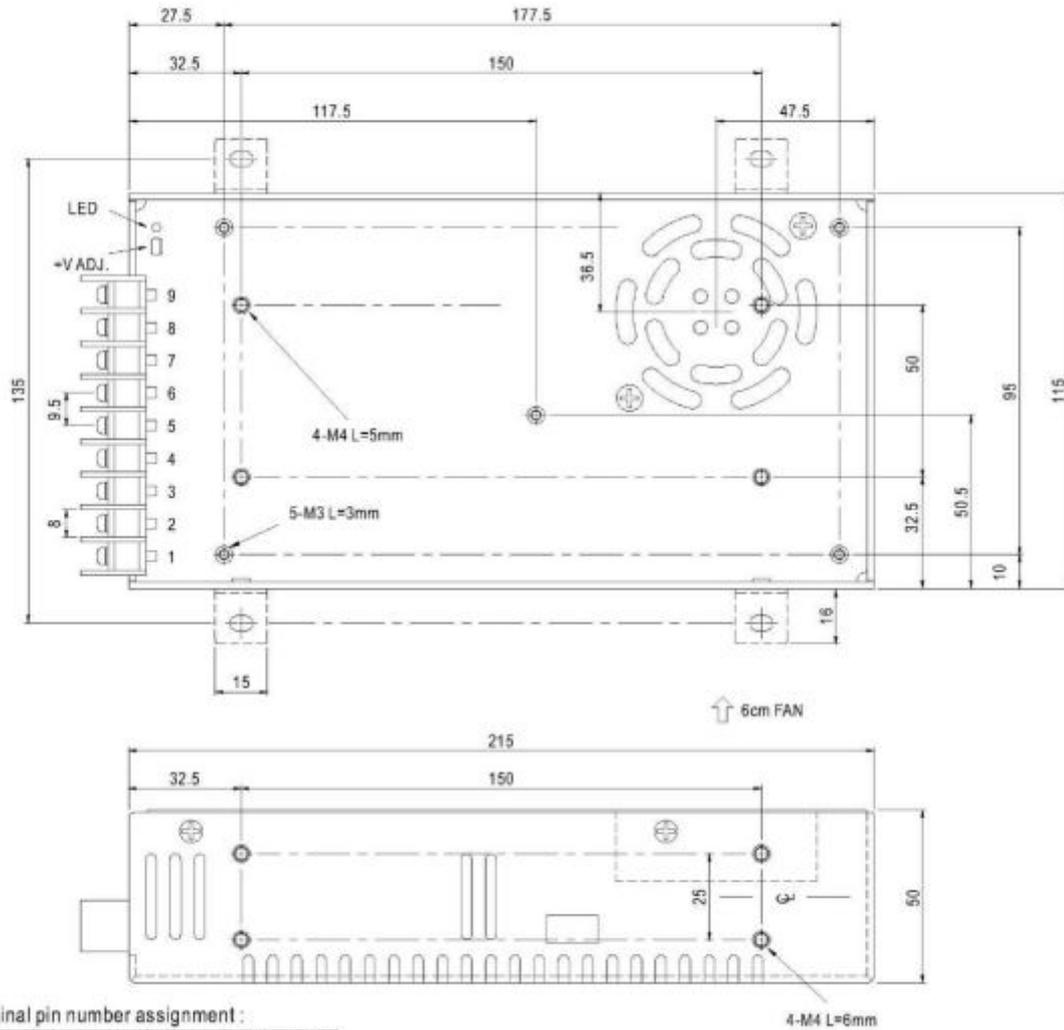
- AC input range selectable by switch
- Protections: Short circuit/Over load/Over voltage
- Forced air cooling by built-in DC fan
- PWM control and regulated
- Built-in cooling Fan ON-OFF control
- 100% full load burn-in test
- Fixed switching frequency at 25KHz
- Low cost
- 1 year warranty

### SPECIFICATION

MODEL	S-350-5	S-350-7.5	S-350-12	S-350-13.5	S-350-15	S-350-24	S-350-27	S-350-48		
OUTPUT	DC VOLTAGE	5V	7.5V	12V	13.5V	15V	24V	27V	48V	
	RATED CURRENT	50A	40A	29A	25.8A	23.2A	14.6A	13A	7.3A	
	CURRENT RANGE	0 ~ 50A	0 ~ 40A	0 ~ 29A	0 ~ 25.8A	0 ~ 23.2A	0 ~ 14.6A	0 ~ 13A	0 ~ 7.3A	
	RATED POWER	250W	300W	348W	348.3W	348W	350.4W	351W	350.4W	
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p	
	VOLTAGE ADJ. RANGE	4.5 ~ 5.6V	6 ~ 9V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	41 ~ 56V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME	200ms, 50ms at full load								
HOLD TIME (Typ.)	20ms at full load									
INPUT	VOLTAGE RANGE	90 ~ 132VAC / 180 ~ 264VAC by switch			254 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY (Typ.)	73%	76%	74%	79%	78%	81%	82%	83%	
	AC CURRENT (Typ.)	6.5A/115VAC		4A/230VAC						
	INRUSH CURRENT (Typ.)	50A/115VAC		50A/230VAC						
	LEAKAGE CURRENT	<3.5mA / 240VAC								
PROTECTION	OVER LOAD	105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	5.75 ~ 6.75V	9.4 ~ 10.9V	13.8 ~ 16.2V	15.5 ~ 18.2V	18 ~ 21V	27.6 ~ 32.4V	33.7 ~ 39.2V	57.6 ~ 67.2V	
FUNCTION	FAN ON/OFF CONTROL	RTH3 ≥ 55°C FAN ON, ≤ 45°C FAN OFF, ≥ 80°C output shutdown (5 ~ 7.5V)								
		RTH3 ≥ 65°C FAN ON, ≤ 55°C FAN OFF, ≥ 80°C output shutdown (12 ~ 15V)								
		RTH3 ≥ 70°C FAN ON, ≤ 60°C FAN OFF, ≥ 85°C output shutdown (24 ~ 48V)								
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)								
SAFETY & EMC	WITHSTAND VOLTAGE	I/P-O/P: 1.5KVAC		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								
OTHERS	MTBF	234.3K hrs min. MIL-HDBK-217F (25°C)								
	DIMENSION	215*115*50mm (L*W*H)								
	PACKING	1.07Kg; 12pcs/13.5Kg/0.92CUFT								
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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.									

### Mechanical Specification

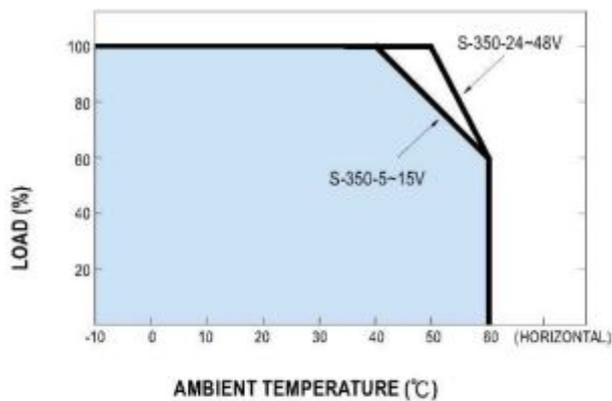
Case No. 912C Unit:mm



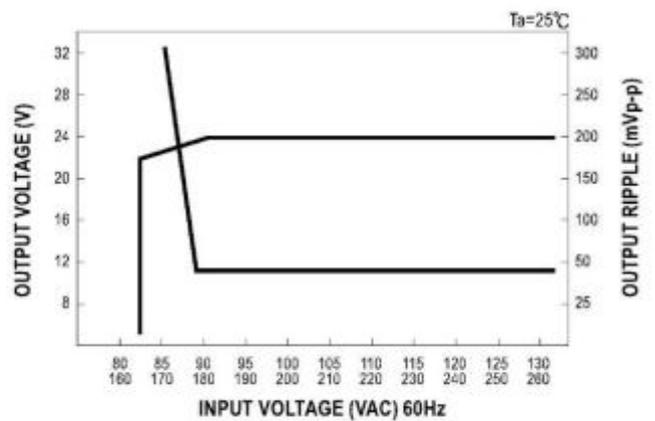
Terminal pin number assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4~6	-V
2	AC/N	7~9	+V
3	FG		

### Derating Curve



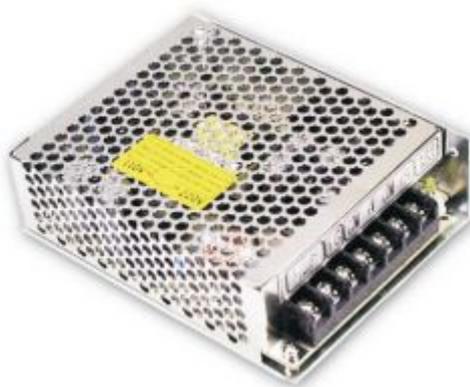
### Static Characteristics (24V)



## AC/DC преобразователи серий D и ID

AC/DC преобразователи серий D и ID мощностью от 30Вт до 120Вт имеют защитный перфорированный корпус. Диапазон входных напряжений переменного тока от 85В до 264В частотой от 47Гц до 63Гц или от 120В до 370В постоянного напряжения. Для AC/DC преобразователя D-30 диапазон постоянных входных напряжений от 240В до 370В.

Выход - два канала из комбинации напряжений: 5В, 12В и 24В в зависимости от типа. Электрическая прочность изоляции 3000В, и 1500В для D-30, защита от короткого замыкания по выходным цепям. Ограничение пускового тока и мягкий старт. Преобразователи серии серий D и ID имеют входной ЭМИ фильтр.



### ■ Features :

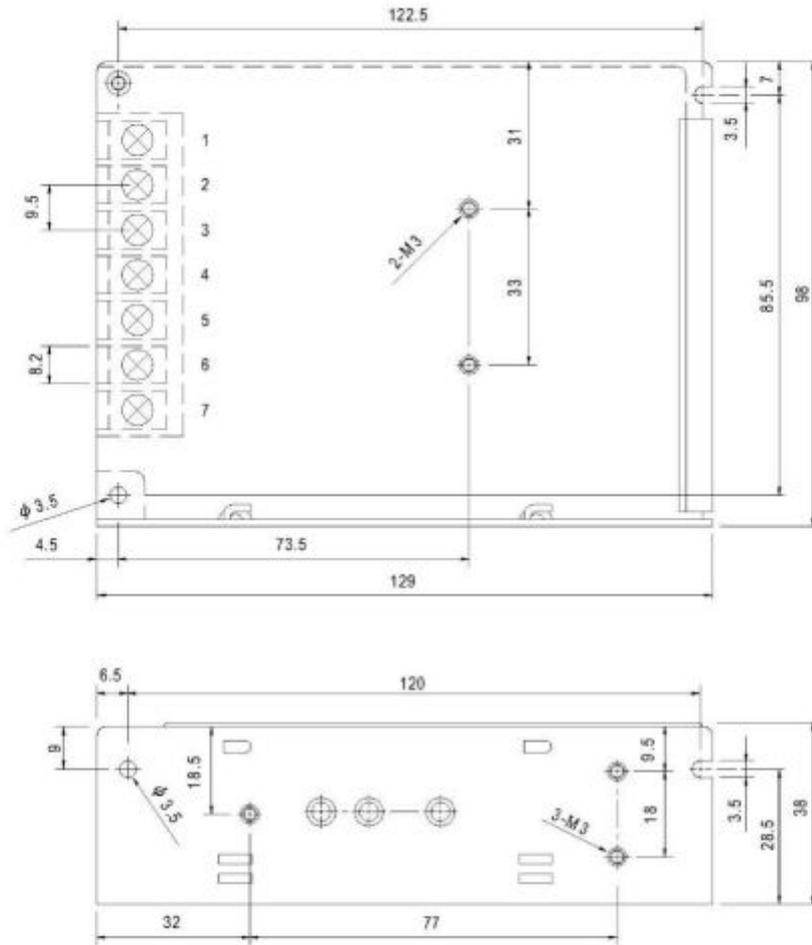
- AC input range selected by switch
- Protections: Short circuit/Over load
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 23KHz
- 1 year warranty

### SPECIFICATION

MODEL		D-30A		D-30B	
OUTPUT	DC VOLTAGE	5V	12V	5V	24V
	RATED CURRENT	4A	1A	2.2A	1A
	CURRENT RANGE	0.5 ~ 4A	0.1 ~ 1A	0.5 ~ 4A	0.1 ~ 1A
	RATED POWER	32W		35W	
	RIPPLE & NOISE (max.) Note.2	50mVp-p	100mVp-p	50mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	CH1 : 4.75 ~ 5.5V		CH1 : 4.75 ~ 5.5V	
	VOLTAGE TOLERANCE Note.3	±2.0%	+ 3,-7%	±2%	+ 3,-5%
	LINE REGULATION	±0.5%	±1.0%	±0.5%	±1.0%
	LOAD REGULATION	±0.5%	±4.0%	±0.5%	±4.0%
SETUP, RISE, HOLD TIME	200ms, 50ms, 30ms at full load				
INPUT	VOLTAGE RANGE	85 ~ 132VAC / 170 ~ 264VAC selected by switch		240 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY(Typ.)	72%		74%	
	AC CURRENT	0.8A/115VAC	0.45A/230VAC		
	INRUSH CURRENT(max.)	COLD START 18A/115VAC		36A/230VAC	
	LEAKAGE CURRENT	<1mA / 240VAC			
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Fold back current limiting, recovers automatically after fault condition is removed.			
	ENVIRONMENT	WORKING TEMP. -10 ~ +60°C (Refer to output load derating curve)			
ENVIRONMENT	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC	SAFETY STANDARDS	Design refer to UL1012			
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC 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	Design refer to FCC Part15 J Conduction				
OTHERS	MTBF	417.6K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	129*98*38mm (L*W*H)			
	PACKING	0.41Kg; 30pcs/13.4Kg/0.86CUFT			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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.				

■ Mechanical Specification

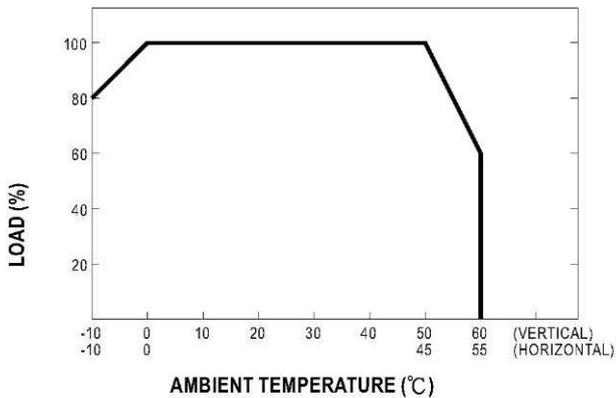
Case No. 903 Unit:mm



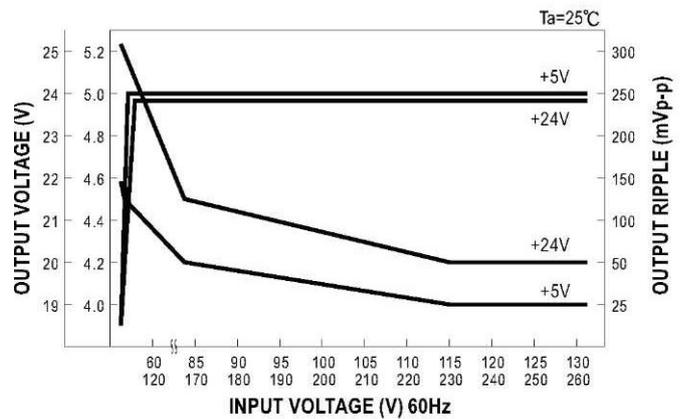
Terminal Pin. No Assignment

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

■ Output Derating



■ Static Characteristics (B)





### ■ Features :

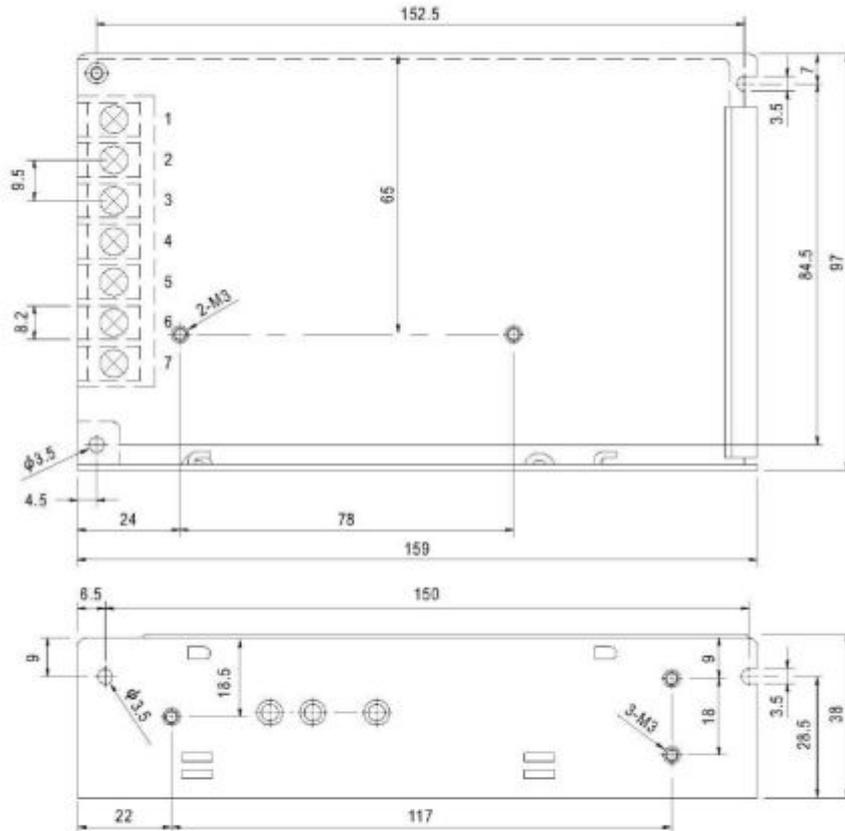
- AC input selectable by switch
- Protections: Short circuit/Over load
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 24KHz I/P-O/P:Rated
- 1 year warranty

### SPECIFICATION

MODEL		D-50A		D-50B	
OUTPUT	DC VOLTAGE	5V	12V	5V	24V
	RATED CURRENT	6A	2A	6A	1A
	CURRENT RANGE	1 ~ 6A	0.3 ~ 2A	1 ~ 6A	0.2 ~ 1A
	RATED POWER	54W		54W	
	RIPPLE & NOISE (max.) Note.2	50mVp-p	100mVp-p	50mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	CH1 : 4.75 ~ 5.5V		CH1 : 4.75 ~ 5.5V	
	VOLTAGE TOLERANCE Note.3	±2.0%	+5, -8%	±2.0%	±8.0%
	LINE REGULATION	±0.5%	±1.0%	±0.5%	±1.0%
	LOAD REGULATION	±0.5%	±5.0%	±0.5%	±8.0%
SETUP, RISE, HOLD TIME	200ms, 100ms, 20ms at full load				
INPUT	VOLTAGE RANGE	85 ~ 132VAC/170 ~ 264VAC selected by switch		240 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY(Typ.)	73%		73%	
	AC CURRENT	1.3A/115VAC 0.65A/230VAC			
	INRUSH CURRENT(max.)	COLD START 18A/115VAC 36A/230VAC			
	LEAKAGE CURRENT	<0.5mA / 240VAC			
PROTECTION	OVER LOAD	105 ~ 150% rated output power			
		Protection type : Fold back current limiting, 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, period for 60min. each along X, Y, Z axes			
SAFETY & EMC	SAFETY STANDARDS	Design refer to UL1012			
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC 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		Design refer to FCC Part15 J Conduction			
OTHERS	MTBF	408.9K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	159*97*38mm (L*W*H)			
	PACKING	0.53Kg; 24pcs/13.6Kg/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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p>				

■ Mechanical Specification

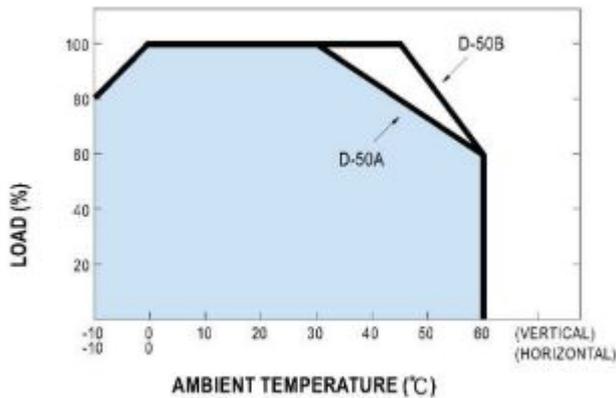
Case No. 901 Unit:mm



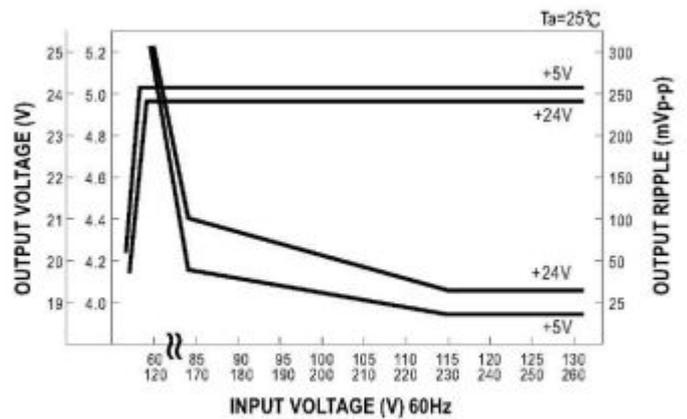
Terminal Pin. No Assignment

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

■ Output Derating



■ Static Characteristics (B)





■ Features :

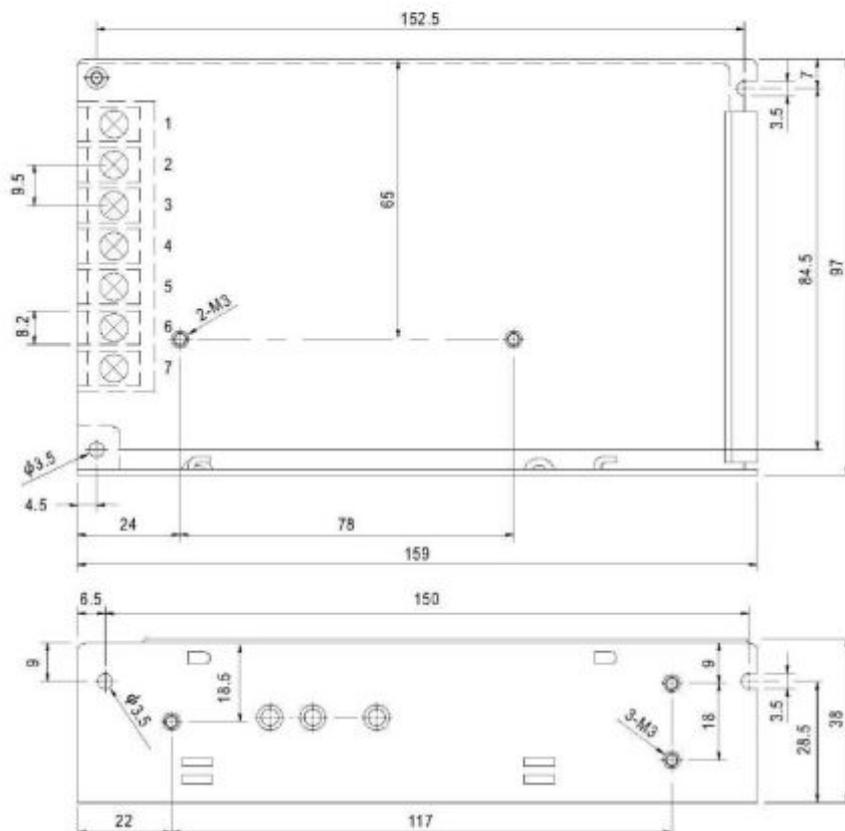
- Universal AC input/Full range
- Protections: Short circuit/Over load/Over voltage
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 54KHz
- 2 years warranty

## 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	
	VOLTAGE ADJ. RANGE	CH1 : 4.75 ~ 5.5V		CH1 : 4.75 ~ 5.5V	
	VOLTAGE TOLERANCE Note.3	±2.0%		±2.0%	
	LINE REGULATION	±0.5%		±0.5%	
	LOAD REGULATION	±0.5%		±0.5%	
	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°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, 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°C)			
	DIMENSION	159*97*38mm (L*W*H)			
	PACKING	0.54Kg; 24pcs/13.8Kg/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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF &amp; 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

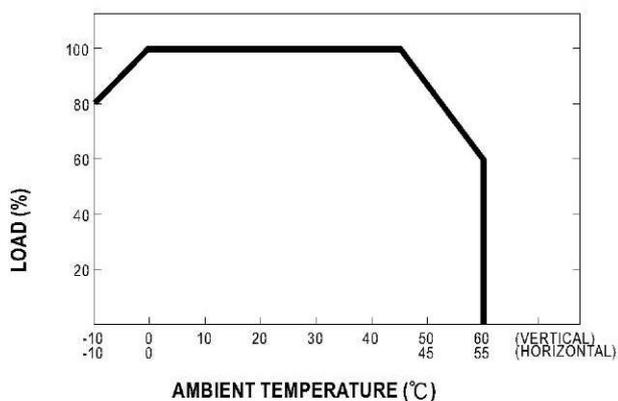
Case No. 901 Unit:mm



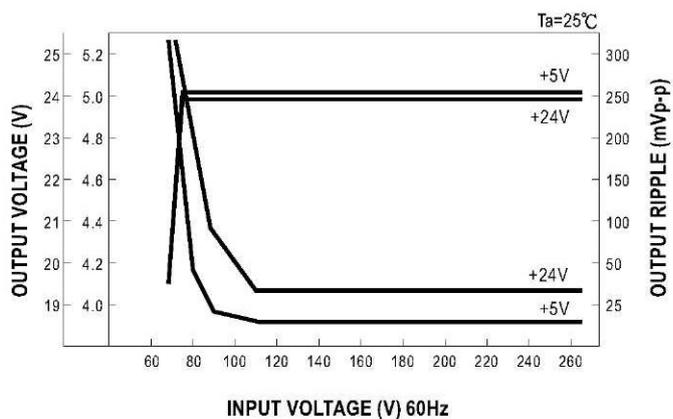
Terminal Pin. No Assignment

Pin No.	Assignment	Pin No.	Assignment
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)



## AC/DC преобразователи серий Т, ТР и IT

AC/DC преобразователи с тремя выходами и мощностью от 30Вт до 150Вт, серий Т, ТР и IT. Диапазон входных напряжений переменного тока от 85В до 264В частотой от 47Гц до 63Гц, или от 120В до 370В постоянного напряжения.

Выход - три канала из комбинации напряжений: 3,3В, 5 В, 12В, 15В, 24В, -5 В, -12В или -15В в зависимости от типа. Электрическая прочность изоляции 3000В, имеется защита от перенапряжения на входе, защита от короткого замыкания по выходным цепям, мягкий пуск с ограничением пускового тока. В преобразователях имеется встроенный входной фильтр ЭМИ.



■ Features :

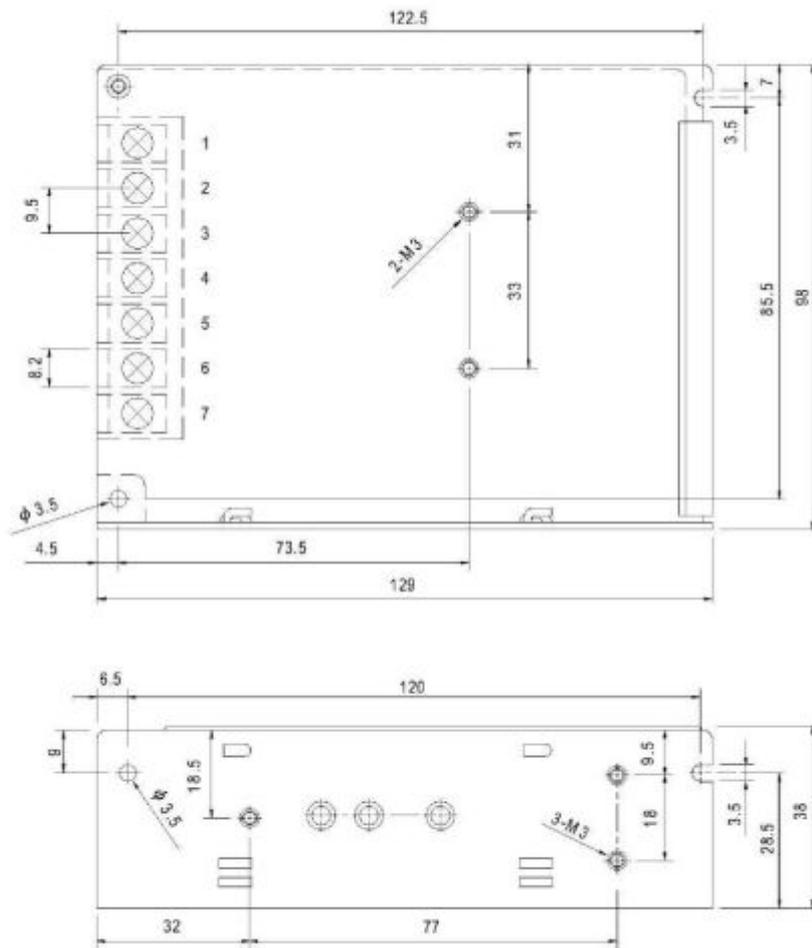
- AC input range selected by switch
- Protections: Short circuit/Over load
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 23KHz
- 1 year warranty

## SPECIFICATION

MODEL		T-30A			T-30B		
OUTPUT	DC VOLTAGE	5V	12V	-5V	5V	12V	-12V
	RATED CURRENT	3A	1A	0.5A	3A	1A	0.5A
	CURRENT RANGE	0.5 – 3A	0.1 – 1A	0.1 – 0.5A	0.5 – 3A	0.1 – 1A	0.1 – 0.5A
	RATED POWER	30W			33W		
	RIPPLE & NOISE (max.) Note.2	50mVp-p	100mVp-p	50mVp-p	50mVp-p	100mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	CH1 : 4.75 – 5.5V			CH1 : 4.75 – 5.5V		
	VOLTAGE TOLERANCE Note.3	±2.0%	+ 2,-6%	+2,-10%	±2.0%	+ 2,-6%	±6.0%
	LINE REGULATION	±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%
SETUP, RISE, HOLD TIME	200ms, 100ms, 30ms at full load						
INPUT	VOLTAGE RANGE	85 – 132VAC / 170 – 264VAC selected by switch			240 – 370VDC		
	FREQUENCY RANGE	47 – 63Hz					
	EFFICIENCY(Typ.)	70%			72%		
	AC CURRENT	0.8A/115VAC		0.45A/230VAC			
	INRUSH CURRENT(max.)	COLD START 18A/115VAC		36A/230VAC			
	LEAKAGE CURRENT	<0.75mA / 240VAC					
PROTECTION	OVER LOAD	105 – 150% rated output power					
		Protection type : Fold back current limiting, 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, period for 60min. each along X, Y, Z axes					
SAFETY & EMC	SAFETY STANDARDS	Design refer to UL1012					
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC		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	Design refer to FCC Part15 J Conduction Class A					
OTHERS	MTBF	463.1K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	129*98*38mm (L*W*H)					
	PACKING	0.42Kg; 30pcs/13.6Kg/0.86CUFT					
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p>						

■ Mechanical Specification

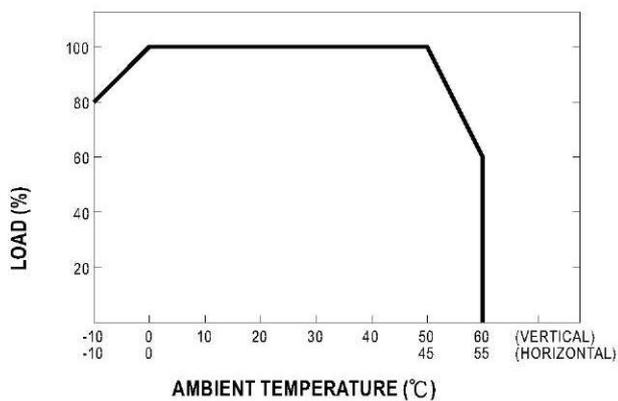
Case No. 903 Unit:mm



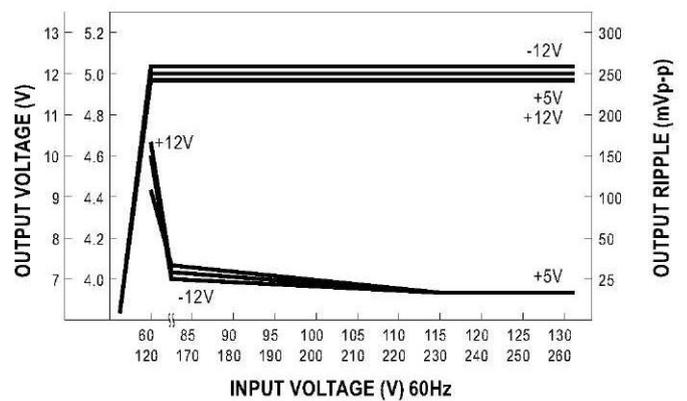
Terminal Pin. No Assignment

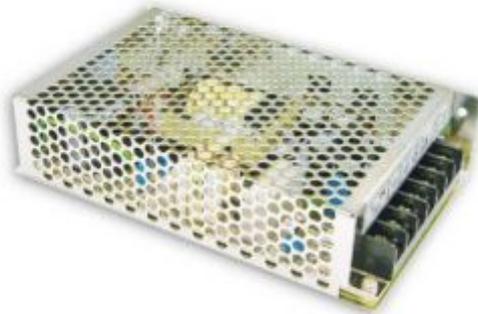
Pin No.	Assignment	Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V	7	DC OUTPUT +V1
2	AC/N	5	DC OUTPUT +V2		
3	FG ⊕	6	DC OUTPUT COM		

■ Output Derating



■ Static Characteristics (B)





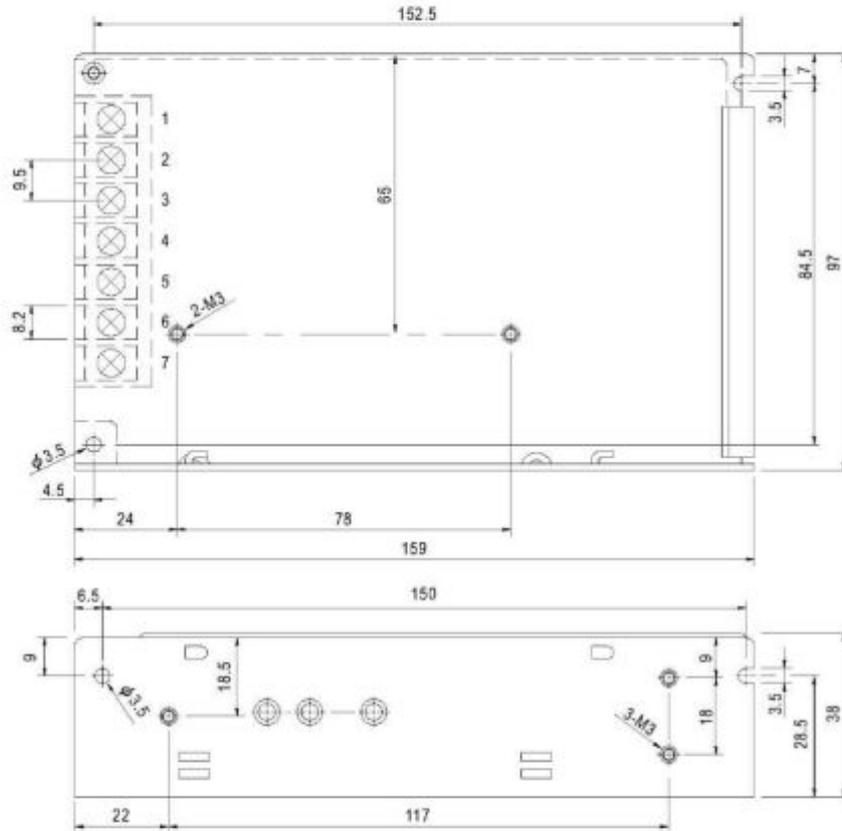
- Features :
  - Universal AC input / Full range
  - Protections: Short circuit/Over load/Over voltage
  - Cooling by free air convection
  - LED indicator for power on
  - Fixed switching frequency at 50KHz
  - 2 years warranty

## SPECIFICATION

MODEL		T-60A			T-60B			T-60C		
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3
	DC VOLTAGE	5V	12V	-5V	5V	12V	-12V	5V	15V	-15V
	RATED CURRENT	5A	2.5A	0.5A	5A	2.5A	0.5A	5A	2A	0.5A
	CURRENT RANGE	0.5 – 7A	0.2 – 3.5A	0 – 1A	0.5 – 7A	0.2 – 3.5A	0 – 1A	0.5 – 7A	0.2 – 3A	0 – 1A
	RATED POWER	57.5W			61W			62.5W		
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-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%	±6.0%	±2.0%	±6.0%	±6.0%	±2.0%	±6.0%	±6.0%
	LINE REGULATION	±0.5%	±1.0%	±0.5%	±0.5%	±1.0%	±0.5%	±0.5%	±1.0%	±0.5%
	LOAD REGULATION	±1.0%	±4.0%	±1.0%	±1.0%	±4.0%	±1.0%	±1.0%	±4.0%	±1.0%
	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.)	72%			72%			72%		
	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°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, 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	281.1K hrs min. MIL-HDBK-217F (25°C)								
	DIMENSION	159*97*38mm (L*W*H)								
	PACKING	0.55Kg; 24pcs/14.1Kg/0.75CUFT								
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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

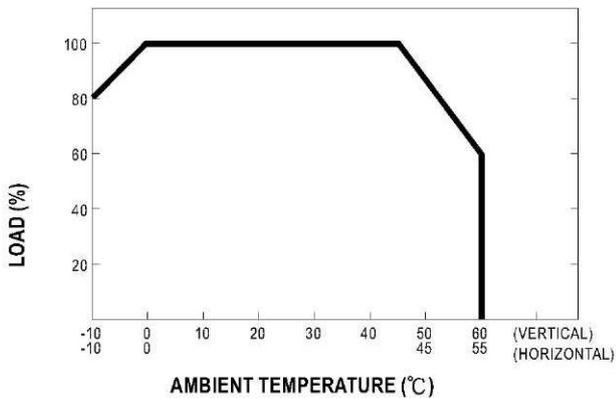
Case No. 901 Unit:mm



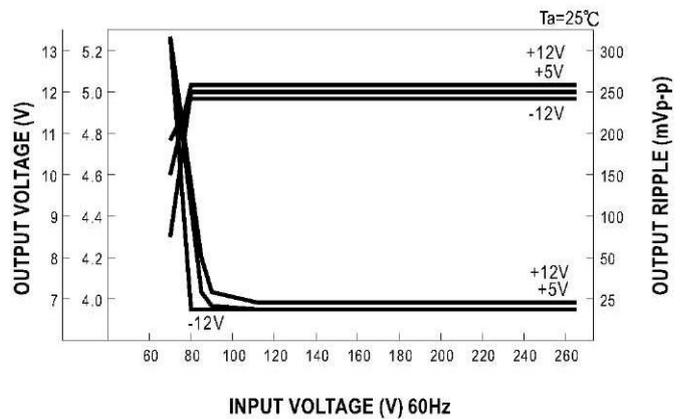
Terminal Pin. No Assignment

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

■ Output Derating



■ Static Characteristics (B)





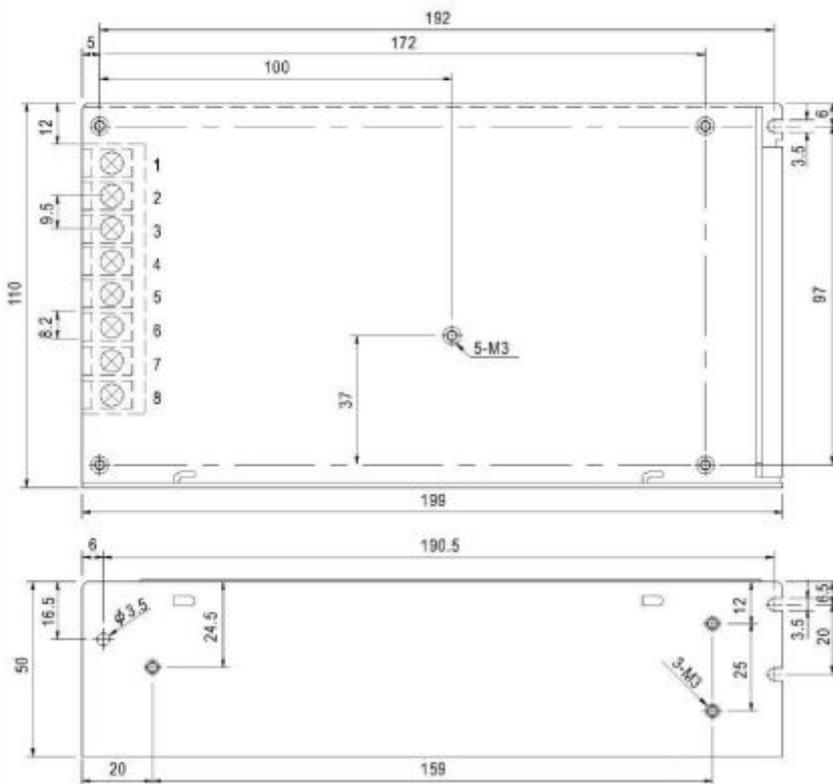
- Features :
  - AC input range selected by switch
  - Protections: Short circuit / Overload / Over voltage
  - 100% full load burn-in test
  - Fixed switching frequency at 25KHz
  - 2 years warranty

## SPECIFICATION

MODEL		T-120A			T-120B			T-120C			T-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 TIME	800ms, 20ms/230VAC      1600ms, 20ms/115VAC at full load												
HOLD UP TIME (Typ.)	24ms/230VAC      14ms/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 (Typ.)	2.2A/115VAC      1.3A/230VAC											
	INRUSH CURRENT (Typ.)	COLD START 32A											
	LEAKAGE CURRENT	<3.5mA / 240VAC											
PROTECTION	OVERLOAD	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°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)											
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes											
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, CCC GB4943 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 / 25°C/ 70% RH											
	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°C)											
	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°C 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

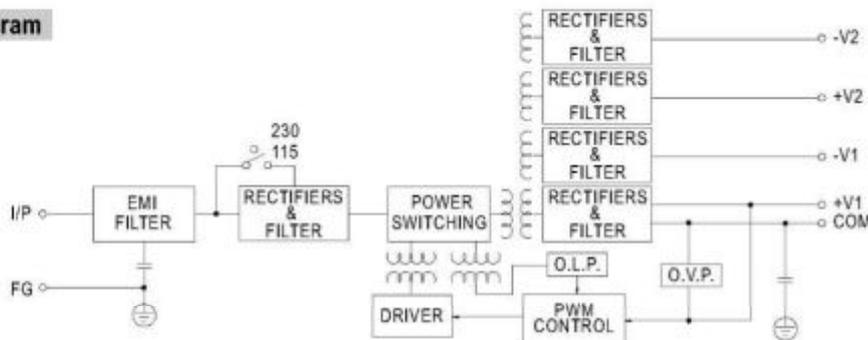


**Terminal Pin No. Assignment**

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

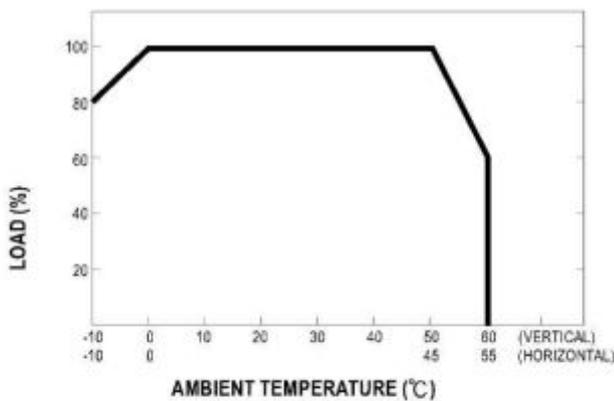
MODEL	T-120A	T-120B	T-120C	T-120D
Pin No. 4	+12V	+12V	+15V	+24V
Pin No. 5	NC	-12V	-15V	+12V
Pin No. 6	-5V	NC	NC	NC

**Block Diagram**

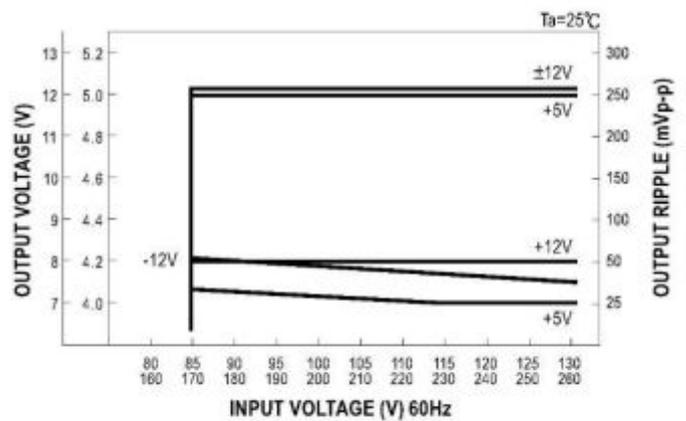


fosc : 25KHz

**Derating Curve**



**Static Characteristics(B)**



## AC/DC преобразователи серий Q, QP и IQ

AC/DC преобразователи с четырьмя выходами и мощностью от 60Вт до 200Вт, серий Q, QP и IQ. Диапазон входных напряжений переменного тока: от 90В до 264В частотой от 47Гц до 63Гц, или от 120В до 370В постоянного напряжения для серий QP и IQ. Диапазон входных напряжений для серии Q: переменный ток от 176В до 264В частотой от 47Гц до 63Гц, или от 240В до 370В постоянного напряжения.

Выход - четыре канала из комбинации напряжений: 3,3В, 5 В, 12В, 15В, 24В, -5 В, -12В или -15В в зависимости от типа. Электрическая прочность изоляции 3000В, защита от короткого замыкания по выходным цепям. В преобразователях имеется встроенный входной фильтр ЭМИ.



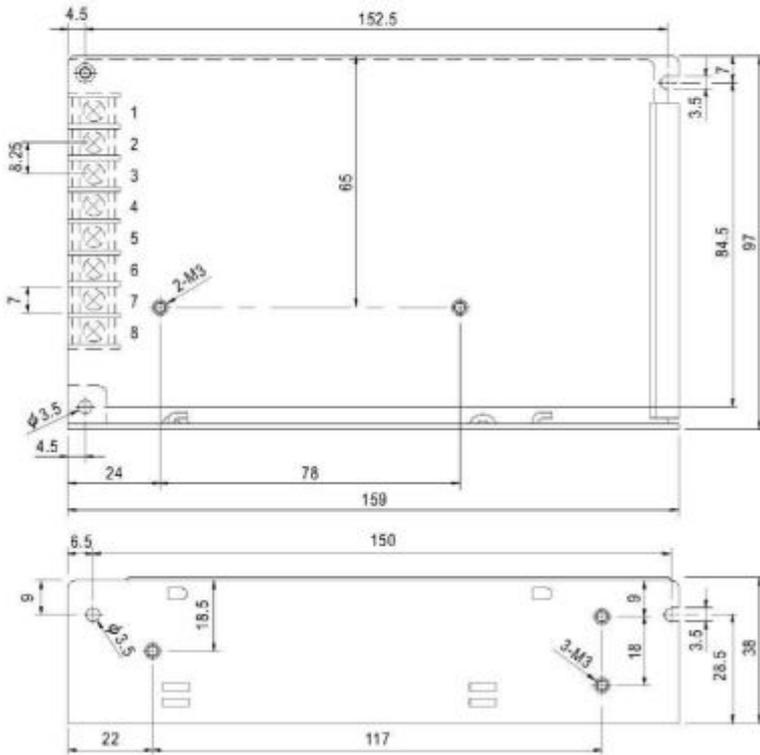
- Features :**
- Universal AC input / Full range
  - Protections: Short circuit / Overload / Over voltage
  - Cooling by free air convection
  - LED indicator for power on
  - Fixed switching frequency at 35KHz
  - 2 years warranty

## 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											
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, light industry level, criteria A											
	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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 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**

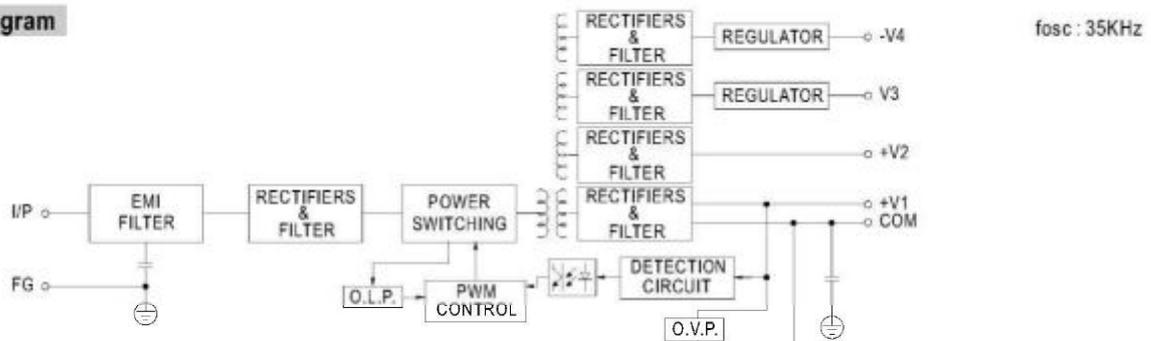
Case No. 901 Unit:mm



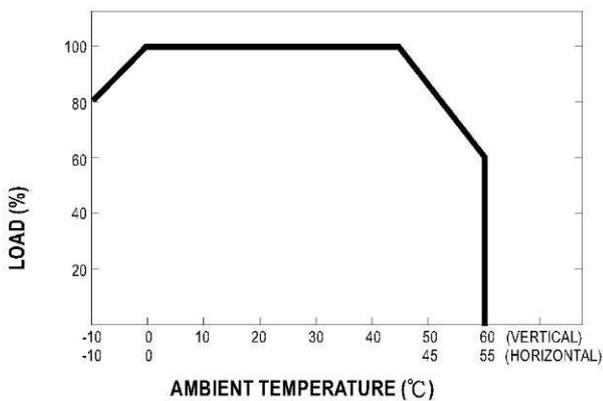
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5	DC OUTPUT -V4
2	AC/N	6	DC OUTPUT +V2
3	FG $\perp$	7	DC OUTPUT COM
4	DC OUTPUT V3	8	DC OUTPUT +V1

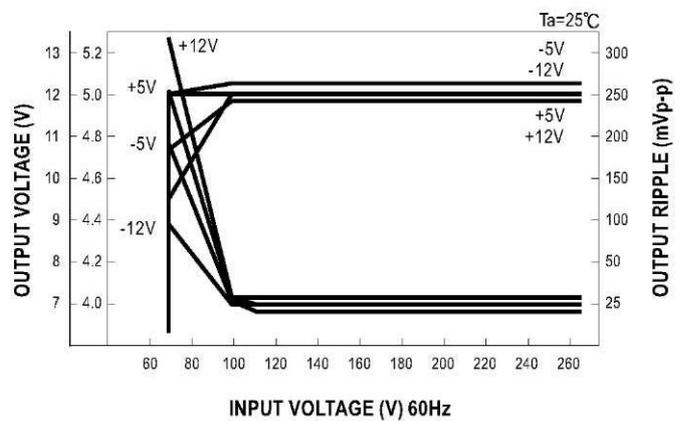
**Block Diagram**

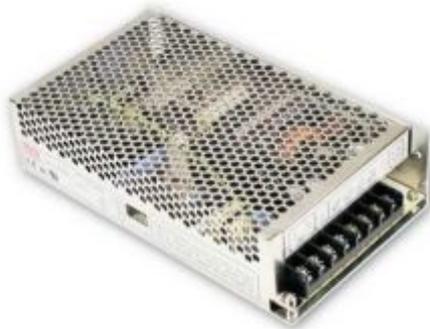


**Derating Curve**



**Static Characteristics**





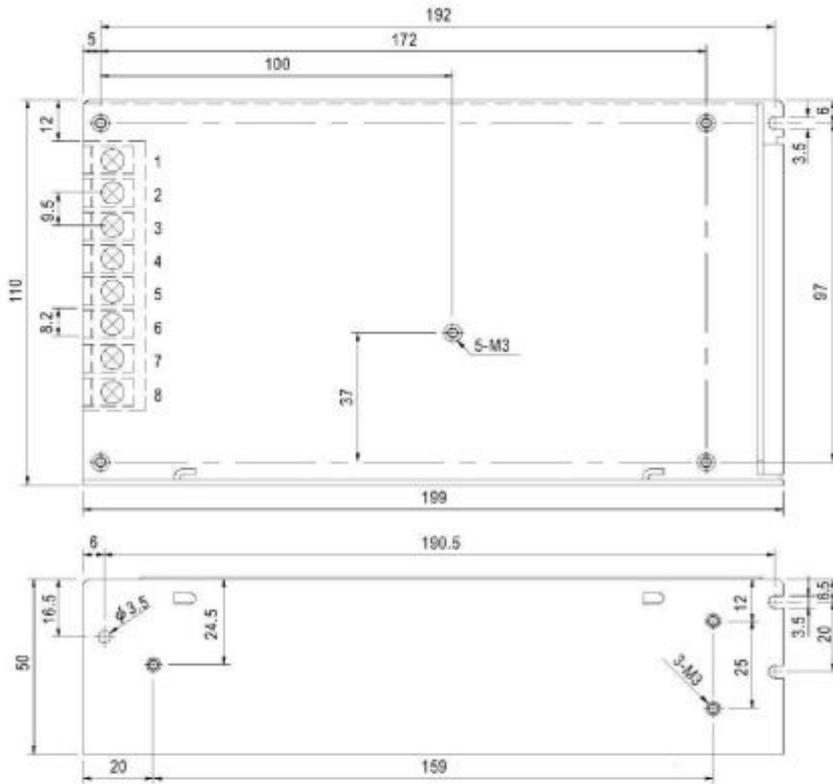
- Features :
  - AC input range selected by switch
  - Protections: Short circuit / Overload / Over voltage
  - 100% full load burn-in test
  - Fixed switching frequency at 25KHz
  - 2 years warranty

## SPECIFICATION

MODEL		Q-120B				Q-120C				Q-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 UP 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	OVERLOAD	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°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)											
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes											
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, CCC GB4943 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 / 25°C / 70% RH											
	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°C)											
	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°C 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

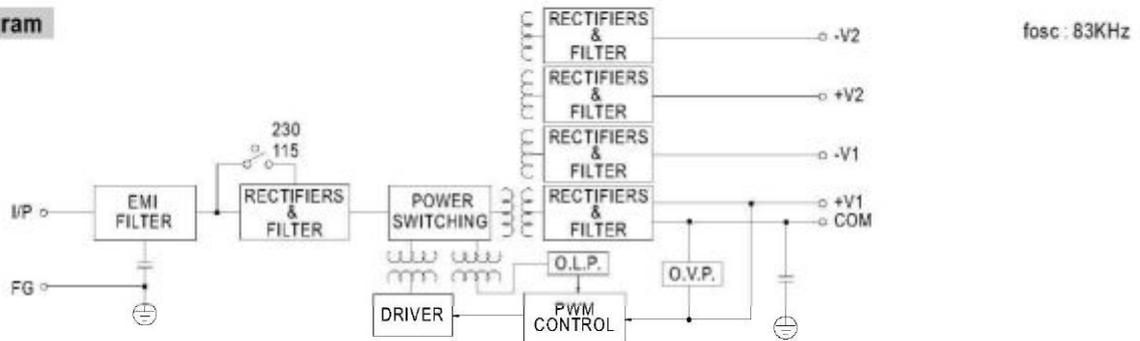


**Terminal Pin No. Assignment**

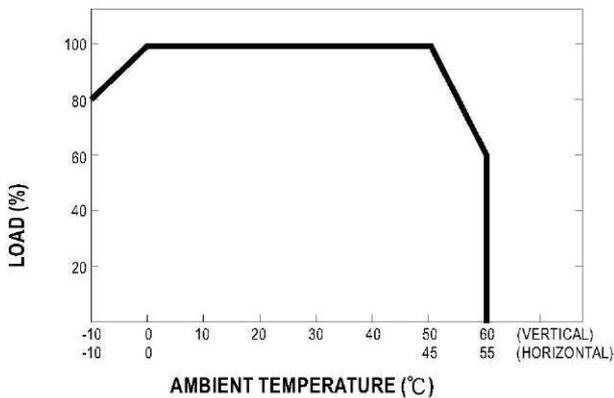
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	6	DC OUTPUT -V1
2	AC/N	7	DC OUTPUT COM
3	FG	8	DC OUTPUT +V1
4,5	DC OUTPUT		

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

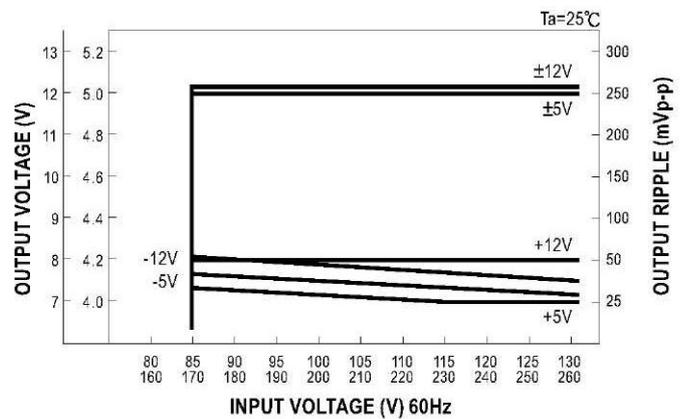
**Block Diagram**



**Derating Curve**



**Static Characteristics (B)**



## AC/DC преобразователи серий

### DR, DRH, DRP и DRT

AC/DC преобразователи серий DR, DRH, DRP и DRT мощностью от 30Вт до 480Вт предназначены для монтажа на DIN рейку. Диапазон входных напряжений переменного тока для серий DR, DRH и DRP от 85В до 264В частотой от 47Гц до 63Гц, или от 120В до 370В постоянного напряжения. AC/DC преобразователи серии DRT питаются от трехфазной сети переменного тока от 340В до 550В частотой от 47Гц до 63Гц.

Выход - один канал из комбинации напряжений 5 В, 12В, 24В или 48В в зависимости от типа. Выходное напряжение регулируется в пределах  $\pm 10\%$ . Электрическая прочность изоляции 3000В, имеется защита от короткого замыкания и перенапряжения по выходным цепям, защита от перегрева, мягкий пуск с ограничением пускового тока. В преобразователях DRP имеется встроенный корректор коэффициента мощности.



■ Features :

- Universal AC input/Full range
- Protections:Short circuit/Over load/Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- Isolation class II
- LED indicator for power on
- 100% full load burn-in test
- 3 years warranty

**SPECIFICATION**

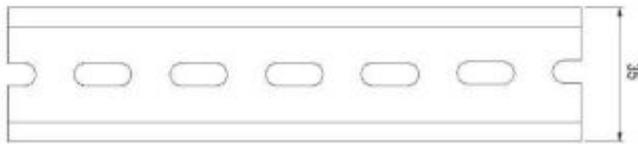
MODEL	DR-30-5	DR-30-12	DR-30-15	DR-30-24	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	3A	2A	2A	1.5A
	CURRENT RANGE	0 ~ 3A	0 ~ 2A	0 ~ 2A	0 ~ 1.5A
	RATED POWER	15W	24W	30W	36W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	100ms, 30ms/230VAC    100ms, 30ms/115VAC at full load			
HOLD TIME (Typ.)	100ms/230VAC    21ms/115VAC at full load				
INPUT	VOLTAGE RANGE	85 ~ 264VAC    120 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY (Typ.)	74%	81%	82%	83%
	AC CURRENT (Typ.)	0.88A/115VAC    0.48A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 15A/115VAC    30A/230VAC			
PROTECTION	OVER LOAD	105 ~ 160% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed			
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V
ENVIRONMENT	WORKING TEMP.	-20 ~ +60°C (Refer to output load derating curve)			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved, Design refer to EN50178			
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC			
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms/500VDC			
	EMI CONDUCTION & RADIATION	Compliance to EN55011,EN55022 (CISPR22) Class B			
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3			
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2, EN61204-3 Heavy industry level, criteria A			
	MTBF	441.5K hrs min.    MIL-HDBK-217F (25°C)			
	DIMENSION	78*93*56mm (W*H*D)			
	PACKING	0.27Kg; 48pcs/14Kg/1.02CUFT			
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 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

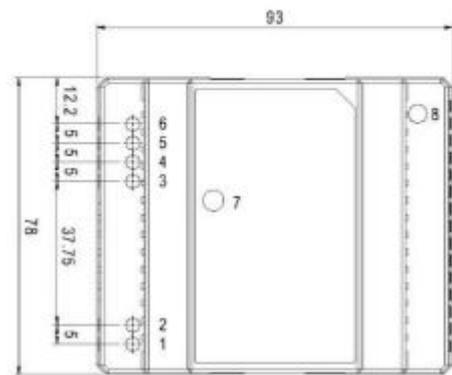
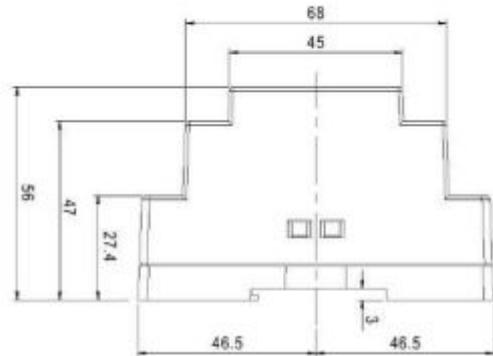
Case No. 918B Unit:mm

Terminal Pin. No Assignment

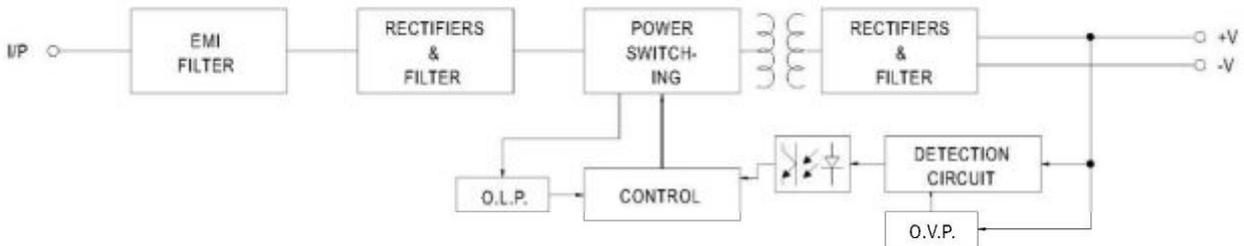
Pin No.	Assignment	Pin No.	Assignment
1	AC/N	5,6	-V
2	AC/L	7	LED
3,4	+V	8	+V ADJ.



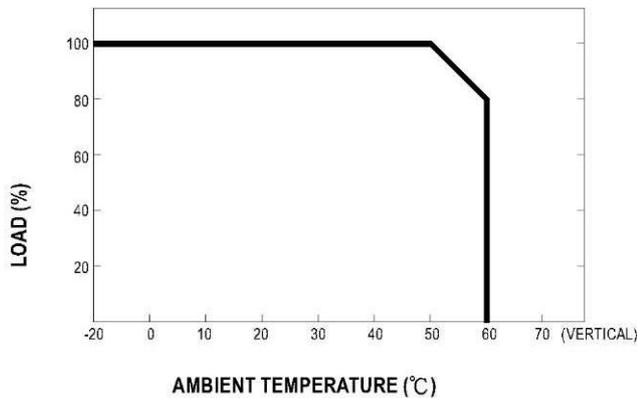
ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15



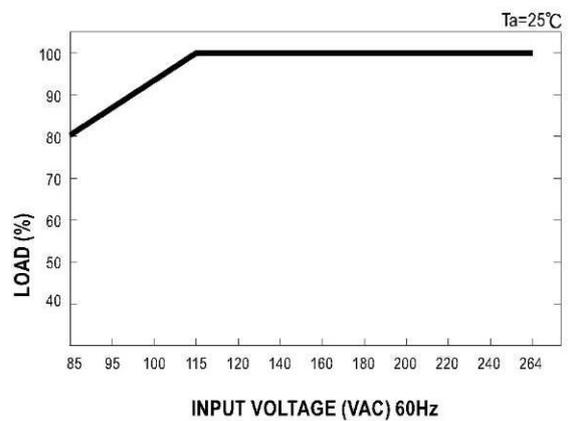
■ Block Diagram



■ Output Derating



■ Output Derating VS Input Voltage





■ Features :

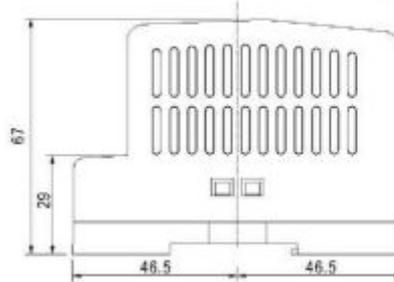
- Universal AC input/Full range
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- LED indicator for power on
- 100% full load burn-in test
- Fix switching frequency at 100KHz
- 3 years warranty

**SPECIFICATION**

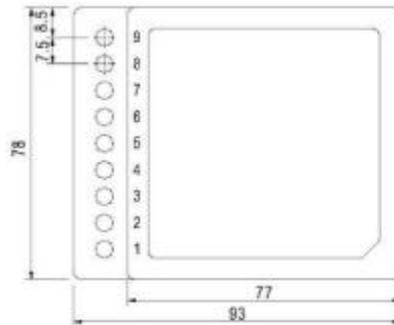
MODEL		DR-4505	DR-4512	DR-4515	DR-4524
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	5A	3.5A	2.8A	2A
	CURRENT RANGE	0 ~ 5A	0 ~3. 5A	0 ~ 2.8A	0 ~ 2A
	RATED POWER	25W	42W	42W	48W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	200mVp-p	240mVp-p	480mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	800ms, 60ms/230VAC at full load			
HOLD TIME (Typ.)	100ms/230VAC at full load				
INPUT	VOLTAGE RANGE	85 ~ 264VAC	120 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY (Typ.)	72%	77%	77%	80%
	AC CURRENT (Typ.)	1.5A/115VAC	0.75A/230VAC		
	INRUSH CURRENT (Typ.)	COLD START 28A/115VAC	56A/230VAC		
	LEAKAGE CURRENT	<1mA / 240VAC			
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed			
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V
	OVER TEMPERATURE	Tj 135°C typically (U1) Detect on heat sink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down			
ENVIRONMENT	WORKING TEMP.	-10 ~ +50°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)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, 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 EN55011,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, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A			
OTHERS	MTBF	364.6K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	93*78*67mm (L*W*H)			
	PACKING	0.31Kg; 48pcs/16.1Kg/1.3CUFT			
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 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. 918A Unit:mm



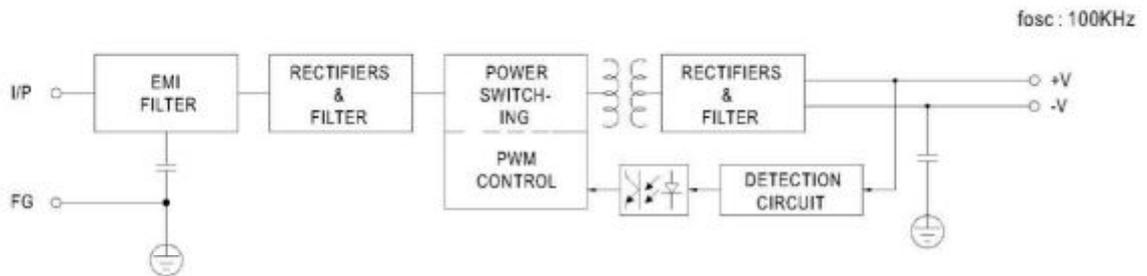
Install DIN rail TS35/7.5 or TS35/15



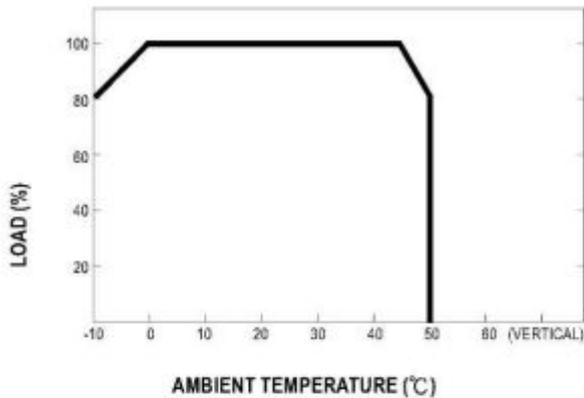
Terminal Pin. No Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	6,7	DC OUTPUT+V
2	AC/N	8	LED
3	FG ⊕	9	+V ADJ.
4,5	DC OUTPUT-V		

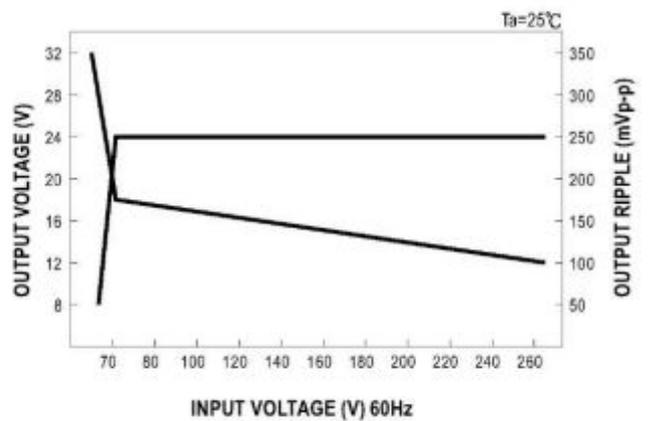
**Block Diagram**



**Output Derating**



**Static Characteristics (24V)**





### ■ Features :

- Universal AC input/Full range
- Protections: Short circuit/Over load/Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- Isolation class II
- LED indicator for power on
- 100% full load burn-in test
- 3 years warranty

### SPECIFICATION

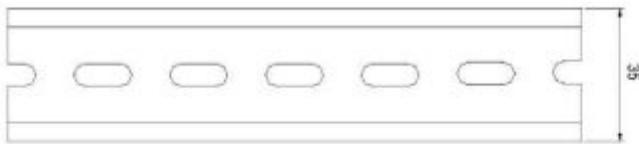
MODEL	DR-60-5	DR-60-12	DR-60-15	DR-60-24	
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	6.5A	4.5A	4A	2.5A
	CURRENT RANGE	0 ~ 6.5A	0 ~ 4.5A	0 ~ 4A	0 ~ 2.5A
	RATED POWER	32.5W	54W	60W	60W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	11.1 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	100ms, 30ms/230VAC      200ms, 30ms/115VAC at full load			
HOLD TIME (Typ.)	100ms/230VAC      23ms/115VAC at full load				
INPUT	VOLTAGE RANGE	88 ~ 264VAC      124 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY (Typ.)	76%	82%	83%	84%
	AC CURRENT (Typ.)	1.2A/115VAC      0.8A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 18A/115VAC      36A/230VAC			
PROTECTION	OVER LOAD	105 ~ 160% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed			
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V
ENVIRONMENT	WORKING TEMP.	-20 ~ +60°C (Refer to output load derating curve)			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved, Design refer to EN50178			
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC			
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms/500VDC			
	EMI CONDUCTION & RADIATION	Compliance to EN55011,EN55022 (CISPR22) Class B			
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3			
OTHERS	EMM IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2, EN61204-3 Heavy industry level, criteria A			
	MTBF	216.2K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	78*93*56mm (W*H*D)			
	PACKING	0.3Kg; 48pcs/15.4Kg/1.02CUFT			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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**

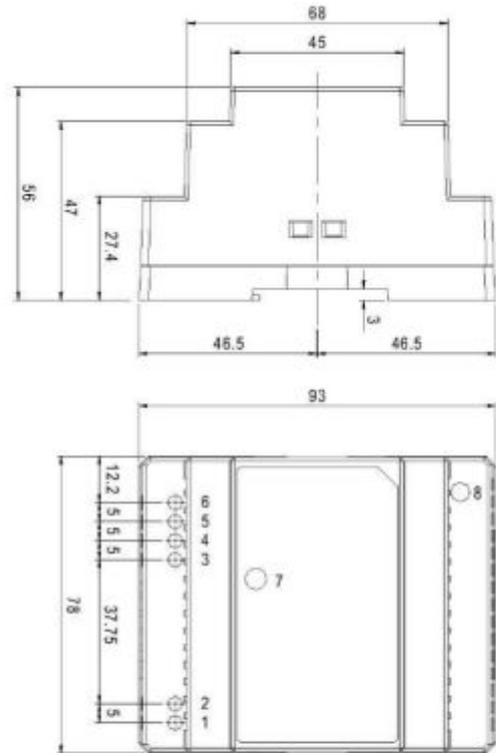
Case No.918B Unit:mm

Terminal Pin. No Assignment

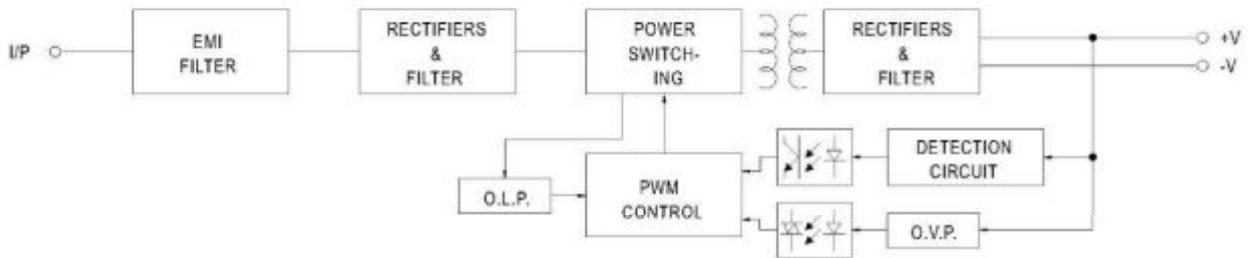
Pin No.	Assignment	Pin No.	Assignment
1	AC/N	5,6	-V
2	AC/L	7	LED
3,4	+V	8	+V ADJ.



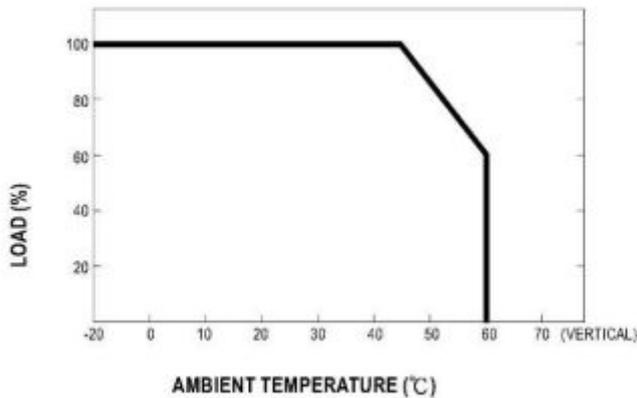
ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15



**Block Diagram**



**Output Derating**





■ Features :

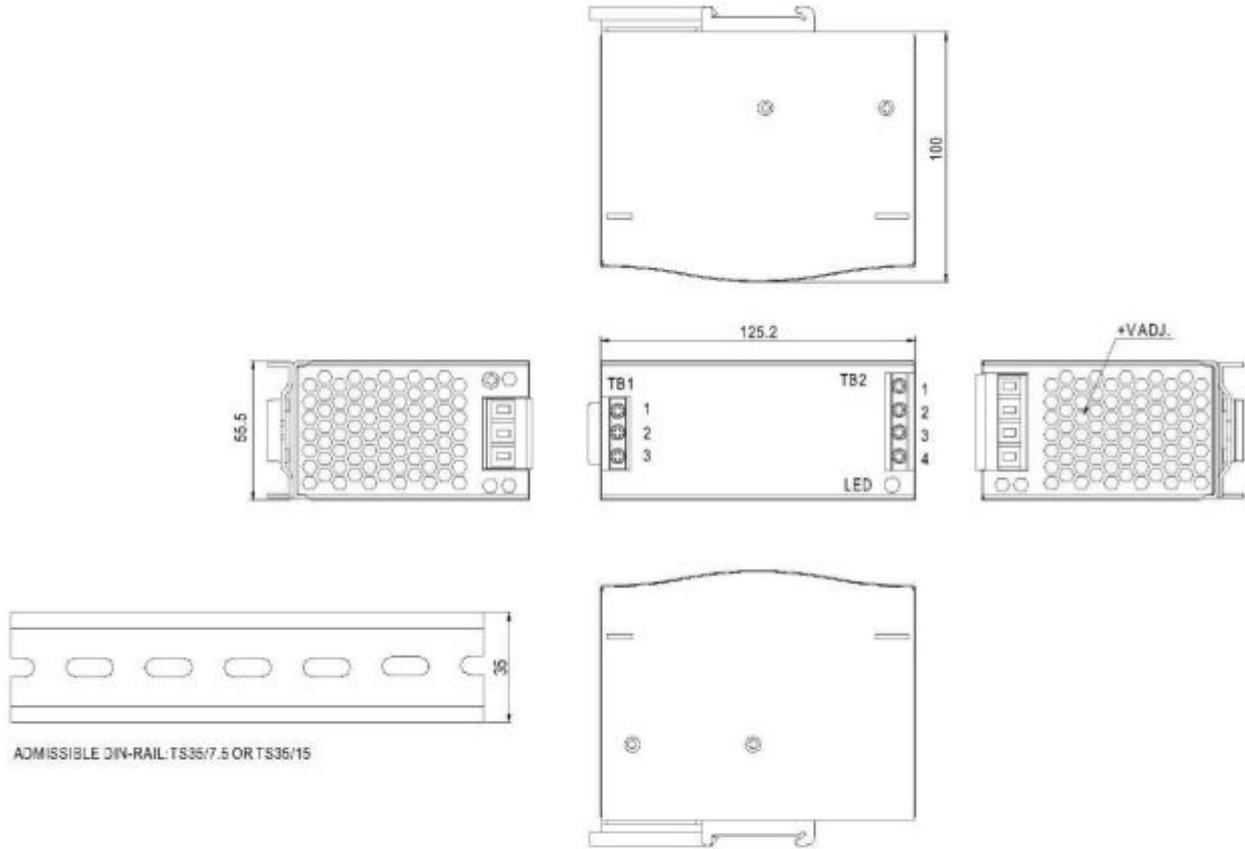
- Universal AC input/Full range
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- LED indicator for power on
- 100% full load burn-in test
- Fix switching frequency at 50KHz
- 3 years warranty

**SPECIFICATION**

MODEL	DR-75-12	DR-75-24	DR-75-48	
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	6.3A	3.2A	1.6A
	CURRENT RANGE	0 – 6.3A	0 – 3.2A	0 – 1.6A
	RATED POWER	76W	76.8W	76.8W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	12 – 14V	24 – 28V	48 – 53V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	1000ms, 60ms/230VAC    1800ms, 60ms/115VAC at full load		
HOLD TIME (Typ.)	60ms/230VAC    12ms/115VAC at full load			
INPUT	VOLTAGE RANGE	85 – 264VAC    120 – 370VDC		
	FREQUENCY RANGE	47 – 63Hz		
	EFFICIENCY (Typ.)	76%	80%	81%
	AC CURRENT (Typ.)	1.6A/115V    0.96A/230V		
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC    40A/230VAC		
	LEAKAGE CURRENT	<1mA / 240VAC		
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	OVER VOLTAGE	15 ~ 16.5V	29 ~ 34V	58 ~ 65V
		Protection type : Hiccup mode, recovers automatically after fault condition is removed		
	OVER TEMPERATURE	85°C±5°C (TSW1) Detect on heat sink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
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)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, 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 EN55011,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, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A		
OTHERS	MTBF	123.1K hrs min.    MIL-HDBK-217F (25°C)		
	DIMENSION	55.5*125.2*100mm (W*H*D)		
	PACKING	0.6Kg; 20pcs/13Kg/1.1CUFT		
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 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. 923 Unit:mm



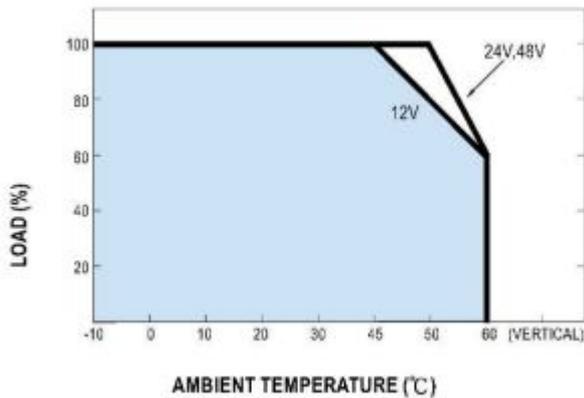
Terminal Pin. No Assignment (TB1)

Pin No.	Assignment
1	FG ⊕
2	AC/N(DC+)
3	AC/L(DC-)

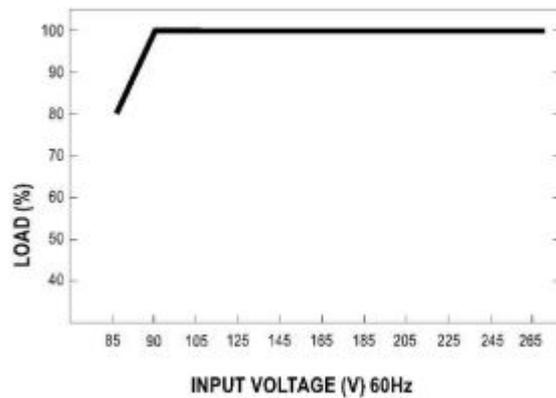
Terminal Pin. No Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V

**Output Derating**



**Output Derating Vs Input Voltage**





■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- Isolation class II
- LED indicator for power on
- No load power consumption<1W
- 100% full load burn-in test
- 3 years warranty

**SPECIFICATION**

MODEL	DR-100-12	DR-100-15	DR-100-24	
OUTPUT	DC VOLTAGE	12V	15V	24V
	RATED CURRENT	7.5A	6.5A	4.2A
	CURRENT RANGE	0 ~ 7.5A	0 ~ 6.5A	0 ~ 4.2A
	RATED POWER	90W	97.5W	100.8W
	RIPPLE & NOISE (max.) Note.2	120mVp-p	120mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 15V	15 ~ 18V	24 ~ 29V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%
	LINE REGULATION	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%
INPUT	SETUP, RISE TIME	2700ms, 80ms/230VAC    2700ms, 80ms/115VAC at full load		
	HOLD UP TIME (Typ.)	50ms/230VAC    18ms/115VAC at full load		
	VOLTAGE RANGE	88 ~ 264VAC	124 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz		
	EFFICIENCY (Typ.)	87%	87%	89%
PROTECTION	AC CURRENT (Typ.)	3A/115VAC    1.6A/230VAC		
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC    45A/230VAC		
	OVERLOAD	105 ~ 135% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	OVER VOLTAGE	16 ~ 20V	19 ~ 23V	30 ~ 35V
ENVIRONMENT	OVER TEMPERATURE	90°C ±15°C (RTH2) detect on heatsink of power transistor Protection type : Shut down o/p voltage, re-power on to recover		
	WORKING TEMP.	-20 ~ +60°C (Refer to output load derating curve)		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)		
SAFETY & EMC (Note 4)	VIBRATION	Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6		
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved, design refer to EN50178		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC		
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms/500VDC 25°C 70%RH		
	EMI CONDUCTION & RADIATION	Compliance to EN61204-3, EN55022 ClassB		
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3		
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A		
	MTBF	486K hrs min.    MIL-HDBK-217F (25°C)		
	DIMENSION	100*93*56mm (W*H*D)		
	PACKING	0.35Kg; 36pcs/13.6Kg/0.89CUFT		
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 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> <p>5. Harmonic current test @ 90% load.</p>			

■ Mechanical Specification

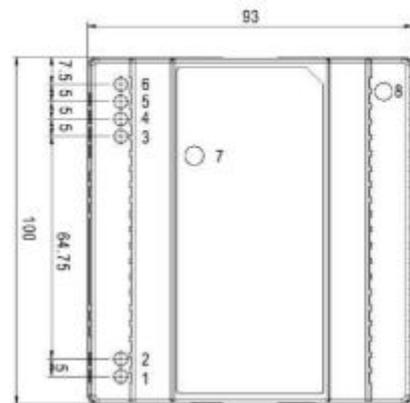
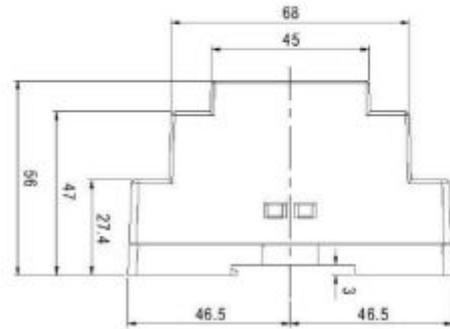
Case No.970A Unit:mm

Terminal Pin No. Assignment

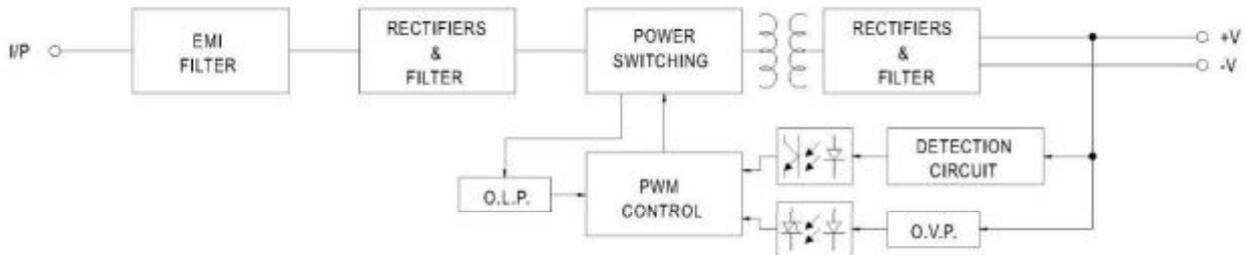
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5,6	-V
2	AC/N	7	LED
3,4	+V	8	+V ADJ.



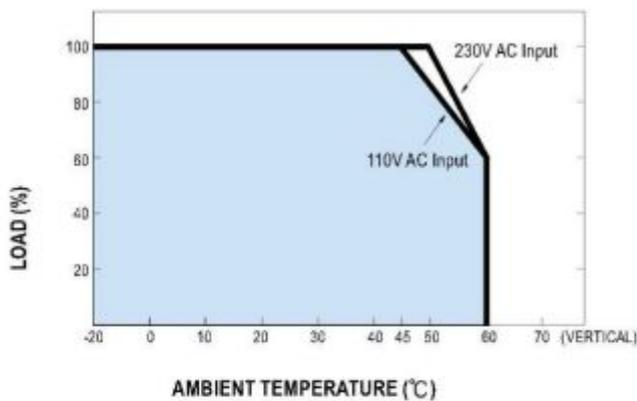
ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15



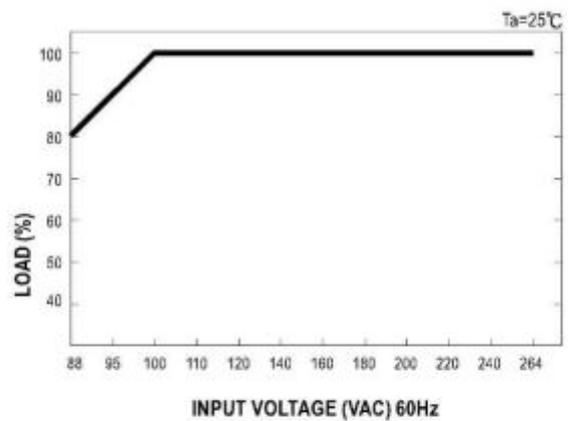
■ Block Diagram



■ Derating Curve VS Ambient Temperature



■ Output Derating VS Input Voltage





■ Features :

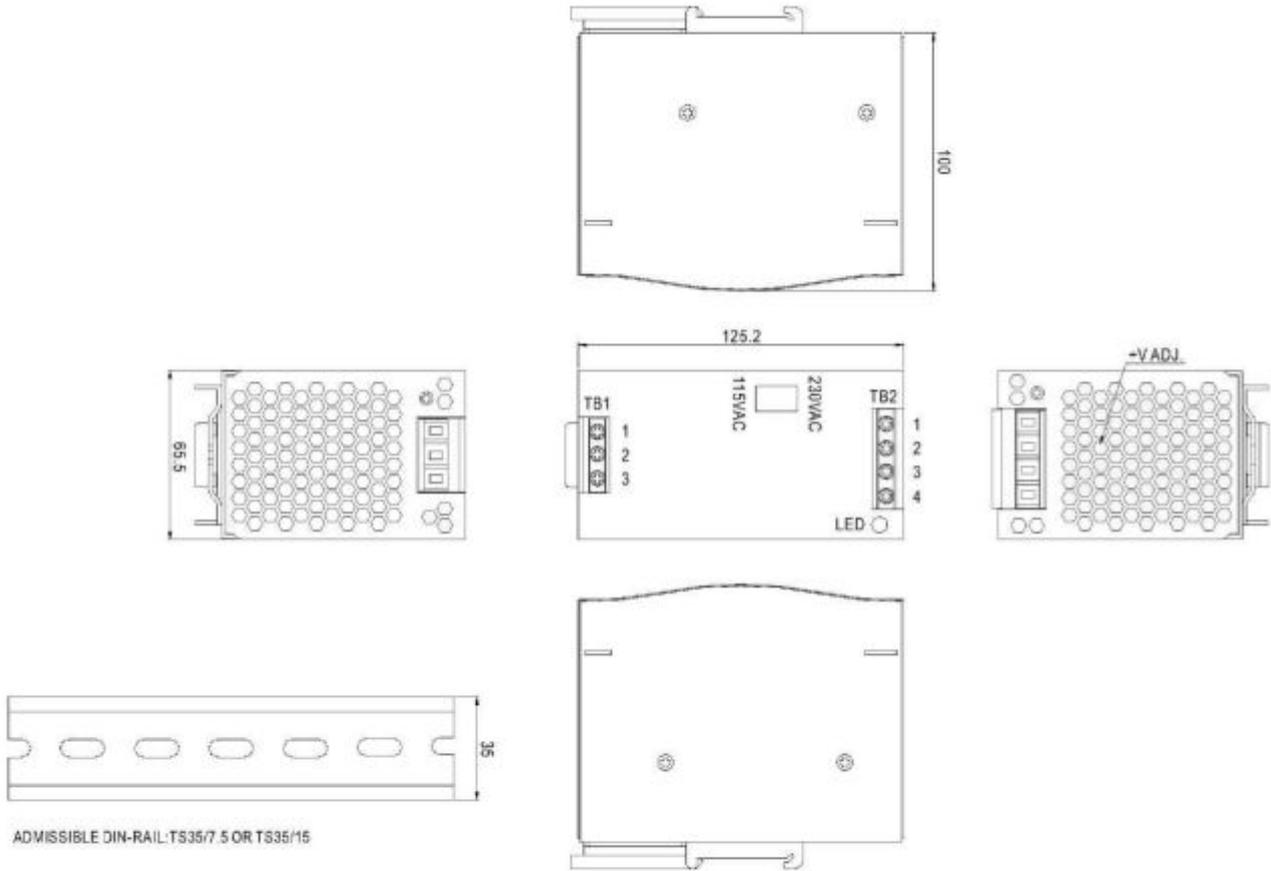
- AC input range selectable by switch
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at 55KHz
- 3 years warranty

**SPECIFICATION**

MODEL	DR-120-12	DR-120-24	DR-120-48	
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	10A	5A	2.5A
	CURRENT RANGE	0 ~ 10A	0 ~ 5A	0 ~ 2.5A
	RATED POWER	120W	120W	120W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 14V	24 ~ 28V	48 ~ 53V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	500ms, 70ms/230VAC    500ms, 70ms/115VAC at full load		
HOLD TIME (Typ.)	36ms/230VAC    32ms/115VAC at full load			
INPUT	VOLTAGE RANGE	88 ~ 132VAC/176 ~ 264VAC by switch		248 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz		
	EFFICIENCY (Typ.)	80%	84%	85%
	AC CURRENT (Typ.)	2.6A/115VAC    1.6A/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 : Constant current limiting, recovers automatically after fault condition is removed		
	OVER VOLTAGE	15 ~ 16.5V	29 ~ 33V	58 ~ 65V
	OVER TEMPERATURE	85°C±5°C (TSW1)	90°C±5°C(TSW1)	90°C±5°C(TSW1)
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 )		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, 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 EN55011,EN55022 (CISPR22) Class B		
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3		
OTHERS	EMM IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A		
	MTBF	136.8Khrs min.    MIL-HDBK-217F (25°C)		
	DIMENSION	65.5*125.2*100mm (W*H*D)		
	PACKING	0.79Kg; 20pcs/16.5Kg/1.1CUFT		
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 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. 921A Unit:mm



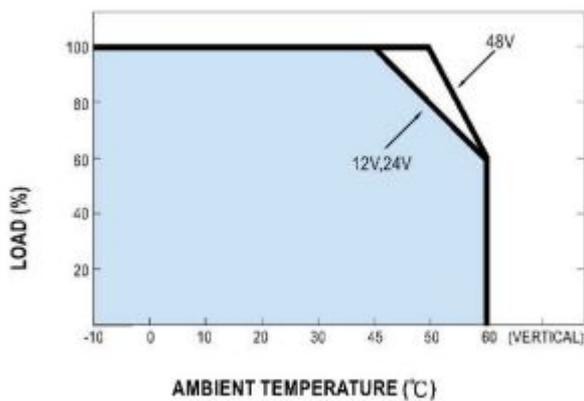
Terminal Pin. No Assignment (TB1)

Pin No.	Assignment
1	FG ⊕
2	AC/N
3	AC/L

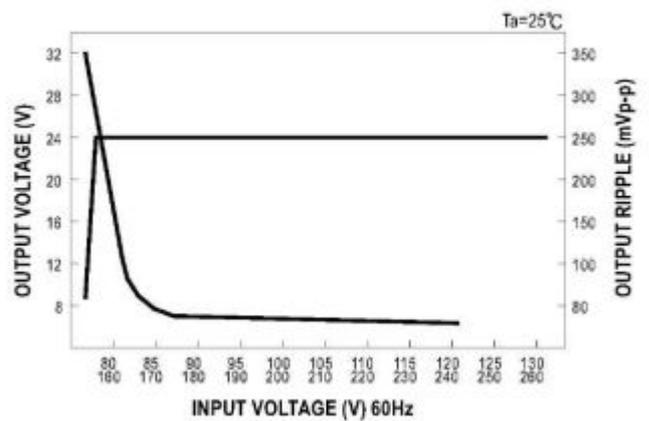
Terminal Pin. No Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V

■ Output Derating



■ Static Characteristics (24V)




**■ Features :**

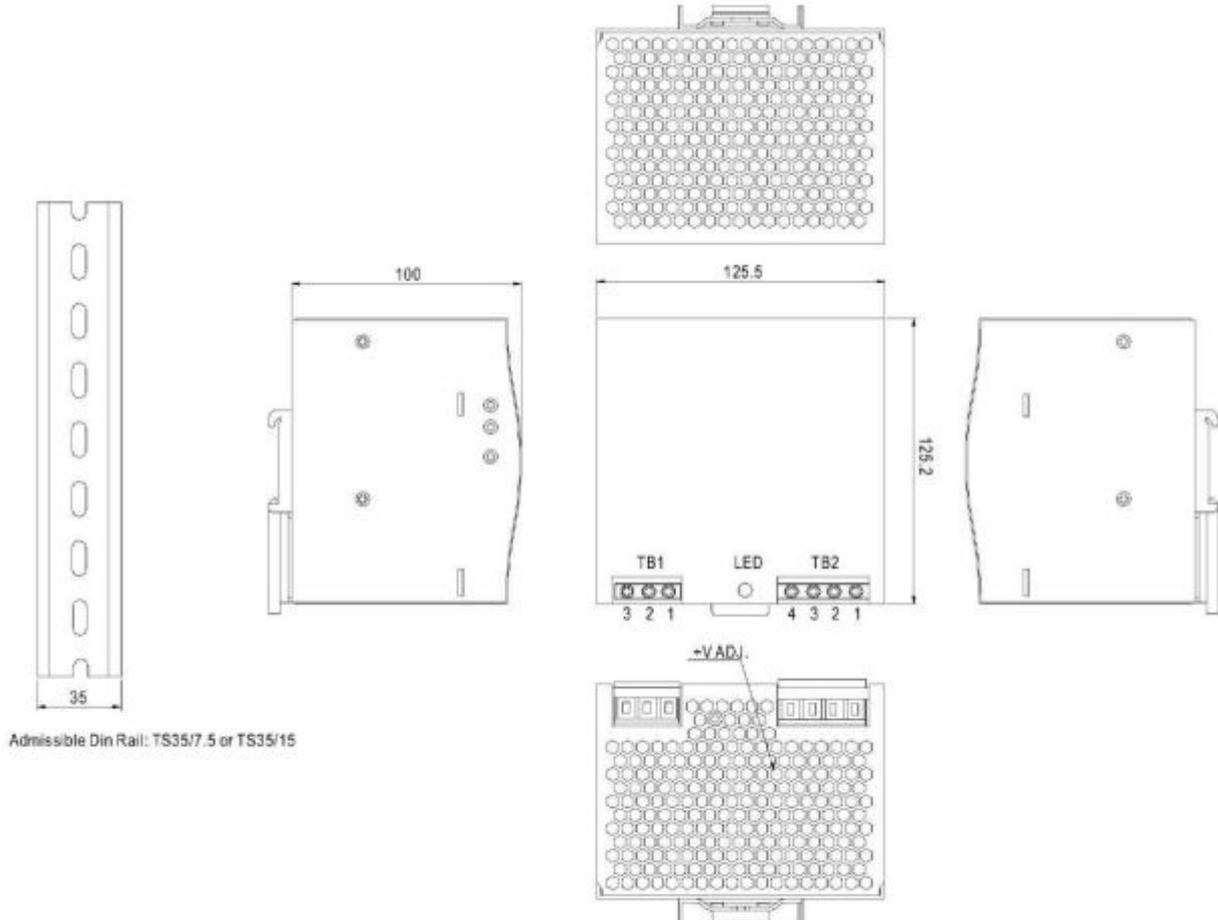
- Universal AC input / Full range
- Built in active PFC function
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at 100KHz
- 3 years warranty

**SPECIFICATION**

MODEL		DRP-240-24	DRP-240-48
OUTPUT	DC VOLTAGE	24V	48V
	RATED CURRENT	10A	5A
	CURRENT RANGE	0 ~ 10A	0 ~ 5A
	RATED POWER	240W	240W
	RIPPLE & NOISE (max.) <small>Note.2</small>	80mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 53V
	VOLTAGE TOLERANCE <small>Note.3</small>	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%
	SETUP, RISE TIME	800ms, 40ms/230VAC      800ms, 40ms/115VAC at full load	
HOLD TIME (Typ.)	24ms/230VAC      24ms/115VAC at full load		
INPUT	VOLTAGE RANGE <small>Note.5</small>	85 ~ 264VAC	120 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	0.96/230VAC      0.99/115VAC at full load	
	EFFICIENCY (Typ.)	84%	85%
	AC CURRENT (Typ.)	2.8A/115VAC      1.4A/230VAC	
	INRUSH CURRENT (Typ.)	COLD START 27A/115VAC      45A/230VAC	
	LEAKAGE CURRENT	<3.5mA / 240VAC	
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed	
	OVER VOLTAGE	30 ~ 36V	54 ~ 60V
	OVER TEMPERATURE	100°C ±5°C (TSW1) Detect on heat sink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down	
ENVIRONMENT	WORKING TEMP.	-10 ~ +70°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)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	
SAFETY & EMC <small>(Note 4)</small>	SAFETY STANDARDS	UL508, 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 EN55011, 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, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A	
OTHERS	MTBF	105.5Khrs min.    MIL-HDBK-217F (25°C)	
	DIMENSION	125.5*125.2*100mm (W*H*D)	
	PACKING	1.2Kg; 12pcs/15.5Kg/1.2CUFT	
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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. 5. Derating may be needed under low input voltages. Please check the derating curve for more details.		

■ Mechanical Specification

Case No. 922A Unit:mm



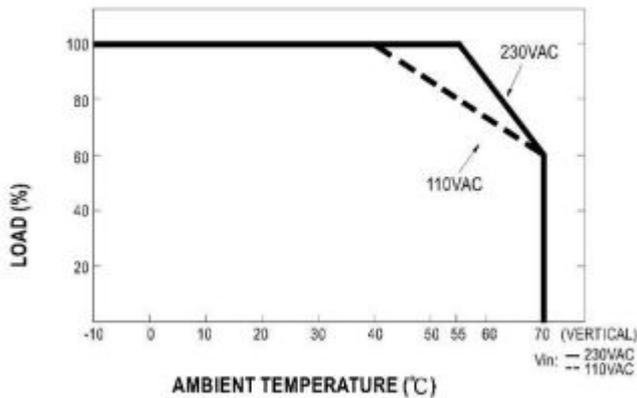
Terminal Pin. No Assignment (TB1)

Pin No.	Assignment
1	FG (⊕)
2	AC/N
3	AC/L

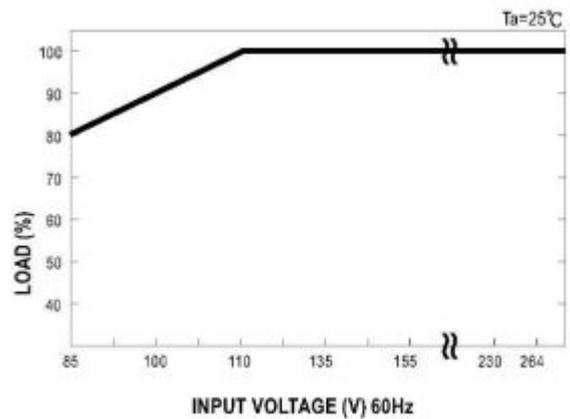
Terminal Pin. No Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V

■ Output Derating



■ Output derating VS input voltage





■ Features :

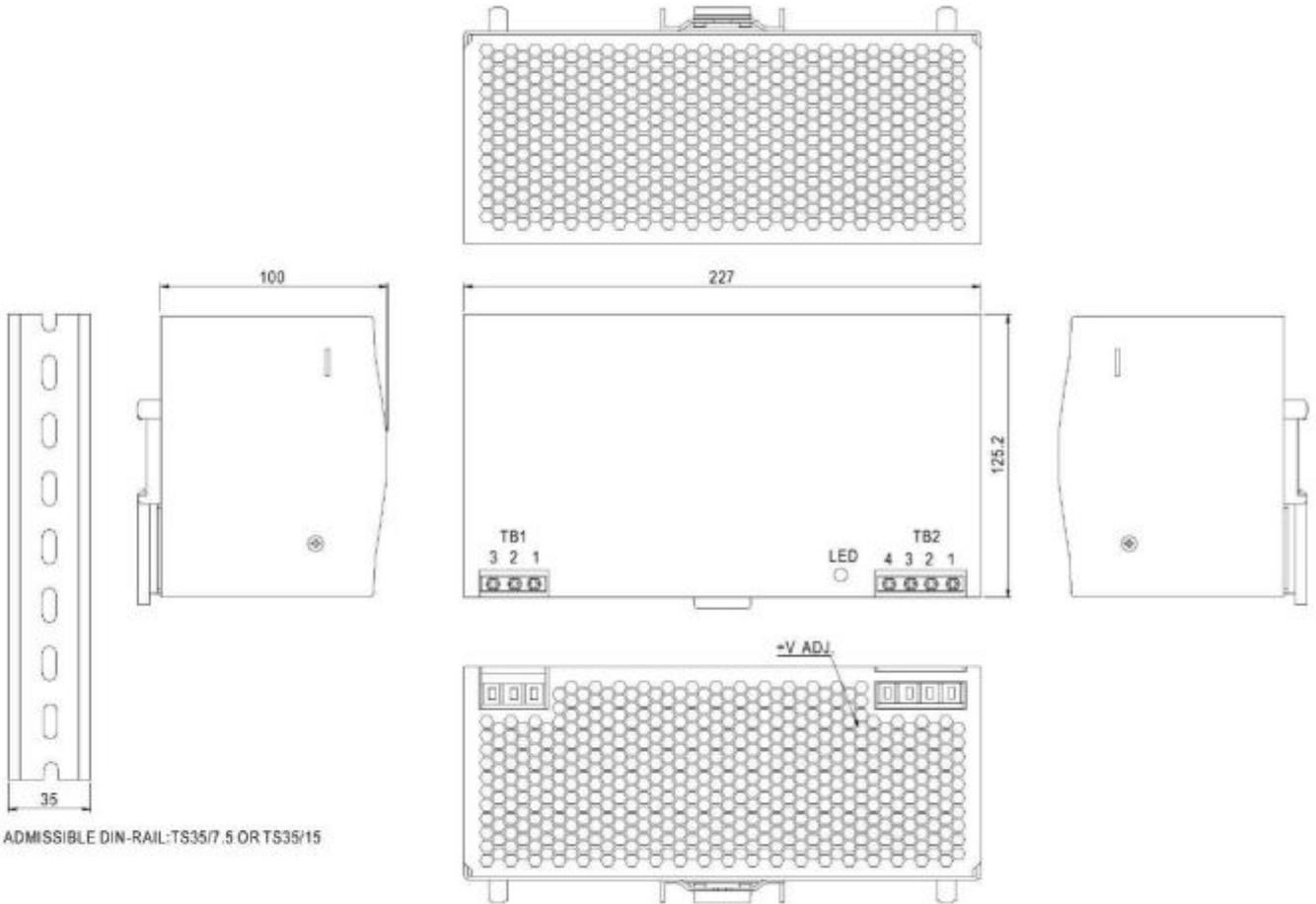
- Built-in passive PFC function compliance to EN61000-3-2
- High efficiency 89% and low dissipation
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- 100% full load burn-in test
- 3 years warranty

**SPECIFICATION**

MODEL		DRP-480-24	DRP-480-48
OUTPUT	DC VOLTAGE	24V	48V
	RATED CURRENT	20A	10A
	CURRENT RANGE	0 ~ 20A	0 ~ 10A
	RATED POWER	480W	480W
	RIPPLE & NOISE (max.) Note.2	120mVp-p	120mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 53V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%
	SETUP, RISE TIME	1200ms, 40ms/230VAC at full load	
HOLD TIME (Typ.)	16ms/230VAC at full load		
INPUT	VOLTAGE RANGE	180 ~ 264VAC    250 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	≥0.7	
	EFFICIENCY (Typ.)	89%	
	AC CURRENT (Typ.)	4A/230VAC	
	INRUSH CURRENT (Typ.)	COLD START 40A/230VAC	
	LEAKAGE CURRENT	<3.5mA / 240VAC	
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed	
	OVER VOLTAGE	30 ~ 36V	54 ~ 60V
	OVER TEMPERATURE	100°C ±5°C (TSW : Detect on heatsink of power switch) Protection type : Shut down o/p voltage, recovers automatically after temperature goes down	
ENVIRONMENT	WORKING TEMP.	-20 ~ +70°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)	
	VIBRATION	Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6	
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, 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, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A	
OTHERS	MTBF	180.9Khrs min.    MIL-HDBK-217F (25°C)	
	DIMENSION	227*125.2*100mm (W*H*D)	
	PACKING	2.4Kg; 6pcs/15Kg/1.75CUFT	
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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 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.930 Unit:mm



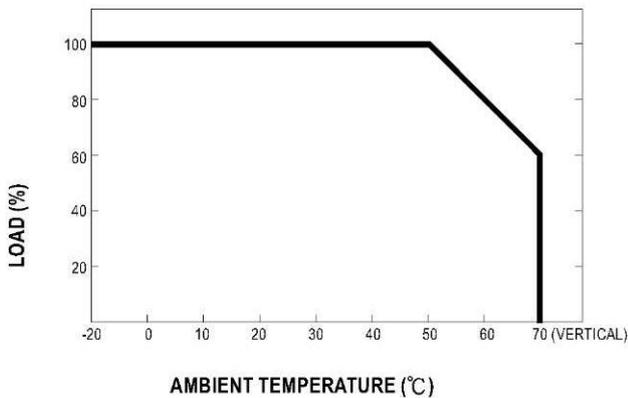
TB1 Terminal Pin. No Assignment

Pin No.	Assignment
1	AC/L(DC+)
2	AC/N(DC-)
3	FG ⊕

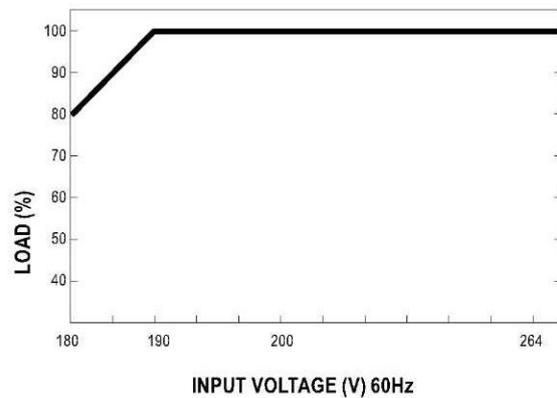
TB2 Terminal Pin. No Assignment

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V

■ Derating Curve



■ Output Derating VS Input Voltage



## AC/DC преобразователи других серий

Серия AC/DC преобразователей **OFM** включает в себя модели мощностью 5Вт, 10Вт, 15Вт и 25Вт, предназначены для установки на печатную плату кроме OFM-020X, которые предназначены для установки на шасси прибора. Диапазон входных напряжений переменного тока от 85В до 264В частотой от 47Гц до 440Гц, или от 120В до 370В для постоянного напряжения. Выходное напряжение один канал 5 В, 12В, 15В или 24В, в зависимости от типа. Имеется возможность регулировки выходного напряжения в пределах  $\pm 10\%$ . Электрическая прочность изоляции 3000В, защита от короткого замыкания и перенапряжения по выходным цепям, мягкий пуск с ограничением пускового тока. Изменение выходного напряжения при изменении входного напряжения от минимального до максимального значения не более 0,5%, изменение выходного напряжения во всем диапазоне выходных токов не более 1%.

AC/DC преобразователи серий **LPP**, **LPS**, **PS** и **PPS** включают в себя модели мощностью 5Вт, 15Вт, 25Вт, 45Вт, 65Вт, 100Вт, и 150Вт. Диапазон входных напряжений переменного тока от 85В до 264В частотой от 47Гц до 440Гц, или от 120В до 370В для постоянного напряжения. Выходное напряжение один канал 3,3В, 5 В, 7,5В, 12В, 13,5В, 15В, 24В, 27В или 48В, в зависимости от типа. Имеется возможность регулировки выходного напряжения в пределах от -5% до +10%. Электрическая прочность изоляции 3000В, защита от короткого замыкания и перенапряжения по выходным цепям, мягкий пуск с ограничением пускового тока. В преобразователи встроен входной фильтр ЭМИ, в моделях LPP и PPS имеется корректор коэффициента мощности.

AC/DC преобразователи **PD** с двумя выходами и мощностью 25Вт, 45Вт, 65Вт и 110Вт, в зависимости от типа. Диапазон входных напряжений переменного тока от 90В до 264В частотой от 47Гц до 440Гц (для PD-25 и PD-110 частота переменного тока от 47Гц до 63Гц), или от 120В до 370В для постоянного напряжения. Выходное напряжение два канала из комбинации напряжений  $\pm 5В$ ,  $\pm 12В$ ,  $\pm 15В$ , 3,3В, 5 В, 12В или 24В, в зависимости от типа. Электрическая прочность изоляции 3000В, защита от короткого замыкания и перенапряжения по выходным цепям, мягкий пуск с ограничением пускового тока.

Открытые AC/DC преобразователи **PT** и **PTsb**, **PPT** с тремя выходами и мощностью от 45Вт до 125Вт, в зависимости от типа. Диапазон входных напряжений переменного тока от 90В до 264В частотой от 47Гц до 440Гц, или от 120В до 370В для постоянного напряжения. Выходное напряжение три канала из комбинации напряжений: 5Vsb, 3,3В, 5 В, 12В, 15В, 24В, -5 В, -12В или -15В в зависимости от типа. Электрическая прочность изоляции 3000В, имеется защита от перенапряжения на входе, защита от короткого замыкания и перенапряжения по выходным цепям, мягкий пуск с ограничением пускового тока. В преобразователях имеется встроенный входной фильтр ЭМИ, в моделях PPT имеется корректор коэффициента мощности, модели PTsb с функцией ATX имеют дополнительный дежурный канал 5Vsb и могут управляться дистанционно.

Открытые AC/DC преобразователи с четырьмя выходами и мощностью 100Вт, серий **PQ** (без корректора коэффициента мощности) и **PPQ** (с корректором коэффициента мощности). Диапазон входных напряжений переменного тока для серии PQ от 90В до 264В частотой от 47Гц до 440Гц, или от 120В до 370В постоянного напряжения, для серии PPQ от 100В до 264В частотой от 47Гц до 63Гц, или от 141В до 370В постоянного напряжения. Выходное напряжение четыре канала из комбинации напряжений: 3,3В, 5 В, 12В, 15В, 24В, -5 В, -12В или -15В в зависимости от типа. Электрическая прочность изоляции 3000В, имеется защита от перенапряжения на входе, защита от короткого замыкания и перенапряжения по выходным цепям, мягкий пуск с ограничением пускового тока. В преобразователях имеется встроенный входной фильтр ЭМИ, модели с обозначением PPQ имеют встроенный корректор коэффициента мощности.

Открытые AC/DC преобразователи для медицинской техники серий **MPQ**, **MPS**, **MPT** и **MPD** мощностью 30Вт, 45Вт, 65Вт, 120Вт, и 200Вт. Диапазон входных напряжений переменного тока от 90В до 264В частотой от 47Гц до 440Гц, или от 120В до 370В постоянного напряжения. Для MPS-30 диапазон входных напряжений переменного тока от 85В до 264В частотой от 47Гц до 63Гц, или от 120В до 370В постоянного напряжения. Выходные напряжения: до девяти каналов из комбинации напряжений: 3,3В, 5 В, 7,5В, 12В, 13,5В, 15В, 24В, 27 В и 48В в зависимости от типа. Электрическая прочность изоляции 4000В, ток утечки не более 300 мкА, имеется защита от перенапряжения на входе, защита от короткого замыкания и перенапряжения по выходным цепям, мягкий пуск с ограничением пускового тока. В преобразователях имеется встроенный входной фильтр ЭМИ.

AC/DC преобразователи серий **RS**, **RD**, **RID**, **RT** и **RQ** мощностью от 25Вт до 150Вт имеют компактный защитный перфорированный корпус. Диапазон входных напряжений переменного тока от 88В до 264В частотой от 47Гц до 63Гц. Выходные напряжения: до девяти каналов из комбинации напряжений: 3,3В, 5 В, 12В, 13,5В, 15В, 24В, 48 В, -5В, -12В и -15В в зависимости от типа. Регулировка выходного напряжения для моделей с одним выходом  $\pm 10\%$ , для остальных от  $-5\%$  до  $+10\%$ . Электрическая прочность изоляции 3000В, защита от короткого замыкания и перенапряжения по выходным цепям.

Миниатюрные AC/DC преобразователи серий **NES**, **NED** и **NET** мощностью от 15Вт до 100Вт имеют защитный перфорированный корпус. Диапазон входных напряжений переменного тока от 85В до 264В частотой от 47Гц до 63Гц или от 120В до 370В постоянного напряжения. Выходные напряжения: до девяти каналов из комбинации напряжений: 5В, 7,5В, 12В, 13,5В, 15В, 24В, -5В, -12В и -15В в зависимости от типа. Регулировка выходного напряжения для моделей с одним выходом  $\pm 10\%$ , для остальных от  $-5\%$  до  $+10\%$ . Электрическая прочность изоляции 3000В, защита от короткого замыкания и перенапряжения по выходным цепям с автоматическим восстановлением.

AC/DC преобразователи серий **SP** и **PSP** мощностью от 75Вт до 1500Вт имеют защитный перфорированный корпус с вентилятором принудительного охлаждения. Диапазон входных напряжений переменного тока от 85В до 264В частотой от 47Гц до 63Гц или от 120В до 370В постоянного напряжения. Выходные напряжения: девять каналов из комбинации напряжений: 3,3В, 5В, 7,5В, 12В, 13,5В, 15В, 24В, 27В и 48В в зависимости от типа. Регулировка выходного напряжения  $\pm 10\%$ . Электрическая прочность изоляции 3000В, защита от короткого замыкания и перенапряжения по выходным цепям. Ограничение пускового тока и мягкий старт, встроенный корректор коэффициента мощности. Преобразователи серии PSP допускают параллельную работу по выходу.

Модульные AC/DC преобразователи серий **MD**, **MP** и **MS** мощностью от 450Вт до 1000Вт допускают параллельную работу для увеличения мощности. Диапазон входных напряжений переменного тока: от 85В до 264В частотой от 47Гц до 63Гц, или от 120В до 370В постоянного напряжения. Выходные напряжения до 14 изолированных каналов из комбинации напряжений: 2В, 3,3В, 5 В, 7,5В 12В, 15В, 24В, 27 В, 36В или 48В в зависимости от типа. Электрическая прочность изоляции 3000В, мягкий пуск и ограничение пускового тока, защита от короткого замыкания по выходным цепям. Имеется вход для дистанционного управления. В преобразователях имеется встроенный корректор коэффициента мощности.

Модульные AC/DC преобразователи серий **SCN** и **SCP** мощностью от 600Вт до 2400Вт допускают параллельную работу для увеличения мощности. Диапазон входных напряжений переменного тока: от 200В до 260В частотой от 47Гц до 63Гц для серии SCN и от 180В до 260В частотой от 47Гц до 63Гц для серии SCP. Для питания SCN-2K0 и SCN-2K4 используется трехфазная промышленная сеть переменного тока. Выходные напряжения: один канал из комбинации напряжений 5В, 12В, 15В, 24В или 48В в зависимости от типа. Электрическая прочность изоляции 1500В, мягкий пуск и ограничение пускового тока, защита от короткого замыкания по выходным цепям. Имеется вход для дистанционного управления преобразователем, диагностический выход норма/не норма для серии SCP. Механическая регулировка выходного напряжения в пределах  $\pm 5\%$  и электронная регулировка от 25% до 100% от выходного напряжения. В преобразователях серии SCP имеется встроенный корректор коэффициента мощности.

AC/DC преобразователи с функцией источника бесперебойного питания серий **AD**, **ADD** и **ADS** мощностью 55Вт и 155Вт применяются для создания устройств с резервным питанием от свинцовых аккумуляторных батарей при пропадании напряжения в первичной питающей сети. Диапазон входных напряжений переменного тока: от 88В до 264В частотой от 47Гц до 63Гц, или от 124В до 370В постоянного напряжения. Выходные напряжения: до трех каналов, включая канал зарядного устройства из комбинации напряжений 5В, 12В, 24В или 48В в зависимости от типа. Электрическая прочность изоляции 3000В, мягкий пуск и ограничение пускового тока, защита от перенапряжения по входу, защита от короткого замыкания по выходным цепям, сигнализация при снижении напряжения на аккумуляторной батарее ниже 82%. В преобразователях имеется встроенный фильтр ЭМИ.

AC/DC преобразователи с функцией АТХ серий **АТХ**, **PSIV**, **IPC** и **YP** мощностью от 150Вт до 350Вт и применяются для питания промышленных компьютеров и устройств автоматики. Диапазон входных напряжений переменного тока: от 200В до 264В частотой от 47Гц до 63Гц. Для обеспечения теплового режима имеется встроенный вентилятор. Выходные напряжения: до шести каналов, включая дежурный канал +5В из комбинации напряжений 3,3В, 5В, 12В, -5В и -12В. Электрическая прочность изоляции 1500В, мягкий пуск и ограничение пускового тока, защита от превышения входного напряжения, защита от короткого замыкания по всем выходным цепям, диагностический сигнал «предупреждение» при снижении напряжения +5В до +4,75В, диагностический сигнал «норма». Вход дистанционного включения и выключения. В преобразователях имеется встроенный фильтр ЭМИ.

Для питания радиоаппаратуры малой мощности AC/DC преобразователи серий **AS**, **ES**, **GS**, **FM90** и **U65** в пластмассовых корпусах, в виде адаптеров двух видов: для настольного расположения и включаемых непосредственно в розетку с выходной мощностью от 6Вт до 120Вт. Диапазон входных напряжений переменного тока от 90В до 264В частотой от 47Гц до 63Гц. Выходное напряжение: один канал: 3,3В, 5 В, 7,5В 12В, 15В, 18В, 24В, 28 В или 48В в зависимости от типа. Имеется защита от короткого замыкания и перенапряжения по выходным цепям, защита от перегрева, мягкий пуск с ограничением пускового тока.