

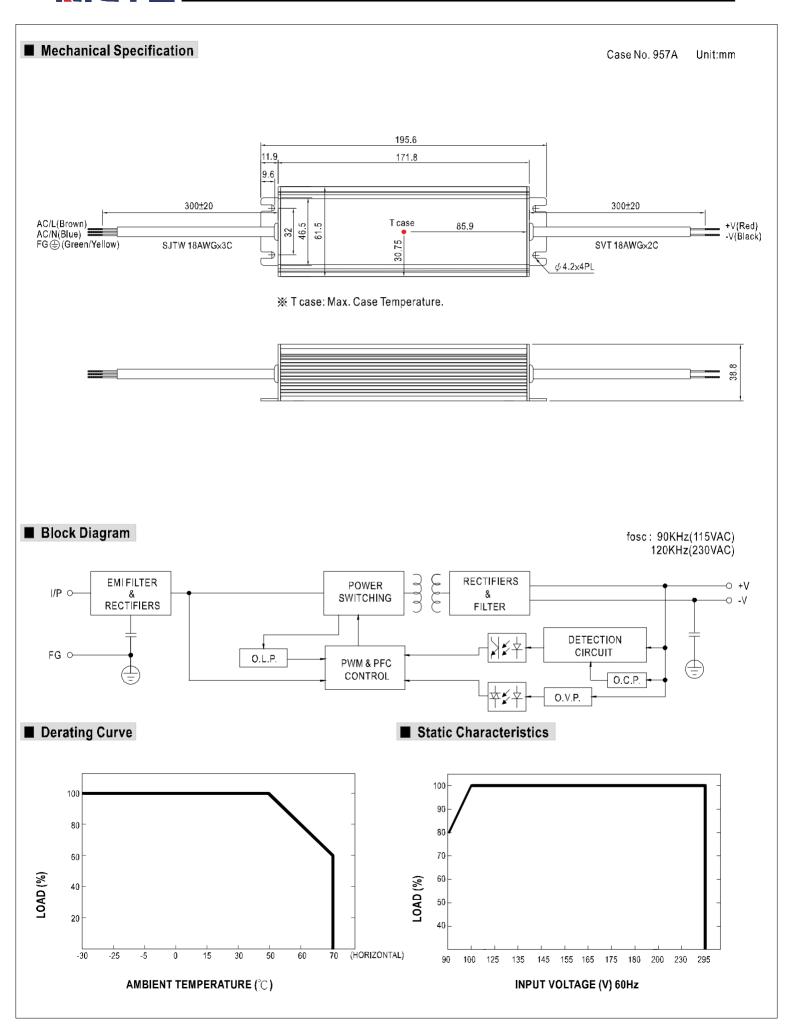
■ Features :

- Universal AC input / Full range (up to 295VAC)
- · Built-in active PFC function
- High efficiency up to 89%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- IP67 design for indoor or outdoor installations
- UL1310 Class 2 power unit
- Pass LPS
- · 100% full load burn-in test
- · High reliability
- Suitable for LED lighting and moving sign applications (Note.2)
- · Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations

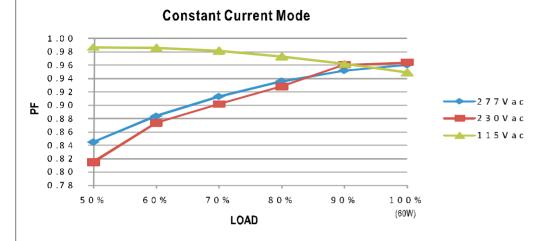
MODEL		CLG-60-12	CLG-60-15	CLG-60-20	CLG-60-24	CLG-60-27	CLG-60-36	CLG-60-48			
	DC VOLTAGE	12V	15V	20V	24V	27V	36V	48V			
	CONSTANT CURRENT REGION Note.5	8.4 ~ 12V	10.5 ~ 15V	14 ~ 20V	16.8 ~ 24V	18.9 ~ 27V	25.2 ~ 36V	33.6 ~ 48V			
	RATED CURRENT	5A	4A	3A	2.5A	2.3A	1.7A	1.3A			
	CURRENT RANGE	0 ~ 5A	0 ~ 4A	0 ~ 3A	0 ~ 2.5A	0 ~ 2.3A	0 ~ 1.7A	0 ~ 1.3A			
	RATED POWER	60W	60W	60W	60W	62.1W	61.2W	62.4W			
	RIPPLE & NOISE (max.) Note.2		2.4Vp-p	1.8Vp-p	2.7Vp-p	2.7Vp-p	3.6Vp-p	4.6Vp-p			
OUTPUT		11.5 ~ 13V	14.5 ~ 16.2V	19.5 ~ 22V	24 ~ 26V	25 ~ 30V	32.5 ~ 39V	43.6 ~ 51.8V			
	VOLTAGE ADJ. RANGE		dified between the		12. 200	120 00.		1010 01101			
	CURRENT ADJ. RANGE		xed. Can be modified between 3% ~ -25% rated output current								
	VOLTAGE TOLERANCE Note 3	·									
	LINE REGULATION	13.0%									
	LOAD REGULATION	±5.0%									
	SETUP TIME		±5.0% 3000ms / 230VAC 5000ms / 115VAC at full load								
		90 ~ 295VAC		AG at full load							
	VOLTAGE RANGE Note.4 FREQUENCY RANGE	47 ~ 63Hz	127 ~ 417VDC								
			DE>0.0/220VAC	DE>0.0/077\/A.C.	ot full load (Dlogg	o refer to "Dower F	actor Characteristic	all aumia)			
INPUT	POWER FACTOR (Typ.) EFFICIENCY (Typ.)	85%	86%	87.5%	87%	88%	actor Characteristic	89%			
INPU		,-	1			00%	09%	09%			
	AC CURRENT (Typ.)	0.8A/115VAC									
	INRUSH CURRENT(max.)	40A/230VAC									
	LEAKAGE CURRENT		<0.75mA/240VAC								
	OVER CURRENT	95 ~ 110%									
		Protection type: Constant current limiting, recovers automatically after fault condition is removed									
	SHORT CIRCUIT		Hiccup mode, recovers automatically after fault condition is removed								
DDOTECTION	OVER VOLTAGE	13.8 ~ 16V	17.5 ~ 21V	23 ~ 26V	28 ~ 32V	31 ~ 35V	41 ~ 46V	54 ~ 60V			
PROTECTION		Protection type: Shut down o/p voltage, re-power on to recover									
	OVED TEMPEDATURE	12V: 90°C ±10°C (TSW1) detect on heatsink of power transistor									
	OVER TEMPERATURE	15V ~ 48V: 85°C ±10°C (TSW1) detect on heatsink of power transistor									
		Protection type: Shut down o/p voltage, recovers automatically after temperature goes down -30 ~ +70°C (Refer to "Derating Curve")									
	WORKING TEMP.			ırve")							
	WORKING HUMIDITY	20 ~ 95% RH no									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°€, 10									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ :	<u>, </u>								
	VIBRATION			iod for 72min eac	· · · · · · · · · · · · · · · · · · ·						
	SAFETY STANDARDS					lependent, CAN/CS	SA C22.2 No. 223-N	191(except for 48V)			
	OAI ETT OTANDARDO	J61347-1, J6134	7-2-13(option, 20-	~27only), IP67 app	proved						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3.75KV	AC I/P-FG:1.88	KVAC O/P-FG:	0.5KVAC						
EMC	ISOLATION RESISTANCE	I/P-O/P:100M O	nms / 500VDC / 25	5℃/ 70 % RH							
	EMC EMISSION	Compliance to E	N55015, EN55022	2 (CISPR22) Class	B, EN61000-3-2	Class C (≧75% lo	ad); EN61000-3-3				
	EMC IMMUNITY	Compliance to E	N61000-4-2,3,4,5	,6,8,11, EN55024,	EN61547, light in	ndustry level (surge	4KV), criteria A				
	MTBF	495.7Khrs min	MIL-HDBK-217I	F (25°℃)							
OTHERS	DIMENSION	195.6*61.5*38.8	mm (L*W*H)								
	PACKING	0.86Kg; 16pcs/1	1.8Kg/0.54CUFT								
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance: includes set up Derating may be needed up Constant current operation	ed at 20MHz of b tolerance, line re nder low input vol region is within 7	86Kg; 16pcs/14.8Kg/0.54CUFT mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. erance, line regulation and load regulation. er low input voltage. Please check the static characteristics for more details. gion is within 70% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please juirements for some specific system design.								

- reconfirm special electrical requirements for some specific system design.

 6. The power supply is considered as a component that will be operated in combination with final equipment.
- 7. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.

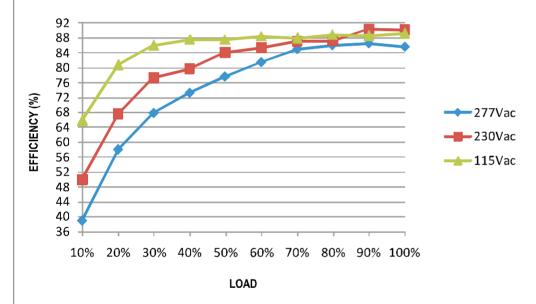


■ Power Factor Characteristic



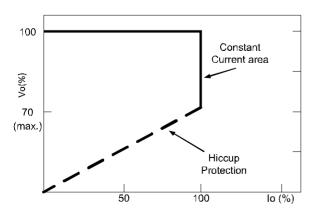
■ EFFICIENCY vs LOAD (48V Model)

CLG-60 series possess superior working efficiency that up to 89% can be reached in field applications.



■ DRIVING METHODS OF LED MODULE

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



Typical LED power supply I-V curve

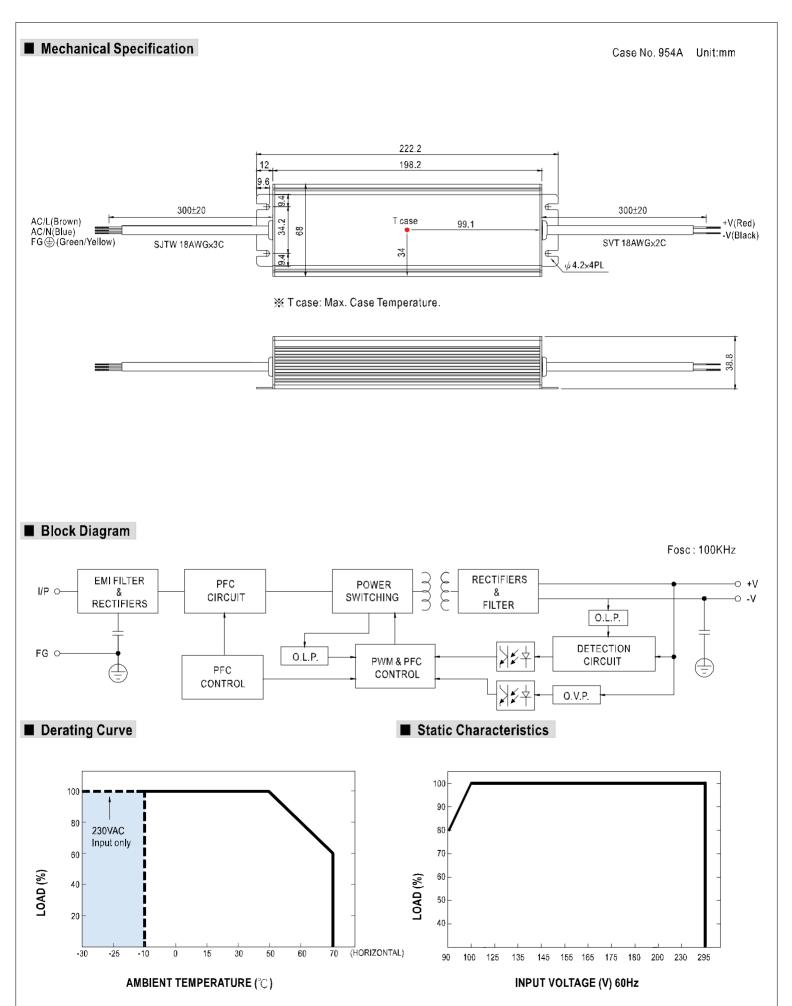


- Universal AC input / Full range (up to 295VAC)
- · Built-in active PFC function
- High efficiency up to 90%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- IP67 design for indoor or outdoor installations
- UL1310 Class 2 power unit
- Pass LPS
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications
- · Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations

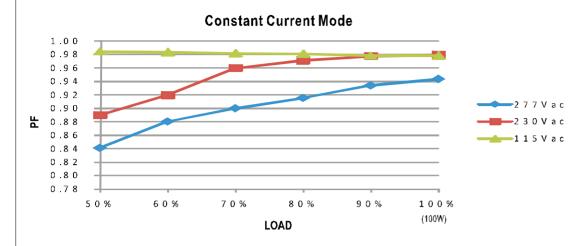
MODEL		CLG-100-12	CLG-100-15	CLG-100-20	CLG-100-24	CLG-100-27	CLG-100-36	CLG-100-48			
	DC VOLTAGE	12V	15V	20V	24V	27V	36V	48V			
	CONSTANT CURRENT REGION Note.7	9 ~ 12V	1 1.25 ~ 15V	15 ~ 20V	18 ~ 24V	20.25 ~ 27V	27 ~ 36V	36 ~ 48V			
	RATED CURRENT Note.5	5A	5A	4.8A	4A	3.55A	2.65A	2A			
	RATED POWER Note.5	60W	75W	96W	96W	95.85W	95.4W	96W			
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p			
ОИТРИТ	VOLTAGE ADJ. RANGE	Fixed. Can be mo	dified between 0%	% ~ -15% rated outp	out voltage						
OUIPUI	CURRENT ADJ. RANGE	Fixed. Can be mo	dified between 39	% ~ -25% rated outp	out current						
	VOLTAGE TOLERANCE Note.3	±3.0%	±3.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%			
	LINE REGULATION	±1.0%									
	LOAD REGULATION	±2.0%									
	SETUP, RISE TIME	1200ms, 80ms / 2	30VAC 1200	oms, 80ms / 115VA	C at full load						
	HOLD UP TIME (Typ.)	60ms / 230VAC	30ms / 115VA	C at full load							
	VOLTAGE RANGE Note.4	90 ~ 295VAC	127 ~ 417VDC								
	FREQUENCY RANGE	47 ~ 63Hz	√ ~ 63Hz								
	POWER FACTOR (Typ.)	PF>0.95/115VAC	, PF>0.95/230VA	C, PF>0.92/277VA	C at full load (Pleas	se refer to "Power F	actor Characteristi	c" curve)			
INDUT	EFFICIENCY (Typ.)	84.5%	86.5%	90%	90%	90%	90%	89%			
INPUT	AC CURRENT (Typ.)		12V:0.8A/115VAC								
	INRUSH CURRENT(max.)	COLD START 40A/230VAC									
	LEAKAGE CURRENT	<0.75mA / 240VAC									
	OVER CURRENT (Typ.)	95 ~ 102%									
	CHORT CIDCUIT	Protection type: Constant current limiting, recovers automatically after fault condition is removed Hiccup mode, recovers automatically after fault condition is removed									
PROTECTION	SHORT CIRCUIT	13 ~ 16V	16.5 ~ 20V	22 ~ 27V	27 ~ 34V	30 ~ 36V	39 ~ 48V	52 ~ 64V			
PROTECTION	OVER VOLTAGE			ch off o/p voltage, i	1 • • • •		33 40 /	3Z ·· 04V			
		,,		cir on o/p voltage,	re-power on to reco	7461					
	OVER TEMPERATURE	90°C ±10°C (RTH2) Protection type: Shut down o/p voltage, re-power on to recover									
		-30 ~ +70°C (Refer to "Derating Curve")									
	WORKING TEMP	20 ~ 95% RH noi		iive j							
ENVIRONMENT.	WORKING HUMIDITY										
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10				_					
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 5	. ,	-16- 70 :	h -1 V V 7	_					
	VIBRATION			iod for 72min. eacl							
	SAFETY STANDARDS Note.8	UL879, UL8750, UL1310 Class 2, TUV EN60950-1, EN61347-1, EN61347-2-13 independent CAN/CSA C22.2 No. 223-M91(except for 48V), IP67 approved									
CAFETY	WITHOUTH NO VOLTA OF			. ,.	• •						
SAFETY &	WITHSTAND VOLTAGE			KVAC O/P-FG:0	J.5KVAC						
EMC	ISOLATION RESISTANCE		ims / 500VDC / 25		D ENGADOD 2 2 2	C (> 750(! !) - FN04000 0 0				
	EMC EMISSION	•		· ,		lass C (≧75% load	, .				
	EMC IMMUNITY	•			=N55024, light indu	ustry level (surge 4h	(V), criteria A				
	MTBF		MIL-HDBK-217F (25°C)							
OTHERS	DIMENSION	222.2*68*38.8mi									
	PACKING	1.0Kg; 12pcs/13I				mbient temperature					

- 4. Derating may be needed under low input voltages. Please check the static characteristics for more details.
- 5. This is the maximum possible output current and power, over load protection may be activated slightly below this level to comply with the requirement of UL1310 class 2.
- 6. 3 years warranty is guaranteed for operating ambient temperature no higher than 68°C.
- 7. Constant current operation region is within 75% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
- 8. Safety and EMC design refer to EN60598-1, subject 8750(UL), CNS15233, GB7000.1, FCC part18.
- The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.



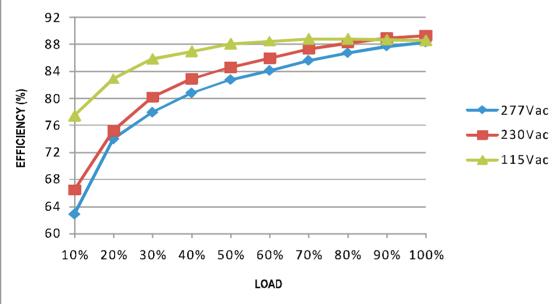


■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (48V Model)

CLG-100 series possess superior working efficiency that up to 89% can be reached in field applications.

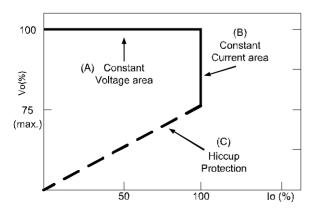


■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode [with LED driver, at area (A)] and CC mode [direct drive, at area (B)].



Typical LED power supply I-V curve



■ Features :

- Universal AC input / Full range (up to 295VAC)
- · Built-in active PFC function
- High efficiency up to 91%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- · Cooling by free air convection
- · OCP point adjustable through output cable or internal potentiometer
- IP65 / IP67 design for indoor or outdoor installations
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting

CLG-150-12 A

Blank: IP67 rated. Cable for I/O connection.

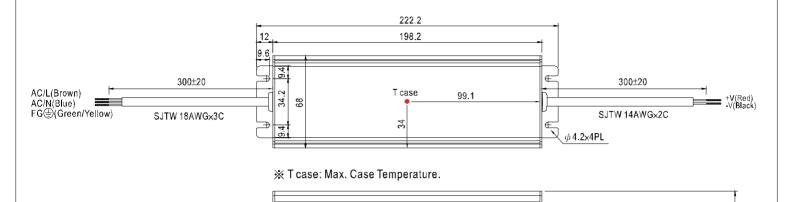
- $A: IP65\ rated.\ Output\ voltage\ and\ constant\ current\ level\ can\ be\ adjusted\ through\ internal\ potentiometer.$
- B: IP67 rated. Constant current level adjustable through output cable.
- C: Terminal block for I/O connection. Output voltage and constant current level can be adjusted through internal potentiometer.

MODEL		CLG-150-12	CLG-150-15	CLG-150-20	CLG-150-24	CLG-150-30	CLG-150-36	CLG-150-48		
	DC VOLTAGE	12V	15V	20V	24V	30V	36V	48V		
	CONSTANT CURRENT REGION Note.4	9 ~12V	11.25 ~ 15V	15 ~ 20V	18 ~ 24V	22.5 ~ 30V	27 ~ 36V	36 ~ 48V		
	RATED CURRENT	11A	9.5A	7.5A	6.3A	5A	4.2A	3.2A		
	RATED POWER	132W	142.5W	150W	151.2W	150W	151.2W	153.6W		
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p		
	VOLTAGE ADJ. RANGE Note.6	9 ~ 13V	13 ~ 17V	17 ~ 22V	22 ~ 27V	26 ~ 32V	31 ~ 41V	40 ~ 56V		
DUTPUT		Can be adjusted b	y internal potention	neter or through o	utput cable					
	CURRENT ADJ. RANGE	5.5 ~ 11A	4.75 ~ 9.5A	3.75 ~ 7.5A	3.15 ~ 6.3A	2.5 ~ 5A	2.1 ~ 4.2A	1.6 ~ 3.2A		
	VOLTAGE TOLERANCE Note.3	=2.0%	±2.0%	±2.0%	±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	=1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%		
	SETUP, RISE TIME	3000ms, 80ms at		/115VAC	1	1 - 1 - 1	1			
	HOLD UP TIME (Typ.)	50ms / 230VAC	16ms / 115VAC							
	` * * * *	90 ~ 295VAC	127 ~ 417VDC	at rail load						
	FREQUENCY RANGE	47 ~ 63Hz	127 +17 400							
	POWER FACTOR (Typ.)		PF>0 95/230VAC	PE>0 93/277VAC	at full load (Please	refer to "Power Fa	ctor Characteristic"	curve)		
NPUT	EFFICIENCY (Typ.)	88%	88%	90%	90%	91%	91%	91%		
111 01	AC CURRENT (Typ.)	2A / 115VAC	1A / 230VAC	0.68A / 277VAC	3076	3176	3170	3170		
	INRUSH CURRENT(max.)			0.00A/2/1VAC						
	LEAKAGE CURRENT	COLD START 65A/230VAC								
	LEARAGE CORRENT	<1ma / 240VAC								
	OVER CURRENT (Typ.) Note.4	4 95 ~ 108% Protection type: Constant current limiting, recovers automatically after fault condition is removed								
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed 13.5 ~ 16V								
ROTECTION	OVER VOLTAGE						42 ~ 48V	59 ~ 68V		
		Protection type: Shut down and latch off o/p voltage, re-power on to recover								
	OVER TEMPERATURE	100°C ±10°C (RTH2)								
		Protection type: Shut down o/p voltage, re-power on to recover								
	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 95% RH non-condensing								
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~	95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 5	0℃)							
	VIBRATION	10 ~ 500Hz, 5G 1	2min./1cycle, perio	d for 72min. each	along X, Y, Z axes					
	SAFETY STANDARDS Note.7	UL8750, UL1012	; EN61347-1, EN61	134 7- 2-13 indeper	ident (except for CL	G-150 C type); UL	.60950-1, TUV EN6	0950-1;		
	GALLIT STANDARDS NO.E.7	J61347-1(option,	except for CLG-15	0 C type), J61347-	2-13, IP65 or IP67	approved				
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3.75KVA	.C I/P-FG:1.88K	VAC O/P-FG:0.	.5KVAC					
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG,	O/P-FG:100M Ohr	ns / 500VDC / 25	2/70% RH					
	EMC EMISSION	Compliance to EN	155015, EN55022 (CISPR22) Class B	, EN61000-3-2 Cla	ss C (≧75% load)	; EN61000-3-3			
	EMC IMMUNITY	Compliance to EN	161000-4-2,3,4,5,6	,8,11, EN61547, E	N55024, light indus	try level (surge 4K)	V), criteria A			
	MTBF	303.7Khrs min.	MIL-HDBK-217F	(25℃)						
OTHERS	DIMENSION	222.2*68*38.8mn	n (L*W*H)(CLG-150)-Blank/A/B)	229*68*38.8mm (L	W*H)(CLG-150-C))			
PACKING 1.0Kg; 12pcs/13Kg/0.58CUFT(CLG-150-Blank/A/B) 1Kg; 12pcs/13Kg/0.96CUFT(CL						g/0.96CUFT(CLG-	150-C)			
NOTE	Ripple & noise are measure Tolerance: includes set up Constant current operation reconfirm special electrical r Derating may be needed ur Type A and type C only. Safety and EMC design reference.	ecially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. asured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. It up tolerance, line regulation and load regulation. It up tolerance, line regulation and load regulation. It is the suitable operation region for LED related applications, but please ical requirements for some specific system design. It is the suitable operation region for LED related applications, but please ical requirements for some specific system design. It is the suitable operation region for LED related applications, but please ical requirements for some specific system design.								

■ Mechanical Specification

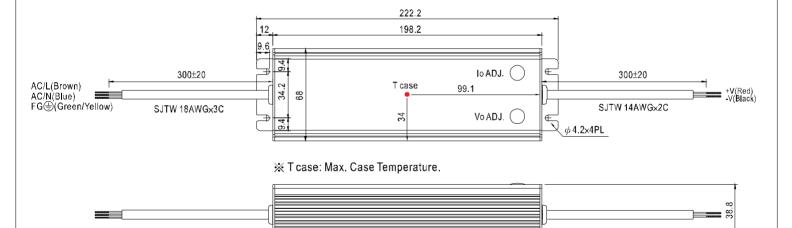
Case No. 954A Unit:mm

Blank:(CLG-150)



☆IP67 rated. Cable for I/O connection.

A Type:(CLG-150-_A)



☆ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.

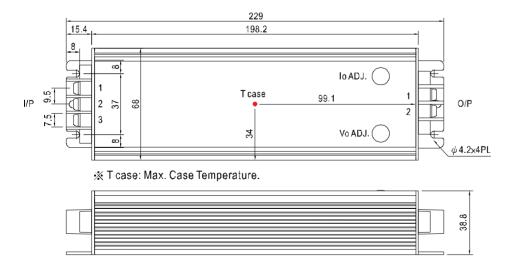
(Can access by removing the rubber stopper on the case.)

B Type:(CLG-150-_B) 222.2 198.2 300±20 300±20 SJTW 14AWG×2C AC/L(Brown) 34.2 Tcase 99.1 SJTW 18AWG×2C AC/N(Blue) FG (Green/Yellow) 89 SJTW 18AWG×3C 34 ※ T case: Max. Case Temperature.

- 🔆 IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistor between ADJ1 and ADJ2.
- * Reference resistance value for output current adjustment (Typical)

Resistance	Percentage of rated current
Open	Slightly > 100%
4.7 K Ω	100%
620Ω	75%
82Ω	50%
Short	Slightly < 50%

C Type:(CLG-150-_C)



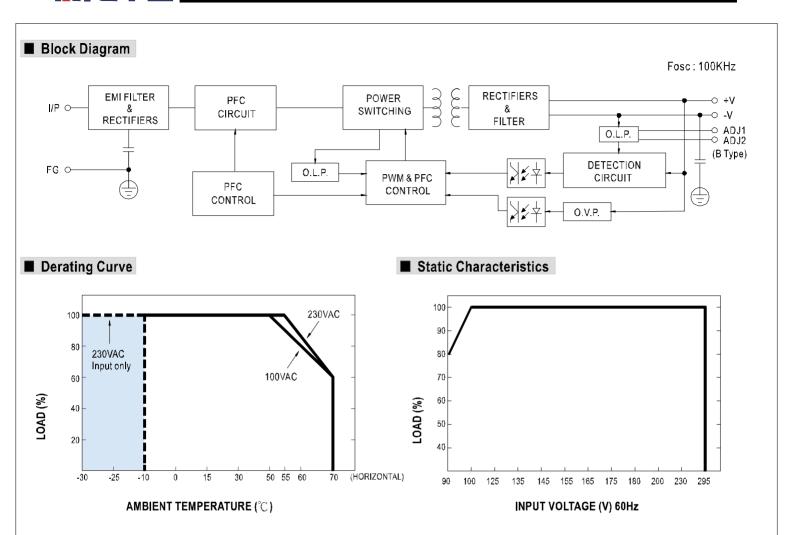
% Output voltage and constant current level can be adjusted through internal potentiometer. (Can access by removing the rubber stopper on the case.)

AC Input Terminal Pin No. Assignment

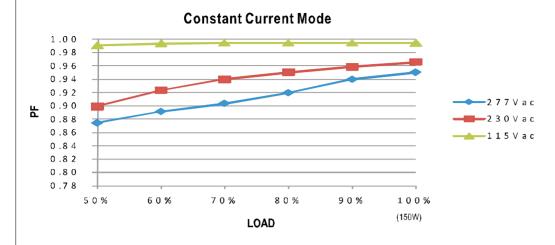
Pin No.	Assignment
1	FG ±
2	AC/N
3	AC/L

DC Output Terminal Pin No. Assignment

Pin No.	Assignment
1	+V
2	-V

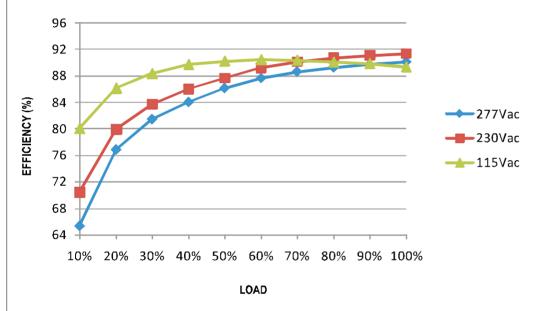


■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (48V Model)

CLG-150 series possess superior working efficiency that up to 91% can be reached in field applications.

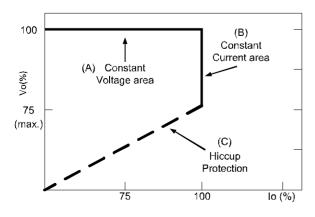


■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode [with LED driver, at area (A)] and CC mode [direct drive, at area (B)].



Typical LED power supply I-V curve





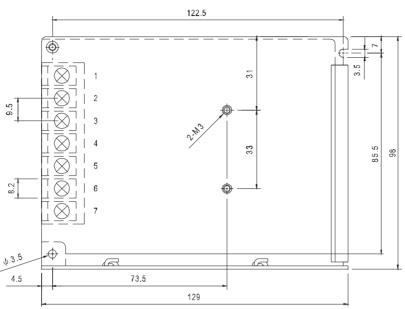
- AC input range selected by switch
- Protections:Short circuit/Over load
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 23KHz
- 1 year warranty

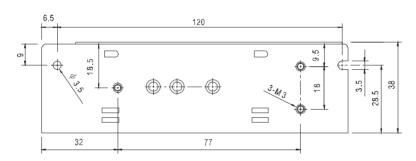
MODEL		D-30A		D-30B	D-30B			
	DC VOLTAGE	5V	12V	5V	24V			
	RATED CURRENT	4A	1A	2.2A	1A			
	CURRENT RANGE	0.5 ~ 4A	0.1 ~ 1A	0.5 ~ 4A	0.1 ~ 1A			
	RATED POWER	32W	·	35W	•			
OUTPUT	RIPPLE & NOISE (max.) Note.2	50mVp-p	100mVp-p	50mVp-p	100mVp-p			
JUIPUI	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH1: 4.75 ~ 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 fu	I load					
	VOLTAGE RANGE	85 ~ 132VAC / 170 ~ 264	VAC selected by switch	240 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz						
NPUT	EFFICIENCY(Typ.)	72% 74%						
W. 01	AC CURRENT	0.8A/115VAC 0.45A	V230VAC	·				
	INRUSH CURRENT(max.)	COLD START 18A/115VAC 36A/230VAC						
	LEAKAGE CURRENT	<1mA / 240VAC						
DOTECTION	OVER LOAD	105 ~ 150% rated output power						
PRUIECIIUN	OVER LOAD	Protection type : Fold bac	ck current limiting, recovers au	tomatically after fault condition	tically after fault condition is removed.			
	WORKING TEMP	-10 ~ +60 ℃ (Refer to output load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
ENVIRONMENT	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 &	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 Part	15 J Conduction					
	MTBF	417.6K hrs min MIL-F	IDBK-217F (25°C)					
OTHERS	DIMENSION	129*98*38mm (L*W*H)						
	PACKING	0.41Kg; 30pcs/13.4Kg/0.						
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up	ed at 20MHz of bandwidth	n by using a 12" twisted pair-					



■ Mechanical Specification

Case No. 903 Unit:mm



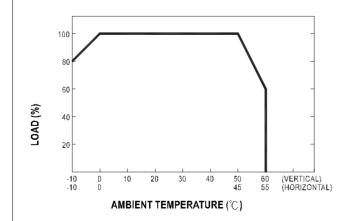


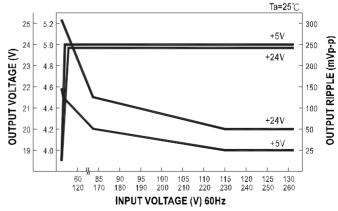
Terminal Pin. No Assignment

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 ±	6	DC OUTPUT COM		

■ Output Derating

■ Static Characteristics (B)







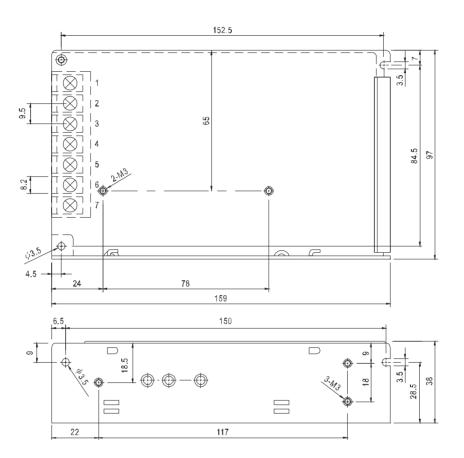
■ Features :

- 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

		D-50A		D-50B				
	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				
оитрит	RIPPLE & NOISE (max.) Note.2	50mVp-p	100mVp-p	50mVp-p	100mVp-p			
OUIPUI	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		•				
	VOLTAGE RANGE	85 ~ 132VAC/170 ~ 264VAC se	lected by switch 240 ~ 370	VDC				
	FREQUENCY RANGE	47 ~ 63Hz						
INPUT	EFFICIENCY(Typ.)	73%		73%				
INFUI	AC CURRENT	1.3A/115VAC 0.65A/230VAC						
	INRUSH CURRENT(max.)	COLD START 18A/115VAC 36A/230VAC						
	LEAKAGE CURRENT	<0.5mA / 240VAC						
BROTECTION	OVER LOAD	105 ~ 150% rated output power						
PROTECTION	OVER LUAD	Protection type : Fold back curre	ent limiting, recovers automatica	lly after fault condition is remove	d			
	WORKING TEMP.	-10 ~ +60 °C (Refer to output load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
ENVIRONMENT	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 STANDARDS	Design refer to UL1012						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-FG:1.5k	(VAC 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 Co	onduction					
	MTBF	408.9K hrs min. MIL-HDBK-2	217F (25℃)					
OTHERS	DIMENSION	159*97*38mm (L*W*H)						
	PACKING	0.53Kg; 24pcs/13.6Kg/0.75CUF	-T					
NOTE	2 Ripple & noise are measure	lly mentioned are measured at 2 ed at 20MHz of bandwidth by us tolerance, line regulation and lo	sing a 12" twisted pair-wire term		llel capacitor.			

■ Mechanical Specification

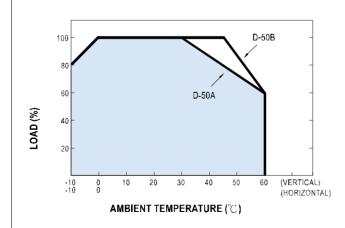
Case No. 901 Unit:mm



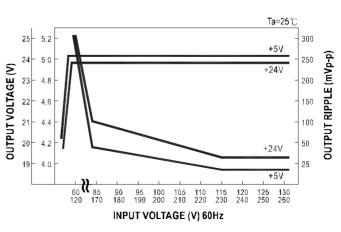
Terminal Pin. No Assignment

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

■ Output Derating



■ Static Characteristics (B)



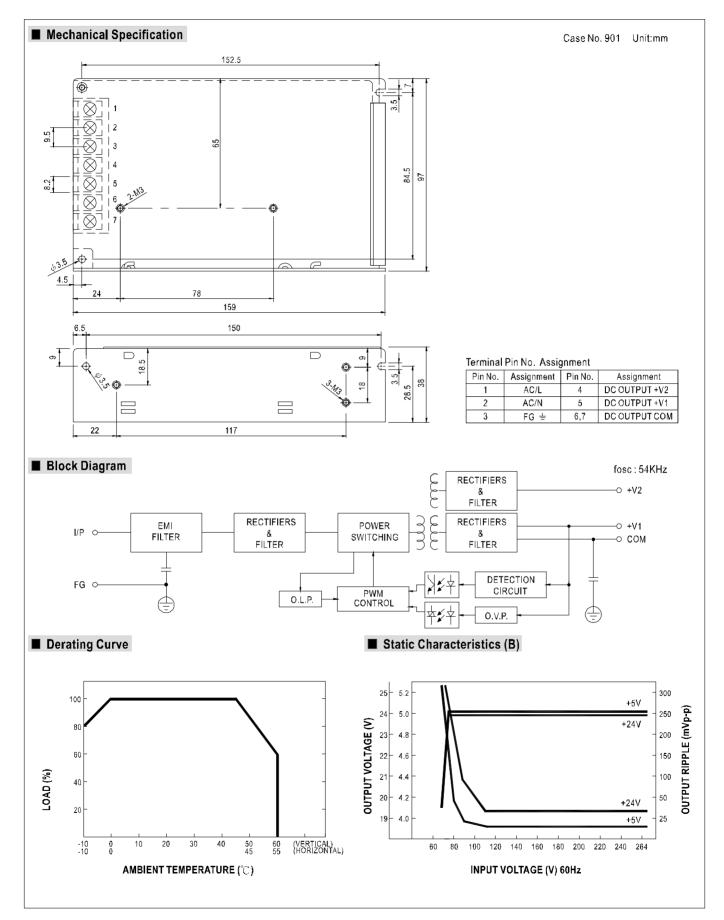




- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 54KHz

MODEL		D-60A		D-60B					
	OUTPUT NUMBER	CH1	CH2	CH1	CH2				
	DC VOLTAGE	5V	12V	5V	24V				
	RATED CURRENT	4A	3A	3A	1.8A				
	CURRENT RANGE	0.3 ~ 6A	0.2 ~ 4A	0.3 ~ 6A	0.2 ~ 2.2A				
	RATED POWER	56W		58W	-				
	RIPPLE & NOISE (max.) Note.2	75mVp-p	150mVp-p	75mVp-p	150mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH1: 4.75 ~ 5.5V					
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±2.0%	±5.0%				
	LINE REGULATION	±0.5%	±1.0%	±0.5%	±0.5%				
	LOAD REGULATION	±0.5%	±4.0%	±0.5%	±4.0%				
	SETUP, RISE TIME	300ms, 50ms / 230VAC 86	00ms, 50ms / 115VAC at full load	-	'				
	HOLD UP TIME (Typ.)	80ms/230VAC 10ms/115VAC at full load							
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VI	OC .						
	FREQUENCY RANGE	47 ~ 63Hz							
MBUT	EFFICIENCY(Typ.)	73%		76%					
NPUT	AC CURRENT (Typ.)	2A/115VAC 1A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC 40A/230VAC							
	A1/ED: AAD	105 ~ 150% rated output powe	r						
	OVERLOAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed.							
PROTECTION	21/57 1/21 74 25	5V : 5.75 ~ 6.75V							
	OVER VOLTAGE	Protection type: Hiccup mode, recovers automatically after fault condition is removed.							
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C) on +5V output							
	VIBRATION		period for 60min. each along X,	Y, Z axes					
	SAFETY STANDARDS	UL1012, UL60950-1, TUV EN6	0950-1 approved						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5K	VAC O/P-FG:0.5KVAC						
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M	Ohms / 500VDC / 25°C / 70% RH						
(Note 4)	EMC EMISSION	Compliance to EN55022 (CISF	PR22) Class B, EN61000-3-2,-3						
	EMC IMMUNITY	Compliance to EN61000-4-2,	3,4,5,6,8,11, EN55024, light ind	ustry level, criteria A					
	MTBF	301.2K hrs min. MIL-HDBK-217F (25°C)							
OTHERS	DIMENSION	159*97*38mm (L*W*H)	, /						
	PACKING	0.54Kg; 24pcs/13.8Kg/0.75CU	FT						
NOTE	Ripple & noise are measure Tolerance : includes set up	ed at 20MHz of bandwidth by u tolerance, line regulation and le	230VAC input, rated load and 2 sing a 12" twisted pair-wire term pad regulation. e installed into a final equipment	inated with a 0.1uf & 47uf para	llel capacitor.				





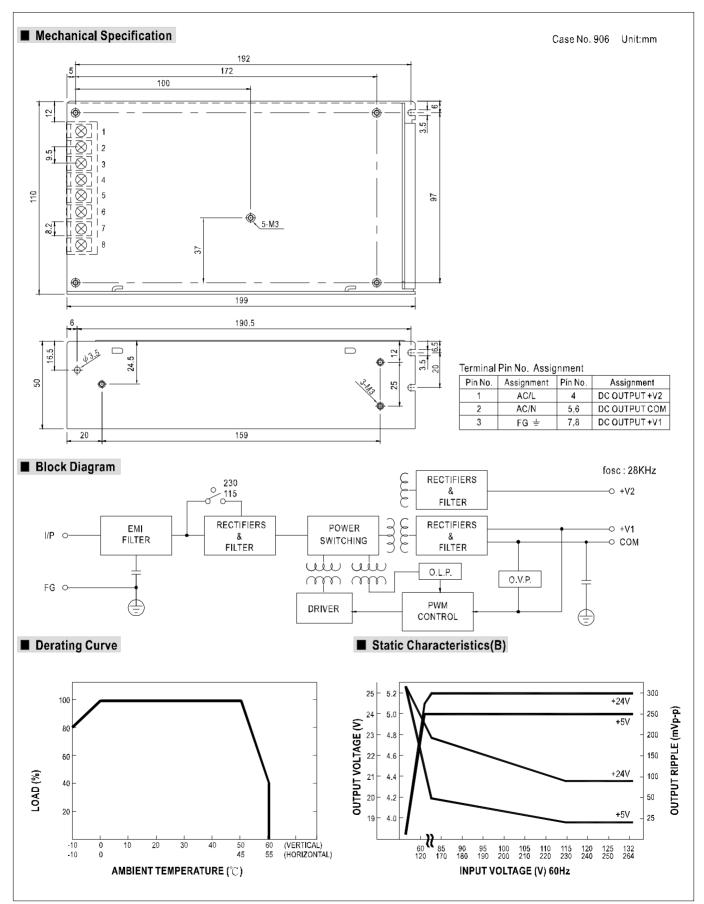




- AC input range selected by switch
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 28KHz

-		D-120A		D-120B	D-120B				
	OUTPUT NUMBER	CH1	CH2	CH1	CH2				
	DC VOLTAGE	5V	12V	5V	24V				
	RATED CURRENT	12A	5A	6A	4A				
	CURRENT RANGE	2 ~ 12A	0.5 ~ 5A	2 ~ 10A	0.4 ~ 4A				
	RATED POWER	120W		126W	1				
	RIPPLE & NOISE (max.) Note.2	60mVp-p	120mVp-p	60mVp-p	150mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V							
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±2.0%	±7.0%				
	LINE REGULATION	±0.5%	±1.0%	±0.5%	±1.0%				
	LOAD REGULATION	±0.5%	±5.0%	±0.5%	±6.0%				
	SETUP, RISE TIME	200ms, 50ms at full loa	d	<u>'</u>					
	HOLD UP TIME (Typ.)	24ms at full load							
	VOLTAGE RANGE	88 ~ 132VAC/176 ~ 264	IVAC selected by switch 24	48 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz	•						
NPUT	EFFICIENCY (Typ.)	78% 80%							
MFUI	AC CURRENT (Typ.)	2.2A/115VAC 1.3A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 32A							
	LEAKAGE CURRENT	<3.5mA / 240VAC							
		105 ~ 135% rated output power							
	OVERLOAD	Protection type: Shut down o/p voltage, re-power on to recover							
PROTECTION		CH1:5.75 ~ 6.75VDC							
	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover							
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-cond	20 ~ 90% RH non-condensing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C) o	n +5V output						
	VIBRATION	, ,	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes						
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, CCC GB4943 approved							
SAFETY &	WITHSTAND VOLTAGE		G:1.5KVAC O/P-FG:0.5KVAC	<u> </u>					
EMC	ISOLATION RESISTANCE	I/P-O/P. I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH							
(Note 4)	EMC EMISSION		2 (CISPR22) Class B, EN61000						
, ,	EMC IMMUNITY	Compliance to EN610	00-4-2,3,4,5,6,8,11, EN55024	light industry level, criteria A					
	MTBF	272.8K hrs min. MIL-HDBK-217F (25°C)							
OTHERS	DIMENSION	199*110*50mm (L*W*F	, ,						
	PACKING	0.82Kg; 16pcs/14.2Kg/	<u>'</u>						
NOTE	Ripple & noise are measure Tolerance : includes set up	ed at 20MHz of bandwi tolerance, line regulation	dth by using a 12" twisted pair-	ad and 25°C of ambient tempe wire terminated with a 0.1uf & quipment.					





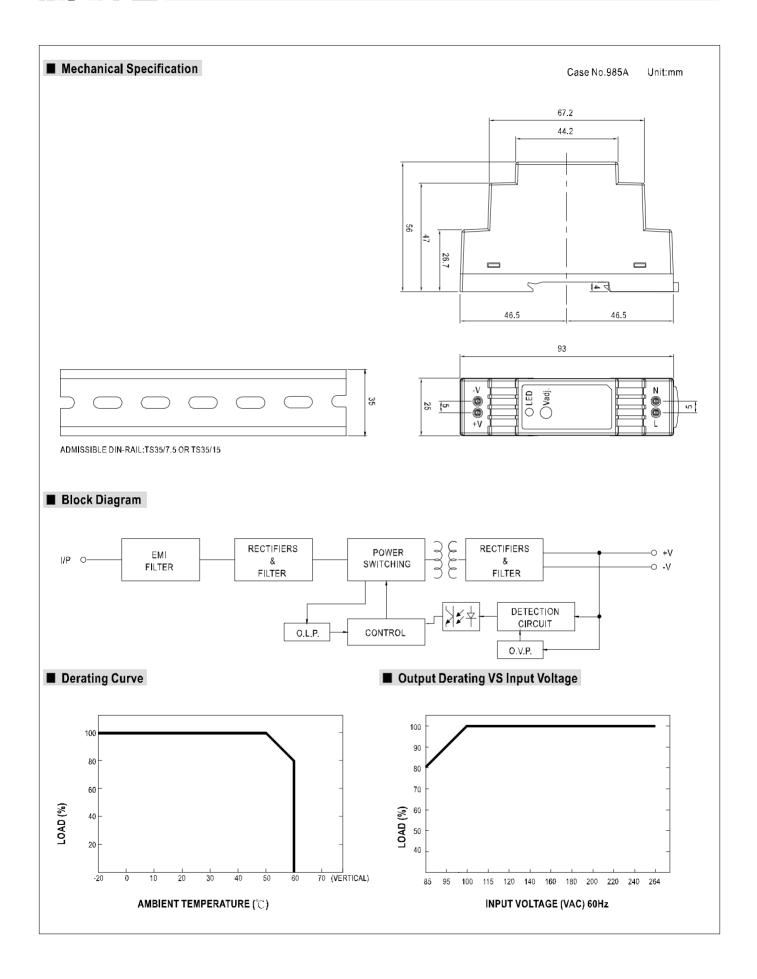




- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- LED indicator for power on
- No load power consumption<0.5W
- 100% full load burn-in test

MODEL		DR-15-5	DR-15-12	DR-15-15	DR-15-24	
	DC VOLTAGE	5V	12V	15V	24V	
	RATED CURRENT	2.4A	1.25A	1A	0.63A	
	CURRENT RANGE	0~2.4A	0 ~ 1.25A	0 ~ 1A	0 ~ 0.63A	
	RATED POWER	12W	15W	15W	15.2W	
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p	
OUTPUT	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	1000ms, 50ms/230VAC 10	00ms, 50ms/115VAC at full load			
	HOLD UP TIME (Typ.)	70ms/230VAC 16ms/115V/	C at full load			
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VD	С			
	FREQUENCY RANGE	47 ~ 63Hz				
INPUT	EFFICIENCY (Typ.)	77%	84%	83.5%	85%	
	AC CURRENT (Typ.)	0.88A/115VAC 0.48A/230\	/AC			
	INRUSH CURRENT (Typ.)	COLD START 35A/115VAC 65A/230VAC				
	OVER GAR	105 ~ 160% rated output power				
PROTECTION	OVERLOAD Note.5	Protection type : Constant curre	nt limiting, recovers automatically	y after fault condition is removed		
PROTECTION		5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	
	OVER VOLTAGE	Protection type : Shut off o/p vol	tage, clamping by zener diode			
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
ENVIRONMENT	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; Mounting: Compliance to IEC60068-2-6				
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 ap	proved, design refer to EN50178			
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC				
EMC	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC /	=			
(Note 4)	EMC EMISSION	· ·	022 (CISPR22), EN61204-3 Class			
	EMC IMMUNITY			0-6-2, EN61204-3, heavy industry	/ level, criteria A	
	MTBF		217F (25°C)			
OTHERS	DIMENSION	25*93*56mm (W*H*D)				
	PACKING	0.1Kg; 140pcs/15Kg/0.92CUFT				
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consider.	arameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. le & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 of & 47 of parallel capacitor. rance: includes set up tolerance, line regulation and load regulation. power supply is considered a component which will be installed into a final equipment. stant current operation region is within 60% ~100% rated output voltage. Protection type for short circuit is hiccup mode and will recover automatically fault condition is removed.				









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

MODEL		DR-30-5	DR-30-12	DR-30-15	DR-30-24		
	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		
OUTPUT	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 100	ms, 30ms/115VAC at full load				
	HOLD UP TIME (Typ.)	100ms/230VAC 21ms/115	VAC at full load				
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VD	OC				
	FREQUENCY RANGE	47 ~ 63Hz					
INPUT	EFFICIENCY (Typ.)	74%	81%	82%	83%		
	AC CURRENT (Typ.)	0.88A/115VAC					
	INRUSH CURRENT (Typ.)	COLD START 15A/115VAC	30A/230VAC				
		105 ~ 160% rated output power					
DDATEATION	OVERLOAD	Protection type: Constant current limiting, recovers automatically after fault condition is removed					
PROTECTION		5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V		
	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover					
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
ENVIRONMENT	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; Mounting: Compliance t	o IEC60068-2-6		
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 ap	pproved, Design refer to EN5017	8			
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC			<u> </u>		
EMC	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC	/ 25°C / 70% RH				
(Note 4)	EMC EMISSION	Compliance to EN55011, EN55	022 (CISPR22) Class B, EN6100	0-3-2,-3			
	EMC IMMUNITY	Compliance to EN61000-4-2, 3	4, 5, 6, 8, 11, EN55024, EN6100	00-6-2, EN61204-3, heavy industr	level, criteria A		
	MTBF	441.5K hrs min. MIL-HDBK-2	217F (25°C)				
OTHERS	DIMENSION	78*93*56mm (W*H*D)					
	PACKING	0.27Kg; 48pcs/14Kg/1.02CUFT					
NOTE	 Ripple & noise are measure Tolerance : includes set up 	lly mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. ed at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. tolerance, line regulation and load regulation. lered a component which will be installed into a final equipment.					

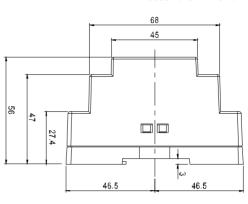


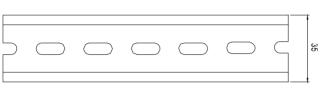
■ Mechanical Specification

Case No. 918B Unit:mm

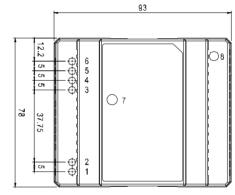


Pin No.	Assignment	Pin No.	Assignment
1	AC/N	5,6	-V
2	AC/L	7	LED
3,4	+V	8	+V ADJ.

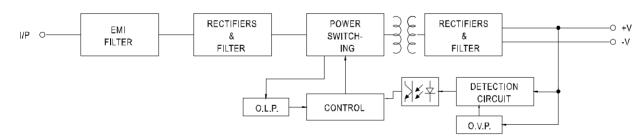








■ Block Diagram

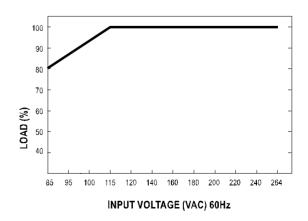


■ Derating Curve

100 80 60 LOAD (%) 40 20 70 (VERTICAL)

AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



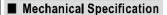


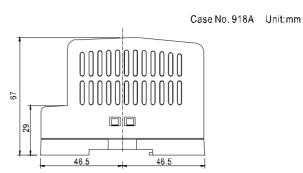


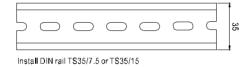
- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- LED indicator for power on
- 100% full load burn-in test
- Fix switching frequency at 100KHz

MODEL		DR-4505	DR-4512	DR-4515	DR-4524	
	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	
OUTPUT	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 loa	d			
	HOLD UP TIME (Typ.)	60ms/230VAC at full load				
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VD	С			
	FREQUENCY RANGE	47 ~ 63Hz				
INPUT	EFFICIENCY (Typ.)	72%	77%	77%	80%	
INFUI	AC CURRENT (Typ.)	1.5A/115VAC 0.75A/230VA	AC .			
	INRUSH CURRENT (Typ.)	COLD START 28A/115VAC	56A/230VAC			
	LEAKAGE CURRENT	<1mA / 240VAC				
		105 ~ 150% rated output power				
	OVERLOAD	Protection type : Constant curre	nt limiting, recovers automatically	after fault condition is removed		
PROTECTION		5 75 ~ 6 75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	
PROTECTION	OVER VOLTAGE	Protection type : Shut off o/p vol	tage, clamping by zener diode			
	0V=5 ==M5=5 4=U5=	Tj 135 [*] C typically (U1) detect on heat sink of power transistor				
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, re-power on to recover				
	WORKING TEMP.	-10 ~ +50° (Refer to "Derating	Curve")			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
ENVIRONMENT	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; Mounting: Compliance to IEC60068-2-6				
	SAFETY STANDARDS	UL508, TUV EN60950-1 approv	ed			
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KV	AC O/P-FG:0.5KVAC			
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M (
(Note 4)	EMC EMISSION	-	22 (CISPR22) Class B, EN61000			
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,	5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), heavy industry level,	criteria A	
	MTBF	364.6K hrs min. MIL-HDBK-2	217F (25°C)			
OTHERS	DIMENSION	93*78*67mm (L*W*H)				
	PACKING	0.31Kg; 48pcs/17.5Kg/1.3CUFT				
NOTE	Ripple & noise are measure Tolerance : includes set up	is NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. se are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. second of the sec				



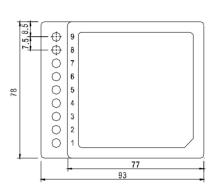




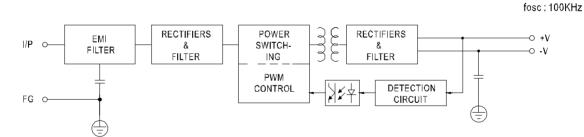


Terminal Pin No. Assignment

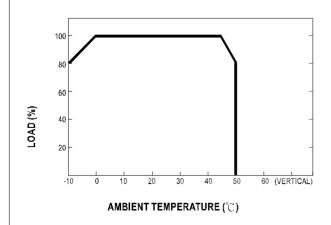
Terminari in 146. Assignment					
Pin No.	Assignment	Pin No.	Assignment		
1	AC/L	6,7	DC OUTPUT+V		
2	AC/N	8	LED		
3	FG ⊕	9	+VADJ.		
4.5	DC OUTPUT -V				



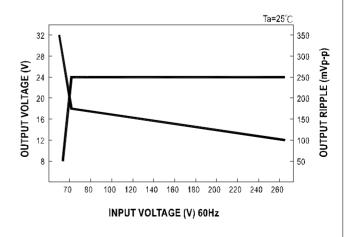
■ Block Diagram



■ Derating Curve



■ Static Characteristics (24V)





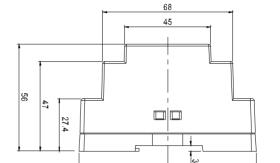
- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- LED indicator for power on
- 100% full load burn-in test

MODEL		DR-60-5	DR-60-12	DR-60-15	DR-60-24		
	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		
OUTPUT	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 200	ms, 30ms/115VAC at full load				
	HOLD UP TIME (Typ.)	100ms/230VAC 23ms/115	VAC at full load				
	VOLTAGE RANGE	88 ~ 264VAC 124 ~ 370VE	OC .		<u> </u>		
	FREQUENCY RANGE	47 ~ 63Hz					
INPUT	EFFICIENCY (Typ.)	76%	82%	83%	84%		
	AC CURRENT (Typ.)	1.2A/115VAC 0.8A/230VAC					
	INRUSH CURRENT (Typ.)	COLD START 18A/115VAC 36A/230VAC					
		105 ~ 160% rated output power					
DROTECTION	OVERLOAD	Protection type : Constant curre	ent limiting, recovers automatical	ly after fault condition is removed			
PROTECTION		5 75 ~ 6 9V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V		
	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover					
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
ENVIRONMENT	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; Mounting: Compliance t	o IEC60068-2-6		
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 ap	pproved, Design refer to EN5017	8			
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC					
EMC	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC	/ 25°C / 70% RH				
(Note 4)	EMC EMISSION	Compliance to EN55011, EN55	022 (CISPR22) Class B, EN6100	0-3-2,-3			
	EMC IMMUNITY	Compliance to EN61000-4-2, 3	4, 5, 6, 8, 11, EN55024, EN6100	00-6-2, EN61204-3, heavy industr	y level, criteria A		
	MTBF	216.2K hrs min. MIL-HDBK-2	217F (25°C)				
OTHER\$	DIMENSION	78*93*56mm (W*H*D)					
	PACKING	0.3Kg; 48pcs/15.4Kg/1.02CUF	Γ				
NOTE	Ripple & noise are measure Tolerance : includes set up	ially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. ured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. p tolerance, line regulation and load regulation. idered a component which will be installed into a final equipment.					



■ Mechanical Specification

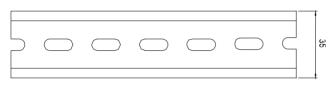
Case No.918B Unit:mm



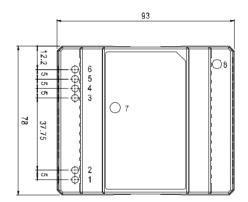
46.5

Terminal Pin No. Assignment

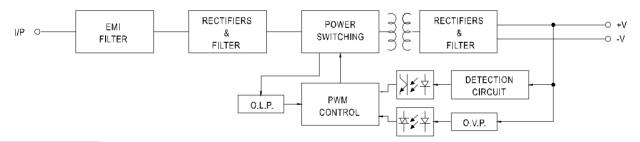
Pin No.	Assignment	Pin No.	Assignment
1	AC/N	5,6	-V
2	AC/L	7	LED
3,4	+V	8	+V ADJ.



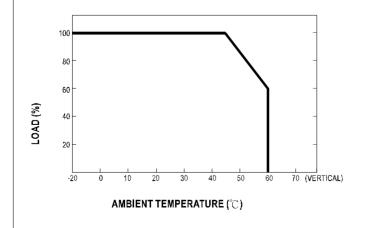
ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15



■ Block Diagram



■ Derating Curve



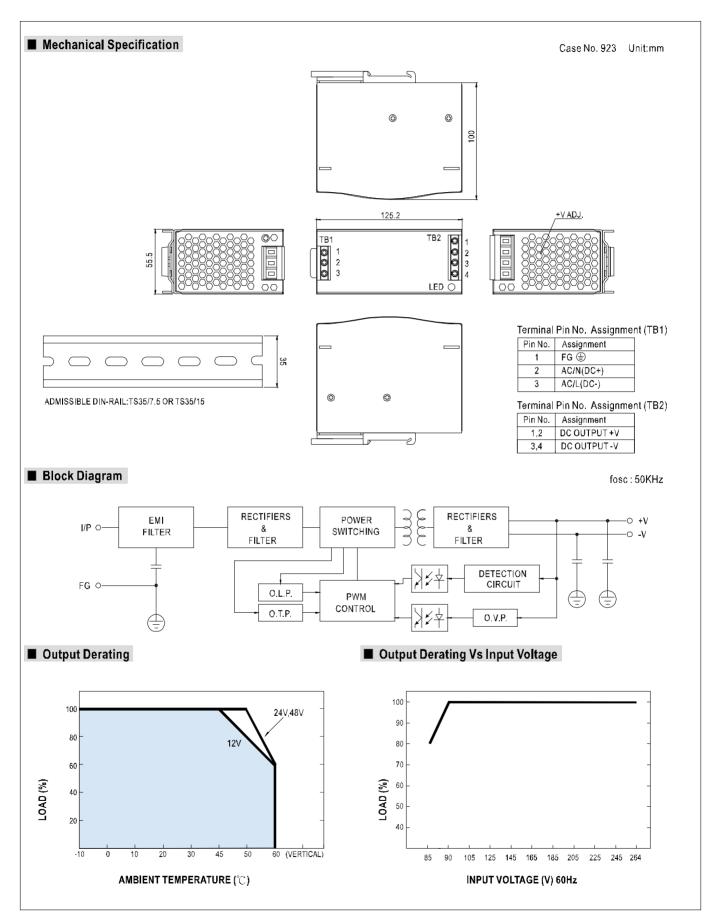




- Universal AC input / Full range
- Protections:Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- LED indicator for power on
- 100% full load burn-in test
- Fix switching frequency at 50KHz

MODEL		DR-75-12	DR-75-24	DR-75-48	
	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	
OUTPUT	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, 60m	s/115VAC at full load		
	HOLD UP TIME (Typ.)	60ms/230VAC 12ms/115VAC at full lo	ad		
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
INPUT	EFFICIENCY (Typ.)	76%	80%	81%	
INFUI	AC CURRENT (Typ.)	1.6A/115V 0.96A/230V			
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC 40A/230VAC			
	LEAKAGE CURRENT	<1mA / 240VAC			
		105 ~ 150% rated output power			
	OVERLOAD	Protection type : Constant current limiting,	recovers automatically after fault condition i	s removed	
PROTECTION	OVERVOLTACE	15 ~ 16.5V	29 ~ 34V	58 ~ 65V	
PROTECTION	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover			
	OVER TEMPERATURE	$85\%\pm5\%$ (TSW1) detect on heat sink of power transistor			
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down			
	WORKING TEMP.	-10 ~ +60 °C (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 6	Omin. each along X, Y, Z axes; Mounting: Co	ompliance to IEC60068-2-6	
	SAFETY STANDARDS	UL508, TUV EN60950-1 approved			
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC 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 / 500	VDC / 25℃ / 70% RH		
(Note 4)	EMC EMISSION	Compliance to EN55011,EN55022 (CISPR	22) Class B, EN61000-3-2,-3		
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN	N55024, EN61000-6-2 (EN50082-2), heavy inc	dustry level, criteria A	
	MTBF	123.1K hrs min. MIL-HDBK-217F (25℃)		
OTHER\$	DIMENSION	55.5*125.2*100mm (W*H*D)			
	PACKING	0.6Kg; 20pcs/13Kg/1.29CUFT			
NOTE	Ripple & noise are measure Tolerance : includes set up	Il parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. ipple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. plerance: includes set up tolerance, line regulation and load regulation. ne power supply is considered a component which will be installed into a final equipment.			





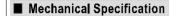


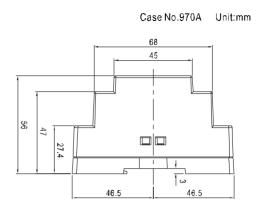


- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- LED indicator for power on
- No load power consumption<1W
- 100% full load burn-in test

MODEL		DR-100-12	DR-100-15	DR-100-24		
	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		
OUTPUT	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%		
	SETUP, RISE TIME	2700ms, 80ms/230VAC 2700ms, 80m	ns/115VAC at full load			
	HOLD UP TIME (Typ.)	50ms/230VAC 18ms/115VAC at full lo	ad			
	VOLTAGE RANGE	88 ~ 264VAC 124 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
INPUT	EFFICIENCY (Typ.)	87%	87%	89%		
	AC CURRENT (Typ.)	3A/115VAC 1.6A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC 45A/230VAC				
	OVERLOAD Note.6	105 ~ 135% rated output power				
	OVERLOAD Note.6	Protection type: Constant current limiting,	recovers automatically after fault condition i	s removed		
DRATECTION	OVER VOLTAGE	16 ~ 20V	19 ~ 23V	30 ~ 35V		
FROILCIION	OVER VOLIAGE	Protection type : Shut down o/p voltage, re	-power on to recover			
	OVER TEMPERATURE	90°C ±15°C (RTH2) detect on heatsink of power transistor				
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, re-power on to recover				
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°℃, 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 STANDARDS	UL60950-1, TUV EN60950-1 approved, de	sign refer to EN50178			
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC				
EMC	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70				
(Note 4)	EMC EMISSION	Compliance to EN61204-3, EN55022 Clas-	s B, EN61000-3-2,-3			
	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8,	11, EN55024, EN61000-6-2, EN61204-3, he	avy industry level, criteria A		
	MTBF	486K hrs min. MIL-HDBK-217F (25°℃)				
OTHERS	DIMENSION	100*93*56mm (W*H*D)				
	PACKING	0.35Kg; 36pcs/13.6Kg/0.89CUFT				
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consid Harmonic current test @ 90	arameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. le & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. rance: includes set up tolerance, line regulation and load regulation. proper supply is considered a component which will be installed into a final equipment. nonic current test @ 90% load. er short circuit or overload >150% conditions, output voltage may shut down for 5 sec. and then go into constant current protection mode.				

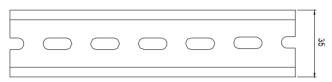




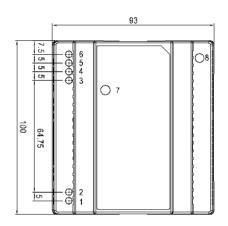


Terminal Pin No. Assignment

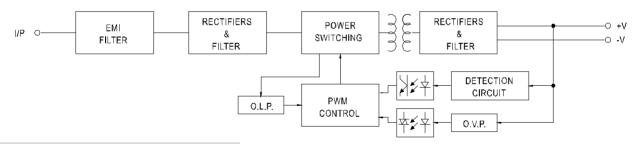
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5,6	-V
2	AC/N	7	LED
3,4	+V	8	+V ADJ.



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

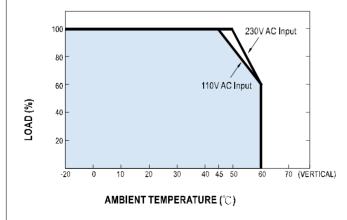


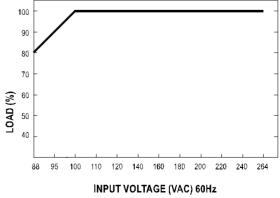
■ Block Diagram



■ Derating Curve VS Ambient Temperature

■ Output Derating VS Input Voltage





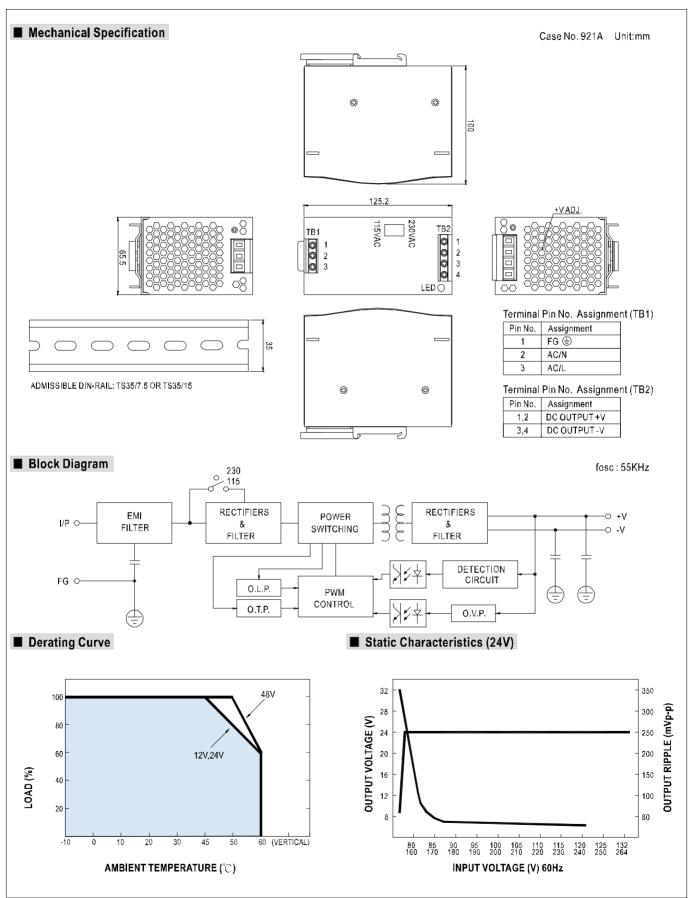




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at 55KHz

MODEL		DR-120-12	DR-120-24	DR-120-48	
	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	
OUTPUT	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/1	15VAC at full load		
	HOLD UP TIME (Typ.)	36ms/230VAC 32ms/115VAC at full loa	ad		
	VOLTAGE RANGE	88 ~ 132VAC/176 ~ 264VAC by switch	248 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY (Typ.)	80%	84%	85%	
INPUT	AC CURRENT (Typ.)	2.6A/115VAC 1.6A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC 40A/230VAC			
	LEAKAGE CURRENT	<3.5mA / 240VAC			
	OVERLOAD	105 ~ 150% rated output power			
			recovers automatically after fault condition is		
PROTECTION	OVER VOLTAGE	15 ~ 16.5V	29 ~ 33V	58 ~ 65V	
		Protection type: Shut down o/p voltage, re-	•		
	OVER TEMPERATURE	85°C±5°C (TSW1)	90°C±5°C(TSW1)	90°C ±5°C (TSW1)	
		Protection type: Shut down o/p voltage, recovers automatically after temperature goes down			
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20~+85°C, 10~95% RH			
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)			
	VIBRATION	-	n along X, Y, Z axes; Mounting: Compliance t	to IEC60068-2-6	
	SAFETY STANDARDS	UL508, UL60950-1, TUV EN60950-1 appro			
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-I			
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500			
(Note 4)	EMC EMISSION	Compliance to EN55011,EN55022 (CISPR:	· · · · · · · · · · · · · · · · · · ·		
	EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), heavy industry level, criteria A				
	MTBF	136.8Khrs min. MIL-HDBK-217F (25°€)			
OTHERS	DIMENSION	65.5*125.2*100mm (W*H*D)			
	PACKING	0.79Kg; 20pcs/16.5Kg/1.29CUFT			
NOTE	Ripple & noise are measure Tolerance : includes set up	DT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. e measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0 1uf & 47uf parallel capacitor les set up tolerance, line regulation and load regulation. r is considered a component which will be installed into a final equipment.			





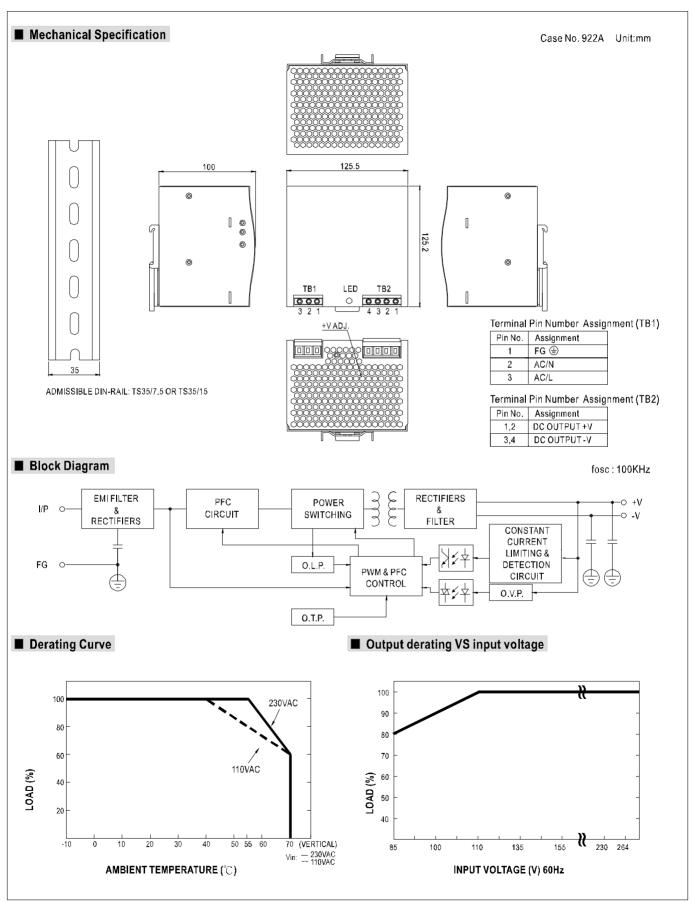




- Universal AC input / Full range
- Built in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- · Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at 100KHz

MODEL		DRP-240-24	DRP-240-48	
	DC VOLTAGE	24V	48V	
	RATED CURRENT	10A	5 A	
	CURRENT RANGE	0 ~ 10A	0 ~ 5A	
	RATED POWER	240W	240W	
	RIPPLE & NOISE (max.) Note.2	80mVp-p	150mVp-p	
OUTPUT	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	800ms, 40ms/230VAC 800ms, 40ms/115VAC at full load		
	HOLD UP TIME (Typ.)	24ms/230VAC 24ms/115VAC at full load		
	VOLTAGE RANGE Note.5	85 ~ 264VAC 120 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	0.96/230VAC 0.99/115VAC at full load		
INPUT	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		
	OVERLOAD	105 ~ 150% rated output power		
	OVERLOAD	Protection type: Constant current limiting, recovers automatically	y after fault condition is removed	
DECTECTION	OVER VOLTAGE	30 ~ 36V	54 ~ 60V	
PROTECTION	OVER VOLIAGE	Protection type: Shut down o/p voltage, re-power on to recover		
	OVER TEMPERATURE	100°C ±5°C (TSW1)detect on heat sink of power transistor		
	OVERTEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down		
	WORKING TEMP.	-10 ~ +70°C (Refer to "Derating Curve")		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
ENVIRONMENT	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; Mounting: Compliance to IEC60068-2-6		
	SAFETY STANDARDS	UL508, UL60950-1, TUV EN60950-1 approved		
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC 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		
(Note 4)	EMC EMISSION	Compliance to EN55011,EN55022 (CISPR22) Class B, EN61000	-3-2,-3	
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), heavy industry level, criteria A		
	MTBF 289.9Khrs min. MIL-HDBK-217F (25℃)			
OTHERS	DIMENSION	125.5*125.2*100mm (W*H*D)		
	PACKING	1.2Kg; 12pcs/15.5Kg/1.29CUFT		
NOTE	 All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance: includes set up tolerance, line regulation and load regulation. The power supply is considered a component which will be installed into a final equipment. Derating may be needed under low input voltages. Please check the derating curve for more details. 			





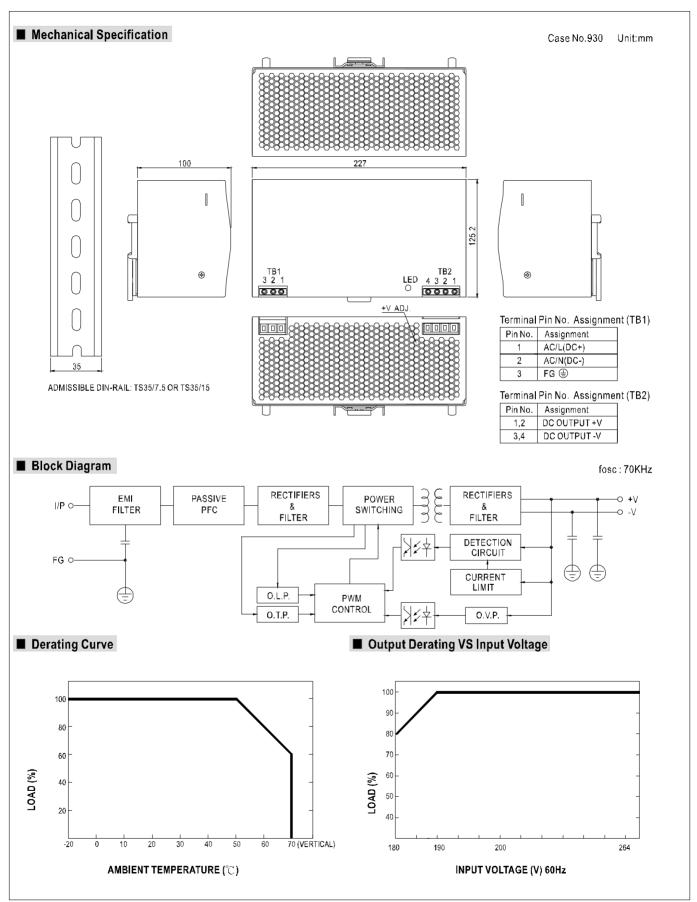




- Built-in passive PFC function compliance to EN61000-3-2
- High efficiency 89% and low dissipation
- Protections: Short circuit / Overload / Over voltage / Over temperature
- · Cooling by free air convection
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15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

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 UP 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	OVERLOAD	105 ~ 150% rated output power		
		Protection type: Constant current limiting, recovers automatically	after fault condition is removed	
	OVER VOLTAGE	30 ~ 36V	54 ~ 60V	
		Protection type: Shut down o/p voltage, re-power on to recover		
	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 "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 STANDARDS	UL508, UL60950-1, TUV EN60950-1 approved		
SAFETY &	WITHSTAND VOLTAGE	/P-O/P:3KVAC /P-FG:1.5KVAC O/P-FG:0.5KVAC /P-O/P, /P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH		
EMC	ISOLATION RESISTANCE			
(Note 4)	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3		
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61000-6-2 (EN50082-2), heavy industry level, criteria A		
OTHERS	MTBF	180.9Khrs min. MIL-HDBK-217F (25℃)		
	DIMENSION	227*125.2*100mm (W*H*D)		
	PACKING	2.4Kg; 6pcs/15Kg/1.75CUFT		
NOTE	Ripple & noise are measure Tolerance : includes set up	specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. neasured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. set up tolerance, line regulation and load regulation. considered a component which will be installed into a final equipment.		







- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 93.5%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- · Cooling by free air convection
- · OCP point adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and street lighting applications
- · Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations

HLG-100-20 A Blank: IP67 rated. Cable for I/O connection.

A: IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.

B: IP67 rated. Constant current level adjustable through output cable with 1~10Vdc or 10V PWM signal or resistance.

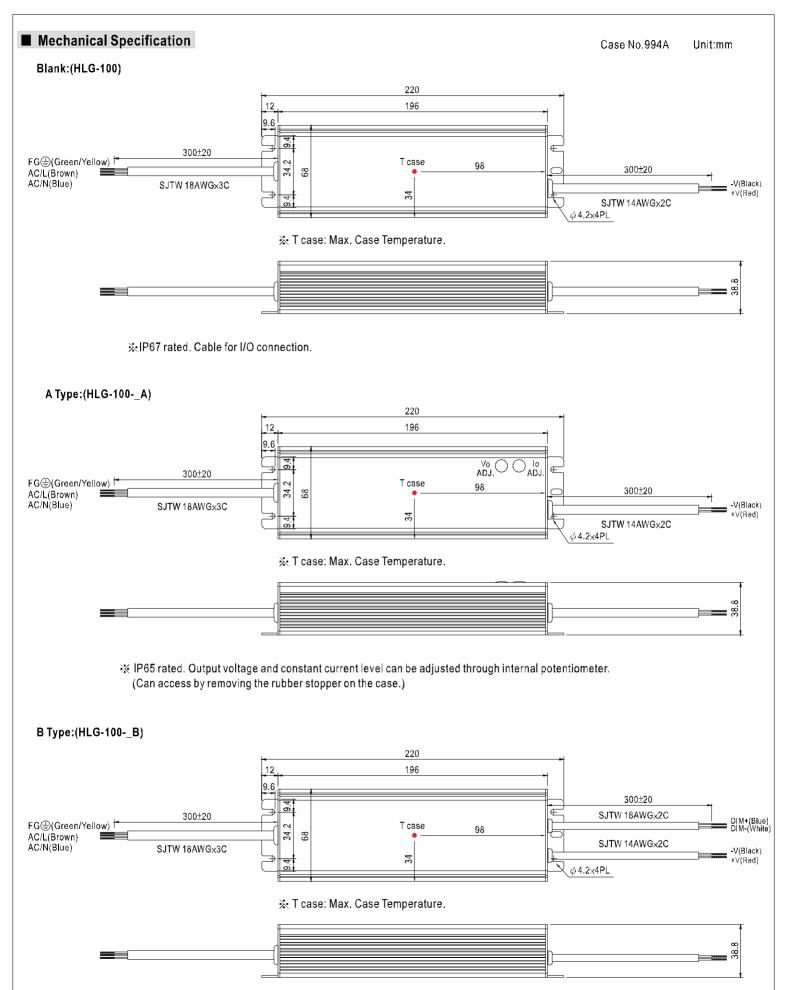
D (option): IP67 rated. Timer dimming function, contact NIETZ for details

MODEL		HLG-100-20	HLG-100-24	HLG-100-30	HLG-100-36	HLG-100-42	HLG-100-48	HLG-100-54					
	DC VOLTAGE	20V	24V	30V	36V	42V	48V	54V					
	RATED CURRENT	4.8A	4A	3.2A	2.65A	2.28A	2A	1.77A					
	RATED POWER	96W	96W	96W	95.4W	95.76W	96W	95.58W					
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	200m∨p-p	200m∨p-p	200mVp-p	200mVp-p	200mVp-p					
	VOLTAGE ADJ. RANGE Note.5	17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	38 ~ 46V	43 ~ 53V	49 ~ 58V					
		Can be adjusted b	y internal potentio	meter or through o	itput cable								
OUTPUT	CURRENT ADJ. RANGE	3 ~ 4.8A	2.5 ~ 4A	2 ~ 3.2A	1.65 ~ 2.65A	1.4 ~ 2.28A	1.25 ~ 2A	1.1 ~ 1.77A					
	VOLTAGE TOLERANCE Note.3	±1.0%	±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 Note.7	2500ms, 50ms at	full load 230VAC	:/ 115VAC ; B typ	e 2500ms, 200ms a	t 95% load 230\	/AC / 115VAC	1					
	HOLD UP TIME (Typ.)	16ms at full load	230VAC /115VAC	;	<u> </u>								
	VOLTAGE RANGE Note 4	90 ~ 264VAC	~ 264VAC 127 ~ 370VDC										
	FREQUENCY RANGE	47 ~ 63Hz											
	POWER FACTOR (Typ.)		PF>0.95/230VAC	(Please refer to "P	ower Factor Charac	cteristic" curve)							
INPUT	EFFICIENCY (Typ.)	93.5%	93.5%	93.5%	93.5%	93.5%	93.5%	93.5%					
	AC CURRENT (Typ.)	1.2A / 115VAC	0.55A / 230VAC										
	INRUSH CURRENT (Typ.)	COLD START 75											
	LEAKAGE CURRENT	<0.75mA / 240VA											
		95 ~ 106%											
	OVER CURRENT		Constant current lin	niting recovers aut	omatically after fau	It condition is remo	wed						
	SHORT CIRCUIT		limiting, recovers a	•	•		,,,,,,						
PROTECTION		23 ~ 27V	28 ~ 34V	34 ~ 38V	41 ~ 46V	47 ~ 53V	54 ~ 60V	59 ~ 65V					
	OVER VOLTAGE	Protection type : \$	Shut down o/p volta	ge with auto-recov	ery or re-power on	to recovery	<u>'</u>	•					
		100°C±10°C (RTH2)											
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down											
	WORKING TEMP.		er to "Derating Curv		•								
	WORKING HUMIDITY	20 ~ 95% RH non	-condensing	,									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~											
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 5											
	VIBRATION	,	2min./1cycle, perio	d for 72min each	along X Y 7 axes								
	SAFETY STANDARDS Note.6	-	• •		• • •	r IP67 approved : De	sign refer to LII 6095	0-1 THV EN60950					
	WITHSTAND VOLTAGE		C I/P-FG:1.88K	•		in or approved; be	angir raidi to decodo	0 1, 10 V E1400300					
SAFETY &	ISOLATION RESISTANCE		O/P-FG:100M Ohr										
EMC	EMC EMISSION		N55015, EN55022 (ss C (> 60% load)	· EN61000 3 3						
	EMC IMMUNITY	,	161000-4-2,3,4,5,6	· /		· · · · · · · · · · · · · · · · · · ·							
	MTBF	192.2Khrs min.	MIL-HDBK-217F		103024, Heavy Indi	istry lever (surge 4	KV), Citteria A						
OTHERS	DIMENSION	220*68*38.8mm ((200)									
OTHERS	PACKING	1.12Kg; 12pcs/14	· · · · · · · · · · · · · · · · · · ·										
		Ų		AC input rated los	d and 25°C of and	biont tomporature							
NOTE	Ripple & noise are measure Tolerance : includes set up Derating may be needed ur Type A only	/ mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. d at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. olerance, line regulation and load regulation. der low input voltages. Please check the static characteristics for more details. r to EN60598-1, CNS15233, GB7000.1, FCC part18.											

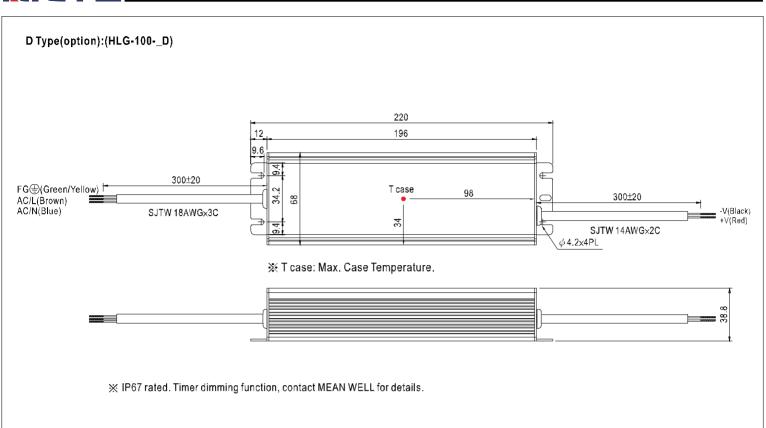
- 6. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part18.
- 7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.
- 8. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

 9. Refer to warranty statement.

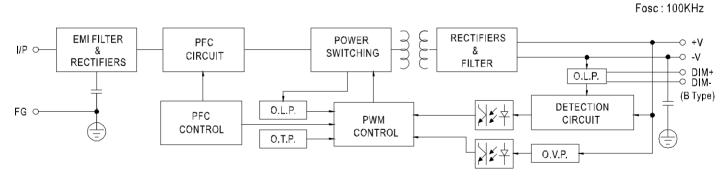






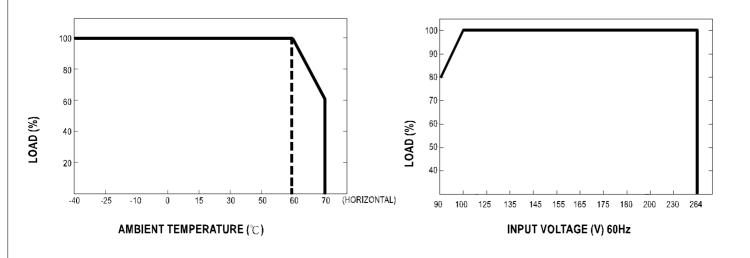






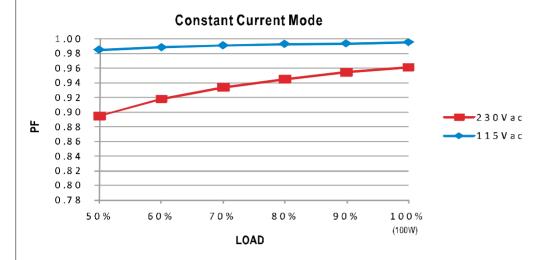
■ Derating Curve

■ Static Characteristics



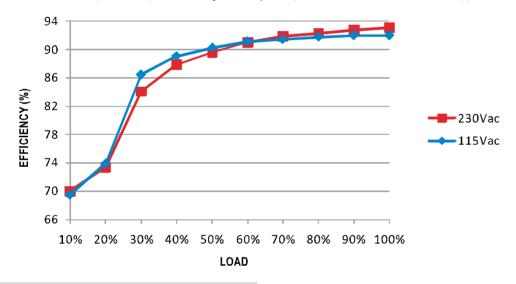


■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (48V Model)

HLG-100 series possess superior working efficiency that up to 93.5% can be reached in field applications.

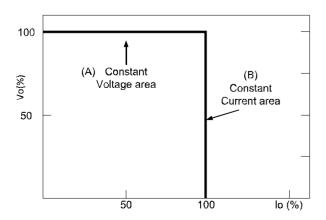


■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

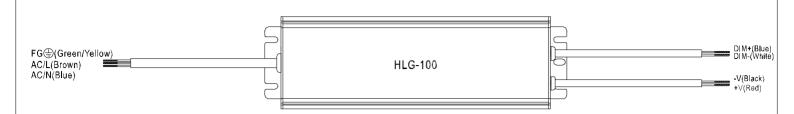
Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



Typical LED power supply I-V curve



■ DIMMING OPERATION



- X Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.
- ※ Please DO NOT connect "DIM-" to "-V".
- X Reference resistance value for output current adjustment (Typical)

Resistance value	10K Ω	20ΚΩ	30 ΚΩ	40 ΚΩ	50Κ Ω	60K Ω	70K Ω	80K Ω	90ΚΩ	100KΩ	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

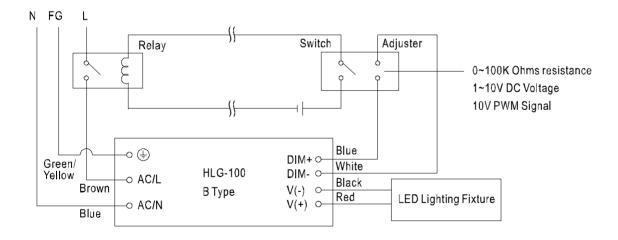
Dimming value	1V	2V	3V	4V	5 V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

* 10V PWM signal for output current adjustment (Typical): Frequency range: 100HZ ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

**Wusing the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

Dimming connection diagram for turning the lighting fixture ON/OFF:



Using a switch and relay can turn ON/OFF the lighting fixture.

- 1.Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.
- 2. The LED lighting fixture can be turned ON/OFF by the switch.



■ WATERPROOF CONNECTION

5A/PIN

M12-04

10A max.

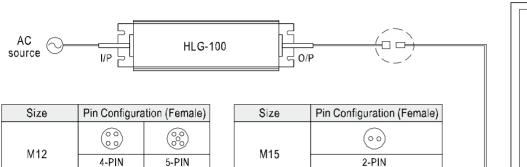
5A/PIN

M12-05

10A max.

Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-100 to operate in dry/wet/damp or outdoor environment.

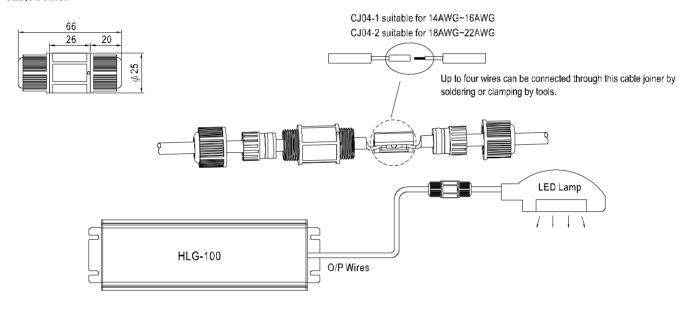


Size	Pin Configuration (Female)	
M15	00	
WITS	2-PIN	
	12A/PIN	
Order No.	M15-02	
Suitable Current	12A max.	LED Lamp

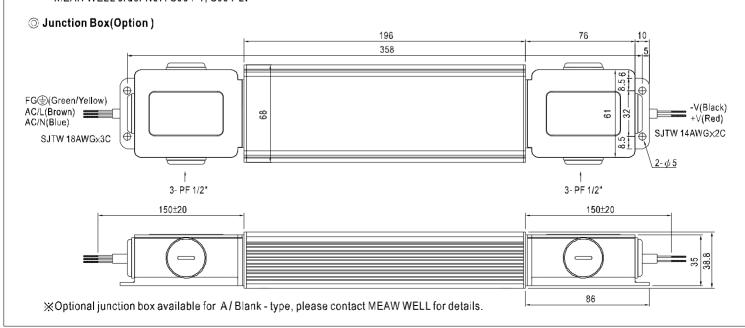
O Cable Joiner

Order No.

Suitable Current



*CJ04 cable joiner can be purchased independently for user's own assembly. MEAN WELL order No.: CJ04-1, CJ04-2.





- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 94%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- · Cooling by free air convection
- OCP point adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and street lighting applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations

HLG-120-12 A Blan

Blank: IP67 rated. Cable for I/O connection.

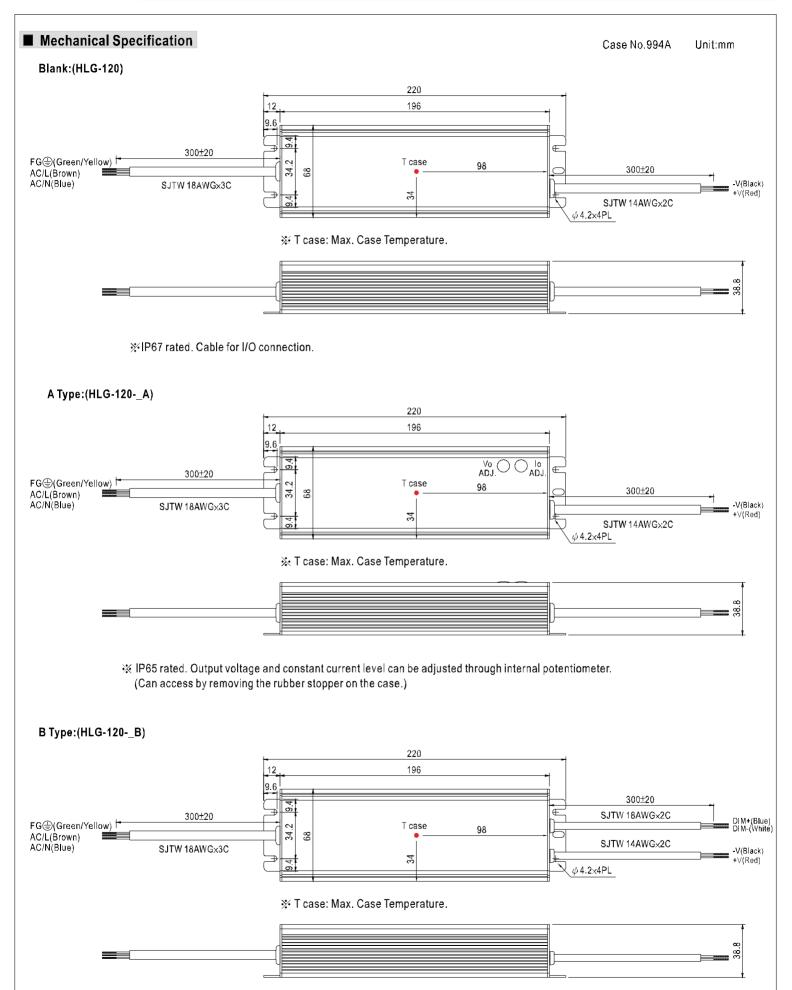
A: IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.

B: IP67 rated. Constant current level adjustable through output cable with 1~10Vdc or 10V PWM signal or resistance.

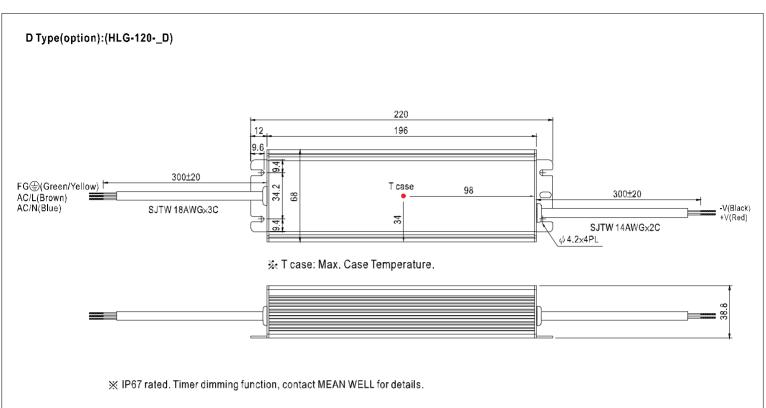
D (option): IP67 rated. Timer dimming function, contact NIETZ for details.

MODEL		HLG-120-12	HLG-120-15	HLG-120-20	HLG-120-24	HLG-120-30	HLG-120-36	HLG-120-42	HLG-120-48	HLG-120-54			
	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V			
	RATED CURRENT	10A	8A	6A	5A	4A	3.4A	2.9A	2.5A	2.3A			
	RATED POWER	120W	120W	120W	120W	120W	122.4W	121.8W	120W	124.2W			
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p			
	VOLTAGE ADJ. RANGE Note.5	· · ·		17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	38 ~ 46V	43 ~ 53V	49 ~ 58V			
				ootentiometer o									
OUTPUT	CURRENT ADJ. RANGE	5 ~ 10A	4 ~ 8A	3 ~ 6A	2.5 ~ 5A	2 ~ 4A	1.7 ~ 3.4A	1.4 ~ 2.9A	1.2 ~ 2.5A	1.1 ~ 2.3A			
	VOLTAGE TOLERANCE Note.3		±2.0%	±1.0%	±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%	±0.5%			
	LOAD REGULATION	±2.0%	±1.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
			00ms, 50ms at full load 230VAC / 115VAC ; B type 2500ms, 200ms at 95% load 230VAC / 115VAC										
	HOLD UP TIME (Typ.)		ad 230VAC		, = .,,pa		2 41 20 70 1044	2001/10/111					
	, , , ,		90 ~ 264VAC 127 ~ 370VDC										
	FREQUENCY RANGE	47 ~ 63Hz	121 570	7100									
	POWER FACTOR (Typ.)		/ΔC PE>0 Q5/	230\/ A C (Place	e refer to "Po	ver Factor Char	actoristic" cun	(Δ)					
INPUT	EFFICIENCY (Typ.)	92%	92%	93.5%	94%	94%	94%	94%	94%	94%			
INFUI	AC CURRENT (Typ.)	1.4A / 115VA			34 /0	34 /0	9470	34 /0	J4 /0	34/0			
			OLD START 75A/230VAC										
	() ,												
	LEARAGE CURRENT	<0.75mA / 240VAC 95 ~ 108%											
	OVER CURRENT												
				•		matically after f		s removed					
	SHORT CIRCUIT					ult condition is r		47 50)/	54 2014	E0 05)/			
PROTECTION	OVER VOLTAGE	14 ~ 1 7V	18 ~ 21V	23 ~ 27V	28 ~ 34V	34 ~ 38V	41 ~ 46V	47 ~ 53V	54 ~ 60V	59 ~ 65V			
		Protection type: Shut down o/p voltage with auto-recovery or re-power on to recovery											
	OVER TEMPERATURE	85°C ±10°C (
		• .			covers automa	atically after tem	iperature goes	down					
	WORKING TEMP.	•	Refer to "Dera	,									
	WORKING HUMIDITY	20 ~ 95% RH	non-condensir	ng									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80 ℃,	10 ~ 95% RH										
	TEMP. COEFFICIENT	±0.03%/℃ (0	~ 50°€)										
	VIBRATION	10 ~ 500Hz, 5	G 12min /1cyc	le, period for 7	2min, each al	ong X, Y, Z axes	;						
	SAFETY STANDARDS Note.6	UL8750, EN61	347-1, EN61347	-2-13 independe	ent, J61347-1, J	61347-2-13, IP65	or IP67 approv	ed ; Design refe	r to UL60950-1,	TUV EN6095			
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3.75	KVAC I/P-F	G:1.88KVAC	O/P-FG:0.5	KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-F	G, O/P-FG:10	00M Ohms / 50	0VDC / 25°C /	70% RH							
EMC	EMC EMISSION	Compliance to	EN55015, EN	155022 (CISPF	(22) Class B, I	EN61000-3-2 C	lass C (≥50%	load) ; EN610	00-3-3				
	EMC IMMUNITY	Compliance to	EN61000-4-2	2,3,4,5,6,8,11,	EN61547, EN	55024, heavy in	dustry level (si	urge 4KV), crit	eria A				
	MTBF	192.2Khrs mi	n. MIL-HDB	K-217F (25°C)									
OTHERS	DIMENSION	220*68*38.8n	nm (L*W*H)										
	PACKING	1.12Kg; 12pc:	s/14.4Kg/0.740	CUFT									
NOTE	Ripple & noise are measure Tolerance : includes set up Derating may be needed ur Type A only. Safety and EMC design refe Length of set up time is me The power supply is conside	ly mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. If at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. It to tolerance, line regulation and load regulation. It is regulation and load regulation.											

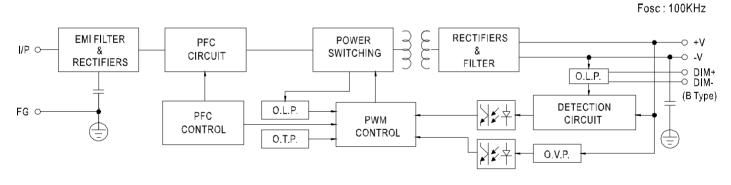






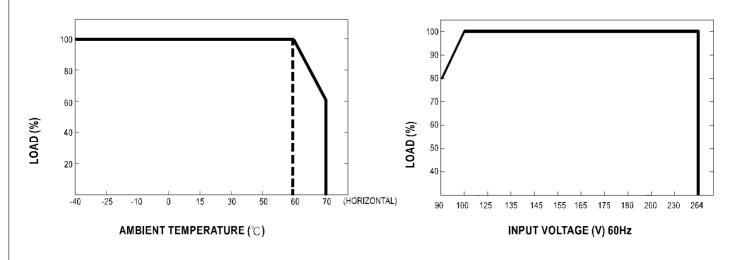


■ Block Diagram

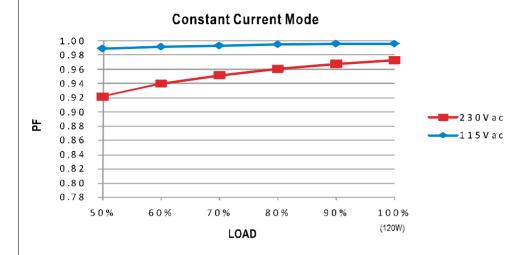


■ Derating Curve

■ Static Characteristics

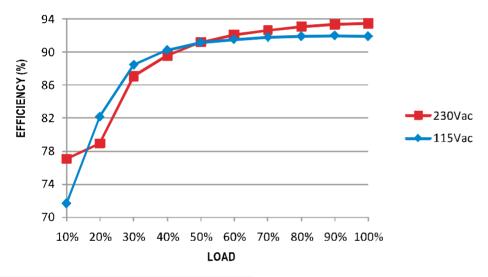


■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (48V Model)

HLG-120 series possess superior working efficiency that up to 94% can be reached in field applications.

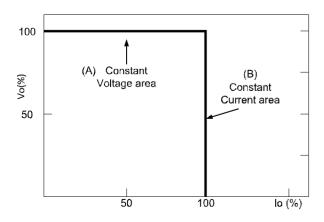


■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

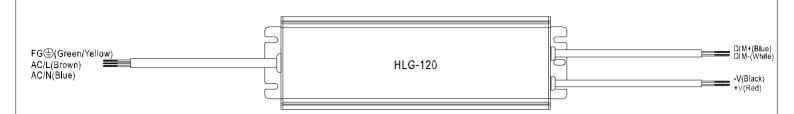
Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



Typical LED power supply I-V curve



■ DIMMING OPERATION



- 💥 Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.
- ※ Please DO NOT connect "DIM-" to "-V".
- * Reference resistance value for output current adjustment (Typical)

Resistance value	10ΚΩ	20ΚΩ	30 ΚΩ	40 ΚΩ	50K Ω	60Κ Ω	70 ΚΩ	80K Ω	90ΚΩ	100ΚΩ	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

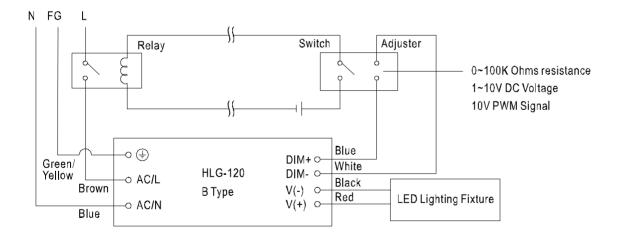
Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

* 10V PWM signal for output current adjustment (Typical): Frequency range: 100HZ ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

**Wusing the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

Dimming connection diagram for turning the lighting fixture ON/OFF:



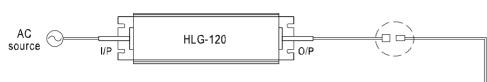
Using a switch and relay can turn ON/OFF the lighting fixture.

- 1. Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.
- 2. The LED lighting fixture can be turned ON/OFF by the switch.

■ WATERPROOF CONNECTION

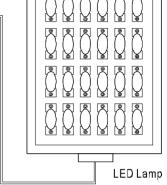
© Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-120 to operate in dry/wet/damp or outdoor environment.

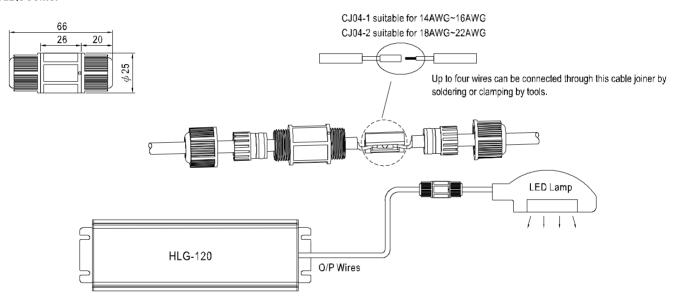


Size	Pin Configura	tion (Female)
M12	000	000
IVI I Z	4-PIN	5-PIN
	5A/PIN	5A/PIN
Order No.	M12-04	M12-05
Suitable Current	10A max.	10A max.

Size	Pin Configuration (Female)
M15	00
CIM	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.

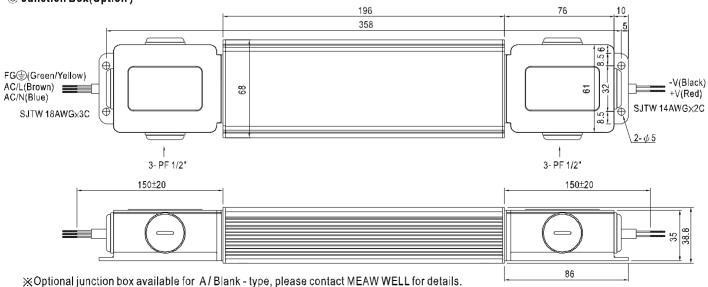


© Cable Joiner



*CJ04 cable joiner can be purchased independently for user's own assembly. MEAN WELL order No.: CJ04-1, CJ04-2.









- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 94%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- · Cooling by free air convection
- OCP point adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and street lighting applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations

HLG-150-12 A Blank: IP67 rated. Cable for I/O connection.

A: IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.

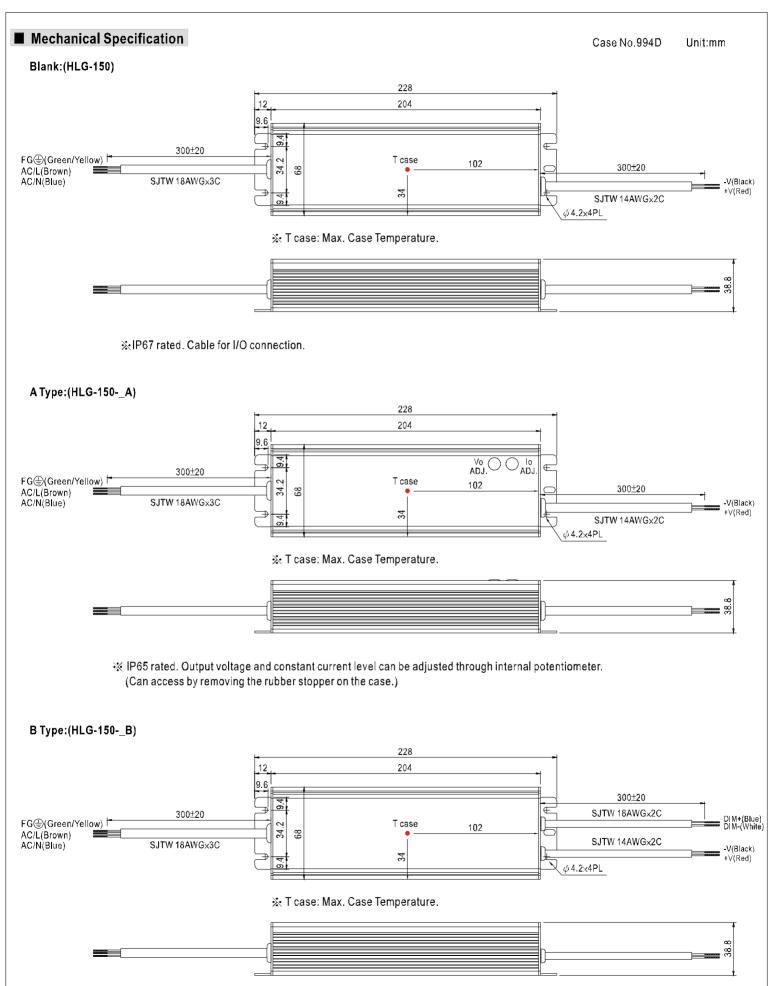
B: IP67 rated. Constant current level adjustable through output cable with 1~10Vdc or 10V PWM signal or resistance.

D (option): IP67 rated. Timer dimming function, contact NIETZ for details.

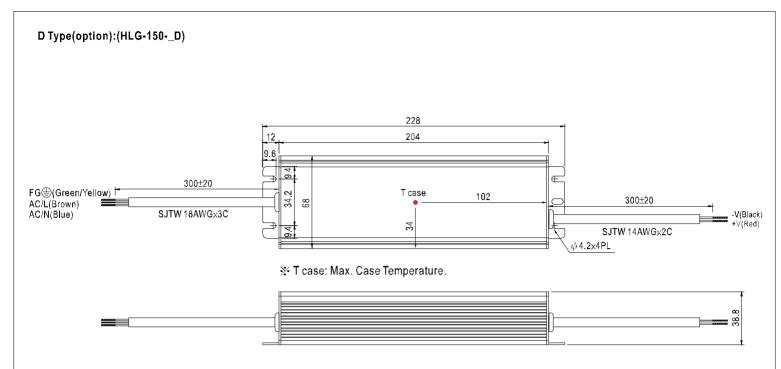
MODEL		HLG-150-12	HLG-150-15	HLG-150-20	HLG-150-24	HLG-150-30	HLG-150-36	HLG-150-42	HLG-150-48	HLG-150-54			
	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V			
	RATED CURRENT	12.5A	10A	7.5A	6.3A	5A	4.2A	3.6A	3.2A	2.8A			
	RATED POWER	150W	150W	150W	151.2W	150W	151.2W	151.2W	153.6W	151.2W			
	RIPPLE & NOISE (max.) Note.2		150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p			
	VOLTAGE ADJ. RANGE Note.5		13.5 ~ 17V	17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	38 ~ 46V	43 ~ 53V	49 ~ 58V			
				potentiometer of					10 001	10 001			
OUTPUT	CURRENT ADJ. RANGE	7.5 ~ 12.5A	6 ~ 10A	4.5 ~ 7.5A	3.8 ~ 6.3A	3 ~ 5A	2.5 ~ 4.2A	2.16 ~ 3.6A	1.92 ~ 3.2A	1.68 ~ 2.8A			
	VOLTAGE TOLERANCE Note,3		±2.0%	±1.0%	±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%	±0.5%			
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
								230VAC / 115		_0.070			
	HOLD UP TIME (Typ.)	,	2500ms, 80ms at full load 230VAC / 115VAC; B type 2500ms, 200ms at 95% load 230VAC / 115VAC 6ms at full load 230VAC / 115VAC 10 ~ 264VAC 127 ~ 370VDC										
	, , , ,												
	FREQUENCY RANGE	90 ~ 264 VAC 127 ~ 370 VDC 47 ~ 63 Hz											
	POWER FACTOR (Typ.)		47 ~ 63HZ PF>0.98/115VAC, PF>0.95/230VAC (Please refer to "Power Factor Characteristic" curve)										
INPUT	EFFICIENCY (Typ.)	92%	92.5%	93%	93.5%	93.5%	93.5%	94%	94%	94%			
	AC CURRENT (Typ.)	1.7A / 115VA		230VAC	30.070	30.070	30.070	J470	J 7 / 0	J+70			
	INRUSH CURRENT (Typ.)		75A/230VAC	2001/10									
	LEAKAGE CURRENT	<0.75mA / 24											
	LEARAGE CONNENT	95 ~ 108%	OVAO										
	OVER CURRENT		o . Canatant a	at limiting	unna vora outar	natically after fa	ault appolition is						
	SHORT CIRCUIT			•		It condition is re		s removed					
PROTECTION	SHOKT CIRCUIT	14 ~ 17V	18 ~ 21V	23 ~ 27V	28 ~ 34V	34 ~ 38V	41 ~ 46V	47 ~ 53V	54 ~ 60V	59 ~ 65V			
PROTECTION	OVER VOLTAGE							T1 00V	J4 00V	33 034			
		Protection type: Shut down o/p voltage with auto-recovery or re-power on to recovery 100°C ±10°C (RTH2)											
	OVER TEMPERATURE			o o/p voltago r	ocovers autor	natically after t	omporaturo a	oos down					
	WORKING TEMP.	,	Refer to "Dera	• •	ecovers autor	natically after i	emperature g	OG3 GOWII					
			non-condensi	,									
CHUIDONMENT	WORKING HUMIDITY STORAGE TEMP., HUMIDITY	-40 ~ +80°C,		ily									
ENVIRONMENT	TEMP. COEFFICIENT	±0.03%/°C (0											
	VIBRATION	- \	- /	ole period for	72min acabal	ng V V 7 avec							
	SAFETY STANDARDS Note.6		•			ong X, Y, Z axes 31347-2-13, IP65		ad : Danlan rafar	4a III 00000 4 1	TUV ENCORO			
	WITHSTAND VOLTAGE	,		<u>.</u>			or iPor approvi	ed , Design refer	10 0100930-1,	IUV ENGUSSU			
SAFETY &				G:1.88KVAC									
EMC	ISOLATION RESISTANCE		•	00M Ohms / 50			l 0 /> con/	In a divided of	00.0.0				
	EMC EMISSION	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≥60% load); EN61000-3-3											
	EMC IMMUNITY		Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, heavy industry level (surge 4KV), criteria A										
07:UED0	MTBF		192.2Khrs min. MIL-HDBK-217F (25°C') 228*68*38.8mm (L*W*H)										
OTHERS	DIMENSION		. ,	SULT									
	PACKING		s/14.8Kg/0.740			0 :							
NOTE	All parameters NOT special Ripple & noise are measure Tolerance: includes set up Derating may be needed ur Type A only.	ed at 20MHz o tolerance, line	f bandwidth by regulation and	/ using a 12" to d load regulation	wisted pair-wire on.	e terminated w	ith a 0.1uf & 4		oacitor.				

- 6. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part18.
- 7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.
- 8. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 9. Refer to warranty statement.



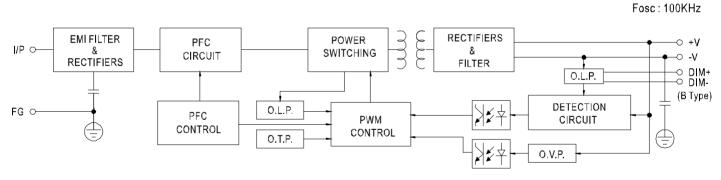






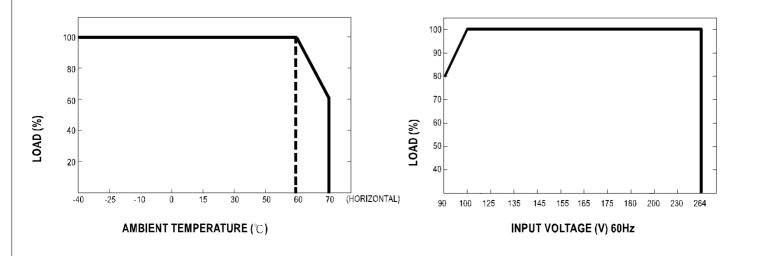
X IP67 rated. Timer dimming function, contact MEAN WELL for details.

■ Block Diagram



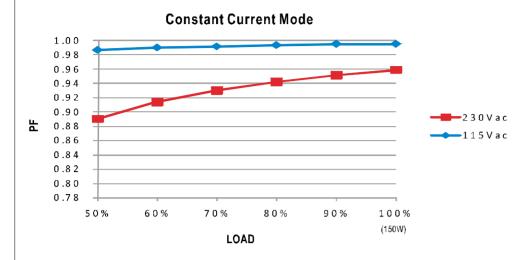
■ Derating Curve

■ Static Characteristics



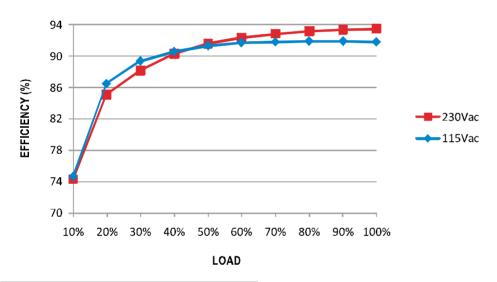


■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (48V Model)

HLG-150 series possess superior working efficiency that up to 94% can be reached in field applications.

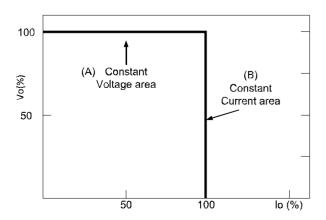


■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

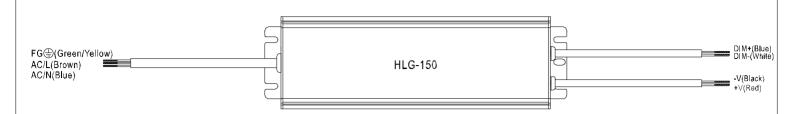
Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



Typical LED power supply I-V curve



■ DIMMING OPERATION



- X Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.
- ※ Please DO NOT connect "DIM-" to "-V".
- X Reference resistance value for output current adjustment (Typical)

Resistance value	10K Ω	20ΚΩ	30KΩ	40 ΚΩ	50K Ω	60K Ω	70K Ω	80K Ω	90KΩ	100KΩ	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

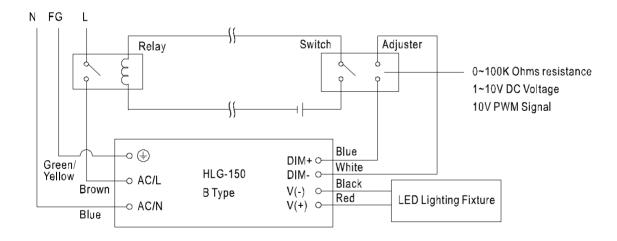
Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

* 10V PWM signal for output current adjustment (Typical): Frequency range: 100HZ ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

**Wusing the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

Dimming connection diagram for turning the lighting fixture ON/OFF:



Using a switch and relay can turn ON/OFF the lighting fixture.

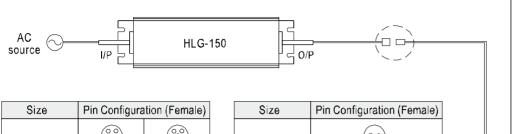
- 1.Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.
- 2. The LED lighting fixture can be turned ON/OFF by the switch.



■ WATERPROOF CONNECTION

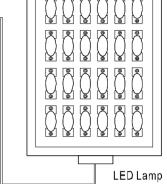
(a) Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-150 to operate in dry/wet/damp or outdoor environment.

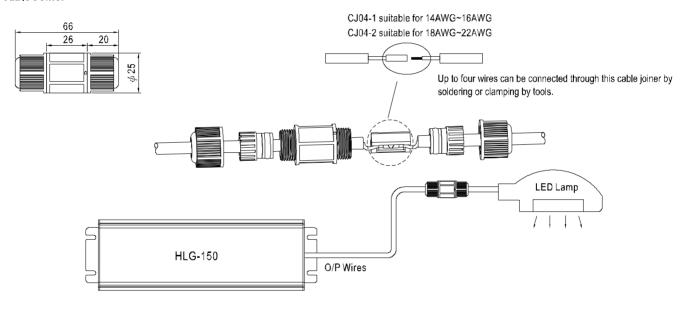


- 1	4	• •	(1 0111010)
	M12	000	000
	IVI I Z	4-PIN	5-PIN
		5A/PIN	5A/PIN
Ĭ	Order No.	M12-04	M12-05
	Suitable Current	10A max.	10A max.

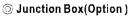
Size	Pin Configuration (Female)
M15	0
CLIM	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.

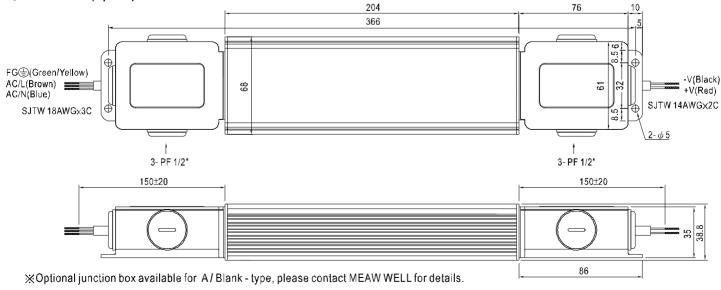


Cable Joiner



*CJ04 cable joiner can be purchased independently for user's own assembly. MEAN WELL order No.: CJ04-1, CJ04-2.









- Features :
- · Universal AC input / Full range
- · Built-in active PFC function
- High efficiency up to 94%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- · Cooling by free air convection
- · OCP point adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- · Suitable for LED lighting and street lighting applications
- · Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations

HLG-185-12 A Blank: IP67 rated. Cable for I/O connection.

A: IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.

B: IP67 rated. Constant current level adjustable through output cable with 1~10Vdc or 10V PWM signal or resistance.

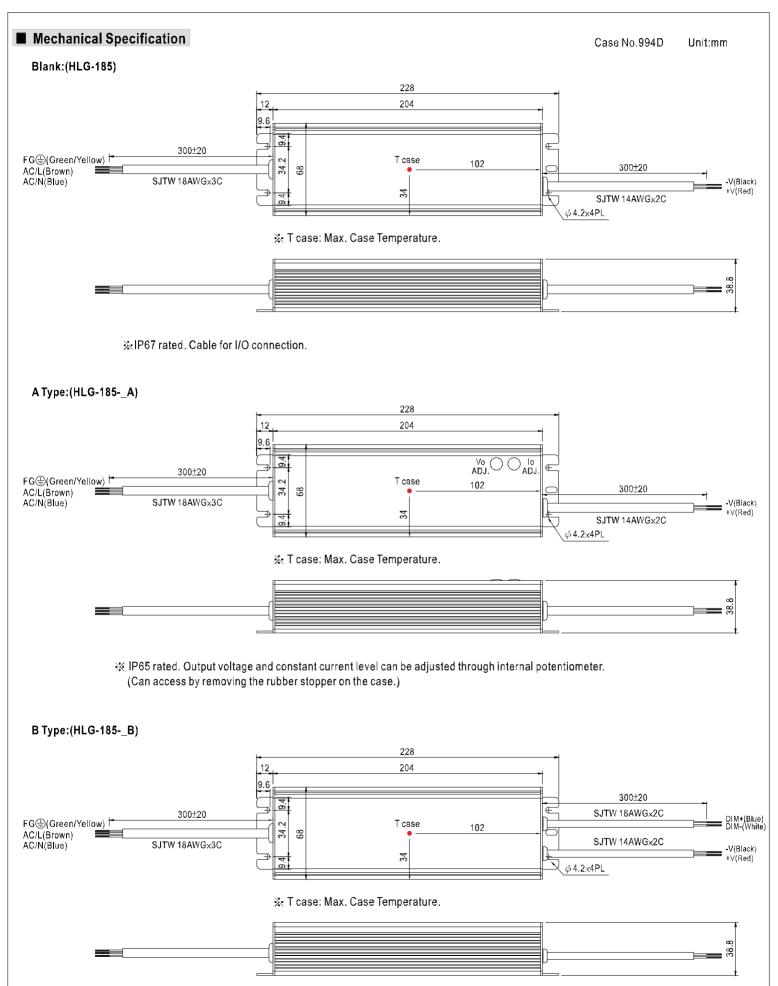
D (option): IP67 rated. Timer dimming function, contact NIETZ for details.

MODEL			HLG-185-12	HLG-185-15	HLG-185-20	HLG-185-24	HLG-185-30	HLG-185-36	HLG-185-42	HLG-185-48	HLG-185-54			
	DC VOLTAGE		12 V	15V	20V	24V	30V	36V	42V	48V	54∨			
	RATED CURRENT		13A	11.5A	9.3A	7.8A	6.2A	5.2A	4.4A	3.9A	3.45A			
	RATED POWER		156W	172W	186W	187.2W	186W	187.2W	184.8W	187.2W	186.3W			
	RIPPLE & NOISE (I	max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p			
	RATED POWER RIPPLE & NOISE (max.) No VOLTAGE ADJ. RANGE NO T CURRENT ADJ. RANGE VOLTAGE TOLERANCE No LINE REGULATION LOAD REGULATION SETUP, RISE TIME No HOLD UP TIME (Typ.) VOLTAGE RANGE No FREQUENCY RANGE POWER FACTOR (Typ.) EFFICIENCY (Typ.) AC CURRENT (Typ.) AC CURRENT (Typ.) INRUSH CURRENT (Typ.) LEAKAGE CURRENT OVER CURRENT SHORT CIRCUIT	NGE Note.5	10.8 ~ 13.5V	13.5 ~ 17V	17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	38 ~ 46V	43 ~ 53V	49 ~ 58V			
ОИТРИТ	CURRENTARIA	ANCE	Can be adjust	ed by internal p	otentiometer	or through outp	out cable							
OUIPUI	CORRENT ADJ. K	ANGE	6.5 ~ 13A	5.75 ~ 11.5A	4.65 ~ 9.3A	3.9 ~ 7.8A	3.1 ~ 6.2A	2.6 ~ 5.2A	2.2 ~ 4.4A	1.95 ~ 3.9A	1.72 ~ 3.45A			
	VOLTAGE TOLERA	NCE Note.3	±2.5%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%			
	LINE REGULATION	N	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	LOAD REGULATION	ON	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	Note.7	2500ms, 80m	s at full load	230VAC / 115\	AC; B type	2500ms, 200m	s at 95% load	230VAC / 115	VAC				
	HOLD UP TIME (T)	/p.)	16ms at full lo	ad 230VAC	115VAC									
	VOLTAGE RANGE	Note.4	90 ~ 264VAC	127 ~ 370	OVDC									
	FREQUENCY RAN	IGE	47 ~ 63Hz											
	POWER FACTOR	(Тур.)	PF>0.98/115\	/AC, PF>0.95/2	230VAC (Pleas	se refer to "Pov	ver Factor Char	acteristic" cun	/e)					
INDUT	EFFICIENCY (Typ.)	92%	93%	93.5%	94%	94%	94%	94%	94%	94%			
INPUT	AC CURRENT	12V	1.8A / 115VA	0.8A/2	30VAC						•			
	(Typ.)	15V ~ 54V	2.1A / 115VA	0.9A/2	30VAC									
	INRUSH CURREN	Г (Тур.)	COLD START	75A/230VAC										
	LEAKAGE CURRE	NT	<0.75mA/24	<0.75mA / 240VAC										
	OVER CURRENT		95 ~ 108%											
	OVER CURRENT		Protection typ	Protection type: Constant current limiting, recovers automatically after fault condition is removed										
	SHORT CIRCUIT		Constant current limiting, recovers automatically after fault condition is removed											
PROTECTION	OVED VOLTA OF		14 ~ 17V	18 ~ 21V	23 ~ 27V	28 ~ 34V	34 ~ 38V	41 ~ 46V	47 ~ 53∨	54 ~ 60V	59 ~ 65∨			
	OVER VOLIAGE		Protection typ	e : Shut down	o/p voltage wit	h auto-recovei	y o r re- power o	n to recovery						
	OVER TEMPERAT	UDE	100℃ ±10℃	100°C ±10°C (RTH2)										
	OVER TEMPERAT	URE	Protection ty	pe : Shut dowr	ı o/p voltage, r	ecovers autoi	matically after	temperature g	oes down					
	WORKING TEMP.		-40 ~ +70°C (Refer to "Derat	ling Curve")									
	WORKING HUMID	ITY	20 ~ 95% RH	non-condensir	ng									
ENVIRONMENT	STORAGE TEMP.,	HUMIDITY	-40 ~ +80°C,	10 ~ 95% RH										
	TEMP. COEFFICIE	NT	±0.03%/°C (0	~ 50°C)										
	VIBRATION		10 ~ 500Hz, 5	G 12min./1cyc	le, period for	72min. each al	ong X, Y, Z axe	S						
	SAFETY STANDAR	RDS Note.6	UL8750, EN61	347-1, EN61347	-2-13 independe	ent, J61347-1, J	61347-2-13, IP6	or IP67 approv	ed ; Design refe	r to UL60950-1,	TUV EN60950-1			
OAFFTV 0	WITHSTAND VOLT	TAGE	I/P-O/P:3.75	KVAC I/P-F	G:1.88KVAC	O/P-FG:0.5h	KVAC							
SAFETY &	ISOLATION RESIS	TANCE	I/P-O/P, I/P-F	G, O/P-FG:10	00M Ohms / 50	00VDC / 25°C /	70% RH							
EMC	EMC EMISSION		I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (⊇50% load); EN61000-3-3											
	EMC IMMUNITY		Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, heavy industry level (surge 4KV), criteria A											
	MTBF		192.2Khrs mi	n. MIL-HDB	K-217F (25°C)	1								
OTHERS	DIMENSION		228*68*38.8mm (L*W*H)											
	PACKING		1.15Kg; 12pcs/14.8Kg/0.74CUFT											
NOTE	PACKING 1.15Kg; 12pcs/14.8Kg/0.74CUFT 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.													

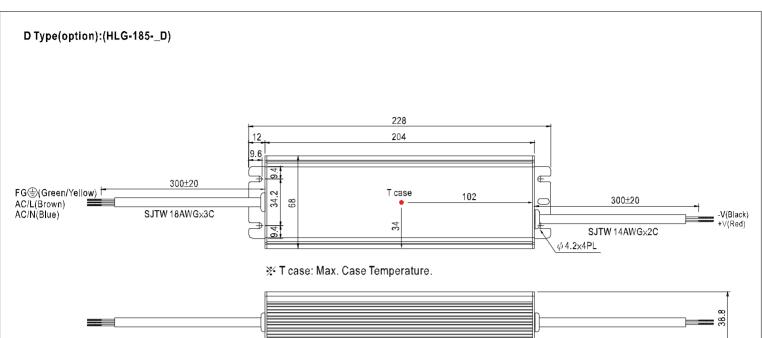
- Tolerance: includes set up tolerance, line regulation and load regulation.
- 4. Derating may be needed under low input voltages. Please check the static characteristics for more details.
- 5. Type A only.
- 6. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part18.
- 7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.

 8. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
- 9. Refer to warranty statement.



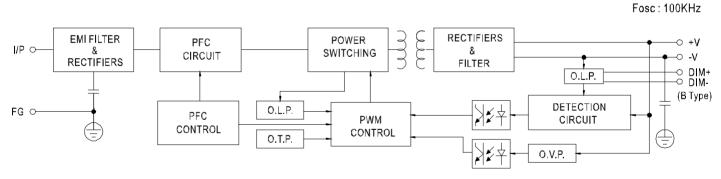






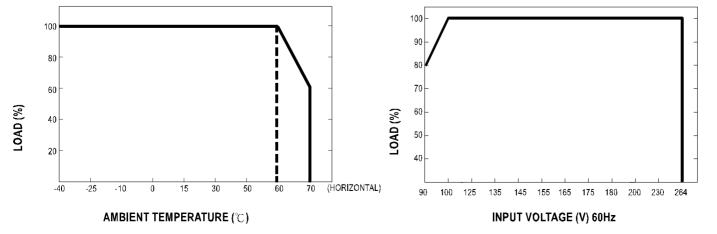
X IP67 rated. Timer dimming function, contact MEAN WELL for details.

■ Block Diagram



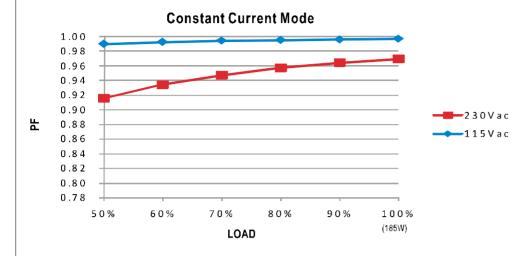
■ Derating Curve

■ Static Characteristics



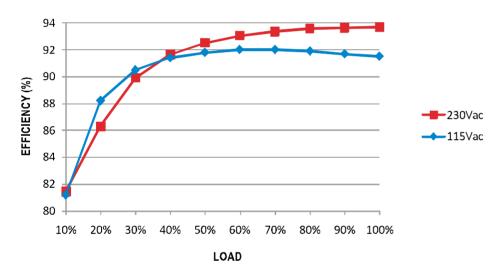


■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (48V Model)

HLG-185 series possess superior working efficiency that up to 94% can be reached in field applications.

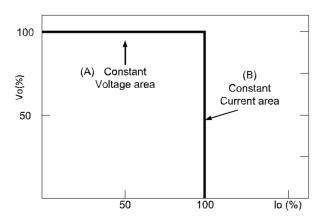


■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

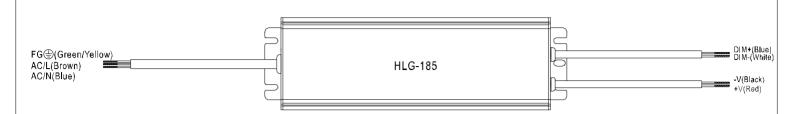
Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



Typical LED power supply I-V curve



■ DIMMING OPERATION



- X Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.
- ※ Please DO NOT connect "DIM-" to "-V".
- X Reference resistance value for output current adjustment (Typical)

Resistance value	10K Ω	20ΚΩ	30KΩ	40 ΚΩ	50K Ω	60K Ω	70 ΚΩ	80K Ω	90KΩ	100KΩ	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

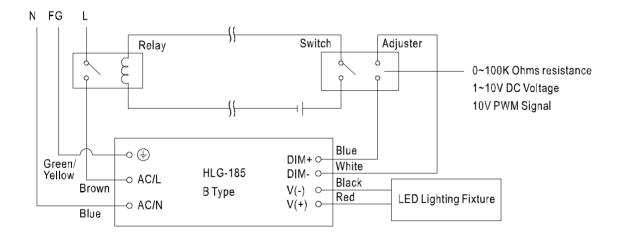
Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

* 10V PWM signal for output current adjustment (Typical): Frequency range: 100HZ ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	102%~108%

**Wusing the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

Dimming connection diagram for turning the lighting fixture ON/OFF:



Using a switch and relay can turn ON/OFF the lighting fixture.

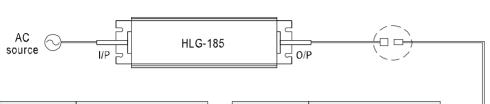
- 1.Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.
- 2. The LED lighting fixture can be turned ON/OFF by the switch.



■ WATERPROOF CONNECTION

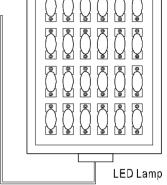
(a) Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-185 to operate in dry/wet/damp or outdoor environment.

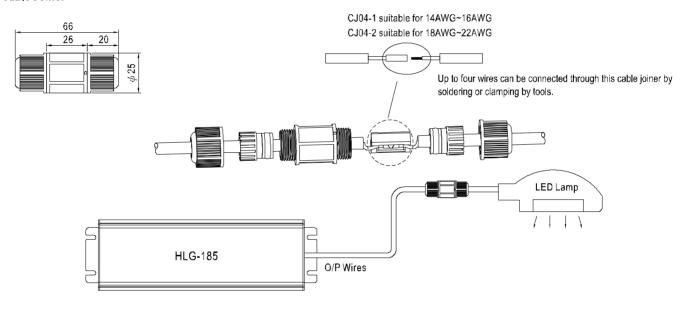


Size	Pin Configura	tion (Female)
M12	000	000
IVITZ	4-PIN	5-PIN
	5A/PIN	5A/PIN
Order No.	M12-04	M12-05
Suitable Current	10A max.	10A max.

Size	Pin Configuration (Female)
M15	00
CIIVI	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.

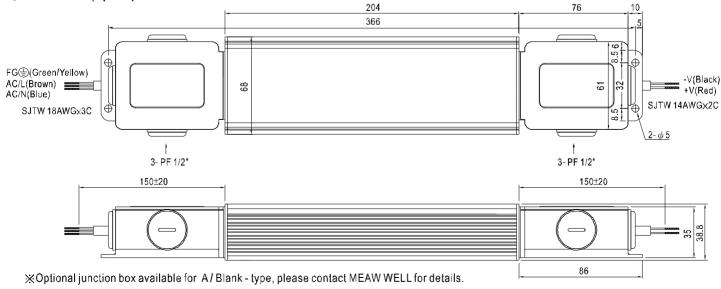


Cable Joiner



*CJ04 cable joiner can be purchased independently for user's own assembly. MEAN WELL order No.: CJ04-1, CJ04-2.





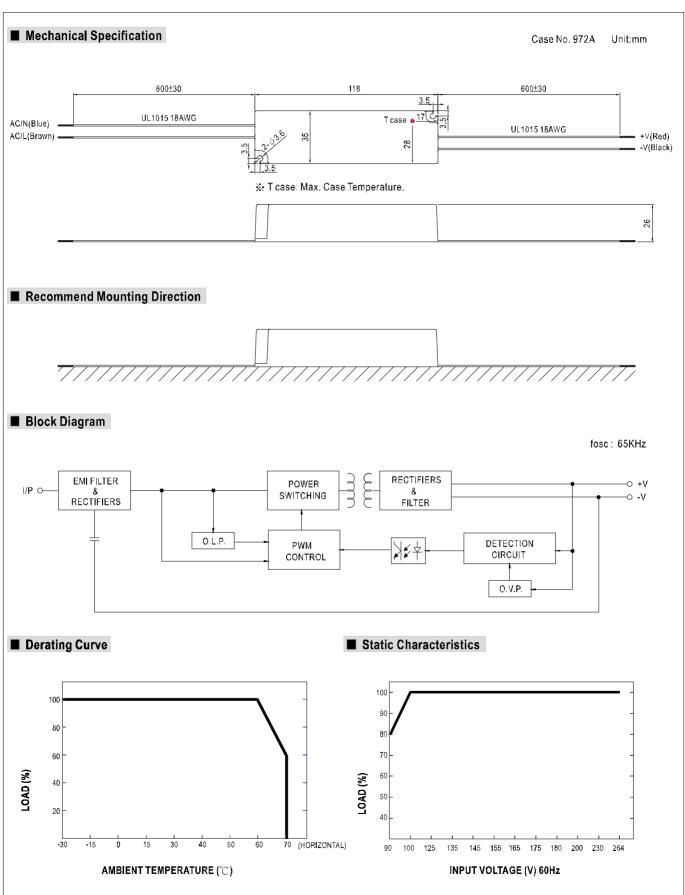




- Constant voltage design
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Small and compact size
- Fully encapsulated with IP67 level (Note.7)
- · Fully isolated plastic case
- Class Ⅱ power unit, no FG
- Pass LPS
- Suitable for LED lighting and moving sign applications
- 100% full load burn-in test
- · Low cost, high reliability

MODEL		LPV-20-5	LPV-20-12	LPV-20-15	LPV-20-24						
	DC VOLTAGE	5V	12V	15V	24V						
	RATED CURRENT	3A	1.67A	1.33A	0.84A						
	CURRENT RANGE	0 ~ 3A	0 ~ 1.67A	0 ~ 1.33A	0 ~ 0.84A						
	RATED POWER	15W	20W	20W	20.2W						
OUTPUT	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p						
UUIPUI	VOLTAGE TOLERANCE Note.3	±5.0%									
	LINE REGULATION	±1.0%									
	LOAD REGULATION	±2.0%									
	SETUP, RISE TIME Note.6	500ms, 20ms / 230VAC 500ms	s, 20ms / 115VAC at full load								
	HOLD UP TIME (Typ.)	50ms/230VAC 16ms/115V	AC at full load								
	VOLTAGE RANGE Note.4	90 ~ 264VAC 127 ~ 370VD									
	FREQUENCY RANGE	47 ~ 63Hz									
INPUT	EFFICIENCY (Typ.)	77%	83%								
INFUI	AC CURRENT (Typ.)	0.55A/115VAC 0.35A/230VA									
	INRUSH CURRENT(max.)	COLD START 35A/115VAC									
	LEAKAGE CURRENT	0.25mA / 240VAC									
	OVERLOAD	110 ~ 150% rated output power									
PROTECTION	OVERLOAD	Protection type : Hiccup mode,	recovers automatically after faul	t condition is removed							
PROTECTION	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16V	17.5 ~ 21V	28 ~ 32V						
	OVER VOLIAGE	Protection type : Shut off o/p vo	Itage, clamping by zener diode								
	WORKING TEMP.	-30 ~ +70 ℃ (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°℃, 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	UL879, UL1310 Class 2, CAN/C	SA C22.2 No. 223-M91, IP67 ap	proved; design refer to TUV EN6	0950-1, EN61347-2-13						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC									
EMC	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC									
Linio	EMC EMISSION	Compliance to EN55022 (CISP)	R22) Class B, EN61000-3-2 Clas	ss A, EN61000-3-3							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4	4,5,6,8,11, EN55024, light indus	try level, criteria A							
	MTBF	786.5Khrs min. MIL-HDBK-2	17F (25℃)								
OTHERS	DIMENSION	118*35*26mm (L*W*H)									
	PACKING	0.22Kg; 60pcs/14.2Kg/0.62CUF	T								
NOTE	Ripple & noise are measure Tolerance : includes set up Derating may be needed ur The power supply is consid complete installation, the fir Length of set up time is me	neters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. ie: includes set up tolerance, line regulation and load regulation. may be needed under low input voltage. Please check the static characteristics for more details. ier supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the expectation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. if set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minute.									







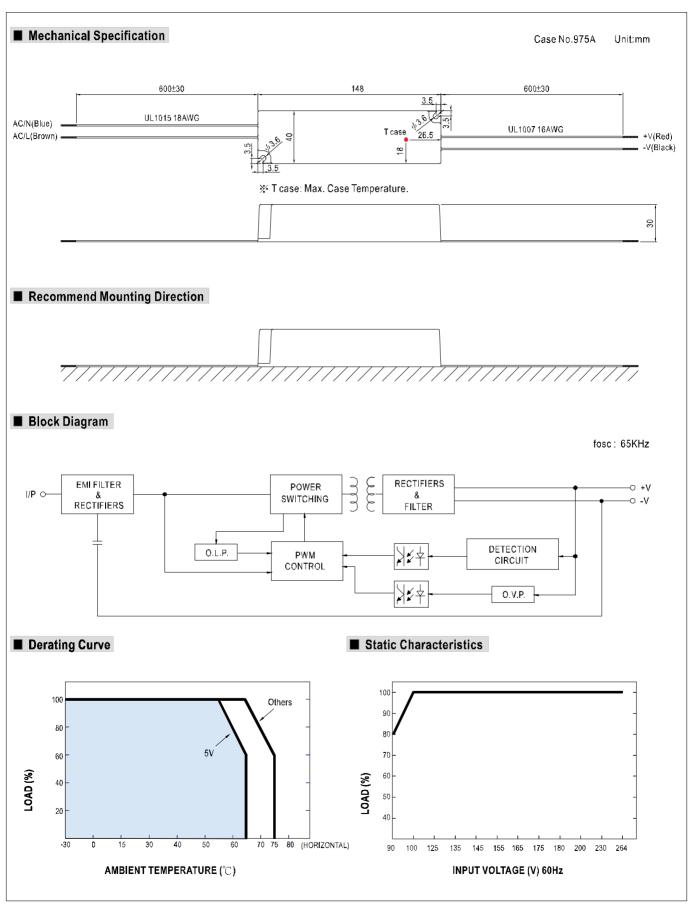


■ Features :

- · Constant voltage design
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Fully encapsulated with IP67 level (Note.9)
- Fully isolated plastic case
- $^{\bullet}$ Class ${\rm I\hspace{-.1em}I}$ power unit, no FG
- Pass LPS
- Suitable for LED lighting and moving sign applications (Note.8)
- 100% full load burn-in test
- · Low cost, high reliability

MODEL		LPV-35-5	LPV-35-12	LPV-35-15	LPV-35-24	LPV-35-36			
	DC VOLTAGE	5V	12V	15V	24V	36V			
	RATED CURRENT	5A	3A	2.4A	1.5A	1A			
	CURRENT RANGE	0 ~ 6A (Note.7)	0 ~ 3A	0 ~ 2.4A	0 ~ 1.5A	0 ~ 1A			
	RATED POWER	30W	36W	36W	36W	36W			
AUTBUT	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p	150mVp-p			
OUTPUT	VOLTAGE TOLERANCE Note.3	±6.0%	±5.0%						
	LINE REGULATION	±1.0%							
	LOAD REGULATION	±4.0%	±2.0%						
	SETUP, RISE TIME Note.6	500ms, 20ms / 230VAC 500ms, 20ms / 115VAC at full load							
	HOLD UP TIME (Typ.)	50ms/230VAC 16ms/115VAC at full load							
	VOLTAGE RANGE Note.4	90 ~ 264VAC 127 ~	370VDC						
	FREQUENCY RANGE	47 ~ 63Hz							
INPUT	EFFICIENCY (Typ.)	77%	84%	84%	85%	85%			
INFOI	AC CURRENT (Typ.)	1.1A/115VAC 0.7A/230	OVAC						
	INRUSH CURRENT(max.)	COLD START 30A/115VA	COLD START 30A/115VAC 60A/230VAC						
	LEAKAGE CURRENT	0.25mA/240VAC							
	OVERLOAD	110 ~ 150% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed							
PROTECTION	OVERLOAD								
PROTECTION	AVED VOI 74.05	5. 7 5 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	41.4 ~ 48.6V			
	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover							
	WORKING TEMP.	-30 ~ +75°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°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	UL1310 Class 2, CAN/CSA C22.2 No. 223-M91, IP67 approved; design refer to TUV EN60950-1, EN61347-2-13							
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC							
EMC	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH							
LINIC	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A							
	MTBF	743.5Khrs min. MIL-HDBK-217F (25℃)							
OTHERS	DIMENSION	148*40*30mm (L*W*H)							
	PACKING	0.34Kg; 40pcs/14.6Kg/0.63CUFT							
NOTE	 All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance: includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltage. Please check the static characteristics for more details. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. LPV-35-5 can provide 6A of output current continuously. Based on the requirement of UL1310 class 2, the output current is only certified up to 5A for the test report of LPV-35-5. In the European market this power supply can be used for LED lighting applications with input power up to 25W. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minute. 								





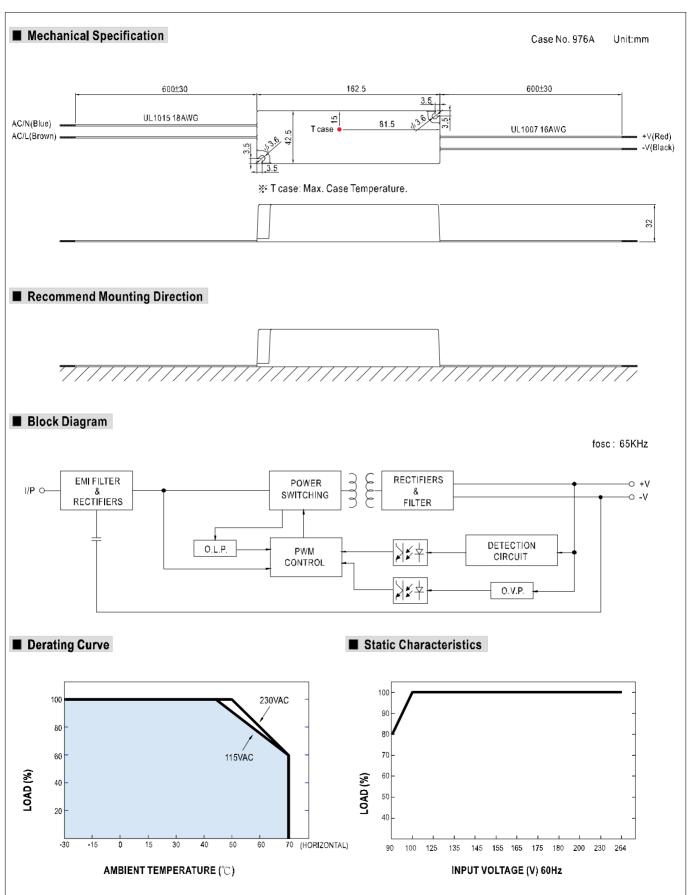




- Constant voltage design
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Fully encapsulated with IP67 level (Note.8)
- Fully isolated plastic case
- Class Ⅱ power unit, no FG
- Pass LPS
- Suitable for LED lighting and moving sign applications (Note.7)
- 100% full load burn-in test
- Low cost, high reliability

MODEL		LPV-60-5	LPV-60-12	LPV-60-15	LPV-60-24	LPV-60-36	LPV-60-48		
	DC VOLTAGE	5V	12V	15 V	24V	36V	48V		
	RATED CURRENT	8A	5A	4A	2.5A	1.67A	1.25A		
	CURRENT RANGE	0 ~ 8A	0 ~ 5A	0 ~ 4A	0 ~ 2.5A	0 ~ 1.67A	0 ~ 1.25A		
	RATED POWER	40W	60W	60W	60W	60W	60W		
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p	150mVp-p	150mVp-p		
OUTPUT	VOLTAGE TOLERANCE Note.3	±8.0% ±5.0%							
	LINE REGULATION	±1.0%							
	LOAD REGULATION	±6.0% ±2.0%							
	SETUP, RISE TIME Note.6	500ms, 20ms / 230VAC 500ms, 20ms / 115VAC at full load(for 5~36V); 500ms, 30ms / 230VAC 500ms, 30ms / 115VAC at full load(for 48V)							
	HOLD UP TIME (Typ.)	50ms/230VAC 16ms/115VAC at full load							
	VOLTAGE RANGE Note.4	90 ~ 264VAC 127 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
INPUT	EFFICIENCY (Typ.)	76%	83%	83%	86%	86%	86%		
INFUI	AC CURRENT (Typ.)	1.2A/115VAC 1A/	230VAC		·	·	·		
	INRUSH CURRENT(max.)	COLD START 30A/115VAC 60A/230VAC							
	LEAKAGE CURRENT	0.25mA/240VAC							
	OVERLOAD	110 ~ 150% rated output power							
PROTECTION	OVEREDAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed							
PROTECTION	OVED VOLTA OF	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	41.4 ~ 48.6V	55.2 ~ 64.8V		
	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover							
	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°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	UL879, UL1310 Class 2(except for LPV-60-5), CAN/CSA C22.2 No. 223-M91(except for LPV-60-5, LPV-60-48), IP67 approved; design refer to TUV EN60950-1, EN61347-2-13							
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC							
EMC	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH							
EIVIC	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A							
	MTBF	732Khrs min. MIL-HDBK-217F (25°C)							
OTHERS	DIMENSION	162.5*42.5*32mm (I	_*W*H)						
	PACKING	0.4Kg; 32pcs/13.8Kg/0.56CUFT							
NOTE	 All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance: includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltage. Please check the static characteristics for more details. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. In the European market this product is only suitable for LED lighting applications that don't have to comply with the harmonic current requirements of EN61000-3-2 Class C. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minute. 								





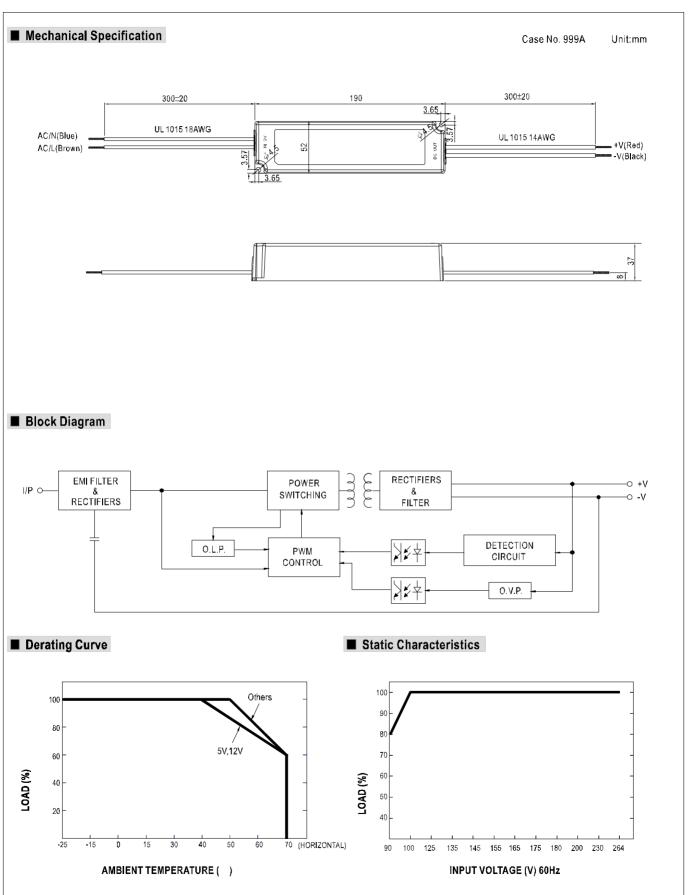




- Constant voltage design
- Universal AC input / Full range
- Fully encapsulated with IP67 level (Note.8)
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Over current / Over voltage
- Fully isolated plastic case
- Cooling by free air convection
- 100% full load burn-in test
- · Low cost, high reliability
- Suitable for LED lighting and moving sign applications(Note 7.)

MODEL		LPV-100-5	LPV-100-12	LPV-100-15	LPV-100-24	LPV-100-36	LPV-100-48			
	DC VOLTAGE	5V	12V	15V	24V	36V	48V			
	RATED CURRENT	12A	8.5A	6.7A	4.2A	2.8A	2.1A			
	CURRENT RANGE	0 ~ 12A	0 ~ 8.5A	0 ~ 6.7A	0~4.2A	0 ~ 2.8A	0 ~ 2.1A			
	RATED POWER	60W	102W	100.5W	100.8W	100.8W	100.8W			
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p	150mVp-p	150mVp-p			
OUTPUT	VOLTAGE TOLERANCE Note.3	±8.0%	±5.0%							
	LINE REGULATION	±1.0%	±1.0%							
	LOAD REGULATION	±6.0% ±2.0%								
	SETUP, RISE TIME Note.6	2000ms, 25ms / 230VAC 2000ms, 25ms / 115VAC								
	HOLD UP TIME (Typ.)	50ms/230VAC 14ms/115VAC at full load								
	VOLTAGE RANGE Note.4	90 ~ 264VAC 1	27 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz								
INDUT	EFFICIENCY (Typ.)	80%	85%	87%	88%	88%	89%			
INPUT	AC CURRENT	2.2A/115VAC 1.2/	V230VAC							
	INRUSH CURRENT(max.)	COLD START 30A/115VAC 75A/230VAC								
	LEAKAGE CURRENT	0.25mA / 240VAC								
	OVED CURRENT	110 ~ 150% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed								
BBOTFOTION	OVER CURRENT									
PROTECTION	01/50 1/01 71 05	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	41.4 ~ 48.6V	55.2 ~ 64.8V			
	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover								
	WORKING TEMP.	-25 ~ +70°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95	5% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C	C)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
	SAFETY STANDARDS	IP67 approved; Design refer to TUV EN60950-1, EN61347-2-13								
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC								
EMC	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH								
	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A(≒80% load), EN61000-3-3								
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN55024, light industry level, criteria A								
	MTBF	703Khrs min. MIL-HDBK-217F (25°C)								
OTHERS	DIMENSION	190*52*37mm (L*W*H)								
	PACKING	0.63Kg;20pcs/13.6k	(g/0.51CUFT							
NOTE	 All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance: includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltage. Please check the static characteristics for more details. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. In the European market this product is only suitable for LED lighting applications that don't have to comply with the harmonic current requirements of EN61000-3-2 Class C. Suitable for indoor use or outdoor use without direct sunlight exposure. 									





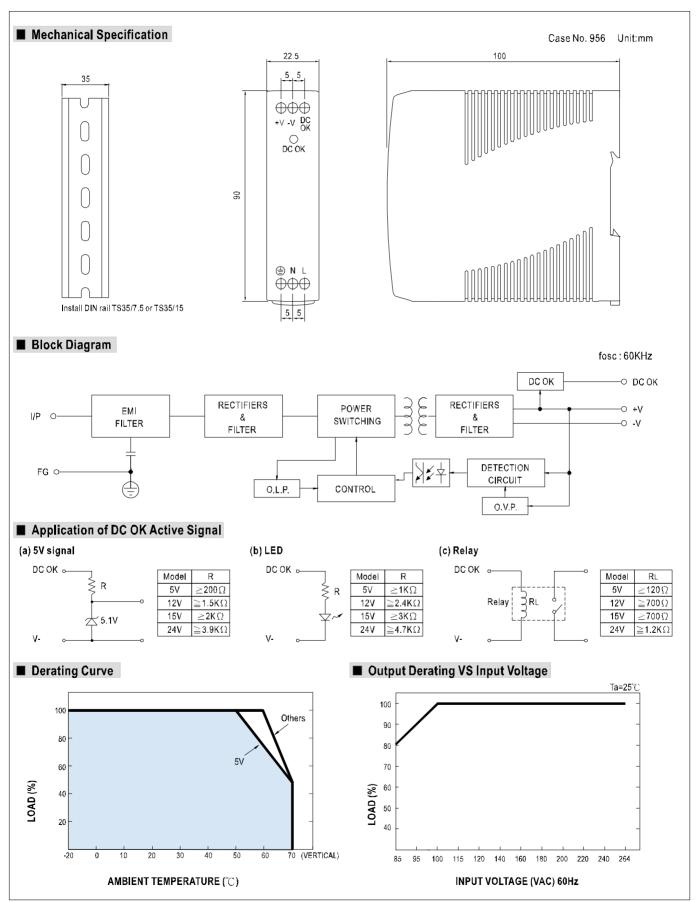




- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- · Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- NEC class 2 / LPS compliant
- Built in DC OK active signal
- LED indicator for power on
- No load power consumption<0.75W
- 100% full load burn-in test

MODEL		MDR-10-5	MDR-10-12	MDR-10-15	MDR-10-24				
	DC VOLTAGE	5V	12V	15V	24V				
	RATED CURRENT	2A	0.84A	0.67A	0.42A				
	CURRENT RANGE	0 ~ 2A	0~0.84A	0 ~ 0.67A	0 ~ 0.42A				
	RATED POWER	10W	10W	10 W	10W				
OUTDUT	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p				
OUTPUT	VOLTAGE TOLERANCE Note.3	±5.0%	±3.0%	±3.0%	±2.0%				
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%				
	LOAD REGULATION	±5.0%	±3.0%	±3.0%	±2.0%				
	SETUP, RISE TIME Note.5	500ms, 30ms/230VAC 1000ms, 30ms/115VAC at full load							
	HOLD UP TIME (Typ.)	120ms/230VAC 25ms/115VAC at full load							
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
INPUT	EFFICIENCY (Typ.)	77%	81%	81%	84%				
INFUI	AC CURRENT (Typ.)	0.33A/115VAC 0.21A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 35A/115VAC 70A/230VAC							
	LEAKAGE CURRENT	<1mA / 240VAC							
	OVERLOAD	Above 105% rated output power							
PROTECTION		Protection type : Hiccup mode, r	ecovers automatically after fault	condition is removed					
PROTECTION	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V				
		Protection type : Shut down o/p	voltage, re-power on to recover						
FUNCTION	DC OK ACTIVE SIGNAL (max.)	3.75 ~ 6V / 50mA	9 ~ 13.5V / 40mA	11.5 ~ 16.5V / 40mA	18 ~ 27V / 20mA				
	WORKING TEMP.	-20 ~ +70°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +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 STANDARDS	UL508, TUV EN60950-1 approved, NEC class 2 / LPS compliant							
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC 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 / 25°C / 70% RH							
(Note 4)	EMC EMISSION	Compliance to EN55011, EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3							
	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024,EN61000-6-1,EN61204-3, light industry level, criteria A							
	MTBF	584K hrs min. MIL-HDBK-217F (25°C)							
OTHERS	DIMENSION	22.5*90*100mm (W*H*D) 0.17Kg; 72pcs/13.2Kg/0.91CUFT							
	PACKING								
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consided EMC directives.	ally mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. ed at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. tolerance, line regulation and load regulation. dered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets easured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.							





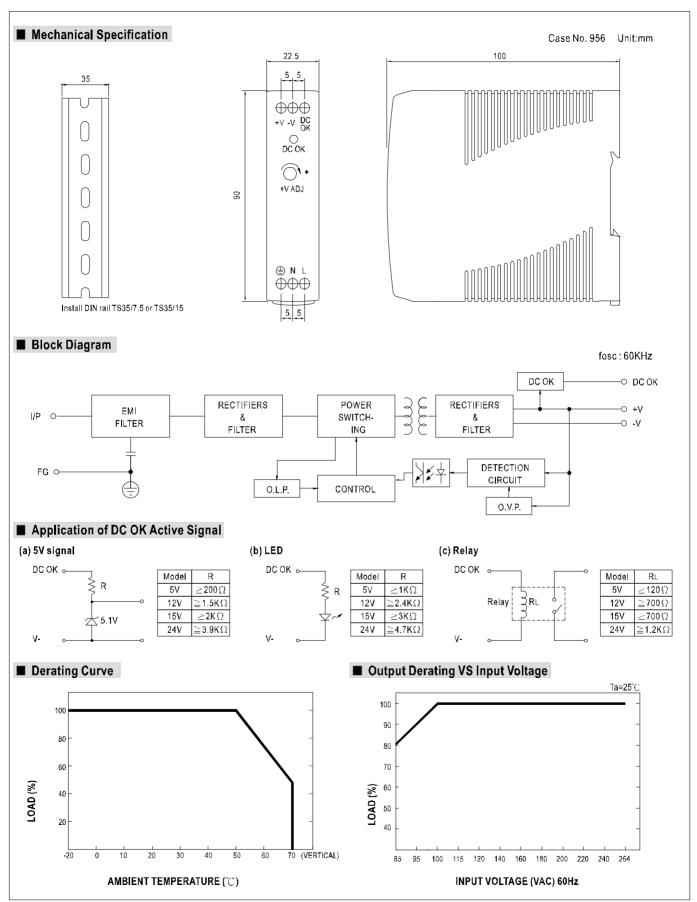




- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- NEC class 2 / LPS compliant
- Built in DC OK active signal
- LED indicator for power on
- No load power consumption<0.75W
- 100% full load burn-in test

MODEL		MDR-20-5	MDR-20-12	MDR-20-15	MDR-20-24				
	DC VOLTAGE	5V	12V	15V	24V				
	RATED CURRENT	3A	1.67A	1.34A	1A				
	CURRENT RANGE	0 ~ 3A	0 ~ 1.67A	0 ~ 1.34A	0 ~ 1A				
	RATED POWER	15W	20W	20W	24W				
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p				
OUTPUT	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 Note.5	500ms, 30ms/230VAC 1000ms, 30ms/115VAC at full load							
	HOLD UP TIME (Typ.)	50ms/230VAC 20ms/115VAC at full load							
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VD	С						
	FREQUENCY RANGE	47 ~ 63Hz							
IMBUT	EFFICIENCY (Typ.)	76%	80%	81%	84%				
INPUT	AC CURRENT (Typ.)	0.55A/115VAC 0.35A/230V	/AC						
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC 40A/230VAC							
	LEAKAGE CURRENT	<1mA/240VAC							
		105 ~ 160% rated output power							
DROTECTION	OVERLOAD	Protection type: Constant current limiting, recovers automatically after fault condition is removed							
PROTECTION		5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V				
	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover							
FUNCTION	DC OK ACTIVE SIGNAL (max.)	3.75 ~ 6V / 50mA	9 ~ 13.5V / 40mA	11.5 ~ 16.5V / 40mA	18 ~ 27V / 20mA				
	WORKING TEMP.	-20 ~ +70°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +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 STANDARDS		ed, NEC class 2 / LPS compliant						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KV							
EMC	ISOLATION RESISTANCE	I/P-O/P. I/P-FG, O/P-FG:100M C							
(Note 4)	EMC EMISSION	Compliance to EN55011, EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3							
	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-1, EN61204-3, light industry level, criteria A							
	MTBF	236.9K hrs min. MIL-HDBK-217F (25℃)							
OTHERS	DIMENSION	22.5*90*100mm (W*H*D)							
	PACKING 0.19Kg; 72pcs/14.7Kg/0.91CUFT								
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consided EMC directives.	neters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. includes set up tolerance, line regulation and load regulation. er supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets ectives. fixed up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.							





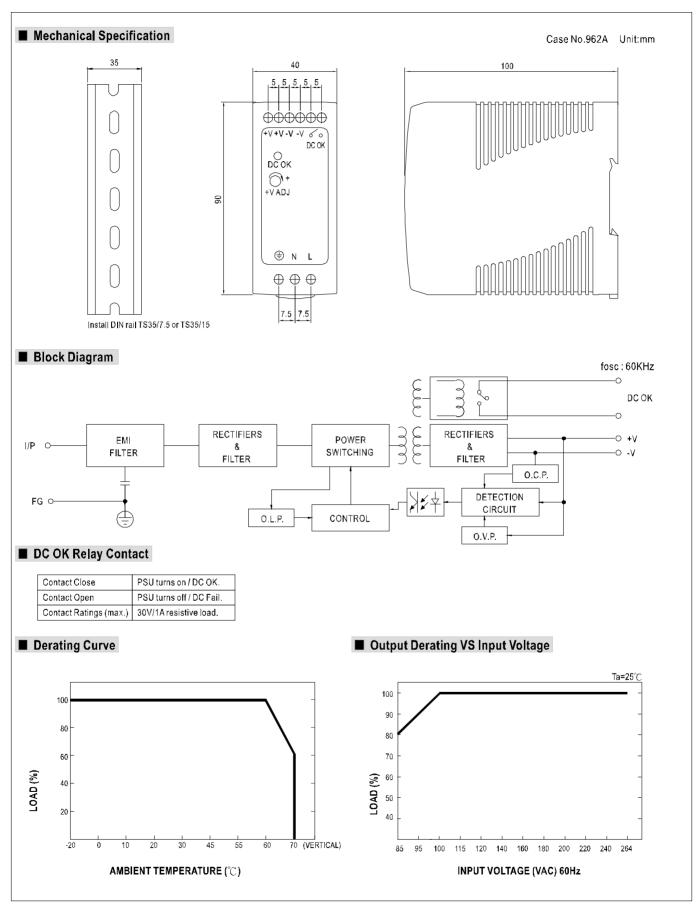




- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- NEC class 2 / LPS compliant (12V,24V,48V only)
- LED indicator for power on
- DC OK relay contact
- No load power consumption<0.75W
- 100% full load burn-in test

MODEL		MDR-40-5	MDR-40-12	MDR-40-24	MDR-40-48			
	DC VOLTAGE	5V	12V	24V	48V			
	RATED CURRENT	6A	3.33A	1.7A	0.83A			
	CURRENT RANGE	0~6A	0 ~ 3.33A	0 ~ 1.7A	0 ~ 0.83A			
	RATED POWER	30W	40W	40.8W	39.8W			
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	150mVp-p	200mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	5 ~ 6V	12 ~ 15V	24 ~ 30V	48 ~ 56V			
	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 Note.5	500ms, 30ms/230VAC 500	ms, 30ms/115VAC at full load		•			
	HOLD UP TIME (Typ.)	50ms/230VAC 20ms/115V/	AC at full load					
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VD	С					
	FREQUENCY RANGE	47 ~ 63Hz						
IMBUT	EFFICIENCY (Typ.)	78%	86%	88%	88%			
INPUT	AC CURRENT (Typ.)	1.1A/115VAC 0.7A/230VA						
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC	60A/230VAC					
	LEAKAGE CURRENT	<1mA / 240VAC						
		105 ~ 150% rated output power						
DECTECTION	OVERLOAD	Protection type : Constant curre	nt limiting, recovers automatically	y after fault condition is removed				
PROTECTION	01/50 1/01 71 05	6.25 ~ 7.25V	15.6 ~ 18V	31.2 ~ 36V	57.6 ~ 64.8V			
	OVER VOLTAGE	Protection type : Shut down o/p	voltage, re-power on to recover					
FUNCTION	DC OK SIGNAL	Relay contact rating(max.): 30V	/1A resistive					
	WORKING TEMP.	-20 ~ +70°C (Refer to "Derating	Curve")					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)						
	VIBRATION	'		ach along X, Y, Z axes; Mounting:	Compliance to IEC60068-2-6			
	SAFETY STANDARDS	· · · · · · · · · · · · · · · · · · ·	50-1 approved, NEC class 2 / LP	'S compliant (12V,24V,48V only)				
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KV						
EMC	ISOLATION RESISTANCE		Ohms / 500VDC / 25°C / 70% RH					
(Note 4)	EMC EMISSION	,	22 (CISPR22), EN61204-3 Class					
	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4	, 5, 6, 8, 11, EN55024, EN61000-6	6-2, EN61204-3, heavy industry leve	el, criteria A			
	MTBF	301.7K hrs min. MIL-HDBK-2	17F (25℃)					
OTHERS	DIMENSION	40*90*100mm (W*H*D)						
	PACKING	0.3Kg; 42pcs/13.6Kg/0.82CUFT						
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consided EMC directives.	ly mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature, and at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. tolerance, line regulation and load regulation. Bered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets assured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.						





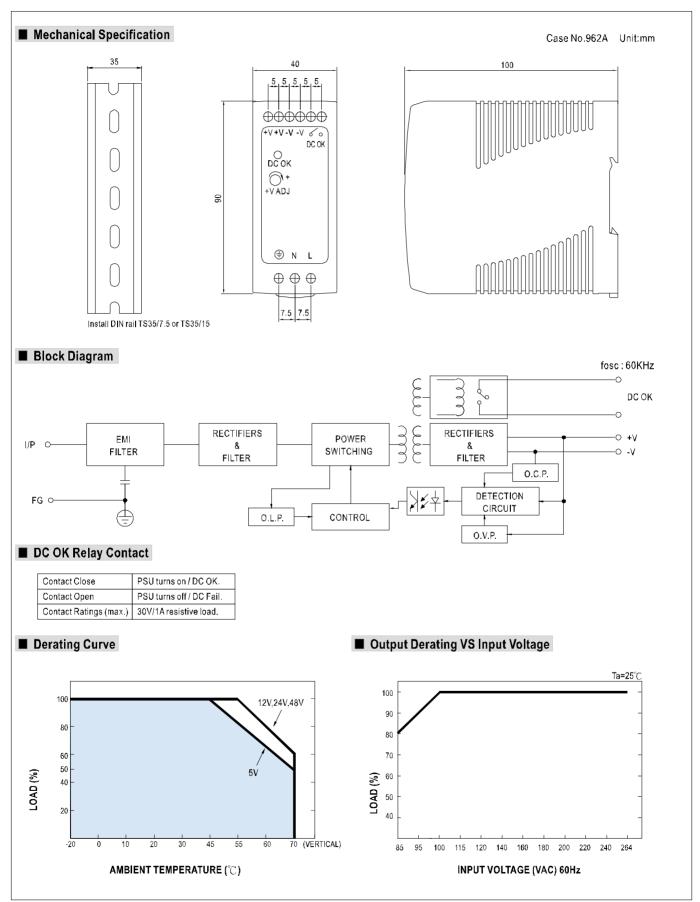




- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- NEC class 2 / LPS compliant (24V,48V only)
- LED indicator for power on
- DC OK relay contact
- No load power consumption<0.75W
- 100% full load burn-in test

MODEL		MDR-60-5	MDR-60-12	MDR-60-24	MDR-60-48				
	DC VOLTAGE	5V	12V	24V	48V				
	RATED CURRENT	10A	5A	2.5A	1.25A				
	CURRENT RANGE	0 ~ 10A	0 ~ 5A	0 ~ 2.5A	0 ~ 1.25A				
	RATED POWER	50W	60W	60W	60W				
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	150mVp-p	200mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	5~6V	12 ~ 15V	24 ~ 30V	48 ~ 56V				
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%				
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%				
	LOAD REGULATION	±1.5%	±1.0%	±1.0%	±1.0%				
	SETUP, RISE TIME Note.5	500ms, 30ms/230VAC 500	ms, 30ms/115VAC at full load	1					
	HOLD UP TIME (Typ.)	50ms/230VAC 20ms/115V/	AC at full load						
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VD	С						
	FREQUENCY RANGE	47 ~ 63Hz							
IMBUT	EFFICIENCY (Typ.)	78%	86%	88%	87%				
INPUT	AC CURRENT (Typ.)	1.8A/115VAC 1A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC 60A/230VAC							
	LEAKAGE CURRENT	<1mA / 240VAC							
		105 ~ 150% rated output power	05 ~ 150% rated output power						
BBATFATION	OVERLOAD	Protection type : Constant curre	nt limiting, recovers automatically	y after fault condition is removed					
PROTECTION		6.25 ~ 7.25V	15.6 ~ 18V	31.2 ~ 36V	57.6 ~ 64.8V				
	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover							
FUNCTION	DC OK SIGNAL	Relay contact rating(max.): 30V	/1A resistive						
	WORKING TEMP.	-20 ~ +70°C (Refer to "Derating	Curve")						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)							
	VIBRATION	Component: 10 ~ 500Hz, 2G 10	min./1cycle, period for 60min. ea	ach along X, Y, Z axes; Mounting:	Compliance to IEC60068-2-6				
	SAFETY STANDARDS	UL508, UL60950-1, TUV EN609	50-1 approved, NEC class 2 / LP	'S compliant (24V,48V only)					
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KV	AC O/P-FG:0.5KVAC						
EMC	ISOLATION RESISTANCE	· · · · · ·	Ohms / 500VDC / 25°C / 70% RH						
(Note 4)	EMC EMISSION	Compliance to EN55011, EN550	022 (CISPR22), EN61204-3 Class	s B, EN61000-3-2,-3					
	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4	, 5, 6, 8, 11, EN55024, EN61000-6	6-2, EN61204-3, heavy industry lev	el, criteria A				
	MTBF	299.2K hrs min. MIL-HDBK-2	17F (25°€)						
OTHERS	DIMENSION	40*90*100mm (W*H*D)							
	PACKING	0.33Kg; 42pcs/14.8Kg/0.82CUFT							
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consid EMC directives.	tolerance, line regulation and lo- lered a component which will be	ing a 12" twisted pair-wire termi ad regulation. Installed into a final equipment.	5°C of ambient temperature. inated with a 0.1uf & 47uf paralle The final equipment must be re y lead to increase of the set up	-confirmed that it still meets				





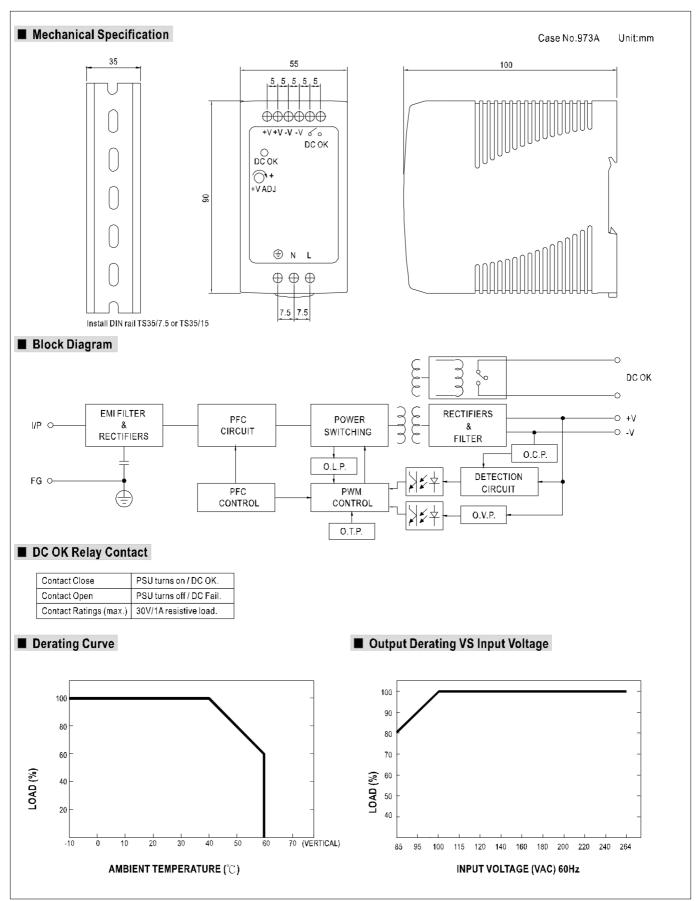




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- ZCS/ZVS technology to reduce power dissipation
- · Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- DC OK relay contact
- No load power consumption<1W
- LED indicator for power on
- 100% full load burn-in test

MODEL		MDR-100-12	MDR-100-24	MDR-100-48						
	DC VOLTAGE	12V	24V	48V						
	RATED CURRENT	7.5A	4A	2A						
	CURRENT RANGE	0 ~ 7.5A	0~4A	0 ~ 2A						
	RATED POWER	90W	96W	96W						
	RIPPLE & NOISE (max.) Note.2	120mVp-p	150mVp-p	200mVp-p						
OUTPUT	VOLTAGE ADJ. RANGE	12 ~ 15V	24 ~ 30V	48 ~ 56V						
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%						
	LINE REGULATION	±1.0%	±1.0%	±1.0%						
	LOAD REGULATION	±1.0%	±1.0%	±1.0%						
	SETUP, RISE TIME Note.5	000ms, 50ms/230VAC 3000ms, 50ms/115VAC at full load								
	HOLD UP TIME (Typ.)	50ms/230VAC 20ms/115VAC at full lo								
	VOLTAGE RANGE Note.6	85 ~ 264VAC 120 ~ 370VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF ≥ 0.95/230VAC PF ≥ 0.98/115VAC	C at full load							
INPUT	EFFICIENCY (Typ.)	85%	86%	88%						
	AC CURRENT (Typ.)	1.3A/115VAC 0.8A/230VAC								
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC 60A/230V	VAC							
	LEAKAGE CURRENT	<1mA / 240VAC								
		105 ~ 150% rated output power								
	OVERLOAD	Protection type: Constant current limiting,	recovers automatically after fault condition i	s removed						
BRATTATION		15.6 ~ 18V	31.2 ~ 36V	57.6 ~ 64.8V						
PROTECTION	OVER VOLTAGE	Protection type: Shut down o/p voltage, re	e-power on to recover							
	OVED TEMPEDATURE	90°C ±10°C (RTH2) detect on heatsink of power transistor								
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, re-power on to recover								
FUNCTION	DC OK SIGNAL	Relay contact rating(max.): 30V/1A resistiv	ve							
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)								
	VIBRATION	Component: 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6								
	SAFETY STANDARDS	UL508, TUV EN60950-1 approved								
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC 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 / 50	00VDC / 25℃ / 70% RH							
(Note 4)	EMC EMISSION	Compliance to EN55011, EN55022 (CISPF	R22), EN61204-3 Class B, EN61000-3-2,-3							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A								
	MTBF	346K hrs min. MIL-HDBK-217F (25℃)								
OTHERS	DIMENSION	55*90*100mm (W*H*D)								
	PACKING	0.42Kg; 30pcs/13.6Kg/0.82CUFT								
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is conside EMC directives. Length of set up time is measure.	ed at 20MHz of bandwidth by using a 12" tolerance, line regulation and load regulat lered a component which will be installed it	nto a final equipment. The final equipment the power supply may lead to increase of	47uf parallel capacitor. must be re-confirmed that it still meets						





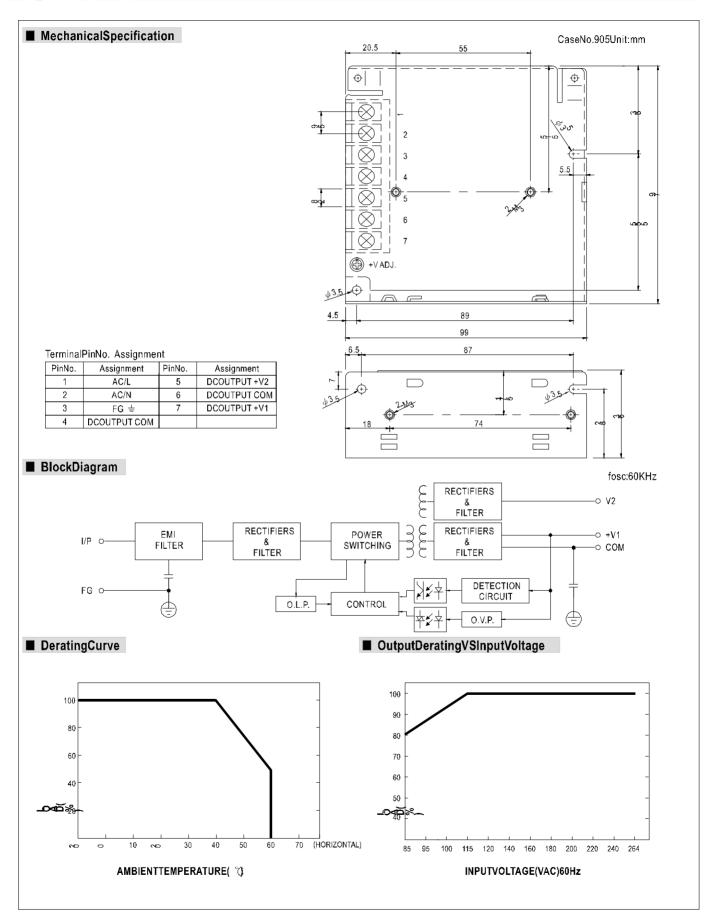




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test

MODEL		NED-35A		NED-35B					
	OUTPUTNUMBER	CH1	CH2	CH1	CH2				
	DCVOLTAGE	5V	12V	5V	24V				
	RATEDCURRENT	4A	1A	2.2A	1A				
	CURRENTRANGE Note.6	0.5~5A	0.1~1.5A	0.5~4A	0.2~1.3A				
	RATEDPOWER	32W		35W					
CUIDUIT	RIPPLE&NOISE(max.) Note.2	80mVp-p	120mVp-p	80mVp-p	200mVp-p				
OUTPUT	VOLTAGE ADJ.RANGE	CH1:4.75~5.5V		CH1:4.75~5.5V					
	VOLTAGETOLERANCE Note.3	±2.0%	±6.0%	±2.0%	±6.0%				
	LINEREGULATION Note.4	±0.5%	±1.0%	±0.5%	±1.0%				
	LOADREGULATION Note.5	±1.5%	±3.0%	±1.5%	±3.0%				
	SETUP,RISETIME	500ms,30ms/230VAC1200ms	,30ms/115VAC atfullload						
	HOLDUP TIME (Typ.)	Oms/230VAC10ms/115VAC atfullload							
	VOLTAGERANGE	85~264VAC120~370VDC							
	FREQUENCY RANGE	47~63Hz							
INPUT	EFFICIENCY (Typ.)	78%		81%					
INFUI	ACCURRENT (Typ.)	0.75A/115VAC0.5 A/230VAC							
	INRUSHCURRENT (Typ.)	COLDSTART 45A							
	LEAKAGECURRENT	<2mA/240VAC							
		110~150%ratedoutputpower							
	OVERLOAD	Protectiontype: Hiccupmode,r	ecoversautomaticallyafterfaultco	nditionisremoved					
PROTECTIO		CH1:5.75~6.75V	ated load a n	d 2 5 of a m bient temperature.					
	OVERVOLTAGE	Protectiontype:Shutdowno/pvoltage,re-powerontorecover							
	WORKINGTEMP.	-20~+60 °C(Referto"Derating(Curve")						
	WORKINGHUMIDITY	20~90%RH non-condensing							
ENVIRONME	STORAGETEMP., HUMIDITY	-40~+85 °Ç10~95%RH							
	TEMP.COEFFICIENT	±0.03%/°C (0~45 °C)							
	VIBRATION	10~500Hz,2G10min./1cycle,periodfor 60min.eachalongX, Y,Zaxes							
	SAFETY STANDARDS	UL60950-1,CB(IEC60950-1)a	pproved						
SAFETY &	WITHSTANDVOLTAGE	I/P-O/P:3KVACI/P-FG:1.5KV/	ACO/P-FG:0.5KVAC						
EMC	ISOLATIONRESISTANCE	I/P-O/P,I/P-FG,O/P-FG:100M							
(Note7)	EMCEMISSION	CompliancetoEN55022(CISP	R22)ClassB, EN61000-3-2,-3						
	EMCIMMUNITY	CompliancetoEN61000-4-2,3	4,5,6,8,11,EN55024,EN61000-6-1,	ligh tindustrylevel,criteria A					
	MTBF	402.7Khrsmin.MIL-HDBK-217	'F(25) ℃						
OTHERS	DIMENSION	99*97*36mm(L*W*H)							
	PACKING	0.36Kg;45pcs/17.2Kg/0.93CUFT							
NOTE	Ripple & noise are measure Tolerance : includes set up Line regulation is measurec Load regulation is measure Each output can work within The power supply is consid	0.36Kg;45pcs/17.2Kg/0.93CUFT / m entioned a remeasured at 230VAC input, r d at 20MHz of bandwidth by using a 12" twisted pair- olerance, line regulation and load regulation. from low line to high line at rated load. from 20% to 100% rated load, and other output at 6 0% rated load. current range. But total output power can't exceed rated output power. red a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets e on how to perform these EMC tests, please refer to EMI testing of component power supplies.							





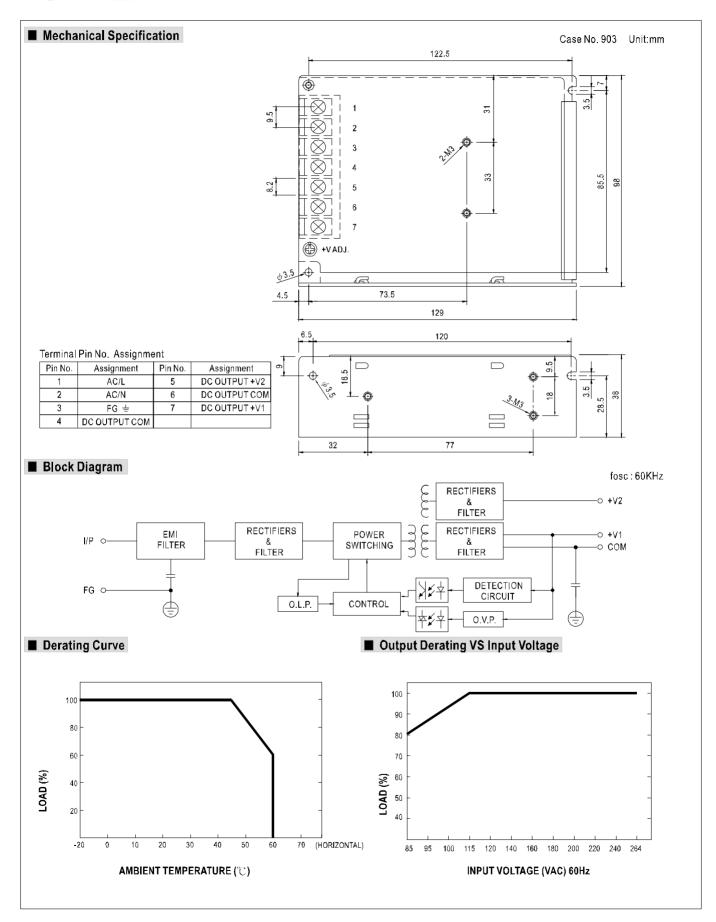




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test

MODEL		NED-50A		NED-50B					
	OUTPUT NUMBER	CH1	CH2	CH1	CH2				
	DC VOLTAGE	5V	12V	5V	24V				
	RATED CURRENT	6A	2A	4A	1.4A				
	CURRENT RANGE Note.6	1 ~ 6A	0.3 ~ 3A	1~6A	0.2 ~ 2A				
	RATED POWER	54W		53.6W					
OUTDUT	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	80mVp-p	200mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH1: 4.75 ~ 5.5V					
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±2.0%	±6.0%				
	LINE REGULATION Note.4	±0.5%	±1.0%	±0.5%	±1.0%				
	LOAD REGULATION Note.5	±1.5%	±3.0%	±1.5%	±3.0%				
	SETUP, RISE TIME	500ms, 30ms/230VAC 120	0ms, 30ms/115VAC at full load						
	HOLD UP TIME (Typ.)	50ms/230VAC 10ms/115VA	AC at full load						
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VD0	2						
	FREQUENCY RANGE	47 ~ 63Hz							
INPUT	EFFICIENCY(Typ.)	79%		82%					
	AC CURRENT (Typ.)	1.1A/115VAC 0.65A/230VA	AC .						
	INRUSH CURRENT (Typ.)	COLD START 45A							
	LEAKAGE CURRENT	<2mA/240VAC							
	OVERLOAD	110 ~ 150% rated output power	110 ~ 150% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed						
PROTECTION		••	ecovers automatically after fault	condition is removed					
	OVER VOLTAGE	CH1: 5.75 ~ 6.75V							
		Protection type: Shut down o/p voltage, re-power on to recover							
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)		_					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
	SAFETY STANDARDS	UL60950-1, CB(IEC60950-1) ap	•						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KV							
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M (
(Note 7)	EMC EMISSION	Compliance to EN55022 (CISP	,						
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-1, light industry level, criteria A							
	MTBF	413.3K hrs min. MIL-HDBK-2	17F (25°C)						
OTHERS	DIMENSION	129*98*38mm (L*W*H)							
	PACKING	0.44Kg; 45pcs/21Kg/1.24CUFT		*C					
NOTE	Ripple & noise are measure Tolerance : includes set up Line regulation is measured Load regulation is measured Each output can work within The power supply is consident.	lly mentioned are measured at 2 ad at 20MHz of bandwidth by us tolerance, line regulation and lo. I from low line to high line at rate d from 20% to 100% rated load, n current range. But total output ered a component which will be ce on how to perform these EM	ing a 12" twisted pair-wire termi ad regulation. ad load. and other output at 60% rated power can't exceed rated outpu installed into a final equipment.	nated with a 0.1uf & 47uf paralli load. t power. The final equipment must be re	· -confirmed that it still meets				





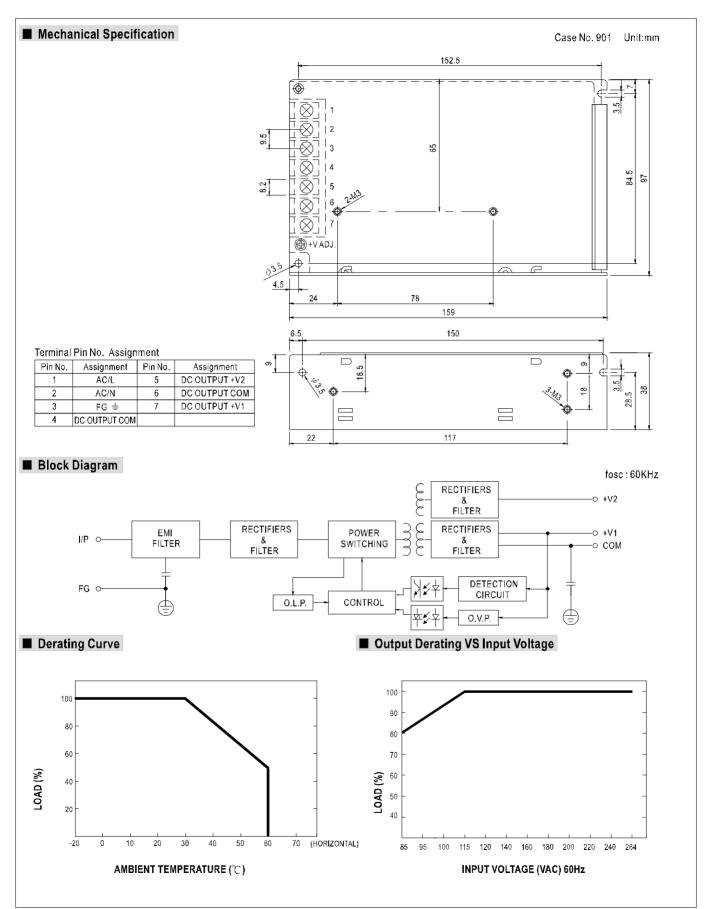




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test

MODEL		NED-75A		NED-75B	NED-75B			
	OUTPUT NUMBER	CH1	CH2	CH1	CH2			
	DC VOLTAGE	5V	12V	5V	24V			
	RATED CURRENT	7A	3A	5A	2A			
	CURRENT RANGE Note.6	1 ~ 8A	0.3 ~ 4A	1 ~ 6A	0.2 ~ 3A			
	RATED POWER	71W		73W	'			
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	80mVp-p	200mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH1: 4.75 ~ 5.5V				
	VOLTAGE TOLERANCE Note.3	±2.0% ±6.0%		±2.0%	±6.0%			
	LINE REGULATION Note.4	±0.5%	±1.0%	±0.5%	±1.0%			
	LOAD REGULATION Note.5	±1.5%	±3.0%	±1.5%	±3.0%			
	SETUP, RISE TIME	500ms, 30ms/230VAC 1	200ms, 30ms/115VAC at fu	load				
	HOLD UP TIME (Typ.)	50ms/230VAC 10ms/11	5VAC at full load					
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370\	/DC					
	FREQUENCY RANGE	47 ~ 63Hz						
INPUT	EFFICIENCY (Typ.)	78% 81%						
	AC CURRENT (Typ.)	1.5A/115VAC 0.9A/230VAC						
	INRUSH CURRENT (Typ.)	COLD START 45A						
	LEAKAGE CURRENT	<2mA / 240VAC						
	OVER OAR	110 ~ 150% rated output pow	er					
	OVERLOAD	Protection type : Hiccup mod	e, recovers automatically af	ter fault condition is removed				
PROTECTION	OVER VOLTAGE	CH1: 5.75 ~ 6.75V	,					
	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover						
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40~+85°C, 10~95% RH						
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycl	e, period for 60min. each al	ong X, Y, Z axes				
	SAFETY STANDARDS	UL60950-1, CB(IEC60950-1) approved						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5	KVAC O/P-FG:0.5KVAC					
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100I	M Ohms / 500VDC / 25°C / 7	0% RH				
(Note 7)	EMC EMISSION	Compliance to EN55022 (CI	SPR22) Class B, EN61000-	3-2,-3				
	EMC IMMUNITY	Compliance to EN61000-4-2,	3,4,5,6,8,11, EN55024, EN	61000-6-1, light industry level,	, c ri teria A			
	MTBF	381.3K hrs min. MIL-HDBI	K-217F (25°C)					
OTHERS	DIMENSION	159*97*38mm (L*W*H)						
	PACKING	0.52Kg; 30pcs/16.6Kg/0.97C	UFT					
NOTE	Ripple & noise are measure Tolerance : includes set up Line regulation is measured Load regulation is measure Each output can work within	ly mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. ed at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. tolerance, line regulation and load regulation. I from low line to high line at rated load. d from 20% to 100% rated load, and other output at 60% rated load. n current range. But total output power can't exceed rated output power. ered a component which will be installed into a final equipment.						





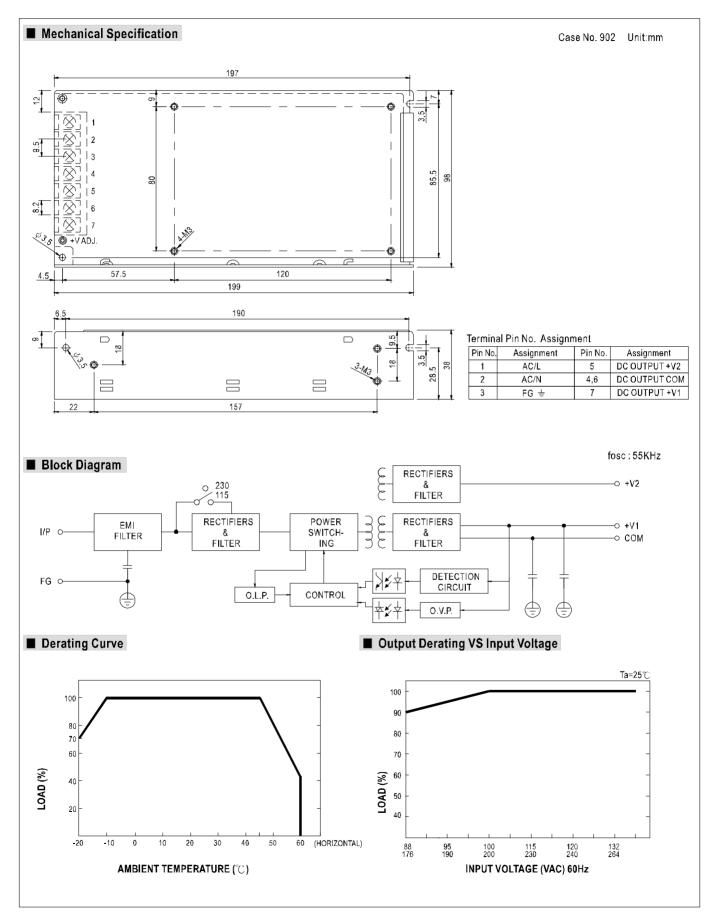




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test

MODEL		NED-100A		NED-100B		NED-100C NED-100D				
	OUTPUT NUMBER	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	
	DC VOLTAGE	5V	12V	5V	24V	12V	5V	24V	5V	
	RATED CURRENT	10 A	4.2A	8A	2.5A	7A	3A	3.5A	3A	
	CURRENT RANGE Note.6	2 ~ 10A	0.7 ~ 7.0A	1 ~ 10A	0.3 ~ 3.5A	0 ~ 8A	0 ~ 3A	0~4A	0 ~ 3A	
	RATED POWER	100. 4W		100W	100W		'	99W	•	
OUTDUT	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	80mVp-p	200mVp-p	120mVp-p	80mVp-p	120mVp-p	80mVp-p	
OUTPUT	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH1: 4.75 ~ 5.	5V	CH1: 11.4 ~ 13.	2V	CH1: 22.8 ~ 26.4	4V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±10%	±2.0%	±8.0%	±2.0%	±3.0%	±2.0%	±3.0%	
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION Note.5	±1.0%	±5.0%	±1.0%	±4.0%	±1.0%	±2.0%	±1.0%	±2.0%	
	SETUP, RISE TIME	2000ms, 30ms	/230VAC 1	200ms, 30ms/1	15VAC at full lo	ad				
	HOLD TIME (Typ.)	25ms/230VAC	20ms/115	VAC at full load						
	VOLTAGE RANGE	88 ~ 132VAC /	176 ~ 264VAC s	selected by swite	ch 248	~ 373VDC				
	FREQUENCY RANGE	47 ~ 63Hz								
INPUT	EFFICIENCY (Typ.)	80%		82%		80%		82%		
1141 01	AC CURRENT (Typ.)	2A/115VAC	1.2A/230VA	3						
	INRUSH CURRENT (Typ.)	COLD START 45A								
	LEAKAGE CURRENT	<2mA/240VAC								
	OVER LOAD	110 ~ 150% rated output power								
PROTECTION	OVER EURO		•		•	ult condition is re		I		
	OVER VOLTAGE	CH1: 5.75 ~ 6.75V CH2: 5.75 ~ 6.75V CH1: 13.8 ~ 15.8V CH2: 27.6 ~ 32.4V Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	WORKING TEMP.	-20 ~ +60°C (Refer to output load derating curve) 20 ~ 90% RH non-condensing								
EW//BANKENE	WORKING HUMIDITY									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 1								
	TEMP. COEFFICIENT	,	~ 50℃)on Ch1 o	•	sia saah alaas	V V 7 avaa				
	VIBRATION SAFETY STANDARDS		G 10min /1cycle B(IEC60950-1)	- 1	nin. each along	x, r, z axes				
	WITHSTAND VOLTAGE		C //P-FG:1.5K		·∩ 5K\/∆∩					
SAFETY &	ISOLATION RESISTANCE		6, O/P-FG:100M							
EMC	EMICONDUCTION & RADIATION	·	EN55022 (CIS							
(Note 7)	HARMONIC CURRENT	· · · · · · · · · · · · · · · · · · ·	EN61000-3-2,-							
	EMS IMMUNITY	<u> </u>			ENV50204, EN5	50 24 ,EN61000-6	6-1,light industry I	level, criteria A		
	MTBF	320.7K hrs mi		-217F (25°C)	•	,	. 5	,		
OTHERS	DIMENSION	199*98*38mm								
	PACKING		/17.5Kg/0.97Cl	JFT						
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance: includes set up Line regulation is measure Load regulation is measure Each output can work withir The power supply is consid	ed at 20MHz of tolerance, line I from low line i d from 20% to n current range	bandwidth by undergulation and to high line at rational to high line at rational to but total output.	using a 12" twis load regulation. ated load. d, and other ou ut power can't e	ted pair-wire te tput at 60% rat exceed rated ou	rminated with a ed load.	nt temperature. 0.1uf & 47uf par	allel capacitor.		





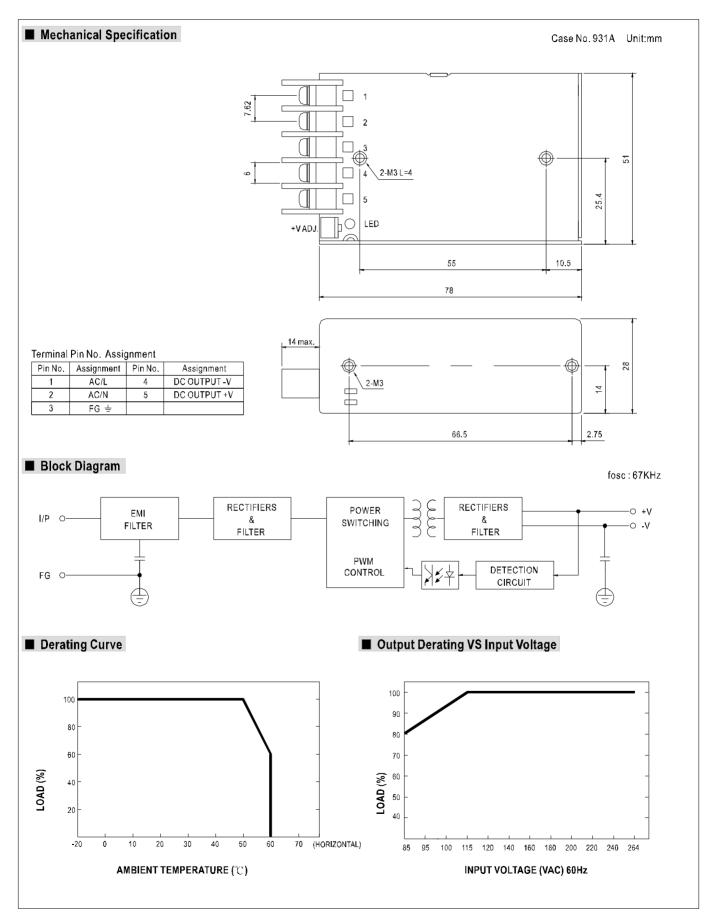




- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- 100% full load burn-in test

MODEL		NES-15-5	NES-15-12	NES-15-15	NES-15-24	NES-15-48					
	DC VOLTAGE	5V	12V	15V	24V	48V					
	RATED CURRENT	3A	1.3A	1A	0.7A	0.35A					
	CURRENT RANGE	0 ~ 3A	0 ~ 1.3A	0 ~ 1A	0 ~ 0.7A	0 ~ 0.35A					
	RATED POWER	15W	15.6W	15W	16.8W	16.8W					
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p					
OUTPUT	VOLTAGE ADJ. RANGE	4. 7 5 ~ 5.5 V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V	43.2 ~ 52.8V					
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%					
	LINE REGULATION Note.4	±1.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	LOAD REGULATION Note.5	±1.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	SETUP, RISE TIME	1000ms, 30ms/230VAC	1000ms, 30ms/1 15 V	AC at full load	•	'					
	HOLD UP TIME (Typ.)	100ms/230VAC 20ms/115VAC at full load									
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 3	370VDC								
	FREQUENCY RANGE	17 ~ 63Hz									
INPUT	EFFICIENCY (Typ.)	79%	81%	81%	85%	82%					
	AC CURRENT (Typ.)	0.35A/115VAC 0.25									
	INRUSH CURRENT (Typ.)	COLD START 45A									
	LEAKAGE CURRENT	<2mA / 240VAC									
		Above 105% rated output power									
	OVERLOAD	Protection type : Hiccup r	node, recovers automatic	ally after fault condition is	removed						
	01/50 1/01 71 0 7	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V					
	OVER VOLTAGE	Protection type : Shut off									
		U1 Tj 140°C typically (U1) detect on main control	IC							
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down									
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% R	Н								
	TEMP COEFFICIENT	±0.03%/°C (0 ~ 45°C)									
	VIBRATION	10 ~ 500Hz, 2G 10min./1	cycle, period for 60min. e	ach along X, Y, Z axes							
	SAFETY STANDARDS	UL60950-1, CB(IEC6095	0-1),CCC GB4943 appro	ved							
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG	:1.5KVAC O/P-FG:0.5I	(VAC							
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:	100M Ohms / 500VDC / 2	5°C / 70% RH							
(Note 6)	EMC EMISSION	Compliance to EN55022	(CISPR22) Class B, EN6	1000-3-2,-3							
	EMC IMMUNITY	Compliance to EN61000-	4-2,3,4,5,6,8,11, EN5502	4, EN61000-6-1, light ind	ustry level, criteria A						
	MTBF	563.5Khrs min. MIL-H	DBK-217F (25°C)								
OTHERS	DIMENSION	78*51*28mm (L*W*H)									
	PACKING	0.18Kg; 60pcs/11.8Kg/0.4	46CUFT								
NOTE	Ripple & noise are measure Tolerance : includes set up Line regulation is measure Load regulation is measure	In parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ipple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Includes set up tolerance, line regulation and load regulation. Increase regulation is measured from low line to high line at rated load. Increase regulation is measured from 0% to 100% rated load. Increase regulation is measured from 0% to 100% rated load. Increase regulation is measured from 0% to 100% rated load. Increase regulation is measured from 0% to 100% rated load. Increase regulation is measured from 0% to 100% rated load. Increase regulation is measured from 0% to 100% rated load.									





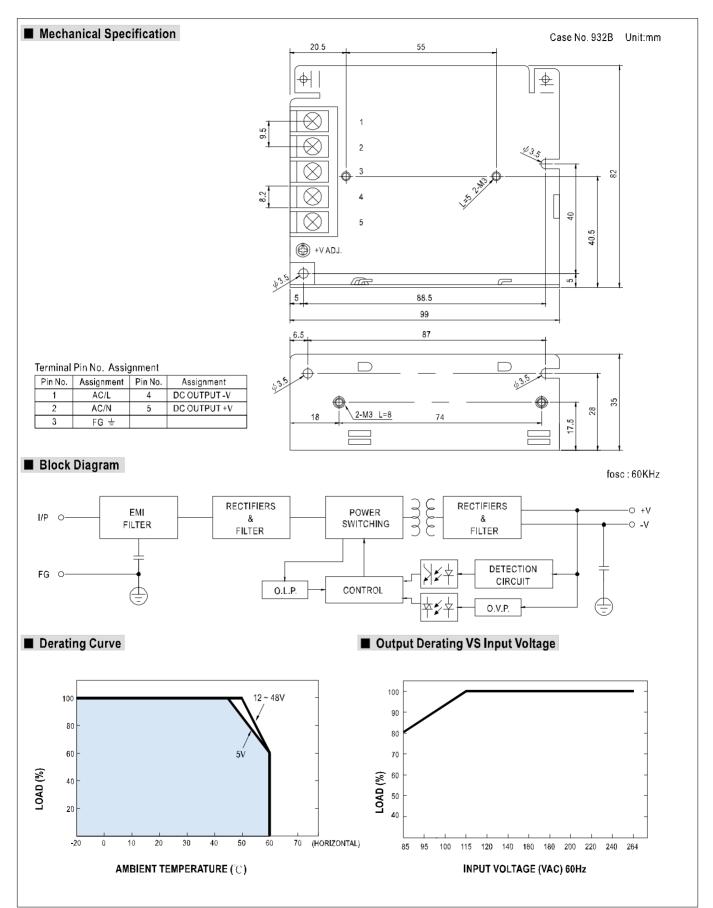




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test

MODEL		NES-25-5	NES-25-12	NES-25-15	NES-25-24	NES-25-48				
	DC VOLTAGE	5V	12V	15V	24V	48V				
	RATED CURRENT	5A	2.1A	1.7A	1.1A	0.57A				
	CURRENT RANGE	0 ~ 5A	0 ~ 2.1A	0 ~ 1.7A	0 ~ 1.1A	0 ~ 0.57A				
ОИТРИТ	RATED POWER	25W	25.2W	25.5W	26.4W	27.36W				
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	150mVp-p	200mVp-p	240mVp-p				
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V	43.2 ~ 52.8V				
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%				
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%				
	LOAD REGULATION Note.5	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%				
	SETUP, RISE TIME	500ms, 30ms/230VAC	00ms, 30ms/230VAC 1200ms, 30ms/115VAC at full load							
	HOLD UP TIME (Typ.)	50ms/230VAC 10ms/115VAC at full load								
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 3	370VDC							
	FREQUENCY RANGE	47 ~ 63Hz								
INPUT	EFFICIENCY (Typ.)	78%	83%	84%	86%	86%				
111 01	AC CURRENT (Typ.)	0.55A/115VAC 0.3	5A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 45A								
	LEAKAGE CURRENT	<2mA / 240VAC								
PROTECTION	OVERLOAD	110 ~ 150% rated output								
		**		Illy after fault condition is re		1 0 04 04				
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V				
		Protection type: Shut down o/p voltage, re-power on to recover								
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% R	H							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
	SAFETY STANDARDS		0-1),CCC GB4943 approv							
SAFETY &	WITHSTAND VOLTAGE		:1.5KVAC							
EMC	ISOLATION RESISTANCE		100M Ohms / 500VDC / 25	_						
(Note 6)	EMC EMISSION	-	(CISPR22) Class B, EN61							
	EMC IMMUNITY	•		024, EN61000-6-1, light inc	lustry level, criteria A					
	MTBF	411.47Khrs min. MIL-	HDBK-217F (25℃)							
OTHERS	DIMENSION	99*82*35mm (L*W*H)	OLIET							
	PACKING	0.3Kg; 45pcs/14.5Kg/0.6								
NOTE	Ripple & noise are measure Tolerance : includes set up Line regulation is measure Load regulation is measure	parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Delse & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Berance : includes set up tolerance, line regulation and load regulation. Beregulation is measured from low line to high line at rated load. Beregulation is measured from 0% to 100% rated load. Beregulation is measured from 0% to 100% rated load. Beregulation is measured from 0% to 100% rated load. Beregulation is measured from 0% to 100% rated load. Beregulation is measured from 0% to 100% rated load. Beregulation is measured from 0% to 100% rated load. Beregulation is measured from 0% to 100% rated load. Beregulation is measured from 0% to 100% rated load.								





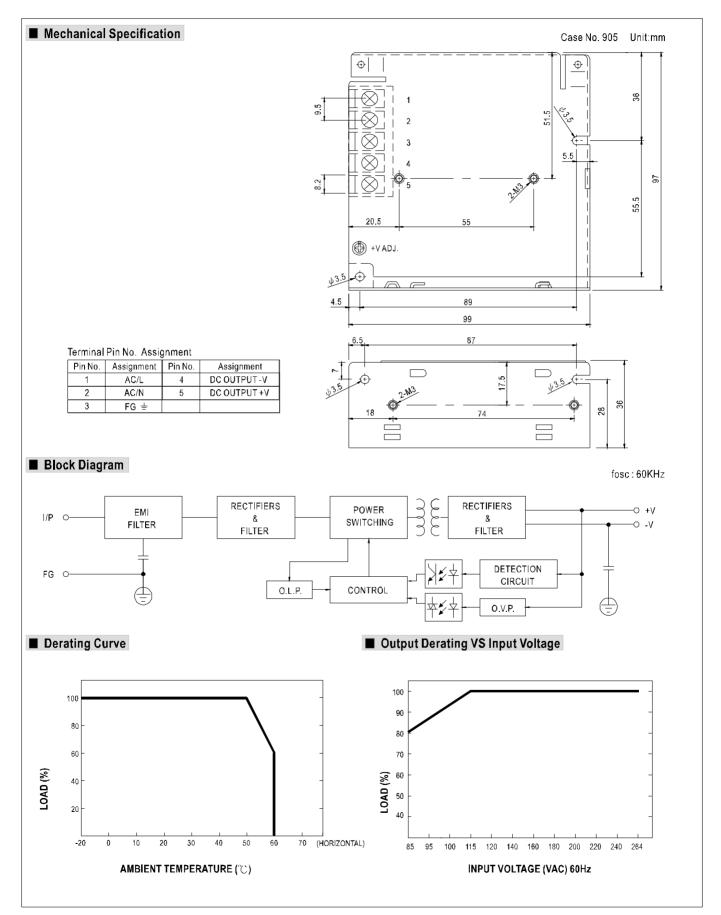




- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test

MODEL		NES-35-5	NES-35-12	NES-35-15	NES-35-24	NES-35-48				
	DC VOLTAGE	5V	12V	15V	24V	48V				
	RATED CURRENT	7A	3A	2.4A	1.5A	0.8A				
	CURRENT RANGE	0 ~ 7A	0 ~ 3A	0~2.4A	0 ~ 1.5A	0~0.8A				
	RATED POWER	35W	36W	36W	36W	38.4W				
OUTPUT	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	150mVp-p	200mVp-p	240mVp-p				
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V	43.2 ~ 52.8V				
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%				
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%				
	LOAD REGULATION Note.5	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%				
	SETUP, RISE TIME	500ms, 30ms/230VAC 1200ms, 30ms/115VAC at full load								
	HOLD UP TIME (Typ.)	50ms/230VAC 10ms	s/115VAC at full load							
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 3	370VDC							
	FREQUENCY RANGE	47 ~ 63Hz								
INPUT	EFFICIENCY (Typ.)	78%	81%	83%	85%	86%				
	AC CURRENT (Typ.)	0.75A/115VAC 0.5	12.0							
	INRUSH CURRENT (Typ.)	COLD START 45A								
	LEAKAGE CURRENT	<2mA / 240VAC								
		110 ~ 150% rated output	power							
PROTECTION	OVERLOAD	Protection type : Hiccup i	mode, recovers automatic	ally after fault condition is r	emoved					
		5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V				
	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover								
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
ENV RONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH								
	TEMP COEFFICIENT	±0.03%/°C (0 ~ 45°C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1	cycle, period for 60min. ea	ach along X, Y, Z axes						
	SAFETY STANDARDS	•	0-1),CCC GB4943 approv	<u> </u>						
SAFETY &	WITHSTAND VOLTAGE		:1.5KVAC O/P-FG:0.5K							
EMC	ISOLATION RESISTANCE		100M Ohms / 500VDC / 25							
(Note 6)	EMC EMISSION		(CISPR22) Class B, EN61							
	EMC IMMUNITY			024, EN61000-6-1, light in	dustry level, criteria A					
	MTBF	394Khrs min. MIL-HD								
OTHERS	DIMENSION	99*97*36mm (L*W*H)	()							
	PACKING	` '	93CUFT							
NOTE	Ripple & noise are measure Tolerance : includes set up Line regulation is measure Load regulation is measure	ed at 20MHz of bandwidth tolerance, line regulation from low line to high line d from 0% to 100% rated	0.36Kg; 45pcs/17.2Kg/0.93CUFT I mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. I at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. I olerance, line regulation and load regulation. I one long hip to high line at rated load.							





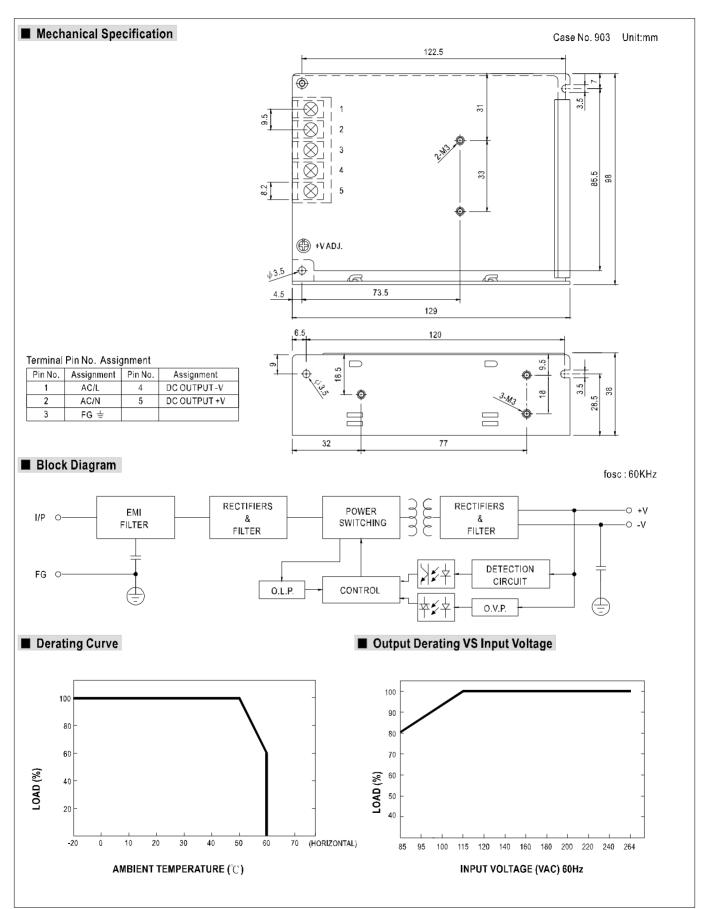




- Universal AC input/Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test

MODEL		ES-50-5 NES-50-12 NES-50-15 NES-50-24 NES-50								
	DC VOLTAGE	5V	12V	15V	24V	48V				
	RATED CURRENT	10A	4.2A	3.4A	2.2A	1.1A				
	CURRENT RANGE	0 ~ 10A	0 ~ 4.2A	0~3.4A	0 ~ 2.2A	0 ~ 1.1A				
	RATED POWER	50W	50.4W	51W	52.8W	52.8W				
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	150mVp-p	200mVp-p	240mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V	43.2 ~ 52.8V				
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%				
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%				
	LOAD REGULATION Note.5	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%				
	SETUP, RISE TIME	500ms, 30ms/230VAC	1200ms, 30ms/115VA	C at full load						
	HOLD UP TIME (Typ.)	50ms/230VAC 10ms	s/115VAC at full load							
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 3	370VDC							
	FREQUENCY RANGE	47 ~ 63Hz								
INPUT	EFFICIENCY(Typ.)	79%	82%	83%	86%	87%				
INPUI	AC CURRENT (Typ.)	1.1A/115VAC 0.65A	/230VAC	'	•					
	INRUSH CURRENT (Typ.)	COLD START 45A								
	LEAKAGE CURRENT	<2mA / 240VAC								
PROTECTION	OVERLOAD	110 ~ 150% rated output		H 6 6 10 100 1						
		•		cally after fault condition is		FF 0 C4 0V				
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25	27.6 ~ 32.4V	55.2 ~ 64.8V				
		Protection type: Shut down o/p voltage, re-power on to recover								
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% R	H							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)								
	VIBRATION	· · · · · · · · · · · · · · · · · · ·	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
	SAFETY STANDARDS	UL60950-1, CB(IEC6095								
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG								
EMC (Note 6)	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:								
(HOLE U)	EMC EMISSION	Compliance to EN55022	, , , , , , , , , , , , , , , , , , , ,	· · · · · · · · · · · · · · · · · · ·	. (. 1 1 2					
	EMC IMMUNITY	•		24, EN61000-6-1, light indu	stry level, criteria A					
	MTBF	374.2K hrs min. MIL-H	IDBK-217F (25°€)							
OTHERS	DIMENSION	129*98*38mm (L*W*H)	2401157							
	PACKING	0.41Kg; 45pcs/19.5Kg/1.		11 1 10520 / 11						
NOTE	Ripple & noise are measure Tolerance : includes set up Line regulation is measure Load regulation is measure	lly mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. ed at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. tolerance, line regulation and load regulation. I from low line to high line at rated load. d from 0% to 100% rated load. ered a component which will be installed into a final equipment.								





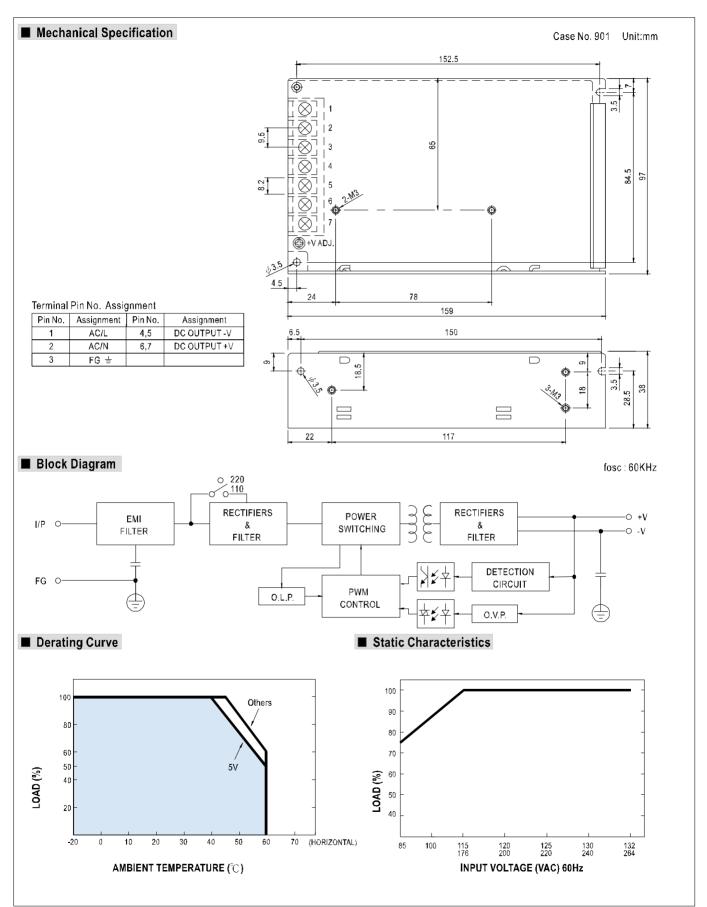




- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test

MODEL		NES-100-5	NES-100-7.5	NES-100-9	NES-100-12	NES-100-15	NES-100-24	NES-100-48			
	DC VOLTAGE	5V	7.5V	9V	12V	15V	24V	48V			
	RATED CURRENT	20A	13.6A	11.2A	8.5A	7A	4.5A	2.3A			
	CURRENT RANGE	0 ~ 20A	0 ~ 13.6A	0 ~ 11.2A	0 ~ 8.5A	0 ~ 7A	0 ~ 4.5A	0 ~ 2.3A			
	RATED POWER	100W	102W	100.8W	102W	105W	108 W	110.4W			
OUTPUT	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p			
	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	7.13 ~ 8.3V	8.55 ~ 9.9V	11.4 ~ 13.2V	14.25 ~ 16.5V	22.8 ~ 26.4V	45.6 ~ 52.8V			
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%			
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	LOAD REGULATION Note.5	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	500ms, 20ms/23	0VAC 500ms	, 20ms/115VAC at	full load	•		<u> </u>			
	HOLD UP TIME (Typ.)	30ms/230VAC	25ms/115VAC	at full load							
	VOLTAGE RANGE	85 ~ 132VAC / 17	6 ~ 264VAC select	ed by switch	248 ~ 373VDC						
	FREQUENCY RANGE	47 ~ 63Hz									
INPUT	EFFICIENCY (Typ.)	80%	81%	81%	83%	84%	86%	86%			
INI OI	AC CURRENT (Typ.)	2A/115VAC									
	INRUSH CURRENT (Typ.)	COLD START 36A									
	LEAKAGE CURRENT	<2mA/240VAC									
PROTECTION		110 ~ 150% rated	d output power								
	OVERLOAD	Protection type:	Hiccup mode, reco	vers automatically	after fault conditior	is removed					
	OVER VOLTAGE	5.75 ~ 6.75V	8.6 ~ 10.1V	10.4 ~ 12.2V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V			
	OVER VOLTAGE	Protection type:	Protection type: Hiccup mode, recovers automatically after fault condition is removed								
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/℃ (0~5	60℃)								
	VIBRATION	10 ~ 500Hz, 2G	0min./1cycle, perio	od for 60min. each	along X, Y, Z axes						
	SAFETY STANDARDS	UL60950-1, CB(I	EC60950-1),CCC	GB4943 approved							
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC	I/P-FG:1.5KVAC	O/P-FG:0.5KVA	3						
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG,	D/P-FG:100M Ohm	s / 500VDC / 25°C	70% RH						
(Note 6)	EMC EMISSION	Compliance to El	N55022 (CISPR22)	Class B, EN61000)-3-2,-3						
	EMC IMMUNITY	Compliance to El	N61000-4-2,3,4,5,6	6,8,11, EN55024, E	N61000-6-1, light i	ndustry level, criter	ria A				
	MTBF	320.7Khrs min	MIL-HDBK-217F	(25 °℃)							
OTHERS	DIMENSION	159*97*38mm (L	*W*H)								
	PACKING	0. 55Kg ; 30pcs/17									
NOTE	All parameters not specially Ripple & noise are measure Tolerance: includes set up Line regulation is measured Load regulation is measure The power supply is consid	ed at 20MHz of ba tolerance, line red I from low line to l d from 0% to 100	andwidth by using gulation and load r nigh line at rated lo % rated load.	a 12" twisted pair- egulation. oad.	wire terminated w		parallel capacitor.				





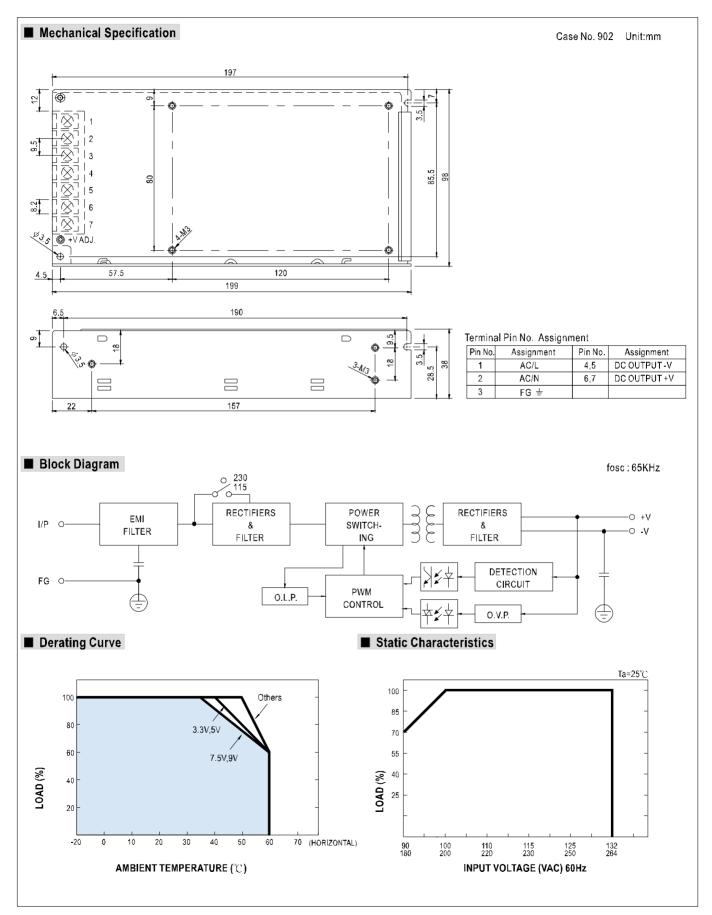




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- High efficiency, long life and high reliability

MODEL		NES-150-3.3	NES-150-5	NES-150-7.5	NES-150-9	NES-150-12	NES-150-15	NES-150-24	NES-150-48					
	DC VOLTAGE	3.3V	5V	7.5V	9V	12V	15V	24V	48V					
	RATED CURRENT	30A	26A	20A	16.7A	12.5A	10A	6.5A	3.3A					
	CURRENT RANGE	0 ~ 30A	0 ~ 26A	0 ~ 20A	0 ~ 16.7A	0 ~ 12.5A	0 ~ 10A	0 ~ 6.5A	0 ~ 3.3A					
	RATED POWER	99W	130W	150W	150 W	150W	150W	156W	158.4W					
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	120mVp-p	120mVp-p	120mVp-p	120mVp-p	120mVp-p	200mVp-p					
OUTPUT	VOLTAGE ADJ. RANGE	3.2 ~ 3.5V	4.75 ~ 5.5V	7.13 ~ 8.3V	8.55 ~ 9.9V	11.4 ~ 13.5V	14.25 ~ 16.5V	22.8 ~ 27.6V	45.6 ~ 52.8V					
	VOLTAGE TOLERANCE Note.3	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%					
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	LOAD REGULATION Note.5	±2.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	SETUP, RISE TIME Note.7	800ms, 20ms/2	30VAC 120	00ms, 30ms/1 15	/AC at full load									
	HOLD UP TIME (Typ.)	24ms/230VAC	20ms/115V	AC at full load										
	VOLTAGE RANGE	90 ~ 132VAC /	180 ~ 264VAC se	elected by switch	254 ~ 373	BVDC								
	FREQUENCY RANGE	47 ~ 63Hz												
INDUT	EFFICIENCY (Typ.)	73%	78%	80%	83%	83%	83%	86%	86%					
INFUI	AC CURRENT (Typ.)	3A/115VAC	2A/230VAC					•	•					
	INRUSH CURRENT (Typ.)	COLD START 45A/230VAC												
	LEAKAGE CURRENT	<2mA / 240VAC												
INPUT PROTECTION ENVIRONMENT SAFETY &		110 ~ 150% rat	10 ~ 150% rated output power											
	OVERLOAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed												
		3.8 ~ 4.65V	1.8 ~ 4.65V 5.75 ~ 6.75V 8.6 ~ 10.1V 10.4 ~ 12.2V 13.8 ~ 16.2V 17.25 ~ 20.25V 27.6 ~ 32.4V 58											
	OVER VOLTAGE	Protection type	: Hiccup mode,	recovers automa	tically after fault	condition is remo	oved							
	WORKING TEMP.	-20 ~ +60°C (R	efer to output loa	ad derating curve	e)									
	WORKING HUMIDITY	20 ~ 90% RH n	on-condensing					27.6 ~ 32.4V 55.2 ~ 62.4°						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH												
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~	· 50℃)											
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes												
	SAFETY STANDARDS	UL60950-1, TU	IV EN60950-1,G	B4943 approve	d									
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC	I/P-FG:1.5K\	/AC O/P-FG:0	.5KVAC									
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG	, O/P-FG:100M	Ohms/500VDC 7	0% RH									
EMC (Note 6)	EMI CONDUCTION & RADIATION	Compliance to	EN55022 (CISP	R22) Class B,GE	9254 CLASS B									
(HARMONIC CURRENT	Compliance to	EN61000-3-2,-3	GB17625.1										
	EMS IMMUNITY	Compliance to	EN61000-4-2, 3	, 4, 5, 6, 8,11, EN	IV50204, EN550	24, EN61000-6-1	, heavy industry	level, criteria A						
	MTBF	433.3Khrs min.	MIL-HDBK-2	217F (25°C)										
OTHERS	DIMENSION	199*98*38mm (L*W*H)												
	PACKING	0.7Kg; 20pcs/1	5Kg/0 72CUFT											
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance: includes set up Line regulation is measure Load regulation is measure The power supply is consid EMC directives.	ed at 20MHz of tolerance, line r I from low line to d from 0% to 10 ered a compone	bandwidth by usegulation and loo egulation and loo high line at rat 10% rated load. ent which will be	sing a 12" twiste bad regulation. ed load. e installed into a	d pair-wire term	inated with a 0.1	uf & 47uf parall	-confirmed that						





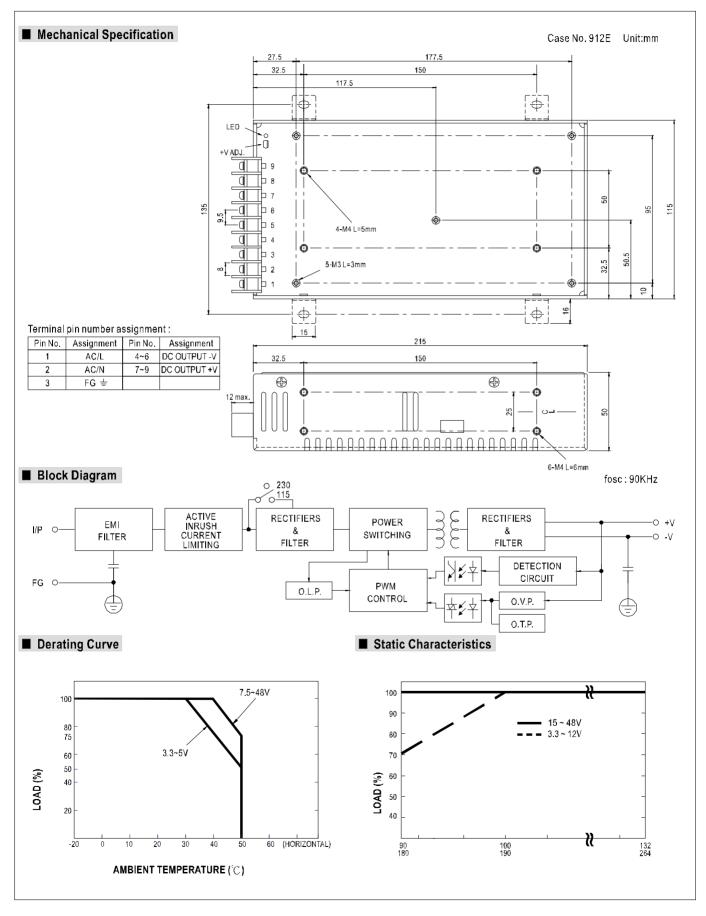




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage/ Over temperature
- · Cooling by free air convection
- Withstand 300vac surge input for 5 second
- Built-in constant current limiting circuit
- 100% full load burn-in test
- LED indicator for power on
- Fixed switching frequency at 90KHz
- Low cost, high reliability

MODEL		NES-200-3.3	NES-200-5	NES-200-7.5	NES-200-12	NES-200-15	NES-200-24	NES-200-27	NES-200-36	NES-200-48			
	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	27V	36V	48V			
	RATED CURRENT	40A	40A	27A	17A	14A	8.8A	7.8A	5.9A	4.4A			
	CURRENT RANGE	0~40A	0 ~ 40A	0 ~ 27A	0 ~ 17A	0 ~ 14A	0 ~ 8.8A	0 ~ 7.8A	36V 5.9A 0 ~ 5.9A 212.4W 240mVp-p 32 ~ 40V ±1.0% ±0.5% ±0.5% 41.4 ~ 46.8V 48V) (TSW1) [0 ~ 4.4A			
	RATED POWER	132W	200W	202.5W	204W	210W	211.2W	210.6W	212.4W	211.2W			
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p	240mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	2.97 ~ 3.7V	4.5 ~ 5.6V	6 ~ 9V	10 ~ 13.5V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	32 ~ 40V	41 ~ 56V			
	VOLTAGE TOLERANCE Note.3	±2.0%	±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%	±0.5%			
	LOAD REGULATION	±1.5%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	1000ms, 50m	s/230VAC	1000ms,50ms	/115VAC at fu	llload							
	HOLD UP TIME	20ms/230VA	C 16ms/115	VAC at full load									
	VOLTAGE RANGE	90 ~ 132VAC	/ 180 ~ 264VA	C by switch	254 ~ 370VE	OC .							
	FREQUENCY RANGE	47 ~ 63Hz		·									
NIBILE.	EFFICIENCY (Typ.)	75%	79%	82%	85%	85%	87%	88%	89%	89%			
INPUT	AC CURRENT	4.5A/115VAC	2.5A/23	0VAC	-	-	-	+	-	-			
	INRUSH CURRENT (max.)	40A/115VAC	55A/230	VAC									
	LEAKAGE CURRENT	<3.5mA / 240	VAC										
		105 ~ 150% rated output power											
	OVER LOAD	Protection type: Constant current limiting, recovers automatically after fault condition is removed											
		3.8~4.9V 5.75~6.75V 9.4~10.9V 13.8~16.2V 18~21V 27.6~32.4V 33.7~39.2V 41.4~46.8V 57.6~67.2											
PROTECTION	OVER VOLTAGE	Protection ty	e :Shut down	O/P voltage, re	-power on to re	cover			36V 5.9A 0~5.9A 212.4W 240mVp-p 32~40V ±1.0% ±0.5% ±0.5% 89% 89%				
		95°C±5°C (3.3	8V);100℃±5℃	(5V); 90°C±5°(C(7.5V);85°C±	5°C (12~24V);8	0°C±5°C(27~ 3	6V);75℃±5℃		Detect on cas			
	OVER TEMPERATURE	Protection ty	oe : Shut down	O/P voltage, re	covers automa	atically after te	mperature goes	s down	, , , ,				
	WORKING TEMP.	-20 ~ +50°C	Refer to outpu	it load derating	curve)								
	WORKING HUMIDITY	20 ~ 90% RH	non-condensi	ng	,								
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C,	10 ~ 95% RH										
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)											
	VIBRATION	- '		cle, 60min. eac	h along X, Y, Z	axes							
	SAFETY STANDARDS	UL60950-1 a	pproved										
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KV/	C I/P-FG:1.	5KVAC O/P-	FG:0.5KVAC								
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-F	G, O/P-FG:10	0M Ohms / 500	VDC / 25°C / 70)% RH							
EIVIC	EMI CONDUCTION & RADIATION	Design refer	:o EN55022 (C	ISPR22) Class	A								
	MTBF	271.9K hrs m	in. MIL-HDI	BK-217F (25°C)								
OTHERS	DIMENSION	215*115*50m	ım (L*W*H)										
	PACKING	0.93Kg; 12pc	s/12Kg/0.92C	JFT									
NOTE	All parameters NOT spec Ripple & noise are meas Tolerance : includes set	ured at 20MH	Iz of bandwid	Ith by using a	12" twisted p					citor.			





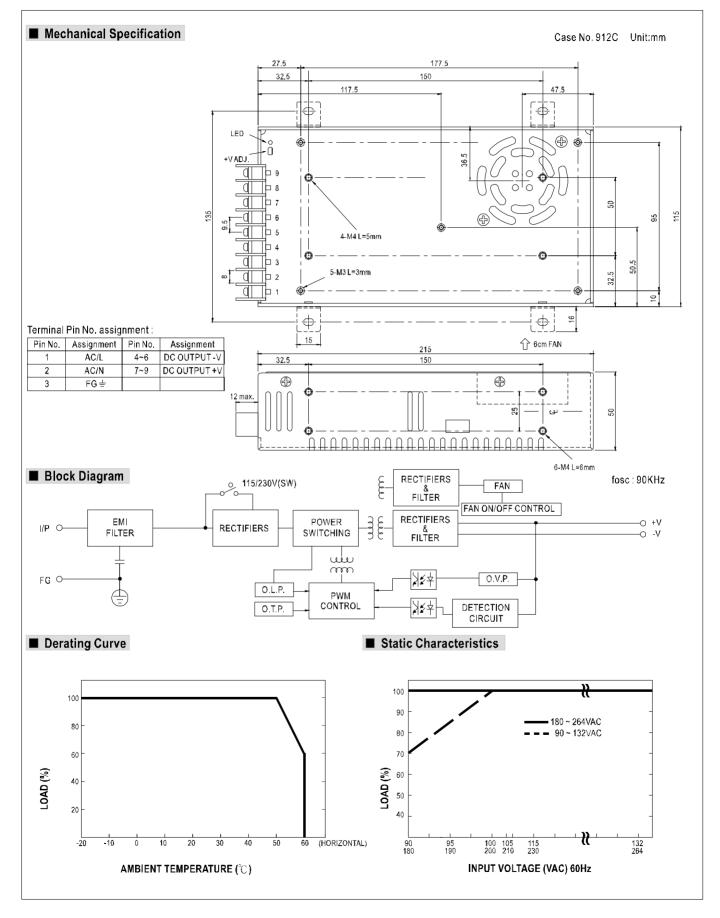




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage/ Over temperature
- Forced air cooling by built-in DC fan
- Withstand 300vac surge input for 5 second
- Built-in cooling Fan ON-OFF control
- Built-in constant current limiting circuit
- 100% full load burn-in test
- · LED indicator for power on
- Fixed switching frequency at 90KHz
- Low cost, high reliability

MODEL		NES-350-3.3	NES-350-5	NES-350-7.5	NES-350-12	NES-350-15	NES-350-24	NES-350-27	NES-350-36	NES-350-48				
	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	27V	36V	48V				
	RATED CURRENT	60A	60A	46A	29A	23.2A	14.6A	13A	9.7A	7.3A				
	CURRENT RANGE	0 ~ 60A	0 ~ 60A	0~46A	0~29A	0 ~ 23.2A	0 ~ 14.6A	0 ~ 13A	0 ~ 9.7A	0 ~ 7.3A				
	RATED POWER	198W	300W	345W	348W	348W	350.4W	351W	349.2W	350.4W				
OUTPUT	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p	240mVp-p				
	VOLTAGE ADJ. RANGE	2.97 ~ 3.7V	4.5 ~ 5.6V	6~9V	10 ~ 13.5V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	32~40V	41 ~ 56V				
	VOLTAGE TOLERANCE Note.3	+3%,-4.5%	±3.0%	±2.0%	±1.5%	±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%	±0.5%				
	LOAD REGULATION	±2.5%	±2.0%	±2.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%				
	SETUP, RISE TIME	1000ms, 50m	s/230VAC	1000ms,50ms	/115VAC at fu	II load								
	HOLD UP TIME (Typ.)	20ms/230VA0	16ms/115\	/AC at full load										
	VOLTAGE RANGE	90 ~ 132VAC	/ 180 ~ 264VAC	C by switch	254 ~ 370VE	C								
	FREQUENCY RANGE	47 ~ 63Hz							36V 48V 9.7A 7.3A 0 ~ 9.7A 0 ~ 7.3 349.2W 350.4W 240mVp-p 240mV ±1.0% ±1.0% ±0.5% ±0.5% ±0.5% ±0.5% 87.5% 87.5%					
INDIIT	EFFICIENCY (Typ.)	74%	78%	80%	83%	84%	87%	88%	87.5%	87.5%				
INPUI	AC CURRENT (Typ.)	7A/115VAC	4A/230VA0						9.7A 0 ~ 9.7A 349.2W 240mVp-p 32~40V ±1.0% ±0.5% 87.5%					
	INRUSH CURRENT (Typ.)	40A/115VAC	60A/230V	AC										
	LEAKAGE CURRENT	<3.5mA / 240	VAC											
		105 ~ 135% rated output power												
	OVER LOAD	Protection type: Constant current limiting, recovers automatically after fault condition is removed												
PROTECTION	0.450.404.74.05	3.8 ~ 4.6V												
PROTECTION	OVER VOLTAGE	Protection typ	e :Shut down (D/P voltage, re	-power on to re	cover								
,	OVED TEMPEDATURE	85°C±5°C(3.	85°C±5°C (3.3~7.5V); 80°C±5°C (12V); 75°C±5°C (15~48V) (TSW1) Detection case											
	OVER TEMPERATURE	Protection typ	oe : Shut down	O/P voltage, re	ecovers automa	atically after ter	mperature goes	s down	0 ~ 9.7A					
EUNCTION	EAN ON/OFE CONTROL/Typ \	_	FAN ON, \leq 45		, ,									
FUNCTION	FAN ON/OFF CONTROL(Typ.)	RTH2≧55°C	FAN ON, ≦50	C FAN OFF	(12 ~ 48V)									
	WORKING TEMP	-20 ~ +60°C (Refer to output	load derating	curve)									
	WORKING HUMIDITY	20 ~ 90% RH	non-condensir	ıg										
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C,	10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.03%/°C (0	~50°C)											
	VIBRATION	10 ~ 500Hz, 3	BG 10min./1cyc	le, 60min. eac	h along X, Y, Z	axes								
	SAFETY STANDARDS	UL60950-1 a	oproved											
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVA	C I/P-FG:1.5	KVAC O/P-	FG:0.5KVAC									
FUNCTION ENVIRONMENT SAFETY & EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-F	G, O/P-FG:100	M Ohms/500V	DC / 25°C / 70°	6 RH								
	EMI CONDUCTION & RADIATION	Design refer t	o EN55022 (CI	SPR22) Class	Α									
	EMS IMMUNITY	Design refer t	o EN61000-4-2	2, 3, 4, 5, 6, 8,1	1, ENV50204,	EN55024, light	t industry level,	. criteria A						
	MTBF	234.3K hrs m	in MIL-HDB	K-217F (25°€)	·								
OTHERS	DIMENSION	215*115*50m	m (L*W*H)											
	PACKING		s/13.5Kg/0.920											
NOTE	All parameters NOT speciall Ripple & noise are measured Tolerance : includes set up t	d at 20MHz of	bandwidth by L	ısing a 12" twi:	sted pair-wire t				ci to r.					





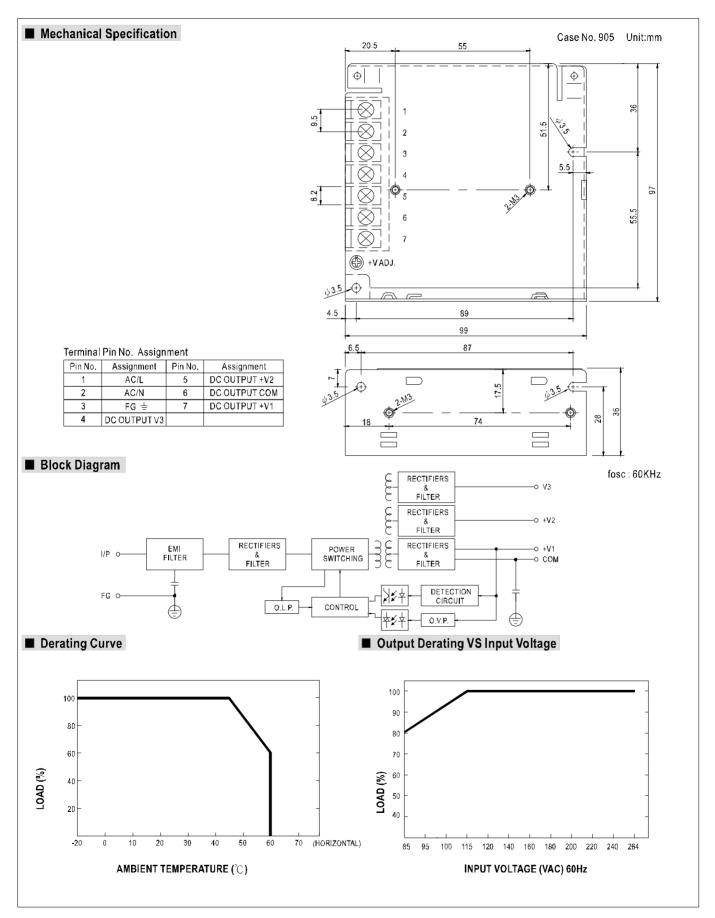




- Universal AC input / Full range
- Protections: Short circuit / Over load / Over voltage
- Cooling by free air convection
- 100% full load burn-in test

MODEL		NET-35A			NET-35B			NET-35C			NET-35D						
	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	CH3				
	DC VOLTAGE	5V	12V	-5V	5V	12V	-12V	5V	15∨	-15V	5V	24V	12V				
	RATED CURRENT	3A	1A	0.5A	3A	1A	0.5A	2.5A	1A	0.5A	2.5A	0.5A	1A				
OUTPUT INPUT PROTECTION ENVIRONMENT SAFETY & EMC (Note 7) OTHERS	CURRENT RANGE Note.6	0.5 ~ 4A	0.1 ~ 1.5A	0.1 ~ 0.5A	0.5 ~ 4A	0.1 ~ 1.5A	0.1 ~ 0.5A	0.5 ~ 3.5A	0.1 ~ 1.5A	0.1 ~ 0.5A	0.5 ~ 3.5A	0.1 ~ 1A	0.1 ~ 1A				
	RATED POWER	29.5W			33W			35W			3 CH1 CH2 V 5V 24V A 2.5A 0.5A ~ 0.5A 0.5 ~ 3.5A 0.1 ~ 1 36.5W mVp-p 80mVp-p 200mV CH1: 4.75 ~ 5.5V 0% ±2.0% ±8.0% 0% ±0.5% ±1.0% 179% 79% 79%		•				
OUTDUT	RIPPLE & NOISE (max.) Note.2	80mVp-p 120mVp-p 120mVp-p			80mVp-p	120mVp-p	120mVp-p	80mVp-p	150mVp-p	150mVp-p	80mVp-p	200mVp-p	120mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	CH1:4.75	~ 5.5V		CH1: 4.75	~ 5.5V		CH1: 4.75	~ 5.5V	•	CH1: 4.75	~ 5.5V					
OUTPUT INPUT PROTECTION ENVIRONMENT SAFETY & EMC (Note 7) OTHERS I OTHERS I I I I I I I I I I I I I I I I I I I	VOLTAGE TOLERANCE Note.3	±2.0% ±6.0% ±6.0%			±2.0%	±6.0%	±6.0%	±2.0%	±8.0%	±8.0%	±2.0%	±8.0%	±8.0%				
	LINE REGULATION Note.4	±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 Note.5	±1.5%	±3.0%	±3.0%	±1.5%	±3.0%	±3.0%	±1.5%	±3.0%	±3.0%	±1.5%	±3.0%	±3.0%				
	SETUP, RISE TIME	500ms, 30	ms/230VA	C 120	0ms, 30ms/115VAC at full load												
	HOLD UP TIME (Typ.)	50ms/230	VAC 1	0ms/115V/	AC at full lo	ad						0.1 ~ 1A					
	VOLTAGE RANGE	85 ~ 264V	AC 12	0 ~ 370VD	С												
	FREQUENCY RANGE	47 ~ 63Hz															
INDIIT	EFFICIENCY (Typ.)	78%			79%			79%			79%						
INFUI	AC CURRENT (Typ.)	0.75A/115	0.75A/115VAC														
	INRUSH CURRENT (Typ.)	COLD ST.	COLD START 45A														
	LEAKAGE CURRENT	<2mA / 24	0VAC														
		110 ~ 150% rated output power															
	OVERLOAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed															
PROTECTION		CH1: 5.75 ~ 6.75V															
	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover															
	WORKING TEMP.	-20 ~ +60	-20 ~ +60°C (Refer to "Derating Curve")														
	WORKING HUMIDITY	20 ~ 90% RH non-condensing															
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85	°C, 10 ~ 95	% RH													
	TEMP. COEFFICIENT	±0.03%/°((0 ~ 45℃)													
	VIBRATION	10 ~ 500H	lz, 2G 10mi	in./1cycle, į	period for 6	30min. each	along X, Y	, Z axes									
	SAFETY STANDARDS	UL60950-	1, CB(IEC6	60950-1) ap	proved												
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3I	KVAC I/P	'-FG:1.5KV	AC O/P-I	FG:0.5KVA	С										
EMC	ISOLATION RESISTANCE	I/P-O/P, I/	P-FG, 0/P-	FG:100M (Ohms / 500'	VDC / 25°C	/ 70% RH										
(Note 7)	EMC EMISSION	Complian	ce to EN55	022 (CISPF	R22) Class	B, EN6100	0-3-2,-3		1.5								
	EMC IMMUNITY	Complian	ce to EN61	000-4-2, 3,	4, 5, 6, 8,1	1, EN55024	I, EN61000	-6-1, light in	ndustry lev	el, criteria A	4						
	MTBF	386.2Khrs	min. M	L-HDBK-2	17F (25℃)												
OTHERS	DIMENSION	99*97*36	nm (L*W*H)													
	PACKING	0.36Kg; 4	5pcs/17.2K	g/0.93CUF	Т												
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up Line regulation is measure Load regulation is measure Each output can work within The power supply is consid	ed at 20MH tolerance, I from low l d from 20% n current ra	Iz of band line regula ine to high 6 to 100% ange. But to	vidth by us tion and lo line at rate rated load, otal output	sing a 12" to ad regulation ad load. and other power can	wisted pair on. output at (o't exceed r	-wire termi 50% rated ated outpu	nated with load.			el capacitor						





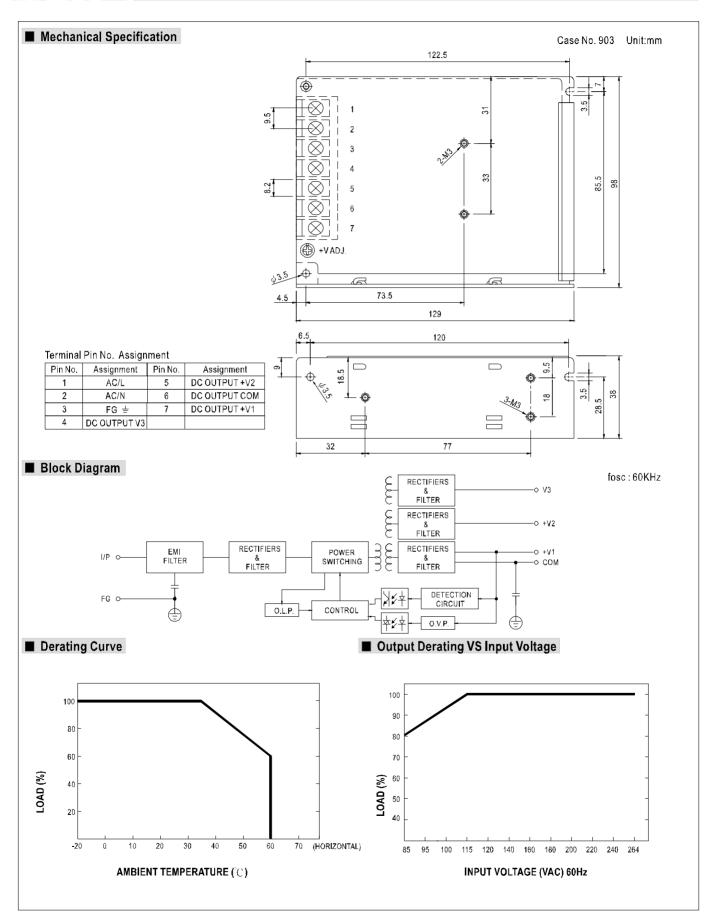




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test

MODEL		NET-50A			NET-50B			NET-50C			NET-50D			
	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	СНЗ	CH1	CH2	СНЗ	
OUTPUT INPUT PROTECTION - ENVIRONMENT SAFETY & EMC (Note 7)	DC VOLTAGE	5V	12V	-5V	5 V	12V	-12V	5V	15V	-15V	5V	24V	12V	
	RATED CURRENT	4 A	2A	0.5A	4A	2A	0.5A	4A	1.5A	0.5A	3A	1A	1A	
	CURRENT RANGE Note.6	0.6 ~ 5A	0.2 ~ 2.5A	0.1 ~ 0.7A	0.6 ~ 5A	0.2 ~ 2.5A	0.1 ~ 0.7A	0.6 ~ 5A	0.1 ~ 2A	0.1 ~ 0.7A	0.6 ~ 5A	CH2 24V 1A 5A 0.1 ~ 1.5A 7p-p 200mVp-p 4.75 ~ 5.5V 6 ±8.0% 6 ±1.0% 6 ±3.0%	0.1 ~ 1.5A	
	RATED POWER	46.5W			50W			50W		-	51W			
OUTPUT INPUT PROTECTION ENVIRONMENT SAFETY & EMC (Note 7) OTHERS	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	80mVp-p	120mVp-p	120mVp-p	80mVp-p	150mVp-p	150mVp-p	80mVp-p	200mVp-p	120mVp-p	
OUIPUI	VOLTAGE ADJ. RANGE	CH1:4.75	~ 5.5V	•	CH1: 4.75	~ 5.5V		CH1: 4.75	~ 5.5V		CH1: 4.75	CH1 CH2 5V 24V 5A 1A 0.6 ~ 5A 0.1 ~ 1.5A 51W 50mVp-p 200mVp-p CH1: 4.75 ~ 5.5V +2.0% ±8.0% 10.5% ±1.0% ±1.5% ±3.0%	•	
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±5.0%	±2.0%	±6.0%	±5.0%	±2.0%	±8.0%	±5.0%	±2.0%		±6.0%	
	LINE REGULATION Note.4	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%	±0.5%		±1.0%	
	LOAD REGULATION Note.5	±1.5%	±3.0%	±1.0%	±1.5%	±3.0%	±1.0%	±1.5%	±3.0%	±1.0%	±1.5%	±3.0%	±3.0%	
	SETUP, RISE TIME	500ms, 30	ms/230VA	C 120	0ms, 30ms	/115VAC at	full load					1A		
	HOLD UP TIME (Typ.)	50ms/230VAC 10ms/115VAC at full load												
	VOLTAGE RANGE	85 ~ 264V	AC 12	0 ~ 370VD	2									
	FREQUENCY RANGE	47 ~ 63Hz												
	EFFICIENCY (Typ.)	76%			78%			78%			80%			
	AC CURRENT (Typ.)	1.1A/115\	/AC 0	.65A/230V	AC						3A 1A 1A 1A 0.6 ~ 5A 0.1 ~ 1.5A 0.1 ~ 1.5H 0			
	INRUSH CURRENT (Typ.)	COLD ST.	ART 45A											
	LEAKAGE CURRENT	<2mA / 24	0VAC											
	OVERLOAD	110 ~ 150% rated output power												
DECTECTION	OVERLOAD	Protection type : Hiccup mode, recovers automatically after fault condition is removed												
PROTECTION	OVER VOLTAGE	CH1: 5.75 ~ 6.75V												
	OVER VOLINGE	Protection	type : Shu	t down o/p	voltage, re	-power on to	recover							
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")												
	WORKING HUMIDITY	20 ~ 90%	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85	℃, 10 ~ 95	% RH								% ±1.0% ± 3.0% ±		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)												
	VIBRATION			, ,		0min. each	along X, Y,	Zaxes						
	SAFETY STANDARDS			30950-1) ap	•									
	WITHSTAND VOLTAGE					FG:0.5KVA								
	ISOLATION RESISTANCE					VDC / 25°C								
(Note /)	EMC EMISSION			,		B, EN6100		4 12 142 1						
	EMC IMMUNITY					EN55024, E	.N61000-6-	1, light indi	ustry level,	criteria A				
	MTBF	348.4K hr			!17F (25℃)									
OTHERS	DIMENSION		3mm (L*W*											
	PACKING	•		1.24CUFT	2001/40:		1 05							
NOTE	Ripple & noise are measure Tolerance : includes set up Line regulation is measure Load regulation is measure Each output can work within	cially mentioned are measured at 230VAC input, rated load and 25 °C of ambient temperature. ured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. up tolerance, line regulation and load regulation. red from low line to high line at rated load. ured from 20% to 100% rated load, and other output at 60% rated load. thin current range. But total output power can't exceed rated output power. sidered a component which will be installed into a final equipment.												



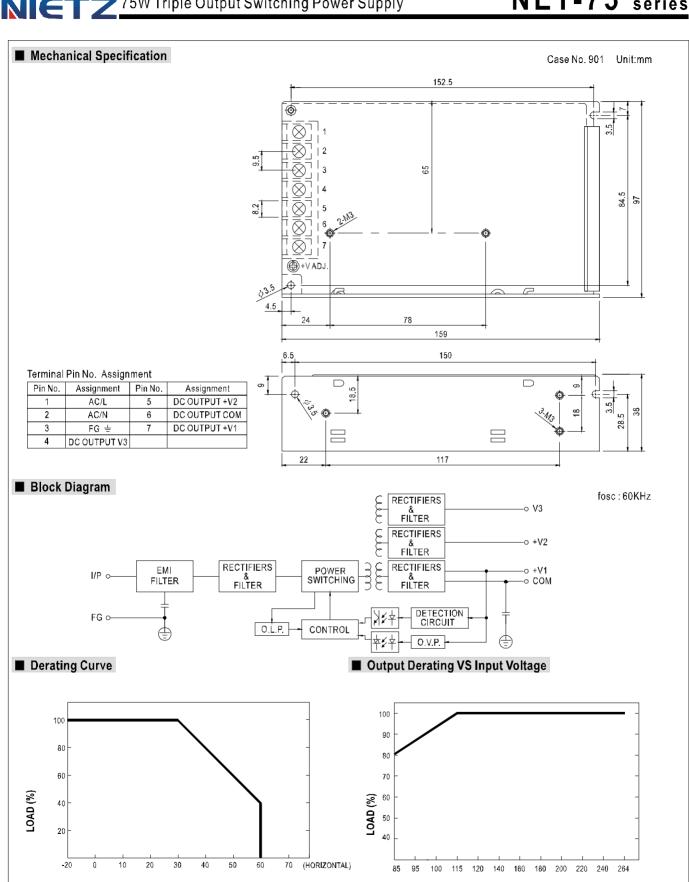




- Universal AC input / Full range
- Protections: Short circuit / Over load / Over voltage
- Cooling by free air convection
- 100% full load burn-in test

MODEL		NET-75A			NET-75B			NET-75C			NET-75D			
	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	CH3	CH1	CH2	СНЗ	CH1	CH2	CH3	
	DC VOLTAGE	5V	12V	-5∨	5V	12V	-12V	5V	15 V	-15V	5V	24V	12V	
OUTPUT INPUT PROTECTION ENVIRONMENT SAFETY & EMC (Note 7) OTHERS	RATED CURRENT	6A	3A	0.5A	5A	2.8A	0.5A	6A	2.3A	0.5A	5A	1.5A	1A	
	CURRENT RANGE Note.6	0.6 ~ 7A	0.2 ~ 3.5A	0.1 ~ 0.7A	0.6 ~ 7A	0.2 ~ 3.5A	0 1 ~ 0 7A	0.6 ~ 7A	0.1~3.5A	0.1 ~ 0.7A	0.6 ~ 6A	0.1 ~ 2A	0.1 ~ 1.5A	
	RATED POWER	68.5W			64.6W	·		72W			73W	H1 CH2 V 24V A 1.5A .6 ~ 6A 0.1 ~ 2A 3W 0mVp-p 200mVp- H1: 4.75 ~ 5.5V 2.0% ±8.0% 0.5% ±1.0% 1.5% ±3.0%	'	
OUTDUT	RIPPLE & NOISE (max.) Note.2	80mVp-p 120mVp-p 120mVp-p		80mVp-p	120mVp-p	120mVp-p	80mVp-p	150mVp-p	150mVp-p	80mVp-p 200mVp-p 120mVp-r				
OUIPUI	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V			CH1: 4.75	~ 5. 5 V		CH1: 4.75	~ 5.5V		CH1: 4.75	~ 5.5V		
OUTPUT INPUT PROTECTION - ENVIRONMENT SAFETY & EMC (Note 7) OTHERS	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±5.0%	±2.0%	±6.0%	±5.0%	±2.0%	±8.0%	±5.0%	±2.0%	±8.0%	±6.0%	
	LINE REGULATION Note.4	±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 Note.5	±1.5%	±3.0%	±1.0%	±1.5%	±3.0%	±1.0%	±1.5%	±3.0%	±1.0%	±1.5%	±3.0%	±3.0%	
	SETUP, RISE TIME	500ms, 30	ms/230VA	120	0ms, 30ms	/1 15 VAC at	full load							
	HOLD UP TIME (Typ.)	50ms/230VAC 10ms/115VAC at full load												
	VOLTAGE RANGE	85 ~ 264V	AC 12	0 ~ 370VD0	3									
	FREQUENCY RANGE	47 ~ 63Hz												
INPUT	EFFICIENCY(Typ.)	77%			78%			78%			80%			
	AC CURRENT (Typ.)	1.5A/115\	/AC 0	.9A/230VA	С									
	INRUSH CURRENT (Typ.)	COLD ST	ART 45A											
	LEAKAGE CURRENT	<2mA / 24	0VAC											
	OVERLOAD	110 ~ 150% rated output power												
PROTECTION	OVEREDAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed												
FROTEGION	OVER VOLTAGE	CH1: 5.75 ~ 6.75V												
	OVER VOLINGE	Protection type : Shut down o/p voltage, re-power on to recover												
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")												
	WORKING HUMIDITY	20 ~ 90% RH non-condensing												
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85	℃, 10 ~ 9 5	% RH										
	TEMP. COEFFICIENT	±0.03%/°(C (0 ~ 45°C)								p 200mVp-p 12 75 ~ 5.5V ±8.0% ±1.0% ±1 ±3.0% ±3		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes												
	SAFETY STANDARDS			60950-1) ap	•									
	WITHSTAND VOLTAGE					FG:0.5KVA								
	ISOLATION RESISTANCE					VDC / 25°C								
(Note 1)	EMC EMISSION			•		B, EN6100		4 10 142 1						
	EMC IMMUNITY					EN55024, E	:N61000-6-	-1, light indi	ustry level,	criteria A				
	MTBF	361.6K hr			!17 F (25℃))								
OTHERS	DIMENSION		3mm (L*W*		_									
	PACKING		•	g/0.97CUF		المعلمد لمد	ad and OF	On all marks		.a.ba				
NOTE	Ripple & noise are measure Tolerance : includes set up Line regulation is measured Load regulation is measure Each output can work within	F specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. s set up tolerance, line regulation and load regulation. leasured from low line to high line at rated load. measured from 20% to 100% rated load, and other output at 60% rated load. bork within current range. But total output power can't exceed rated output power. s considered a component which will be installed into a final equipment.												

AMBIENT TEMPERATURE (°C)



INPUT VOLTAGE (VAC) 60Hz



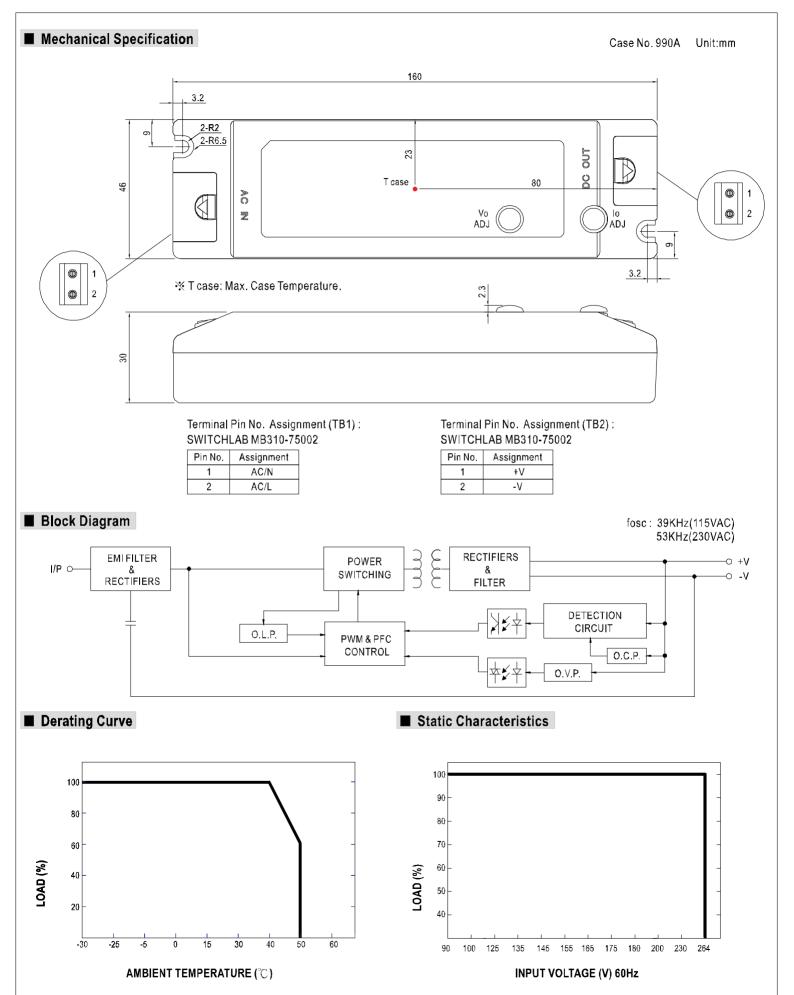
■ Features :

- · Universal AC input / Full range
- · Adjustable output voltage and current level
- Protections: Short circuit / Over current / Over voltage / Over temperature
- · Cooling by free air convection
- Built-in constant current limiting circuit
- Fully isolated plastic case with terminal block style of I/O
- Built-in active PFC function, comply with EN61000-3-2 class C (Pin≥25W)
- Class II power unit, no FG
- 100% full load burn-in test
- · High reliability
- Suitable for LED lighting and moving sign applications (Note.2)
- · Compliance to worldwide safety regulations for lighting

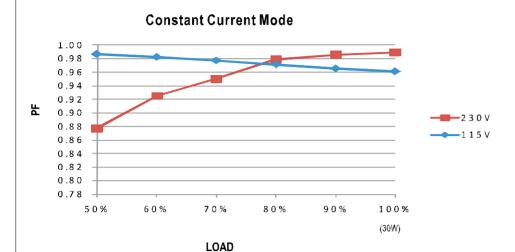
MODEL		PLC-30-9	PLC-30-12	PLC-30-15	PLC-30-20	PLC-30-24	PLC-30-27	PLC-30-36	PLC-30-48	
	DC VOLTAGE	9V	12V	15V	20V	24V	27V	36V	48V	
	CONSTANT CURRENT REGION Note 6	6.3 ~ 9V	8.4 ~ 12V	10.5 ~ 15V	14 ~ 20V	16.8 ~ 24V	18.9 ~ 27V	25.2 ~ 36V	33.6 ~ 48V	
	RATED CURRENT	3.3A	2.5A	2A	1.5A	1.25A	1.12A	0.84A	0.63A	
	CURRENT RANGE	0 ~ 3.3A	0 ~ 2.5A	0 ~ 2A	0 ~ 1.5A	0 ~ 1.25A	0 ~ 1.12A	0~0.84A	0 ~ 0.63A	
	RATED POWER	29.7W	30W	30W	30W	30W	30.24W	30.24W	30.24W	
OUTBUT	RIPPLE & NOISE (max.) Note.2	2.6Vp-p	2Vp-p	2.6Vp-p	2.6Vp-p	2.4Vp-p	2.3Vp-p	3.6Vp-p	3.7Vp-p	
OUTPUT	VOLTAGE ADJ. RANGE Note.5	8.55 ~ 9.9V	11.4 ~ 13.2V	14.5 ~ 16.5V	19 ~ 22V	22.8 ~ 26.4V	25.65 ~ 29.7V	34.2 ~ 39.6V	45.6 ~ 52.8V	
	CURRENT ADJ. RANGE Note.5	2.475 ~ 3.399A	1.875 ~ 2.575A	1.5 ~ 2.06A	1.125 ~ 1.545A	0.938 ~ 1.288A	0.84 ~ 1.1536A	0.63 ~ 0.865A	0.473 ~ 0.649	
	VOLTAGE TOLERANCE Note.3	±10%				'				
	LINE REGULATION	±3.0%								
	LOAD REGULATION	±5.0%								
	SETUP TIME	1500ms / 230V	AC 3000ms/1	15VAC at full loa	ıd					
	VOLTAGE RANGE Note.4	90 ~ 264VAC	127 ~ 370VE	C						
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF>0.95/115VA	0.95/115VAC, PF>0.9/230VAC at full load (Please refer to "Power Factor Characteristic" curve)							
INPUT	EFFICIENCY (Typ.)	80%	82.5%	83.5%	84%	84%	84.5%	85%	85.5%	
	AC CURRENT (Typ.)	0.4A/115VAC	0.2A/230VAC		'	'			'	
	INRUSH CURRENT (max.)	40A/230VAC								
	LEAKAGE CURRENT	<0.5mA/240V	4C							
	OVER AUDDENT	100 ~ 110%								
	OVER CURRENT	Protection type	: Constant curre	ent limiting, reco	vers automatical	lly after fault cor	dition is removed			
	SHORT CIRCUIT	Hiccup mode, r	Hiccup mode, recovers automatically after fault condition is removed.							
PROTECTION	0.450.401.44.05	10 ~ 14V	14 ~ 16V	17 ~ 22V	23 ~ 26V	27 ~ 34V	31 ~ 35V	40 ~ 50V	53 ~ 63V	
	OVER VOLTAGE	Protection type	: Shut down o/p	voltage, re-pow	er on to recover					
	OVER TEMPERATURE	95°C±10°C (T	SW1)							
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, re-power on to recover								
	WORKING TEMP.	-30 ~ +50°C (R	efer to "Derating	Curve")						
	WORKING HUMIDITY	20 ~ 95% RH n	on-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10	0 ~ 95% RH							
	TEMP. COEFFICIENT	±0.06%/°C (0 ~	· 50°C)							
	VIBRATION	10 ~ 500Hz, 20	12min./1cycle,	period for 72mi	n. each along X,	Y, Z axes				
	SAFETY STANDARDS	UL1310 Class 2	2, TUV EN61347	-1, EN 61347-2-1	3, CAN/CSA C2:	2.2 No. 223-M91	(except for 48V);	J61347-1, J6134	7-2-13 approved	
CAFETY	WITHSTAND VOLTAGE	I/P-O/P:3.75K	VAC							
SAFETY &	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH								
EMC	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (Pin ≥ 25W), Class D (>70% load) ; EN61000-3-3								
	EMC IMMUNITY	Compliance to	EN61000-4-2,3,	4,5,6,8,11, EN5	5024, EN61547,	light industry le	/el, criteria A			
	MTBF	625 5Khrs min	5.5Khrs min. MIL-HDBK-217F (25°C')							
OTHERS	DIMENSION	160*46*30mm	6*30mm (L*W*H)							
	PACKING	0.2Kg; 70pcs/1	5Kg/0.96CUFT							
NOTE	All parameters NOT specia Ripple & noise are measure							llel capacitor.		

- 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacito
- 3. Tolerance : includes set up tolerance, line regulation and load regulation.
- 4. Derating may be needed under low input voltage. Please check the static characteristics for more details.
- 5. Output voltage can be adjusted through the SVR1 on the PCB; limit of output constant current level can be adjusted through the SVR2 on the PCB.
- 6. Constant current operation region is within 70% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
- 7. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
- 8. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.



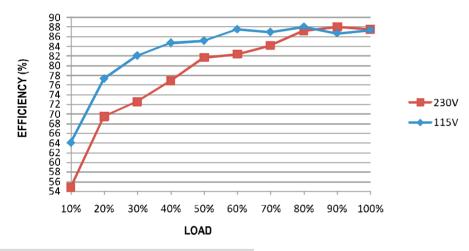


■ Power Factor Characteristic



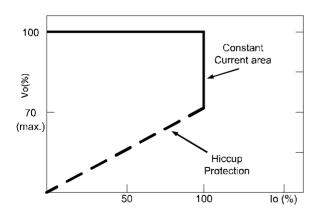
■ EFFICIENCY vs LOAD (48V Model)

PLC-30 series possess superior working efficiency that up to 85.5% can be reached in field applications.



■ DRIVING METHODS OF LED MODULE

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



Typical LED power supply I-V curve

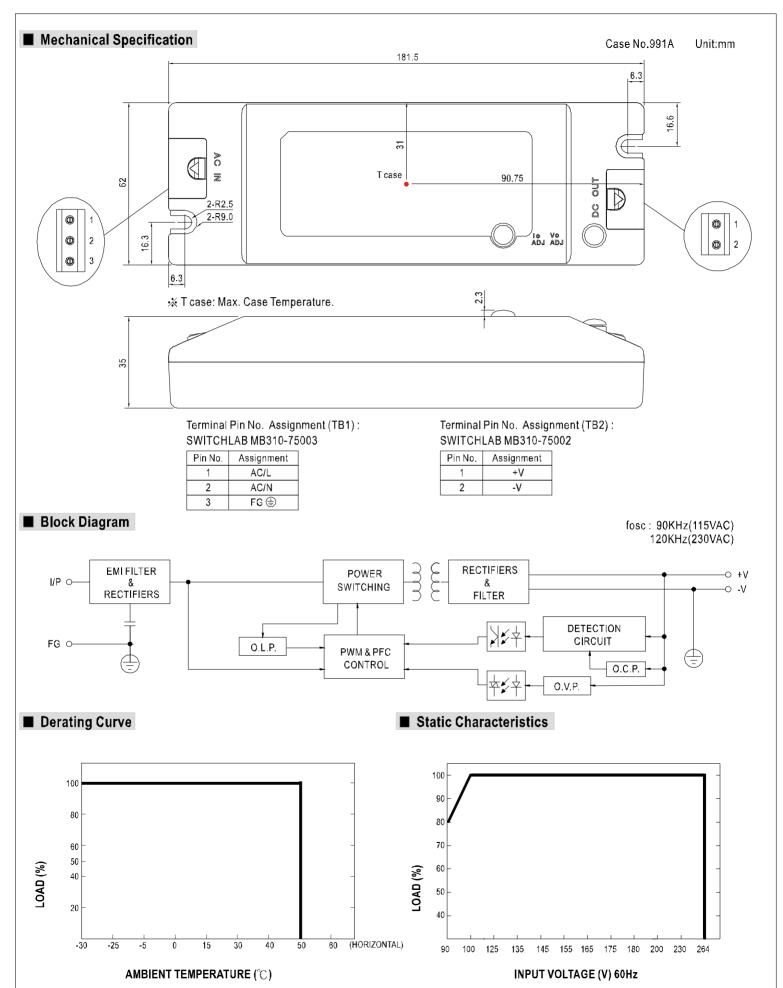


- Universal AC input / Full range
- Adjustable output voltage and current level
- Protections: Short circuit / Over current / Over voltage / Over temperature
- · Cooling by free air convection
- · Built-in constant current limiting circuit
- Fully isolated plastic case with terminal block style of I/O
- Built-in active PFC function, comply with EN61000-3-2 class C (≥75% load)
- Pass LPS
- 100% full load burn-in test
- · High reliability
- Suitable for LED lighting and moving sign applications
- · Compliance to worldwide safety regulations for lighting

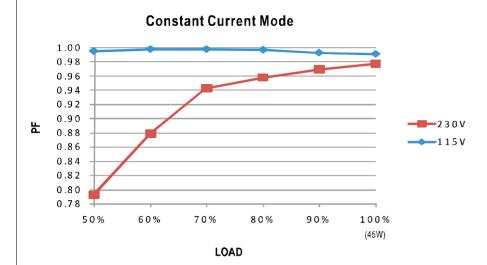
MODEL		PLC-45-12	PLC-45-15	PLC-45-20	PLC-45-24	PLC-45-27	PLC-45-36	PLC-45-48		
	DC VOLTAGE	12V	15V	20V	24V	27V	36V	48V		
	CONSTANT CURRENT REGION Note,6	9 ~ 12V	11.25 ~15V	15 ~ 20V	18 ~24V	20.25~27V	27 ~ 36V	36 ~ 48V		
	RATED CURRENT	3.8A	3A	2.3A	1.9A	1.7A	1.25A	0.95A		
	CURRENT RANGE	0 ~ 3.8A	0 ~ 3A	0 ~ 2.3A	0 ~ 1.9A	0 ~ 1.7A	0 ~ 1.25A	0 ~ 0.95A		
	RATED POWER	45.6W	45W	46W	45.6W	45.9W	45W	45.6W		
VIITBUT	RIPPLE & NOISE (max.) Note.2	2Vp-p	2.4Vp-p	1.8Vp-p	2.7Vp-p	2.7Vp-p	3.6Vp-p	4.6Vp-p		
DUTPUT	VOLTAGE ADJ. RANGE Note.5	11.5 ~ 13V	14.5 ~ 16.2V	19.5 ~ 22V	24 ~ 26V	25 ~ 30V	32.5 ~ 39V	43.6 ~ 51.8V		
	CURRENT ADJ. RANGE Note.5	2.85 ~ 3.914A	2.25 ~ 3.1A	1.725 ~ 2.37A	1.425 ~1.957A	1.275 ~ 1.75A	0.938 ~ 1.288A	0.713 ~ 0.979A		
	VOLTAGE TOLERANCE Note,3	±10%								
	LINE REGULATION	±3.0%								
	LOAD REGULATION	±5.0%								
	SETUP TIME	1500ms / 230VA	3000ms / 115V	AC at full load						
	VOLTAGE RANGE Note.4	90 ~ 264VAC	127 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF>0.92/115VAC	, PF>0.9/230VAC	at full load (Please	e refer to "Power F	actor Characteristic	c" curve)			
NPUT	EFFICIENCY (Typ.)	83.5%	85%	86.5%	86.5%	86.5%	87.5%	87.5%		
	AC CURRENT (Typ.)	0.55A/115VAC	0.25A/230VAC							
	INRUSH CURRENT (max.)	40A/230VAC								
	LEAKAGE CURRENT	<0.75mA / 240VA	/C							
	OVER CURRENT	95 ~ 110%								
	OVER CURRENT	Protection type:	Constant current	imiting, recovers a	utomatically after	fault condition is re	moved			
	SHORT CIRCUIT	Hiccup mode, red	covers automatica	lly after fault cond	tion is removed.					
		13.8 ~ 16V	3.8 ~ 16V							
RUTECTION	OVER VOLTAGE	Protection type :	Shut down o/p vol	tage, re-power on	to recover	•				
		95°C ±10°C (TSW1) detect on heatsink of power transistor								
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down								
	WORKING TEMP.	-30 ~ +50°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 95% RH nor	n-condensing							
NVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10	- 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 5	i0℃)							
	VIBRATION	10 ~ 500Hz, 2G	I2min./1cycle, per	iod for 72min. eac	h along X, Y, Z axe	es				
	SAFETY STANDARDS	UL1310 Class 2,	TUV EN61347-1, I	EN61347-2-13, CA	N/CSA C22.2 No. 2	223-M91(except for	48V) ; J61347-1, J6	1347-2-13 approve		
	WITHSTAND VOLTAGE	I/P-O/P:3.75KV/	AC I/P-FG:1.88	KVAC O/P-FG:	0.5KVAC	,	,			
SAFETY &	ISOLATION RESISTANCE	I/P-O/P:100M OF	ims / 500VDC / 25	°C/70% RH						
MC	EMC EMISSION	//P-O/P:100M Ohms / 500VDC / 25°C / 70% RH Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≧ 75% load); EN61000-3-3								
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024,EN61547, light industry level, criteria A								
	MTBF	515Khrs min.	MIL-HDBK-217F ((25°C)						
THERS	DIMENSION	181.5*62*35mm		. ,						
	PACKING	0.41Kg; 30pcs/13.3Kg/0.67CUFT								
NOTE	All parameters NOT specia Ripple & noise are measun Tolerance : Includes set up Derating may be needed ui	0.41Kg; 30pcs/13.3Kg/0.67CUFT / mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. d at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. olerance, line regulation and load regulation. der low input voltage. Please check the static characteristics for more details. ed through the SVR1 on the PCR : limit of output constant current level can be adjusted through the SVR2 on the PCR.								

- 5. Output voltage can be adjusted through the SVR1 on the PCB; limit of output constant current level can be adjusted through the SVR2 on the PCB.
- 6. Constant current operation region is within 75% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
- 7. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
- 8. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.



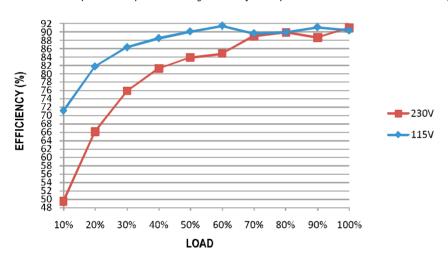


■ Power Factor Characteristic



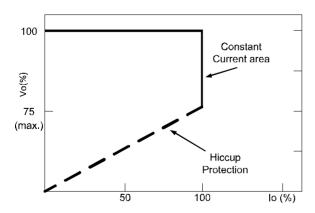
■ EFFICIENCY vs LOAD (48V Model)

PLC-45 series possess superior working efficiency that up to 87.5% can be reached in field applications.



■ DRIVING METHODS OF LED MODULE

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



Typical LED power supply I-V curve



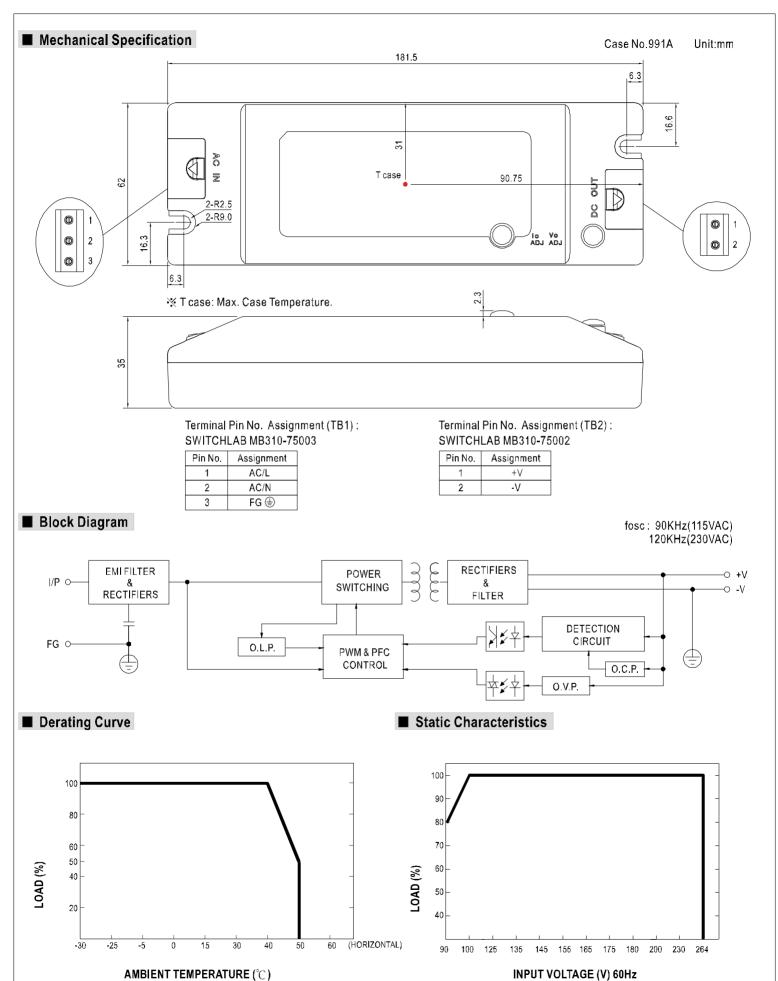


- Universal AC input / Full range
- High efficiency 89%
- · Adjustable output voltage and current level
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- Fully isolated plastic case with terminal block style of I/O
- Built-in active PFC function, comply with EN61000-3-2 class C (≧75% load)
- Pass LPS
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications (Note-2)
- · Compliance to worldwide safety regulations for lighting

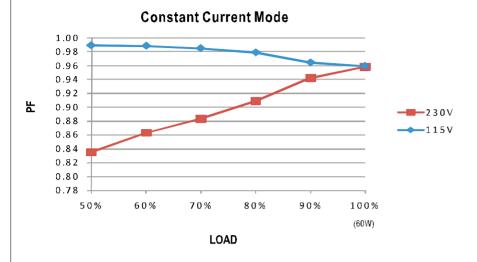
MODEL		PLC-60-12	PLC-60-15	PLC-60-20	PLC-60-24	PLC-60-27	PLC-60-36	PLC-60-48		
	DC VOLTAGE	12V	15V	20V	24V	27V	36V	48V		
	CONSTANT CURRENT REGION Note 6	8.4 ~ 12V	10.5 ~15V	14 ~ 20V	16.8 ~24V	18.9 ~27V	25.2 ~ 36V	33.6 ~ 48V		
	RATED CURRENT	5A	4A	3A	2.5A	2.3A	1.7A	1.3A		
	CURRENT RANGE	0 ~ 5A	0 ~ 4A	0 ~ 3A	0 ~ 2.5A	0 ~ 2.3A	0 ~ 1.7A	0 ~ 1.3A		
	RATED POWER	60W	60W	60W	60W	62.1W	61W	62.5W		
	RIPPLE & NOISE (max.) Note.2	2Vp-p	2.4Vp-p	1.8Vp-p	2.4Vp-p	2.7Vp-p	3.6Vp-p	4.6Vp-p		
OUTPUT	VOLTAGE ADJ. RANGE Note.5	11.5 ~ 13V	14.5 ~ 16.2V	19.5 ~ 22V	24 ~ 26V	25 ~ 30V	32.5 ~ 39V	43.6 ~ 51.8V		
	CURRENT ADJ. RANGE Note.5	3.75 ~ 5.15A	3 ~ 4.12A	2.25 ~ 3.09A	1.875 ~ 2.575A	1.725 ~ 2.369A	1.275 ~ 1.751A	0.975 ~ 1.339/		
	VOLTAGE TOLERANCE Note.3	±10%	1							
	LINE REGULATION	±3.0%								
	LOAD REGULATION	±5.0%								
	SETUP TIME	1500ms / 230VA0	3000ms / 115V	AC at full load						
	VOLTAGE RANGE Note.4	90 ~ 264VAC	127 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF>0.98/115VAC	, PF>0.9/230VAC	at full load (Please	e refer to "Power Fa	actor Characteristic	" curve)			
NPUT	EFFICIENCY (Typ.)	85%	86%	87.5%	87%	88%	89%	89%		
	AC CURRENT (Typ.)	0.8A/115VAC	0.4A/230VAC			·				
	INRUSH CURRENT (max.)	40A/230VAC								
	LEAKAGE CURRENT	<0.75mA / 240VA	(C							
	OVER CURRENT	95 ~ 110%								
						ault condition is ren	noved			
	SHORT CIRCUIT			lly after fault condi		T	T	T =		
PROTECTION	OVER VOLTAGE	13.8 ~ 16V	17.5 ~ 21V	23 ~ 26V	28 ~ 32V	31 ~ 35V	41 ~ 46V	54 ~ 60V		
		Protection type: Shut down o/p voltage, re-power on to recover								
	OVER TEMPERATURE	95°C ±10°C (TSW1) detect on heatsink of power transistor								
			type: Shut down o/p voltage, recovers automatically after temperature goes down							
	WORKING TEMP	,	er to "Derating Cu	rve")						
	WORKING HUMIDITY	20 ~ 95% RH nor	n-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ·	- 95% RH							
	TEMP. COEFFICIENT	±0.03%/℃ (0~5	(0°C)							
	VIBRATION	10 ~ 500Hz, 2G 1	2min./1cycle, peri	iod for 72min. eac	h along X, Y, Z axe	s				
	SAFETY STANDARDS	UL1310 Class 2,	TUV EN61347-1, E	EN61347-2-13, CA	N/CSA C22.2 No. 2	23-M91(except for 4	18V) ; J61347-1, J6	1347-2-13 approv		
SAFETY&	WITHSTAND VOLTAGE	I/P-O/P:3.75KV/	AC I/P-FG:1.88	KVAC O/P-FG:0	0.5KVAC					
	ISOLATION RESISTANCE	I/P-O/P:100M Oh	ms / 500VDC / 25	°C / 70% RH						
EMC	EMC EMISSION	Compliance to El	N55015, EN55022	(CISPR22) Class	B, EN61000-3-2 C	lass C (≧75% load) ; EN61000-3-3			
	EMC IMMUNITY	Compliance to El	V61000-4-2,3,4,5,	6,8,11, EN55024,E	N61547, light indu	stry level, criteria	4			
	MTBF	515Khrs min.	MIL-HDBK-217F (25°℃)						
OTHERS	DIMENSION	181.5*62*35mm	(L*W*H)							
	PACKING		, ,							
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up Derating may be needed ur Output voltage can be adjuication. Constant current operation reconfirm special electrical	0.41Kg; 30pcs/13.3Kg/0.67CUFT / mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. If at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. olerance, line regulation and load regulation. Ider low input voltage. Please check the static characteristics for more details. Ided through the SVR1 on the PCB; limit of output constant current level can be adjusted through the SVR2 on the PCB. Idegion is within 70% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please equirements for some specific system design.								

- 7. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
- 8. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.



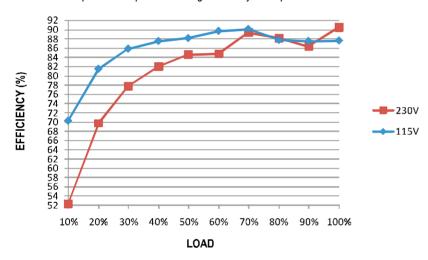


■ Power Factor Characteristic



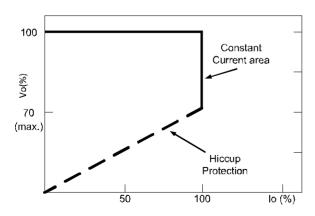
■ EFFICIENCY vs LOAD (48V Model)

PLC-60 series possess superior working efficiency that up to 89% can be reached in field applications.



■ DRIVING METHODS OF LED MODULE

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



Typical LED power supply I-V curve





■ Features :

- Universal AC input / Full range
- High efficiency 90%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- · Cooling by free air convection
- · Built-in active PFC function
- Pass LPS
- 100% full load burn-in test
- High reliability
- · Suitable for LED lighting and moving sign applications
- · Compliance to worldwide safety regulations for lighting

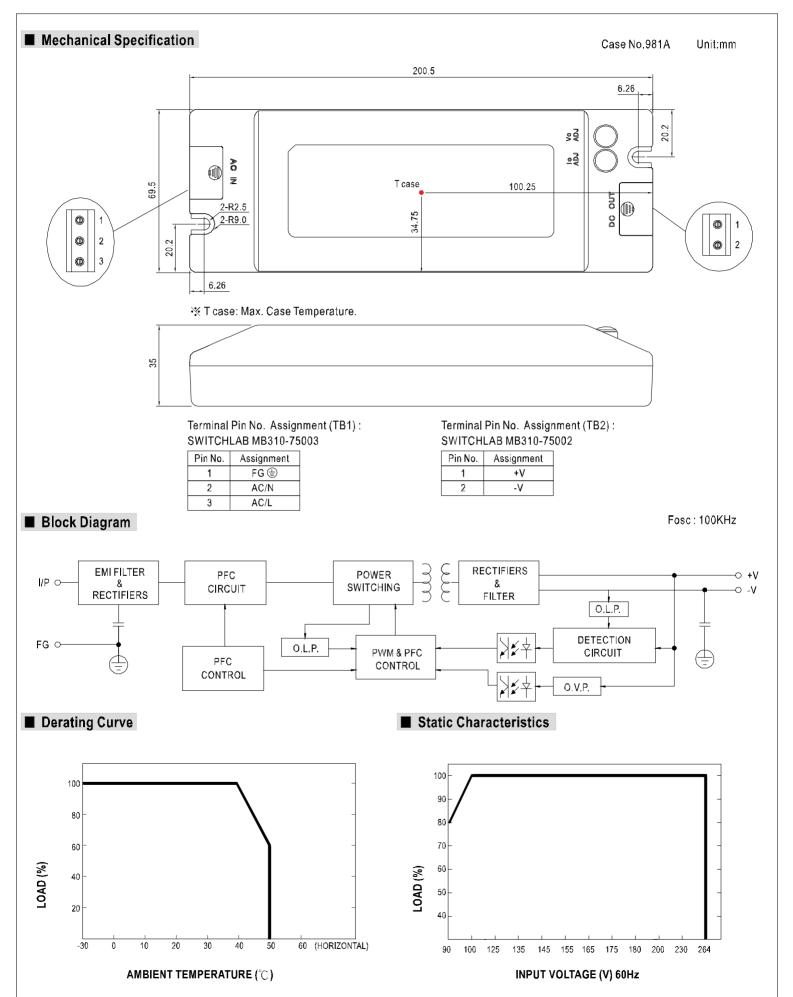
SPECIFICATION

MODEL		PLC-100-12	PLC-100-15	PLC-100-20	PLC-100-24	PLC-100-27	PLC-100-36	PLC-100-48	
	DC VOLTAGE	12V	15V	20V	24V	27V	36∨	48V	
	CONSTANT CURRENT REGION Note.4	9 ~ 12V	11.25 ~ 15V	15 ~ 20V	18 ~ 24V	20.25 ~ 27V	27 ~ 36V	36 ~ 48V	
	RATED CURRENT Note.6	5A	5A	4.8A	4A	3.55A	2.65A	2A	
	CURRENT RANGE Note.6	0 ~ 5A	0 ~ 5A	0 ~ 4.8A	0 ~ 4A	0 ~ 3.55A	0 ~ 2.65A	0 ~ 2A	
	RATED POWER Note.6	60W	75W	96W	96W	95.85W	95.4W	96W	
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150m∨p-p	150mVp-p	150mVp-p	150m∨p-p	200mVp-p	
DUTPUT	VOLTAGE ADJ. RANGE(Vo ADJ)	10.2 ~ 12V	12.8 ~ 15V	17 ~ 20V	20.4 ~ 24V	23 ~ 27V	30.6 ~ 36V	40.8 ~ 48V	
	CURRENT ADJ. RANGE(Io ADJ)	3.75 ~ 5A	3.75 ~ 5A	3.6 ~ 4.8A	3 ~ 4A	2.6 ~ 3.55A	2 ~ 2.65A	1.5 ~ 2A	
	VOLTAGE TOLERANCE Note.3	±3.0%	±3.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%	
	LINE REGULATION	±1.0%		•	·	·	·		
	LOAD REGULATION	±2.0%							
	SETUP, RISE TIME	1200ms, 80ms/23	30VAC 1200ms, 80	0ms/115VAC at fu	II load				
	HOLD UP TIME (Typ.)	60ms/230VAC 3	0ms/115VAC at full	load					
	VOLTAGE RANGE Note.5	90 ~ 264VAC	127 ~ 370VDC						
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR (Typ.)	PF>0.95/115VAC	, PF>0.95/230VAC	at full load (Pleas	se refer to "Power F	actor Characteristic	c" curve)		
NPUT	EFFICIENCY (Typ.)	84.5%	86.5%	90%	90%	90%	90%	89%	
	AC CURRENT (Typ.)	12V:0.8A/115VA	C 0.4A/230VAC	15V:0.9A/11	5VAC 0.45A/230	VAC 20V ~ 48	V:1.1A/115VAC	0.55A/230VAC	
	INRUSH CURRENT (Typ.)	COLD START 40	A/230VAC						
	LEAKAGE CURRENT	<0.75mA / 240VA	/C						
	OVED CURRENT (Tyre) Note 4	95 ~ 102%							
	OVER CURRENT (Typ.) Note.4	Protection type:	Constant current lir	miting, recovers a	utomatically after fa	ault condition is rem	noved		
NOTE OTION	0.722.70124.02	13 ~ 16V	16.5 ~ 20V	22 ~ 27V	27 ~ 34V	30 ~ 36∨	39 ~ 48V	52 ~ 64V	
KOTECTION	OVER VOLTAGE	Protection type:	Shut down and late	h off o/p voltage,	re-power on to reco	over			
	AVED TEMPEDATURE	90°C ±10°C (RTF	H2)						
	OVER TEMPERATURE	Protection type:	Shut down o/p volt	tage, re-power or	n to recover				
	WORKING TEMP.	-30 ~ +50°C (Ref	er to "Derating Cur	ve")					
	WORKING HUMIDITY	20 ~ 95% RH nor	n-condensing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 °	~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 5	50°C)						
	VIBRATION	10 ~ 500Hz, 2G	12min./1cycle, perio	od for 72min. eac	h along X, Y, Z axes	3			
	SAFETY STANDARDS Note.7	UL1310 Class 2, T	UV EN60950-1, EN61	347-1, EN61347-2-	-13, CAN/CSA C22.2	No. 223-M91(except f	for 48V) ; J61347-1,	J61347-2-13 approv	
CAFETVO	WITHSTAND VOLTAGE	UL1310 Class 2, TUV EN60950-1, EN61347-1, EN61347-2-13, CAN/CSA C22.2 No. 223-M91(except for 48V); J61347-1, J61347-2-13 approved I/P-O/P:3.75KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC							
SAFETY &	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH							
EMC	EMC EMISSION	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2,-3, Class C (≥70% load) ; EN61000-3-3							
	EMC IMMUNITY	Compliance to E	N61000-4-2,3,4,5,6	,8,11, EN61547, I	EN55024, light indu	ıstry level, (surge 4I	KV), criteria A		
	MTBF	297.9Khrs min.	MIL-HDBK-217F	(25°C)					
OTHERS	DIMENSION	200.5*69.5*35mi	m (L*W*H)						
	PACKING	0.52Kg; 25pcs/14	Kg/0.65CUFT						
NOTE	1. All parameters NOT specia	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.							

NOTE

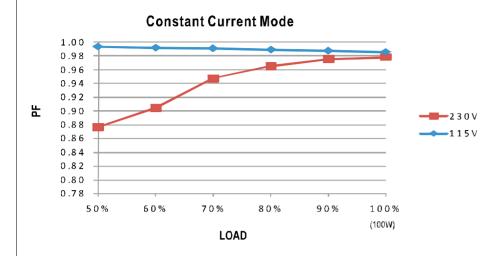
- 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1ut & 47uf parallel capacitor.
- 3. Tolerance: includes set up tolerance, line regulation and load regulation.
- 4. Constant current operation region is within 75% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
- 5. Derating may be needed under low input voltage. Please check the static characteristics for more details.
- 6. This is the maximum possible output current and power. Over load protection may be activated slightly below this level to comply with the requirement of UL1310 class 2.
- 7. Safety and EMC design refer to EN60598-1, subject 8750(UL), CNS15233, GB7000.1, FCC part18.
- 8. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.





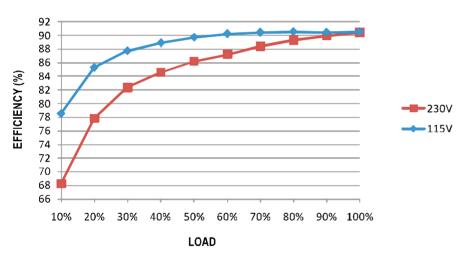


■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (48V Model)

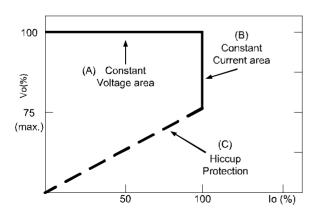
PLC-100 series possess superior working efficiency that up to 91% can be reached in field applications.



■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs. Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode [with LED driver, at area (A)] and CC mode [direct drive, at area (B)].



Typical LED power supply I-V curve

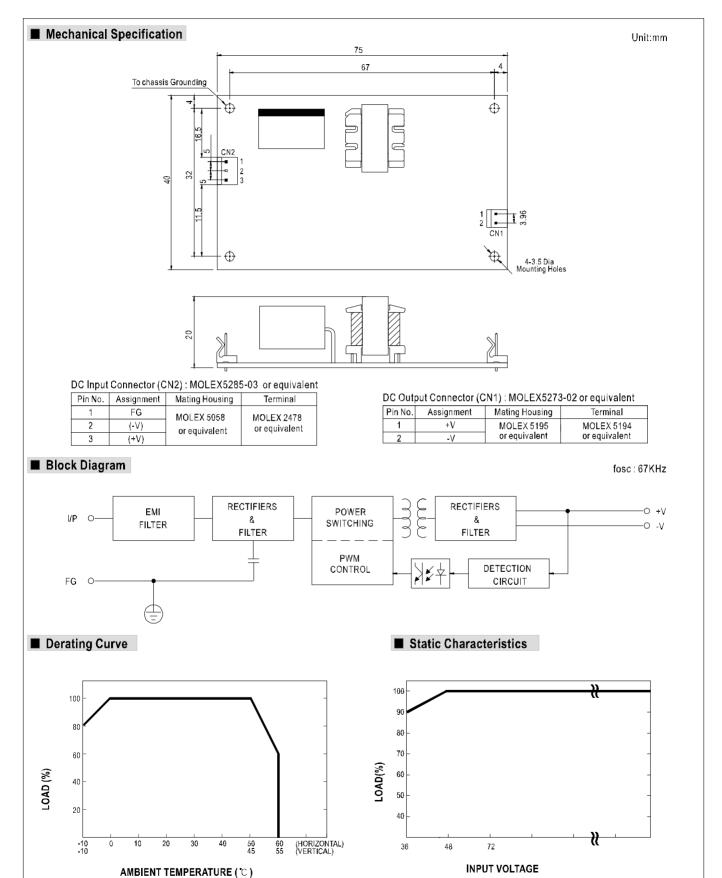




- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Fix switching frequency at 67KHz
- Low cost
- High reliability

MODEL		P\$D-05-05	PSD-05-12	PSD-05-24				
	DC VOLTAGE	5V	12V	24V				
	RATED CURRENT	1A	0.45A	0.22A				
	CURRENT RANGE	0 ~ 1A	0 ~ 0.5A	0 ~ 0.25A				
	RATED POWER	5W	5.4W	5.28W				
OUTPUT	RIPPLE & NOISE (max.) Note.2	50mVp-p	100m∨p-p	150mVp-p				
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%				
	LINE REGULATION	±1.0%	±1.0%	±0.5%				
	LOAD REGULATION	±1.0%	±1.0%	±0.5%				
	SETUP, RISE, HOLD UP TIME	1.2s, 20ms, at full load						
	VOLTAGE RANGE	36 ~ 72VDC						
INPUT	EFFICIENCY(Typ.)	75%	78%	78%				
	DC CURRENT(Typ.)	0.15A/48V						
	OVERLOAD	Above 105% rated output power						
	OVERLOAD	rotection type : Fold back current limiting, recovery automatically after fault condition is removed						
PROTECTION	OVER VOLTAGE	5.75~ 6.75V	13.8~16.2V	27.6~ 32.4V				
PROTECTION	OVER VOLIAGE	Protection type: Hiccup mode, recovery a	utomatically after fault condition is removed					
	OVER TEMPERATURE	U1 Tj140 typically(U1)detect on main co	ontrol IC					
	OVER TEMPERATURE	Protection type: Hiccup mode, recovery a	utomatically after temperature goes down					
	WORKING TEMP.	-10 ~ +60 °C (Refer to output load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 50°C)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 6	60min. each along X, Y, Z axes					
	WITHSTAND VOLTAGE	I/P-O/P:2KVAC						
SAFETY &	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500	0VDC / 25°C / 70% RH					
EMC	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class	s B					
	EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 6, 8 EN	V50204, EN55024, EN61000-6-1, light indu	stry level, criteria A				
OTHERS	DIMENSION	75*40*20mm (L*W*H)						
OTHERS	PACKING	50mg;120pcs/6.25Kg/1CUFT						
NOTE	1. All parameters NOT specially mentioned are measured at 48VDC 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.							





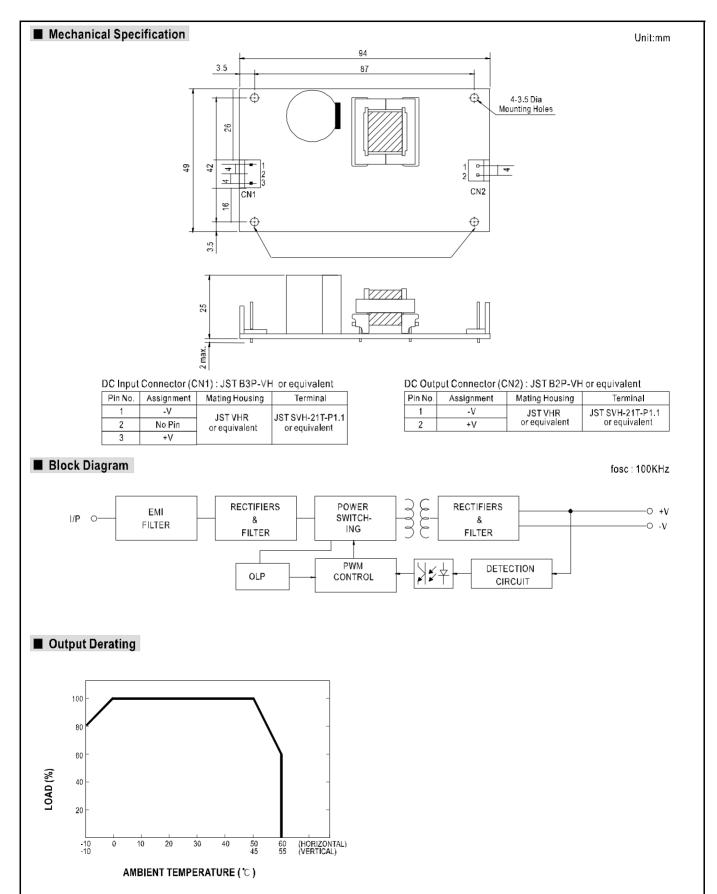




- Protections:Short circuit/Over load /Over voltage/Polarity
- Cooling by free air convection
- 100% full load burn-in test
- Low cost
- High reliability

MODEL		PSD-15A-05	PSD-15B-05	PSD-15C-05	PSD-15A-12	PSD-15B-12	PSD-15C-12	PSD-15A-24	PSD-15B-24	PSD-15C-24
	DC VOLTAGE	5V	'	'	12V		•	24V	•	•
	RATED CURRENT	3A			1.25A			0.6A		
	CURRENT RANGE	0 ~ 3A			0 ~ 1.25A			0 ~ 0.6A		
OUTPUT	RATED POWER	15W 15W 14.4W								
OUIFUI	RIPPLE & NOISE (max.) Note.2	50mVp-p 100mVp-p 100mVp-p								
	VOLTAGE TOLERANCE Note.3	± 2.0%	1							
	LINE REGULATION	± 1.0%			<u>±</u> 1.0%			± 0.5%		
	LOAD REGULATION	<u>+</u> 1.0%			<u>±</u> 1.0%			± 0.5%		
	SETUP, RISE, HOLD UP TIME	2.5s, 25ms, -	2.5s, 25ms,/12VDC/24VDC/48VDC at full load							
	VOLTAGE RANGE	A: 9.2~18VE	OC (12VDC)	B:18 ~ 36VD	C (24VDC)	C:36~72VDC	(48VDC)			
INPUT	EFFICIENCY(Typ.)	74%	%						78%	79%
	DC CURRENT(Typ.)	1.9A/12VDC	A/12VDC 0.9A/24VDC 0.45A/48VDC						•	
	OVER LOAD	105% -150%	rated output p	ower						
PROTECTION	OVER LOAD	Protection typ	oe : hiccup mo	de ,recovery a	utomatically af	ter fault condit	ion is removed			
	0.720.74.02	5.75 ~ 6.75V 13.8~ 16.2V 27.6 ~ 32.4V							/	
	OVER VOLTAGE	Protection typ	e : Shut off o/	p voltage, clam	ping by zener	diode		1		
	WORKING TEMP.	-		load derating cu			nsing			
	WORKING HUMIDITY	20 ~ 95% RH	non-condensi	ing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 1	0 ~ 95% RH							
	TEMP. COEFFICIENT	±0.05%/℃ (0	~ 50°C)							
	VIBRATION	10 ~ 500Hz, 2	2G 10min./1cy	cle, Period for	60min.each al	ong X, Y, Z axe	·S			
	WITHSTAND VOLTAGE	I/P-O/P:2KV/	AC .							
SAFETY & EMC	ISOLATION RESISTANCE	I/P-O/P:100N	1 Ohms/500VI	DC / 25°C/ 70%	RH					
•	EMI CONDUCTION&RADIATION	Compliance to	o EN55022(CI	ISPR22) CLAS	S B					
	EMS IMMUNITY	Compliance to	o EN61000-4-	2, 3, 4, 6, 8 EN	I55024, EN610	000-6-1 Light in	ndustry level, o	riteria A		
	MTBF	740.4Khrs mi	n. MIL-HDBK	-217F(25°℃)						
OTHERS	DIMENSION	94*49*25mm (L*W*H)								
	PACKING	81mg;120pcs	:/10.72Kg							
NOTE	2.Ripple & noise are measue 3.Tolerance:includes set up 4. The power supply is consi	ed at 20 MHz tolerance,lii dered a com	If y mentioned are measured at normal input, rated load and 25°C of ambient temperature. If at 20 MHz of bandwidth by using a 12inch twisted pair-wire termined with a 0.1uf & 47uf capacitor. It is a component which will be installed into a final equipment. The final equipment must be re-confirmed at its series. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power."							



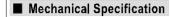




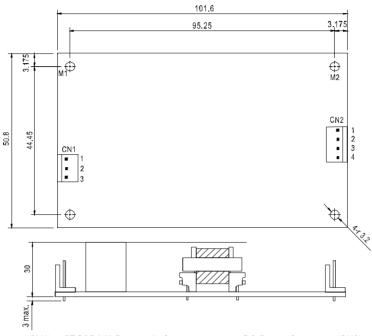
- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage/Reverse polarity
- 1500VAC I/O isolation
- Cooling by free air convection
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Low cost
- High reliability

MODEL		PSD-30A-5	PSD-30B-5	PSD-30C-5	PSD-30A-12	PSD-30B-12	PSD-30C-12	PSD-30A-24	PSD-30B-24	PSD-30C-24			
	DC VOLTAGE	5V	'	'	12V	12V		24V	24V				
	RATED CURRENT	5A			2.5A	2.5A			1.25A				
	CURRENT RANGE	0 ~ 5A			0 ~ 2.5A			0 ~ 1.25A					
	RATED POWER	25W			30W			30W					
OUTDUT	RIPPLE & NOISE (max.) Note.2	100mVp-p			120mVp-p			150mVp-p					
OUTPUT	VOLTAGE ADJ. RANGE	4.5 ~ 5.5VDC			11 ~ 13.5VDC	;		22 ~ 26VDC					
	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%					
	SETUP, RISE, HOLD UP TIME	2s, 50ms,	at full load										
	VOLTAGE RANGE	A:9 ~ 18VDC	B:18 ~ 30	6VDC C:	36 ~ 72VDC								
INPUT	EFFICIENCY (Typ.)	77%	79%	80%	77%	80%	82%	78%	83%	83%			
	DC CURRENT	4.5A/12V		•	2.5A/24V	•	,	1.1A/48V	,				
	OVERLOAD		ated output po be: Hiccup mo		utomatically af	ter fault conditi	on is removed						
PROTECTION		6 ~ 7.5V	•		14 ~ 16.5V			27 ~ 32.5V					
	OVER VOLTAGE	Protection typ	e : Hiccup mo	de, recovers a	utomatically aft	er fault conditie	on is removed	1					
	REVERSE POLARITY	By internal fu	se open										
	WORKING TEMP.	-20 ~ +55°C (Refer to outpu	t load derating	curve)								
	WORKING HUMIDITY	20 ~ 90% RH	non-condensi	ng									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C,	10 ~ 95% RH										
	TEMP. COEFFICIENT	±0.03%/℃ (0	~50℃)										
	VIBRATION	10 ~ 500Hz, 2	2G 10min./1cy	cle, 60min. eac	ch along X, Y, Z	axes							
	SAFETY STANDARDS	Design refer t	o LVD										
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5K\	/AC I/P-FG:	1.5KVAC O/	P-FG:0.5KVAC	,							
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-F	G, O/P-FG:10	0M Ohms/500\	VDC								
(Note 4)	EMI CONDUCTION & RADIATION	Compliance t	o EN55022 (C	ISPR22) Class	В								
	EMS IMMUNITY	Compliance t	o EN61000-4-2	2,3,4,6,8; ENV	50204, EN 550	24, light indus	try level, criteri	a A					
	MTBF	902.4K hrs m	2.4K hrs min. MIL-HDBK-217F(25°ℂ)										
OTHERS	DIMENSION	101.6*50.8*3	1.6*50.8*30mm (L*W*H)										
	PACKING		15kg8 4pcs/12.6kg/0.82CUFT										
NOTE	Ripple & noise are measure Tolerance : includes set up	ed at 20MHz o tolerance, line	of bandwidth be regulation ar	y using a 12" nd load regulat	twisted pair-wi	re terminated	with a 0.1uf &	47uf parallel c	nentioned are measured at 12,24,48VDC input, rated load and 25°C of ambient temperature. It 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. By the rance, line regulation and load regulation. It a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets				





Unit:mm



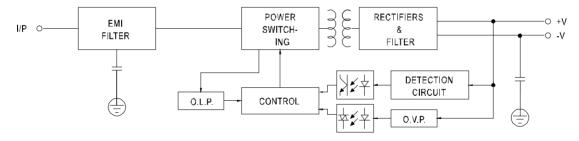
AC Input Connector (CN1): JST B3P-VH-B or equivalent

	Pin No.	Assignment	Mating Housing	Terminal
	1	DC-	JST VHR	JST SVH-21T-P1.1
ĺ	3	DC+	or equivalent	orequivalent
	2	NC	'	

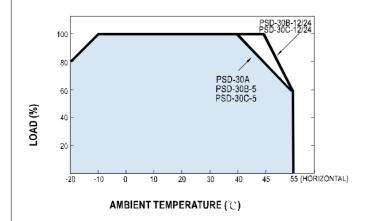
DC Output Connector (CN2): JST B4P-VH-B or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1,2	+ V	JST VHR	JST SVH-21T-P1.1
3,4	-V	or equivalent	or equivalent

■ Block Diagram



■ Derating Curve





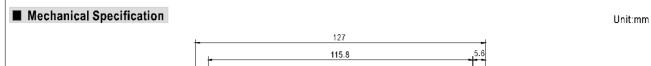


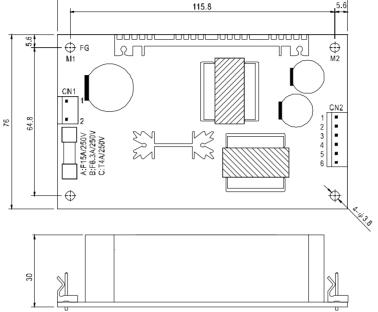
■ Features :

- 2:1 wide input range
 Protections: Short circuit/Over load /Over voltage/Polarity
 Cooling by free air convection
- Built-in EMI filter, low ripple noise
 100% full load burn-in test
- Fixed switching frequency at 96KHZ
- · Low cost
- · High reliability

MODEL		PSD-45A-05	PSD-45B-05	PSD-45C-05	PSD-45A-12	PSD-45B-12	PSD-45C-12	PSD-45A-24	PSD-45B-24	PSD-45C-24
	DC VOLTAGE	5V	5V	5V	12V	12V	12V	24V	24V	24V
	RATED CURRENT	6A	9A	9 A	2.5A	3.75A	3.75A	1.25A	1.875A	1.875A
	CURRENT RANGE	0 ~ 6A	0 ~ 9A	0 ~ 9A	0~2.5A	0 ~ 3.75A	0 ~ 3.75A	0 ~ 1.25A	0 ~ 1.875A	0 ~ 1.875A
	RATED POWER	30W	45W	45W	30W	45W	45W	30W	45W	45W
OUTPUT	RIPPLE & NOISE (max.) Note.2	100mVp-p 120mVp-p						150mVp-p	•	
	VOLTAGE ADJ RANGE	4.5 ~ 5.5V			10.8 ~13.2V			21.6 ~ 26.4V		
	VOLTAGE TOLERANCE Note.3	± 2.0%			± 2.0%			± 2.0%		
	LINE REGULATION	± 1.0%			± 1.0%			±0.5%		
	LOAD REGULATION	± 1.0%			± 1.0%			±0.5%		
	SETUP, RISE, HOLD UP TIME	1000ms, 50m	ıs,/12VDC	/24VDC at full	load; 1500ms,	50ms,48VD	C at full load	•		
	VOLTAGE RANGE	A: 9.2 ~18VDC (12VDC) B:18 ~ 36VDC (24VDC) C:36~72VDC(48VDC)								
INPUT	EFFICIENCY(Typ.)	74%	74% 77% 80% 78% 82% 83% 79% 85%							86%
	DC CURRENT(Typ.)	3.5A/12VDC	2.5A/24VDC	1.2A/48VDC						
	OVER LOAD	105% -160% rated output power								
	OVERLOAD	Protection typ	e :shut down,	Re-power on	after fault cond	lition is remove	ed			
PROTECTION	OVED VOLTAGE	5.75 ~ 6.75V	10%load		13.8~ 16.2V/	10%load		27.6 ~ 32.4V	7/10%load	
	OVER VOLTAGE	Protection typ	e : Hiccup ma	de, recovery a	utomatically a	fter fault condit	ion is removed	1		
	WORKING TEMP.	-10 ~ +60°C	(Refer to outp	ut load derating	g curve),20~90	0%RH non-con	densing			
	WORKING HUMIDITY	20 ~ 95% RH	non-condensi	ng						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.05%/°C (0~50°C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, Period for 60min.each along X, Y, Z axes								
	SAFETY STANDARDS	EN60950-1 0	B approved b	y TUV						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5K	VAC I/P-FG	:1.5KVAC O	/P-FG:0.5KVA	ıc				
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-F	G, O/P-FG:10	00M Ohms/500	VDC / 25°C/ 7	0% RH				
	EMI CONDUCTION&RADIATION	Compliance to	EN55022(CI	SPR22) CLAS	S B					
	EMS IMMUNITY	Compliance t	o EN61000-4-	2, 3, 4, 6, 8 EN	N55024, EN61	000-6-1 Light ir	ndustry level, o	criteria A		
	MTBF	329.3Khrs m		BK-217F (25°C			<u> </u>			
OTHERS	DIMENSION	127*76*30mr			· /					
O I I I I I	PACKING			CUFT						
NOTE	1.All parameters NOT special 2.Ripple & noise are measure 3.Tolerance:includes set up	0.19Kg;72pcs/15.6Kg/1.35CUFT cially mentioned are measured at normal input,rated load and 25°C of ambient temperature. ued at 20 MHz of bandwidth by using a 12inch twisted pair-wire termined with a 0.1uf & 47uf capacitor. up tolerance,line regulation and load regulation. N and OFF the power supply continuously is 2 seconds.					tor.			







DC Input Connector (CN1): Molex 5277-02 or equivalent

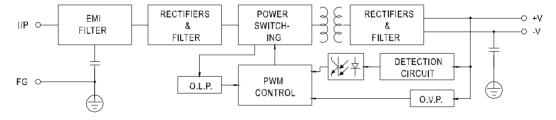
Pin No.	Assignment	Mating Housing	Terminal
1	Vin-	Molex 5195	Molex 5194
2	Vin+	or equivalent	or equivalent

DC Output Connector (CN2): Molex 5273-06 or equivalent

ſ	Pin No.	Assignment	Mating Housing	Terminal
	1,2,3	+V	Molex 5195	Molex 5194
ſ	4,5,6	-V	or equivalent	or equivalent

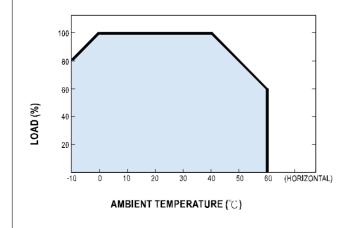
■ Block Diagram

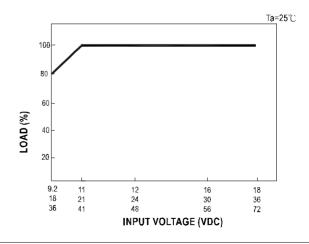
fosc:96KHz



■ Output Derating

■ Static Characteristics





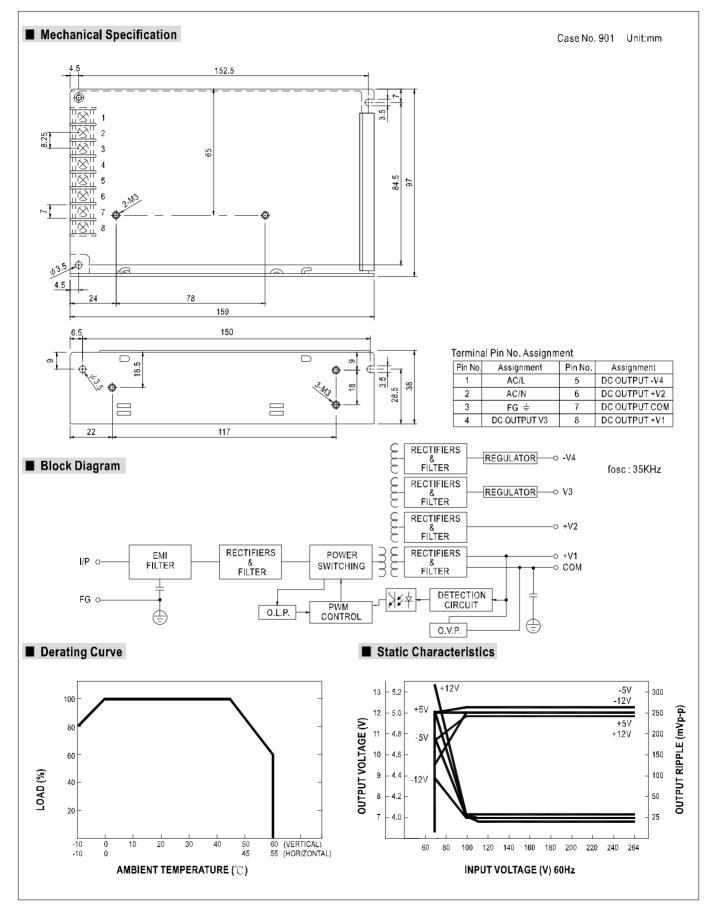




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 35KHz

MODEL		Q-60B			Q-60C Q-60D								
	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	СНЗ	CH4
	DC VOLTAGE	5 V	12V	-5V	-12V	5 V	15V	-5V	-15V	5 V	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			60W	ı		II.	62W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-р 120mVp-р 100mVp-р 120mVp-р			100mVp-p	120mVp-p	100mVp-p	120mVp-p	100mVp-p	120mVp-p	150mVp-p	120mVp-p
OUTPUT	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V			CH1: 4.75				CH1: 4.75				
	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, 20	ms/230VA	C 160	0ms, 20ms	/115VAC a	full load	'					
	HOLD UP TIME (Typ.)	70ms/230	VAC	15 ms/115 V	AC at full lo	ad							
	VOLTAGE RANGE	85 ~ 264V	AC 1:	20 ~ 370VE	C								
	FREQUENCY RANGE	47 ~ 63Hz											
INPUT	EFFICIENCY (Typ.)	70%				72%				75%			
INPUT	AC CURRENT (Typ.)	2A/115VA	A/115VAC 0.8A/230VAC										
	INRUSH CURRENT (Typ.)	COLD ST	COLD START 15A/115VAC 30A/230VAC										
LEAKAGE CURRENT <1mA / 240VAC													
		105 ~ 150%/115VAC rated output power											
	OVERLOAD	Protection	type : Hic	cup mode,	recovers au	utomatically	after fault	condition is	removed				
PROTECTION		5V: 5.75 ~ 6.75VDC											
	OVER VOLTAGE	Protection type: Hiccup mode, recovers automatically after fault condition is removed											
	WORKING TEMP.	-10 ~ +60℃ (Refer to "Derating Curve")											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85	°C, 10 ~ 95	% RH									
	TEMP. COEFFICIENT	±0.03%/°	○ (0 ~ 50°C) on +5V o	utput								
	VIBRATION	10 ~ 500H	lz, 2G 10m	in./1cycle,	60min. eac	h along X, \	/, Z axes						
	SAFETY STANDARDS	UL60950-	1 approved	b									
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3	KVAC I/F	P-FG:1.5K\	/AC O/P-	FG:0.5KVA	С						
EMC	ISOLATION RESISTANCE	I/P-O/P, I/	P-FG, O/P	-FG:100M	Ohms / 500	VDC / 25℃	/70% RH						
(Note 4)	EMC EMISSION	Complian	ce to EN55	022 (CISP	R22) Class	B, EN6100	0-3-2,-3						
	EMC IMMUNITY	Complian	ce to EN61	000-4-2,3,	4,5,6,8,11,	light indust	y level, cri	teria A					
	MTBF	284.8K hr	smin. N	IIL-HDBK-2	217F (25°℃)							
OTHERS	DIMENSION	159*97*3	Bmm (L*W*	Ή)									
	PACKING			(g/0.75CUF									
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up The power supply is consider.	ed at 20MI tolerance,	lz of band line regula	width by us	sing a 12" t ad regulati	wisted pair on.	-wire termi				el capacito	r.	





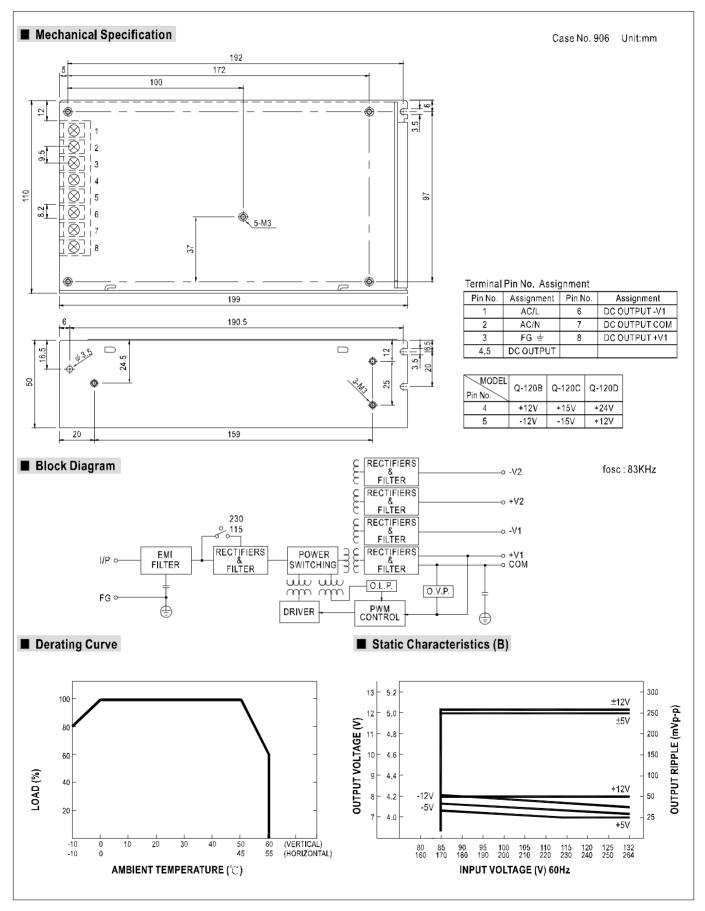




- AC input range selected by switch
- Protections: Short circuit / Overload / Over voltage
- 100% full load burn-in test
- Fixed switching frequency at 25KHz

MODEL		Q-120B				Q-120C			Q-120D				
	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	СНЗ	CH4	CH1	CH2	СНЗ	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
OUTPUT	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, 50	ms, 20ms	at full load									
	VOLTAGE RANGE	88 ~ 132V	AC/176 ~ 2	64VAC sel	ected by sw	vitch 2	40 ~ 370VI	oc .					
	FREQUENCY RANGE	47 ~ 63Hz											
INPUT	EFFICIENCY (Typ.)	77%				76%				80%			
	AC CURRENT	2.8A/115\	2.8A/115VAC 1.6A/230VAC										
	INRUSH CURRENT (max.)	COLD ST	COLD START 35A										
	LEAKAGE CURRENT	<3.5mA/	<3.5mA/240VAC										
PROTECTION		105 ~ 135% rated output power											
	OVERLOAD	Protection type: Shut down o/p voltage, re-power on to recover											
	0VED VOLTAGE	CH1:5.75 ~ 6.75VDC											
	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover											
	WORKING TEMP.	-10 ~ +60 °C (Refer to "Derating Curve")											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	- 20 ~ + 85	°C, 10 ~ 95	% RH									
	TEMP. COEFFICIENT	±0.03%/°	○ (0 ~50 ℃))									
	VIBRATION	10 ~ 500H	łz, 2G 10m	in./1cycle,	60min. eac	h along X, `	r, Z axes						
	SAFETY STANDARDS	UL60950-	1, TUV EN	60950-1, C	CC GB494	3 approved							
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3	KVAC I/F	P-FG:1.5KV	AC O/P-	FG:0.5KVA	С						
EMC	ISOLATION RESISTANCE			-FG:100M (
(Note 4)	EMC EMISSION	Complian	ce to EN55	022 (CISPF	R22) Class	B, EN6100	0-3-2,-3						
	EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A												
	MTBF	261.4K hi	smin. N	IIL-HDBK-2	217F (25°C)							
OTHERS	DIMENSION	199*110*	50mm (L*V	/*H)									
	PACKING			(g/0.95CUF									
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up The power supply is consid	ed at 20MI tolerance,	Iz of band line regula	width by us ition and lo	sing a 12" t ad regulati	wisted pair on.	-wire termi				el capacito	r.	









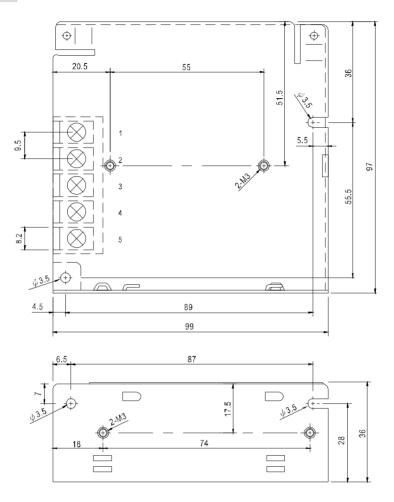
- AC input range selected by switch
- Protections:Short circuit/Over load
- Cooling by free air convection
- 100% full load burn-in
- Fixed switching frequency at 37KHz
- Lost cost
- High reliability
- 1 year warranty

MODEL		S-15-5	S-15-12	S-15-24				
	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				
ОИТРИТ	RIPPLE & NOISE (max.) Note.2	50mVp-p	50mVp-p	100mVp-p				
OUIPUI	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						
	VOLTAGE RANGE	85 ~ 132VAC / 170 ~ 264VAC selected by s	witch 240 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz						
INPUT	EFFICIENCY(Typ.)	65%	68%	72%				
INFO	AC CURRENT	0.5A/115VAC 0.25A/230VAC						
	INRUSH CURRENT(max.)	COLD START 15A/115VAC 30A/230V	/AC					
	LEAKAGE CURRENT	<0.5mA / 240VAC						
PROTECTION	OVER LOAD	105 ~ 150% rated output power						
TROTECTION	OVER LOAD	Protection type : Fold back current limiting,	rotection type : Fold back current limiting, recovers automatically after fault condition is removed					
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
ENVIRONMENT	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 STANDARDS	Design refer to UL1012						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-FG:1.5KVAC O/F						
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500V						
	EMI CONDUCTION & RADIATION	Design refer to FCC Part15 J Conduction C	Class B					
	MTBF	522.1K hrs min. MIL-HDBK-217F (25°C)					
OTHERS	DIMENSION	99*97*36mm (L*W*H)						
	PACKING	0.31Kg; 45pcs/15Kg/0.9CUFT						
NOTE								



■ Mechanical Specification

Case No. 905 Unit:mm



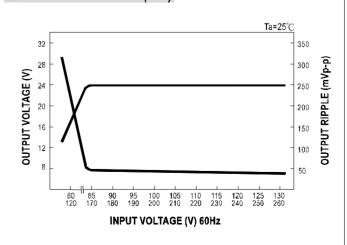
Terminal Pin. No Assignment

Pin No.	Assignment	Pin No.	Assignment
1	DC OUTPUT +V	3	FG ±
2	DC OUTPUT -V	4,5	AC INPUT

■ Derating Curve

100 80 60 LOAD (%) 40 20 (VERTICAL) (HORIZONTAL) -10 -10 AMBIENT TEMPERATURE ($^{\circ}$)

■ Static Characteristics (24V)



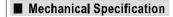


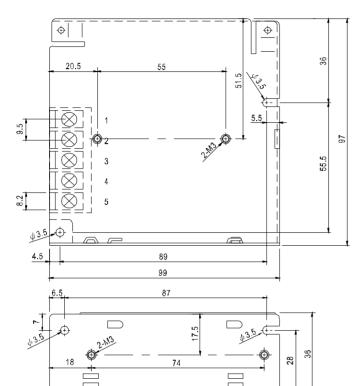


- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 56KHz

MODEL		S-25-5	S-25-12	S-25-15	S-25-24						
	DC VOLTAGE	5V	12V	15V	24V						
	RATED CURRENT	5 A	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						
OUTPUT	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 80	0ms, 50ms/115VAC at full loa	d							
	HOLD UP TIME (Typ.)	90ms/230VAC 12ms/115VAC at full load									
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370V	5 ~ 264VAC 120 ~ 370VDC								
	FREQUENCY RANGE	47 ~ 63Hz									
INPUT	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									
	OVEDI OAD	105 ~ 150% rated output power									
DDOTECTION	OVERLOAD	Protection type : Hiccup mode.	, recovers automatically after	fault condition is removed.							
PROTECTION	OVED VOLTAGE	5.75V ~ 6.75V	13.8V ~ 16.2V	17.25V ~ 20.25V	27.6V ~ 32.4V						
	OVER VOLTAGE	Protection type : Hiccup mode	, recovers automatically after	fault condition is removed							
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)									
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle	, period for 60min. each along	y X, Y, Z axes							
	SAFETY STANDARDS	UL1012, TUV EN60950-1 approved									
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5K	VAC O/P-FG:0.5KVAC								
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M	Ohms / 500VDC / 25 $^{\circ}\text{C}$ / 70%	RH							
(Note 4)	EMC EMISSION	Compliance to EN55022 (CIS	PR22) Class B, EN61000-3-2,	-3							
	EMC IMMUNITY	Compliance to EN61000-4-2,	3,4,5, EN55024, light indust	ry level, criteria A							
	MTBF	330.8K hrs min. MIL-HDBK	-217F (25°C)								
OTHERS	DIMENSION	99*97*36mm (L*W*H)									
	PACKING	0.39Kg; 45pcs/18Kg/0.9CUFT									
NOTE	 Ripple & noise are measure Tolerance : includes set up 		using a 12" twisted pair-wire to oad regulation.	nd 25°_{\circ} of ambient temperaturiterminated with a 0.1uf & 47uf ment.							







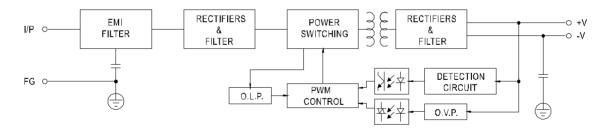
Case No. 905 Unit:mm

Terminal Pin No. Assignment

	•		
Pin No.	Assignment	Pin No.	Assignment
1	DC OUTPUT -V	4	AC/L
2	DC OUTPUT +V	5	AC/N
3	FG ±		

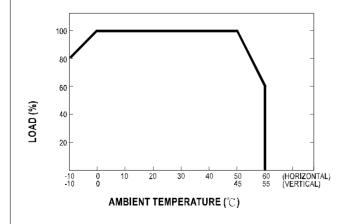
■ Block Diagram

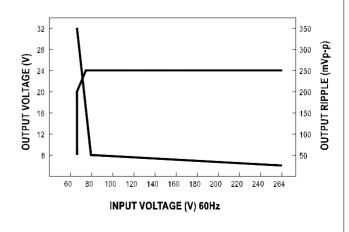
fosc:56KHz



■ Derating Curve

■ Static Characteristics (24V)









■ Features :

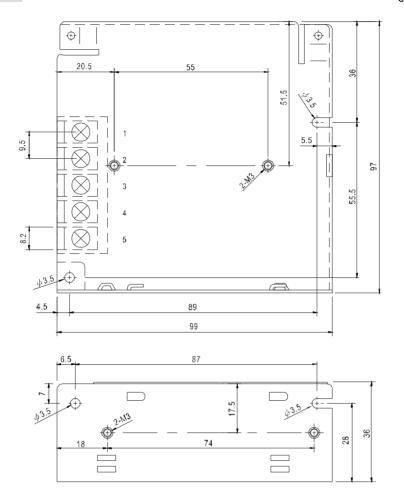
- AC input range selected by switch
- Protections:Short circuit/Over load
- Cooling by free air convection
- 100% full load burn-in
- Fixed switching frequency at 37KHz
- Lost cost
- High reliability
- 1 year warranty

MODEL		S-25-5	S-25-12	S-25-24				
	DC VOLTAGE	5V	12V	24V				
	RATED CURRENT	5A	2.1A	1.1A				
	CURRENT RANGE	0~5A	0~2.1A	0~1.1A				
	RATED POWER	25W	25.2W	26.4W				
OUTPUT	RIPPLE & NOISE (max.) Note.2	50mVp-p	50m∨p-p	100mVp-p				
JUIPUI	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						
	VOLTAGE RANGE	85 ~ 132VAC / 170 ~ 264VAC selected by	switch 240 ~ 370VDC	;				
	FREQUENCY RANGE	47 ~ 63Hz						
INPUT	EFFICIENCY(Typ.)	65%	68%	72%				
	AC CURRENT	0.75A/115V 0.4A/230VAC		·				
	INRUSH CURRENT(max.)	COLD START 15A/115VAC 30A/230VAC						
	LEAKAGE CURRENT	<0.5mA / 240VAC						
DOTECTION	OVERLOAD	105 ~ 150% rated output power						
RUIECTION	OVER LOAD	Protection type: Fold back current limiting, recovers automatically after fault condition is removed						
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
NVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH non-condensing						
	TEMP. COEFFICIENT	±0.02%/℃ (0 ~ 50°C)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for	r 60min. each along X, Y, Z	axes				
	SAFETY STANDARDS	Design refer to UL1012						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-FG:1.5KVAC (D/P-FG:0.5KVAC					
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500	OVDC					
	EMI CONDUCTION & RADIATION	Design refer to FCC Part15 J Conduction	Class B					
	MTBF	522.1K hrs min. MIL-HDBK-217F (25°	C)					
OTHERS	DIMENSION	99*97*36mm (L*W*H)						
	PACKING	0.31Kg; 45pcs/15Kg/0.9CUFT						
NOTE	2 Ripple & noise are measu	cially mentioned are measured at 230 ured at 20MHz of bandwidth by using up tolerance, line regulation and load	a 12" twisted pair-wire to	nd 25°C of ambient temperature. erminated with a 0.1uf & 47uf parallel capacitor.				



■ Mechanical Specification

Case No. 905 Unit:mm

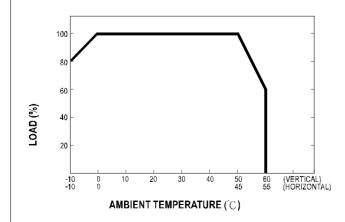


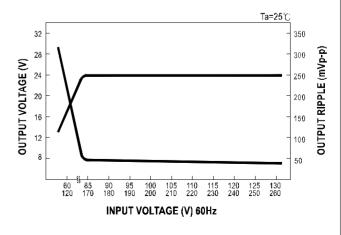
Terminal Pin. No Assignment

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)









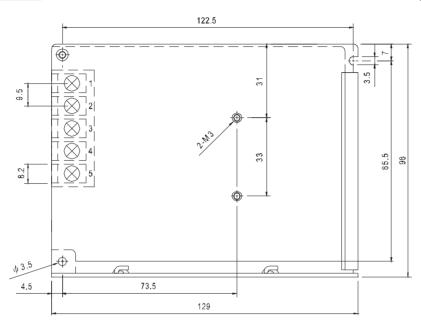
- AC input range selected by switch
- Protections:Short circuit/Over load
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 37KHz
- 1 year warranty

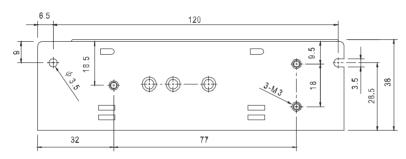
MODEL		S-35-5	S-35-12	S-35-15	S-35-24				
	DC VOLTAGE	5V	12V	15V	24V				
	RATED CURRENT	7A	3A	2.4A	1.5A				
	CURRENT RANGE	0 ~ 7A	0 ~ 3A	0 ~ 2.4A	0 ~ 1.5A				
	RATED POWER	35W	36W	36W	36 W				
OUTPUT	RIPPLE & NOISE (max.) Note.2	75mVp-p	100mVp-p	100mVp-p	100mVp-p				
JUIFUI	VOLTAGE ADJ. RANGE	4.75 ~ 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 lo	ad						
	VOLTAGE RANGE	85 ~ 132VAC / 170 ~ 264VAC	selected by switch 2	40 ~ 370VDC					
INPUT	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	<2mA / 240VAC						
PROTESTION	OVER LOAD	105 ~ 150% rated output power							
PROTECTION	OVER LUAD	Protection type: Fold back current limiting, recovers automatically after fault condition is removed							
	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle	e, period for 60min. each	along X, Y, Z axes					
	SAFETY STANDARDS	Design refer to UL1012							
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-FG:1.	5KVAC O/P-FG:0.5KVA	/C					
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100N	/I Ohms/500VDC						
	EMI CONDUCTION & RADIATION	Design refer to FCC Part15 J	Conduction Class B						
	MTBF	435.2K hrs min. MIL-HDBI	(-217F (25°C)						
OTHERS	DIMENSION	129*98*38mm (L*W*H)	. ,						
	PACKING	0.41Kg; 30pcs/13.4Kg/0.86C	UFT						
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



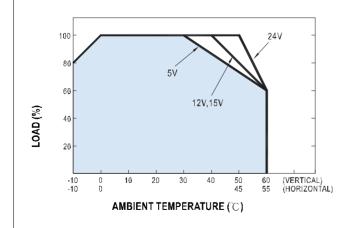


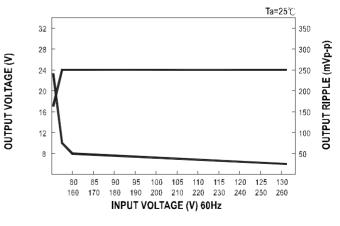
Terminal Pin. No Assignment

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

■ Output Derating

■ Static Characteristics (24V)





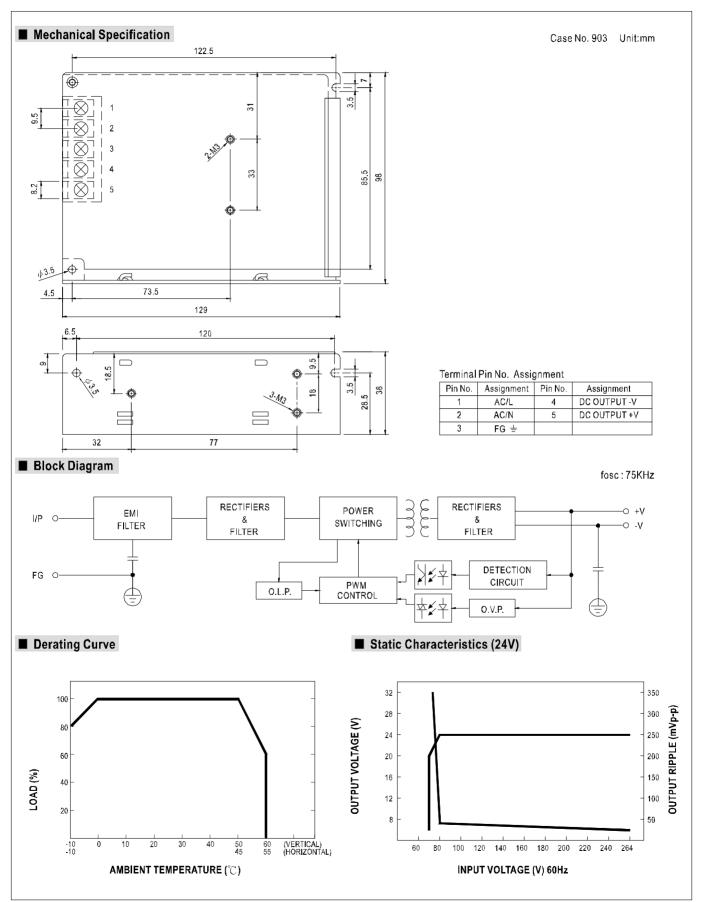




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 75KHz

MODEL		S-40-5	S-40-12	S-40-15	S-40-24				
	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	43.2W				
	RIPPLE & NOISE (max.) Note.2	75mVp-p	100mVp-p	100mVp-p	100mVp-p				
DUTPUT	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 800	ms, 50ms/115VAC at full load						
	HOLD UP TIME (Typ.)	70ms/230VAC 15ms/115VAC at full load							
	VOLTAGE RANGE	ANGE 85 ~ 264VAC 120 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
NPUT	EFFICIENCY (Typ.)	72%/115VAC	76%/115VAC	76%/115VAC	78%/115VAC				
01	AC CURRENT (Typ.)	1.2A/115VAC 0.6A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 25A/115VAC 50A/230VAC							
	LEAKAGE CURRENT	<1mA / 240VAC							
	OVERLOAD	105 ~ 150% rated output power							
PROTECTION	OVERLUAD	Protection type : Hiccup mode, r	ecovers automatically after fault	condition is removed					
ROTECTION	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25	27.6 ~ 32.4V				
	OVER VOLTAGE	Protection type: Hiccup mode, recovers automatically after fault condition is removed							
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating	Curve")						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°℃, 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	UL1012, UL60950-1, TUV EN60	950-1 approved						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KV	AC O/P-FG:0.5KVAC						
EMC	ISOLATION RESISTANCE		Ohms / 500VDC / 25°C / 70% RH						
(Note 4)	EMC EMISSION	Compliance to EN55022 (CISP	R22) Class B, EN61000-3-2,-3						
	EMC IMMUNITY	Compliance to EN61000-4-2,3	,4,5, EN55024, light industry le	vel, criteria A					
	MTBF	314.1K hrs min. MIL-HDBK-2	217F (25°€)						
OTHERS	DIMENSION	129*98*38mm (L*W*H)							
	PACKING	0.44Kg; 30pcs/13.9Kg/0.86CUF							
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.								









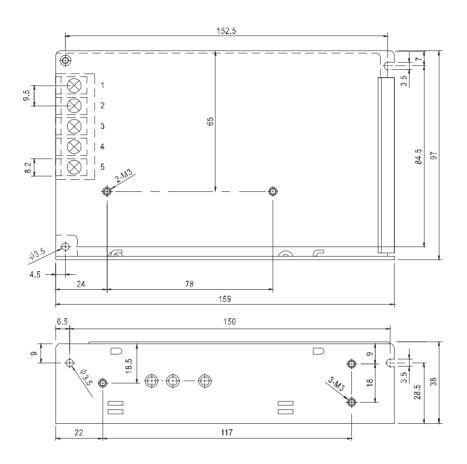
- AC input range selected by switch
- Protections:Short circuit/Over load
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 27KHz
- 1 year warranty

MODEL		S-50-5	\$-50-12	S-50-15	S-50-24				
	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				
CUIDUI	RIPPLE & NOISE (max.) Note 2	75mVp-p	100mVp-p	100mVp-p	100mVp-p				
OUTPUT	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	<u> </u>						
	VOLTAGE RANGE	85 ~ 132VAC / 170 ~ 264VAC se	elected by switch 240 ~ 37	0VDC					
	FREQUENCY RANGE	47 ~ 63Hz							
INPUT	EFFICIENCY(Typ.)	71%	78%	78%	82%				
INPU I	AC CURRENT	1.3A/115VAC 0.65A/230VAC							
	INRUSH CURRENT(max.)	COLD START 18A/115VAC	36A/230VAC						
	LEAKAGE CURRENT	<1mA / 240VAC							
	OVED LOAD	105 ~ 150% rated output power							
PROTECTION	OVER LOAD	Protection type: Fold back current limiting, recovers automatically after fault condition is removed.							
	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)							
	VIBRATION	10~500Hz, 2G 10min./1cycle, p	eriod for 60min. each along X,	/, Z axes					
	SAFETY STANDARDS	Design refer to UL1012	•						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-FG:1.5I	KVAC 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 C	onduction Class B						
	MTBF	408.3K hrs min. MIL-HDBK-2	217F (25°C)						
OTHERS	DIMENSION	159*97*38mm (L*W*H)							
	PACKING	0.51Kg; 24pcs/13.1Kg/0.7CUF	Г						
NOTE	2. Ripple & noise are measure	ly mentioned are measured at and at 20MHz of bandwidth by us tolerance, line regulation and lo	sing a 12" twisted pair-wire tern	25° of ambient temperature. ninated with a 0.1uf & 47uf paral	lel capacitor.				



■ Mechanical Specification

Case No. 901 Unit:mm

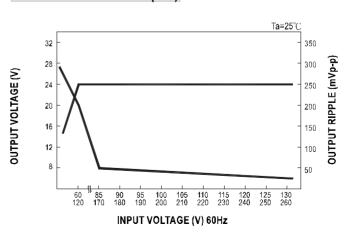


Terminal Pin. No Assignment

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

■ Output Derating

100 80 60 LOAD (%) 40 20 (VERTICAL) (HORIZONTAL) -10 -10 AMBIENT TEMPERATURE (°C)



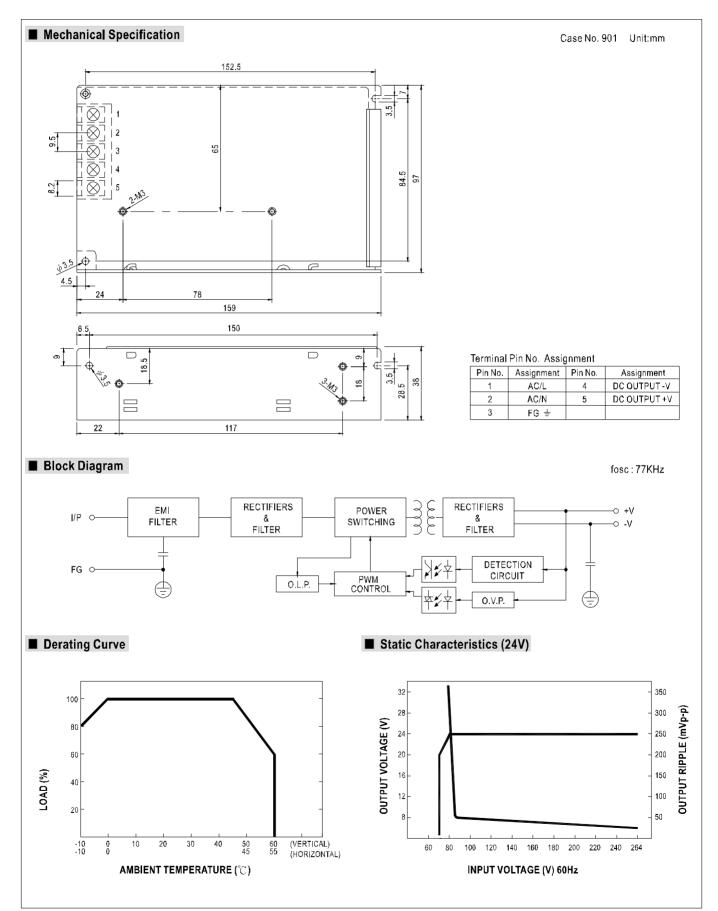




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 77KHz

MODEL		S-60-5	S-60-12	S-60-15	S-60-24							
	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	150 mVp-p	150mVp-p							
OUTPUT	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 800	ms, 50ms/115VAC at full load									
	HOLD UP TIME (Typ.)	80ms/230VAC 12ms/115V	AC at full load		24V 2.5A 0~2.5A 60W 150mVp-p 21.6~26.4V ±1.0% ±0.5% 79%							
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VD	2									
	FREQUENCY RANGE	47 ~ 63Hz										
INPUT	EFFICIENCY(Typ.)	73%	76%	77%	79%							
INFOI	AC CURRENT (Typ.)	2A/115VAC 1A/230VAC										
	INRUSH CURRENT (Typ.)	COLD START 20A/115VAC 40A/230VAC										
	LEAKAGE CURRENT	<3.5mA / 240VAC										
	AVERI AAR	105 ~ 150% rated output power										
	OVERLOAD	Protection type : Hiccup mode,	ecovers automatically after fault	condition is removed.								
PROTECTION	01/50 1/01 74 05	5 75 ~ 6 75V	13.8 ~ 16.2V	17.25 ~ 20.25	27.6 ~ 32.4V							
ROTECTION	OVER VOLTAGE	Protection type : Hiccup mode,	ecovers automatically after fault	condition is removed.								
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")										
	WORKING HUMIDITY	20 ~ 90% RH non-condensing										
NVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH										
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			21.6 ~ 26.4V ±1.0% ±0.5% ±0.5% 179%							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle,	period for 60min. each along X, Y	, Z axes	ition is removed. 25 ~ 20.25							
	SAFETY STANDARDS	UL1012, UL60950-1, TUV EN60	950-1, CCC GB4943 approved									
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KV	AC O/P-FG:0.5KVAC									
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M	Dhms / 500VDC / 25°C / 70% RH									
(Note 4)	EMC EMISSION	Compliance to EN55022 (CISP	150% rated output power tion type: Hiccup mode, recovers automatically after fault condition is removed. 6.75V 13.8 ~ 16.2V 17.25 ~ 20.25 27.6 ~ 32.4V tion type: Hiccup mode, recovers automatically after fault condition is removed. 60°C (Refer to "Derating Curve") 0% RH non-condensing 85°C, 10 ~ 95% RH 60°C (0 ~ 50°C) 00Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes 2, UL60950-1, TUV EN60950-1, CCC GB4943 approved D:3KVAC /P-FG:1.5KVAC O/P-FG:0.5KVAC P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH iance to EN55022 (CISPR22) Class B, EN61000-3-2,-3 liance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A									
	EMC IMMUNITY	Compliance to EN61000-4-2,3	,4,5,6,8,11, EN55024, light indu	ustry level, criteria A								
	MTBF	316.2K hrs min MIL-HDBK-2										
OTHERS	DIMENSION	159*97*38mm (L*W*H)										
PACKING 0.51Kg; 24pcs/13.1Kg/0.7CUFT												
NOTE	 Ripple & noise are measure Tolerance : includes set up 	lly mentioned are measured at 2 ed at 20MHz of bandwidth by us tolerance, line regulation and lo ered a component which will be	sing a 12" twisted pair-wire term ad regulation.	inated with a 0.1uf & 47uf paralle	el capacitor.							









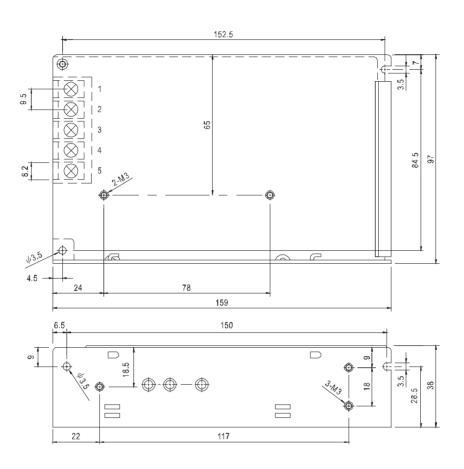
- AC input range selected by switch
- Protections:Short circuit/Over load
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 27KHz
- 1 year warranty

MODEL		S-75-5	S-75-12	S-75-15	S-75-24						
	DC VOLTAGE	5V	12V	15V	24V						
	RATED CURRENT	14A	6.3A	5A	3.2A						
	CURRENT RANGE	0~14A	0~6.3A	0~5A	0~3.2A						
	RATED POWER	70W	75.6W	75W	76.8W						
ОИТРИТ	RIPPLE & NOISE (max.) Note.2	75mVp-p	100 mVp -p	100mVp-p	100mVp-p						
OUTPUT	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									
	VOLTAGE RANGE	85 ~ 132VAC / 170 ~ 264VAC se	elected by switch 240 ~ 37	OVDC							
	FREQUENCY RANGE	47 ~ 63Hz									
INPUT	EFFICIENCY(Typ.)	71%	78%	78%	82%						
1111 01	AC CURRENT	1.7A/115V									
	INRUSH CURRENT(max.)	COLD START 18A/115VAC	36A/230VAC								
	LEAKAGE CURRENT	<1mA / 240VAC									
DDOTECTION	OVER LOAD	105 ~ 150% rated output power	105 ~ 150% rated output power								
PROTECTION	OVERLOAD	Protection type : Fold back curr	ent limiting, recovers automatic	ally after fault condition is remove	d.						
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)									
	VIBRATION	10~500Hz, 2G 10min./1cycle, p	period for 60min each along X,	Y, Z axes							
	SAFETY STANDARDS	Design refer to UL1012									
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-FG:1.5	KVAC O/P-FG:0.5KVAC								
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M									
	EMI CONDUCTION & RADIATION	Design refer to FCC Part15 J C	onduction Class B								
	MTBF	408.3K hrs min. MIL-HDBK-	217F (25°ℂ)								
OTHERS	DIMENSION	159*97*38mm (L*W*H)									
PACKING 0.51Kg; 24pcs/13.1Kg/0.7CUFT											
NOTE	2. Ripple & noise are measure	lly mentioned are measured at a ed at 20MHz of bandwidth by us tolerance, line regulation and lo	sing a 12" twisted pair-wire terr	25℃ of ambient temperature. ninated with a 0.1uf & 47uf para	llel capacitor.						



■ Mechanical Specification

Case No. 901 Unit:mm

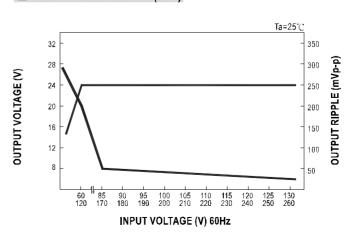


Terminal Pin No Assignment

Terrinia	emina Fin. No Assignment										
Pin No.	Assignment	Pin No.	Assignment								
1	AC/L	4	DC OUTPUT -V								
2	AC/N	5	DC OUTPUT+V								
3	EC ±										

■ Output Derating

100 80 60 LOAD (%) 40 20 (VERTICAL) (HORIZONTAL) AMBIENT TEMPERATURE (°C)







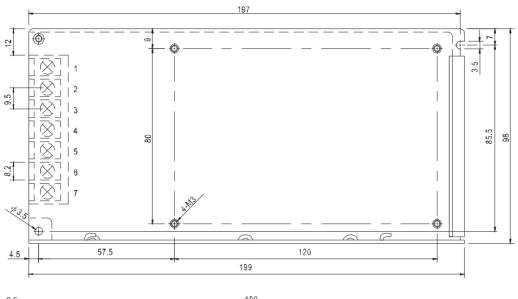
- AC input range selectable by switch
- Protections:Short circuit/Over load
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 25KHz
- Low cost
- High reliability
- 1 year warranty

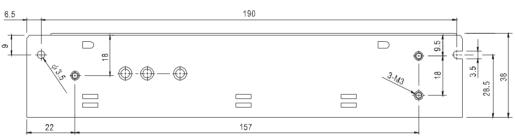
MODEL		S-100-3	S-100-5	S-100-7.5	S-100-10	S-100-12	S-100-15	S-100-18	S-100-24	S-100-27	S-100-48		
	DC VOLTAGE	3V	5V	7.5V	10V	12V	15V	18V	24V	27V	48V		
	RATED CURRENT	20A	20A	13.6A	10A	8.5A	6.7A	5.6A	4.5A	3.7A	2A		
	CURRENT RANGE	0 ~ 20A	0 ~ 20A	0 ~ 13.6A	0 ~ 10A	0 ~ 8.5A	0~6.7A	0 ~ 5.6 A	0 ~ 4.5A	0~3.7A	0 ~ 2A		
	RATED POWER	60W	100W	102W	100W	102W	100.5W	100.8W	108W	99.9W	96W		
OUTPUT	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-р	100mVp-p		
OUTPUT	VOLTAGE ADJ. RANGE	2.85 ~ 3.3V	4.75 ~ 5.5V	6.75 ~ 8.25V	9 ~ 1 1 V	10.8 ~ 13.2V	13.5 ~ 16.5V	16.2 ~ 19.8V	21.6 ~ 26.4V	26 ~ 32V	43.2 ~ 52.8		
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%		
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.3%	±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%		
	SETUP, RISE, HOLD TIME	200ms, 80ms, 20ms at full load											
	VOLTAGE RANGE	85 ~ 132VA0	C/180 ~ 264V/	AC selected b	y switch	255 ~ 370VE	OC .						
	FREQUENCY RANGE	47 ~ 63Hz	,										
INPUT	EFFICIENCY (Typ.)	70%	78%	80%	80%	81%	81%	82%	84%	84%	84%		
	AC CURRENT	2.4A/115VAC 1.2A/230VAC											
	INRUSH CURRENT (max.)	COLD STAF	RT 30A/115VA	C 60A/2	230VAC								
	LEAKAGE CURRENT	<1mA / 240\	/AC										
DDATEATION	AVED 1 A 4 B	105 ~ 150%	105 ~ 150% rated output power (150 ~ 200% rated output power for S-100-7.5 only)										
PROTECTION	OVER LOAD	Protection ty	pe : Shut dov	vn o/p voltage	, re-power o	n to recover							
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.03%/℃	0 ~ 50℃)										
	VIBRATION	10 ~ 500Hz,	2G 10min./1	cycle, 60min.	each along X	, Y, Z axes							
	SAFETY STANDARDS	Design refer	to UL1012										
SAFETY &	WITHSTAND VOLTAGE	I/P-0/P:1.5H	(VAC I/P-F	G:1.5KVAC	O/P-FG:0.5	KVAC							
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-	FG, O/P-FG:	100M Ohms/5	00VDC								
	EMI CONDUCTION & RADIATION	Design refer	to FCC Part	I5 J Conducti	on Class B								
	MTBF	322.4K hrs r	nin. MIL-H	DBK-217F (2	5°C)								
OTHERS	DIMENSION	199*98*38m	m (L*W*H)										
	PACKING	0.62Kg; 20p	cs/13.6Kg/0.	72CUFT									
NOTE	All parameters NOT spec Bipple & noise are measu Tolerance : includes set to	ured at 20M	Hz of bandv	vidth by usin	g a 12" twis	ted pair-wir				rallel capac	itor.		



■ Mechanical Specification

Case No. 902 Unit:mm





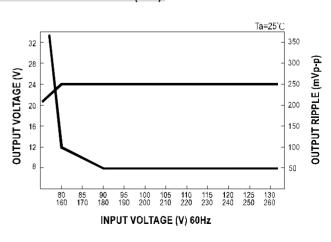
Terminal Pin. No Assignment

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

■ Derating Curve

S-100-12~48 100 80 S-100-5 60 LOAD (%) 40 20 -10 -10 (VERTICAL) (HORIZONTAL)

AMBIENT TEMPERATURE (°C)



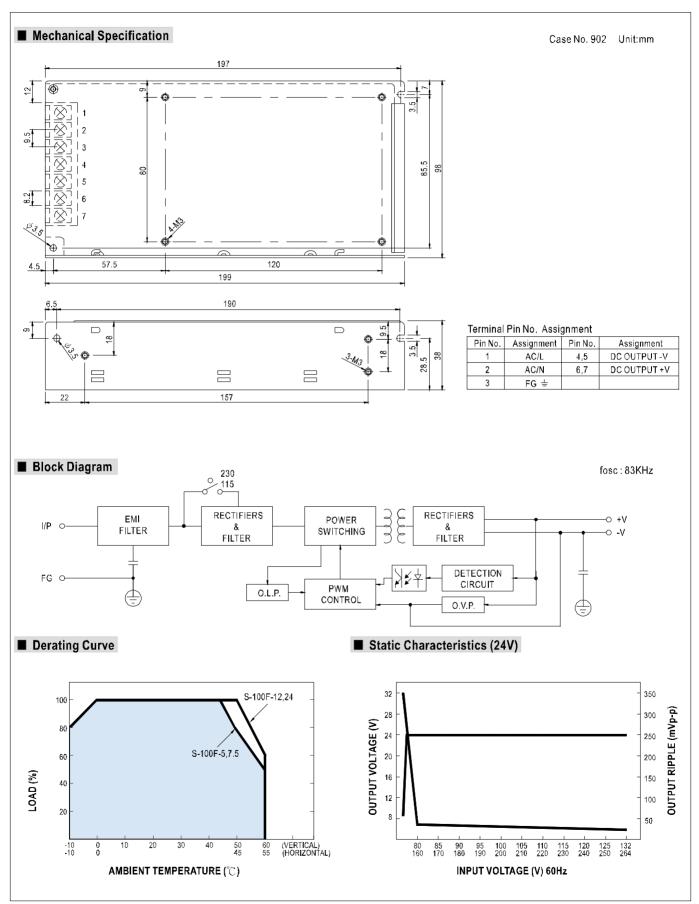




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 83KHz

MODEL		S-100F-5	S-100F-7.5	S-100F-12	S-100F-15	S-100F-24	S-100F-48					
	DC VOLTAGE	5V	7.5V	12V	15V	24V	48V					
	RATED CURRENT	20A	13.5A	8.5A	6.7A	4.5A	2.2A					
	CURRENT RANGE	0 ~ 20A	0 ~ 13.5A	0 ~ 8.5A	0 ~ 6.7A	0 ~ 4.5A	0 ~ 2.2A					
	RATED POWER	100W	101.25W	102W	100.5W	108W	105.6W					
	RIPPLE & NOISE (max.) Note.2	100mVp-p	125mVp-p	125mVp-p	125mVp-p	150mVp-p	150mVp-p					
OUTPUT	VOLTAGE ADJ. RANGE	4.5 ~ 5.5V	6.75 ~ 8.25V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V	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	1000ms, 30ms at ful	000ms, 30ms at full load									
	HOLD UP TIME (Typ.)	20ms at full load										
	VOLTAGE RANGE	88 ~ 132VAC/176 ~	264VAC selected by ju	ımper or switch	248 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz										
INPUT	EFFICIENCY (Typ.)	76%	78%	80%	81%	83%	84%					
INFOI	AC CURRENT (Typ.)	3.15A/115VAC 1.5A/230VAC										
	INRUSH CURRENT (Typ.)	COLD START 20A/	COLD START 20A/115VAC 40A/230VAC									
	LEAKAGE CURRENT	GE CURRENT <1mA / 240VAC										
		105 ~ 150% rated output power										
ROTECTION -	OVERLOAD	Protection type : Hid	ccup mode, recovers a	utomatically after fau	It condition is removed							
PROTECTION	AV	5.75 ~ 6.75V	8.63 ~ 10.13V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V					
	OVER VOLTAGE	Protection type: Hiccup mode, recovers automatically after fault condition is removed										
	WORKING TEMP.	-10 ~ +60 ℃ (Refer to "Derating Curve")										
	WORKING HUMIDITY	20 ~ 90% RH non-condensing										
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 9	5% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)										
	VIBRATION	10 ~ 500Hz, 2G 10n	nin./1cycle, 60min. eac	ch along X, Y, Z axes								
	SAFETY STANDARDS	CSA60950-1 (for 24	V only), UL1012, UL6	0950-1, TUV EN6095	0-1, CCC GB4943 appr	oved						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/	P-FG:1.5KVAC O/P	-FG:0.5KVAC								
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/F	P-FG:100M Ohms / 500	0VDC / 25°C / 70% RF	ł							
(Note 4)	EMC EMISSION	Compliance to EN5	5022 (CISPR22) Class	s B, EN61000-3-2,-3								
	EMC IMMUNITY	Compliance to EN6	1000-4-2,3,4,5,6,8,11,	EN55024, light indus	stry level, criteria A							
	MTBF	314 9K hrs min.	MIL-HDBK-217F (25℃	C)								
OTHERS	DIMENSION	199*98*38mm (L*W	*H)									
	PACKING	0.65Kg; 20pcs/14.2	•									
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up The power supply is consid	ed at 20MHz of band tolerance, line regula	dwidth by using a 12" ation and load regulat	twisted pair-wire terr tion.	minated with a 0.1uf &		itor.					









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

MODEL		S-120-3	S-120-5	S-120-7.	S-120-10	S-120-12	S-120-15	S-120-18	S-120-24	S-120-27	S-120-48		
	DC VOLTAGE	3V	5V	7.5V	10V	12V	15V	18V	24V	27V	48V		
	RATED CURRENT	22A	22A	16A	12A	10A	8A	6.7A	5A	4.5A	2.5A		
	CURRENT RANGE	0~22A	0~22A	0~16A	0~12A	0~10A	0~8A	0~6.7A	0~5A	0~4.5A	0~2.5A		
	RATED POWER	66W	110W	120W	120W	120W	120W	120.6W	120W	121.5W	120W		
OUTPUT	RIPPLE & NOISE (max.) Note.2	100mVp-p	1 00mVp-p	100mVp-p	100mVp-p	100mVp-p	1 00m∨p-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p		
OUIFUI	VOLTAGE ADJ. RANGE	2.85 ~ 3.3V	4.75 ~ 5.5V	6.75 ~ 8.25	/ 9 ~ 11V	10.8 ~ 13.2V	13.5 ~ 16.5V	16 2 ~ 19 8V	21.6 ~ 26.4V	26 ~ 32V	43.2 ~ 52.8\		
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%		
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.3%	±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%		
	SETUP, RISE, HOLD TIME	200ms, 80m	200ms, 80ms, 20ms at full load										
	VOLTAGE RANGE	85 ~ 132VAC	C/180 ~ 264V/	AC selected	by switch	255 ~ 370VE	C						
	FREQUENCY RANGE	47 ~ 63 Hz											
INPUT	EFFICIENCY (Typ.)	70%	78%	80%	80%	81%	81%	82%	84%	84%	84%		
	AC CURRENT	2.6A/115V	2.6A/115V 1.3A/230VAC										
	INRUSH CURRENT (max.)	COLD STAF	RT 30A/115VA	C 60A	/230VAC								
	LEAKAGE CURRENT	<1mA / 240\	/AC										
PROTECTION	OVER LOAD	105 ~ 150% rated output power (150 ~ 200% rated output power for S-100-7.5 only)											
TROTECTION	OVERLOAD	Protection type: Shut down o/p voltage, re-power on to recover											
	WORKING TEMP.	-10 ~ +60 ℃ (Refer to output load derating curve)											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85℃	, 10 ~ 95% RI	H									
	TEMP. COEFFICIENT	±0.03%/℃ (- /										
	VIBRATION			cycle, 60min	. each along X	, Y, Z axes							
	SAFETY STANDARDS	Design refer											
SAFETY &	WITHSTAND VOLTAGE				O/P-FG:0.5	√ VAC							
EMC	ISOLATION RESISTANCE		FG, O/P-FG:										
	EMI CONDUCTION & RADIATION	Design refer	to FCC Part1	15 J Conduc	tion Class B								
	MTBF	322.4K hrs r		DBK-217F (25℃)								
OTHERS	DIMENSION	199*98*38m											
	PACKING	Ų. i	cs/13.6Kg/0.1										
NOTE	All parameters NOT spec Ripple & noise are measi Tolerance : includes set	ured at 20M	Hz of bandw	vidth by usi	ng a 12" twis	ted pair-wir				rallel capaci	itor.		

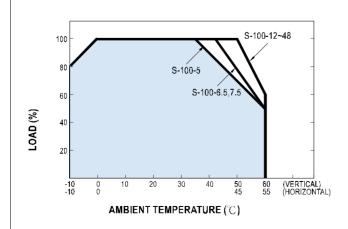


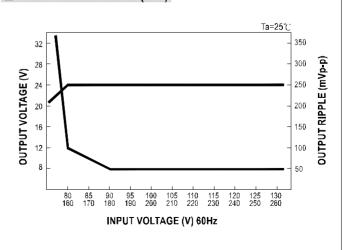
■ Mechanical Specification Case No. 902 Unit:mm 85.5 120 199 190

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 ±		



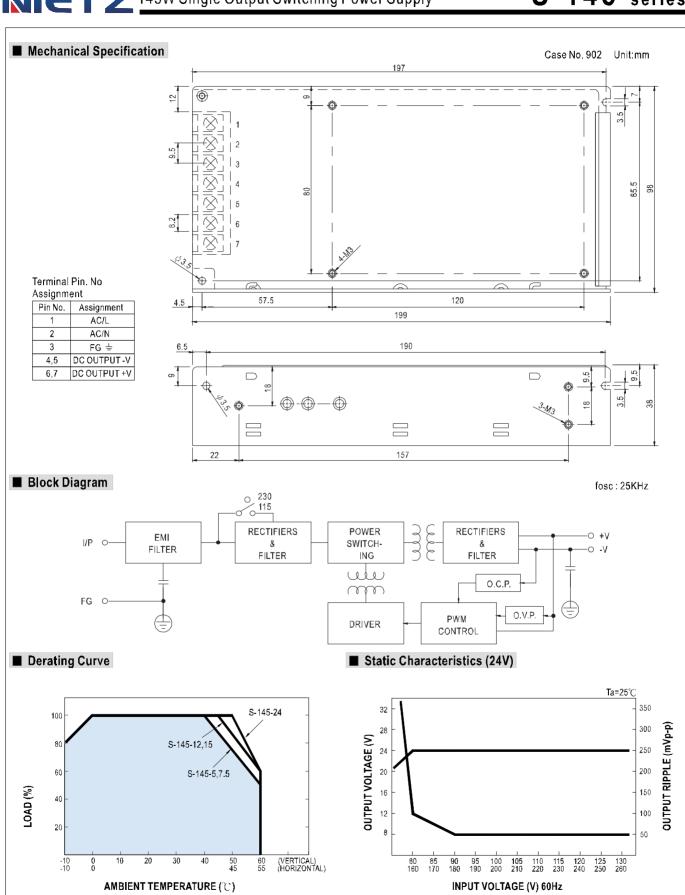






- AC input range selectable by switch
- Protections:Short circuit/Over load/Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 25KHz
- LED indicator for power on
- Made in China for low cost
- High reliability
- 1 year warranty

MODEL		S-145-5	S-145-7.5	S-145-12	S-145-15	S-145-24					
	DC VOLTAGE	5V	7.5V	12V	15V	24V					
	RATED CURRENT	25A	18A	12A	9.6A	6A					
OUTPUT INPUT PROTECTION ENVIRONMENT SAFETY & EMC OTHERS	CURRENT RANGE	0 ~ 25A(30A max.)	0 ~ 18A(21A max.)	0 ~ 12A(14A max.)	0 ~ 9.6A(11A max.)	0 ~ 6A(7A max.)					
	RATED POWER	125W	135W	144W	144W	144W					
	RIPPLE & NOISE (max.) Note.2	100mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p					
OUTPUT	VOLTAGE ADJ. RANGE	4.5 ~ 5.5V	6 ~ 8.3V	10.6 ~ 13.2V	13.2 ~ 16.5V	21 ~ 28V					
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%					
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	SETUP, RISE, HOLD TIME	100ms, 50ms, 20ms at fu	ıll load		15V 24V 9.6A 6A 0~9.6A(11A max.) 0~6A(7A m 144W 120mVp-p 150mVp-p 13.2~16.5V 21~28V ±1.0% ±0.5% ±0.5% ±0.5% ±0.5% 10.5%						
	VOLTAGE RANGE	88 ~ 132VAC/176 ~ 264V	/AC selected by switch								
	FREQUENCY RANGE	47 ~ 63Hz	•								
MANUT	EFFICIENCY (Typ.)	78% 80.5% 81% 83.5%									
INPUT	AC CURRENT	3.2A/115VAC 1.6A/230VAC									
	INRUSH CURRENT (max.)	COLD START 35A									
	LEAKAGE CURRENT	<3.5mA / 240VAC									
	0//== 1 0.4 =	125 ~ 165% rated output	power								
PROTECTION	OVER LOAD	Protection type : Shut do	own o/p voltage, re-powe	r on to recover							
	0VED VOLTA 0E	5.6 ~ 6.8V	8.6 ~ 10V	13.8 ~ 16.2V	17.3 ~ 20.3V	29 ~ 32V					
	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover									
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% F	RH								
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)									
	VIBRATION	10 ~ 500Hz, 2G 10min./1	- 5.5V 6 - 8.3V 10.6 ~ 13.2V 13.2 ~ 16.5V 21 ~ 28V 0% ±1.0% ±1.0% ±1.0% ±1.0% ±1.0% ±0.5%								
	SAFETY STANDARDS	Design refer to UL1012									
SAFFTY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-I	FG:1.5KVAC O/P-FG:0	0.5KVAC							
	ISOLATION RESISTANCE	' '									
LINO	EMI CONDUCTION & RADIATION	•	,								
	EMS IMMUNITY	Compliance to IEC801-2	,3,4 Light industry level,	criteria A							
	MTBF	286.7K hrs min. MIL-l	HDBK-217F (25°€)								
OTHERS	DIMENSION	199*98*38mm (L*W*H)									
	PACKING	5									
NOTE		ured at 20MHz of band up tolerance, line regul nust be removed.	width by using a 12" to	wisted pair-wire termina							





■ 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

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			
	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			
OUTPUT	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, HOLD TIME	100ms, 50ms, 20ms at full load											
	VOLTAGE RANGE	88 ~ 132VAC/	176 ~ 264VAC	selected by sv	vitch 248	~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz											
INPUT	EFFICIENCY (Typ.)	78%	80%	80%	82%	83%	84%	85%	86%	87%			
INI OI	AC CURRENT	3.2A/115VAC	1.6A/230	VAC	•	•	•	•		•			
	INRUSH CURRENT (max.)	COLD START	35A										
	LEAKAGE CURRENT	<3.5mA/240	<3.5mA/240VAC										
	OVERLOAR	105 ~ 150% r	05 ~ 150% rated output power										
PROTECTION	OVER LOAD	Protection typ	e : Shut down	o/p voltage, re	power on to re	cover							
FROILGION	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											
	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover											
	WORKING TEMP.	-10 ~ +60 ℃ (Refer to output load derating curve)											
	WORKING HUMIDITY	20 ~ 90% RH	non-condensir	ng									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C,	10 ~ 95% RH										
	TEMP. COEFFICIENT	±0.03%/°C (0	~ 50°C)										
	VIBRATION	10 ~ 500Hz, 2	G 10min /1cyc	de, 60min. eac	h along X, Y, Z	axes							
	SAFETY STANDARDS	UL1012, UL6	0950-1, TUV E	N60950-1 App	roved								
	WITHSTAND VOLTAGE	I/P-O/P:3KVA	.C I/P-FG:1.	5KVAC O/P-	FG:0.5KVAC								
SAFETY &	ISOLATION RESISTANCE			M Ohms/500V									
EMC	EMI CONDUCTION & RADIATION	•	•	ISPR22) Class	В								
(Note 4)	HARMONIC CURRENT	Compliance to	EN61000-3-2	2,-3									
	EMS IMMUNITY	Compliance	o EN61000-4-	2,3,4,5,6,8,11	I; ENV50204, I	EN55024, LigI	nt industry leve	el, criteria A					
	MTBF	286.7K hrs m	in. MIL-HDE	8K-217F (25°€)								
OTHERS	DIMENSION	199*110*50m	, ,										
	PACKING		/13.8Kg/0.95C										
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up The power supply is consid EMC directives.	ed at 20MHz o tolerance, line	f bandwidth by regulation and	y using a 12" i d load regulati	wisted pair-wir on.	re terminated v	with a 0.1uf & 4	47uf parallel d	•	still meets			

50

90 95 100 105 110 115 180 190 200 210 220 230 INPUT VOLTAGE (V) 60Hz

■ Mechanical Specification Case No. 906 Unit:mm 192 172 100 3.5 110 26 199 190.5 16.5 50 Terminal Pin. No Assignment Assignment Pin No. Assignment DC OUTPUT-V AC/L 4,5 DC OUTPUT +V AC/N 6,7 FG ± ■ Derating Curve ■ Static Characteristics (24V) Ta=25℃ 350 32 100 OUTPUT RIPPLE (mVp-p) 300 28 OUTPUT VOLTAGE (V) ① S-150-5~12 CONVECTION 2 S-150-5-12 CONVECTION S-150-5-12 FORCED AIR 200 60 LOAD (%) 40 12 20

60 (VERTICAL) 55 (HORIZONTAL)

-10 -10 20

AMBIENT TEMPERATURE (°℃)

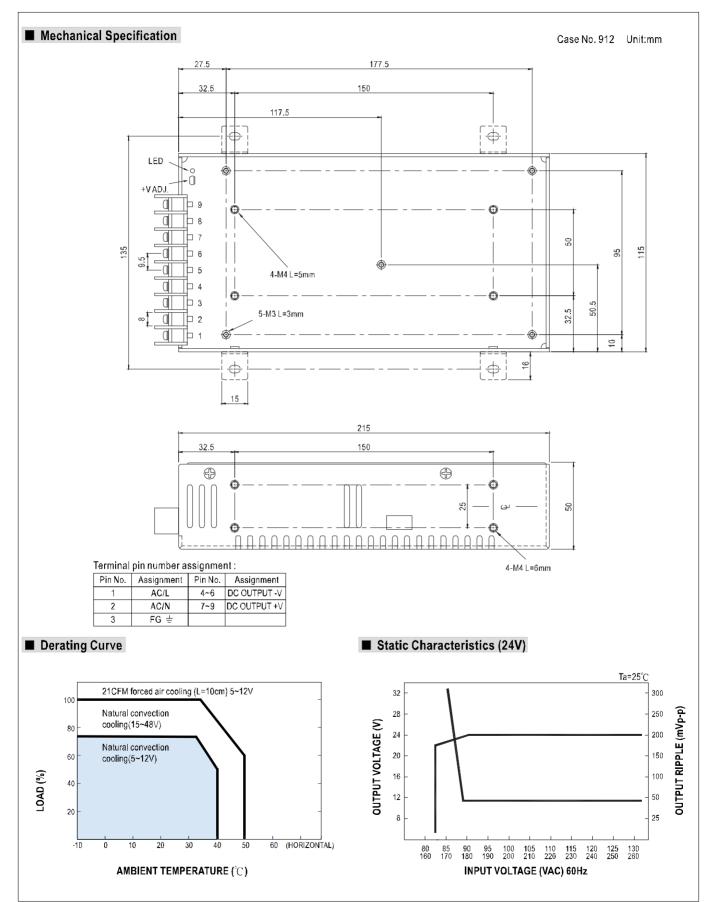




- AC input range selectable by switch
- Protections:Short circuit/Over load/Over temperature
- Cooling by free air convection
- 100% full load burn-in test
- Compact size, light weight
- Fixed switching frequency at 25KHz
- Low cost
- High reliability
- 1 year warranty

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					
	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.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p					
OUTPUT	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, HOLD TIME	200ms, 100ms, 20ms at full load												
	VOLTAGE RANGE	90 ~ 132VAC / 1	80 ~ 264VAC by	switch 254	~ 370VDC									
	FREQUENCY RANGE	47 ~ 63Hz												
INDUT	EFFICIENCY (Typ.)	74%	79%	80%	80%	81%	83%	83%	84%					
INPUT	AC CURRENT	4.5A/115VAC	2.5A/230VA	3										
	INRUSH CURRENT (max.)	50A/115VAC 50A/230VAC												
	LEAKAGE CURRENT	<3.5mA / 240V/	AC .											
		105 ~ 135% rated output power												
	OVER LOAD	Protection type	: Hiccup mode, r	ecovers automa	tically after fault	condition is remo	oved							
		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					
PROTECTION	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover												
	OVED TEMPEDATURE	≥90°C (RTH3)	Detect on inside	ambient temper	ature									
	OVER TEMPERATURE	Protection type	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down											
	WORKING TEMP.	-10 ~ +50 °C (R	efer to output loa	d derating curve)									
	WORKING HUMIDITY	20 ~ 90% RH no	on-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°€, 10	~ 95% RH											
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~	50°C)											
	VIBRATION	10 ~ 500Hz, 2G	10min /1cycle,	60min. each alor	ng X, Y, Z axes									
	SAFETY STANDARDS	Design refer to												
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVA	.C I/P-FG:1.5k	(VAC O/P-FG:	0.5KVAC									
EMC	ISOLATION RESISTANCE		O/P-FG:100M (
	EMI CONDUCTION & RADIATION	Design refer to	FCC Part15 J Co	onduction Class	4									
	MTBF		MIL-HDBK-2	!17F (25°C)										
OTHERS	DIMENSION	215*115*50mm	, ,											
	PACKING	Ų. Į	12Kg/0.92CUFT											
NOTE	All parameters NOT spec Ripple & noise are measu Tolerance : includes set u	ured at 20MHz	of bandwidth b	y using a 12" t	wisted pair-wir				oacitor.					





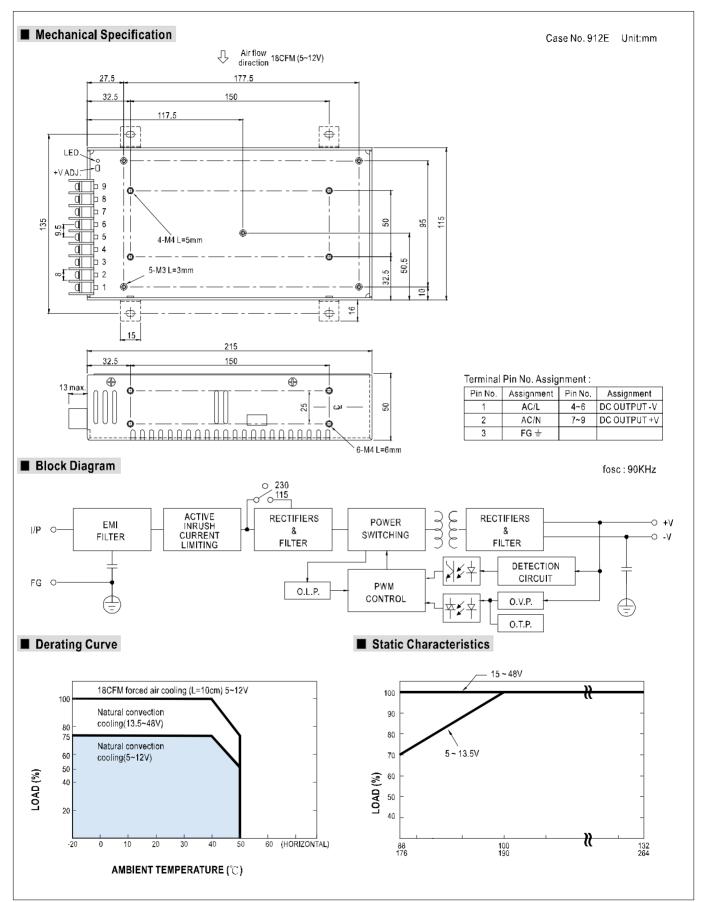




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 100% full load burn-in test
- Fixed switching frequency at 90KHz
- Low cost
- High reliability

MODEL		S-210-5	S-210-7.5	S-210-12	S-210-13.5	S-210-15	S-210-24	S-210-27	S-210-48					
	DC VOLTAGE	5V	7.5V	12V	13.5V	15V	24V	27V	48V					
	RATED CURRENT	40A	27A	17A	15 A	14A	8.8A	7.8A	4.4A					
OUTPUT V L S INPUT E A III L PROTECTION C C V V V V V V V V V V V V V V V V V V	CURRENT RANGE	0 ~ 40A	0 ~ 27A	0 ~ 17A	0 ~ 15A	0 ~ 14A	0 ~ 8.8A	0 ~ 7.8A	0 ~ 4.4A					
	RATED POWER	200W	202.5W	204W	202.5W	210W	211.2W	210.6W	211.2W					
	RIPPLE & NOISE (max.) Note.2	80mVp-p	100mVp-p	120mVp-p	120mVp-p	120mVp-p	200mVp-p	200mVp-p	200mVp-p					
	VOLTAGE ADJ. RANGE	4.5 ~ 5.7V	6~9V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 29V	45.6 ~ 52.8\					
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%					
	LINE REGULATION	±0.5%												
	LOAD REGULATION	±1.0%												
	SETUP, RISE TIME													
	HOLD UP TIME (Typ.)	20ms/230VAC	20ms/115\	/AC at full load										
	VOLTAGE RANGE 88 ~ 132VAC / 176~264VAC by switch 248 ~ 370VDC													
	FREQUENCY RANGE	47 ~ 63Hz												
INDUT	EFFICIENCY (Typ.)	79%	82%	83%	84%	85%	87%	87%	87%					
INFUI	AC CURRENT (Typ.)	4.2A/115VAC 2.5A/230VAC												
	INRUSH CURRENT (Typ.)	35A/115VAC												
	LEAKAGE CURRENT	<3.5mA / 240V	AC .											
		105 ~ 150% ra	ed output power	r										
	OVERLOAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed												
		5.75 ~ 6.75 V 9.4 ~ 10.9 V 13.8 ~ 16.2 V 15.5 ~ 18.2 V 18 ~ 21 V 27.6 ~ 32.4 V 31.05 ~ 36.45 V 55.2 ~ 64.8 V												
PROTECTION	OVER VOLTAGE	Protection type: Hiccup mode, recovers automatically after fault condition is removed												
	OVED TEMBEDATURE													
	OVER TEMPERATURE	Protection type	: Hiccup mode,	recovers autom	atically after faul	t condition is ren	noved							
	WORKING TEMP	-20 ~ +50°C (R	efer to "Derating	g Curve")										
	WORKING HUMIDITY	20 ~ 90% RH n	on-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 1	0 ~ 95% RH											
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~	-50℃)											
	VIBRATION	10 ~ 500Hz, 20	3 10min./1cycle,	period for 60mir	n. each along X,	Y, Z axes								
	SAFETY STANDARDS	UL60950-1 app	proved											
SAFETY	WITHSTAND VOLTAGE	I/P-O/P:3KVAC	I/P-FG:1.5K	VAC O/P-FG:0	.5KVAC									
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG	, O/P-FG:100M	Ohms / 500VDC	/ 25 ℃/ 70% RH									
	LINE REGULATION													
OTHERS	DIMENSION	215*115*50mm	ı (L*W*H)											
	PACKING	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH 244.7K hrs min. MIL-HDBK-217F (25°C) 215*115*50mm (L*W*H) 0.95Kg; 12pcs/12.4Kg/0.92CUFT												
NOTE	2. Ripple & noise are measure	ed at 20MHz of	bandwidth by u	ising a 12" twist				llel capacitor.						





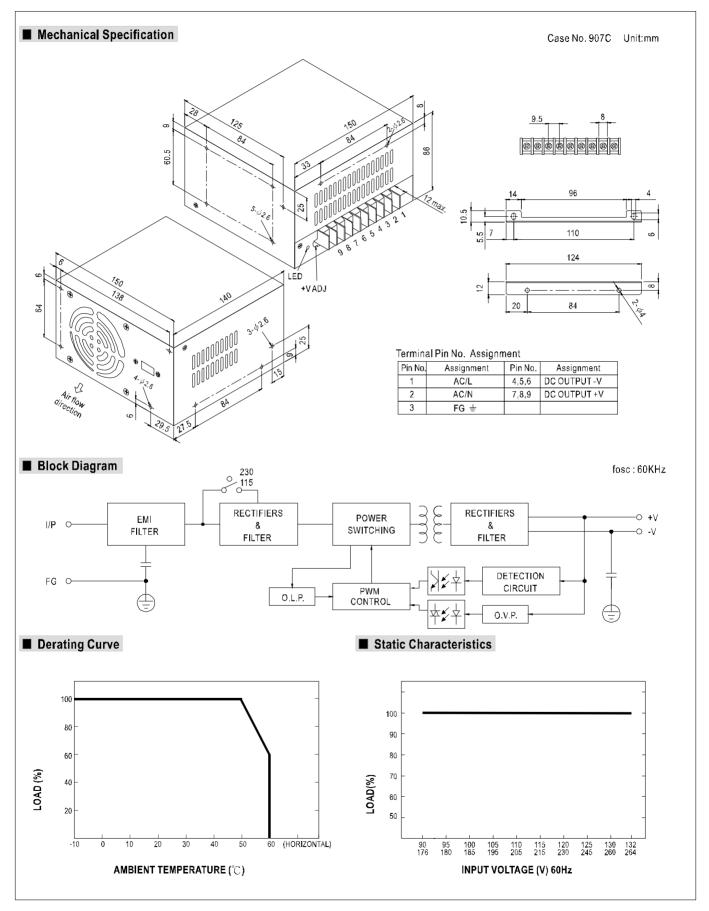




- AC input range selected by switch
- Protections: Short circuit / Overload / Over voltage
- Forced air cooling by built-in DC fan
- 100% full load burn-in test
- Fixed switching frequency at 60KHz
- Low cost
- High reliability

MODEL		S-250-5	S-250-12	S-250-15	S-250-24	S-250-27	S-250-48						
	DC VOLTAGE	5V	12V	15 V	24V	27V	48V						
	RATED CURRENT	40A	18A	15 A	10A	9A	5.2A						
	CURRENT RANGE	0 ~ 40A	~40A 0~18A 0~15A 0~10A 0~9A (
OUTPUT OUTPUT	RATED POWER	200W	0W 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	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 I	oad										
	HOLD TIME (Typ.)	19ms at full load											
	VOLTAGE RANGE	90 ~ 132VAC / 176 ~	264VAC Selected b	y switch 248~370	VDC								
	FREQUENCY RANGE	47 ~ 63Hz											
INPIIT	EFFICIENCY (Typ.)	74%	79%	80%	81.5%	82%	82%						
INPUT	AC CURRENT (Typ.)	4.8A/115VAC 2.8A/230VAC											
	INRUSH CURRENT (Typ.)	COLD START 45A/2	30VAC										
	LEAKAGE CURRENT	<2mA / 240VAC											
		105 ~ 135% rated output power											
DROTECTION	OVER LOAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed											
PROTECTION	OVER VOLTAGE	5.75 ~ 6.75V											
	OVER VOLTAGE	Protection type: Hiccup mode, recovers automatically after fault condition is removed											
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)											
	VIBRATION	10 ~ 500Hz, 2G 10m	n /1cycle, 60min ea	nch along X, Y, Z axes									
	SAFETY STANDARDS	UL60950-1 approved											
SAFETY	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/F	-FG:1.5KVAC O/I	P-FG:0.5KVAC									
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-	FG:100M Ohms / 50	00VDC / 25°C / 70% RF	1								
	MTBF	238.9K hrs min. MIL-HDBK-217F (25°C)											
MTBF 238.9K hrs min. MIL-HDBK-217F (25°C) OTHERS DIMENSION 150*140*86mm (L*W*H)													
	MTBF 238.9K hrs min. MIL-HDBK-217F (25℃) DIMENSION 150*140*86mm (L*W*H) PACKING 1.15Kg; 8pcs/10.2Kg/0.97CUFT												
NOTE	All parameters NOT special Ripple & noise are measing. Tolerance : includes set includes.	ured at 20MHz of ba	andwidth by using	a 12" twisted pair-v			llel capacitor.						





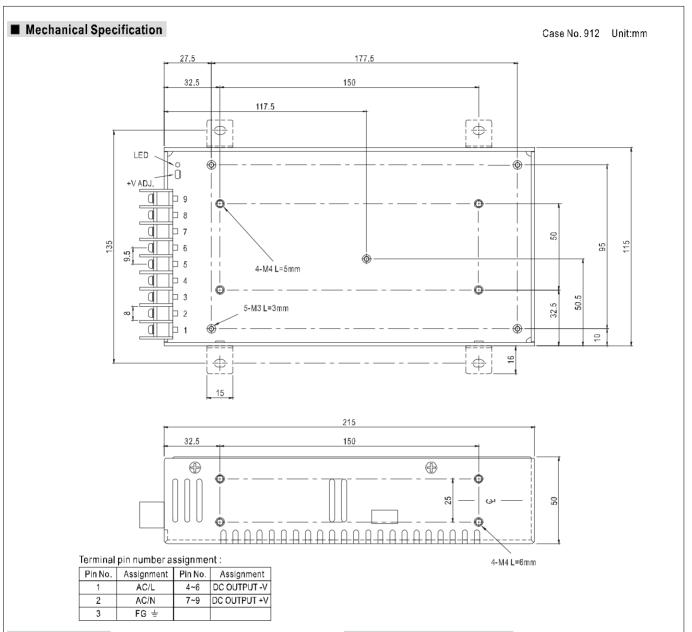


■ Features :

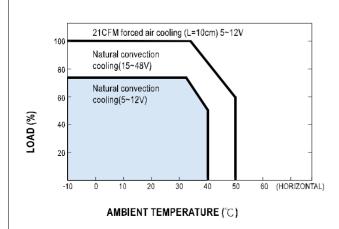
- AC input range selectable by switch
- Protections:Short circuit/Over load/Over temperature
- Cooling by free air convection
- 100% full load burn-in test
- Compact size, light weight
- Fixed switching frequency at 25KHz
- Low cost
- High reliability
- 1 year warranty

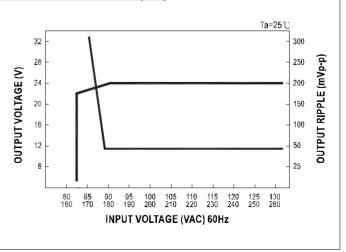
MODEL		S-250-5	S-250-7.5	S-250-12	S-250-13.5	S-250-15	S-250-24	S-250-27	S-250-48					
	DC VOLTAGE	5V	7.5V	12V	13.5V	15V	24V	27V	48V					
	RATED CURRENT	40A	30A	20A	17.8A	16A	10A	8.9A	5A					
OUTPUT OUTPUT INPUT PROTECTION OUTPUT INPUT I	CURRENT RANGE	0~40A	0~225A	0~20A	0~17.8A	0~16A	0~10A	0~8.9A	0~5A					
	RATED POWER	200W	200W	240W	240.3W	240W	240W	240.3W	240W					
	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%					
INPUT -	LOAD REGULATION	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	SETUP, RISE, HOLD TIME	· · · · · · · · · · · · · · · · · · ·												
	VOLTAGE RANGE	90 ~ 132VAC / 1	32VAC / 180 ~ 264VAC by switch 254 ~ 370VDC											
	FREQUENCY RANGE	47 ~ 63Hz												
INDUT	EFFICIENCY (Typ.)	74%	79%	80%	80%	81%	83%	83%	84%					
INPUT	AC CURRENT	6A/115VAC	15VAC 3A/230VAC											
	INRUSH CURRENT (max.)	50A/115VAC	50A/230VAC	;										
	LEAKAGE CURRENT	<3.5mA / 240VA	AC .											
		105 ~ 135% rat	05 ~ 135% rated output power											
	OVER LOAD	Protection type	: Hiccup mode,	recovers automa	tically after fault	condition is remo	ved							
	OVED VOLTA OF	5.75 ~ 6.75V												
PROTECTION	OVER VOLIAGE	Protection type	: Shut down o/p	voltage, re-powe	er on to recover									
	OVED TEMPEDATURE	>90°C (RTH3)	>90°C (RTH3) Detect on inside ambient temperature											
	OVER TEMPERATURE	Protection type	: Shut down o/p	voltage, recover	s automatically a	fter temperature	goes down							
	WORKING TEMP.	-10 ~ +50°C (R	efer to output loa	ad derating curve)									
	WORKING HUMIDITY	20 ~ 90% RH n	on-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C , 10	~ 95% RH											
	TEMP. COEFFICIENT	±0.03%/℃ (0~	.50℃)											
	VIBRATION	10 ~ 500Hz, 20	10min./1cycle,	60min. each alor	ng X, Y, Z axes									
	SAFETY STANDARDS	Design refer to	UL1950											
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVA	C I/P-FG:1.5h	(VAC 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 Co	onduction Class	4									
	MTBF	271.9K hrs min	. MIL-HDBK-2	217F (25°C)										
OTHERS	DIMENSION	215*115*50mm	(L*W*H)											
	PACKING	0.93Kg; 12pcs/	*50mm (L*W*H) 12pcs/12Kg/0.92CUFT ntioned are measured at 230VAC input, rated load and 25°C of ambient temperature.											
NOTE	2. Ripple & noise are measu	ured at 20MHz	of bandwidth b	by using a 12" i	wisted pair-wir	lly mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. d at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. tolerance, line regulation and load regulation.								





■ Derating Curve





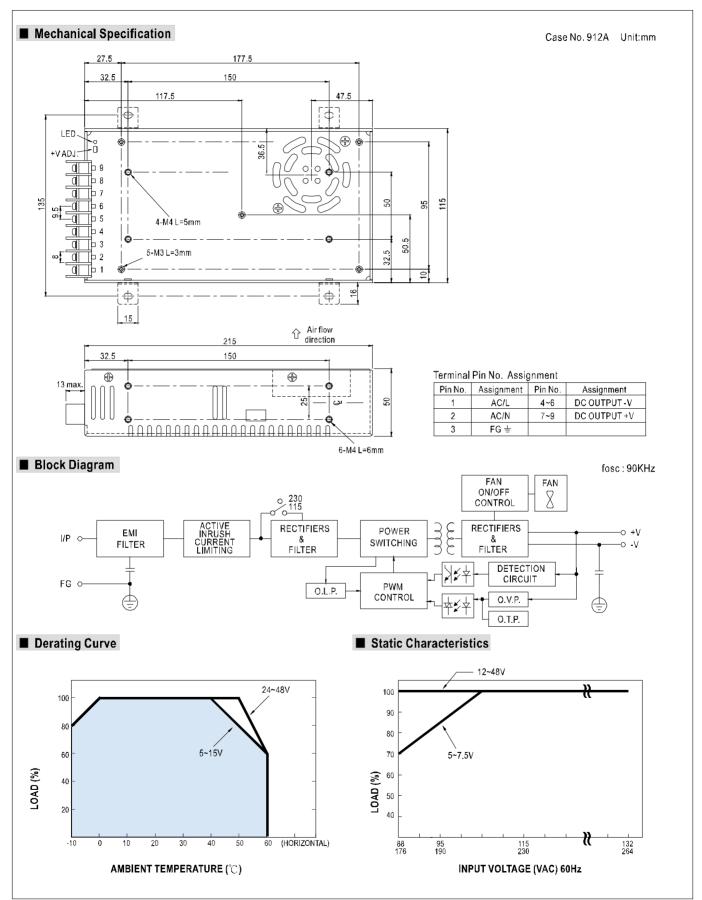




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC fan
- Cooling Fan ON-OFF auto control
- 100% full load burn-in test
- Fixed switching frequency at 90KHz

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					
	DC VOLTAGE	5V	7.5V	12V	13.5V	15V	24V	27V	48V					
	RATED CURRENT	50A	36A	25A	22A	20A	12.5A	11A	6.5A					
DUTPUT I I I I I I I I I I I I I I I I I I	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					
OUTPUT	VOLTAGE ADJ. RANGE	4.5 ~ 5.7V	6~9V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	41 ~ 56V					
DUTPUT VOLUMENT OF THE PUT A A IN PUT A IN PU	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%												
	SETUP, RISE TIME	2000ms, 20ms	000ms, 20ms at full load											
	HOLD UP TIME (Typ.)	24ms at full loa	nd											
	VOLTAGE RANGE	88 ~ 132VAC /	176~264VAC by	y switch 24	8 ~ 370VDC									
	FREQUENCY RANGE	47 ~ 63Hz	•	<u>′</u>										
INDUT	EFFICIENCY(Typ.)	77%	80%	82%	83%	84%	86%	86%	87%					
INPUI	AC CURRENT (Typ.)	6A/115VAC	3.5A/230VAC	'	_			-						
	INRUSH CURRENT (Typ.)	18A/115VAC												
	LEAKAGE CURRENT	<3.5mA / 240V	AC .											
		105 ~ 135% rated output power												
	OVERLOAD	Protection type	: Hiccup mode	, recovers autom	natically after faul	t condition is ren	noved							
		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					
PROTECTION	OVER VOLTAGE	Protection type	: Hiccup mode,	, recovers autom	natically after faul	t condition is ren	noved	-						
		RTH1>65°C FAN ON, <55°C FAN OFF, >70°C (5 ~ 15V)												
	FAN CONTROL O.T.P.	RTH1≧70°C F	AN ON, ≦65°C	FAN OFF, ≧80	0°C (24 ~ 48V)									
		Protection type : Hiccup mode, recovers automatically after fault condition is removed												
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")												
	WORKING HUMIDITY	20 ~ 90% RH non-condensing												
ENVIRONMENT	STORAGE TEMP., HUMIDITY													
	TEMP. COEFFICIENT	±0.03%/°C (0	~ 50 °C)											
	VIBRATION	10 ~ 500Hz, 20	3 10min./1cycle	, period for 60mi	n. each along X,	Y, Z axes								
	SAFETY STANDARDS	UL60950-1 ap	proved											
SAFETY	WITHSTAND VOLTAGE	I/P-O/P:3KVA0	I/P-FG:1.5K	VAC O/P-FG:	0.5KVAC									
	ISOLATION RESISTANCE	I/P-O/P, I/P-F0	G, O/P-FG:100M	Ohms / 500VD0	C / 25℃/ 70% RH									
	MTBF	188.7K hrs mir	n. MIL-HDBK	-217F (25°C)										
OTHERS	DIMENSION	215*115*50mn	n (L*W*H)	. ,										
	PACKING	1.08Kg; 12pcs	/13.8Kg/0.92CU	IFT										
NOTE	All parameters NOT specia Bipple & noise are measure Tolerance : includes set up	ed at 20MHz of	bandwidth by u	using a 12" twis				lel capacitor.						





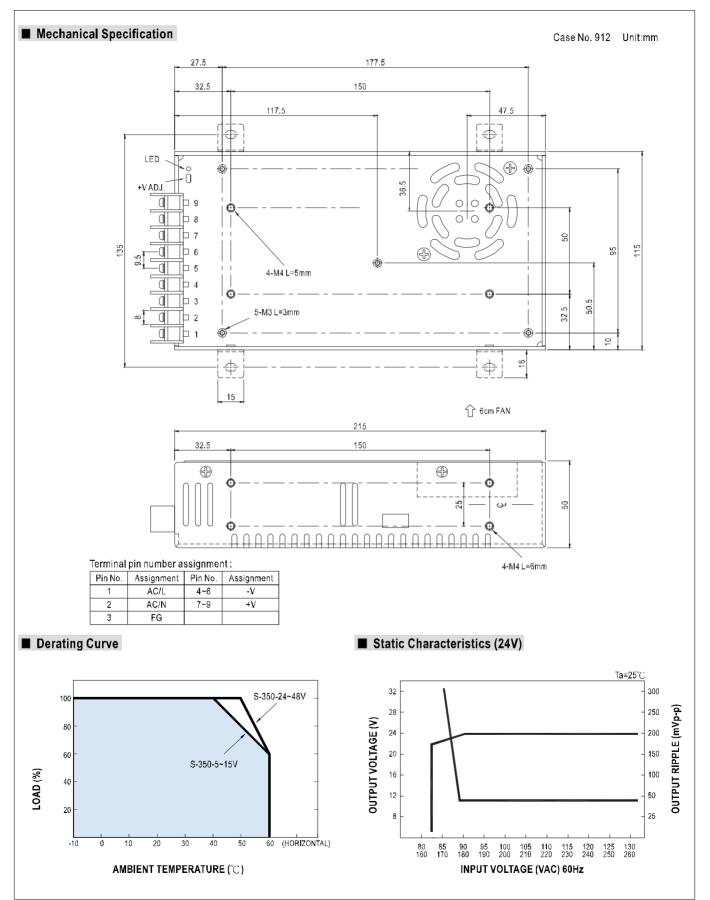




- Universal AC input / Full range
- Protections:Short circuit/Over load/Over voltage
- Forced air cooling by built-in DC fan
- PWM control and regulated
- Built-in cooling Fan ON-OFF control
- 100% full load burn-in test
- Fixed switching frequency at 25KHz
- Low cost
- 1 year warranty

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					
	DC VOLTAGE	5V	7.5V	12V	13.5V	15V	24V	27V	48V					
	RATED CURRENT	50 A	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	150mV p -p	200mVp-p	240mVp-p					
OUTPUT	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, HOLD TIME	200ms, 50ms, 2	0ms at full load											
	VOLTAGE RANGE	90 ~ 132VAC / 1	80 ~ 264VAC by	switch 254	4 ~ 370VDC									
	FREQUENCY RANGE	47~63Hz												
INPUT	EFFICIENCY (Typ.)	73%	76%	74%	79%	78%	81%	82%	83%					
INFO	AC CURRENT	6.5A/115VAC	4A/230VAC			•								
	INRUSH CURRENT (max.)	50A/115VAC												
	LEAKAGE CURRENT	<3.5mA / 240VA	√ C											
	OVED LOAD	105~135% rated output power												
PROTECTION	OVER LOAD	Protection type	: Hiccup mode, i	ecovers automa	tically after fault	condition is remo	ved							
PROTECTION	OVED 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 VOLTAGE	Protection type: Hiccup mode, recovers automatically after fault condition is removed												
		RTH3 \geq 55°C FAN ON, \leq 45°C FAN OFF, \geq 80°C output shutdown (5 ~ 7.5V)												
FUNCTION	FAN ON/OFF CONTROL	RTH3>65°C F	AN ON, $<$ 55 $^\circ$ C	FAN OFF, >80	C output shutdo	wn (12 ~ 15V)								
		RTH3 \ge 70 $^{\circ}$ C FAN ON, \le 60 $^{\circ}$ C FAN OFF, \ge 85 $^{\circ}$ C output shutdown (24 ~ 48V)												
	WORKING TEMP.	-10 ~ +50℃ (Refer to output load derating curve)												
	WORKING HUMIDITY	20 ~ 90% RH non-condensing												
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH												
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)												
	VIBRATION		10min./1cycle,		<u> </u>									
SAFETY &	WITHSTAND VOLTAGE		.C I/P-FG:1.5h		:0.5KVAC									
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG	O/P-FG:100M (Dhms/500VDC										
	MTBF	234.3K hrs min. MIL-HDBK-217F (25°C)												
OTHERS	DIMENSION	215*115*50mm (L*W*H)												
	PACKING	•	13.5Kg/0.92CUF											
NOTE	All parameters NOT special Ripple & noise are measure Tolerance : includes set up to	d at 20MHz of ba	ındwidth by usin	g a 12" twisted _l				apacitor.						





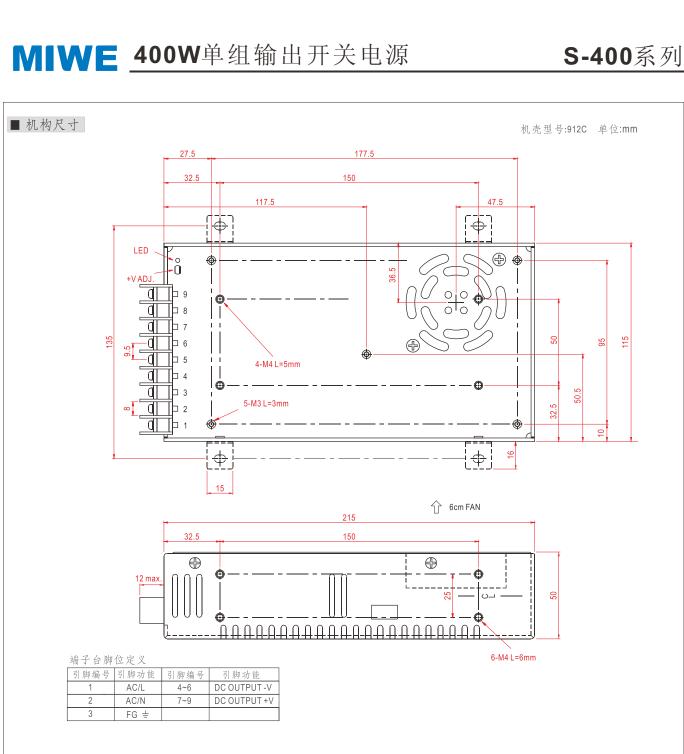


■ 特性:

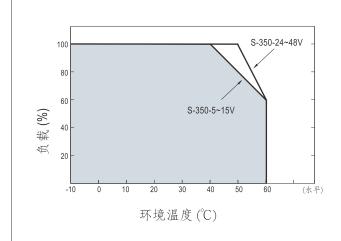
- ·交流输入范围通过开关切换 ·保护种类:短路/过负载/过电压/过温度 ·内置直流风扇强制风冷
- · PWM控制
- 冷却风扇自动控制
- 100%满载老化
- 开关工作频率: 25KHZ 低成本
- 1年保固

电气规格

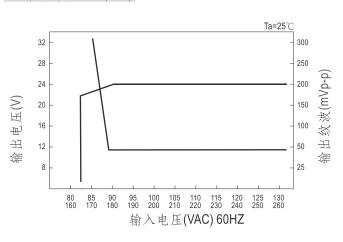
型号		S-400-5	S-400-7.5	S-400-12	S-400-13.5	S-400-15	S-400-24	S-400-27	S-400-36	S-400-48	
	直流电压	5V	7.5V	12V	13.5V	15V	24V	27V	36V	48V	
	额定电流	60A	50A	33A	29.5A	26.5A	16.5A	14.8A	11A	8.3A	
	电流范围	0~60A	0~50A	0~33A	0~29.5A	0~26.5A	0~16.5A	0~14.8A	0~11A	0~8.3A	
	额定功率	300W	375W	396W		397.5W		399.6W	396W	398.4W	
输 保 功 环 安慰 其 备 出 入 护 能 境 规兼 它 注	纹波与噪声 (最大)备注2			150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p	240mVp-p	
加山	电压调整范围	4.5 ~ 5.6V	6 ~ 9V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	32~40V	41 ~ 56V	
	电压精度 备注3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	线性调整率		±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	负载调整率		±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	启动、上升时间		ms, 50ms(满载时)								
	保持时间(Typ.)	20ms(满 载	时)								
	电压范围	90 ~ 132VA	C/180~264V	AC(开关切?	换)或254~3	70VDC					
	频率范围	47 ~ 63Hz									
the λ	效率(Typ.)	73%	76%	74%	79%	78%	81%	82%	83%	83%	
捌 / \	交流电流(Typ.)	8A/115V	AC 5A/2								
	浪涌电流(Typ.)	50A/115VA	C 50A/2	230VAC							
	漏电流	<3.5mA / 24	0VAC								
	1	额定输出功率的105%~135%									
促拍	过负载	保护模式:	定电流限制	, 负载异常	常条件移除	后可自动恢	复				
M 1/	过电压	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	40.5~46.5V	57.6 ~ 67.2V	
	4.47	保护模式:	打嗝模式,	电压异常系	条件移除后	可自动恢复					
计能	风扇开关控制				扇关, ≧80						
-57 HC					,扇关,≧85	5°C (12~ 48\	/) 关闭输出	3			
	工作温度		! (请参考)	负载减额曲	线)						
TT 1+	工作湿度	20 ~ 90% R									
	储存温度、湿度		, 10 ~ 95% F	RH							
	温度系数	±0.03%/℃									
	耐振动				、Z轴各60						
安规和	耐压				O/P-FG:0	.5KVAC					
电磁兼容		,	FG, O/P-FG								
	MTBF		rs. MIL-HDI		5°C)						
其它	尺寸		mm (L*W*H)								
	包装	1.07Kg; 12p	cs/13.5Kg/0	.92CUFT							
备注	1. 如未特别说明, 所有规格参数 2. 纹波和噪声测量方法: 使用一 3. 精度: 包含设定误差、线性调	条12"双绞线,同	引时终端要并联!			宽下进行量测。					



■负载减额曲线



■ 静态特性曲线(24V)





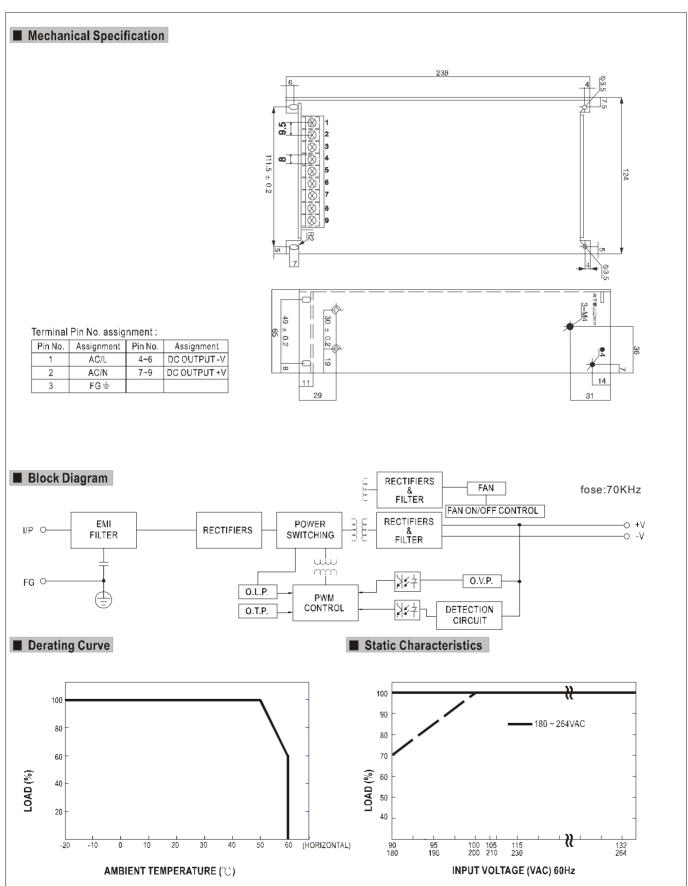


■ Features :

- Ac input:180~264VAC
- Protections: Short circuit / Overload / Over voltage/ Over temperature
- Forced air cooling by built-in DC fan
- Withstand 300vac surge input for 5 second
- Built-in cooling Fan ON-OFF control
- Built-in constant current limiting circuit
- 100% full load burn-in test
- LED indic ator for power on
- Fixed switching frequency at 70kHz
- Low cost, high reliability
- 1 years warranty

MODEL		S-500-12	S-500-24	S-500-36	S-500-48				
	DC VOLTAGE	12V	24V	36V	48V				
	RATED CURRENT	40A	20A	13.4A	10A				
	DC VOLTAGE RATED CURRENT CURRENT RANGE RATED POWER RIPPLE & NOISE (max.) Note.2 VOLTAGE ADJ. RANGE VOLTAGE TOLERANCE Note.3 LINE REGULATION LOAD REGULATION SETUP, RISE TIME HOLD UP TIME (Typ.) VOLTAGE RANGE Note.4 FREQUENCY RANGE EFFICIENCY (Typ.) AC CURRENT (Typ.) INRUSH CURRENT OVER LOAD OVER VOLTAGE OVER TEMPERATURE FAN ON/OFF CONTROL(Typ.) WORKING TEMP. WORKING HUMIDITY TEMP. COEFFICIENT VIBRATION SAFETY STANDARDS WITHSTAND VOLTAGE ISOLATION RESISTANCE MTBF DIMENSION PACKING 1. All parameters NOT speci 2. Ripple & noise are measu 3. Tolerance: includes set u 4. Please connect positive personal resistance of the control o	0~40A	0~20A	0~13.4A	0~10A				
	RATED POWER	480W	480W	482.4W	480W				
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	240mVp-p	240mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	10 ~ 13.5V	20 ~ 26.4V	32~40V	41 ~ 56V				
	VOLTAGE TOLERANCE Note.3	±1.5%	±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	1000ms,50ms/230VAC	at full load						
	HOLD UP TIME (Typ.)	20ms/230VAC at full loa	d						
	VOLTAGE RANGE Note.4	180~264VAC 254~37	0VDC						
	FREQUENCY RANGE	47 ~ 63Hz							
MBUT	EFFICIENCY (Typ.)	82%	86%	87%	87%				
INPUT	AC CURRENT (Typ.)	5A/230VAC							
	INRUSH CURRENT (Typ.)	60A/230VAC							
	LEAKAGE CURRENT	<3.5mA/240VAC							
		105 ~ 135% rated output po	ower						
	OVER LOAD	Protection type : Constant of	current limiting, recovers auto	omatically after fault condition is re	emoved				
-		13.8 ~ 16.2V	27.6 ~ 32.4V	41.4~46.8V	57.6 ~ 67.2V				
PROTECTION	OVER VOLTAGE		O/P voltage, re-power on to	recover	<u>'</u>				
		RTH1≥85°CDetect on	case						
	OVER TEMPERATURE	Protection type : Shut dowr	n O/P voltage, recovers autor	matically after temperature goes d	own				
FUNCTION	FAN ON/OFF CONTROL(Typ.)	RTH2≥55℃ FAN ON,≤	50°C FAN OFF						
	WORKING TEMP.	-20 ~ +60°€ (Refer to output	ut load derating curve)						
	WORKING HUMIDITY	20 ~ 90% RH non-condens	ing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)							
	VIBRATION	10 ~ 500Hz, 3G 10min./1cy	cle, 60min. each along X, Y,	Z axes					
	SAFETY STANDARDS	UL60950-1 approved							
SAFETY	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-FG	:1.5KVAC	C					
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:10	0M Ohms/500VDC / 25°C / 7	0% RH					
	MTBF	234.3K hrs min. MIL-HD	BK-217F (25°C)						
OTHERS	DIMENSION	238*124*65mm (L*W*H)							
	PACKING	1.45kg/9Pcs/14kg							
NOTE	2. Ripple & noise are measu 3. Tolerance : includes set u 4. Please connect positive p	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. Please connect positive pole of input voltage with mark "L" of terminal block, connect negative pole of input voltage with mark "N" of terminal block, using DC voltage for input voltage.							





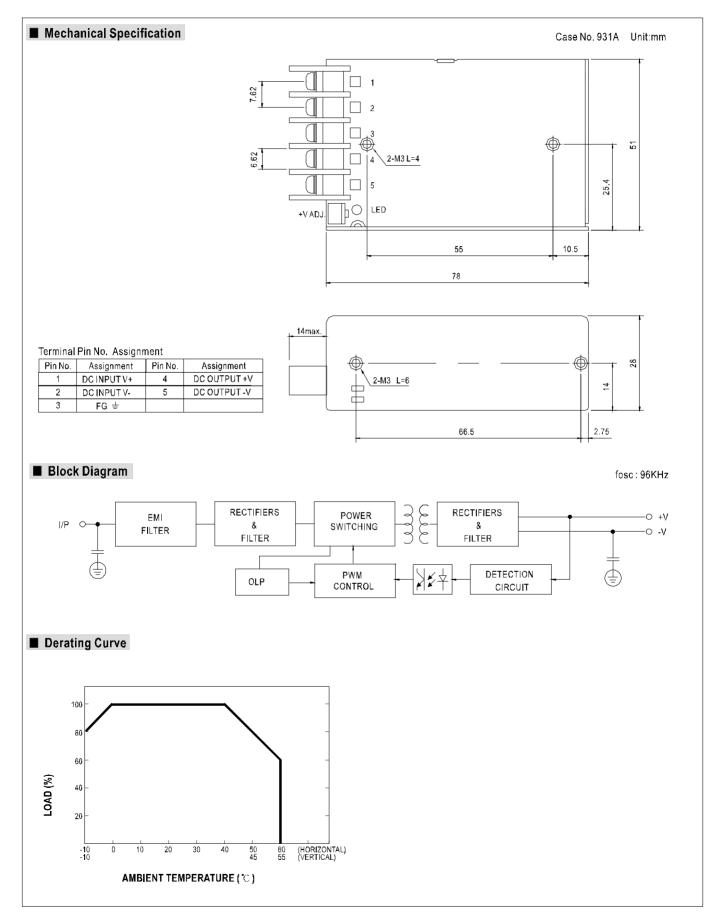




- 2:1 wide input range
- Protections:Short circuit/Over load /voltage
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Low cost
- High reliability

MODEL		SD-15A-05	SD-15B-05	SD-15C-05	SD-15A-12	SD-15B-12	SD-15C-12	SD-15A-24	SD-15B-24	SD-15C-24			
	DC VOLTAGE	5V			12V		1	24V					
	RATED CURRENT	3A			1.25A			0.625A					
	CURRENT RANGE	0 ~ 3A			0 ~ 1.25A	0 ~ 1.25A							
	RATED POWER	15W			15W			15W					
OUTPUT	RIPPLE & NOISE (max.) Note.2	100mVp-p			120mVp-p			150mVp-p					
	VOLTAGE ADJ.RANGE	4.75~5.5VDC	;		10.8~13.2VE	С		21.6~26.4VI	DC .				
	VOLTAGE TOLERANCE Note.3	±2.0%			±1.0%			±1.0%					
	LINE REGULATION	±0.5%			±0.3%			±0.2%		•			
	LOAD REGULATION	±0.5%			±0.3%			±0.2%					
	SETUP, RISE ,HOLD UP TIME	2.5s, 25ms,	12VDC/24V	DC/48VDC at f	ull load			•					
	VOLTAGE RANGE	A: 9.2 ~18V	OC B:18 -	- 36VDC C:	36~72VDC								
INPUT	EFFICIENCY(Typ.)	68%	76%	75%	72%	76%	79%	70%	77%	78%			
	DC CURRENT(Typ.)	1.9A/12VDC	0.9A/	24VDC	0.45A/48VDC	;			1070 1170 1070				
	OVER LOAD	105 ~160% ra	ated output po	wer									
ROTECTION	OVER EOAD	Protection type	oe : Hiccup mo	ode, recovers a	utomatically at	ter fault condi	tion is remove	d					
PROTECTION	OVER VOLTAGE	5.75 ~ 6.75V			13.8~ 16.2V			27.6 ~ 32.4V	'				
	OVERVOLIAGE	Protection ty	oe : Shut off o	/p voltage, clan	ping by zener	diode							
	WORKING TEMP.	-10 ~ +60 ℃ (Refer to "Derating Curve")											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C,	10 ~ 95% RH										
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°℃)										
	VIBRATION	10 ~ 500Hz, 2	2G 10min /1cy	/cle, 60min.eac	h along X, Y, Z	axes							
	WITHSTAND VOLTAGE	I/P-O/P:2KVAC I/P-FG:1KVAC O/P-FG:0.5KVAC											
SAFETY &	ISOLATION RESISTANCE	I/P-O/P,I/P-FG,O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH											
EMC (Note 4)	EMC EMISSION	Compliance to EN55022(CISPR22)											
(14016-4)	EMC IMMUNITY	Compliance t	o EN61000-4	-2,3,4,6,8, EN5	5024, light ind	ustry level, cri	teria A						
OTHERS	DIMENSION	78*51*28mm	(L*W*H)										
OTTLENO	PACKING	0.18kg,60 PCS/11.8kg											
NOTE	2. Ripple & noise are measured3. Tolerance : includes set up to	y mentioned are measured at normal input, rated load and 25°C of ambient temperature. d at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. olerance, line regulation and load regulation. red a component which will be installed into a final equipment.											





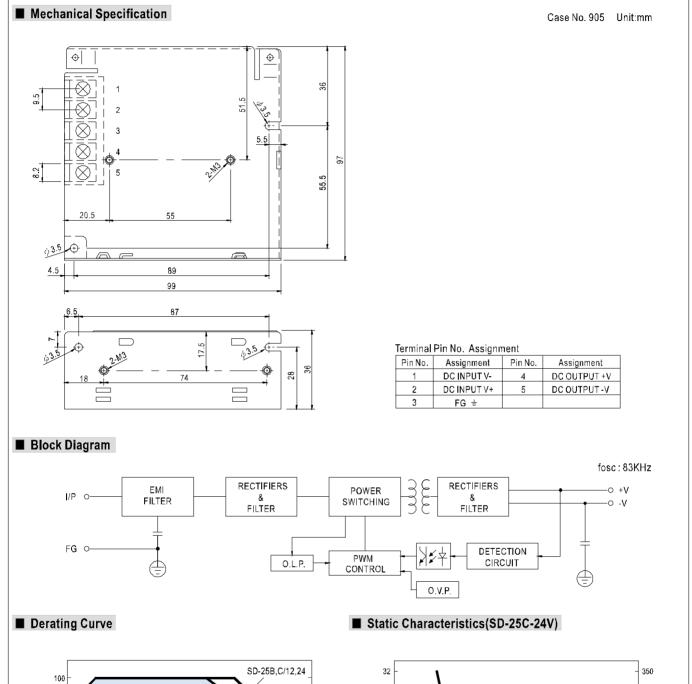


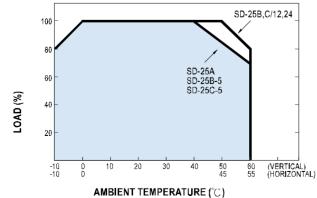


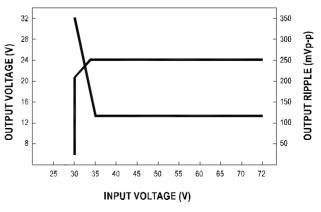
- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage
- 1500VAC I/O isolation
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Fixed switching frequency at 83KHz
- Low cost
- High reliability

MODEL		SD-25A-5	SD-25B-5	SD-25C-5	SD-25A-12	SD-25B-12	SD-25C-12	SD-25A-24	SD-25B-24	SD-25C-24				
	DC VOLTAGE	5V	'	<u>'</u>	12V	'	•	24V	-	-				
	RATED CURRENT	5A			2.1A	2.1A			1.1A					
	CURRENT RANGE	0 ~ 5A	0 ~ 5A					0 ~ 1.1A						
	RATED POWER	25W			25.2W			26.4W						
CUIDUIT	RIPPLE & NOISE (max.) Note.2	100mVp-p			120mVp-p			150mVp-p						
OUTPUT	VOLTAGE ADJ. RANGE	4.5 ~ 5.5VDC			11 ~ 16VDC			23 ~ 30VDC						
	VOLTAGE TOLERANCE Note.3	±2.0%			±1.0%			±1.0%						
	LINE REGULATION	±0.5%			±0.3%			±0.2%						
	LOAD REGULATION	±0.5%			±0.3%			±0.2%						
	SETUP, RISE, HOLD UP TIME	2.5s, 50ms, -	at full load	i										
	VOLTAGE RANGE	A:9.2 ~ 18VD	C B:19 ~	- 36VDC	C:36 ~ 72VDC			75% 78% 81%						
INPUT	EFFICIENCY (Typ.)	71%	72%	74%	72%	75%	78%	75%	81%					
	DC CURRENT	3.2A/12V	•		1.6A/24V		•	0.8A/48V						
		105 ~ 150% r	ated output po	ower										
	OVERLOAD	Protection ty	oe : Hiccup mo	de, recovers a	utomatically af	ter fault conditi	ion is removed							
PROTECTION		5.75 ~ 6.75V	/10% load		16.8 ~ 20V/1	0% load		31.5 ~ 37.5\	//10% load					
	OVER VOLTAGE	Protection ty	e : Hiccup mo	de, recovers a	utomatically af	ter fault conditi	ion is removed							
	WORKING TEMP.	-10 ~ +60°C	10 ~ +60°C (Refer to "Derating Curve")											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing												
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C,	-20 ~ +85°C, 10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.03%/°C (0	0 ~ 50°C)											
	VIBRATION	10 ~ 500Hz,	2G 10min./1cy	cle, 60min. ea	ch along X, Y, Z	axes								
	SAFETY STANDARDS	Design refer	to LVD											
SAFETY &	WITHSTAND VOLTAGE	I/P-0/P:1.5K	VAC I/P-FG	:1.5KVAC C	/P-FG:0.5KVAC	;								
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-F	G, O/P-FG:10	00M Ohms / 50	0VDC / 25°C / 7	0% RH								
(Note 4)	EMC EMISSION	Compliance t	o EN55022 (C	ISPR22) Clas	s B									
	EMC IMMUNITY	Compliance t	o EN61000-4	-2,3,4,6,8, EN	55024,heavy inc	lustry level, cri	teria A							
	MTBF	374.3K hrs m	in.(SD-25A)	365.9K hr	s min (SD-25B)	377.5K H	Irs min.(SD-25	C) MIL-HDE	BK-217F (25℃)				
OTHERS	DIMENSION	99*97*36mm	(L*W*H)											
	PACKING	0.38Kg; 45pc	s/17.8Kg/0.90	CUFT										
NOTE	Ripple & noise are measure Tolerance : includes set up	ally mentioned are measured at 12,24,48VDC input, rated load and 25°C of ambient temperature. red at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. to tolerance, line regulation and load regulation. dered a component which will be installed into a final equipment.												











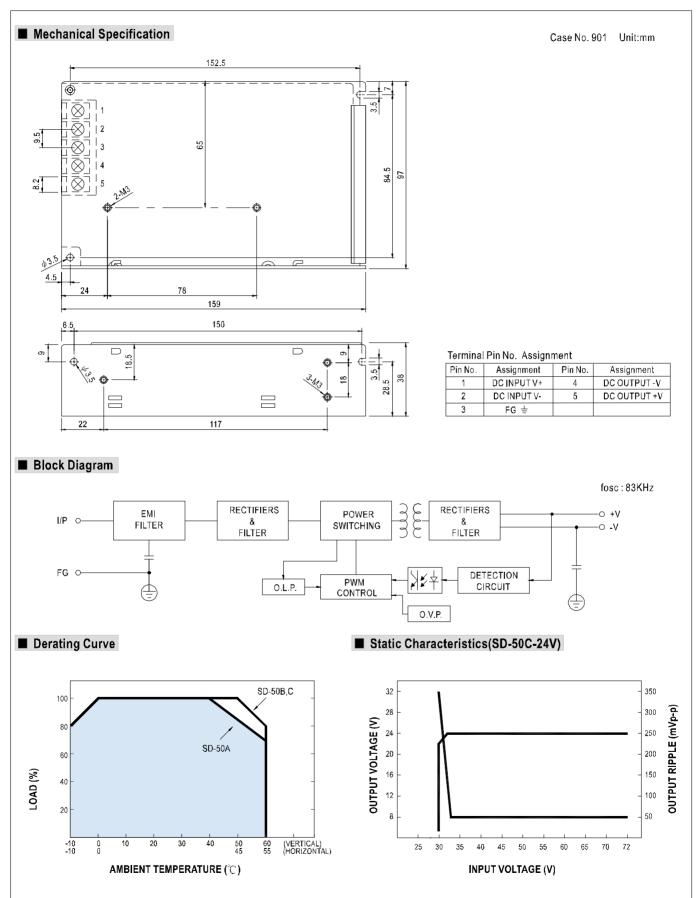


■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage
- 1500VAC I/O isolation
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Fixed switching frequency at 83KHz
- Low cost
- High reliability

MODEL		SD-50A-5	SD-50B-5	SD-50C-5	SD-50A-12	SD-50B-12	SD-50C-12	SD-50A-24	SD-50B-24	SD-50C-24				
	DC VOLTAGE	5V		•	12V			24V		•				
	RATED CURRENT	10 A			4.2A	4.2A								
	CURRENT RANGE	0 ~ 10A			0 ~ 4.2A			0 ~ 2.1A						
	RATED POWER	50W			50.4W			50.4W						
OUTPUT	RIPPLE & NOISE (max.) Note.2	100mVp-p			120mVp-p			150mVp-p						
OUIPUI	VOLTAGE ADJ. RANGE	4.5 ~ 5.5VDC	;		11 ~ 16VDC			23 ~ 30VDC						
	VOLTAGE TOLERANCE Note.3	±2.0%			±1.0%			±1.0%						
	LINE REGULATION	±0.5%			±0.3%			±0.2%						
	LOAD REGULATION	±0.5%			±0.3%			±0.2%						
	SETUP, RISE, HOLD UP TIME	2.5s, 50ms, -	at full load	d										
	VOLTAGE RANGE	A:9.2 ~ 18VD	C B:19~	-36VDC	C:36 ~ 72VDC	_								
INPUT	EFFICIENCY (Typ.)	70%	73%	76%	72%	75%	78%	74%	83%					
	DC CURRENT	7A/12V			3A/24V			1.5A/48V						
	OVERLOAD	105 ~ 150% r	ated output po	ower										
PROTECTION	OVERLOAD	Protection type	oe : Hiccup ma	ode, recovers a	utomatically af	ter fault conditi	on is removed							
	OVER VOLTAGE	5.75 ~ 6.75V	10% load		16.8 ~ 20V/1	0% load		31.5 ~ 37.5\	7/10% load					
	OVER VOLIAGE	Protection type	oe : Hiccup mo	ode, recovers a	utomatically af	ter f <mark>ault</mark> conditi	on is removed							
	WORKING TEMP.	-10 ~ +60℃	10 ~ +60°C (Refer to "Derating Curve")											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing												
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH												
	TEMP. COEFFICIENT	±0.03%/°C (0)~50°C)											
	VIBRATION	10 ~ 500Hz, 2	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes											
	SAFETY STANDARDS	Design refer	to LVD											
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5K	VAC I/P-FG	:1.5KVAC O	/P-FG:0.5KVAC	}								
EMC	ISOLATION RESISTANCE		•		0VDC / 25°C / 7	0% RH								
(Note 4)	EMC EMISSION	Compliance t	o EN55022 (C	ISPR22) Clas	s B									
	EMC IMMUNITY	Compliance t	o EN61000-4-	2,3,4,6,8, EN5	5024, heavy inc	dustry level, cr	iteria A							
	MTBF	365.6K hrs m	in.(SD-50A)	357.5K hrs	s min (SD-50B)	368.5K ⊦	Irs min (SD-50	C) MIL-HDE	K-217F (25°C)				
OTHERS	DIMENSION	159*97*38mr	n (L*W*H)											
	PACKING	0.48Kg; 24pc	s/12.7Kg/0.75	CUFT										
NOTE	Ripple & noise are measure Tolerance : includes set up	ally mentioned are measured at 12,24,48VDC input, rated load and 25°C of ambient temperature. red at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. to tolerance, line regulation and load regulation. dered a component which will be installed into a final equipment.												





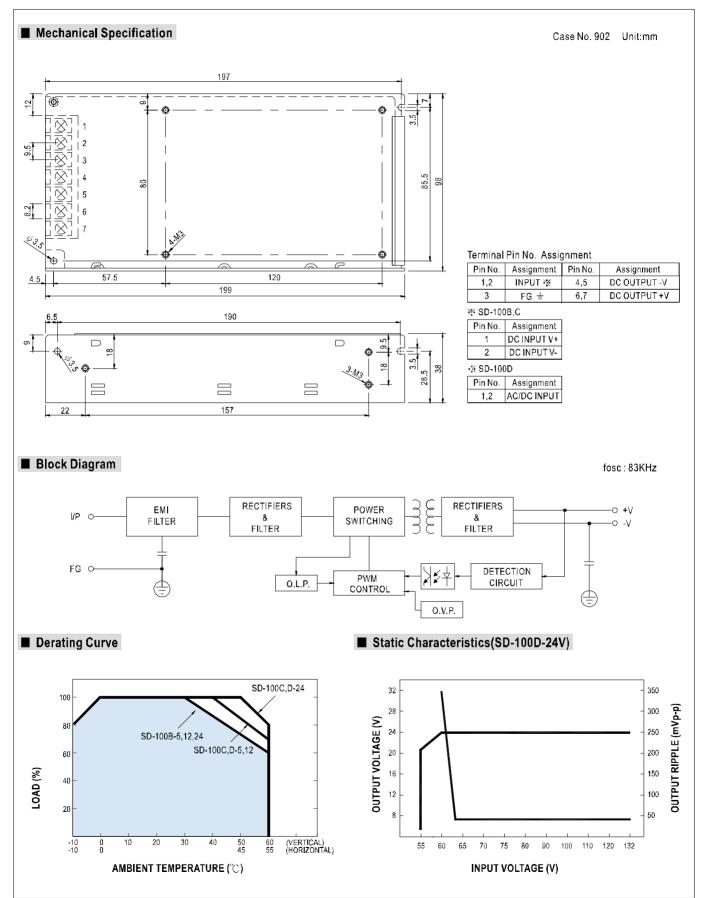




- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage
- 1500VAC I/O isolation
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Fixed switching frequency at 83KHz
- 24V and 48V input voltage design refer to LVD
- Low cost
- High reliability

MODEL		SD-100B-5	SD-100C-5	SD-100D-5	SD-100B-12	SD-100C-12	SD-100D-12	SD-100B-24	SD-100C-24	SD-100D-2	
	DC VOLTAGE	5V		<u>'</u>	12V			24V			
	RATED CURRENT	20A			8.5A		4.2A				
	CURRENT RANGE	0 ~ 20A		0~8.5A			0~4.2A				
	RATED POWER	100W			102W			100.8W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p			120mVp-p			150mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	4.5 ~ 5.5VDC			11 ~ 16VDC			23 ~ 30VDC			
	VOLTAGE TOLERANCE Note.3	±2.0%			±1.0%			±1.0%			
	LINE REGULATION	±0.5%			±0.3%			±0.2%			
	LOAD REGULATION	±0.5%			±0.3%			±0.2%			
	SETUP, RISE TIME	2s, 50ms(only	/ D mode) at fu	ıll load	•			'			
	HOLD UP TIME (Typ.)	20ms(only D	mode) at full lo	ad							
	VOLTAGE RANGE	B:19 ~ 36VD0	C:36 ~	72VDÇ D	:72 ~ 144VDC	or 85 ~ 132VAC	;				
	EFFICIENCY (Typ.)	74%	75%	76%	75%	77%	80%	78%	81%	83%	
NPUT	DC CURRENT (Typ.)	4.8A/24V	2.4A/48V	1.8A/96V	4.8A/24V	2.4A/48V	1.8A/96V	4.8A/24V	2.4A/48V	1.8A/96V	
	INRUSH CURRENT (Typ.)	D:18A/96VD0	D:18A/96VDC								
	LEAKAGE CURRENT	<0.75mA/120	VAC(SD-100E	D)							
		105 ~ 135% r	05 ~ 135% rated output power								
	OVERLOAD	Protection typ	Protection type: Hiccup mode, recovers automatically after fault condition is removed								
PROTECTION		5.75 ~ 6.75V/	10% load		16.8 ~ 20V/10	0% load		31.5 ~ 37.5V/10% load			
	OVER VOLTAGE	Protection type: Hiccup mode, recovers automatically after fault condition is removed									
	WORKING TEMP.	-10 ~ +60°C (Refer to "Dera	iting Curve")							
	WORKING HUMIDITY	20 ~ 90% RH	non-condensi	ng							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C,	10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)									
	VIBRATION	10 ~ 500Hz, 2	G 10min./1cy	cle, 60min. ead	h along X, Y, Z	axes					
	SAFETY STANDARDS	IEC60950-1	CB approved b	y TUV (for D t	ype only)						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5K\	/AC I/P-FG:	1.5KVAC O	P-FG:0.5KVAC						
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-F	G, O/P-FG:100	0M Ohms / 500	VDC / 25°C / 70)% RH					
(Note 4)	EMC EMISSION	Compliance t	5 EN55022 (CI	ISPR22) Class	В						
	EMC IMMUNITY	Compliance t	o EN61000-4-2	2,3,4,6,8, light	industry level, o	riteria A					
	MTBF	356.7K hrs m	in (SD-100B)	355.5K h	s min (SD-1000	C) 341.9K	Hrs min.(SD-	100D) MIL-H	HDBK-217F (25	5°C)	
OTHERS	DIMENSION	199*98*38mr	n (L*W*H)		,		,	,	•	,	
	PACKING	0.65Kg; 20pc	s/13.8Kg/0.8C	UFT							
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up The power supply is consid	ed at 20MHz o tolerance, line	of bandwidth b regulation an	by using a 12" and load regula	twisted pair-wi	re terminated v			apacitor.		







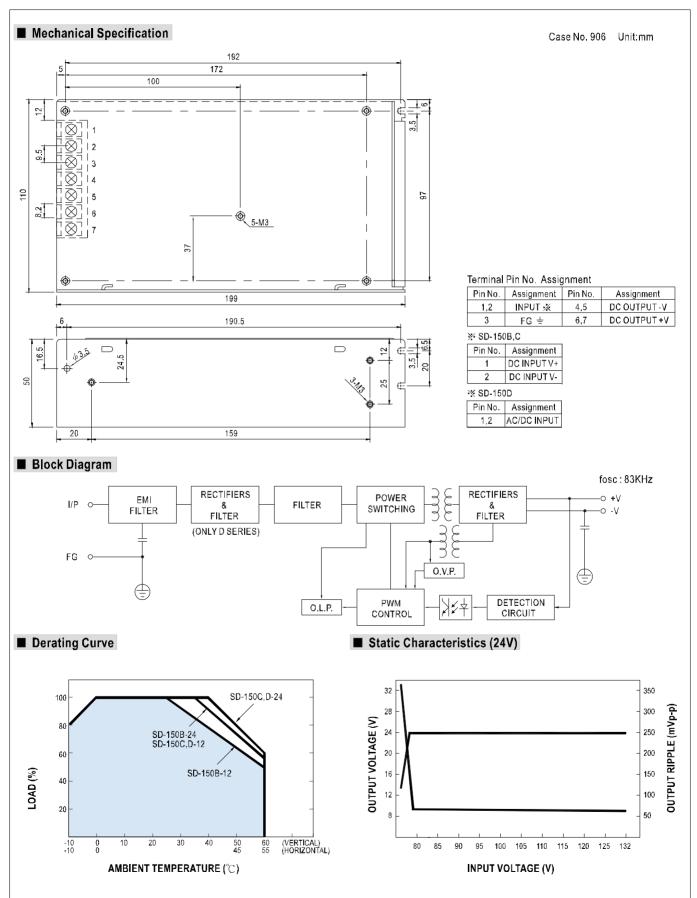


- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage
- 1500VAC I/O isolation
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- 24V and 48V input voltage design refer to LVD
- Low cost
- High reliability
- 2 years warranty



MODEL		SD-150B-12	SD-150C-12	SD-150D-12	SD-150B-24	SD-150C-24	SD-150D-24		
	DC VOLTAGE	12V	<u>'</u>		24V	24V			
	RATED CURRENT	12.5A			6.3A				
	CURRENT RANGE	0 ~ 12.5A			0 ~ 6.3A				
	RATED POWER	150W			151.2W				
	RIPPLE & NOISE (max.) Note 2	120mVp-p			150mVp-p	150mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	11 ~ 16VDC			23 ~ 30VDC				
	VOLTAGE TOLERANCE Note.3	±1.0%			±1.0%				
	LINE REGULATION	±0.5%			±0.3%				
	LOAD REGULATION	±0.5%			±0.3%				
	SETUP, RISE TIME	2s, 50ms(only D m	ode) at full load						
	HOLD UP TIME (Typ.)	24ms(only D mode	e) at full load						
	VOLTAGE RANGE	B:19 ~ 36VDC	C:36 ~ 72VDC	D:72 ~144VDC or 85	5 ~ 132VAC				
	EFFICIENCY (Typ.)	75%	77%	79%	77%	80%	82%		
INPUT	DC CURRENT (Typ.)	6.8A/24V	3.4A/48V	2.7A/96V	6.8A/24V	3.4A/48V	2.7A/96V		
	INRUSH CURRENT (Typ.)	D:22.5A/96VDC							
	LEAKAGE CURRENT	<0.75mA / 120VAC (SD-150D)							
		105 ~ 135% rated output power							
	OVERLOAD	Protection type: Hiccup mode, recovers automatically after for			ault condition is remo	ved			
PROTECTION		16.8V ~ 20V/10% LOAD Protection type: Hiccup mode, recovers automatically after fa			31.5 ~ 37.5V/10	% LOAD			
	OVER VOLTAGE				ault condition is removed				
	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~	95% RH						
	TEMP COEFFICIENT	±0.03%/°C (0~50	(°C)						
	VIBRATION	10 ~ 500Hz, 2G 10	min./1cycle, 60min.	each along X, Y, Z axe	es				
	SAFETY STANDARDS	IEC60950-1 CB a	pproved by TUV (for	D type only)					
SAFETY &	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 / 25°C / 70%	RH				
(Note 4)	EMC EMISSION	Compliance to EN	55022 (CISPR22) CI	ass B					
	EMC IMMUNITY	Compliance to EN	61000-4-2,3,4,6,8, li	ght industry level, crite	eria A				
	MTBF	296.2K hrs min (S	D-150B) 289.9k	(hrs min (SD-150C)	289K Hrs min.(SE	0-150D) MIL-HDBK-	217 F (25°⊜)		
OTHERS	DIMENSION	199*110*50mm (L	*W*H)						
	PACKING	0.86Kg; 16pcs/14	5Kg/0.95CUFT						
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance: includes set up The power supply is consider.	lly mentioned are red at 20MHz of bar tolerance, line regi	neasured at 24,48,9 ndwidth by using a " ulation and load reg	2" twisted pair-wire to ulation	erminated with a 0.1		acitor.		









■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 1500VAC I/O isolation
- Cooling by free air convection
- 100% full load burn-in test
- 24V and 48V input voltage design refer to LVD

		SD-200B				SD-200C					
	DC VOLTAGE	5V	12V	24\/	48V	5V	12V	24V	48V		
	RATED CURRENT	34A	16.7A	8.4A	4.2A	40A	16.7A	8.4A	4.2A		
	CURRENT RANGE	0 ~ 34A	0 ~ 16.7A	0~8.4A	0 ~ 4.2A	0 ~ 40A	0 ~ 16.7A	0 ~ 8.4A	0 ~ 4.2A		
	RATED POWER	170W	200.4W	201.6W	201.6W	200W	200.4W	201.6W	201.6W		
	RIPPLE & NOISE (max.) Note.2	100mVp-p	120mVp-p	150mVp-p	200mVp-p	100mVp-p	120mVp-p	150mVp-p	200mVp-p		
OUTPUT	VOLTAGE ADJ. RANGE	4.5 ~ 5.5VDC	11 ~ 16VDC	23 ~ 30VDC	43 ~ 53VDC	4.5 ~ 5.5VDC	11 ~ 16VDC	23 ~ 30VDC	43 ~ 53VDC		
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±2.0%	±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%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%		
	SETUP, RISE TIME	300ms, 50ms a	t full load		•	•					
	VOLTAGE RANGE	B:19 ~ 36VDC	C:36 ~ 72V	DC D:72 ~	144VDC						
INDUT	EFFICIENCY (Typ.)	79%	82%	85%	86%	81%	84%	86%	86%		
INPUT	DC CURRENT (Typ.)	10.8A/24V	10.6A/24V	10.4A/24V	10.4A/24V	5.4A/48V	5.2A/48V	6.7A/48V	5A/48V		
	INRUSH CURRENT (Typ.)	C:45A/48VDC	D:45A/96V	DC	•			'			
		105 ~ 135% rated output power									
	OVERLOAD	Protection type: Shut down o/p voltage, re-power on to recover									
		5.75 ~ 6.75V	16.8 ~ 20V	31.5 ~ 37.5V	53 ~ 65V	5.75 ~ 6.75V	16.8 ~ 20V	31.5 ~ 37.5V	53 ~ 65V		
PROTECTION	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover									
	OVER TEMPERATURE	95°C±5°C (100°C±5°C for SD-200B-12 only) TSW1 detect on main power transistor									
		Protection type: Shut down o/p voltage, recovers automatically after temperature goes down									
	WORKING TEMP.	-20 ~ +60 °C (R	-20 ~ +60 °C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +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 STANDARDS	UL60950-1app	roved (for SD-20	00C-24 type only), IEC60950-1 C	3 approved by T	UV (for D type o	nly)			
SAFETY &	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	/ 25°C / 70% RH						
(Note 4)	EMC EMISSION	Compliance to	EN55022 (CISP	R22) Class B							
	EMC IMMUNITY	Compliance to	EN61000-4-2,3,4	4,6,8, light indus	try level, criteria	A					
	MTBF	218.2K hrs min	. MIL-HDBK-2	217F (25°℃)							
OTHERS	DIMENSION	215*115*50mm	(L*W*H)								
PACKING 1.1Kg; 12pcs/14.4Kg/0.92CUFT											
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up The power supply is consider.	ed at 20MHz of tolerance, line r	bandwidth by u egulation and k	sing a 12" twiste ad regulation.	ed pair-wire term	inated with a 0.1					



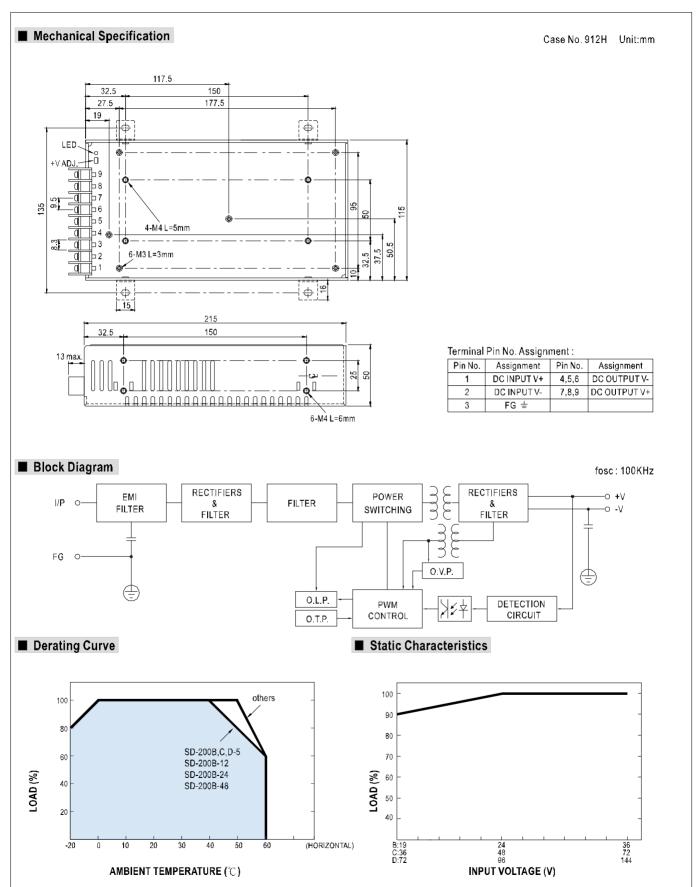


■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 1500VAC I/O isolation
- Cooling by free air convection
- 100% full load burn-in test
- 24V and 48V input voltage design refer to LVD

MODEL		\$D-200D							
	DC VOLTAGE	5V	12V	24V	48V				
	RATED CURRENT	40A	16.7A	8.4A	4.2A				
	CURRENT RANGE	0~40A	0 ~ 16.7A	0 ~ 8.4A	0 ~ 4.2A				
	RATED POWER	200W	200.4W	201.6W	201.6W				
AUTRUT	RIPPLE & NOISE (max.) Note.2	100mVp-p	120mVp-p	150mVp-p	200mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	4.5 ~ 5.5VDC	11 ~ 16VDC	23 ~ 30VDC	43 ~ 53VDC				
	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%	±1.0%	±1.0%	±1.0%				
	SETUP, RISE TIME	300ms, 50ms at full load							
	VOLTAGE RANGE	B:19 ~ 36VDC C:36 ~ 72V	DC D:72~144VDC						
INPUT	EFFICIENCY (Typ.)	82%	82%	84%	90%				
INPUT	DC CURRENT (Typ.)	3.5A/96V	3.5A/96V	3.5A/96V	3.5A/96V				
	INRUSH CURRENT (Typ.)	C:45A/48VDC D:45A/96VI	OC .						
		105 ~ 135% rated output power							
	OVERLOAD	Protection type : Shut down o/p	voltage, re-power on to recover						
	0.750.700.74.05	5 75 ~ 6 75V	16.8 ~ 20V	31.5 ~ 37.5V	53 ~ 65V				
PROTECTION	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover							
	OVER TEMPERATURE	85°C ±5°C (TSW1) detect on main power transistor							
		Protection type: Shut down o/p voltage, recovers automatically after temperature goes down							
	WORKING TEMP.	-20 ~ +60 € (Refer to "Derating	-20 ~ +60°C (Refer to "Derating Curve")						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +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 STANDARDS	IEC60950-1 CB approved by TI	JV (for D type only)						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-FG:1.5k	(VAC O/P-FG:0.5KVAC						
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M	Dhms / 500VDC / 25℃/ 70% RH						
(Note 4)	EMC EMISSION	Compliance to EN55022 (CISPF	R22) Class B						
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4	1,6,8, light industry level, criteria	A					
	MTBF	218.2K hrs min. MIL-HDBK-2	:17F (25°€)						
OTHERS	DIMENSION	215*115*50mm (L*W*H)							
	PACKING	1.1Kg; 12pcs/14.4Kg/0.92CUFT							
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consider.	becally mentioned are measured at 24,48,96VDC input, rated load and 25°C of ambient temperature. assured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. bet up tolerance, line regulation and load regulation. considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets uidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."							







- DC input active surge current limiting
- Wide 4:1~2:1 DC input range (24V: 19~72VDC, 96V:72~144VDC)
- Protections: Short circuit / Overload / Over voltage / Over temperature / Input polarity(by fuse)
- 2000VAC I/O Isolation
- Forced air cooling by built-in DC fan with fan speed control function
- Output OK Signal
- Built-in remote ON-OFF control
- Built-in remote sense function

MODEL		SD-500L-12	SD-500L-24	SD-500L-48	SD-500H-12	SD-500H-24	SD-500H-48		
	DC VOLTAGE	12V	24V	48V	12V	24V	48V		
	RATED CURRENT	40A	21A	10.5A	40A	21A	10.5A		
	CURRENT RANGE	0~40A	0 ~ 21A	0 ~ 10.5A	0~40A	0 ~ 21A	0 ~ 10.5A		
	RATED POWER	480W	504W	504W	480W	504W	504W		
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p		
OUTPUT	VOLTAGE ADJ. RANGE	11 ~ 15V	23 ~ 30V	46 ~ 60V	11 ~ 15V	23 ~ 30V	46 ~ 60V		
	VOLTAGE TOLERANCE Note.3	±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%		
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	SETUP, RISE TIME	500ms, 50ms at full I	oad						
	VOLTAGE RANGE Note 5	19 ~ 72VDC			72 ~ 144VDC				
	EFFICIENCY (Typ.)	86%	88%	89%	87%	89%	90%		
INPUT	DC CURRENT (Typ.)	24.2A/19VDC 24.8	3A/24VDC 12A/48V	DC	8A/72VDC 6A/96\	/DC			
	CURRENT (AT NO LOAD)	Max. 0.2A/48VDC			Max. 0.1A/96VDC				
	INRUSH CURRENT (Typ.)	60A/48VDC			60A/96VDC				
		105 ~ 125% rated ou	tput power						
	OVERLOAD		· ·	nut down o/p voltage af	ter about 5 sec., re-pow	ver on to recover			
		16 ~ 19V	30.8 ~ 35.2V	62 ~ 68V	16 ~ 19V	30.8 ~ 35.2V	62 ~ 68V		
PROTECTION	OVER VOLTAGE	Protection type : Shut down o/p voltage, re-power on to recover							
T NOTES TION		80°C ±5°C (TSW1) detect on heatsink of power transistor							
	OVER TEMPERATURE	80°C±5°C (L-48V,H-24V,H-48V), 85°C ±5°C (L-24V), 90°C ±5°C (L-12V), 95°C ±5°C (H-12V) (TSW2 : detect on heatsink of o/p diode)							
		Protection type: Shut down o/p voltage, recovers automatically after temperature goes down							
	REMOTE ON/OFF CONTROL	Please refer to functi							
FUNCTION	OUTPUT OK SIGNAL	Open collector signa	How when PSU turns	on, max. sink current	:10mA				
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.02%/°C (0~50°C)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes							
	SAFETY STANDARDS	IEC60950-1 CB app	roved by TUV						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:2KVAC I/F	P-FG:1.5KVAC O/P-	FG:0.5KVAC					
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-	-FG:100M Ohms / 500	VDC / 25°C / 70% RH					
(Note 4)	EMC EMISSION	Compliance to EN55	022 (CISPR22) Class	В					
	EMC IMMUNITY	Compliance to EN61	000-4-2,3,4,6,8, light	industry level, criteria	A				
	MTBF	196.3K hrs min. MIL-HDBK-217F (25°C')							
OTHERS	DIMENSION	215*115*50mm (L*W	/*H)						
	PACKING	1 15Kg; 12pcs/14 8K	(g/0.92CUFT						
NOTE	Ripple & noise are measun Tolerance : includes set up The power supply is consided EMC directives. For guidal	ed at 20MHz of band tolerance, line regula lered a component wince on how to perform	mentioned are measured at 48, 96VDC input, rated load and 25°C of ambient temperature. at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. elerance, line regulation and load regulation. ed a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets e on how to perform these EMC tests, please refer to "EMI testing of component power supplies." er low input voltages. Please check the derating curve for more details.						

Air flow

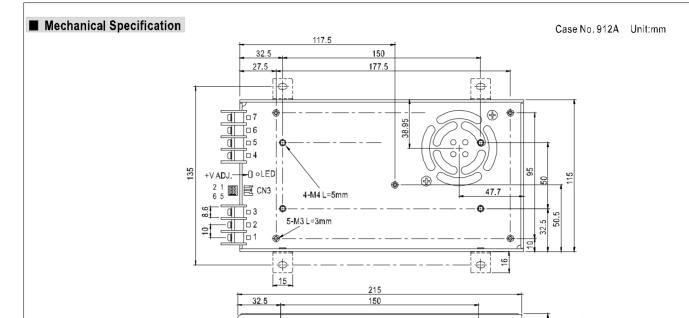
direction

25 50

6-M4 L=5mm

INPUT VOLTAGE (VDC)





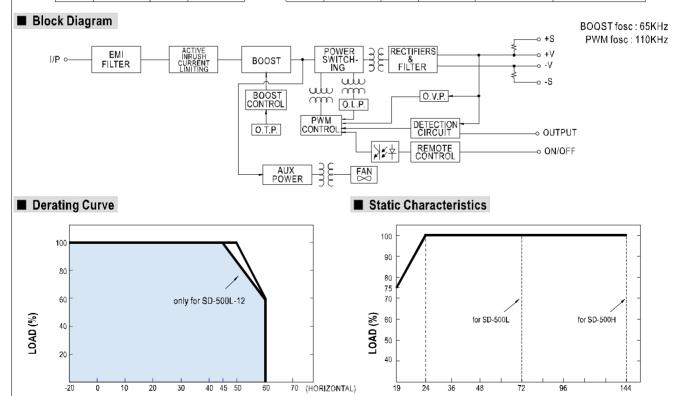
DC Input Terminal Pin No. Assignment

DC IIIput	Tellillia Fill	110. ASSI	giiiient
Pin No.	Assignment	Pin No.	Assignment
1	DC INPUT V+	4,5	-V
2	DC INPUT V-	6,7	+∨
3	FG ±		

AMBIENT TEMPERATURE (℃)

Control Pin No. Assignment (CN3): HRS DF11-6DP-2DS or equivalent

Pin No.	Assignment	Pin No.	Assignment	Mating Housing	Terminal
1	+\$	4	GND	LIDO DE 44 CDO	ICT COUD AGOT DO 5
2	-S	5	RC	HRS DF11-6DS or equivalent	JST SPHD-002T-P0.5 or equivalent
3	OUTPUT OK	6	RCG	or squiraisii	or againstant



■ Function Description of CN3

Pin No.	Function	Description
1		Positive sensing. The +S signal should be connected to the positive terminal of the load. The +S and -S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V.
2	-8	Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V.
3	O/P OK	Open collector signal, reference to pin4(GND). Low when PSU turns on. The maximum sink current is 10mA and the maximum external voltage is 13V.
4	GND	These pins connect to the negative terminal (-V).
5	RC	Remote ON/OFF
6	RCG	Remote ON/OFF ground

■ Function Manual

1.Remote ON/OFF

(1)Remote ON/OFF control becomes available by applying voltage in CN3

(2) Table 1.1 shows the specification of Remote ON/OFF function

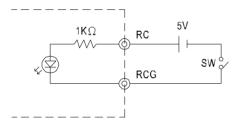
(3)Fig.1.2 shows the example to connect Remote ON/OFF control function

Table 1.1 Specification of Remote ON/OFF

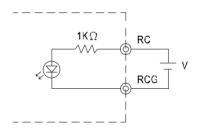
Connection Method	Fig. 1.2(A)	Fig. 1.2(B)
Output on	SW Open	V=0~0.8Vdc
Output off	SW Close	V=4~10Vdc

Fig.1.2 Examples of connecting remote ON/OFF

(A)Using external voltage source



(B)Using external voltage source



2.Output OK signal

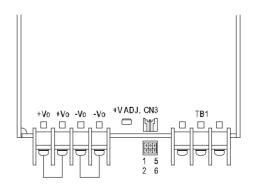
"Output OK" is an open collector signal.
It indicates the output status of the PSU. It can operate in two ways: One is sinking current from external signal; the other is sending out a voltage signal.

2-1 Sink current:

The maximum sink current is 10mA and the maximum external voltage is 13V.

2-2 Voltage signal:

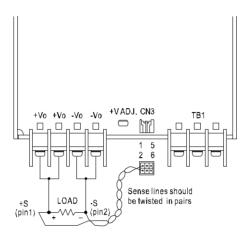
Between O/P OK(pin3) and GND(pin4)	Output Status
0 ~ 0.5V	ON
12 ~ 13V	OFF



1	CN3	5
+\$	O/P OK	RC
-S	GND	RCG
2		6

3 Remote Sense

The remote sensing compensates voltage drop on the load wiring up to 0.5 V.



1	CN3	5
+\$	O/P OK	RC
-S	GND	RCG
2		6





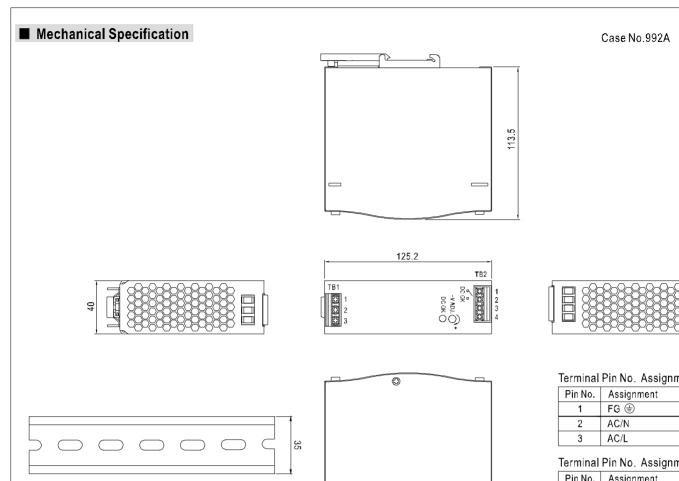
- High efficiency 91% and low power dissipation
- 150% peak load capability
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage / Over temperature
- · Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- EN61000-6-2(EN50082-2) industrial immunity level
- · Built-in DC OK relay contact
- 100% full load burn-in test

MODEL		SDR-120-12	SDR-120-24	SDR-120-48	
	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	
	PEAK CURRENT	15A	7.5A	3.75A	
	PEAK POWER Note.6	180W (3 sec.)			
OUTPUT	RIPPLE & NOISE (max.) Note.2	100mVp-p	100m∨p-p	120mVp-p	
	VOLTAGE ADJ. RANGE	12 ~ 14V	24 ~ 28V	48 ~ 55V	
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	
	SETUP, RISE TIME	1500ms, 60ms/230VAC 3000ms, 60m	ns/115VAC at full load		
	HOLD UP TIME (Typ.)	20ms/230VAC 20ms/115VAC at full lo	ad		
		88 ~ 264VAC 124 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR (Typ.)	0.93/230VAC 0.96/115VAC at full loa	d		
NPUT	EFFICIENCY (Typ.)	89%	91%	90.5%	
	AC CURRENT (Typ.)	1.4A/115VAC 0.7A/230VAC			
	INRUSH CURRENT (Typ.)	35A/115VAC 70A/230VAC			
	LEAKAGE CURRENT	<1mA/240VAC			
		Normally works within 110 ~ 150% rated output power for more than 3 seconds and then shut down o/p voltage			
	OVERLOAD	>150% rated power, constant current limiting with auto-recovery within 3 seconds and shut down o/p voltage after 3 seconds			
		14 ~ 17∨	29 ~ 33∨	56 ~ 65V	
ROTECTION	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover			
		95°C ±5°C (TSW: detect on heatsink of pov	wer switch)		
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, red	ge, recovers automatically after temperature goes down		
FUNCTION	DC OK REALY CONTACT RATINGS (max.)				
	WORKING TEMP.	-25 ~ +70°C (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 95% RH non-condensing			
NVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +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 STANDARDS	UL508, TUV EN60950-1 approved			
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC			
SAFETY &	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 50	0VDC / 25℃ / 70% RH		
EMC	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2, 3			
Note 4)	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A, SEMI F47, GL approved			
	MTBF	289.9Khrs min. MIL-HDBK-217F (25°C)			
OTHERS	DIMENSION	40*125.2*113.5mm (W*H*D)			
	PACKING	0.67Kg; 20pcs/14.4Kg/1.16CUFT			
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance: includes set up	ally mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. red at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. to tolerance, line regulation and load regulation. dered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets			

- 5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.
- 6. 3 seconds max., please refer to peak loading curves.
- 7. Derating may be needed under low input voltage. Please check the derating curve for more details.

Unit:mm





Terminal Pin No. Assignment (TB1)

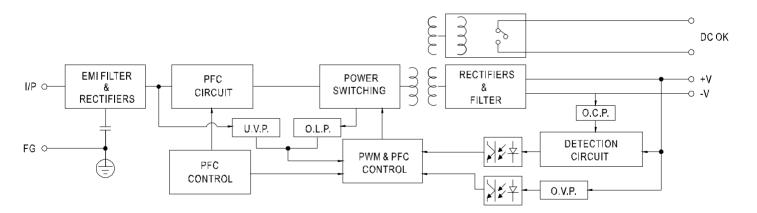
Pin No.	Assignment
1	FG ⊕
2	AC/N
3	AC/L

Terminal Pin No. Assignment (TB2)

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

■ Block Diagram

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

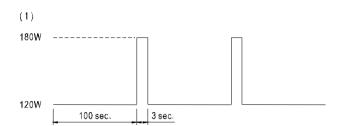


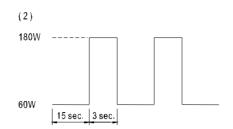
■ DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

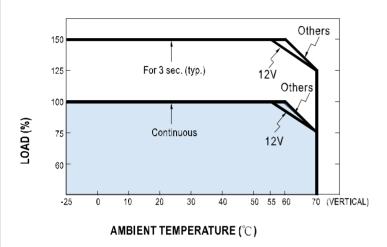


■ Peak Loading

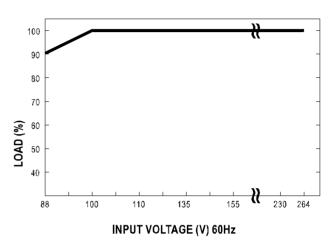




■ Derating Curve



■ Output derating VS input voltage







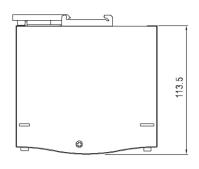
- High efficiency 94% and low power dissipation
- 150% peak load capability
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage / Over temperature
- · Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- EN61000-6-2(EN50082-2) industrial immunity level
- Built-in DC OK relay contact
- 100% full load burn-in test

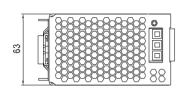
MODEL		SDR-240-24	SDR-240-48	
	DC VOLTAGE	24V	48V	
	RATED CURRENT	10A	5A	
	CURRENT RANGE	0~10A	0~5A	
	RATED POWER	240W	240W	
	PEAK CURRENT	15A 7.5A		
	PEAK POWER Note.6	360W (3sec.)		
OUTPUT	RIPPLE & NOISE (max.) Note.2		120m∨p-p	
	VOLTAGE ADJ. RANGE	24~28\/	48 ~ 55V	
	VOLTAGE TOLERANCE Note.3		±1.0%	
	LINE REGULATION	±0.5%	±0.5%	
	LOAD REGULATION	±1.0%	±1.0%	
	SETUP, RISE TIME	1500ms, 60ms/230VAC 3000ms, 60ms/115VAC at full load	11.070	
	,	20ms/230VAC 20ms/115VAC at full load		
	HOLD UP TIME (Typ.)			
	VOLTAGE RANGE			
	FREQUENCY RANGE	47 ~ 63Hz 0.93/230VAC 0.99/115VAC at full load		
INDUT	POWER FACTOR (Typ.)			
INPUT	EFFICIENCY (Typ.) Note.8			
	AC CURRENT (Typ.)	2.6A/115VAC 1.3A/230VAC		
	INRUSH CURRENT (Typ.)	33A/115VAC 65A/230VAC		
	LEAKAGE CURRENT	<1mA / 240VAC		
	OVERLOAD	Normally works within 110 ~ 150% rated output power for more than 3 seconds and then shut down o/p voltage with auto-recovery >150% rated power, constant current limiting with auto-recovery within 2 seconds and may cause to shut down if over 2 seconds		
			triin z seconds and may cause to shut down if over z seconds 56 ~ 65V	
PROTECTION	OVER VOLTAGE	29 ~ 33V 56 ~ 65V Protection type : Shut down o/p voltage with auto-recovery		
		95°C ±5°C (TSW: detect on heatsink of power switch)		
	OVER TEMPERATURE		fter temperature goes days	
FUNCTION	DC OV DEALY CONTACT DATINGS /may 1	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down		
FUNCTION	DC OK REALY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load		
	WORKING TEMP. Note 5	-25 ~ +70°C (Refer to "Derating Curve") 20 ~ 95% RH non-condensing		
ENVIDANMENT	WORKING HUMIDITY			
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C , 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C) Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X.	V. 7 over: Maunting: Compliance to IECG0009.3.6	
	VIBRATION SAFETY STANDARDS		, 1, 2 axes, Mounting. Compliance to IEC00000-2-0	
	WITHSTAND VOLTAGE	UL508, TUV EN60950-1 approved	OC ON O EN INC	
SAFETY &		ON RESISTANCE //P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH		
EMC	EMC EMISSION			
(Note 4)	LING LINIQUION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3		
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A, SEMI F47, GL approved		
	MTBF	169.3Khrs min. MIL-HDBK-217F (25°C') 63*125.2*113.5mm (W*H*D)		
OTHERS	DIMENSION			
	PACKING	1.03Kg; 12pcs/13.4Kg/1.06CUFT		
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up The power supply is consided EMC directives. Installation clearances : 40re	ally mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. The dead at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. To tolerance, line regulation and load regulation. The dead at component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets may no top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. The side is a heat source, 15mm clearance is recommended.		

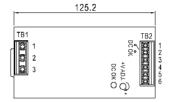
- 6. 3 seconds max., please refer to peak loading curves.
- 7. Derating may be needed under low input voltage. Please check the derating curve for more details.
- 8. After 30 minutes of burn-in.

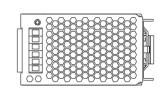
■ Mechanical Specification

Case No. 979A Unit:mm











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



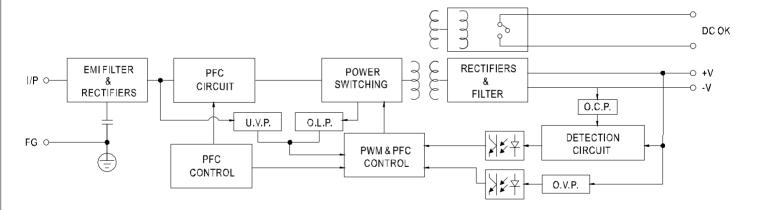
Terminal Pin No. Assignment (TB1)

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

Terminal Pin No. Assignment (TB2)

Pin No.	Assignment
1,2	Relay Contact
3,4	DC OUTPUT +V
5,6	DC OUTPUT -V

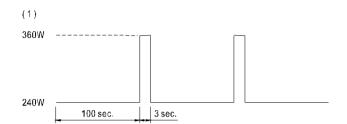
■ Block Diagram

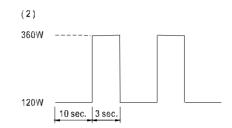


■ DC OK Relay Contact

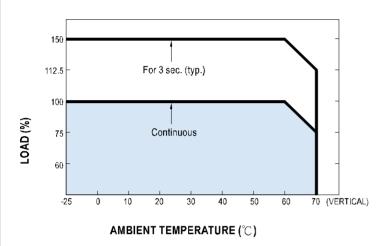
Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.



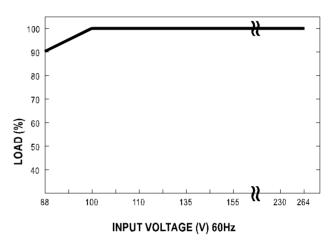




■ Derating Curve



■ Output derating VS input voltage







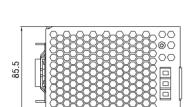
- High efficiency 94% and low power dissipation
- 150% peak load capability
- Built-in active PFC function, PF>0.94
- Protections: Short circuit / Overload / Over voltage / Over temperature
- · Cooling by free air convection
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- EN61000-6-2(EN50082-2) industrial immunity level
- · Built-in DC OK relay contact
- 100% full load burn-in test
- 150% peak load capability

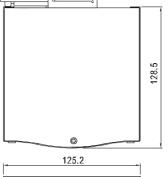
MODEL		SDR-480-24	SDR-480-48	
	DC VOLTAGE	24V	48V	
	RATED CURRENT	20A	10A	
	CURRENT RANGE	0 ~ 20A	0 ~ 10A	
	RATED POWER	480W	480W	
	PEAK CURRENT	30A	15A	
	PEAK POWER Note.6	720W (3sec.)		
OUTPUT	RIPPLE & NOISE (max.) Note.2		120mVp-p	
	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 55V	
	VOLTAGE TOLERANCE Note.3	±1.2%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	
	LOAD REGULATION	±1.0%	±1.0%	
	SETUP, RISE TIME	1500ms, 150ms/230VAC 3000ms, 150ms/115VAC at full loa	ad	
	HOLD UP TIME (Typ.)	14ms/230VAC at full load		
	, ,,	90 ~ 264VAC 127 ~ 370VDC		
	FREQUENCY RANGE	90 ~ 284 VAC 127 ~ 370 VDC 47 ~ 63Hz		
	POWER FACTOR (Typ.)	47 ~ 63HZ 0.94/230VAC		
INPUT	EFFICIENCY (Typ.)	94%		
INFOI	AC CURRENT (Typ.)	5A/115VAC 2.5A/230VAC		
	INRUSH CURRENT (Typ.)	40A/115VAC 80A/230VAC		
	LEAKAGE CURRENT	<0.8mA/240VAC		
	LEARAGE CORREIT	Normally works within 110 ~ 150% rated output power for more than 3 seconds and then shut down o/p voltage with auto-recovery		
	OVERLOAD	>150% rated power, constant current limiting with auto-recovery within 2 seconds and may cause to shut down if over 2 seconds		
		29 ~ 33V	56 ~ 65V	
PROTECTION	OVER VOLTAGE	Protection type : Shut down o/p voltage with auto-recovery or re-	100 00.	
		105°C ±5°C (TSW: detect on heatsink of power switch)	power on to recovery	
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down		
FUNCTION	DO OV REAL V CONTACT DATINGS (max)		inter temperature goes down	
FUNCTION	DC OK REALY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load		
	WORKING TEMP. Note.5 WORKING HUMIDITY	ote.5 -25 ~ +70°C (Refer to "Derating Curve")		
FANCIDAMENT	STORAGE TEMP., HUMIDITY	20 ~ 95% RH non-condensing		
ENVIRONMENT		-40~+85°C, 10~95% RH		
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃) Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6		
	VIBRATION SAFETY STANDARDS		, 1, 2 axes, Mounting. Compliance to IEC00000-2-0	
	WITHSTAND VOLTAGE	UL508, TUV EN60950-1 approved		
SAFETY &	ISOLATION RESISTANCE	/P-O/P:3KVAC /P-FG:1.5KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC		
EMC		/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH		
(Note 4)	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3		
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A, SEMI F47, GL approved		
	MTBF	112.9Khrs min. MIL-HDBK-217F (25°C)		
OTHERS	DIMENSION	85.5*125.2*128.5mm (W*H*D)		
	PACKING	1.6Kg; 8pcs/13.8Kg/0.9CUFT		
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consided EMC directives.	ally mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. red at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. to tolerance, line regulation and load regulation. dered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets		

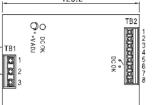
- 5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.
- 6. 3 seconds peak power max. and the average output power should not exceed the rate power.
- 7. Derating may be needed under low input voltage. Please check the derating curve for more details.

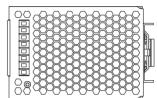
■ Mechanical Specification

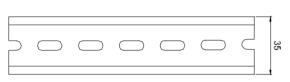
Case No.984A Unit:mm



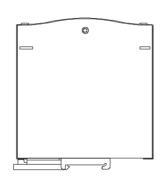








ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15



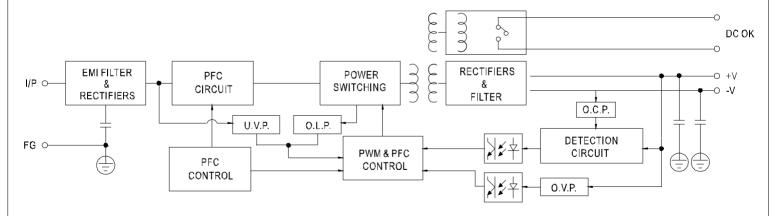
Terminal Pin No. Assignment (TB1)

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
5,6	Relay Contact
7,8	NC

■ Block Diagram

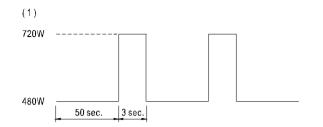


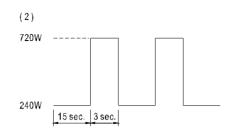
■ DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

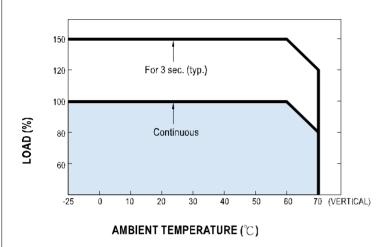


■ Peak Loading

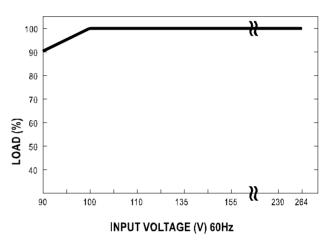




■ Derating Curve



■ Output derating VS input voltage



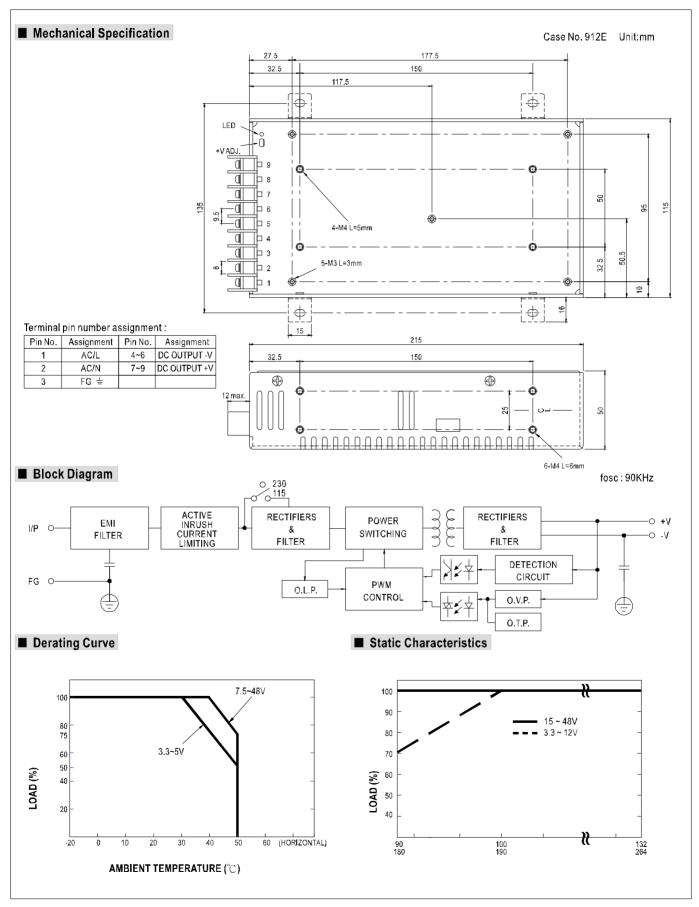




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage/ Over temperature
- Cooling by free air convection
- Withstand 300vac surge input for 5 second
- Built-in constant current limiting circuit
- 100% full load burn-in test
- LED indicator for power on
- Fixed switching frequency at 90KHz
- Low cost, high reliability

MODEL		SE-200-3.3	SE-200-5	SE-200-7.5	SE-200-12	SE-200-15	SE-200-24	SE-200-27	SE-200-36	SE-200-48
	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	27V	36V	48V
	RATED CURRENT	40A	40A	27A	17A	14A	8.8A	7.8A	5.9A	4.4A
	CURRENT RANGE	0 ~ 40A	0 ~ 40A	0 ~ 27A	0 ~ 17A	0 ~ 14A	0 ~ 8.8A	0 ~ 7.8A	0 ~ 5.9A	0 ~ 4.4A
	RATED POWER	132W	200W	202.5W	204W	210W	211.2W	210.6W	212.4W	211.2W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150 mVp -p	150mVp-p	150mVp-p	200mVp-p	240mVp-p	240mVp-
OUTPUT	VOLTAGE ADJ. RANGE	2.97 ~ 3.7V	4.5 ~ 5.6V	6 ~ 9V	10 ~ 13.5V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	32 ~ 40V	41 ~ 56V
	VOLTAGE TOLERANCE Note.3	±2.0%	±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%	±0.5%
	LOAD REGULATION	±1.5%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1000ms, 50m	s/230VAC	1000ms,50m	s/115VAC at fu	ıll load			'	'
	HOLD UP TIME	20ms/230VA	C 16ms/115	SVAC at full load	d					
	VOLTAGE RANGE	90 ~ 132VAC	/ 180 ~ 264VA	C by switch	254 ~ 370V	DC				
	FREQUENCY RANGE	47 ~ 63Hz		•						
	EFFICIENCY (Typ.)	75%	79%	82%	85%	85%	87%	88%	89%	89%
INPUT	AC CURRENT	4.5 A/115 VAC	2.5A/23	80VAC						
	INRUSH CURRENT (max.)	40A/115VAC	55A/230	VAC						
	LEAKAGE CURRENT	<3.5mA / 240	VAC							
		105 ~ 150% rated output power								
	Protection type: Constant current limiting, recovers automatically after fault condition is removed 3.8 ~ 4.9V 5.75 ~ 6.75V 9.4 ~ 10.9V 13.8 ~ 16.2V 18 ~ 21V 27.6 ~ 32.4V 33.7 ~ 39.2V 41.4 ~ 46.4									
							/ 41.4 ~ 46.8\	/ 57.6 ~ 67		
PROTECTION										
		95°C±5°C (3.3V);100°C±5°C (5V); 90°C±5°C (7.5V);85°C±5°C (12~24V);80°C±5°C (27~36V);75°C±5°C (48V) (TSW1) Detect on cas								
	OVER TEMPERATURE	Protection type: Shut down O/P voltage, recovers automatically after temperature goes down								
	WORKING TEMP.	-20 ~ +50°C	Refer to outp	ut load derating	curve)					
	WORKING HUMIDITY		non-condens		,,					
ENVIRONMENT	STORAGE TEMP., HUMIDITY		10 ~ 95% RH	9						
LIVINONMENT	TEMP. COEFFICIENT	±0.03%/°C (0								
	VIBRATION	,		cle. 60min. ead	ch along X. Y. Z	axes				
	SAFETY STANDARDS	UL60950-1 a		;	··· · · · · · · · · · · · · · · ·					
	WITHSTAND VOLTAGE		<u> </u>	.5KVAC O/P	-FG:0.5KVAC					
SAFETY &	ISOLATION RESISTANCE			00M Ohms/500)% RH				
EMC	EMI CONDUCTION & RADIATION	,								
	EMS IMMUNITY	J	Design refer to EN55022 (CISPR22) Class A Design refer to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, light industry level, criteria A							
	MTBF	271.9K hrs m	g							
OTHERS	DIMENSION				<i>'</i>					
J	ERS DIMENSION 215*115*50mm (L*W*H) PACKING 0.93Kg; 12pcs/12Kg/0.92CUFT									
NOTE	All parameters NOT specific and a specific and	cially mention ured at 20MF	ned are meas	sured at 230V	12" twisted					acitor.





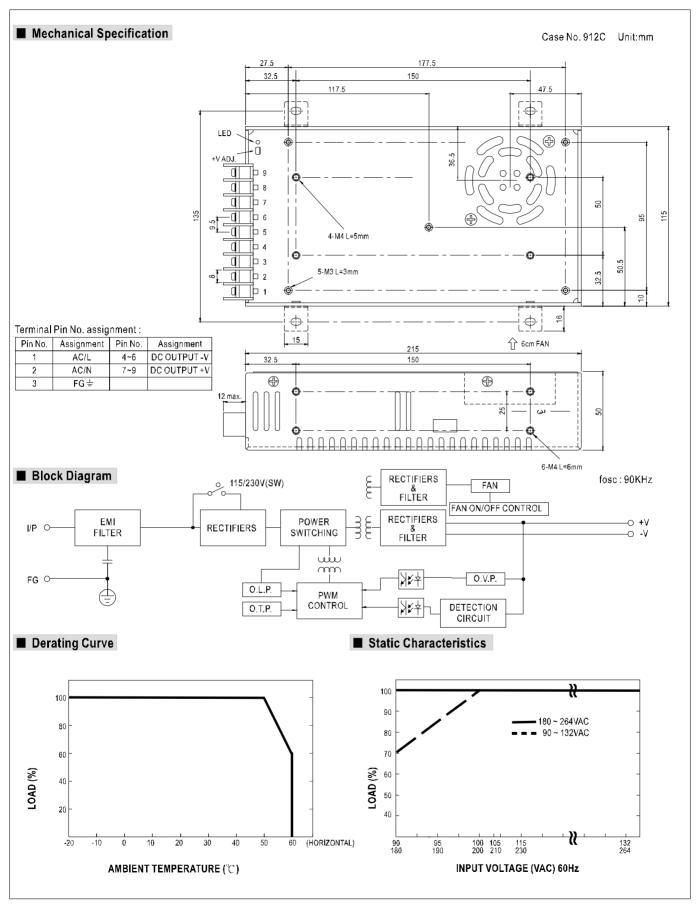




- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage/ Over temperature
- Forced air cooling by built-in DC fan
- Withstand 300vac surge input for 5 second
- Built-in cooling Fan ON-OFF control
- Built-in constant current limiting circuit
- 100% full load burn-in test
- LED indicator for power on
- Fixed switching frequency at 90KHz
- · Low cost, high reliability

MODEL		SE-350-3.3	SE-350-5	SE-350-7.5	SE-350-12	SE-350-15	SE-350-24	SE-350-27	SE-350-36	SE-350-48
	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	27V	36V	48V
	RATED CURRENT	60A	60A	46 A	29A	23.2A	14.6A	13A	9.7A	7.3A
	CURRENT RANGE	0 ~ 60A	0 ~ 60A	0 ~ 46A	0 ~ 29A	0 ~ 23.2A	0 ~ 14.6A	0 ~ 13A	0 ~ 9.7A	0 ~ 7.3A
	RATED POWER	198W	300W	345W	348W	348W	350.4W	351W	349.2W	350.4W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p	240mVp-p
OUTPUT	VOLTAGE ADJ. RANGE	2.97 ~ 3.7V	4.5 ~ 5.6V	6~9V	10 ~ 13.5V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	32~40V	41 ~ 56V
	VOLTAGE TOLERANCE Note.3	±4.5%	±2.0%	±2.0%	±1.5%	±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%	±0.5%
	LOAD REGULATION	±2.5%	±2.0%	±2.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1000ms, 50m	s/230VAC	1000ms,50ms	s/115VAC at fu	III load				
	HOLD UP TIME (Typ.)	20ms/230VA0	16ms/115\	AC at full load	ı					
	VOLTAGE RANGE	90 ~ 132VAC	/ 180 ~ 264VA	C by switch	254 ~ 370VI	OC .				
	FREQUENCY RANGE	47 ~ 63Hz								
INPUT	EFFICIENCY (Typ.)	74%	78%	80%	83%	84%	87%	88%	87.5%	87.5%
INFUI	AC CURRENT (Typ.)	7A/115VAC	4A/230VA	2		•				
	INRUSH CURRENT (Typ.)	40A/115VAC	60A/230V	AC						
	LEAKAGE CURRENT	<3.5mA / 240	VAC							
		105 ~ 135% rated output power								
	OVER LOAD	Protection typ	e : Constant c	urrent limiting,	recovers autor	matically after f	ault condition i	s removed		
DESTESTION		3.8 ~ 4.6V	5.75 ~ 7.5V	9.4 ~ 11.25V	13.8 ~ 16.2V	18 ~ 21V	27.6 ~ 32.4V	33.7 ~ 39.2V	41.4~46.8V	57.6 ~ 67.2V
PROTECTION	OVER VOLTAGE	Protection type :Shut down O/P voltage, re-power on to recover								
	OVER TEMPERATURE	85°C±5°C (3.3~7.5V); 80°C±5°C (12V); 75°C±5°C (15~48V) (TSW1) Detect on case								
	OVER TEMPERATURE	Protection typ	oe : Shut down	O/P voltage, re	ecovers autom	atically after te	mperature goe	s down		
FUNCTION	FAN ON/OFF CONTROL (Tom.)	RTH2≥50°C FAN ON, ≤45°C FAN OFF (3.3 ~ 7.5V)								
FUNCTION	FAN ON/OFF CONTROL(Typ.)	RTH2≧55°C	FAN ON, ≦50	C FAN OFF	(12 ~ 48V)					
	WORKING TEMP.	-20 ~ +60°C (Refer to output	t load derating	curve)					
	WORKING HUMIDITY	20 ~ 90% RH	non-condensir	ng						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C,	10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/℃ (0	~ 50℃)							
	VIBRATION	10 ~ 500Hz, 5	G 10min./1cyd	de, 60min. eac	h along X, Y, Z	axes				
	SAFETY STANDARDS	UL60950-1 a	oproved							
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVA	C 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 / 25°C / 70% RH EMI CONDUCTION & RADIATION Design refer to EN55022 (CISPR22) Class A									
EWIC										
	EMS IMMUNITY	Design refer t	Design refer to EN61000-4-2, 3, 4, 5, 6, 8,11, ENV50204, EN55024, light industry level, criteria A							
	MTBF	234.3K hrs m	in MIL-HDE	3K-217F (25°C)					
OTHERS	DIMENSION	215*115*50m	m (L*W*H)							
	PACKING	0. 1	s/13.5Kg/0.920							
NOTE	All parameters NOT speciall Ripple & noise are measure Tolerance : includes set up to	d at 20MHz of	bandwidth by ι	using a 12" twi	sted pair-wire				citor.	





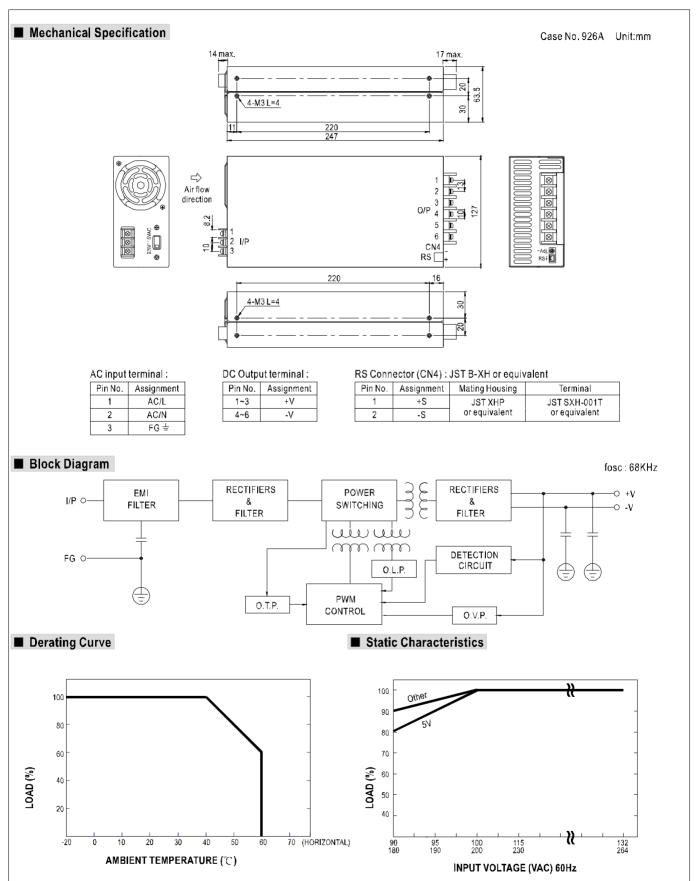




- AC input active surge current limiting
- AC input range selected by switch
- Protections:Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC fan
- High power density 4.9w/inch³
- Built-in remote sense function
- UL approved
- Low cost

MODEL		SE-600-5	SE-600-12	SE-600-15	SE-600-24	SE-600-27	SE-600-36	SE-600-48		
	DC VOLTAGE	5V	12V	15V	24V	27V	36V	48V		
	RATED CURRENT	100A	50A	40A	25A	22.2A	16.6A	12.5A		
	CURRENT RANGE	0 ~ 100A	0 ~ 50A	0 ~ 40A	0 ~ 25A	0 ~ 22.2A	0 ~ 16.6A	0 ~ 12.5A		
	RATED POWER	500W	600W	600W	600W	599.4W	597.6W	600W		
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p		
OUTPUT	VOLTAGE ADJ. RANGE	4.75 ~ 5.5V	10 ~ 13.5V	13.5 ~ 16.5V	22 ~ 26.4V	24 ~ 30V	32 ~ 40V	43 ~ 56V		
	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	±2.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	SETUP, RISE TIME	1000ms, 50ms/2	30VAC 1000r	ns, 50ms/115VAC	at full load					
	HOLD UP TIME (Typ.)	20ms/230VAC	16ms/115VAC	at full load						
	VOLTAGE RANGE	90 ~ 132VAC / 18	0 ~ 264VAC selec	ted by switch	254 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz								
INDUT	EFFICIENCY (Typ.)	78%	83%	84%	87%	87%	87%	88%		
INPUT	AC CURRENT (Typ.)	12A/115VAC	7.5A/230VAC							
	INRUSH CURRENT (Typ.)	30A/115VAC	60A/230VAC							
	LEAKAGE CURRENT	<2.0mA / 240VA	;							
		105 ~ 125% rated output power								
	OVERLOAD	Protection type : Shut down o/p voltage, re-power on to recover								
BRATEATION	AVED VALTA OF	5.75 ~ 6.3V	13.8 ~ 16.2V	18 ~ 21V	27.6 ~ 32.4V	31 ~ 36.5V	42 ~ 50V	57.6 ~ 67.2		
PROTECTION	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover								
		85°C ±5°C (TSW1) detect on heatsink of power transistor								
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down								
	WORKING TEMP.	-20 ~ +60°C (Ref	er to "Derating Cu	rve")						
	WORKING HUMIDITY	20 ~ 90% RH nor	n-condensing							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C , 10 ·	- 95% RH							
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 5	i0℃)							
	VIBRATION	10 ~ 500Hz, 2G 1	0min./1cycle, 60m	nin. each along X, `	Y, Z axes					
	SAFETY STANDARDS	UL60950-1 appro	oved							
SAFETY	WITHSTAND VOLTAGE	I/P-O/P:3KVAC	I/P-FG:1.5KVAC	O/P-FG:0.5KVA	'C					
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG,	D/P-FG:100M Ohm	ns / 500VDC / 25°C	:/ 70% RH					
	MTBF	197K hrs min.	MIL-HDBK-217F ((25°C)						
OTHERS	DIMENSION	247*127*63.5mn	ı (L*W*H)							
	PACKING	2.1Kg; 6pcs/13.4	Kg/1.03CUFT							
NOTE	All parameters NOT spec Ripple & noise are meas Tolerance : includes set	ured at 20MHz d	f bandwidth by u	ising a 12" twiste	ed pair-wire term			capacitor.		





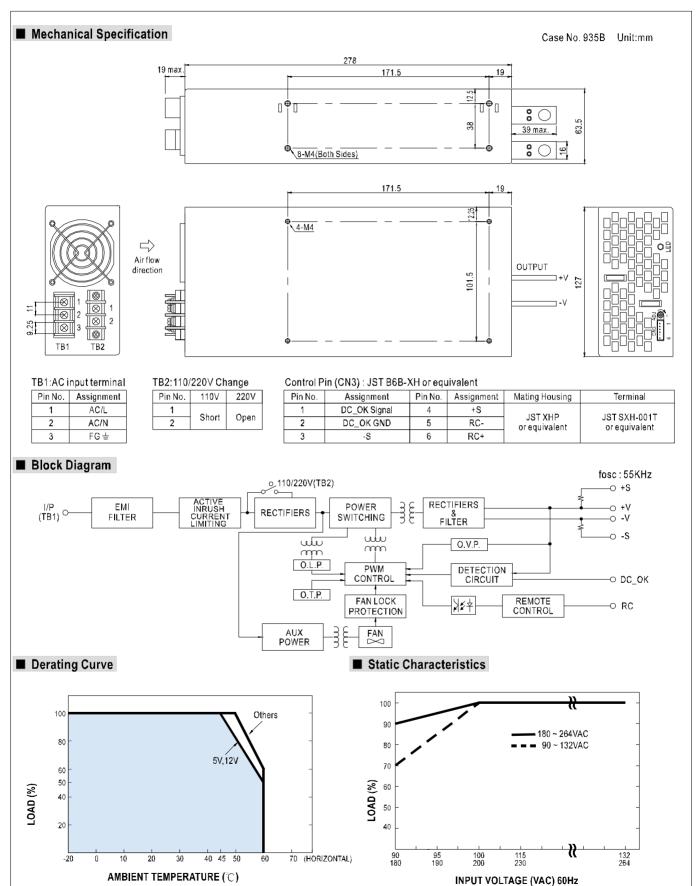




- AC input active surge current limiting
- AC input range selected by switch
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC ball bearing fan
- High power density 7.3w/inch³
- With DC OK signal output
- Built-in remote ON-OFF control
- Built-in remote sense function
- UL / CUL approved
- Low cost

MODEL		SE-1000-5	SE-1000-9	SE-1000-12	SE-1000-15	SE-1000-24	SE-1000-48		
	DC VOLTAGE	5V	9V	12V	15V	24V	48V		
	RATED CURRENT	150A	100 A	83.3A	66.7A	41.7A	20.8A		
	CURRENT RANGE	0 ~ 150A	0 ~ 100A	0 ~ 83.3A	0 ~ 66.7A	0 ~ 41.7A	0~20.8A		
	RATED POWER	750W	900W	999.6W	1000.5W	1000.8W	998.4W		
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p		
OUTPUT	VOLTAGE ADJ. RANGE	3.3 ~ 5.5V	7.5 ~ 10V	10 ~ 13.5V	13.5 ~ 16.5V	22 ~ 27.5V	43 ~ 56V		
	VOLTAGE TOLERANCE Note.3	±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%		
	LOAD REGULATION	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	SETUP, RISE TIME	1500ms, 50ms/230V	AC 1500ms, 50m	ns/115VAC at full load					
	HOLD UP TIME (Typ.)	20ms/230VAC	15ms/115VAC at full lo	ad					
	VOLTAGE RANGE	90 ~ 132VAC / 180 ~	264VAC selected by T	B2 254 ~ 370VE	C				
	FREQUENCY RANGE	47 ~ 63Hz							
INPUT	EFFICIENCY (Typ.)	81%	84%	85%	86%	88%	89%		
INFUI	AC CURRENT (Typ.)	17.5A/115VAC	10A/230VAC						
	INRUSH CURRENT (Typ.)	35A/115VAC 55	5A/230VAC						
	LEAKAGE CURRENT	<2.5mA / 240VAC							
	OVER OAR	105 ~ 125% rated output power							
	OVERLOAD	Protection type : Shu	it down o/p voltage, re-	-power on to recover					
DEOTECTION	OVER VOLTAGE	5.75 ~ 6.3V	10.4 ~ 12.2V	13.8 ~ 16.2V	18 ~ 21V	28 ~ 32.4V	57.6 ~ 67.2V		
FROILGION	OVER VOLIAGE	Protection type: Shut down o/p voltage, re-power on to recover							
	OVER TEMPERATURE	70 $^{\circ}$ $^{\circ}$ ±5 $^{\circ}$ (TSW1) detect on heatsink of power transistor							
	OVERTEMPERATURE	Protection type : Shu	t down o/p voltage, red		fter temperature goes	down			
FUNCTION	DC_OK SIGNAL	PSU turn on:3.3V ~ 5	5.6V PUS turn off	:0 ~ 1V					
1 DIVOTION	REMOTE CONTROL	RC+/RC-: 0 ~ 0.8V p	ower on; 4 ~ 10V powe	er off					
	WORKING TEMP.	-20 ~ +60°C (Refer to	o "Derating Curve")						
	WORKING HUMIDITY	20 ~ 90% RH non-co	ndensing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85 °C , 10 ~ 95	% RH						
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 50°C	:)						
	VIBRATION		in./1cycle, 60min. eacl	h along X, Y, Z axes					
	SAFETY STANDARDS	UL60950-1 approved							
SAFETY	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/F	P-FG:1.5KVAC O/P-	FG:0.5KVAC					
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P	-FG:100M Ohms / 500	VDC / 25°C / 70% RH					
	MTBF	251.6K hrs min. M	IIL-HDBK-217F (25°€))					
OTHERS	DIMENSION	278*127*63.5mm (L*							
	PACKING	2.5Kg; 6pcs/16Kg/1.							
NOTE	 Ripple & noise are measurements Tolerance : includes set un 	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. By using UVP circuit, PSU will not turn on direct by in AC continue ON/OFF condition within 5 sec.							





SE-1500 single output power supply series parameters

Electrical Specifications

Product mo	Product model: 12V-48V		SE-1500-15	SE-1500-24	SE-1500-36	SE-1500-48
		0-12				
	DC voltage	12V	15V	24V	36V	48V
	Rated current	125A	100A	62.5A	42A	31.5A
	Current range	0~125A	0~100A	0~62.5A	0~42A	0~31.5A
Output	Rated power	1500W	1500W	1500W	1500W	1500W
Output	Ripple and noise	150mVp-	150mVp-p	150mVp-p	200mVp-p	300mVp-p
		p				
	Voltage adjustment range	10.8 ~	13.5 ~ 16.5V	22 ~ 27V	32 ~ 39V	45 ~ 53V
		13.2V				
	Voltage accuracy	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	Linear adjustment rate	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Load adjustment rate	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%

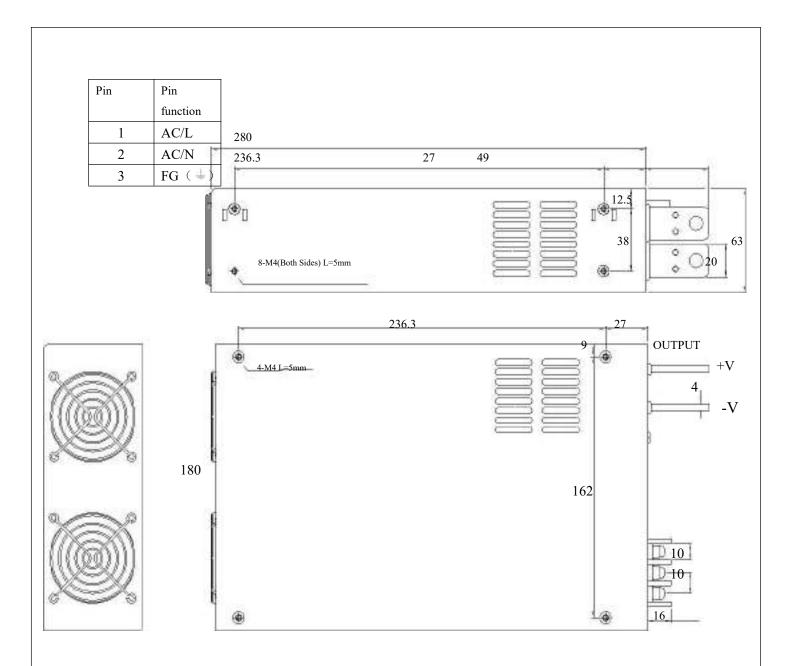
Product m	odel: 60V-200V	SE-1500-60	SE-1500-72	SE-1500-80	SE-1500-11	SE-1500-20
					0	0
	DC voltage	60V	72V	80V	110V	200V
	Rated current	25A	21A	18.7A	13.7A	7.5A
	Current range	0 ~25A	0~21A	0~18.7A	0~18.7A	0 ~7.5A
Outpu	Rated power	1500W	1500W	1500W	1500W	1500W
Outpu	Ripple and noise	150mVp-p	150mVp-p	150mVp-p	200mVp-p	300mVp-p
t	Voltage	10.8 ~ 13.2V	13.5 ~ 16.5V	22 ~ 27V	32 ~ 39V	45 ~ 53V
	adjustment range					
	Voltage accuracy	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	Linear	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	adjustment rate					
	Load adjustment	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	rate					

	Start, rise time	<1000ms, 80ms (F	Full load)					
Time								
	Hold time	10ms(When fully loa	ided)					
	(Typ.)							
	voltage range	180 ~ 264VAC or 2.	180 ~ 264VAC or 254 ~ 370VDC					
	Frequency	47 ~ 63Hz	47 ~ 63Hz					
	Range							
Input	Power factor	0.75/230V(When fully loaded)						
	(Typ.)							
	Efficiency	85%	87%	89%	90%	91%		
	(Typ.) ≤							
	AC current	17A/180VAC 12A/230VAC						
	(Typ.)							
	Inrush	Soft starter 10A23	Soft starter 10A230VAC					
	current							

	(Typ.)						
	Leakage	<3.5mA / 240VAC					
	current						
	Overload	Rated output 100 ~ 105%					
		The user can continuously adjust the output current constant current or over current protection mode					
Protection		through the analog voltage signal. The current constant voltage linear ratio drops to zero					
	Overvoltage	Protection type Turn off output output voltage and recover after restart					
		13.5 ~ 14.8V					
	Over	85°C±5°C Power transistor heat sink 105°C±5°C Detection on power diode radiator					
	temperature	detection					
		Protection type Turn off the output voltage and automatically recover after temperature drops					
	Remote	Please refer to the function manual					
Function	control						
	Auxiliary	13.7V 0.5A can be used for controller power supply					
	power						
	Output	Use 0 ~ 5V analog signal or MCU SPWM control output voltage 0 ~ rated maximum					
	voltage	output voltage, continuously adjustable					
	control						
	Output	Use 0 ~ 5V analog signal or MCU SPWM control output current 5 ~ rated maximum					
	current	output voltage, continuously adjustable					
	control						
	Parallel	Please refer to the function manual					
	current						
	sharing						
	Operating	-20 ~ 70°C					
Environment	temperature						
	Working	20 ~ 90%RH non-condensing					
	humidity						
	Temperature	±0.05%/°C (0~50°C)					
	Coefficient						
	Vibration	10 ~ 500Hz, 2G 10 minutes/cycle, X, Y, Z axis each 60 minutes					
	resistant						
Safety	safety	UL60950-1					
regulation	regulations						
s and	Withstand	I/P-O/P:3KVACI/P-FG:1.5KVAC O/P-FG:0.5KVAC					
electroma	voltage						
gnetic	Insulation	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH					
compatibil	resistance						
ity	Size	280*180*63(L*W*H)					
Note		rwise specified, all specifications and parameters are measured in an environment where the					
	1 *	AC and the rated load is 25°.					
		noise test method: use a 12 ² double wire, and connect 0.1uf and 47uf capacitors in parallel at					
		nd measure under the bandwidth of 20MHZ					
	3. Accuracy in	udes setting error, linear adjustment rate and load adjustment rate					

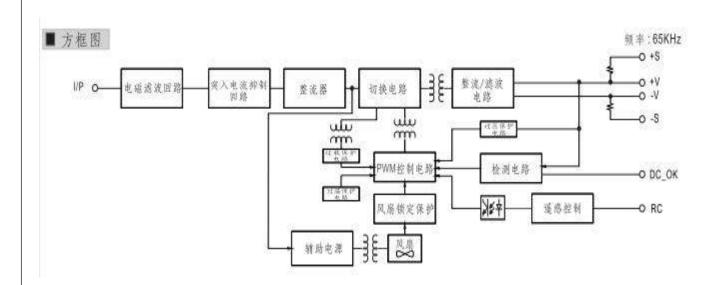
Mechanism size

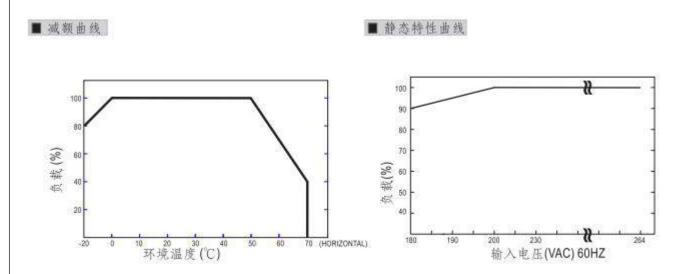
Unit mm



Input terminal pin layout

Working structure diagram:





Parallel output:

- (1) The wiring mode of parallel output operation is as follows (+S, -S and CS are connected in parallel)
- (2) The voltage difference between the parallel units should be less than $\pm 2\%$
- (3) Each output value shall not exceed the following formula

Parallel output current = rated current (unit) \times number of parallel units \times 0.9

(4) A maximum of 10 units can be connected in parallel, and more should be connected in parallel. Please separate control or contact the manufacturer

Interface definition:

CN1: Pin arrangement:

2 1

4	3
6	5
8	7

CN1 pin definition:

GND	PIN
GND	PIN
CV ADJ	OFF-PIN
CC ADJ	GND

CN2 Pin arrangement:

2	1
4	3
6	5
8	7

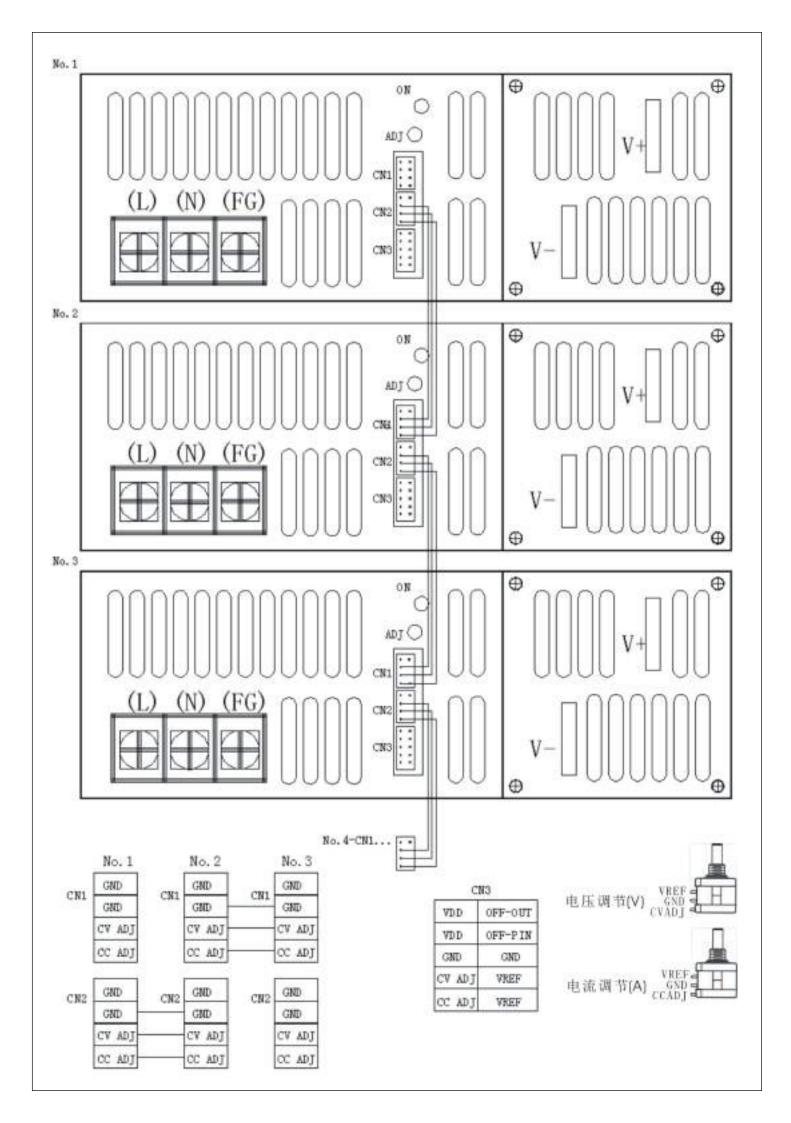
CN2 Pin definition:

GND	PIN
GND	PIN
CV ADJ	OFF-PIN
CCADJ	GND

CN3 Pin arrangement:

2	1
4	3
6	5
8	7
10	9

Parallel diagram:



Output control method:

- 1. Direct power output: CN3 interface VDD and OFF-OUT short circuit
- 2. Voltage adjustment: see the potentiometer connection in the figure above, and disconnect VDD from OFF-OUT, and short-circuit CCADJ and VREF
- 3. Voltage adjustment: see the potentiometer connection in the figure above, and disconnect VDD from OFF-OUT, short-circuit CVADJ and VREF
- 4. Voltage and current adjustment: see the potentiometer connection in the figure above, and disconnect VDD from OFF-OUT.
- 5. Stop output: VDD and OFF-PIN short circuit to stop output

Output status indication:

- 1. Overcurrent protection
- 2. Overvoltage protection
- 3. Overheating protection red light
- 4. Working status green light

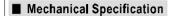




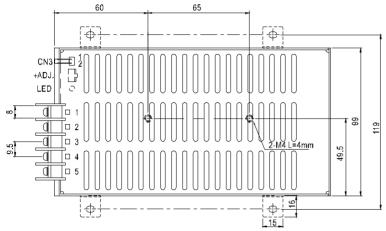
- Universal AC input / Full range
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage
- Built-in constant current limiting circuit
- Low profile: 33mm thickness
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at PFC:67KHz PWM:134KHz

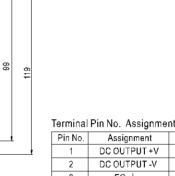
MODEL		SP-75-3.3	SP-75-5	SP-75-7.5	SP-75-12	SP-75-13.5	SP-75-15	SP-75-24	SP-75-27	SP-75-48			
	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	48V			
	RATED CURRENT	15A	15A	10A	6.3A	5.6A	5A	3.2A	2.8A	1.6A			
	CURRENT RANGE	0 ~ 15A	0 ~ 15A	0 ~ 10A	0 ~ 6.3A	0 ~ 5.6A	0 ~ 5A	0~3.2A	0 ~ 2.8A	0 ~ 1.6A			
	RATED POWER	49.5W	75W	75W	75.6W	75.6W	75W	76.8W	75.6W	76.8W			
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	80mVp-p	80mVp-p	80m∨p-p	80mVp-p	100mVp-p	100mVp-p	100mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	3.14 ~ 3.63V	4.75 ~ 5.5V	7.13 ~ 8.25V	11.4 ~ 13.2V	12.8 ~ 14.9V	14.3 ~ 16.5V	22.8 ~ 26.4V	25.7 ~ 29.7V	45.6 ~ 52.8			
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%			
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	600ms, 60ms	at full load										
	HOLD UP TIME (Typ.)	36ms at full lo	ad										
	VOLTAGE RANGE Note.5	85 ~ 264VAC	120 ~ 370	OVDC									
	FREQUENCY RANGE	47 ~ 63Hz											
	POWER FACTOR (Typ.)	PF>0.93/230	/AC 0.96	115VAC at full	load								
INPUT	EFFICIENCY (Typ.)	68%	72%	74%	77%	78%	79%	80%	80%	80%			
	AC CURRENT (Typ.)	1.3A/115VAC 0.7A/230VAC											
	INRUSH CURRENT (Typ.)	COLD START 30A/230VAC											
	LEAKAGE CURRENT	<2mA / 240VAC											
	105 ~ 150% rated output power												
DEATEATION	OVERLOAD	Protection type: Constant current limiting, recovers automatically after fault condition is removed											
PROTECTION		3.8 ~ 4.46V	8 ~ 4.46V 5.75 ~ 6.75V 8.63 ~ 10.13V 13.8 ~ 16.2V 15.53 ~ 18.23V 17.25 ~ 20.25V 27.6 ~ 32.4V 31.05 ~ 36.45V 55.2 ~ 64.8V										
	OVER VOLTAGE	Protection typ	e : Shut down	o/p voltage, re	power on to re	cover	'						
FUNCTION	REMOTE CONTROL(OPTION)	CN3:4 ~ 10VI	OC POWER OF	F, <0 ~ 0.8VD	C POWER ON								
	WORKING TEMP.	-10 ~ +60℃ (Refer to "Derat	ting Curve")									
	WORKING HUMIDITY	20 ~ 90% RH	non-condensir	ng									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C,	10 ~ 95% RH										
	TEMP. COEFFICIENT	±0.05%/℃ (0	~50°C)										
	VIBRATION	10 ~ 500Hz, 2	G 10min./1cyc	le, 60min. eacl	n along X, Y, Z	axes							
	SAFETY STANDARDS	UL60950-1, T	UV EN60950-	1 approved									
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVA	.C I/P-FG:1.	KVAC O/P-	FG:0.5KVAC								
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-F	G, O/P-FG:100	M Ohms / 500	VDC / 25°C / 70	1% RH							
(Note 4)	EMC EMISSION	Compliance t	o EN55022 (CI	SPR22) Class	B, EN61000-3-	2,-3							
	EMC IMMUNITY	Compliance t	o EN61000-4-2	2,3,4,5,6,8,11,1	N55024, light	industry level,	criteria A						
	MTBF	208.8K hrs m	in MIL-HDE	K-217F (25°C))								
OTHERS	DIMENSION	179*97*33mr		,									
	PACKING	0.58Kg; 20pc	s/12Kg/0.64CU	JFT									
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is considered.	ed at 20MHz o tolerance, line lered a compo	mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. erance, line regulation and load regulation. ed a component which will be installed into a final equipment. er low input voltages. Please check the derating curve for more details.										





Case No. 920A Unit:mm





renninai	Pili No. Assignme	III	
Pin No.	Assignment	Pin No.	Assignmen
1	DC OUTPUT+V	4	AC/N
2	DC OUTPUT -V	5	AC/L

FG ±

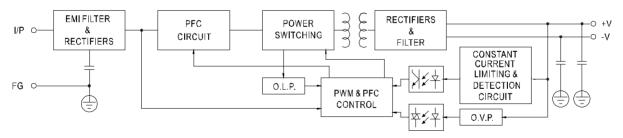
6-M4 L=6mm 179

Remote ON/OFF(CN3): Molex 5046-02 or equivalent(optional)

Pin No.	Assignment	Mating Housing	Terminal
1	RC-	Molex 5051	Molex 2759
2	RC+	or equivalent	or equi v alent

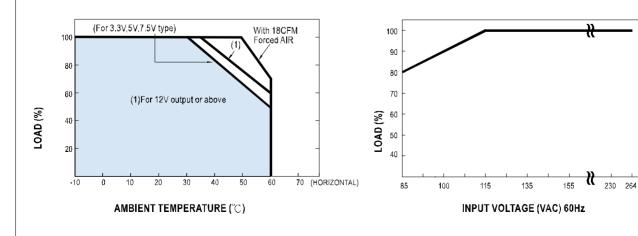
■ Block Diagram

PFC fosc: 67KHz PWM fosc: 134KHz



■ Derating Curve

■ Output Derating VS Input Voltage



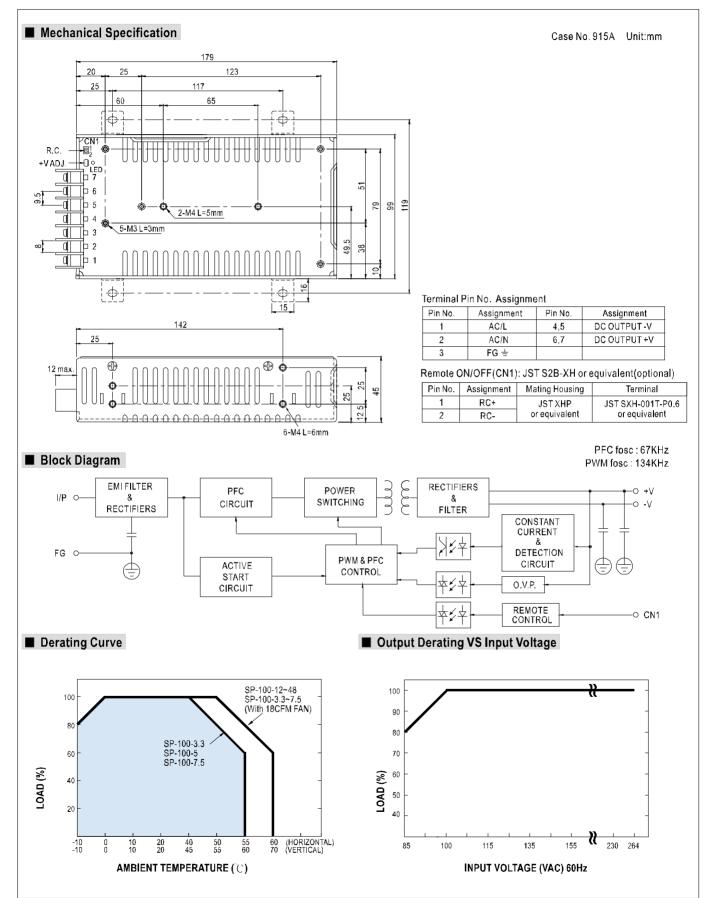




- Universal AC input / full range
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage
- Built-in constant current limiting circuit
- Remote ON-OFF control(Optional)
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at PFC:67KHz PWM:134KHz

MODEL		SP-100-3.3	SP-100-5	SP-100-7.5	SP-100-12	SP-100-13.5	SP-100-15	SP-100-24	SP-100-27	SP-100-48			
	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	48V			
	RATED CURRENT	20A	20A	13.5A	8.5A	7.5A	6.7A	4.2A	3.8A	2.1A			
	CURRENT RANGE	0 ~ 20A	0 ~ 20A	0 ~ 13.5A	0~8.5A	0~7.5A	0 ~ 6.7A	0~4.2A	0~3.8A	0 ~ 2.1A			
	RATED POWER	66W	100W	101.25W	102W	101.25W	100.5 W	100.8W	102.6W	100.8W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p	250mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	3.14 ~ 3.63V	4.75 ~ 5.5V	7.13 ~ 8.25V	11.4 ~ 13.2V	12.8 ~ 14.9V	14.3 ~ 16.5V	22.8 ~ 26.4V	25.7 ~ 29.7V	45.6 ~ 52.8V			
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%			
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	600ms, 30ms	at full load										
	HOLD UP TIME (Typ.)	20ms at full lo	ad										
	VOLTAGE RANGE	85 ~ 264VAC	120 ~ 370	OVDC									
	FREQUENCY RANGE	47 ~ 63Hz											
	POWER FACTOR (Typ.)	PF>0.93/230\	/AC PF>0).98/1 15VAC at	t full load								
INPUT	EFFICIENCY (Typ.)	70% 76% 78% 80% 80% 82% 84% 83%											
	AC CURRENT (Typ.)	1.7A/115VAC	1.7A/115VAC 0.8A/230VAC										
	INRUSH CURRENT (Typ.)	COLD START	COLD START 30A/230VAC										
	LEAKAGE CURRENT	<2mA / 240VA	۱C										
		105 ~ 150% rated output power Protection type: Constant current limiting, recovers automatically after fault condition is removed											
BBOTCOTION	OVERLOAD	Protection typ	e : Constant cu	urrent limiting,	recovers auton	natically after fa	ult condition is	removed					
PROTECTION	OVED VOLTA CE	3.63 ~ 4.46V	3.63 ~ 4.46V 5.5 ~ 6.75V 8.25 ~ 10.13V 13.2 ~ 16.2V 14.85 ~ 18.23V 16.5 ~ 20.25V 26.4 ~ 32.4V 29.7 ~ 36.45V 52.8 ~ 64.8V										
	OVER VOLTAGE				power on to re	cover							
FUNCTION	REMOTE CONTROL(OPTION)	CN1:4 ~ 10VE	OC POWER ON	1, <0 ~ 0.8VDC	POWER OFF								
	WORKING TEMP.		Refer to "Derat										
	WORKING HUMIDITY	20 ~ 90% RH	non-condensin	19									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°€ ,											
	TEMP. COEFFICIENT	±0.05%/°C (0	~50℃)										
	VIBRATION	10 ~ 500Hz, 2	G 10min./1cyc	le, 60min. eacl	h along X, Y, Z	axes							
	SAFETY STANDARDS	UL60950-1, T	UV EN60950-1	approved									
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVA	C I/P-FG:1.5	KVAC O/P-I	FG:0.5KVAC								
EMC	ISOLATION RESISTANCE	,	•		VDC / 25°C / 70								
(Note 4)	EMC EMISSION	Compliance to	EN55022 (CI	SPR22) Class	B, EN61000-3-	2,-3							
	EMC IMMUNITY	Compliance to	EN61000-4-2	,3,4,5,6,8,11, [EN55024, light	industry level,	criteria A						
	MTBF	211.3K hrs mi	n. MIL-HDB	K-217F (25°C)									
OTHERS	DIMENSION	179*99*45mm	,										
	PACKING	<u> </u>	s/14.3Kg/1. 1 70										
NOTE	Ripple & noise are measure Tolerance : includes set up	ed at 20MHz o tolerance, line	r mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. If at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Delerance, line regulation and load regulation. red a component which will be installed into a final equipment.										





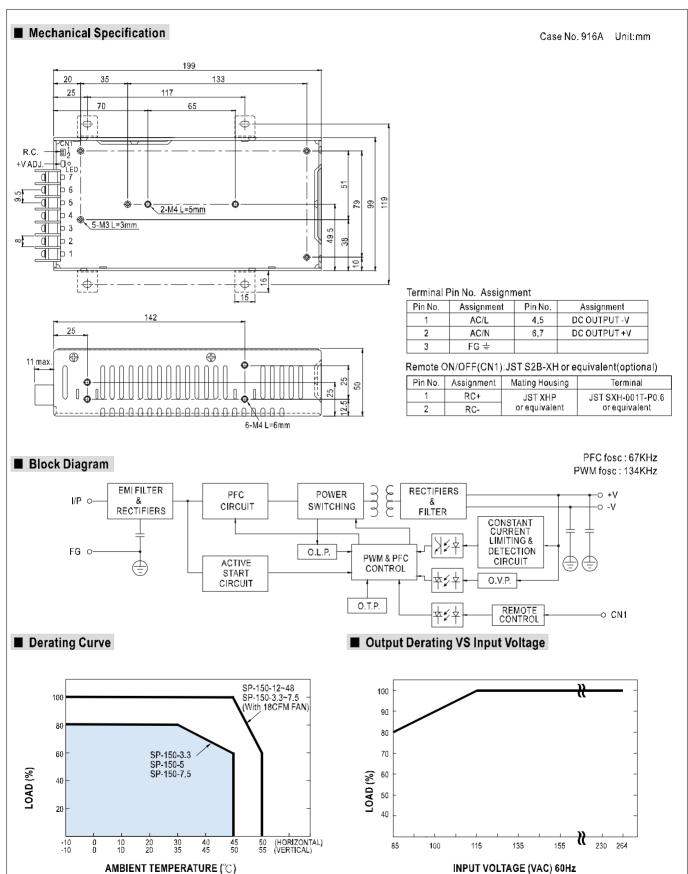




- Universal AC input / Full range
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in constant current limiting circuit
- Remote ON-OFF control(Optional)
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at PFC:67KHz PWM:134KHz

MODEL		SP-150-3.3	SP-150-5	SP-150-7.5	SP-150-12	SP-150-13.5	SP-150-15	SP-150-24	SP-150-27	SP-150-48				
	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	48V				
	RATED CURRENT	30A	30A	20A	12.5A	11.2A	10A	6.3A	5.6A	3.2A				
	CURRENT RANGE	0 ~ 30A	0 ~ 30A	0 ~ 20A	0 ~ 12.5A	0 ~ 11.2A	0 ~ 10A	0 ~ 6.3A	0 ~ 5.6A	0 ~ 3.2A				
	RATED POWER	99W	150W	150W	150W	151.2W	150W	151.2W	151.2W	153.6W				
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p	250mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	3.14 ~ 3.63V	4 75 ~ 5 5∨	7 13 ~ 8.25V	11 4 ~ 13.2V	12.8 ~ 14.9V	14.3 ~ 16.5V	22.8 ~ 26.4V	25.7 ~ 29.7V	45.6 ~ 52.8V				
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%				
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%				
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%				
	SETUP, RISE TIME	600ms, 30ms	at full load		•		•	•						
	HOLD UP TIME (Typ.)	20ms at full lo	ad											
	VOLTAGE RANGE Note.5	85 ~ 264VAC	120 ~ 370	OVDC										
	FREQUENCY RANGE	47 ~ 63Hz												
	POWER FACTOR (Typ.)	PF>0.93/230\	/AC PF>().98/115VAC at	full load									
INPUT	EFFICIENCY (Typ.)	67%	75%	79%	80%	80%	81%	83%	84%	84%				
	AC CURRENT (Typ.)	2.5A/115VAC	2.5A/115VAC 1.2A/230VAC											
	INRUSH CURRENT (Typ.)	COLD START 40A/230VAC												
	LEAKAGE CURRENT	<2mA / 240V/	<2mA / 240VAC											
		105 ~ 150% rated output power												
	OVERLOAD					natically after fa				,				
PROTECTION	OVER VOLTAGE	3.63 ~ 4.46V	63 ~ 4.46V 5.5 ~ 6.75V 8.25 ~ 10.13V 13.2 ~ 16.2V 14.85 ~ 18.2V 16.5 ~ 20.25V 26.4 ~ 32.4V 29.7 ~ 36.45V 52.8 ~ 64.8V											
PROTECTION	OVER VOLIAGE	Protection type : Shut down o/p voltage, re-power on to recover												
	OVER TEMPERATURE	95℃ ±5℃ (T	95℃ ±5℃ (TSW1 : detect on heatsink of power transistor)											
	OVER TEINFERATURE	, ,				tically after tem	perature goes	down						
FUNCTION	REMOTE CONTROL(OPTION)			1, <0 ~ 0.8VDC	POWER OFF									
	WORKING TEMP.	- (Refer to "Derat	,										
	WORKING HUMIDITY	20 ~ 90% RH	non-condensir	ng										
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85℃,	10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.05%/℃ (0	~50°C)											
	VIBRATION			le, 60min. eacl	along X, Y, Z	axes								
	SAFETY STANDARDS		UV EN60950-1											
SAFETY &	WITHSTAND VOLTAGE			KVAC O/P-I										
EMC	ISOLATION RESISTANCE			M Ohms / 500'										
(Note 4)	EMC EMISSION			SPR22) Class	•									
	EMC IMMUNITY					industry level,	criteria A							
	MTBF	191.2K hrs m		8K-217F (25°€)	1									
OTHERS	DIMENSION	199*99*50mm (L*W*H)												
	PACKING	U	s/16.4Kg/1.280											
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consider.	ially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ired at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. p tolerance, line regulation and load regulation. idered a component which will be installed into a final equipment. under low input voltages. Please check the derating curve for more details.												





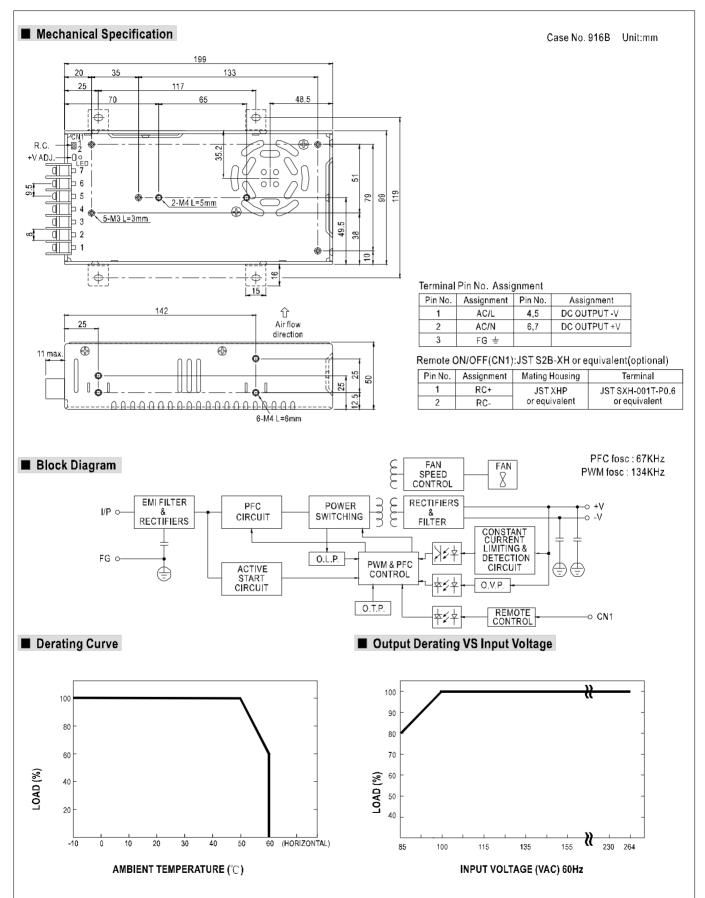




- Universal AC input / full range
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in cooling fan speed control
- Built-in constant current limiting circuit
- Built-in fan speed control
- Remote ON-OFF control(Optional)
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at PFC:67KHz PWM:134KHz

MODEL		SP-200-3.3	SP-200-5	SP-200-7.5	SP-200-12	SP-200-13.5	SP-200-15	SP-200-24	SP-200-27	SP-200-48			
	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	48V			
	RATED CURRENT	40A	40A	26.7A	16.7A	14.9A	13.4A	8.4A	7.5A	4.2A			
	CURRENT RANGE	0~40A	0 ~ 40A	0 ~ 26.7A	0~16.7A	0~14.9A	0 ~ 13. 4 A	0~8.4A	0~7.5A	0 ~ 4.2A			
	RATED POWER	132W	200W	200.25W	200.4W	201.15W	201W	201.6W	202.5W	201.6W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100 mVp -p	100mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p	250mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	3.14 ~ 3.63V	4.75 ~ 5.5V	7.13 ~ 8.25V	11.4 ~ 13.2V	12.8 ~ 14.9V	14.3 ~ 16.5V	22.8 ~ 26.4V	25.7 ~ 29.7V	45.6 ~ 52.8			
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%			
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	600ms, 30ms	at full load			•		•	•	-			
	HOLD UP TIME (Typ.)	20ms at full load											
	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC											
	FREQUENCY RANGE	47 ~ 63Hz											
	POWER FACTOR (Typ.)	PF>0.93/230	/AC PF>(0.98/1 15V AC at	t full load								
INPUT	EFFICIENCY (Typ.)	65%	71%	76%	79%	80%	81%	83%	83%	84%			
	AC CURRENT (Typ.)	3.5A/115VAC 1.7A/230VAC											
	INRUSH CURRENT (Typ.)	COLD START	40A/230VAC										
	LEAKAGE CURRENT	<2mA / 240VA	VC										
		105 ~ 150% r	ated output pov	wer									
	OVERLOAD	Protection typ	e : Constant c	urrent limiting,	recovers autor	natically after fa	ault condition is	s removed					
		3.63 ~ 4.46V	5.5 ~ 6.75V	8.25 ~ 10.13V	13.2 ~ 16.2V	14.85 ~ 18.2V	16.5 ~ 20.25V	26.4 ~ 32.4V	29.7 ~ 36.45V	52.8 ~ 64.8			
PROTECTION	OVER VOLTAGE			o/p voltage, re-									
			15°C ±5°C (TSW1 : detect on heatsink of power transistor)										
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down											
FUNCTION	REMOTE CONTROL(OPTION)	,,		N, <0 ~ 0.8VDC		,	. ,						
	WORKING TEMP		Refer to "Dera										
	WORKING HUMIDITY	`	non-condensir	,									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C ,		· 3									
	TEMP. COEFFICIENT	±0.05%/°C (0											
	VIBRATION	- ,		le, 60min. eacl	h along X. Y. Z	axes							
	SAFETY STANDARDS			1, CCC GB494	<u> </u>	4,00							
SAFETY &	WITHSTAND VOLTAGE			5KVAC O/P-									
EMC	ISOLATION RESISTANCE			OM Ohms / 500)% RH							
(Note 4)	EMC EMISSION		•	SPR22) Class									
	EMC IMMUNITY		•	•		•	criteria A						
	MTBF	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A 183.8K hrs min. MIL-HDBK-217F (25℃)											
OTHERS	DIMENSION	199*99*50mn			<u> </u>								
	PACKING		s/17.9Kg/1.280	CUFT									
	All parameters NOT special	U 1			out_rated load	and 25°C of a	mbient tempe	rature					
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consid	ed at 20MHz o tolerance, line	of bandwidth b regulation an	y using a 12" t d load regulati	wisted pair-wi on.	re terminated v			apacitor.				





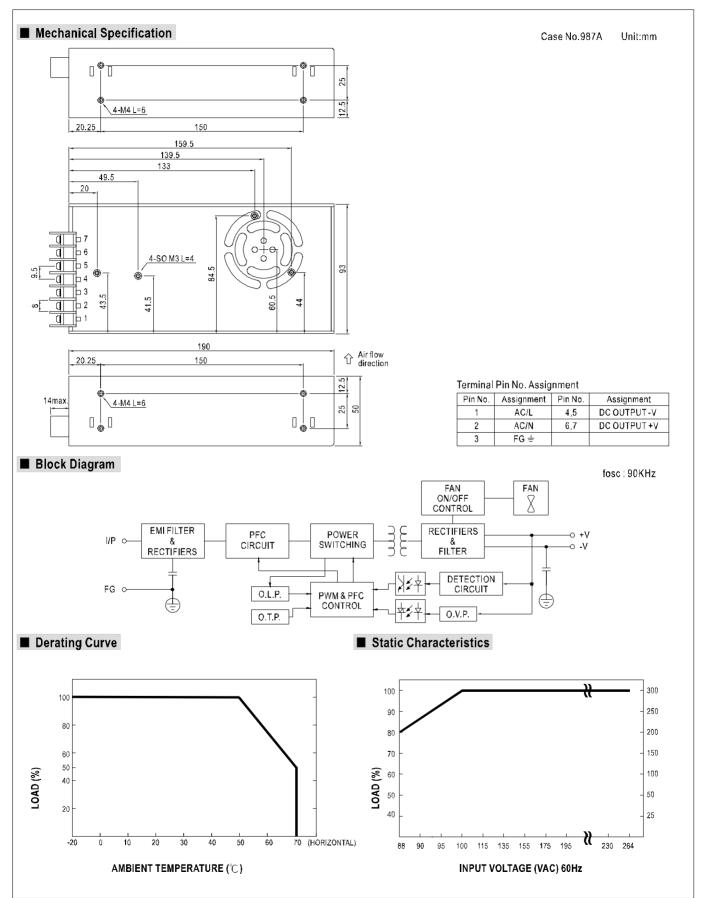




- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC Fan
- Built-in fan ON / OFF control
- LED indicator for power on
- Fixed switching frequency at 90KHz

MODEL		SP-240-5	SP-240-7.5	SP-240-12	SP-240-15	SP-240-24	SP-240-30	SP-240-48						
	DC VOLTAGE	5V	7.5V	12V	15V	24V	30V	48V						
	RATED CURRENT	45A	32A	20A	16A	10A	8A	5A						
	CURRENT RANGE	0 ~ 45A	0 ~ 32A	0 ~ 20A	0 ~ 16A	0 ~ 10A	0 ~ 8A	0 ~ 5A						
	RATED POWER	225W	240W	240W	240W	240W	240W	240W						
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p						
OUTPUT	VOLTAGE ADJ. RANGE	4 ~ 6V	6~9V	10 ~ 14V	12 ~ 18V	20 ~ 28V	27 ~ 33V	41 ~ 56V						
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%						
	LINE REGULATION	±0.5%	±0.5%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%						
	LOAD REGULATION	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%						
	SETUP, RISE TIME	800ms, 50ms/23	0VAC 1500n	ns, 50ms/115VAC a	t full load	'	'							
	HOLD UP TIME (Typ.)	20ms/230VAC	20ms/115VAC	at full load										
	VOLTAGE RANGE Note,5	88 ~ 264VAC 124 ~ 370VDC												
	FREQUENCY RANGE	47 ~ 63Hz												
	POWER FACTOR (Typ.)	PF>0.95/230VAC	F>0.95/230VAC PF>0.98/115VAC at full load											
INPUT	EFFICIENCY (Typ.)	79%	83%	86%	86%	87%	88%	89%						
	AC CURRENT (Typ.)	3.6A/115VAC	1.8A/230VAC	+	!	!	<u>'</u>							
	INRUSH CURRENT (Typ.)	25A/115VAC 40A/230VAC												
	LEAKAGE CURRENT	<2mA/240VAC												
		105 ~ 135% rated	05 ~ 135% rated output power											
	OVERLOAD	Protection type:	Hiccup mode, red	covers automaticall	v after fault con	dition is removed								
		6.3 ~ 7.5V	9.4 ~ 10.9V	14.7 ~ 17.5V	19 ~ 22.5V	29.5 ~ 35V	34.7 ~ 41V	57.6 ~ 67.2						
PROTECTION	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover												
			$90^{\circ}\text{C} \pm 5^{\circ}\text{C} (5\text{V}, 7.5\text{V}), 85^{\circ}\text{C} \pm 5^{\circ}\text{C} (12\text{V}, 15\text{V}, 24\text{V}, 30\text{V}, 48\text{V})$ (TSW1: detect on heatsink of power transistor)											
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down												
FUNCTION	FAN CONTROL	RTH2>40°C FA		· ·		3000 good								
	WORKING TEMP.		er to "Derating Cu											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing												
ENVIRONMENT	STORAGE TEMP., HUMIDITY	,												
	TEMP COEFFICIENT	±0.03%/℃ (0~50℃)												
	VIBRATION	- '		min. each along X,	Y. Zaxes									
	SAFETY STANDARDS	-	EN60950-1 appr	<u> </u>	-,									
SAFETY &	WITHSTAND VOLTAGE	•		O/P-FG:0.5KV/	/C									
EMC	ISOLATION RESISTANCE			ms / 500VDC / 25°C										
(Note 4)	EMC EMISSION			2) Class B, EN6100										
•	EMC IMMUNITY	•	,	5,6,8,11, EN55024,		vel. criteria A								
	MTBF	284K hrs min.			J	. ,								
OTHERS	DIMENSION	190*93*50mm (L		(200)										
OTTLENO														
NOTE	PACKING 0.8Kg; 18pcs/15.4Kg/1.04CUFT 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 5. Derating may be needed under low input voltages. Please check the derating curve for more details.													







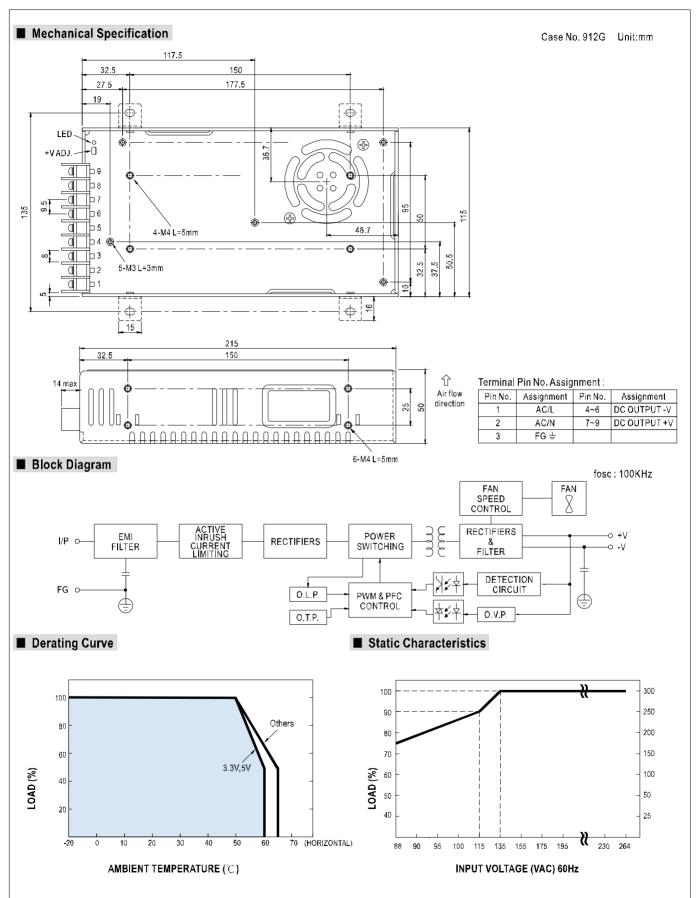


■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC Fan
- Built-in fan speed control
- Fixed switching frequency at 100KHz

MODEL			SP-320-3.3	SP-320-5	SP-320-7.5	SP-320-12	SP-320-13.5	SP-320-15	SP-320-24	SP-320-27	SP-320-36	SP-320-48		
	DC VOLTAGE		3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	36V	48V		
	RATED CURRENT		55A	55A	40A	25A	22A	20A	13A	11.7A	8.8A	6.7A		
	CURRENT RANGE	•	0~60A	0 ~ 55A	0 ~ 40A	0 ~ 25A	0 ~ 22A	0 ~ 20A	0 ~ 13A	0 ~ 11.7A	0 ~ 8.8A	0 ~ 6.7A		
	RATED POWER		181.5W	275W	300W	300W	297W	300W	312W	315.9W	316.8W	321.6W		
	RIPPLE & NOISE (max.) Note 2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	220mVp-p	240mVp-p		
OUTPUT	VOLTAGE ADJ. RA	ANGE	3.14 ~ 3.63V	4.5 ~ 5.5V	6~9V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 31.5V	32.4 ~ 39.6V	41 ~ 56V		
	VOLTAGE TOLERA	ANCE Note.3	±1.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%		
	LINE REGULATIO	N	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%	±0.2%		
	LOAD REGULATION	NC	±1.5% ±1.0% ±1.0% ±0.5% ±0.5% ±0.5% ±0.5% ±0.5% ±0.5% ±0.5%											
	SETUP, RISE TIME	•	800ms, 50ms/230VAC 2500ms, 50ms/115VAC at full load											
	HOLD UP TIME (Ty	yp.)	16ms/230V	AC 16m	s/115VAC at	full load								
	VOLTAGE RANGE	Note.5	88 ~ 264VA	C 124~	370VDC									
	FREQUENCY RAN	IGE	47 ~ 63Hz											
	POWER FACTOR	(Typ.)	PF>0.95/23	OVAC F	°F>0.98/115\	/AC at full loa	nd							
INDUT	EFFICIENCY (Typ.	.)	74%	79%	83%	86%	86%	86%	87%	88%	87%	89%		
INPUT	AC CURRENT	115VAC	2.5A	5A										
	(Тур.)	230VAC	1.5A	2.5A										
	INRUSH CURREN	T (Typ.)	20A/115VAC 40A/230VAC											
	LEAKAGE CURRE	NT	<1mA/240VAC											
	OVERLOAD		105 ~ 135%	rated outpu	power									
	OVERLOAD		Protection t	ype : Hiccup	mode, recov	ers automati	cally after fau	It condition i	is removed					
PROTECTION	OVED VOLTAGE		3.8 ~ 4.5V	5 75 ~ 6 75V	9.4 ~ 10.9V	13.8 ~ 16.2V	15.5 ~ 1 8.2V	18 ~ 21V	27.6 ~ 32.4V	33.7 ~ 39.2V	45 ~ 52.5V	57.6 ~ 67.2		
PROTECTION	OVER VOLTAGE		Protection type: Shut down o/p voltage, re-power on to recover											
	OVED TEMPERAT	une.	80°C ±5°C (70°C ±5°C 3.3V,5V only) (TSW1 : detect on heatsink of power transistor)											
	OVER TEMPERAT	UKE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down											
	WORKING TEMP.		-20 ~ +65°C (Refer to "Derating Curve")											
	WORKING HUMID	ITY	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP.	, HUMIDITY	· · · · · · · · · · · · · · · · · · ·											
	TEMP. COEFFICIE	NT	±0.03%/℃	(0 ~ 50°℃)										
	VIBRATION		10 ~ 500Hz	, 2G 10min./	lcycle, 60mir	ı. each along	X, Y, Z axes							
	SAFETY STANDA	RDS	UL60950-1	TUV EN609	50-1, CCC G	B4943(exce _l	ot for 3.3V, 36	SV) approved	i					
SAFETY &	WITHSTAND VOLT	TAGE	I/P-O/P:3K\	/AC I/P-F0	S:1.5KVAC	O/P-FG:0.5	KVAC							
EMC	ISOLATION RESIS	STANCE	I/P-O/P, I/P-	-FG, O/P-FG	:100M Ohms	/500VDC/2	.5℃/70% RH	ł						
(Note 4)	EMC EMISSION		Compliance	to EN55022	(CISPR22) (Class B, EN6	1000-3-2,-3							
	EMC IMMUNITY		Compliance	to EN61000	-4-2,3,4,5,6,	8,11, EN550	24, light indu	stry level, cri	iteria A					
	MTBF		207K hrs mi	n. MIL-HI	DBK-217F (25	5°C)								
OTHERS	DIMENSION		215*115*50	mm (L*W*H)										
	PACKING		1.1Kg; 12pc	s/14Kg/0.92	CUFT									
NOTE	 All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance: includes set up tolerance, line regulation and load regulation. The power supply is considered a component which will be installed into a final equipment. Derating may be needed under low input voltages. Please check the derating curve for more details. 													





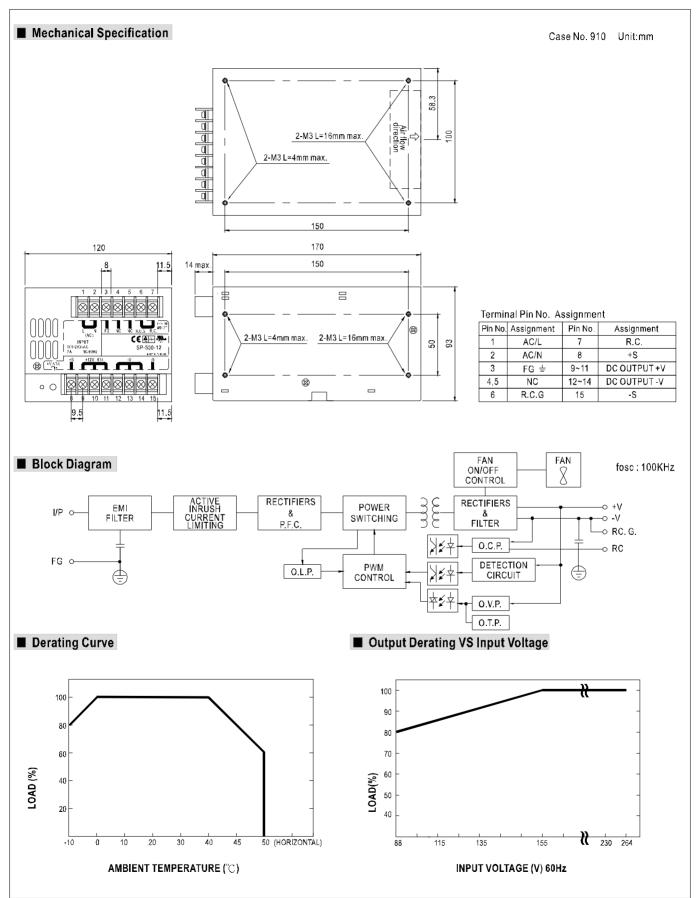




- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload/ Over voltage / Over temperature
- Forced air cooling by built-in DC fan
- Built-in cooling Fan ON-OFF control
- Built-in remote ON-OFF control
- · Built-in remote sense function
- Fixed switching frequency at 110KHz

MODEL		SP-500-12	SP-500-13.5	SP-500-15	SP-500-24	SP-500-27	SP-500-48					
	DC VOLTAGE	12V	13.5V	15V	24V	27V	48V					
	RATED CURRENT	40A	36A	32A	20A	18A	10A					
	CURRENT RANGE	0 ~ 40A	0~36A	0 ~ 32A	0 ~ 20A	0 ~ 18A	0 ~ 10A					
	RATED POWER	480W	486W	480W	480W	486W	480W					
	RIPPLE & NOISE (max.) Note.2	240mVp-p	240mVp-p	240mVp-p	240mVp-p	200mVp-p	300mVp-p					
OUTPUT	VOLTAGE ADJ. RANGE	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	24 ~ 30V	41 ~ 56V					
	VOLTAGE TOLERANCE Note.3	±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%					
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	SETUP, RISE TIME	1500ms, 50ms at full load										
	HOLD UP TIME (Typ.)	24ms at full load										
	VOLTAGE RANGE Note.5	88 ~ 264VAC 124 ~ 370VDC										
	FREQUENCY RANGE	47 ~ 63Hz										
	POWER FACTOR (Typ.)	PF>0.95/230VAC	PF>0.95/115VA	C at full load								
NPUT	EFFICIENCY(Typ.)	84%	84%	83%	85.5%	86.5%	87%					
	AC CURRENT (Typ.)	7A/115VAC 3.5	A/230VAC				'					
	INRUSH CURRENT (Typ.)	18A/115VAC 36A/230VAC										
	LEAKAGE CURRENT	<3.5mA/240VAC										
	OVERLOAD	105 ~ 135% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed										
-												
PROTECTION	OVER VOLTAGE	13.8 ~ 16.2V	15.5 ~ 18.2V	18 ~ 21V	27.6 ~ 32.4V	31 ~ 36.5V	57.6 ~ 67.2V					
		Protection type: Hiccup mode, recovers automatically after fault condition is removed										
	FAN CONTROL, O.T.P.	RTH1 or RTH2 ≥50°C FAN ON, ≤45°C FAN OFF, ≥70°C output shutdown										
FUNCTION	REMOTE CONTROL	RC+/RC-: Short = po										
	WORKING TEMP.	-10 ~ +50°C (Refer)								
	WORKING HUMIDITY	20 ~ 90% RH non-co	<u>_</u>									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 9	5% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C	,									
	VIBRATION	10 ~ 500Hz, 2G 10n	nin /1cycle, period f	or 60min. each along	X, Y, Z axes							
	SAFETY STANDARDS	•	· · · · · · · · · · · · · · · · · · ·	1943(for 24V only) ap	proved							
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/	P-FG:1.5KVAC C	/P-FG:0.5KVAC								
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/F	P-FG:100M Ohms / :	500VDC / 25°C / 70%	RH							
(Note 4)	EMC EMISSION	Compliance to EN5	5022 (CISPR22) Cla	ass B, EN61000-3-2,-	3							
	EMC IMMUNITY	Compliance to EN6	1000-4-2,3,4,5,6,8,	11, light industry level	, criteria A							
	MTBF	133.4K hrs min. MIL-HDBK-217F (25°C)										
OTHER\$	DIMENSION	170*120*93mm (L*\	W*H)									
	PACKING	1.9Kg; 8pcs/15.5Kg										
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. 5. Derating may be needed under low input voltages. Please check the derating curve for more details.											









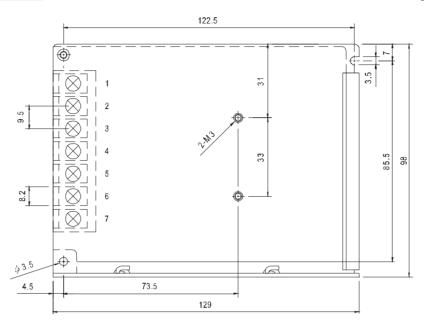
- AC input range selected by switch
- Protections:Short circuit/Over load
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 23KHz
- 1 year warranty

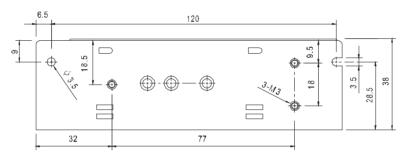
MODEL		T-30A			T-30B									
	DC VOLTAGE	5V	12V	-5V	5V	12V	-12V							
	RATED CURRENT	3A	1A	0.5A	3A	1A	0.5A							
	CURRENT RANGE	0.5 ~ 3A	0.1 ~ 1A	0.1~0.5A	0.5 ~ 3A	0.1 ~ 1A	0.1 ~ 0.5A							
	RATED POWER	30W			33W									
ОИТРИТ	RIPPLE & NOISE (max.) Note.2	50mVp-p	100mVp-p	50mVp-p	50mVp-p	100mVp-p	100mVp-p							
OUTPUT	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												
	VOLTAGE RANGE	85 ~ 132VAC / 170 ~	264VAC selected by s	witch 240 ~ 370	VDC									
	FREQUENCY RANGE	47 ~ 63Hz												
INPUT	EFFICIENCY(Typ.)	70%			72%									
	AC CURRENT	0.8A/115VAC 0	.45A/230VAC		•									
	INRUSH CURRENT(max.)	COLD START 18A/1	15VAC 36A/230\	AC										
	LEAKAGE CURRENT	<0.75mA / 240VAC	75mA / 240VAC											
DDOTECTION	OVERLOAD	105 ~ 150% rated ou	tput power											
PROTECTION	OVER LOAD	Protection type : Fold	d back current limiting,	recovers automatical	ly after fault condition i	s removed.								
	WORKING TEMP.	-10 ~ +60°C (Refer to	o output load derating	curve)										
	WORKING HUMIDITY	20 ~ 90% RH non-co	ndensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95	% RH											
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)on +5V output											
	VIBRATION	10 ~ 500Hz, 2G 10m	in /1cycle, period for (80min. each along X, ∖	[/] , Z axes									
	SAFETY STANDARDS	Design refer to UL10												
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC		P-FG:0.5KVAC										
EMC	ISOLATION RESISTANCE	, ,	FG:100M Ohms/500V											
	EMI CONDUCTION & RADIATION	Design refer to FCC	Part15 J Conduction C	Class A										
	MTBF	463.1K hrs min M	IL-HDBK-217F (25℃))										
OTHERS	DIMENSION	129*98*38mm (L*W*												
	PACKING	0.42Kg; 30pcs/13.6k	0											
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up	ed at 20MHz of band	width by using a 12" t	wisted pair-wire termi			r.							



■ Mechanical Specification

Case No. 903 Unit:mm



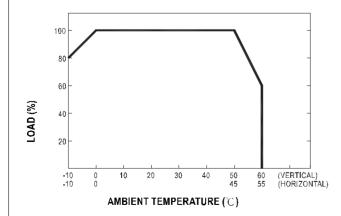


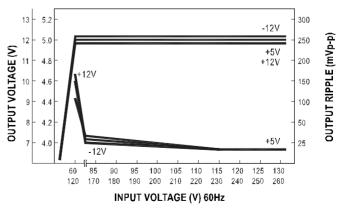
Terminal Pin. No Assignment

	,	,			
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)







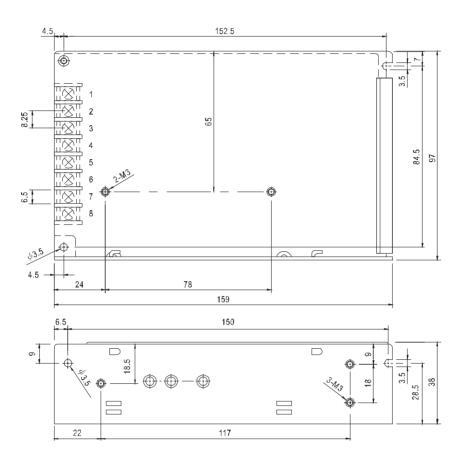
- AC input range selectable by switch
- Protections:Short circuit/Over load
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 24KHz I/P-O/P:Rated
- Low cost
- High reliability
- 1 year warranty

MODEL		T-50A			T-50B			T-50C			T-50D		
	DC VOLTAGE	5V	12V	-5V	5V	12V	-12V	5V	15V	-15V	5V	12V	24V
	RATED CURRENT	7A	1A	1 A	5A	1A	1A	4A	1A	1A	3A	1A	1A
	CURRENT RANGE	0.6 ~ 7A	0.2 ~ 1A	0.2 ~ 1A	0.6 ~ 5A	0.2 ~ 1A	0.2 ~ 1A	0.6 ~ 4A	0.2 ~ 1A	0.2 ~ 1A	0.6 ~ 4A	0.2 ~ 1.2A	0.2 ~ 1.2A
	RATED POWER	52W		•	49W			50W			51W		
OUTPUT	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	50mVp-p	120mVp-p	120mVp-p
OUTFUI	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V			CH1:4.75	~ 5.5V		CH1:4.75	~ 5.5V		CH1:4.75	~ 5.5V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±5.0%	±5.0%	±2.0%	±5.0%	±5.0%	±2.0%	±5.0%	±5.0%	±2.0%	±6.0%	±6.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±1.0%	±1.0%
	LOAD REGULATION	±1.0%	±4.0%	±4.0%	±1.0%	±4.0%	±4.0%	±1.0%	±4.0%	±4.0%	±1.0%	±5.0%	±5.0%
	SETUP, RISE, HOLD TIME	200ms, 10	00ms, 16ms	at full loa	d						200ms, 80	ms, 16ms	at full load
	VOLTAGE RANGE	85 ~ 132V	AC/170 ~ 2	264VAC sel	ected by sw	ritch 2	240 ~ 370VI	DC					
	FREQUENCY RANGE	47 ~ 63Hz											
INPUT	EFFICIENCY(Typ.)	66%			69%			71%			72%		
	AC CURRENT	1.6A/115\	/AC 0	.8A/230VA	С								
	INRUSH CURRENT(max.)	COLD ST	COLD START 20A/115VAC 40A/230VAC										
	LEAKAGE CURRENT	<0.5mA/	240VAC										
PROTESTION	OVEDLOAD	105 ~ 150	% rated ou	tput power									
PROTECTION	OVER LOAD	Protection	type : Fold	d back curre	ent limiting,	recovers a	utomatical	ly after fault	condition i	s removed			
	WORKING TEMP.	20 ~ 90%	RH non-co	ndensing									
	WORKING HUMIDITY	-10 ~ +60	℃ (Refer to	o output loa	d derating	curve), 20 -	~ 90% RH						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85	°C, 10 ~ 95	% RH									
	TEMP. COEFFICIENT	±0.03%/°(€ (0 ~ 50°€	`)on +5V oเ	ıtput								
	VIBRATION	10 ~ 500⊦	lz, 2G 10m	in./1cycle,	period for 6	30min. each	ո along X, <mark>ነ</mark>	r, Z axes					
SAFETY &	SAFETY STANDARDS		fer to UL10										
EMC	WITHSTAND VOLTAGE			I/P-FG:1.5h		P-FG:0.5K\	/AC						
	ISOLATION RESISTANCE				Dhms/500V								
	MTBF	470.2K hrs min. MIL-HDBK-217F (25 °C)											
OTHERS	DIMENSION	159*97*38mm (L*W*H)											
	PACKING	0.54Kg; 24pcs/14Kg/0.75CUFT											
NOTE	2. Ripple & noise are measi	pially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Up tolerance, line regulation and load regulation.											



■ 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	8	DC OUTPUT +V1
2	AC/N	5,7	DC OUTPUT COM		
3	FG ≟	6	DC OUTPUT +V2		

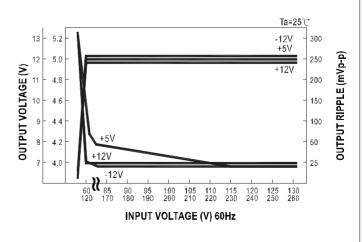
MODEL Pin No.	T-50A	T-50B	T-50C	T-50D
4	-5V	-12V	-15V	+24V

■ Output Derating

100 80 60 LOAD (%) 40 20 55 (VERTICAL) (HORIZONTAL)

AMBIENT TEMPERATURE (°€)

■ Static Characteristics (B)



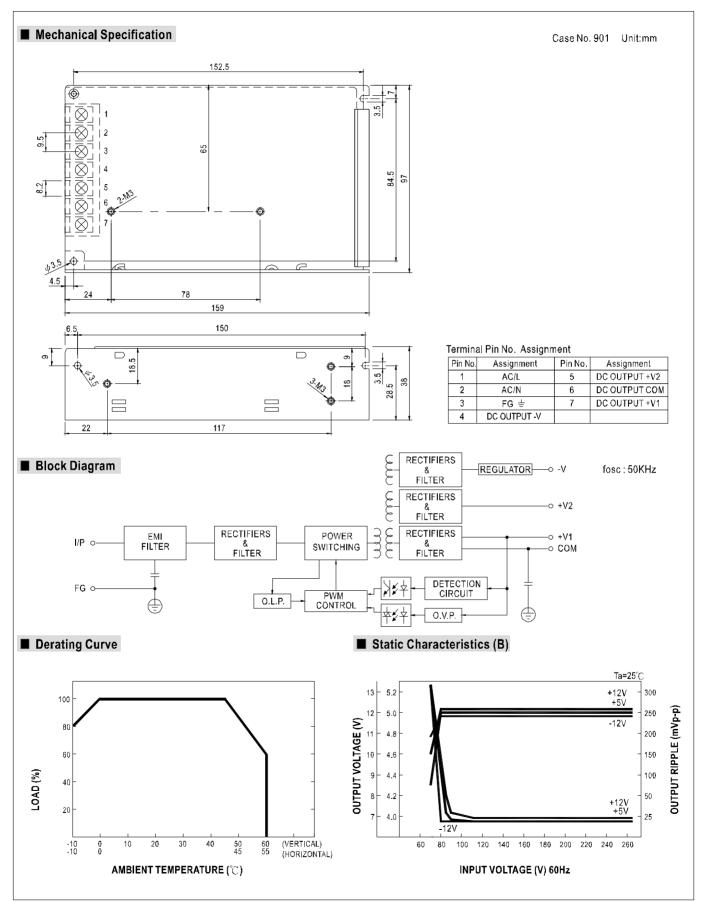




- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- Fixed switching frequency at 50KHz

MODEL		T-60A		T-60B			T-60C				
	OUTPUT NUMBER	CH1	CH2	CH3	CH1	CH2	СНЗ	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	1		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	
OUTPUT	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 ful	lload		•		<u>'</u>	
	HOLD UP TIME (Typ.)	80ms/230VA	0 10ms/1	15VAC at full lo	ad						
	VOLTAGE RANGE	85 ~ 264VAC	120 ~ 37	OVDC							
	FREQUENCY RANGE	47 ~ 63Hz									
INPUT	EFFICIENCY(Typ.)	72%			72%			72%			
INFUT	AC CURRENT (Typ.)	2A/115VAC	1A/230VA	(C	-			1			
	INRUSH CURRENT (Typ.)	COLD STAR	COLD START 20A/115VAC 40A/230VAC								
	LEAKAGE CURRENT	<3.5mA/240VAC									
		105 ~ 150% rated output power									
	OVERLOAD	Protection type : Hiccup mode, recovers automatically after fault condition is removed									
PROTECTION		5V: 5.75 ~ 6.75V									
	OVER VOLTAGE	Protection type: Hiccup mode, recovers automatically after fault condition is removed									
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/℃ (0) ~ 50°⊜)on +5	V output							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes									
	SAFETY STANDARDS	UL1012, UL6	0950-1, TUV E	EN60950-1 app	roved						
CAFETY	WITHSTAND VOLTAGE	I/P-O/P:3KV/	AC I/P-FG:1.	5KVAC O/P	FG:0 5KVAC						
SAFETY &	ISOLATION RESISTANCE	I/P-O/P, I/P-F	G, O/P-FG:10	0M Ohms / 500	VDC / 25°C / 7	70% RH					
EMC (Note 4)	EMI CONDUCTION & RADIATION	Compliance t	o EN55022 (C	ISPR22) Class	В						
,	HARMONIC CURRENT	Compliance	o EN61000-3-	2,-3							
	EMS IMMUNITY	Compliance	to EN61000-4	-2,3,4,5,6,8,1	1; ENV50204	, EN55024, ligh	nt industry leve	el, criteria A			
	MTBF	281.1K hrs m	in. MIL-HDE	BK-217F (25℃	.)						
OTHERS	DIMENSION	159*97*38mr	n (L*W*H)								
	PACKING	3, 1	s/14.1Kg/0.75								
NOTE	Ripple & noise are measure Tolerance : includes set up	ecially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. sured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. t up tolerance, line regulation and load regulation. nsidered a component which will be installed into a final equipment.									





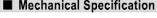


■ Features :

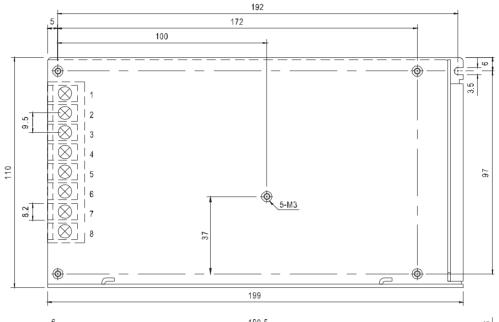
- AC input range selected by switch
- Protections:Short circuit/Over load/Over voltage
- 100% full load burn-in test
- Fixed switching frequency at 25KHz

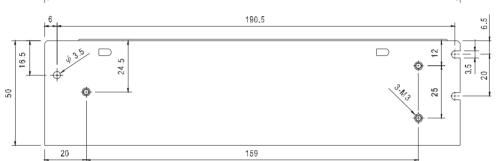
MODEL		T-120A		T-120B		T-120C			T-120D				
	OUTPUT NUMBER	CH1	CH2	СНЗ	CH1	CH2	СНЗ	CH1	CH2	СНЗ	CH1	CH2	CH3
	DC VOLTAGE	5V	12V	-5V	5V	12V	-12V	5V	15V	-15V	5V	12V	24V
	RATED CURRENT	1 1A	5A	1A	11A	4.5A	1A	10 A	3.5A	1A	8 A	2.5A	2A
	CURRENT RANGE	2 ~ 12A	0.5 ~ 5A	0.2 ~ 1A	2 ~ 12A	0.5 ~ 5A	0.2 ~ 1A	2 ~ 12A	0.5 ~ 5A	0.2 ~ 1A	2 ~ 12A	0.2 ~ 5A	0.2 ~ 2A
	RATED POWER	120W			121W			117.5W			118W		
OUTPUT	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	80mVp-p	80mVp-p	120mVp-p	120mVp-p	80mVp-p	150mVp-p	150mVp-p	80mVp-p	120mVp-p	180mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75	~ 5.5V				'	'	'			•	•
	VOLTAGE TOLERANCE Note.3	±2.0%	±6.0%	±6.0%	±2.0%	±6.0%	±6.0%	±2.0%	+10,-5%	+10,-5%	±2.0%	±6.0%	±6.0%
	LINE REGULATION	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%	±0.5%	±1.0%	±1.0%
	LOAD REGULATION	±0.5%	±5.0%	±5.0%	±0.5%	±5.0%	±5.0%	±0.5%	±6.0%	±6.0%	±0.5%	±5.0%	±5.0%
	SETUP, RISE, HOLD TIME	800ms, 20	ms, 20ms/	230VAC	1600ms	, 20ms, 12i	ms/115VAC	at full load	'			•	•
	VOLTAGE RANGE	88 ~ 132V	AC/176 ~ 2	264VAC sel	ected by sv	vitch 2	40 ~ 370VI	ОС					
	FREQUENCY RANGE	47 ~ 63Hz											
INPUT	EFFICIENCY (Typ.)	77%			77%			76%			80%		
1111 01	AC CURRENT	2.8A/115\	/AC 1	.6A/230VA	С								
	INRUSH CURRENT (max.)	COLDIST	ART 35A										
	LEAKAGE CURRENT	<3.5mA/	2 4 0VAC										
		105 ~ 135% rated output power											
	OVER LOAD	Protection type : Shut down o/p voltage, re-power on to recover											
PROTECTION	OVER VOLTAGE	CH1:5.75 ~ 6.75VDC											
		Protection type: Shut down o/p voltage, re-power on to recover											
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85	℃, 10 ~ 95	5% RH									
	TEMP. COEFFICIENT	±0.03%/°	C (0~50°C))									
	VIBRATION	10 ~ 500H	lz, 2G 10m	in./1cycle,	60min. eac	h along X, `	/, Z axes						
	SAFETY STANDARDS	UL60950-	1, TUV EN	60950-1 Ap	proved								
	WITHSTAND VOLTAGE	I/P-O/P:3	KVAC I/F	P-FG:1.5KV	AC O/P-	FG:0.5KVA	С						
SAFETY &	ISOLATION RESISTANCE	I/P-O/P, I/	P-FG, O/P	-FG:100M (Ohms/500V	DC .							
EMC	EMI CONDUCTION & RADIATION	Complian	ce to EN55	022 (CISPI	R22) Class	В							
(Note 4)	HARMONIC CURRENT	Complian	ce to EN61	000-3-2,-3									
	EMS IMMUNITY	Complian	ce to EN61	000-4-2,3,4	4,5,6,8,11;	ENV50204	EN55024,	Light indus	try level, o	riteria A			
	MTBF	274.5K hr	s min. N	/IL-HDBK-2	2 17F (25℃)							
OTHERS	DIMENSION		50mm (L*V										
	PACKING	-	-	(g/0.95CUF									
NOTE	All parameters NOT specia Ripple & noise are measure Tolerance : includes set up The power supply is consid	ed at 20MH tolerance,	lz of band line regula	width by us	sing a 12" i ad regulati	wisted pair on.	-wire termi				el capacitor	·.	

■ Mechanical Specification



Case No. 906 Unit:mm





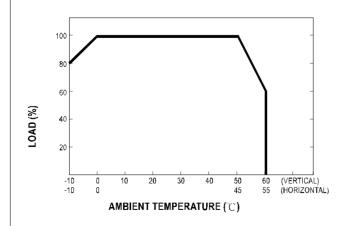
Terminal Pin. No Assignment

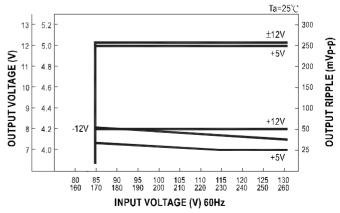
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5,6	DC OUTPUT
2	AC/N	7	DC OUTPUT COM
3	FG ≟	8	DC OUTPUT +5V

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

■ Derating Curve

■ Static Characteristics(B)



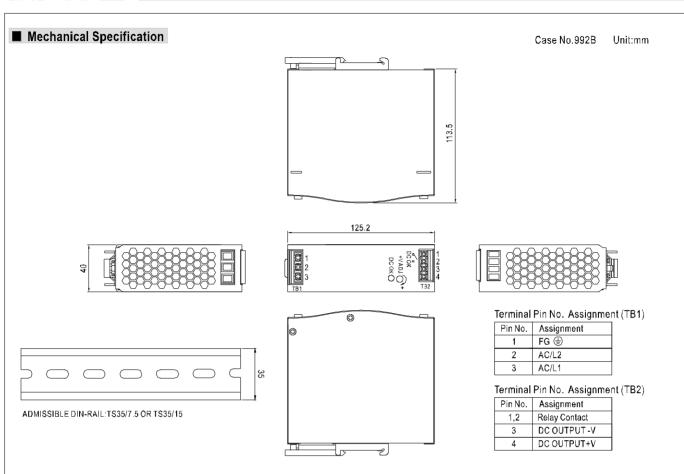




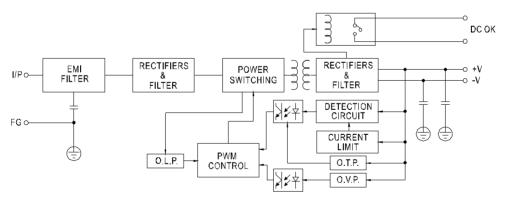
- Single and two phase wide input range 180 ~ 550VAC
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- EN61000-6-2(EN50082-2) industrial immunity level
- 100% full load burn-in test
- Built-in DC OK relay contact

MODEL		WDR-120-12	WDR-120-24	WDR-120-48			
	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	120mVp-p	120mVp-p	150mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	12 ~ 15V	24 ~ 29V	48 ~ 58V			
	VOLTAGE TOLERANCE Note.3	±1.5%	±1.0%	±1.0%			
	LINE REGULATION	±0.5%	±0.5%	±0.5%			
	LOAD REGULATION	±0.5%	±0.5%	±0.5%			
	SETUP, RISE, HOLD UP TIME	2000ms, 70ms, 50ms/400VAC 2000m	is, 70ms, 10ms/230VAC at full load				
	VOLTAGE RANGE	180 ~ 550VAC 254 ~ 780VDC					
	FREQUENCY RANGE	47 ~ 63Hz					
	EFFICIENCY (Typ.)	89.5% / 400V	91% / 400V	92% / 400V			
INPUT	AC CURRENT	0.55A/400VAC 1.2A/230VAC					
	INRUSH CURRENT (max.)	COLD START 50A					
	LEAKAGE CURRENT	<3.5mA / 530VAC					
		105 ~ 130% rated output power					
	OVERLOAD	Protection type: Constant current limiting, recovers automatically after fault condition is removed					
		16 ~ 1 8V	31 ~ 37V	60 ~ 67V			
PROTECTION	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover					
		105°C±5°C (12V),110°C±5°C (24V) (TSW1) detect on heatsink of power transistor; 100°C=5°C (48V) (TSW1) detect on heatsink of power diode					
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down					
FUNCTION	DC OK SIGNAL	Relay contact rating(max.): 30V / 1A resist	ive				
	WORKING TEMP.	-25 ~ +70°€ (Refer to output load derating	curve)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)					
	VIBRATION	Component: 10 ~ 500Hz, 2G 10min./1cycle	e, 60min. each along X, Y, Z axes; Mounting o	clip: Compliance to IEC60068-2-6			
	SAFETY STANDARDS	UL508 approved, IEC60950-1 CB approved	d by SIQ, design refer to GL				
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-	FG:0.5KVAC O/P-DC OK:0.5KVAC				
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500	VDC / 25℃ / 70% RH				
(Note 4)	EMI CONDUCTION & RADIATION	Compliance to EN55011 (CISPR11), EN55	022 (CISPR22), EN61204-3 Class B				
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN	IV50204, EN61204-3, EN61000-6-2 (EN50082	2-2), heavy industry level, criteria A			
	MTBF	268Khrs min. MIL-HDBK-217F (25℃)					
OTHERS	DIMENSION	40*125.2*113.5mm (W*H*D)					
	PACKING	0.65Kg; 20pcs/14Kg/1.16CUFT					
NOTE	Ripple & noise are measure Tolerance : includes set up The power supply is consid	ameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature. & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. nce: includes set up tolerance, line regulation and load regulation. ower supply is considered a component which will be installed into a final equipment. of set up time is measured at cold first start. Turning ON/OFF the power supply very quick may lead to increase of the set up time.					





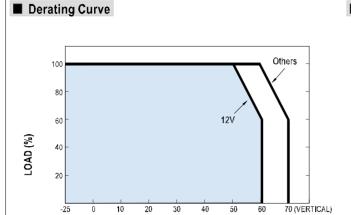
■ Block Diagram



■ DC OK Relay Contact

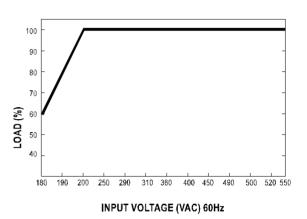
Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.





AMBIENT TEMPERATURE (°C)

■ Static Characteristics







WDR-240-24

Features:

- Single and two phase wide input range 180~550VAC
- High efficiency 91% and low power dissipation
- 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
- EN61000-6-2(EN50082-2) industrial immunity level

WDR-240-48

- Built-in DC OK relay contact
- 100% full load burn-in test

SPECIFICATION

MODEL

MODEL		WDIX-240-24	WDI(-240-40			
	DC VOLTAGE	24V	48V			
	RATED CURRENT	10A	5A			
	CURRENT RANGE	0 ~ 10A	0 ~ 5A			
	RATED POWER	240W	240W			
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 55V			
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%			
	LINE REGULATION	±0.5%	±0.5%			
	LOAD REGULATION	±1.0%	±1.0%			
	SETUP, RISE TIME	800ms, 150ms/400VAC 1500ms, 150ms/230VAC at full load				
	HOLD UP TIME (Typ.)	18ms / 400VAC 18ms / 230VAC at full load				
	VOLTAGE RANGE Note.6	180 ~ 550VAC 254 ~ 780VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	EFFICIENCY (Typ.)	91%				
INPUT	AC CURRENT (Typ.)	1A/400VAC 2A/230VAC				
	INRUSH CURRENT (Typ.)	COLD STAR 50A				
	LEAKAGE CURRENT	<3.5mA/530VAC				
		105 ~ 130% rated output power				
	OVERLOAD	Protection type : Constant current limiting, unit will shut down after	3 sec., auto-recovery after 1 minute if the fault condition is removed			
		29 ~ 33V	56 ~ 65V			
PROTECTION	OVER VOLTAGE	Protection type : Shut down o/p voltage, auto-recovery after 1 mir	nute if the fault condition is removed			
		90°C±5°C (TSW) detect on heatsink of power switch				
	OVER TEMPERATURE	Protection type: Shut down o/p voltage, recovers automatically at	fter temperature goes down			
FUNCTION	DC OK REALY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load				
	WORKING TEMP. Note.5	OD TOOM (FIG. 1)				
	WORKING HUMIDITY	20 ~ 95% RH non-condensing				
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +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 STANDARDS	UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL				
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC				
SAFETY &	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH				
EMC	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22), EN61204-3 Class B				
(Note 4)	HARMONIC CURRENT	Compliance to EN61000-3-2,-3				
	EM\$ IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN6100	00-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approved			
	MTBF	141.1Khrs min. MIL-HDBK-217F (25°C)				
OTHERS	DIMENSION	63*125.2*113.5mm (W*H*D)				
	PACKING	1.06Kg; 12pcs/13.7Kg/1.06CUFT				
NOTE	 All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance: includes set up tolerance, line regulation and load regulation. 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. Installation dearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended. Derating may be needed under low input voltage. Please check the derating curve for more details. 					

Terminal Pin No. Assignment (TB2)

Relay Contact DC OUTPUT +V

DC OUTPUT -V

Pin No. Assignment

1.2

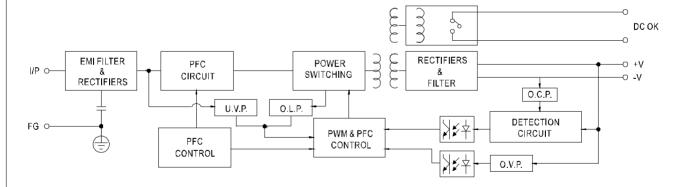
3,4

5.6



■ Mechanical Specification Case No. 979B Unit:mm 113.5 125.2 Terminal Pin No. Assignment (TB1) Pin No. Assignment FG 🕀 35 AC/L2 AC/L1

■ Block Diagram



_2

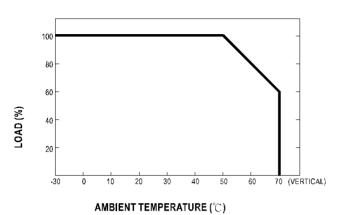
■ DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

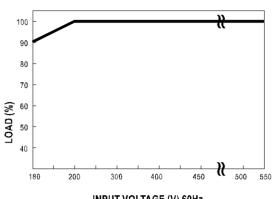
ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15







■ Output derating VS input voltage



INPUT VOLTAGE (V) 60Hz





- Single and two phase wide input range 180~550VAC
- High efficiency 93% and low power dissipation
- 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
- EN61000-6-2(EN50082-2) industrial immunity level
- · Built-in DC OK relay contact
- 100% full load burn-in test

SPECIFICATION

EMC directives.

In case the adjacent device is a heat source, 15mm clearance is recommended.

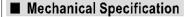
6. Derating may be needed under low input voltage. Please check the derating curve for more details.

MODEL		WDR-480-24	WDR-480-48			
	DC VOLTAGE	24V	48V			
	RATED CURRENT	20A	10A			
	CURRENT RANGE	0 ~ 20A	0 ~ 10A			
	RATED POWER	480W	480W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p			
OUTPUT	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 55V			
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%			
	LINE REGULATION	±0.5%	±0.5%			
	LOAD REGULATION	±1.0%	±1.0%			
	SETUP, RISE TIME	800ms, 150ms/400VAC 2000ms, 150ms/230VAC at full load				
	HOLD UP TIME (Typ.)	18ms / 400VAC 16ms / 230VAC at full load				
	VOLTAGE RANGE Note.6	180 ~ 550VAC 254 ~ 780VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	EFFICIENCY (Typ.)	92%	93%			
INPUT	AC CURRENT (Typ.)	1.6A/400VAC 4A/230VAC				
	INRUSH CURRENT (Typ.)	COLD STAR 50A				
	LEAKAGE CURRENT	<3.5mA / 530VAC				
	OVERI GAR	105 ~ 130% rated output power				
	OVERLOAD	Protection type: Constant current limiting, unit will shut down after	3 sec. ,auto-recovery after 1 minute if the fault condition is removed			
PROTESTION	TION OVER VOLTAGE	29 ~ 33V	56 ~ 65V			
PROTECTION	OVER VOLTAGE	Protection type: Shut down o/p voltage, auto-recovery after 1 mir	nute if the fault condition is removed			
	OVER TEMPERATURE	$95^{\circ}C \pm 5^{\circ}C$ (TSW) detect on heatsink of power switch				
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, recovers automatically after temperature goes down				
FUNCTION	DC OK REALY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load				
	WORKING TEMP. Note.5	-30 ~ +70°C (Refer to output load derating curve)				
	WORKING HUMIDITY	20 ~ 95% RH non-condensing				
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃)				
	VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X,	Y, Z axes; Mounting: Compliance to IEC60068-2-6			
	SAFETY STANDARDS	UL508 approved, IEC60950-1 CB approved by SIQ, design refer	to GL			
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC O/P-D	C OK:0.5KVAC			
SAFETY &	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25° C / 70% RH				
EMC	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22), EN61204-3 Class B				
(Note 4)	HARMONIC CURRENT	Compliance to EN61000-3-2,-3				
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN6100	00-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approved			
	MTBF	112.8Khrs min. MIL-HDBK-217F (25℃)				
OTHERS	DIMENSION	85.5*125.2*128.5mm (W*H*D)				
	PACKING	1.7Kg; 8pcs/14.6Kg/0.9CUFT				
NOTE	2. Ripple & noise are measure	wentioned are measured at 400VAC input, rated load and 25°C of ambient temperature. d at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. plerance, 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

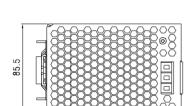
5. Installation clearances: 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power.

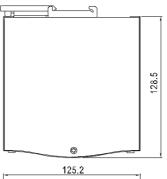


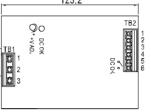


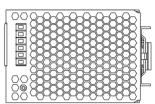
Case No.984B

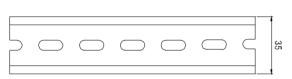
Unit:mm



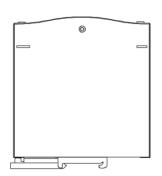








ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15



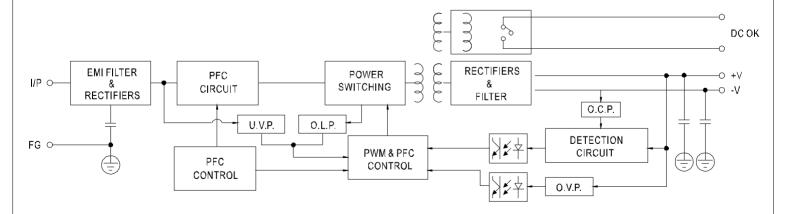
Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	FG 🖶
2	AC/L2
3	AC/L1

Terminal Pin No. Assignment (TB2)

Pin No.	Assignment	
1,2	DC OUTPUT +V	
3,4	DC OUTPUT -V	
5,6	Relay Contact	

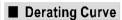
■ Block Diagram

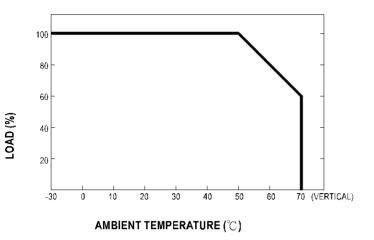


■ DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.







■ Output derating VS input voltage

