



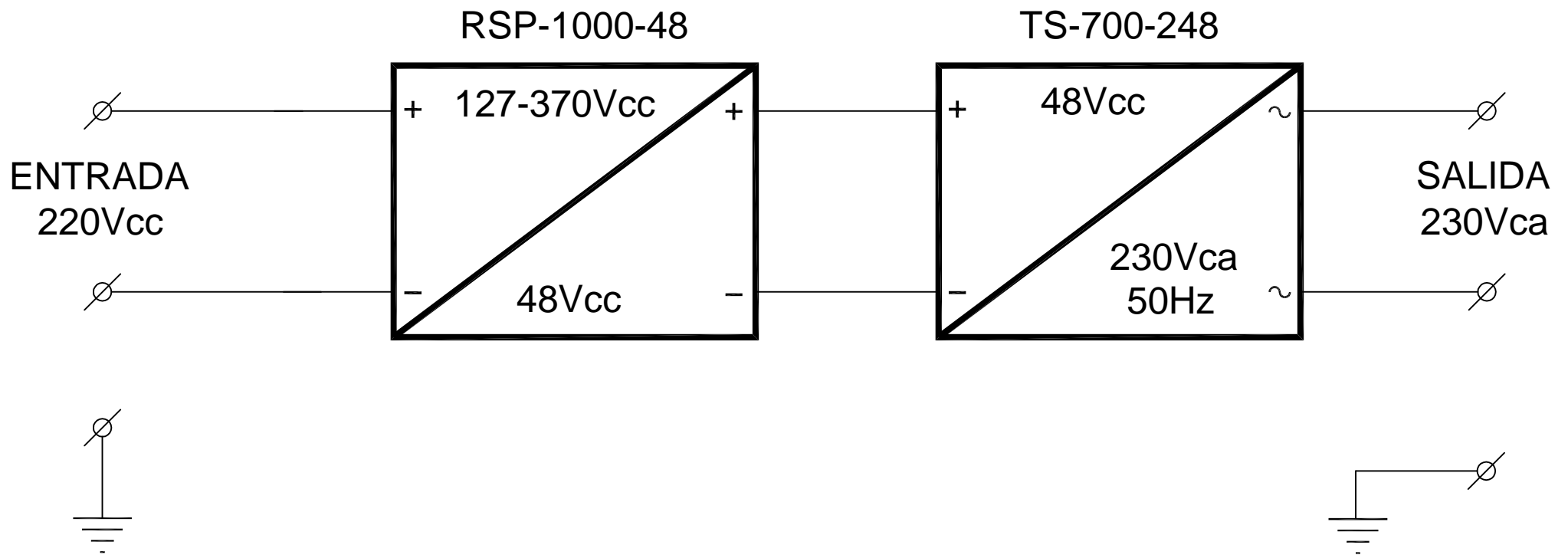
## INVERSOR SENOIDAL


MODELO AMV OND700-220-CT

Ve 220 Vcc (127 ~ 370 Vcc) / Vs 230 Vca 700W

430 x 364 x 83mm

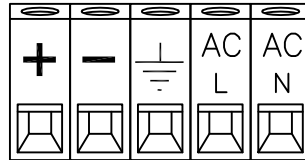




ESCALA:	MATERIAL:		ACABADO:	
APROBO	FECHA	FIRMA	 <b>DIAGRAMA EN BLOQUES DE OND700-220-CT</b>	
DIBUJO	22/7/2016	IVÁN		
AUTORIZO				
FECHA				
EDICION	1			
CODIGO: 30OND700220CT			NUMERO: 300202	

BORNES SITUADOS EN EL TRASERO DE LA CAJA

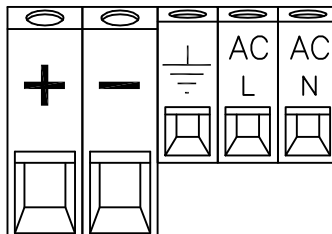
# AMV OND200/400-XX-CX



ENTRADA  
V<sub>CC</sub>


SALIDA  
230V<sub>ca</sub>  
50Hz

# AMV OND700-XX-CX



ENTRADA  
V<sub>CC</sub>

SALIDA  
230V<sub>ca</sub>  
50Hz

ESCALA:	MATERIAL:				ACABADO:					
APROBO	FECHA	FIRMA						CONEXION ENTRADA-SALIDA EQUIPO AMV OND200/400/700-XX-CX		
DIBUJO	2/2/16	IVÁN								
AUTORIZO										
FECHA	3/3/16	25/7/16								
EDICION	1	2	3							CODIGO: 50AMVOND70048C2



### ■ Features :

- Universal AC input / Full range
- AC input active surge current limiting
- Built-in 5V/0.5A auxiliary power
- Built-in active PFC function, PF>0.95
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Output voltage can be trimmed between 40 ~ 110% of the rated output voltage
- Forced air cooling by built-in DC fan
- High power density 10.7w/inch<sup>3</sup>
- 1U low profile 41mm
- Active current sharing up to 3000W(2+1)
- DC OK Signal
- Built-in remote ON-OFF control
- Built-in remote sense function

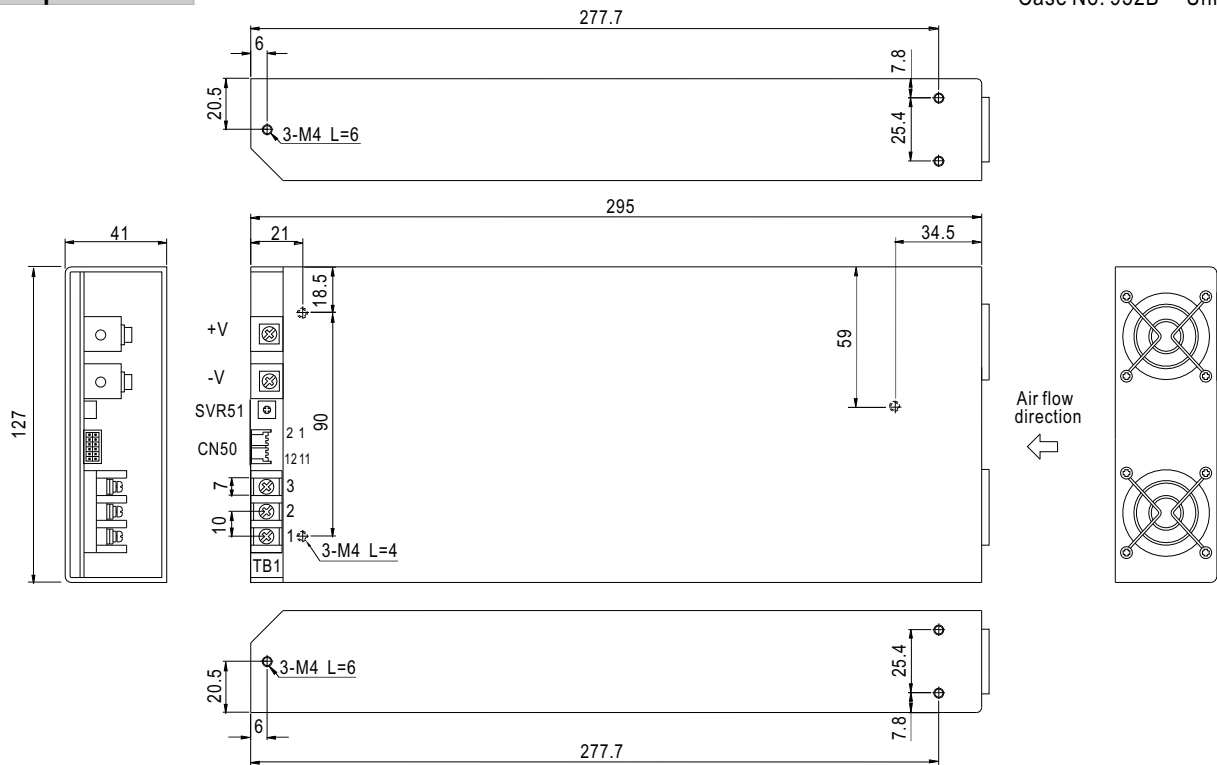
### SPECIFICATION



MODEL		RSP-1000-12	RSP-1000-15	RSP-1000-24	RSP-1000-27	RSP-1000-48
OUTPUT	DC VOLTAGE	12V	15V	24V	27V	48V
	RATED CURRENT	60A	50A	40A	37A	21A
	CURRENT RANGE	0 ~ 60A	0 ~ 50A	0 ~ 40A	0 ~ 37A	0 ~ 21A
	RATED POWER	720W	750W	960W	999W	1008W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	10 ~ 13.5V	13.5 ~ 16.5V	20 ~ 26.4V	24 ~ 30V	43 ~ 55V
	VOLTAGE TOLERANCE Note.3	±1.0%	±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 TIME	300ms, 50ms at full load				
HOLD TIME (Typ.)	16ms/230VAC	16ms/115VAC at full load				
INPUT	VOLTAGE RANGE	90 ~ 264VAC	127 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	0.95/230VAC	0.98/115VAC at full load			
	EFFICIENCY (Typ.)	84%	86%	89%	89%	90%
	AC CURRENT (Typ.)	12A/115VAC	6A/230VAC			
	INRUSH CURRENT (Typ.)	25A/115VAC	40A/230VAC			
LEAKAGE CURRENT	<2.0mA / 240VAC					
PROTECTION	OVER LOAD Note.5	105 ~ 125% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed				
	OVER VOLTAGE	13.8 ~ 16.8V	17 ~ 20.5V	27.6 ~ 32.4V	31 ~ 36.5V	57.6 ~ 67.2V
	OVER TEMPERATURE	85°C ±5°C (TSW2 ) Detect on heatsink of O/P diode; 75°C ±5°C (TSW1 ) Detect on heatsink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down				
FUNCTION	AUXILIARY POWER(AUX)	5V @ 0.5A (+5%, -8%)				
	REMOTE ON/OFF CONTROL Note.6	Power on : short between on/off(pin6) & -S(pin2) on CN50      Power off : open between on/off(pin6) & -S(pin2) on CN50				
	DC OK SIGNAL	Open collector signal low when PSU turns on, Max. sink current :10mA				
	OUTPUT VOLTAGE TRIM Note.6	Adjustment of output voltage is possible between 40 ~ 110% of rated output				
	CURRENT SHARING(CS)Note.7	Please refer to function manual				
ENVIRONMENT	WORKING TEMP.	-20 ~ +60°C (Refer to output load derating curve)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.02%/°C (0 ~ 50°C)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved				
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC    I/P-FG:1.5KVAC    O/P-FG:0.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC				
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22)				
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3				
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN61000-6-2, EN61204-3 Heavy industry level, criteria A				
	MTBF	35K hrs min.    MIL-HDBK-217F (25°C)				
	DIMENSION	295*127*41mm (L*W*H)				
NOTE	PACKING	1.95Kg; 6pcs/12.7Kg/1CUFT				
		<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>6. The power supply unit will have no output if the shorting connector is not assembled. It contains two shorting wires: one is from on/off(pin6) to -s(pin2) and the other is from Vco(pin8) to Vca(pin10). Please refer to function manual for details.</li> <li>7. In parallel connection, maybe only one unit operate if the total output load is less than 5% of rated load condition.</li> </ol>				

## Mechanical Specification

Case No. 952B Unit:mm



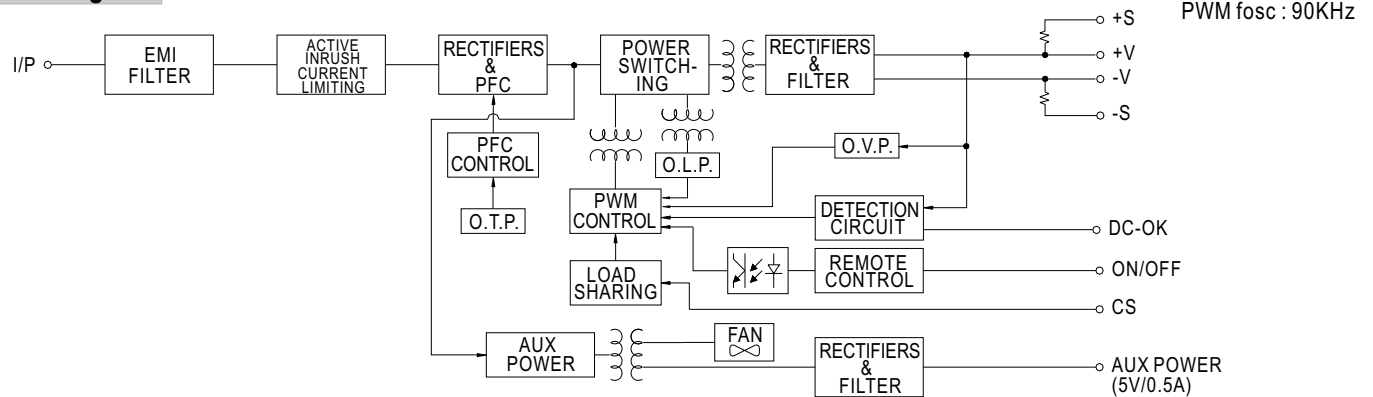
### AC Input Terminal Pin. No. Assignment

Pin No.	Assignment
1	AC/N
2	AC/L
3	FG $\perp$

### Control pin number assignment (CN50) : JST B12B-PHDSS or equivalent

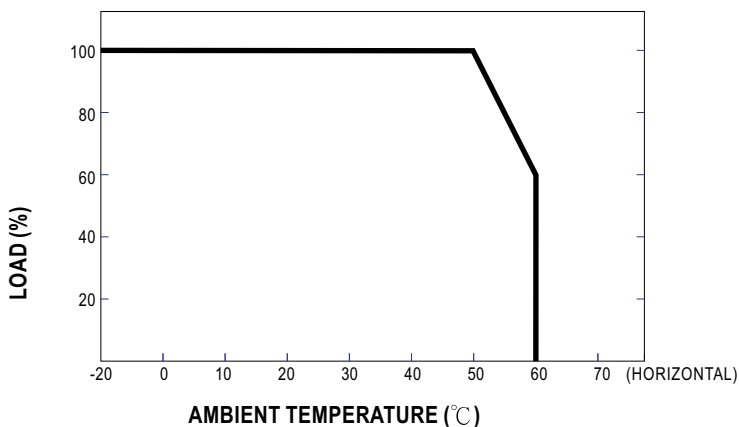
Pin No.	Assignment	Pin No.	Assignment	Pin No.	Assignment	Mating Housing	Terminal
1	+S	5	DC-OK	9	Vci	JST PHDR-12VS or equivalent	JST SPHD-002T-P0.5 or equivalent
2	-S	6	ON/OFF	10	Vca		
3	G-AUX	7	CS	11,12	GND		
4	5V-AUX	8	Vco				

## Block Diagram

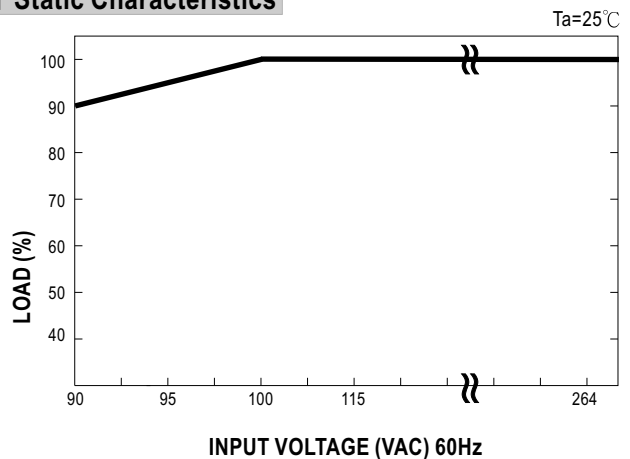


PFC fosc : 110KHz  
PWM fosc : 90KHz

## Derating Curve



## Static Characteristics



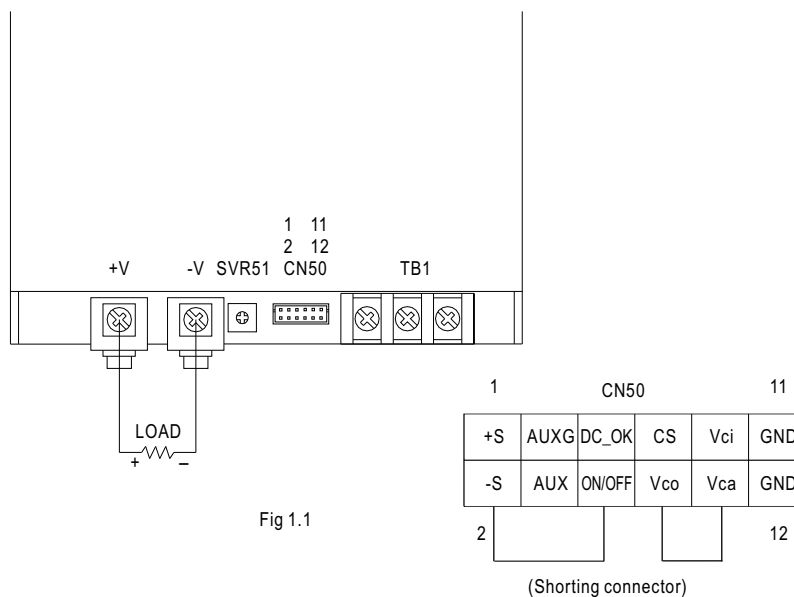
■ Function Description of CN50

Pin No.	Function	Description
1	+S	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	-S	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	G-AUX	Auxiliary voltage output ground. The signal return is isolated from the output terminals (+V & -V).
4	5V-AUX	Auxiliary voltage output, 4.6~5.25V, referenced to pin 3(G-AUX). The maximum load current is 0.5A. This output has the built-in. Oring diodes and is not controlled by the "remote ON/OFF control".
5	DC_OK	Open collector signal, referenced to pin11,12(GND). Low when PSU turns on. The maximum sink current is 10mA and the maximum external voltage is 5.6V.
6	ON/OFF	Turns the output on and off by electrical or dry contact between pin 6 ( ON/OFF) and pin 2 (-S). Short: Power ON, Open: Power OFF.
7	CS	Current sharing signal. When units are connected in parallel, the CS pins of the units should be connected to allow current balance between units.
8	Vco	Short connecting between Vco (pin8) and Vca (pin10) if output voltage trim function is not used.
9	Vci	Connect to external DC voltage source for output voltage trimming, referenced to pin 2 (-S). Output voltage can be trimmed between 40 ~ 110% of the rated output voltage.
10	Vca	Connect to external resistor (1/8W) for output voltage trimming. Output voltage can be trimmed between 40 ~ 110% of the rated output voltage. Please refer to function manual for details.
11,12	GND	These pins connect to the negative terminal (-V). Return for DC_OK Signal output.

■ Function Manual

1. "Remote ON/OFF" and "Output voltage trim" functions are not used.

The power supply unit will have no output if the shorting connector (accessory comes along with the PSU) is not assembled. It contains two shorting wires : one is from ON/OFF (pin6) to -S (pin2) and the other is from Vco (pin8) to Vca (pin10).



## 2. Remote ON/OFF

The PSU can be turned ON/OFF by using the "Remote ON/OFF" function

Between ON/OFF(pin6) and -S(pin2)	Output Status
SW ON (Short)	ON
SW OFF (Open)	OFF

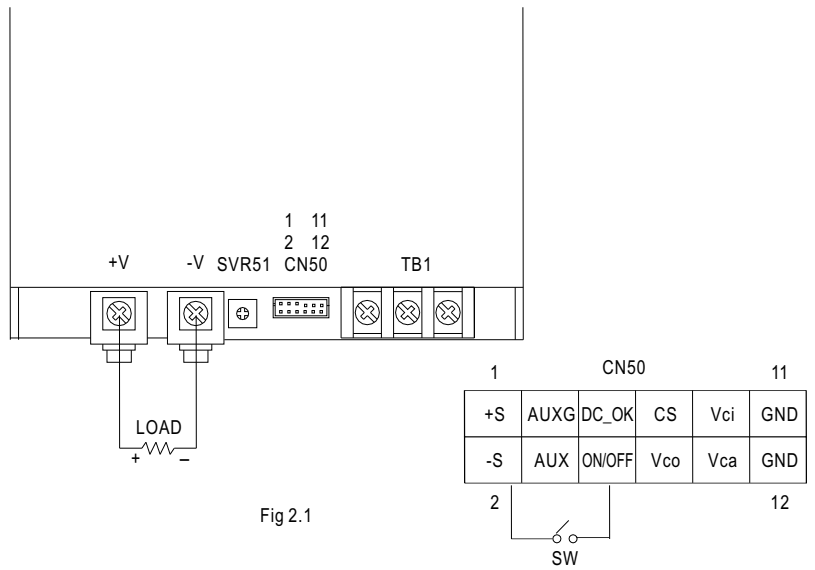


Fig 2.1

## 3. DC\_OK signal

"DC\_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 TTL signal ; the other is sending out a TTL voltage signal.

### 3-1 Sink current :

The maximum sink current is 10mA and the maximum external voltage is 5.6V.

### 3-2 TTL voltage signal :

Between DC- OK(pin5) and GND(pin11&12)	Output Status
0 ~ 1V	ON
3.3 ~ 5.6V	OFF

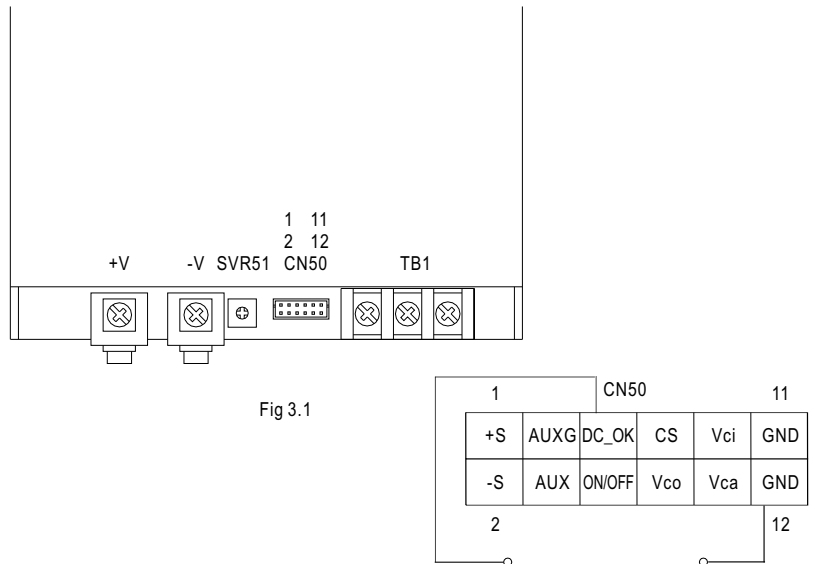


Fig 3.1

## 4. Remote Sense

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

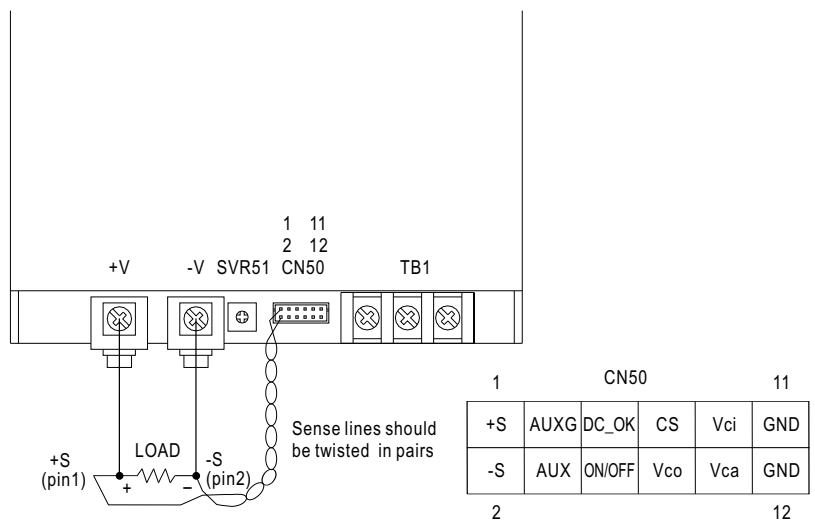


Fig 4.1



## 5. Output Voltage TRIM

Output voltage of RSP-1000 can be trimmed between 40% ~ 110% of its rated value by the following methods :

(1) Using external voltage source between "Vci"(pin9) and "-S"(pin2) that is shown in Fig5.1

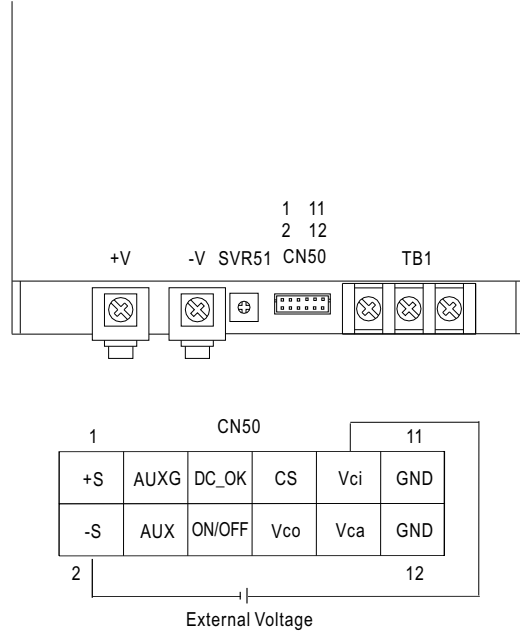
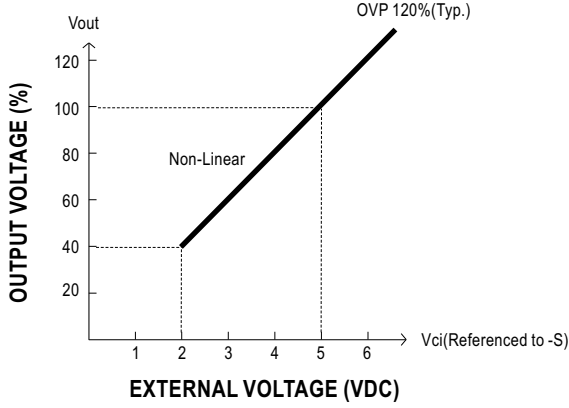


Fig 5.1

(2) Connecting a resistor externally that in shown in Fig 5.2 & Fig 5.3  
 (A) O/P voltage goes down

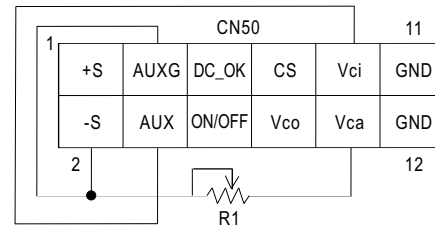
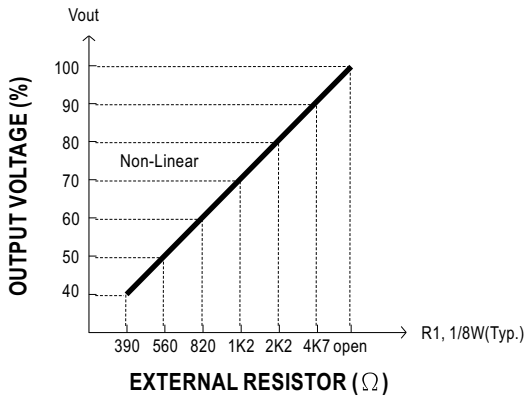


Fig 5.2

(B) O/P voltage goes up

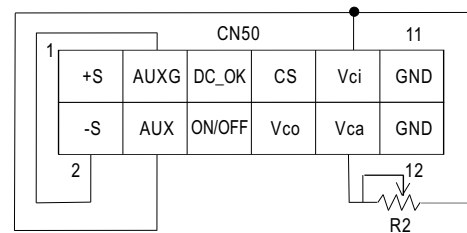
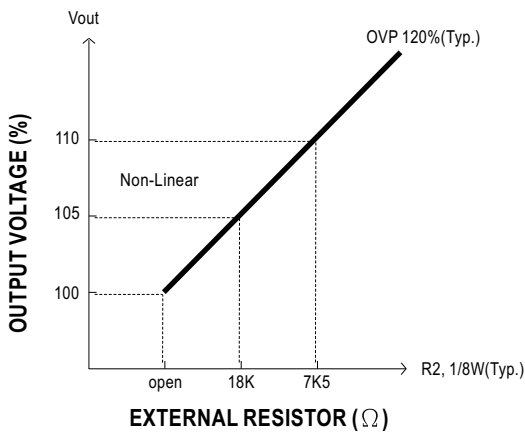


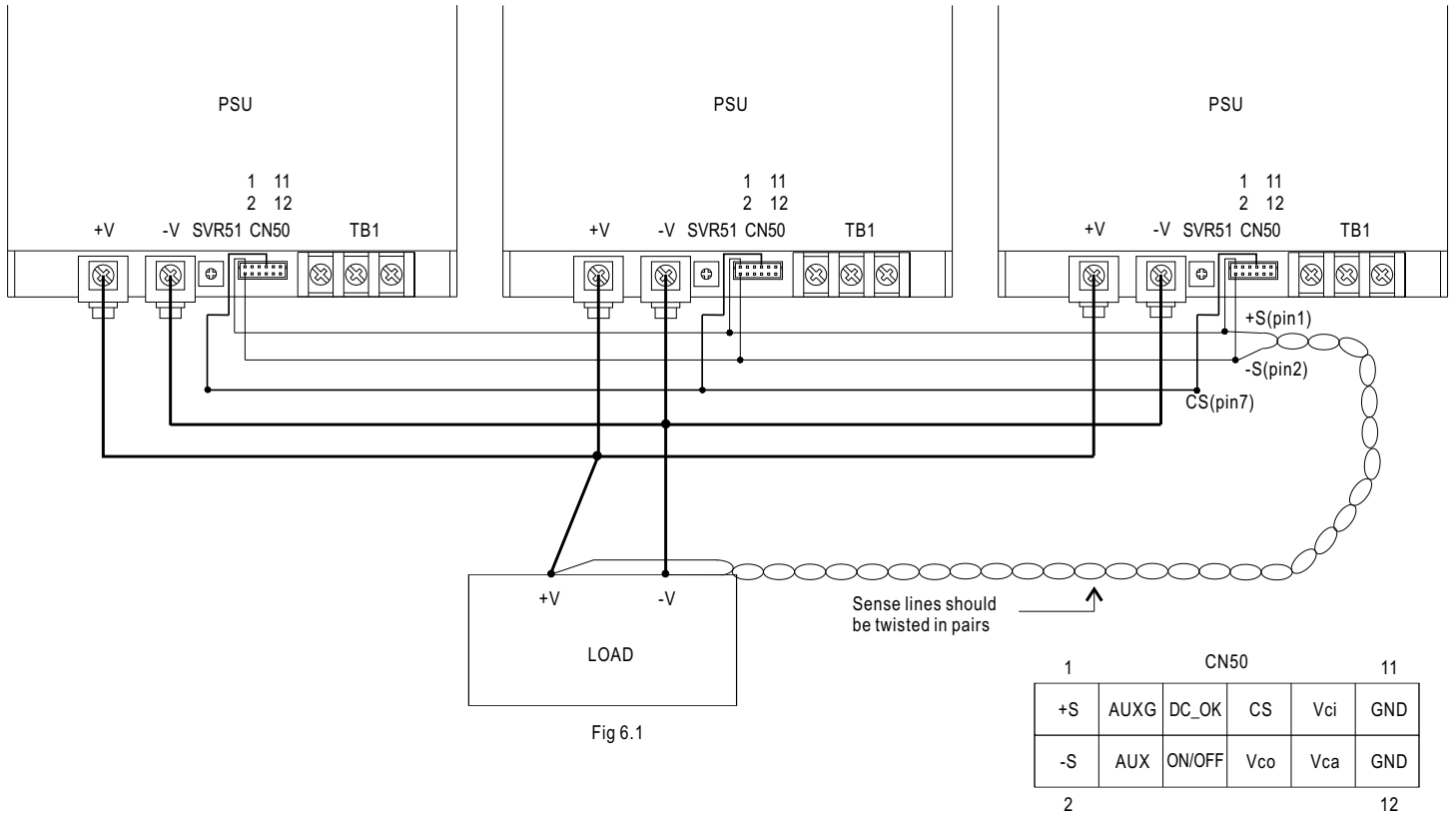
Fig 5.3



**6. Current Sharing with Remote Sensing**

RSP-1000 has the built-in active current sharing function and can be connected in parallel to provide higher output power :

- (1) Parallel operation is available by connecting the units shown as below.  
(+S, -S and CS are connected mutually in parallel).
- (2) Difference of output voltages among parallel units should be less than 2%.
- (3) The total output current must not exceed the value determined by the following equation.  
(output current at parallel operation)=(Rated current per unit)×(Number of unit)×0.9
- (4) In parallel operation 3 units is the maximum, please consult the manufacture for other applications.
- (5) The power supplies should be paralleled using short and large diameter wiring and then connected to the load.



Note : In parallel connection, maybe only one unit (master) operate if the total output load is less than 5% of rated load condition. The other PSUs (slaves) may go into standby mode and their output LEDs will not turn on.

## 700W True Sine Wave DC-AC Power Inverter

# TS-700 series



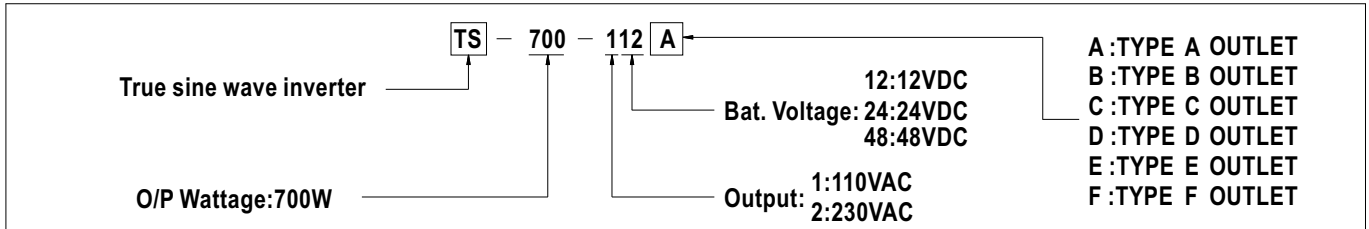
### ■ Features :

- True sine wave output (THD<3%)
- High surge power up to 1400W
- High efficiency up to 91%
- Power ON-OFF switch
- Standby saving mode can be selectable
- Front panel indicator for operation status
- Built-in fan ON-OFF control function
- Protections: Bat. low alarm / Bat. low shutdown / Over voltage / Over temp. / Output short / Reverse polarity / Overload
- Application : Home appliance, power tools, office and portable equipment, vehicle and yacht ...etc.



### SPECIFICATION

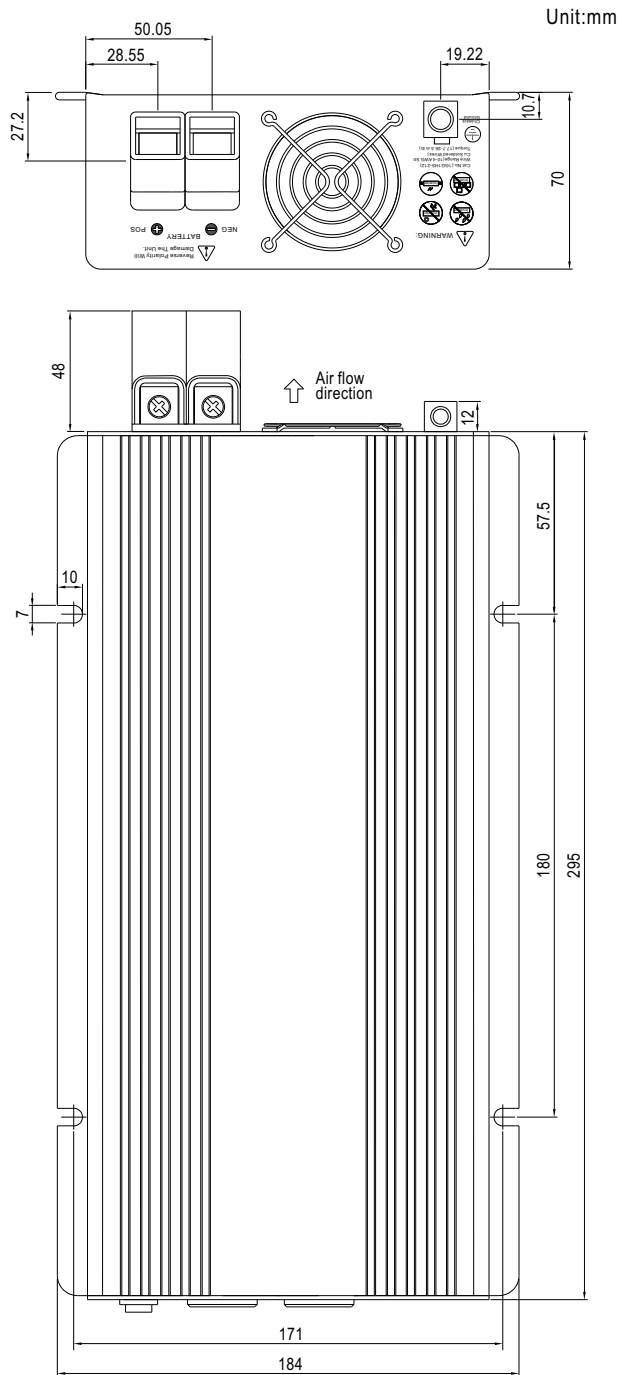
MODEL	TS-700-112□	TS-700-124□	TS-700-148□	TS-700-212□	TS-700-224□	TS-700-248□												
OUTPUT	RATED POWER (Typ.) 700W																	
	MAXIMUM OUTPUT POWER (Typ.) 800W for 180 sec. / 1050W for 10 sec. / surge power 1400W for 30 cycles																	
	AC VOLTAGE			Factory setting set at 110VAC			Factory setting set at 230VAC											
				100 / 110 / 115 / 120VAC selectable by setting button S.W			200 / 220 / 230 / 240VAC selectable by setting button S.W											
	FREQUENCY						60±0.1Hz 50/60Hz selectable by setting button S.W						50±0.1Hz 50/60Hz selectable by setting button S.W					
	WAVEFORM						True sine wave (THD<3%) at rated input voltage											
	AC REGULATION (Typ.)						±3.0%											
	SAVING MODE (Typ.)						Load ≤ 5W will be changed to standby mode											
FRONT PANEL INDICATOR						Battery voltage level, output load level, saving mode, fault and operation status												
INPUT	BAT. VOLTAGE		12V	24V	48V	12V	24V	48V										
	VOLTAGE RANGE (Typ.) <sup>Note.3</sup>		10.5 ~ 15VDC	21 ~ 30VDC	42 ~ 60VDC	10.5 ~ 15VDC	21 ~ 30VDC	42 ~ 60VDC										
	DC CURRENT (Typ.)		75A	38A	19A	75A	38A	19A										
	NO LOAD DISSIPATION		≤ 6W @ standby saving mode															
	OFF MODE CURRENT DRAW		≤ 1mA															
	EFFICIENCY (Typ.) <sup>Note.1</sup>		86%	88%	89%	89%	90%	91%										
	BATTERY TYPES		Open & sealed Lead Acid															
BATTERY INPUT PROTECTION	FUSE		40A*3	30A*2	20A*2	40A*3	30A*2	20A*2										
	BAT. LOW ALARM		11.3±4%	22.5±4%	45±4%	11.3±4%	22.5±4%	45±4%										
	BAT. LOW SHUTDOWN		10.5±4%	21±4%	42±4%	10.5±4%	21±4%	42±4%										
	BAT. POLARITY		By internal fuse open															
OUTPUT PROTECTION	OVER TEMPERATURE		80°C ± 5°C			75°C ± 5°C												
			Protection type : Shut down o/p voltage, re-power on to recover; by internal RTH3 detect on heatsink of power diode															
	OUTPUT SHORT		Protection type : Shut down o/p voltage, re-power on to recover															
	OVER LOAD (Typ.)		105 ~ 115% load for 180 sec., 115% ~ 150% load for 10 sec.															
ENVIRONMENT	WORKING TEMP. <sup>Note.4</sup>		0 ~ +40°C @ 100% load ; +60°C @ 50% load															
	WORKING HUMIDITY		20% ~ 90% RH non-condensing															
	STORAGE TEMP., HUMIDITY		-30 ~ +70°C / -22 ~ +158°F, 10 ~ 95% RH															
	VIBRATION		10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes															
SAFETY & EMC	SAFETY STANDARDS		Design refer to UL458			None												
	LVD		None			EN60950-1												
	WITHSTAND VOLTAGE		Bat I/P - AC O/P:3.0KVAC AC O/P - FG:1.5KVAC															
	ISOLATION RESISTANCE		AC O/P-FG , Bat I/P-FG:100M Ohms / 500VDC / 25°C / 70% RH															
	EMI CONDUCTION&RADIATION		Compliance to FCC class A			Compliance to EN55022 class A, 72/ 245/ CEE, 95/ 54/ CE, E-Mark												
	EMS IMMUNITY		None			Compliance to EN61000-4-2,3,8 ENV50204												
OTHERS	MTBF		74.4K hrs min. MIL-HDBK-217F (25°C)															
	DIMENSION		295*184*70mm (L*W*H)															
	PACKING		3.8Kg; 2pcs/8.6Kg/1.02CUFT															
NOTE	1.Efficiency is tested by 530W, linear load at 13V, 26V, 52V input voltage. 2.All parameters not specified above are measured at rated load, 25°C of ambient temperature. 3.Output derating capacity referenced by curve 1. 4.Output derating capacity referenced by curve 2.																	



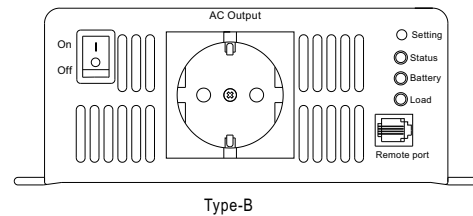
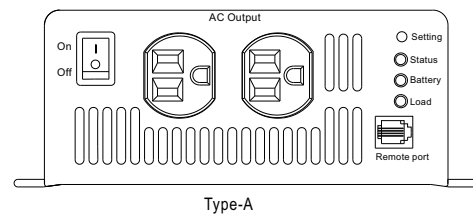
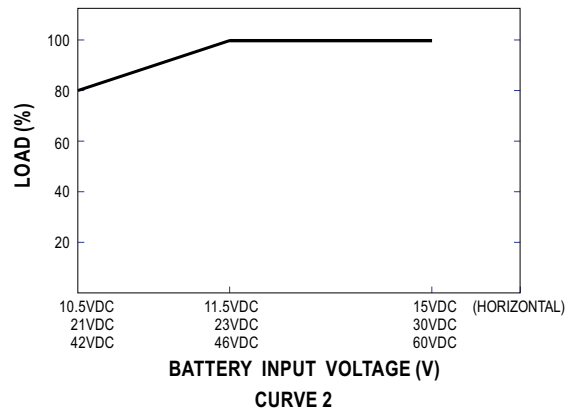
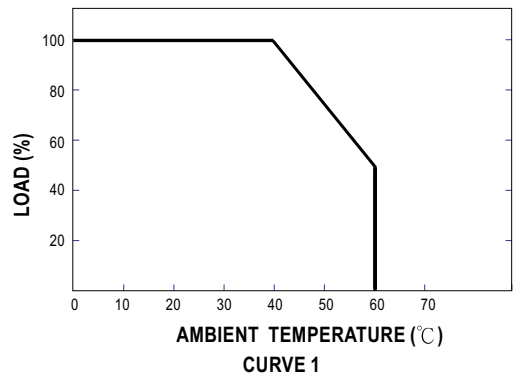
**AC Output Receptacles (optional)**

Receptacle type						
Country	USA	EUROPE	AUSTRALIA	U.K	JAPAN	GFCI
Certificate	<b>FC</b>	<b>E13 CE</b>	<b>E13 CE</b>	<b>E13 CE</b>	<b>FC</b>	<b>FC</b>

**Mechanical Specification**



**Derating Curve**





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[www.amvelectronica.com](http://www.amvelectronica.com)

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**AMV ELECTRONICA**

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