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250 WATT Universal Input SVPS25 AC/DC Power Supply

INSTRUCTION MANUAL

SVPS 25 SERIES

General Description:

The **SVPS25** Series consists of 250*W AC / DC* power supplies providing *DC* regulated outputs of 5*V*, 12*V*, 15*V*, 24*V* and 48*V*. Standard features include Power Factor Correction, Class "B" *VDE* and *FCC* EMI filtering, Remote Voltage Sensing and Short Circuit Protection. Optional features include a Safety Cover and Input Good / Output Good Signals.

Electrical specification:

Output specification:

SPECIFICATION	CONFIGURATION	MODEL NUMBER				
		SVPS25-5	SVPS25-12	SVPS25-15	SVPS25-24	SVPS25-48
Output Voltage Min. (Adjustable)		4.75V	11.4V	14.25V	22.8V	45.6V
Output Voltage Nom. (Adjustable)		5V	12V	15V	24V	48V
Output Voltage Max. (Adjustable)		5.25V	12.6V	15.75	25.2V	50.4V
Output Ripple pk-pk		100mV	150mV	150mV	200mV	400mV
Total Regulation Line and Load		50mV	120mV	120mV	240mV	480mV
Output Current Max. (Output Power Max.) 50°C Ambient 200 LFM External Fan	Without Cover	60A (300W)	25A (300W)	20A (300W)	12.5A (300W)	6.25A (300W)
	With Cover (-Z Option)	48A (240W)	20A (240W)	16A (240W)	10A (240W)	5A (240W)
Output Current Max. (Output Power Max.) 60°C Ambient 200 LFM External Fan	Without Cover	48A (240W)	20A (240W)	16A (240W)	10A (240W)	5A (240W)
	With Cover (-Z Option)	36A (180W)	15A (180W)	12A (180W)	7.5A (180W)	3.75A (180W)
Output Current Max. (Output Power Max.) 50°C Ambient Convection Cooling	Without Cover	50A (250W)	20.8A (250W)	16.7A (250W)	10.4A (250W)	5.2A (250W)
	With Cover (-Z Option)	35A (175W)	14.6A (175W)	11.7A (175W)	7.3A (175W)	3.65A (175W)
Output Current Max. (Output Power Max.) 60°C Ambient Convection Cooling	Without Cover	40A (200W)	16.7A (200W)	13.3A (200W)	8.3A (200W)	4.17A (200W)
	With Cover (-Z Option)	24A (120W)	10A (120W)	8A (120W)	5A (120W)	2.5A (120W)

(Ambient is defined as one inch below the unit.)

Harmonics: Meets *IEC 555-2* AC line harmonics requirement.

Overshoot : No overshoot at turn on, turn off, power failure or removal of a short circuit.

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Start-up time: 1.2 *sec* at input voltage 115*Vac*

Hold-up time: Typically 16 *m*s min at full output power and at input voltage 85*Vac*

Temperature Coefficient: 0.03%/°C

AC input:

Line: 85-265*Vac* Continuous operation, 47-63 *Hz*, Single Phase.
Efficiency: 70% (typical) for all models
Inrush Current: 75*A* typical for cold startup at 25ºC
Input Current : 5*A RMS. max*

Input Power: 357*W* (typical) for all models.

EMI: Conducted EMI conforms to FCC Part 15, Subpart J, Class B and VDE 0871, Curve B.

Input Surge Protection: Meets IEC801,-2,-4,-5 level 3; IEEE C62.41-1991 Location Category A2, (A3 with external MOV's)

Over-current protection: Limits output current to a maximum 200% (typical) of rated load current. Sustained overloads or short circuits for more than 30 seconds may cause power supply damage.

Over-voltage protection: Over-voltage protection is standard on all models. Input power must be interrupted to reestablish output after OV condition has been removed.

Fusing: Fuse F1, 6*A*/250*Vac*, Normal Blow. Overload of power supply does not cause fuse failure. Replace only with the same type and rating.

Isolation Voltage: 3000*Vac* from input to output and input to signal connectors.
1500*Vac* input to chassis.
500*Vac* output to chassis and signal connectors to chassis.

Safety Agency Compliance: Designed to meet *UL1950, CSA22.2 #234-M90, EN60950, IEC950, EN410003*.

Leakage Current: Less than 3.5*mA*, (AC line to chassis ground).

DC Output controls: Simple screw driver adjustment provides ±5% setting over entire voltage range.
Remote Voltage Sensing: Remote sense capability is provided on all units. Max allowed load cable voltage drop must be less than 0.2*V*.

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AC Good Signal: 1*mA* conductance signal which indicates that adequate input capacitor energy storage to meet hold-up specification. DC Output will stay within regulation specifications for 10 *ms* after AC Good Signal ceases to conduct.
AC Good Signal is initiated approximately 1.2 *s* after input power is applied.

DC Good Signal: 1 *mA* conductance signal which indicates that delivered output voltage, as measured at the +V and -V terminals, is above 90% of nominal value.

Ambient operating temperature and cooling: Convection cooled. No fans or blowers needed for continuous operation from 0ºC to 60ºC with 20% derating above 50ºC

Storage temperature: -30° to +85º C

Physical Data

Size: 4.75"x 1.77"x 9.5"
Weight: 3.5 lbs.net

Mounting: Two mounting positions, two mounting surfaces. Threaded inserts in chassis for mounting accept *M4* screws. Customer mounting screws must not protrude into power supply by more than 1/4 inch .

Vibration : The *SV* Series meets *MIL-STD-810E* specification for transportation.

Input connections: Molex Connectors 0.156″ spacing.
Mating connector *P/N 09-50-8051* or equivalent.
Note: Molex Connector requires Crimp Terminals *P/N 08-50-0106*.

Signal Connection: Molex Connectors 0.100″ spacing.
Mating connector *P/N 22-01-2067* or equivalent.

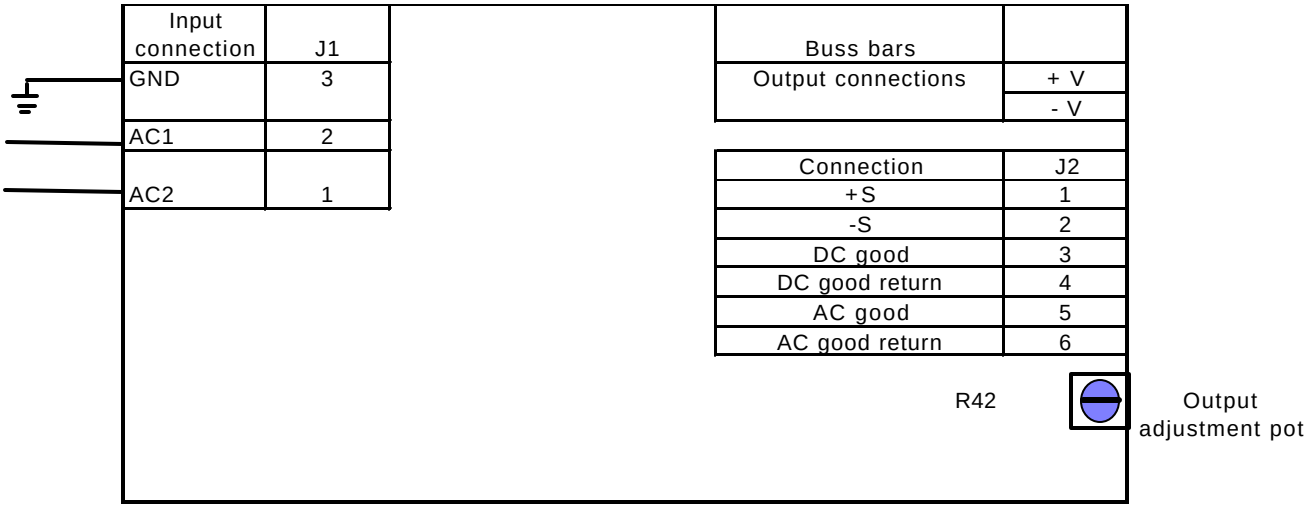
Output connections: Heavy duty buss-bars.

Superior Value Options: The following features are optional and provide the opportunity to optimize the power supply for cost driven applications.

Option Code:	**Description:**
Z	Fully enclosed unit (output power must be derated by 30% in an ambient of 50°C or less and 32% in 50°C to 60°C ambient).

Warranty: One year warranty includes labor as well as parts

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Notes:

1. N/C - no connection
2. The output voltage may be adjusted using the adjustment potentiometer shown.
3. Unit meets drop test in the Lambda shipping container.

Fig. 1 Input/output Connection

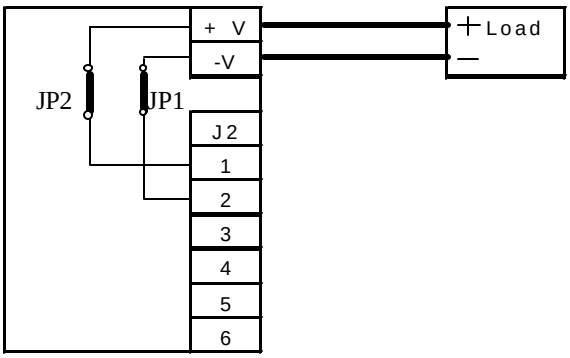
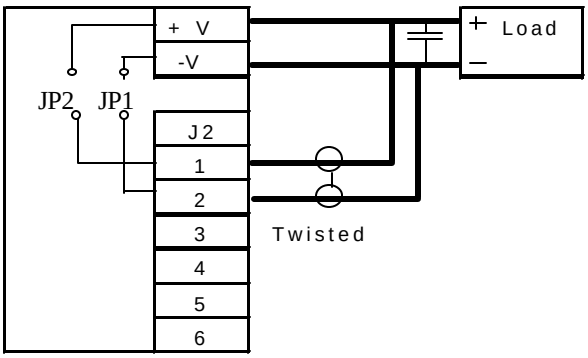


Fig. 2 Local sense connection



Suitable decoupling capacitor (0.1uf, or greater) may be required at load

Fig. 3 Remote sense connection

Note:

Remote sense minimizes the effects of distribution losses by regulating the voltage at the remote sense connections. For remote sensing disconnect jumpers JP1 and JP2. Good layout techniques, such as close proximity and directness, should be observed for noise immunity.

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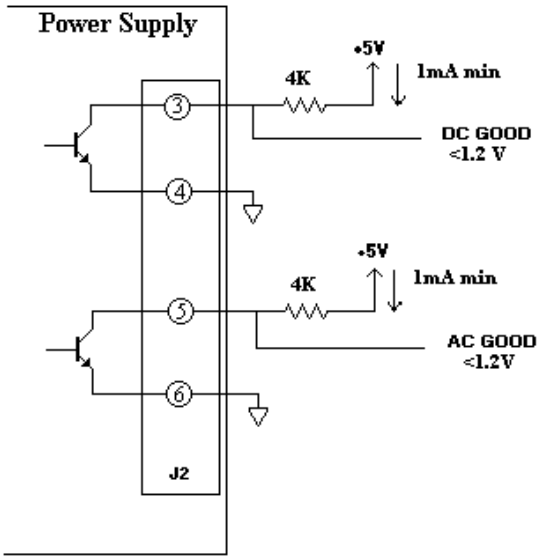
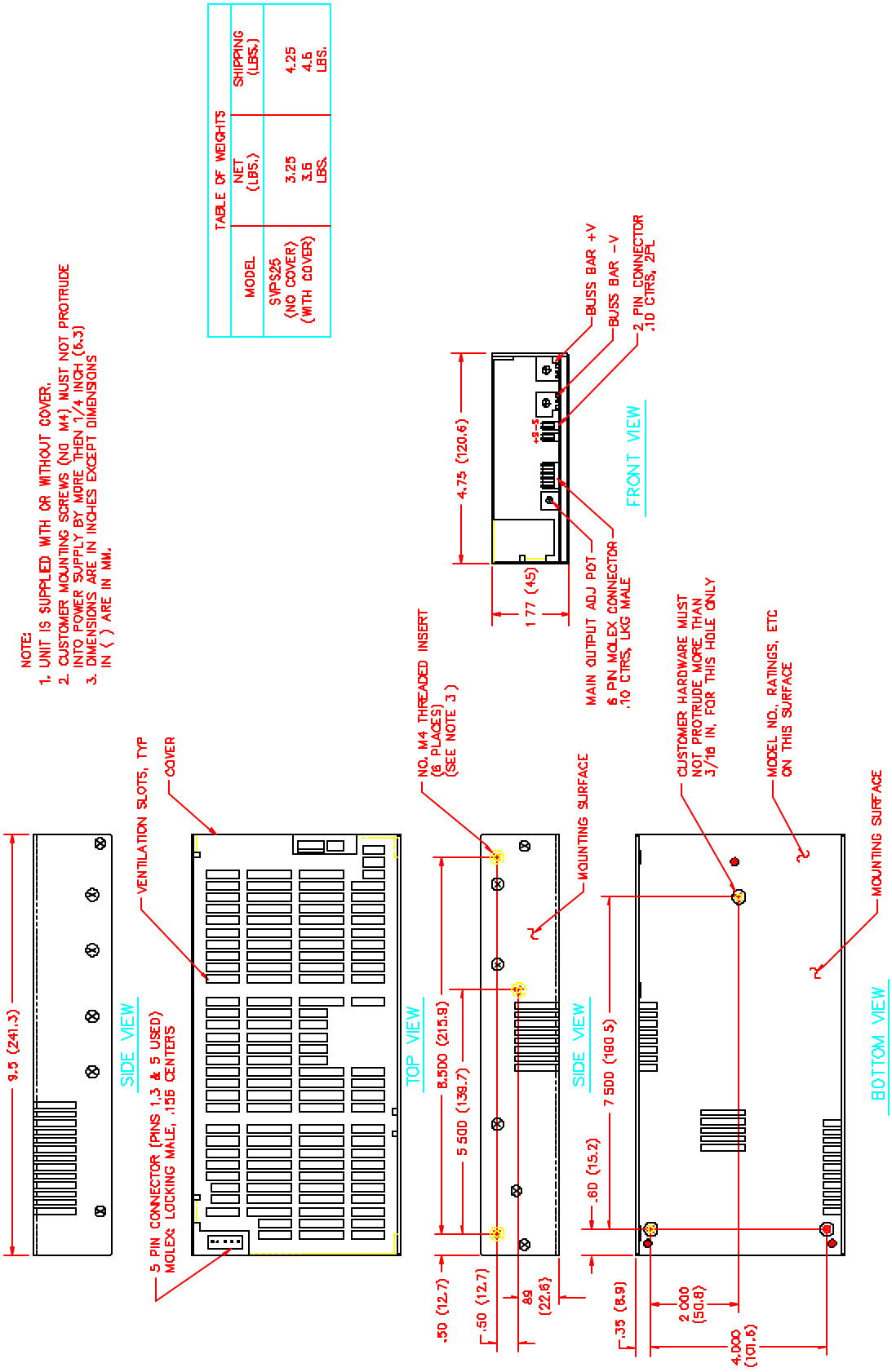


Fig. 4 Connection diagram for output signals.

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