

High Density DC-DC Modules



PS200W Series 132-200 Watt DC-DC Converters Single Output

www.powersolve.co.uk

Features

- Ultra wide 4:1 Input Range
- Half brick package
- Efficiency to 89%
- Regulated Outputs
- Continuous Short Circuit Protection
- Overvoltage, Overload & Over temperature Protections
- Remote On/Off control



Electrical Specification

Input Voltage Range	24V input models: 10 ~ 36V 48V input models: 18 ~ 75V
Input Surge Voltage (100ms max.)	24V input models: 50VDC max. 48V input models: 100VDC max.
Undervoltage Lockout	24V input models: 9.5V (power up) / 8.5V (power down) 48V input models: 17V (power up) / 16V(power down)
Positive Logic Remote ON/OFF	Open collector ref. to -Input Module ON: >3.5VDC to 75VDC or open circuit, Module OFF: <1.2VDC Add suffix N to the Model Number for Negative Logic Remote ON/OFF control
Input Filter	PI Type
Output Voltage	See tables
Output Current	See tables
Voltage Accuracy	±1.5% max.
Transient Response	<500µsec for a 25% step load change
External Trim Adj. Range	±10%
Ripple & Noise, 20MHz BW	40mV RMS max, 100mV pk-pk max. (3.3V & 5V output versions) 60mV RMS max, 150mV pk-pk max. (12V & 15V output versions) 100mV RMS max, 240mV pk-pk max. (24V output versions) 150mV RMS max, 480mV pk-pk max. (48V output versions) measured with a 10µF tantalum & 1.0µF ceramic capacitor across the output
Temperature Coefficient	±0.03%/°C
Short Circuit Protection	Continuous
Line Regulation	±0.2% max. measured over the full input voltage
Load Regulation	±0.2% max. measured from 0-100% load
Over Voltage Protection trip range	115% ~ 140% of nominal output voltage
Current Limit	110% ~ 150% of nominal output current
Star Up Time	120ms typical
Efficiency	See table
Isolation Voltage	IP/OP, IP/Case, OP/Case: 1500VDC min
Isolation Resistance	10 ⁷ ohms min.
Isolation Capacitance	2000pF typical
Switching Frequency	250KHz typical
Operating Case Temperature	-40°C to +100°C
Storage Temperature	-55°C to +105°C
Thermal Shutdown, Case Temp.	+110°C Typ.
Humidity	95% RH max. non-condensing
Dimensions	2.28 x 2.40 x 0.52 inches (57.9 x 61.0 x 13.2 mm)
Weight	114g
Case Material	Aluminium baseplate with plastic case

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Output Voltage and Current Ratings

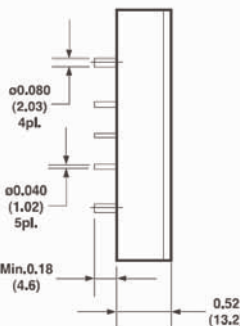
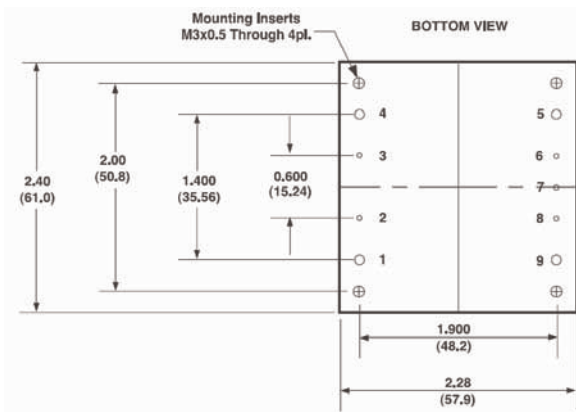
MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	CAPACITOR LOAD max.
				NO LOAD	FULL LOAD		
PS200W-24S3V3	10-36VDC	3.3VDC	50A	130mA	7.90A	87	10000µF
PS200W-24S05	10-36VDC	5VDC	40A	150mA	9.58A	87	10000µF
PS200W-24S12	10-36VDC	12VDC	16.7A	50mA	9.71A	86	2200µF
PS200W-24S15	10-36VDC	15VDC	13.3A	50mA	9.56A	87	2200µF
PS200W-24S24	10-36VDC	24VDC	8.3A	45mA	9.54A	87	2200µF
PS200W-24S28	10-36VDC	28VDC	7.14A	55mA	9.41A	88	2200µF*
PS200W-24S48	10-36VDC	48VDC	4.2A	60mA	9.77A	86	2200µF*
PS200W-48S3V3	18-75VDC	3.3VDC	40A	80mA	3.13A	88	10000µF
PS200W-48S05	18-75VDC	5VDC	40A	80mA	4.68A	89	10000µF
PS200W-48S12	18-75VDC	12VDC	16.7A	60mA	4.74A	88	2200µF
PS200W-48S15	18-75VDC	15VDC	13.3A	60mA	4.72A	88	2200µF
PS200W-48S24	18-75VDC	24VDC	8.3A	60mA	4.72A	88	2200µF
PS200W-48S48	18-75VDC	48VDC	4.2A	50mA	4.83A	87	2200µF*

NOTES:

Nominal Input Voltage 24VDC or 48VDC

The output terminal of 48Vout models requires a minimum capacitor of 47µF to maintain specified regulation.

Mechanical and Connection Details



All dimensions in inches (mm)

Tolerances Inches x.xx ±0.02

Millimeters x.x ±0.5

x.xxx ±0.010

x.xx ±0.25

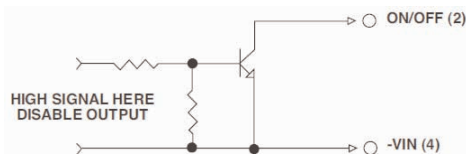
Pin Connection

Pin	Function
1	+Vin
2	ON/OFF
3	CASE
4	-Vin
5	-Vout
6	-Sense
7	Trim
8	+Sense
9	+Vout

Remote ON/OFF Control

The PS200W Series allows the user to switch the module on and off electronically with the remote on/off feature.

The PS200W Series are available with "positive logic" or "negative logic" (option).

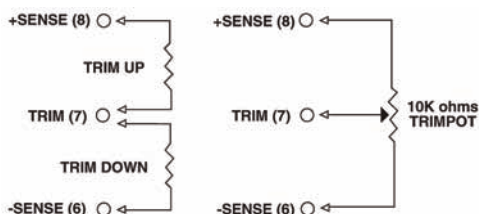


Logic Table

Logic State (Pin 2)	Negative Logic	Positive Logic
Logic low-Switch closed	Module on	Module off
Logic high-Switch open	Module off	Module on

External Output Trim

The output can be trimmed externally (±10%) using a fixed resistor or a trimpot as shown.



Output Noise

The output noise is measured with a 10µF tantalum and a 1.0µF ceramic capacitor across the output.

