

High Density DC-DC Modules



PSQ100W Series 100 Watt DC-DC Converters Single Output

www.powersolve.co.uk

Features

- Quarter brick package
- Efficiency to 88%
- Ultra wide 4:1 input range
- Regulated outputs
- Continuous short circuit protection
- OTP / OVP / OCP
- 1500VDC isolation



Electrical Specification

INPUT

Input Voltage Range	18 ~ 75V
Undervoltage Lockout	17V (Vin power up) 16V (Vin power down)
Positive Logic Remote ON/OFF	Open collector ref. to -Input Module ON: >3.5VDC or open circuit, Module OFF: <1.2VDC Add suffix N to Model Number for Negative Logic Remote ON/OFF control
Input Filter	PI Type

OUTPUT

Voltage Accuracy	±1.5% max.
Transient Response: 25% Step Load Change	<500µsec
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 version) measured with a 10µF tantalum & 1.0µF ceramic capacitor across the output

ENVIRONMENTAL

Temperature coefficient	±0.03%/°C max.
Short Circuit Protection	Continuous
Line Regulation	±0.2% max. measured over full input range
Load Regulation	±0.2% max. measured from 0-100% load
Over Voltage Protection trip range, % Vo nom.	115 ~ 140%
Current Limit	110% ~ 160% Nominal Output

GENERAL

Efficiency	See table
Isolation Voltage	IP/OP, IP/Case, OP/Case: 1500VDC min.
Isolation Resistance	10 ⁷ ohms min.
Switching Frequency	250KHz typ.
Thermal shutdown, case temp.	110°C typ.
Operating case temperature range	-40°C to +100°C
Storage temperature range	-55°C to +105°C
Dimensions	1.45 x 2.28 x 0.50 inches 36.8 x 57.9 x 12.7 mm
Case material	Aluminium baseplate with plastic case

High Density DC-DC Modules



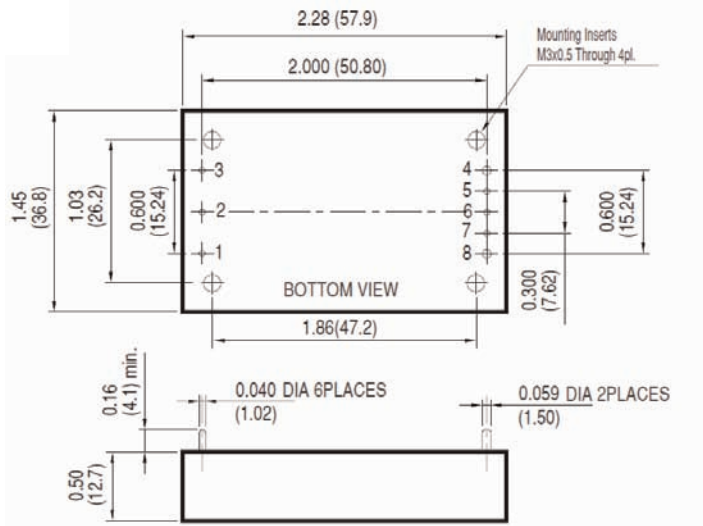
www.powersolve.co.uk

Output Voltage and Current Ratings

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT max.	INPUT CURRENT		% EFF.
				NO LOAD	FULL LOAD	
PSQ100W-48S3V3		3.3VDC	30A	60mA	2344mA	88
PSQ100W-48S05		5VDC	20A	60mA	2367mA	88
PSQ100W-48S12	18 - 75VDC	12VDC	8.3A	30mA	2358mA	88
PSQ100W-48S15		15VDC	6.7A	30mA	2379mA	88
PSQ100W-48S24		24VDC	4.17A	30mA	2369mA	88

NOTE: Nominal Input Voltage 48VDC

Mechanical and Connection Details

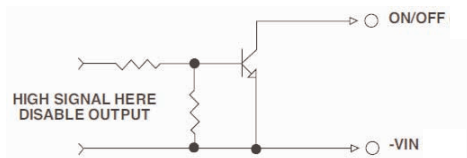


Pin Connection	
Pin	Function
1	+Vin
2	ON/OFF
3	-Vin
4	-Vout
5	-Sense
6	Trim
7	+Sense
8	+Vout

All dimensions in inches (mm)
 Tolerances: Inches x.xx ±0.02 x.xxx ±0.010
 Millimeters x.x ±0.5 x.xx ±0.25

Remote ON/OFF Control

The PSQ100W Series allows the user to switch the module on and off electronically with the remote on/off feature. The PSQ100W Series are available with "positive logic" or "negative logic" (option).

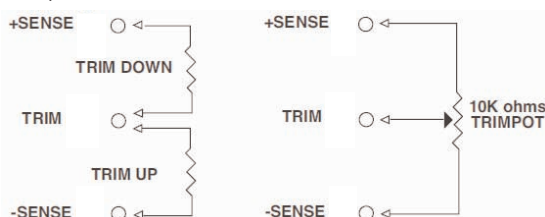


Logic Table

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

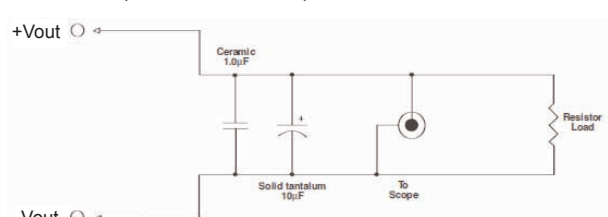
External Output Trim

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.



All specifications typical at nominal line, full load and 25°C unless otherwise stated.