

# High Density DC-DC Modules



## PSQ75W Series 75 Watt DC-DC Converters Single Output

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### Features

- Quarter brick package
- Efficiency to 87%
- Ultra wide 4 : 1 input range
- Continuous short circuit protection



### Electrical Specification

#### INPUT

Input Voltage Range	9 ~ 36V (24V version) 18 ~ 75V (48V version)
Undervoltage Lockout	8.8V (24Vin power up) 8.0V (24Vin power down) 17V (48Vin power up) 16V (48Vin power down)
Positive Logic Remote ON/OFF	Open collector ref. to -Input Module ON: >3.5VDC or open circuit, Module OFF: <1.8VDC 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% ~ 140% Nominal Output

#### GENERAL

Efficiency	See table
Isolation Voltage	IP/OP, IP/Case, OP/Case: 1500VDC min.
Isolation Resistance	10 <sup>7</sup> ohms min.
Switching Frequency	300KHz typ.
Thermal shutdown, case temp.	105°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 0.5 inches 36.8 x 57.9 x 12.7 mm
Case material	Aluminium baseplate with plastic case

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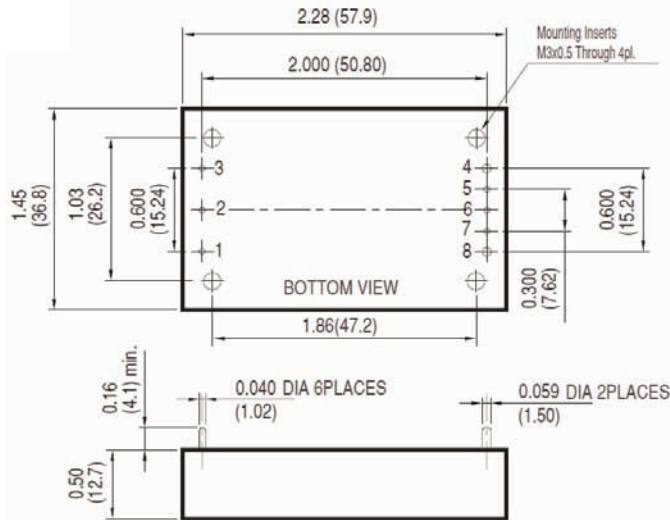
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## Output Voltage and Current Ratings

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT max.	INPUT CURRENT		% EFF.
				NO LOAD	FULL LOAD	
PSQ75W-24S3V3		3.3VDC	12A		2037mA	81
PSQ75W-24S05		5VDC	12A		2967mA	84
PSQ75W-24S12	9 - 36VDC	12VDC	6.25A	50mA	3634mA	86
PSQ75W-24S15		15VDC	5A		3634mA	86
PSQ75W-24S24		24VDC	3.12A		3628mA	86
PSQ75W-48S3V3		3.3VDC	12A		1006mA	82
PSQ75W-48S05		5VDC	12A		1471mA	85
PSQ75W-48S12	18 - 75VDC	12VDC	6.25A	30mA	1817mA	86
PSQ75W-48S15		15VDC	5A		1796mA	87
PSQ75W-48S24		24VDC	3.12A		1796mA	87

NOTE: Nominal Input Voltage 24VDC & 48VDC

## Mechanical and Connection Details



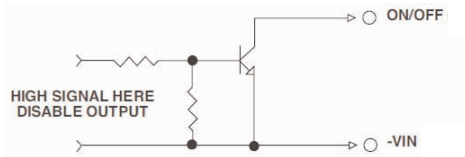
### Pin Connection

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 PSQ75W Series allows the user to switch the module on and off electronically with the remote on/off feature. The PSQ75W Series are available with "positive logic" or "negative logic" (option).

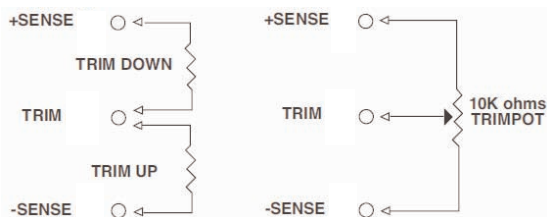


### Logic Table

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

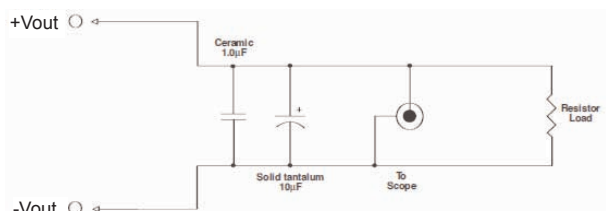
## External Output Trim

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.