

DC-DC Converter

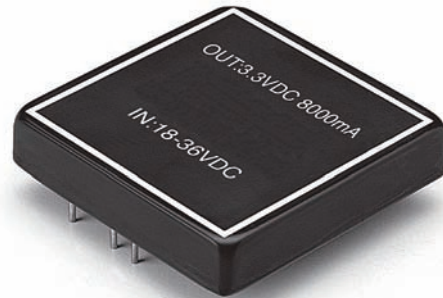
**POWER
SOLVE**

PS40 Series
40 Watt Wide Input
PCB Mounting
Single, Dual & Triple Outputs

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Features

- 40 W Isolated Output
- 2:1 Input Range
- Regulated Outputs
- Continuous Short Circuit Protection
- Efficiency to 92%
- External Output Trimming Function
- Six-Sided Shielded Metal Case



Electrical Specification

Input Voltage Range	9 - 18V (PS40-12-xx) 18 - 36V (PS40-24-xx) 36 - 75V (PS40-48-xx)
Undervoltage Lockout	8.8V power up / 8.0V power down (PS40-12-xx) 17V power up / 16V power down (PS40-24-xx) 34V power up / 32V power down (PS40-48-xx)
Positive Logic Remote On/Off	Open collector ref. to -Vin Module ON: >3.5 - 75VDC or open circuit, Module OFF: <1.8VDC Add suffix N to model number for negative remote ON/OFF control
Input Filter	Pi Type
Voltage Accuracy, Single/Dual Output	±1.5% max.
Dual Positive	±1.5% (3.3V) / ±3.0% (5.0V) max.
Triple	±1.5% (main) / ±5.0% (auxiliary) max.
Voltage Balance (Dual)	±2.0% max.
Transient Response, 25% step load change	<300µSec. error band ±5% Vout
External Trim Adj. Range	±10% (single & dual) / ±5% (dual positive)
Temperature Coefficient	±0.02% / °C
Ripple and Noise (20MHz BW):	20mV rms, 50mV pk-pk max.
2.5V & 3.3V & 5.0V	75mV pk-pk max.
12V & 15V	120mV pk-pk / 150mV pk-pk max.
Dual ±12V / ±15V	100mV pk-pk max.
Dual Positive +3.3V / +5V	
Short Circuit Protection	Continuous (Hiccup Mode)
Line Regulation, Single/Dual	±0.5% measured over full input range
Triple	±1.0% (main) / ±3.0% (auxiliary) measured over full input range
Load Regulation, Single/Dual	±1.0% measured from 10-100% load
Dual Positive	±1.5% (3.3V) / ±4.0% (5.0V) measured from 0-100% load on main output
Triple	±1.0% (main) / ±4.0% (auxiliary) measured from 10-100% load
Efficiency	See Table
Isolation Voltage	I/P-O/P: 1500VDC min.
Isolation Resistance	10 ⁹ Ohms
Switching Frequency	350KHz typ.
Operating Temperature Range	-40°C to +85°C
Derating, above 60°C	Linearly to Zero power at 100°C
Case Temperature	+100°C max.
Thermal Shutdown	+110°C typ.
Storage Temperature Range	-55°C to +125°C
Dimensions	50.8 x 50.8 x 10.2 mm (2.0 x 2.0 x 0.4 Inches)
Case material	Black coated Copper with non-conductive base
Weight	65g

Typical at nominal line, full load & 25°C unless otherwise stated.

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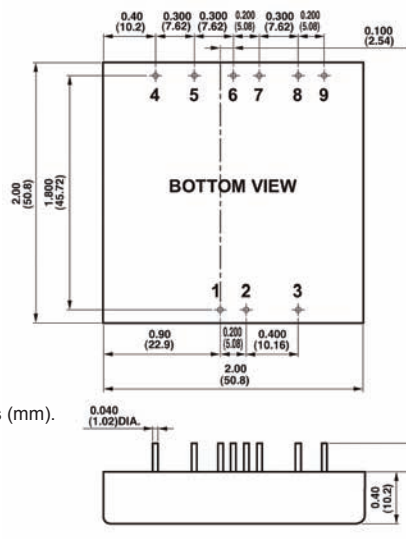
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Output Voltage and Current Ratings

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	
			Min.	Max.	No Load	Full Load		
PS40-12-25S	9 - 18VDC	2.5V	0mA	1000mA	200mA	2367mA	88%	
PS40-12-33S		3.3V	0mA	1000mA	200mA	3090mA	89%	
PS40-12-05S		5V	0mA	800mA	200mA	3745mA	89%	
PS40-12-12S		12V	0mA	333mA	200mA	3703mA	90%	
PS40-12-15S		15V	0mA	266mA	200mA	3702mA	90%	
PS40-12-12D		±12V	±90mA	±1800mA	100mA	4045mA	89%	
PS40-12-15D		±15V	±70mA	±1400mA	100mA	3889mA	90%	
PS40-12-3305D		+3.3V/+5V	0mA	10A/7.5A	100mA	3812mA	87%	
PS40-12-3312T		3.3V/±12V	0.6A/±40mA	6A/±0.4A	200mA	2784mA	88%	
PS40-12-3315T		3.3V/±15V	0.6A/±30mA	6A/±0.3A	200mA	2727mA	88%	
PS40-12-512T		5V/±12V	0.6A/±40mA	6A/±0.4A	200mA	3750mA	88%	
PS40-12-515T		5V/±15V	0.6A/±30mA	6A/±0.3A	200mA	3611mA	90%	
PS40-24-25S		18 - 36VDC	2.5V	0mA	1000mA	100mA	1184mA	88%
PS40-24-33S			3.3V	0mA	1000mA	100mA	1545mA	89%
PS40-24-05S			5V	0mA	800mA	110mA	1831mA	91%
PS40-24-12S	12V		0mA	333mA	100mA	1811mA	92%	
PS40-24-15S	15V		0mA	266mA	100mA	1810mA	92%	
PS40-24-12D	±12V		±90mA	±1800mA	100mA	1978mA	91%	
PS40-24-15D	±15V		±70mA	±1400mA	100mA	1902mA	92%	
PS40-24-3305D	+3.3V/+5V		0mA	10A/7.5A	50mA	1853mA	89.5%	
PS40-24-3312T	3.3V/±12V		0.6A/±40mA	6A/±0.4A	100mA	1361mA	90%	
PS40-24-3315T	3.3V/±15V		0.6A/±30mA	6A/±0.3A	100mA	1333mA	90%	
PS40-24-512T	5V/±12V		0.6A/±40mA	6A/±0.4A	100mA	1833mA	90%	
PS40-24-515T	5V/±15V		0.6A/±30mA	6A/±0.3A	100mA	1806mA	90%	
PS40-48-25S	36 - 75VDC		2.5V	0mA	1000mA	50mA	585mA	89%
PS40-48-33S			3.3V	0mA	1000mA	50mA	764mA	90%
PS40-48-05S			5V	0mA	800mA	60mA	926mA	90%
PS40-48-12S		12V	0mA	333mA	60mA	916mA	91%	
PS40-48-15S		15V	0mA	266mA	60mA	906mA	92%	
PS40-48-12D		±12V	±90mA	±1800mA	50mA	1000mA	90%	
PS40-48-15D		±15V	±70mA	±1400mA	50mA	962mA	91%	
PS40-48-3305D		+3.3V/+5V	0mA	10A/7.5A	50mA	927mA	89.5%	
PS40-48-3312T		3.3V/±12V	0.6A/±40mA	6A/±0.4A	50mA	688mA	89%	
PS40-48-3315T		3.3V/±15V	0.6A/±30mA	6A/±0.3A	50mA	690mA	87%	
PS40-48-512T		5V/±12V	0.6A/±40mA	6A/±0.4A	50mA	938mA	88%	
PS40-48-515T		5V/±15V	0.6A/±30mA	6A/±0.3A	50mA	903mA	90%	

Maximum total power from all outputs is limited to 40W but no output should exceed its maximum current.

Mechanical and Connection Details



All Dimensions in Inches (mm).
 Tolerance:
 Inches x.xx ±0.4
 x.xxx ±0.010
 Millimeters x.x ±1.0
 x.xx ±0.25

Pin	Single	Dual	Dual Positive	Triple
1	+Vin	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin	-Vin
3	On/Off Cont.	On/Off Cont.	On/Off Cont.	On/Off Cont.
4	No Conn.	No Pin	+3.3Vout	+Aux. Out
5	-Sense	+Vout	3.3V RTN	Common
6	+Sense	Common	Trim	-Aux. Out
7	+Vout	Common	No Conn.	+Vout
8	-Vout	-Vout	+5Vout	-Vout (comm)
9	Trim	Trim	5V RTN	No Conn.

External Output Trimming

