



FEATURES

- Efficiency up to 80%
- Wide 2:1 Input Range
- Fully regulated Outputs
- Operating Temperature Range -40°C to +85°C
- Low Ripple and Noise
- Isolation Voltage 1500VDC
- Short-circuit Protection
- Lead free, RoHs Compliant
- 3 Years Product Warranty

The PL01S/D series are miniature, SIP Package, isolated 1W DC/DC converters with 1,500VDC isolation. It offers continuous short circuit protection and allows a wide operating temperature range of -40°C to +85°C. These isolated DC/DC converters are the latest offering from a world leader in power systems technology and manufacturing — Delta Electronics, Inc

Model List

Model Number	Input Voltage (Range) VDC	Output Voltage VDC	Output Current		Input Current		Max. capacitive Load μF	Reflected Ripple current mA (typ.)	Efficiency (typ.)
			Max. mA	@Max. Load mA(typ.)	@No Load mA(typ.)	@Max. Load %			
PL01S0505A	5 (4.5 ~ 9)	5	200	263	40	1680	80	76	
PL01S0512A		12	83	259				77	
PL01S0515A		15	67	254				79	
PL01D0512A		±12	±42	262				77	
PL01D0515A		±15	±33	254				78	
PL01S1205A	12 (9 ~ 18)	5	200	108	20	1680	40	77	
PL01S1212A		12	83	108				77	
PL01S1215A		15	67	105				80	
PL01D1212A		±12	±42	106				79	
PL01D1215A		±15	±33	106				78	
PL01S2405A	24 (18 ~ 36)	5	200	54	10	1680	30	77	
PL01S2412A		12	83	52				80	
PL01S2415A		15	67	52				80	
PL01D2412A		±12	±42	53				80	
PL01D2415A		±15	±33	52				80	
PL01S4805A	48 (36 ~ 75)	5	200	27	7	1680	20	77	
PL01S4812A		12	83	27				78	
PL01S4815A		15	67	27				78	
PL01D4812A		±12	±42	27				79	
PL01D4815A		±15	±33	26				79	

* For each output



Input Characteristics

Parameter	Model	Min.	Typ.	Max.	Unit
Input Surge Voltage (1 sec. max.)	5V Input Models	-0.7	---	15	VDC
	12V Input Models	-0.7	---	25	
	24V Input Models	-0.7	---	50	
	48V Input Models	-0.7	---	100	
Start-Up Threshold Voltage	5V Input Models	---	---	4.5	
	12V Input Models	---	---	9	
	24V Input Models	---	---	18	
	48V Input Models	---	---	36	
Internal Filter Type	All Models	Capacitor			

Output Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Unit	
Output Voltage Setting Accuracy	At 50% Load and Nominal Vin	---	---	±1.0	%Vnom.	
Line Regulation	Vin=Min. to Max.	---	---	±0.2	%	
Load Regulation	No Load to Full Load	Single Output Models	---	---	±1.0	%
		Dual Output Models	---	---	±1.0	%
	10% to 90% Load	Single Output Models	---	---	±0.5	%
		Dual Output Models	---	---	±0.8	%
Min.Load	No minimum Load Requirement					
Ripple & Noise (20MHz)		---	50	---	mV _{P-P}	
Transient Recovery Time	25% Load Step Change	---	250	---	µsec	
Temperature Coefficient		---	---	±0.02	%/°C	
Short Circuit Protection	Continuous					

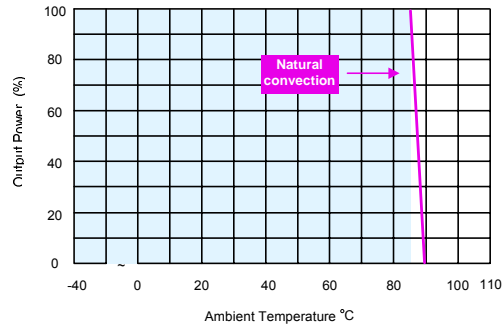
General Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Unit
I/O Isolation Voltage (rated)	60 Seconds	1500	---	---	VDC
I/O Isolation Resistance	500 VDC	1000	---	---	MΩ
I/O Isolation Capacitance	100KHz, 1V	---	---	50	pF
Switching Frequency		---	250	---	KHz
MTBF(calculated)	MIL-HDBK-217F@25°C, Ground Benign	2,800,000	---	---	Hours

Environmental Characteristics

Parameter	Conditions	Min.	Max.	Unit
Operating Ambient Temperature Range (See Power Derating Curve)	Natural Convection	-40	+85	°C
Case Temperature		---	+105	°C
Storage Temperature		-55	+125	°C
Humidity (non condensing)		---	95	% rel. H
Lead Temperature (1.5mm from case for 10Sec.)		---	260	°C

Power Derating Curve

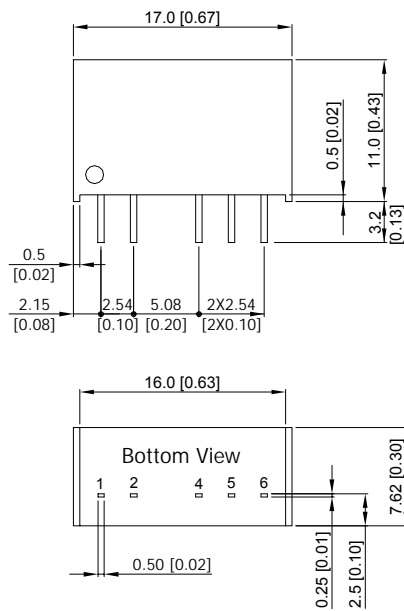


Notes

- 1 Specifications typical at $T_a=+25^{\circ}\text{C}$, resistive load, nominal input voltage, rated output current unless otherwise noted.
- 2 Ripple & Noise measurement bandwidth is 0-20 MHz.
- 3 All DC/DC converters should be externally fused at the front end for protection.
- 4 That "natural convection" is about 20LFM but is not equal to still air (0 LFM).
- 5 Specifications subject to change without notice.

Mechanical Drawing

Mechanical Dimensions



Pin Connections

Pin	Single Output	Dual Output
1	-Vin	-Vin
2	+Vin	+Vin
4	+Vout	+Vout
5	No Pin	Common
6	-Vout	-Vout

- ▶ All dimensions in mm (inches)
- ▶ Tolerance: X.X±0.5 (X.XX±0.02)
X.XX±0.25 (X.XXX±0.01)
- ▶ Pins ±0.05(±0.002)

Physical Outline

Case Size : 17.0x7.62x11.0mm (0.67x0.30x0.43 inches)

Case Material : Non-Conductive Black Plastic (flammability to UL 94V-0 rated)

Pin Material : Alloy 42

Weight : 12.9g



Part Numbering System

P	L	01	S	05	05	A
Form factor	Family series	Watt	Number of Outputs	Input Voltage	Output Voltage	Option Code
D-DIP	A~Z	01:1W	S - Single	03:3.3V	03:3.3V	A - Std. Functions
P-SIP		02:2W	D- Dual	05: 5V	05: 5V	
S-SMD		03:3W		12:12V	12:12V	
		04:4W		24: 24V	15: 15V	
		06:6W		48:48V	24: 24V	

WARRANTY

Delta offers a three(3) years limited warranty. Complete warranty information is listed on our web site or is available upon request from Delta.

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