

PL10-20S Series

10-20A Non-Isolated
DC-DC Converters

- Industry Standard Package and Pin Out
- DOSA Compatible Models
- Low Voltage Outputs to 0.75V
- Wide Input Range 6 to 14V ('W' Models)
- Output Voltage Adjustment
- Remote On/Off and Sequencing ('W' Models)

Key Market Segments & Applications

Distributed Power Architecture
Telecommunications
Data Communications
Networking Equipment
Test Equipment
Industrial Electronics

PL10-20S Features and Benefits

Features

- High Efficiency up to 95%
- Wide Output Voltage Adjustment Range
- Through Hole Packages
- Industry Standard Pin Out

Benefits

- Reduces Input Current Draw
- Stock One Part for all Voltages
- Less PCB Space Used
- Second Sourcing

Specifications

MODEL		PL10S-W12C	PL10S-12	PL16S-12C	PL16S-W12C	PL20S-W12C
ITEMS						
Output Voltage Range	(2) VDC	0.75 - 5.0VDC				
Output Current	A	10			16	20
Output Voltage Accuracy	%	±1.5% max.				
Turn on/off Threshold (typ)	VDC	On: 5.0V, Off: 4.0V	On: 8.0V, Off: 7.7V		On: 5.0V, Off: 4.0V	
Ripple & Noise (Typ)	(2) mV	20mV rms, 75mV pk-pk		30mV rms, 75mV pk-pk		
Line Regulation (Typ)	%	± 0.2% (Vo=3.3V)				
Load Regulation (Typ)	%	±0.5% (Vo=3.3V)				
Capacitive Load (max)	µF	8000µF				
Transient Response	-	<200µs settling time for 25% load change				
Overcurrent Protection	-	Continuous				
Overvoltage Protection	-	N/A				
Over Temp. Protection	°C	+120°C typ.		+130°C typ.		
Remote Sense	-	Yes				
Remote On / Off	-	On: Vin or open circuit; Off: <0.4VDC				
Power Good Signal (logic high)	%	Optional		N/A		Optional
Operating Temperature	°C	-40°C to +85°C				
Operating Humidity	%	20 - 95% Non condensing				
Storage Temperature	°C	-55°C to +125°C				
Storage Humidity	-	10 - 95% Non condensing				
Cooling	-	Convection, or forced air				
Vibration (non operating)	-	10 - 500 - 10Hz, amplitude 1.524mm, X, Y, Z 6 minutes each				
Shock	-	Half sine wave, 40g, 11ms, 3 times each axis, +X, -X, +Y, -Y, +Z, -Z				
Safety Agency Approvals	-	UL/C-UL60950				
Sequencing/Tracking	-	Yes		-		Yes
Switching Frequency	kHz	300kHz				
Weight (Typ)	g	8.0	10.0	8.0	8.5	10.1
Size (WxHxD)	-	See outline drawing				
Warranty	yrs	2				

Note: See Installation Manual for full details, test methods of parameters and application notes

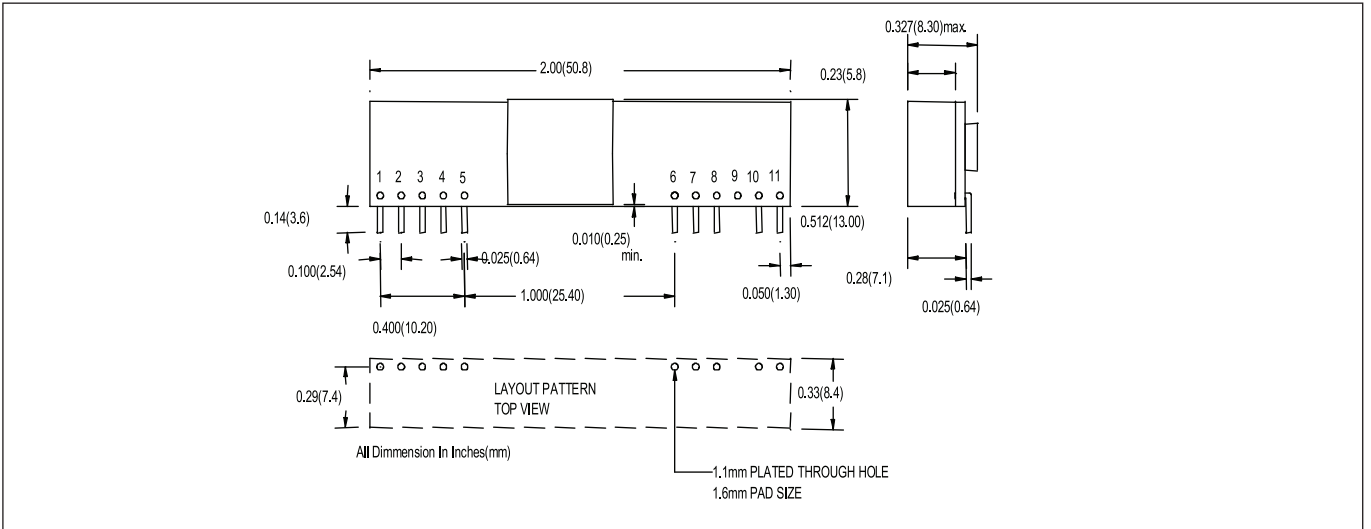
(1) The output noise is measured with a 10µF tantalum cap and 1µF ceramic cap across output (2) See application notes for Trim equations and tables

Model Selector						
Model	Input Voltage (VDC)	Output Voltage (VDC)	Output Curr. (A)	No Load (mA)	Full Load (mA)	Eff. (%)
PL10S-W12C	6.0 - 14	0.75	10	40	762	82
	6.0 - 14	1.2	10	40	1149	87
	6.0 - 14	1.5	10	50	1404	89
	6.0 - 14	1.8	10	40	1666	90
	6.0 - 14	2.0	10	60	1832	91
	6.0 - 14	2.5	10	65	2264	92
	6.0 - 14	3.3	10	75	2956	93
	6.5 - 14	5.0	10	95	4386	95
PL10S-12-1V0	9.0 -14	1.0	10	50	992	84
PL10S-12-1V2	9.0 -14	1.2	10	50	1163	86
PL10S-12-1V5	9.0 -14	1.5	10	50	1404	89
PL10S-12-1V8	9.0 -14	1.8	10	60	1666	90
PL10S-12-2V0	9.0 -14	2.0	10	60	1832	91
PL10S-12-2V5	9.0 -14	2.5	10	70	2264	92
PL10S-12-3V3	9.0 -14	3.3	10	70	2956	93
PL10S-12-5V0	9.0 -14	5.0	10	70	4385	95
PL10S-12-C	8.3 -14	0.75-5.0	10	70	4385	95
PL16S-12C	9.0 -14	0.75	16	40	1299	77
	9.0 -14	1.2	16	50	1928	83
	9.0 -14	1.5	16	50	2326	86
	9.0 -14	1.8	16	60	2727	88
	9.0 -14	2.0	16	60	2996	89
	9.0 -14	2.5	16	65	3704	90
	9.0 -14	3.3	16	75	4783	92
	9.0 -14	5.0	16	75	7092	94
PL16S-W12C	6.0 - 14	0.75	16	40	1250	80
	6.0 - 14	1.2	16	40	1882	85
	6.0 - 14	1.5	16	50	2273	88
	6.0 - 14	1.8	16	60	2697	89
	6.0 - 14	2.0	16	60	2963	90
	6.0 - 14	2.5	16	65	3663	91
	6.0 - 14	3.3	16	75	4731	93
	6.5 - 14	5.0	16	95	7092	94
PL20S-W12C	6.0 - 14	0.75	20	40	1603	78
	6.0 - 14	1.2	20	50	2381	84
	6.0 - 14	1.5	20	50	2874	87
	6.0 - 14	1.8	20	50	3409	88
	6.0 - 14	2.0	20	60	3745	89
	6.0 - 14	2.5	20	65	4630	90
	6.0 - 14	3.3	20	75	5978	92
	6.5 - 14	5.0	20	95	8865	94

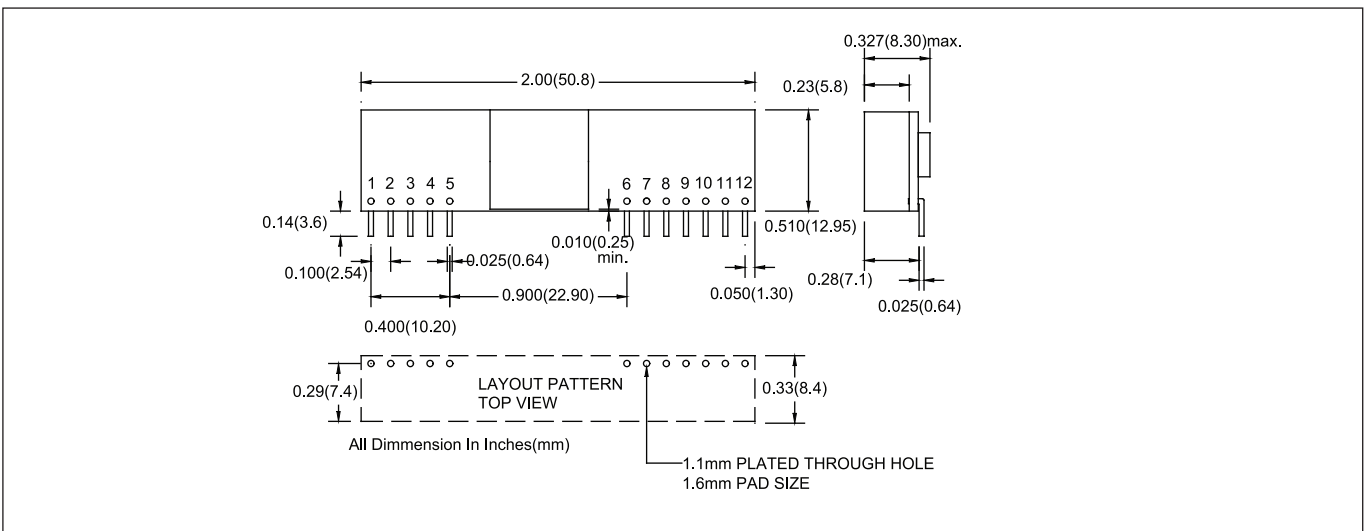
Pinout			
PL10S-W, 16S-W, 20S-W		PL16S-12C	
PIN	Function	PIN	Function
1	+Output	1	+Output
2	+Output	2	+Output
3	+Sense	3	+Sense
4	+Output	4	+Output
5	Common	5	Common
6	No Pin/PGood option	6	Common
7	Common	7	+V Input
8	+V Input	8	+V Input
9	+V Input	9	No Pin
10	Sequencing	10	Trim
11	Trim	11	On/Off Control
12	On/Off Control		

Options	
Remote On / Off Option	
Blank	On: Vin or open circuit; Off: <0.4VDC
N	On: open circuit or <0.4VDC; Off: >2.8VDC to Vin
Power Good Option	
P	(available on W12C models)

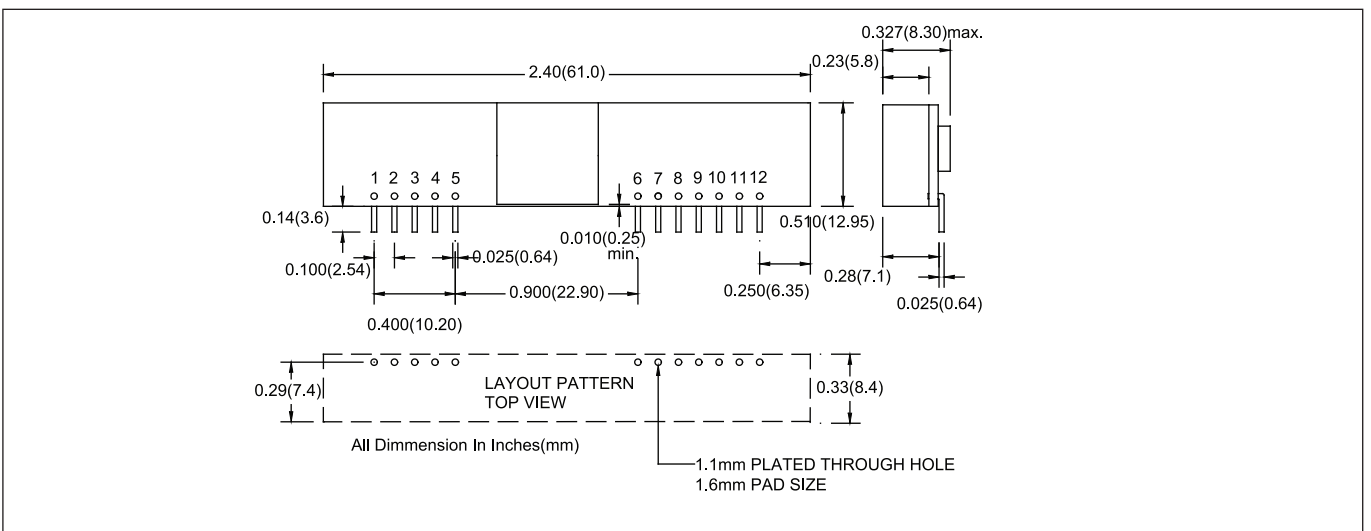
Outline Drawing PL16S-12C Series



Outline Drawing PL10S-W12C & PL16S-W12C Series



Outline Drawing PL20S-W12C Series



TDK-LAMBDA EMEA

www.emea.tdk-lambda.com



TDK-Lambda France SAS

Route de Grivery
ZAC des Delaches
CS 41077
91978 Courtaboeuf Cedex
France
Tel: +33 1 60 12 71 65
Fax: +33 1 60 12 71 66
france@fr.tdk-lambda.com
www.fr.tdk-lambda.com



Italy Sales Office
Via dei Lavoratori 128/130
20092 Cinisello Balsamo (MI)
Italy
Tel: +39 02 61 29 38 63
Fax: +39 02 61 29 09 00
info.italia@it.tdk-lambda.com
www.it.tdk-lambda.com



TDK-Lambda Germany GmbH

Karl-Bold-Strasse 40
77855 Achern
Germany
Tel: +49 7841 666 0
Fax: +49 7841 5000
info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com



Austria Sales Office
Aredstrasse 22
2544 Leobersdorf
Austria
Tel: +43 2256 655 84
Fax: +43 2256 645 12
info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com



TDK-Lambda UK Ltd.

Kingsley Avenue
Ilfracombe
Devon EX34 8ES
United Kingdom
Tel: +44 (0) 12 71 85 66 66
Fax: +44 (0) 12 71 86 48 94
powersolutions@uk.tdk-lambda.com
www.uk.tdk-lambda.com



Nemic Lambda Ltd.

Kibbutz
Givat Hashlosha 48800
Israel
Tel: +9 723 902 4333
Fax: +9 723 902 4777
info@nemic.co.il
www.nemic.co.il



Russia

Technical Support:
St Petersburg
Tel: +7 (812) 6580463
Sales:
Moscow
Tel: +7 (499) 7557732
info@tdk-lambda.ru
www.tdk-lambda.ru

LOCAL DISTRIBUTION

