

Wall Industries, Inc.

LANEH SERIES

3.3, 5, 9, 12, 15, 24, & 48VDC Nominal Input Voltages
Two Package Sizes Available
3000VDC I/O Isolation, Non-regulated Single & Dual Outputs
1 Watt DC/DC Power Converters



FEATURES

- 1 Watt Output Power
- Recognized by UL 60950-1⁽³⁾
- RoHS Compliant
- Non-regulated Single and Dual Outputs
- Two Package Sizes Available
- Industry Standard Pin-out
- High Efficiency up to 85%
- 3000VDC I/O Isolation
- No External Components Needed
- Free Air Convection
- Internal SMD Construction
- -40°C to +85°C Operating Temperature Range

DESCRIPTION

The LANEH series of DC/DC power converters provides 1 Watt of output power in a 7 pin SIP package. This series consists of non-regulated single and dual output models with 3000VDC I/O isolation and a -40°C to +85°C operating temperature range. All models in this series are recognized by UL 60950-1⁽³⁾ and are RoHS compliant. This series has two package sizes available. Please call factory for more details.

SPECIFICATIONS: LANEH SERIES					
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.					
SPECIFICATION	TEST CONDITIONS	Min	Nom	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage Ranges		3.14	3.3	3.47	VDC
		4.75	5	5.25	
		8.55	9	9.45	
		11.4	12	12.6	
		14.25	15	15.75	
		22.8	24	25.2	
	<i>See Note 1</i>	45.6	48	50.4	
Input Filter		Capacitor			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Tolerance	Full load	-5		+5	%
Line Regulation	For 1% of Vin		1.2		%
Load Regulation	10% to 100% full load	3.3 & 5Vdc output models		15	%
		9, 12, 15, & 24Vdc output models		10	
Output Power				1	W
Output Current		See Table			
Ripple & Noise	20MHz Bandwidth			100	mVp-p
Transient Response Setting Time	50% load step change		350		µs
PROTECTION					
Short Circuit Protection	Short term			1	sec
GENERAL SPECIFICATIONS					
Efficiency	<i>See Note 2</i>	See Table			
Switching Frequency	Full load, nominal input		100		KHz
Isolation Voltage	Input to Output	3000			VDC
Isolation Resistance	500VDC	1000			MΩ
ENVIRONMENTAL SPECIFICATIONS					
Operating Ambient Temperature		-40		+85	°C
Storage Temperature		-40		+100	°C
Humidity	non-condensing			95	%
Cooling		Free air convection			
MTBF	MIL-HDBK-217F at 25°C	3,500,000 hours			
PHYSICAL SPECIFICATIONS					
Case Material		DAP			
Weight	Package 1	0.074oz (2.1g)			
	Package 2	0.095oz (2.7g)			
Dimensions (L x W x H)	Package 1	0.77 x 0.24 x 0.39 inches (19.5 x 6.0 x 10.0 mm)			
	Package 2	0.77 x 0.30 x 0.39 inches (19.5 x 7.62 x 10.0 mm)			
NOTES:					
1. 48Vdc nominal input voltage models are only available in package 2 type.					
2. As the input voltage increases there will be an increase in efficiency.					
3. This product is Listed to applicable standards and requirements by UL.					
*Due to advances in technology, specifications subject to change without notice.					

MODEL SELECTION TABLE

SINGLE OUTPUT MODELS

Model Number	Input Voltage	Output Voltage	Output Current	Efficiency	Output Power
LANE3333NH	3.3 VDC (3.14 – 3.47 VDC)	3.3 VDC	303mA	70%	1W
LANE3305NH		5 VDC	200mA	70%	1W
LANE3309NH		9 VDC	112mA	75%	1W
LANE3312NH		12 VDC	84mA	78%	1W
LANE3315NH		15 VDC	67mA	80%	1W
LANE3324NH		24 VDC	42mA	82%	1W
LANE533NH	5 VDC (4.75 – 5.25 VDC)	3.3 VDC	303mA	70%	1W
LANE505NH		5 VDC	200mA	70%	1W
LANE509NH		9 VDC	112mA	75%	1W
LANE512NH		12 VDC	84mA	78%	1W
LANE515NH		15 VDC	67mA	80%	1W
LANE524NH		24 VDC	42mA	82%	1W
LANE933NH	9 VDC (8.55 – 9.45 VDC)	3.3 VDC	303mA	70%	1W
LANE905NH		5 VDC	200mA	70%	1W
LANE909NH		9 VDC	112mA	75%	1W
LANE912NH		12 VDC	84mA	78%	1W
LANE915NH		15 VDC	67mA	80%	1W
LANE924NH		24 VDC	42mA	82%	1W
LANE1233NH	12 VDC (11.4 – 12.6 VDC)	3.3 VDC	303mA	70%	1W
LANE1205NH		5 VDC	200mA	70%	1W
LANE1209NH		9 VDC	112mA	75%	1W
LANE1212NH		12 VDC	84mA	78%	1W
LANE1215NH		15 VDC	67mA	80%	1W
LANE1224NH		24 VDC	42mA	82%	1W
LANE1533NH	15 VDC (14.25 – 15.75 VDC)	3.3 VDC	303mA	70%	1W
LANE1505NH		5 VDC	200mA	70%	1W
LANE1509NH		9 VDC	112mA	75%	1W
LANE1512NH		12 VDC	84mA	78%	1W
LANE1515NH		15 VDC	67mA	80%	1W
LANE1524NH		24 VDC	42mA	82%	1W
LANE2433NH	24 VDC (22.8 – 25.2 VDC)	3.3 VDC	303mA	70%	1W
LANE2405NH		5 VDC	200mA	70%	1W
LANE2409NH		9 VDC	112mA	75%	1W
LANE2412NH		12 VDC	84mA	78%	1W
LANE2415NH		15 VDC	67mA	80%	1W
LANE2424NH		24 VDC	42mA	82%	1W
LANE4805NH	48 VDC (45.6 – 50.4 VDC)	5 VDC	200mA	70%	1W
LANE4809NH		9 VDC	112mA	75%	1W
LANE4812NH		12 VDC	84mA	78%	1W
LANE4815NH		15 VDC	67mA	80%	1W
LANE4824NH		24 VDC	42mA	82%	1W

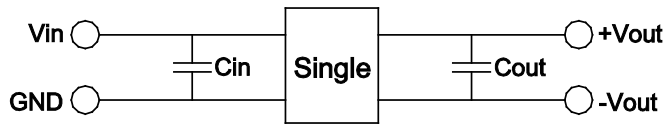
NOTE: 48Vdc nominal input voltage models are only available in package 2 type.

MODEL SELECTION TABLE
DUAL OUTPUT MODELS

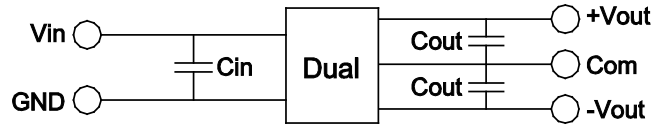
Model Number	Input Voltage	Output Voltage	Output Current	Efficiency	Output Power
LANE3333NDH	3.3 VDC (3.14 – 3.47 VDC)	±3.3 VDC	±150mA	70%	1W
LANE3305NDH		±5 VDC	±100mA	70%	1W
LANE3309NDH		±9 VDC	±56mA	75%	1W
LANE3312NDH		±12 VDC	±42mA	78%	1W
LANE3315NDH		±15 VDC	±34mA	80%	1W
LANE3324NDH		±24 VDC	±21mA	82%	1W
LANE533NDH	5 VDC (4.75 – 5.25 VDC)	±3.3 VDC	±150mA	70%	1W
LANE505NDH		±5 VDC	±100mA	70%	1W
LANE509NDH		±9 VDC	±56mA	75%	1W
LANE512NDH		±12 VDC	±42mA	78%	1W
LANE515NDH		±15 VDC	±34mA	80%	1W
LANE524NDH		±24 VDC	±21mA	82%	1W
LANE933NDH	9 VDC (8.55 – 9.45 VDC)	±3.3 VDC	±150mA	70%	1W
LANE905NDH		±5 VDC	±100mA	70%	1W
LANE909NDH		±9 VDC	±56mA	75%	1W
LANE912NDH		±12 VDC	±42mA	78%	1W
LANE915NDH		±15 VDC	±34mA	80%	1W
LANE924NDH		±24 VDC	±21mA	82%	1W
LANE1233NDH	12 VDC (11.4 – 12.6 VDC)	±3.3 VDC	±150mA	70%	1W
LANE1205NDH		±5 VDC	±100mA	70%	1W
LANE1209NDH		±9 VDC	±56mA	75%	1W
LANE1212NDH		±12 VDC	±42mA	78%	1W
LANE1215NDH		±15 VDC	±34mA	80%	1W
LANE1224NDH		±24 VDC	±21mA	82%	1W
LANE1533NDH	15 VDC (14.25 – 15.75 VDC)	±3.3 VDC	±150mA	70%	1W
LANE1505NDH		±5 VDC	±100mA	70%	1W
LANE1509NDH		±9 VDC	±56mA	75%	1W
LANE1512NDH		±12 VDC	±42mA	78%	1W
LANE1515NDH		±15 VDC	±34mA	80%	1W
LANE1524NDH		±24 VDC	±21mA	82%	1W
LANE2433NDH	24 VDC (22.8 – 25.2 VDC)	±3.3 VDC	±150mA	70%	1W
LANE2405NDH		±5 VDC	±100mA	70%	1W
LANE2409NDH		±9 VDC	±56mA	75%	1W
LANE2412NDH		±12 VDC	±42mA	78%	1W
LANE2415NDH		±15 VDC	±34mA	80%	1W
LANE2424NDH		±24 VDC	±21mA	82%	1W
LANE4805NDH	48 VDC (45.6 – 50.4 VDC)	±5 VDC	±100mA	70%	1W
LANE4809NDH		±9 VDC	±56mA	75%	1W
LANE4812NDH		±12 VDC	±42mA	78%	1W
LANE4815NDH		±15 VDC	±34mA	80%	1W
LANE4824NDH		±24 VDC	±21mA	82%	1W

NOTE: 48Vdc nominal input voltage models are only available in package 2 type.

RECOMMENDED TEST CIRCUITS



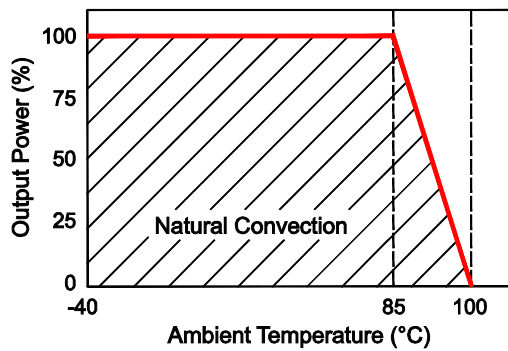
3.3Vdc: Cin 4.7 μ F,25V	3.3Vdc: Cout 22 μ F,25V
5Vdc: Cin 4.7 μ F,25V	5Vdc: Cout 10 μ F,25V
9Vdc: Cin 4.7 μ F,25V	9Vdc: Cout 4.7 μ F,25V
12Vdc: Cin 2.2 μ F,25V	12Vdc: Cout 2.2 μ F,25V
15Vdc: Cin 1 μ F,50V	15Vdc: Cout 1 μ F,50V
24Vdc: Cin 1 μ F,50V	24Vdc: Cout 1 μ F,50V
48Vdc: Cin 1 μ F,100V	



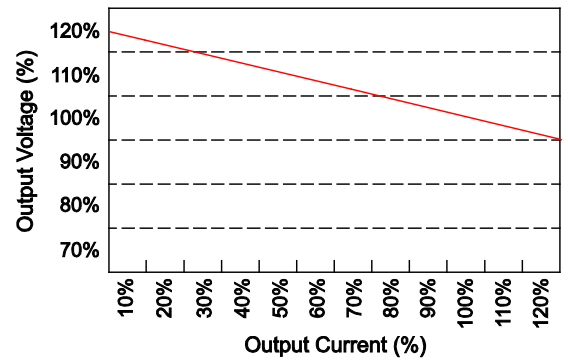
3.3Vdc: Cin 4.7 μ F,25V	3.3Vdc: Cout 22 μ F,25V
5Vdc: Cin 4.7 μ F,25V	5Vdc: Cout 10 μ F,25V
9Vdc: Cin 4.7 μ F,25V	9Vdc: Cout 4.7 μ F,25V
12Vdc: Cin 2.2 μ F,25V	12Vdc: Cout 2.2 μ F,25V
15Vdc: Cin 1 μ F,50V	15Vdc: Cout 1 μ F,50V
24Vdc: Cin 1 μ F,50V	24Vdc: Cout 1 μ F,50V
48Vdc: Cin 1 μ F,100V	

CHARACTERISTICS

Derating Curve

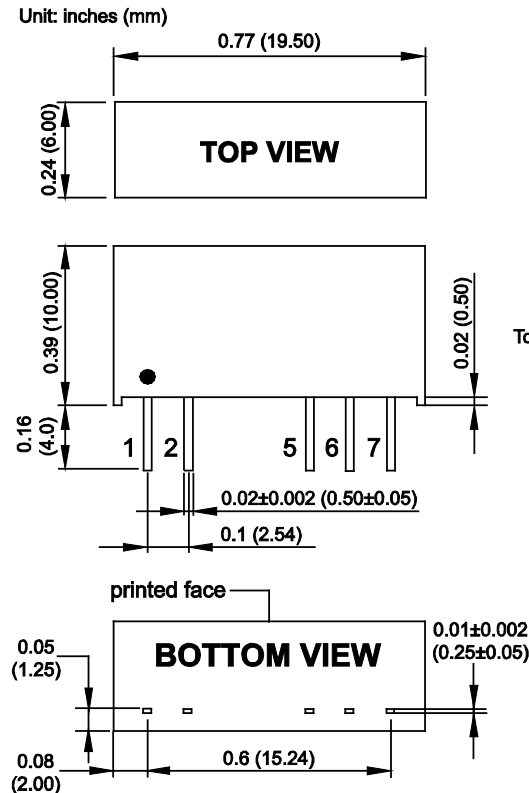


Tolerance Envelope Graph

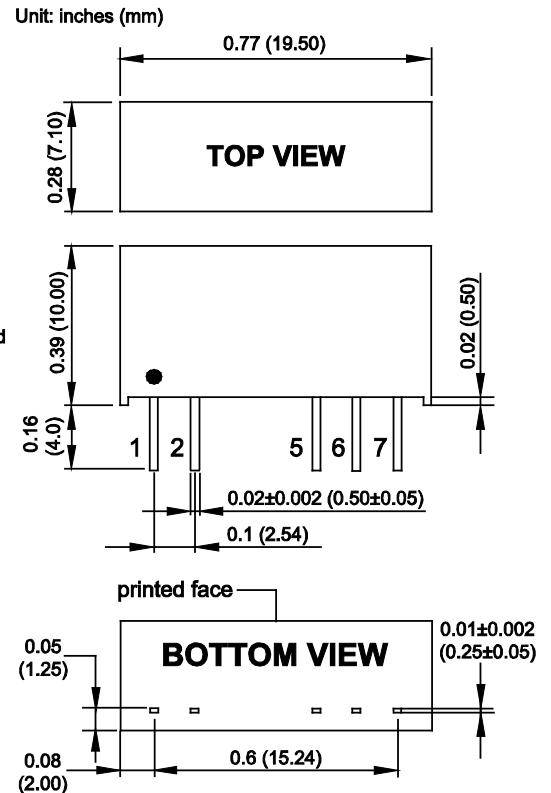


MECHANICAL DRAWINGS

PACKAGE TYPE 1



PACKAGE TYPE 2



PIN CONNECTIONS		
PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	No Pin	Common
7	+Vout	+Vout

Tolerance is ± 0.01 (± 0.25) unless otherwise specified

All dimensions are for reference only



Wall Industries, Inc.

Rev. F

LANEH Series
3000VDC I/O Isolation
1 Watt DC/DC Power Converters
Non-regulated Single & Dual Outputs

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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