



- 6 Watts
- Single and Dual Outputs
- 4:1 Wide Input Voltage Range
- Meets IEC/EN60950 and UL60950 Safety Standards
- RoHS Compliant
- High Efficiency up to 83%
- Industry Standard Footprint: 1.25" x 0.8" x 0.4"
- Low Output Ripple and Noise
- MTBF >2,000,000 Hours
- Economy Version of the LANC Series

DESCRIPTION

The ELANC series of DC/DC power converters provides 6 watts of output power in an industry standard 1.25" x 0.80" x 0.40" package and footprint. This series has single and dual output models with 4:1 input voltage ranges of 9-36VDC and 18-75VDC. Some features include high efficiency, low ripple and noise, and an MTBF > 2,000,000 hours. All models are RoHS compliant and meet IEC/EN60950 and UL60950 safety standards. The ELANC series is the "Economy" version of the LANC series.

Size: 1.25in x 0.8in x 0.4in (31.8mm x 20.32mm x 10.16mm)

MODEL SELECTION TABLE

Single Output Models

Model Number	Input Voltage Range	Output Voltage	Rated Output Current	Output Voltage Overshoot	Output Power	Efficiency	Max. External Load Capacitance
ELANC1233UW6	12 VDC (9 – 36 VDC)	3.3 VDC	2 A		6.6W	78%	
ELANC1205UW6		5 VDC	1.2 A		6W	80%	
ELANC1212UW6		12 VDC	0.5 A		6W	82%	
ELANC1215UW6		15 VDC	0.4 A		6W	82%	
ELANC4833UW5	48 VDC (18 – 75 VDC)	3.3 VDC	0.15 - 1.5 A	65-160mV	5W	76%	1500µF
ELANC4805UW6		5 VDC	0.12 - 1.2 A	100-250mV	6W	80%	1000µF
ELANC4812UW6		12 VDC	0.05 - 0.5 A	240-600mV	6W	82%	220µF
ELANC4815UW6		15 VDC	0.04 - 0.4 A	300-750mV	6W	83%	100µF

MODEL SELECTION TABLE

Dual Output Models

Model Number	Input Voltage Range	Output Voltage	Rated Output Current	Output Voltage Overshoot	Output Power	Efficiency	Max. External Load Capacitance
ELANC1205DUW6	12 VDC (9 – 36 VDC)	±5 VDC	±0.6 A		6W	80%	
ELANC1212DUW6		±12 VDC	±0.25 A		6W	82%	
ELANC1215DUW6		±15 VDC	±0.2 A		6W	83%	
ELANC4805DUW6	48 VDC (18 – 75 VDC)	±5 VDC	0.6 - 0.6 A	2-5%Vo	6W	79%	±82µF
ELANC4812DUW6		±12 VDC	0.025 - 0.25 A	2-5%Vo	6W	80%	±100µF
ELANC4815DUW6		±15 VDC	0.02 - 0.2 A	2-5%Vo	6W	81%	±680µF

SPECIFICATIONS

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	Typ	Max	Unit
INPUT SPECIFICATIONS						
Input Voltage Range		12VDC nominal input models	9	12	36	VDC
		48VDC nominal input models	18	48	75	
Input Reflected Ripple Current		20MHz Bandwidth, typical input filter	Single Output Models		10	mA
		20MHz Bandwidth, 12uH Differential Mode Inductance, 220uF Aluminum Capacitor	Dual Output Models		5	
Inrush Current					1	A ² S
Maximum Input Current		3.3VDC Model			0.4	A
		5-15VDC Models			0.5	
		Dual Output Models			0.43	
Input Voltage	Continuous	Single Output Models			80	VDC
		Dual Output Models			85	
	Transient (100ms)	Single Output Models			-	
		Dual Output Models			100	
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Output Voltage Setpoint		3.3VDC	3.2	3.3	3.4	V
		5VDC	4.85	5	5.15	
		12VDC	11.64	12	12.36	
		15VDC	14.55	15	15.45	
		Dual Output Models		1%	2%	%Vo
Line Regulation		Vi=Vimin to Vimax	Single Output Models		0.2	%
			Dual Output Models		±0.13	
Load Regulation		Io=lomin to Iomax	Single Output Models		0.5	%
			Dual Output Models		±0.2	
Output Ripple RMS		Across 1µF, X7R ceramic capacitor & 10µF Tantalum Capacitor	Single Output Models		30	mV
			Dual Output Models		50	
Output Ripple and Noise Peak to Peak (5Hz to 20MHz)		Across 1µF, X7R ceramic capacitor & 10µF Tantalum Capacitor	Single Output Models		40	mV
			Dual Output Models		60	
			±5V		75	
			±12		120	
			±15		150	
Output Power			See Table			
Output Current			See Table			
Start Delay Time		Io=lomax	Single Output Models		45	mS
			Dual Output Models		5	
Turn On Time		Io=lomax	Single Output Models		1	mS
			Dual Output Models		4	
Temperature Coefficient		Tc=-40°C to +85°C			0.02	%/°C
DYNAMIC RESPONSE						
25%~50%~25% Iomax	Single Output Models	3.3VDC			130/200	mV/uS
		5VDC			150/200	
		12VDC			160/200	
		15VDC			150/200	
	Dual Output Models	±5V			250/300	
		±12			600/300	
±15				750/300		
10%~100%~10% Iomax	Single Output Models	3.3VDC			400/400	mV/uS
		5VDC			400/500	
		12VDC			500/300	
		15VDC			500/500	
	Dual Output Models	±5V			500/500	
		±12			1200/500	
±15				1500/500		
PROTECTION						
Over Current Protection		Dual Output Models	180% of Full at Nominal Input			
Short Circuit Protection		Dual Output Models	Output RMS Current	Continuous <3S, Automatic Recovery		

SPECIFICATIONS

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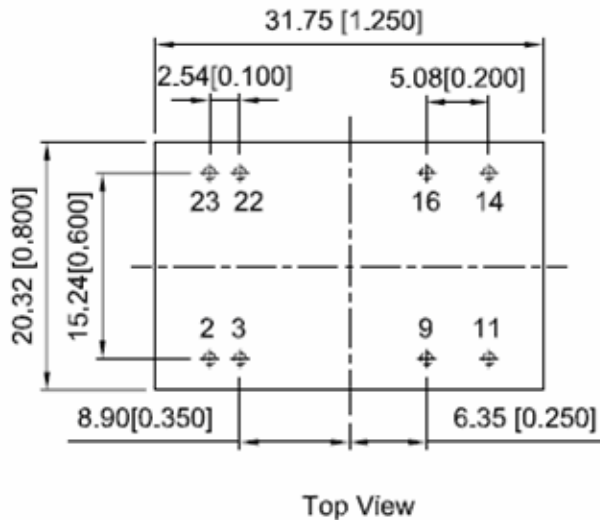
SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
ENVIRONMENTAL SPECIFICATIONS						
Operating Case Temperature			-40		100	°C
Maximum Case Temperature	Single Output Models	Vin=18~75V, Io=60%Iomax			85	°C
	Dual Output Models	VI=Vinom; Iomax			71	
Maximum Operating Case/Board Temperature	Single Output Models				105	°C
	Dual Output Models				100	
Ambient Temperature			-40		85	°C
	Rate of Change			0.5		
Storage Temperature			-55		125	°C
	Rate of Change			0.5		
Humidity ⁽¹⁾	Operating Humidity		5		95	%RH
		Icing/Frosting	Yes			
	Storage Humidity		10		100	%RH
		Icing/Frosting	Yes			
Transportation Humidity				95		%RH
Air Pressure ⁽²⁾			70		106	kPa
Transportation Sinusoidal Vibration ⁽³⁾	Displacement			3.5		mm
	Acceleration			10	15	m/s ²
	Frequency Range			2-9 9-200 200-500		Hz
Transportation Random Vibration	ASD		1		0.3	m ² /s ³
	Frequency Range			10-200 200-2000		Hz
Transportation Shock	Type			II		
	Duration			6		ms
	Acceleration			300		m/s ²
Transportation Free Fall ⁽⁴⁾	1.2 (m<20kg)			1.2		m
Mechanically Active Substances ⁽⁴⁾	Operating	Sand		300		mg/m ³
		Dust		0.4		mg/m ³
	Transportation	Sand		1.5		mg/(m ² h)
		Dust		100		mg/m ³
	Storage	Sand		3		mg/(m ² h)
		Sand		300		mg/m ³
		Dust		5		mg/m ³
		Dust		20		mg/(m ² h)
MTBF				2,000,000		Hours
GENERAL SPECIFICATIONS						
Efficiency			See Table			
Switching Frequency				300		KHz
Basic Isolation				500		VDC
Cross Regulation Asymmetrical Load	Dual Outputs	25%-100% Full Load		±2.5	±5	%
Isolation Capacitance				1000		pF
Isolation Resistance				100		MΩ
PHYSICAL SPECIFICATIONS						
Weight			0.53oz (15g)			
Dimensions (L x W x H)			1.25in x 0.80in x 0.40in (31.75mm x 20.32mm x 10.16mm)			
Case Material			Aluminum; 0.4mm thick; oxidation & nigrescence			
Soldering			Standard Wave Soldering Technique			
SAFETY & EMC CHARACTERISTICS						
Safety Approvals			EN60950			

NOTES

1. Test in-use condition.
2. Don't test in low air pressure condition.
3. Steady place to in-use and storage, only test it in transportation condition.
4. Do not test.
5. When the input voltage is between 75V and 80V, the converter cannot be damaged. Not all the characteristic parameters will conform to the specification, reliability will go down.

**Due to advances in technology, specifications subject to change without notice.*

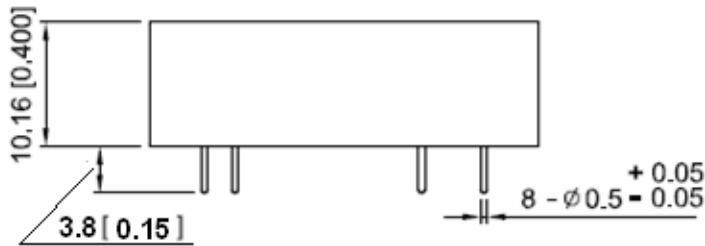
MECHANICAL DRAWINGS



Top View

Pin Definition

PIN NO.	FUNCTION
2, 3	-Vin
11	NC
16	-Vo
9	NP
14	+Vo
22, 23	+Vin



Tolerance: x.xmm=±0.5mm (0.02in)
x.xxmm=±0.25mm (0.0098in)
Unit mm[inch]

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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