

**FEATURES**

- 12 Watts Output power
- High Efficiency up to 88%
- Five-Sided Continuous Shield
- DIP and SMT Types Available
- Standard 1.25 x 0.8 x 0.4 Inches
- 4:1 Ultra Wide Input Voltage Range
- Fixed Switching Frequency (400KHz)
- Compliant to RoHS EU Directive 2002/95/EC
- UL60950-1, EN60950-1, and IEC60950-1 Licensed
- CE Mark meets 2006/95/EC, 93/68/EEC, and 89/336 EEC

**APPLICATIONS**

- Measurement
- Wireless Network
- Telecom/Datacom
- Industry Control System
- Semiconductor Equipment



**SPECIFICATIONS: LANC UW12 Ultra Wide Series**

All specifications apply @ 25°C ambient unless otherwise noted

**INPUT SPECIFICATIONS**

Input Voltage Range.....	24V nominal input .....	9-36VDC
	48V nominal input .....	18-75VDC
Input Filter .....	PI Type	
Input Voltage Variation .....	dv/dt .....	5V/ms max
	Complies with ETS300 132 part 4.4)	
Input Surge Voltage (100ms max) .....	24V input.....	50VDC
	48V input.....	100VDC
Input Reflected Ripple Current (nominal Vin and full load).....	20mA <sub>p-p</sub>	
Start Up Time (nominal Vin and constant resistive load).....	450ms typ.	
Start Up Voltage.....	24V .....	9VDC
	48V .....	18VDC
Shutdown Voltage.....	24V .....	8VDC
	48V .....	16VDC
Remote ON/OFF (See Note 6)		
(Positive Logic).....	DC-DC ON .....	Open or 3.0V < Vr < 12V
	DC-DC OFF .....	Short or 0V < Vr < 1.2V
Input Current of Remote Control Pin (nominal Vin).....	-0.5mA ~ 0.5mA	
Remote Off State Input Current (nominal Vin) .....	2.5mA	

**OUTPUT SPECIFICATIONS**

Output Voltage .....	see table	
Voltage Accuracy (nominal Vin and full load).....	±1.2%	
Output Current .....	see table	
Output Power .....	12 watts max.	
Line Regulation (LL to HL at FL).....	Single .....	±0.2%
Load Regulation (no load to full load) .....	Single Output (DIP) .....	±0.5%
	Single Output (SMT).....	±1%
	Dual Output (SMT, DIP).....	±1%
Cross Regulation (Dual) (Asymmetrical load 25% / 100% FL) .....	±5%	
Minimum Load.....	0%	
Ripple/Noise (20 MHz BW).....	85mV <sub>p-p</sub>	
Temperature Coefficient.....	±0.02% / °C max.	
Transient Response Recovery Time (25% load step).....	250us	

**PROTECTION SPECIFICATIONS**

Over Voltage Protection (single output).....	3.3V Output.....	3.9V
	5.1V Output.....	6.2V
	12V Output.....	15V
	15V Output.....	18V
Over Load Protection (% of full load at nominal input).....	150% typ.	
Short Circuit Protection .....	Continuous, automatic recovery	

**GENERAL SPECIFICATIONS**

Efficiency .....	see table	
Switching Frequency.....	400KHz typ.	
Isolation Voltage		
Input to Output .....	1600VDC min.	
Input (Output) to Case (DIP).....	1600VDC min.	
Input (Output) to Case (SMT) .....	1000VDC min.	
Isolation Resistance .....	10 <sup>9</sup> ohms min.	
Isolation Capacitance.....	1500pF max.	

**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature		
Vo = 5.1V, 12V, 15V, ±12V, ±15V.....	-40°C to +69°C (w/o derating)	
	+69°C to +105°C (w/ derating)	
Vo = 3.3V, ±5V .....	-40°C to +61°C (w/o derating)	
	+61°C to 105°C (w/ derating)	
Storage Temperature .....	-55°C ~ +125°C	
Maximum Case Temperature .....	105°C	
Relative Humidity (non-condensing).....	5% to 95% RH	
Thermal Impedance (Natural Convection).....	20°C / Watt	
Thermal Shock.....	MIL-STD-810F	
Vibration.....	10~55Hz, 10G, 30 minutes along X, Y, and Z	
MTBF (See Note 1).....	BELLCORE-TR-NWT-000332.....	2.75 x 10 <sup>6</sup> hrs
	MIL-STD-217F .....	8.745 x 10 <sup>5</sup> hrs

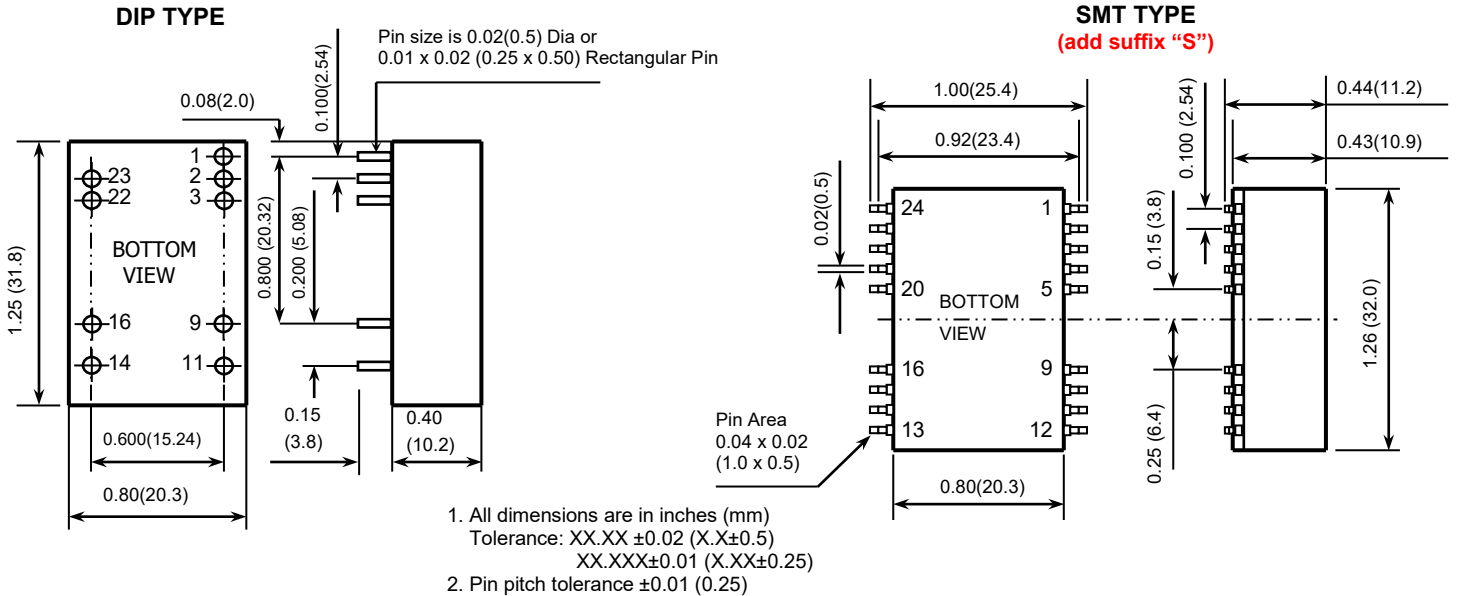
**PHYSICAL SPECIFICATIONS**

Weight .....	18g (0.63 oz)	
Dimensions .....	1.25 x 0.80 x 0.40 inches (31.8 x 20.3 x 10.2 mm)	
Case Material.....	Nickel-coated copper	
Base Material .....	Non-conductive black plastic	
Potting material .....	Epoxy (UL94-V0)	
Shielding.....	five – sided	

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



**MECHANICAL DRAWING**

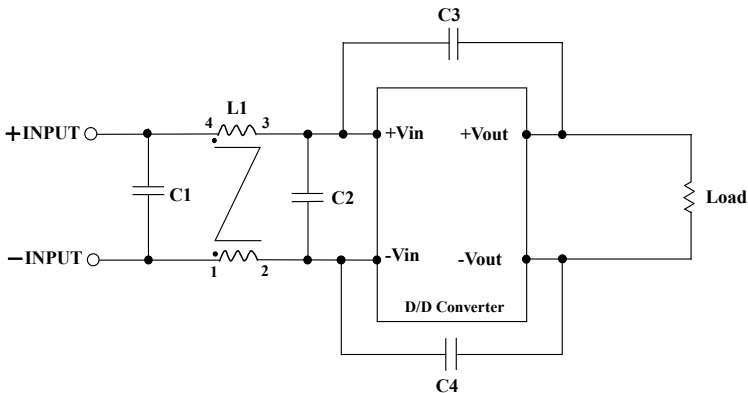


(DIP) PIN CONNECTION					
PIN	SINGLE	DUAL	PIN	SINGLE	DUAL
1	CTRL	CTRL			
2	-INPUT	-INPUT	23	+INPUT	+INPUT
3	-INPUT	-INPUT	22	+INPUT	+INPUT
9	NC	COMMON	16	-OUTPUT	COMMON
11	NC	-OUTPUT	14	+OUTPUT	+OUTPUT

(SMT) PIN CONNECTION					
PIN	SINGLE	DUAL	PIN	SINGLE	DUAL
1	CTRL	CTRL			
2	-INPUT	-INPUT	23	+INPUT	+INPUT
3	-INPUT	-INPUT	22	+INPUT	+INPUT
9	NC	COMMON	16	-OUTPUT	COMMON
11	NC	-OUTPUT	14	+OUTPUT	+OUTPUT
Others	NC	NC	Others	NC	NC

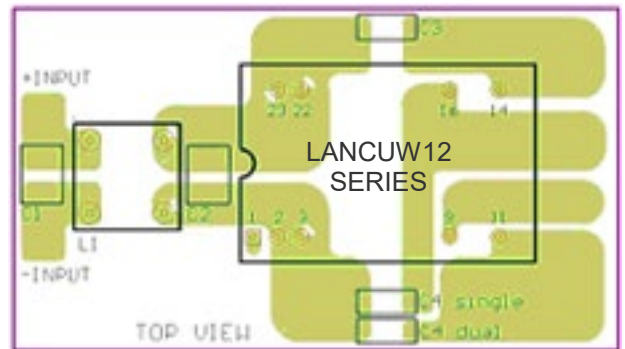
**FIGURE 1**

**Recommended Filter for EN55022 Class B Compliance**



**FIGURE 2**

**Recommended EN55022 Class B Filter Circuit Layout**



The components used in Figure 1, together with the manufacturers' part numbers for these components, are as follows:

	C1	C2	C3	C4	L1
LANC24xxxUW12	3.3uF/50V	N/A	1000pF/2KV	1000pF/2KV	325uF Common Choke
LANC48xxxUW12	2.2uF/100V	2.2uF/100V	1000pF/2KV	1000pF/2KV	145uF Common Choke

**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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