



# NEW! LPS SERIES

## Single and Dual Output

- Surface Mount Technology
- Efficiency to 85%
- 3:1 Input Range
- Low Profile 0.46 Inch High
- 10.2 Watts/Cubic Inch
- Triple Output Protected

The LPS Series of economy-priced 15-watt hybridized DC/DC converters utilize a proprietary circuit design\* to provide high efficiency, wide input range, and quality performance from a compact low profile shielded case. Stevens-Arnold's in-house hybrid facility has applied advanced surface mount technology to package the converters in a cool-running 0.46 inch high case with a compact 1.6 × 2.0 inch footprint. This ideally suits these units for 0.6 inch on-center PC card files and other space-critical applications. These units achieve near-constant efficiencies to 85% over a 20 to 60 VDC input range with a corresponding power density of 10.2 watts per cubic inch. Fully automatic current limiting output, overvoltage clamping, and thermal power limiting protect the converter output and load. Other standard convenience features include I/O isolation and TTL and CMOS compatible remote ON/OFF control.

\*US Patent No. 4621311.

**STOCKED BY YOUR LOCAL DISTRIBUTOR**  
See list on pages 175 & 176



STEVENS-ARNOLD INC.

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### SPECIFICATIONS

All Specifications Typical at Nominal Line, Full Load and 25°C Unless Otherwise Noted.

#### OUTPUT SPECIFICATIONS

Voltage Accuracy	
Single Output .....	± 1.0%, max.
Dual Output, + output .....	± 1.0%, max.
Voltage Balance, Dual, - output .....	± 2.0%, max.
External Trim Adj. Range .....	± 5.0%, max.
Load Regulation	
Single Output, FL-1/4L .....	± 0.5%, max.
Dual Output, FL-1/4L .....	± 1.0%, max.
Single Output, FL-NL .....	± 1.0%, max.
Dual Output, FL-NL .....	± 5.0%, max.
Line Regulation, HL-LL .....	± 0.5%, max.
Ripple & Noise, 20 MHz BW ....	15 mV RMS, max. 75 mV P-P, max.
Temperature Coefficient .....	± 0.02%/°C, max.
Voltage Stability, 24 Hours .....	± 0.05%, max.
Transient Response,	
25% Step Load Change .....	100 μsec., max.
Short Circuit Protection .....	Indefinite
Overvoltage Protection .....	OVP clamping
Thermal Protection .....	Standard

#### INPUT SPECIFICATIONS

Input Voltage Range .....	48V Nominal, 20-60 VDC
Input Filter <sup>1</sup> .....	Use External Capacitor
Surge Protection .....	100 Volts for 100 msec.

#### GENERAL SPECIFICATIONS

Remote On/Off Control .....	See below
Efficiency .....	See Table
Isolation Voltage .....	500 VDC, min.
Isolation Resistance .....	10 <sup>9</sup> ohms, min.
Switching Frequency .....	200 kHz

#### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range .....	-25°C to +60°C
Derate above 60°C Linearly to Zero Power @ +105°C	
Cooling .....	Free-Air Convection

#### PHYSICAL SPECIFICATIONS

Weight .....	2 oz. (57 grams)
Case Material .....	Metal

#### NOTE:

1. The LPS Series DC/DC converters require an external capacitor across the input. The capacitor must withstand 600 mA of ripple current. We recommend a 33 μF @ 100 V Capacitor (Sprague Type 672D or equivalent).

#### REMOTE ON/OFF CONTROL

Control Input .....	Pin 4
Control Common .....	Pin 2
Logic Compatibility .....	10-15V CMOS or Open TTL
Control Voltage, ON .....	+5.5V, min. or open circuit
OFF .....	+1.8V, max. or jumper to Pin 2
Converter Shutdown Idle Current .....	10 mA

**TWO-YEAR WARRANTY**

# 15 Watt DC/DC Converters

T-57-11

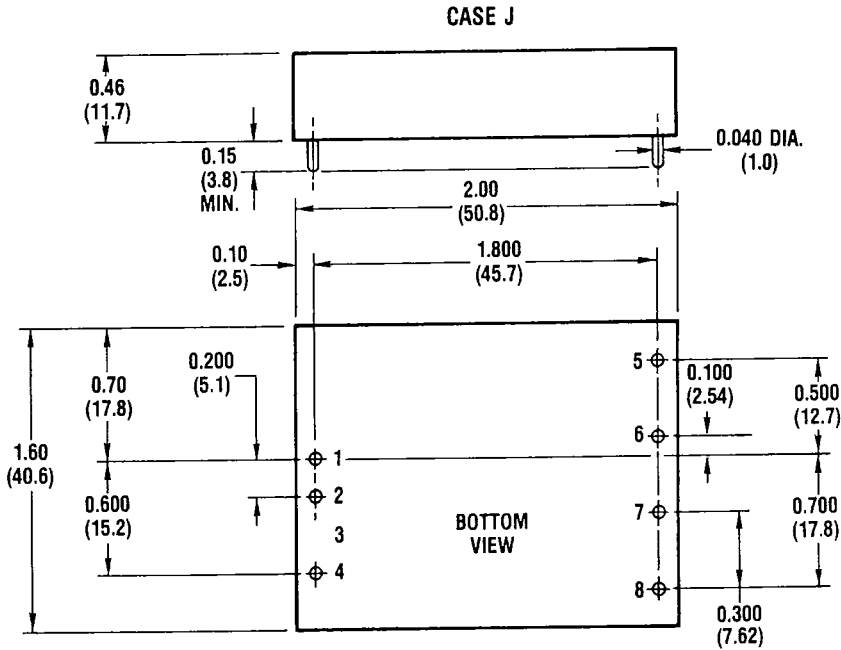
INPUT VOLTAGE RANGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT <sup>1</sup>		% EFF TYP.	REGULATION <sup>2</sup>		CASE	MODEL NUMBER
			NO LOAD	FULL LOAD		LINE <sup>3</sup>	LOAD <sup>4</sup>		
20-60 VDC	5	3000 mA	20 mA	410 mA	80	±0.5%	±0.5%	J	LPS48S05/3000J
20-60 VDC	12	1250 mA	20 mA	385 mA	84	±0.5%	±0.5%	J	LPS48S12/1250J
20-60 VDC	15	1000 mA	20 mA	380 mA	85	±0.5%	±0.5%	J	LPS48S15/1000J
20-60 VDC	±12	±625 mA	25 mA	390 mA	83	±0.5%	±1.0%	J	LPS48D12/625J
20-60 VDC	±15	±500 mA	25 mA	385 mA	84	±0.5%	±1.0%	J	LPS48D15/500J

NOTES. 1. Nominal input 48 VDC.

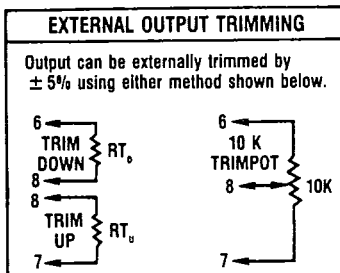
2. Maximum.

3. Measured from High Line to Low Line.

4. Measured from Full Load to 1/4 Load.



ALL DIMENSIONS IN INCHES (mm)



Pin Number	Pin Function	
	Singles	Duals
1	+ Input	+ Input
2	- Input	- Input
3	No Pin	No Pin
4	Control	Control
5	No Pin	+ Output
6	+ Output	Common
7	- Output	- Output
8	Trim	Trim

Tolerance .xx = ±0.02  
.xxx = ±0.005