

# IL SERIES

DC/DC Converter, Single output: 2 watts



## Features

- Single Output
- SIP Package
- 1000 VDC Isolation
- Optional 3000 VDC Isolation
- MTBF >1.2 Mhrs
- -40 °C to +85 °C Operation
- 3 Year Warranty

## Specification

### Input

Input Voltage Range	• Nominal ±10%
Input Reflected Ripple Current	• 20 mA pk-pk through 12 µH inductor, 5 Hz to 20 MHz
Input Reverse Voltage Protection	• None
Input Filter	• Capacitor

### Output

Output Voltage Range	• See table
Minimum Load	• None <sup>(2)</sup>
Line Regulation	• 1.2%/1% Δ Vin
Load Regulation	• ±10%, 20-100% load change (3.3 V models: ±20%)
Setpoint Accuracy	• ±3%
Ripple & Noise	• 150 mV pk-pk max, 20 MHz bandwidth
Temperature Coefficient	• 0.02%/°C
Maximum Capacitive Load	• 470 µF

### General

Efficiency	• See table
Isolation Voltage	• 1000 VDC minimum (3000 VDC -H option)
Isolation Resistance	• 10 <sup>9</sup> Ω
Isolation Capacitance	• 60 pF typical
Switching Frequency	• Variable, 70 KHz typical
MTBF	• >1.21 Mhrs to MIL-HDBK-217F at 25 °C, GB

### Environmental

Operating Temperature	• -40 °C to +85 °C
Storage Temperature	• -40 °C to +125 °C
Case Temperature	• 100 °C max
Cooling	• Convection-cooled

### Notes

1. Add suffix 'H' to model for 3000 VDC isolation.
2. Operation at no load will not damage unit but it may not meet all specifications.
3. All dimensions in inches (mm).
4. Pin pitch tolerance: ±0.014 (±0.35), Case tolerance: ±0.02 (±0.5)
5. Weight: 0.004 lbs (1.8 g)

Input Voltage	No Load Input Current	Output Voltage	Output Current	Efficiency	Model Number <sup>(1)</sup>
5 VDC	35 mA	3.3 V	400 mA	71%	IL0503S ^
	35 mA	5.0 V	400 mA	77%	IL0505S †^
	35 mA	9.0 V	222 mA	80%	IL0509S †^
	35 mA	12.0 V	168 mA	82%	IL0512S †^
	35 mA	15.0 V	132 mA	82%	IL0515S †^
	35 mA	24.0 V	84 mA	82%	IL0524S ^
12 VDC	20 mA	3.3 V	400 mA	72%	IL1203S ^
	20 mA	5.0 V	400 mA	78%	IL1205S †^
	20 mA	9.0 V	222 mA	82%	IL1209S †^
	20 mA	12.0 V	168 mA	84%	IL1212S †^
	20 mA	15.0 V	132 mA	84%	IL1215S †^
	25 mA	24.0 V	84 mA	82%	IL1224S ^
24 VDC	10 mA	3.3 V	400 mA	74%	IL2403S †^
	10 mA	5.0 V	400 mA	80%	IL2405S †^
	10 mA	9.0 V	222 mA	84%	IL2409S ^
	10 mA	12.0 V	168 mA	84%	IL2412S ^
	10 mA	15.0 V	132 mA	84%	IL2415S ^
	10 mA	24.0 V	84 mA	84%	IL2424S ^
48 VDC	7 mA	3.3 V	400 mA	72%	IL4803S
	7 mA	5.0 V	400 mA	78%	IL4805S
	7 mA	9.0 V	222 mA	82%	IL4809S
	7 mA	12.0 V	168 mA	80%	IL4812S
	7 mA	15.0 V	132 mA	82%	IL4815S
	7 mA	24.0 V	84 mA	82%	IL4824S

## Mechanical Details

