

2W

DC-DC converters

The IL series is housed in a SIP4 plastic case for PCB mounting. Featuring a $\pm 10\%$ input voltage range for 5, 12 & 15VDC nominal inputs, offering single outputs of 3.3, 5, 9, 12, 15 & 24VDC.

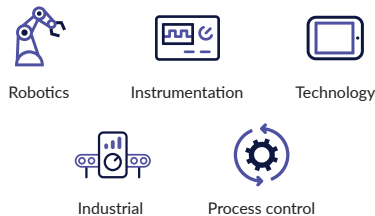
The 2W IL provides 1kVDC isolation between input and output as standard, with 3kVDC isolation available as an option. The operating temperature range is from -40°C to $+85^{\circ}\text{C}$.



Features

- ▶ Unregulated single output
- ▶ $\pm 10\%$ input range
- ▶ Single outputs 3.3 to 24VDC
- ▶ SIP4 package
- ▶ 1.0kVDC isolation, 3.0kVDC option
- ▶ -40°C to $+85^{\circ}\text{C}$ operating temperature
- ▶ 3 year warranty

Applications



Dimensions

See mechanical details

More resources

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Models & ratings

Model number ⁽¹⁾	Input voltage	No load input current	Output voltage	Output current ⁽²⁾	Efficiency
IL0503S	5.0VDC	35mA	3.3VDC	400mA	71%
IL0505S		35mA	5.0VDC	400mA	77%
IL0509S		35mA	9.0VDC	222mA	80%
IL0512S		35mA	12.0VDC	168mA	82%
IL0515S		35mA	15.0VDC	132mA	82%
IL0524S		35mA	24.0VDC	84mA	82%

Continued on page 2

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.

Models & ratings

Model number ⁽¹⁾	Input voltage	No load input current	Output voltage	Output current ⁽²⁾	Efficiency
IL1203S	12.0VDC	20mA	3.3VDC	400mA	72%
IL1205S		20mA	5.0VDC	400mA	78%
IL1209S		20mA	9.0VDC	222mA	82%
IL1212S		20mA	12.0VDC	168mA	84%
IL1215S		20 mA	15.0VDC	132mA	84%
IL1224S		25 mA	24.0VDC	84mA	82%
IL2403S	24.0VDC	10 mA	3.3VDC	400mA	74%
IL2405S		10mA	5.0VDC	400mA	80%
IL2409S		10mA	9.0VDC	222mA	84%
IL2412S		10mA	12.0VDC	168mA	84%
IL2415S		10mA	15.0VDC	132mA	84%
IL2424S		10mA	24.0VDC	84mA	84%

Notes:

1. Add suffix 'H' to model for 3000VDC isolation.
2. Operation at no load will not damage unit but it may not meet all specifications.

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage range		±10		%	Nominal
Input reflected ripple current		20		mA pk-pk	12µH inductor, 5Hz to 20MHz
Input reverse voltage protection	None				
Input filter	Capacitor				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Output voltage	See models & ratings table				
Minimum load	0			%	Operation at no load will not damage unit but it may not meet all specifications.
Line regulation		1.2/1		%	Δ Vin
Load regulation		±10		%	20-100% load change (3.3VDC models: ±20%)
Setpoint accuracy		±3		%	
Ripple & noise			150	mV pk-pk	20MHz bandwidth
Temperature coefficient		0.02		%/°C	
Maximum capacitive load		470		µF	

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Efficiency	See models & ratings table				
Isolation voltage	1000			VDC	Optional 3000VDC -H option
Isolation resistance		10 ⁹		Ω	
Isolation capacitance		60		pF	
Switching frequency		70	650	kHz	Variable
Mean time between failure		>1.21		Mhrs	MIL-HDBK-217F, +25°C GB
Case material	Non conductive black plastic (UL94V-0 rated)				
Potting material	Epoxy (UL94V-0 rated)				
Pin material	C5191R-H solder-coated				
Solder process			260	°C	1.5mm from case 10s max

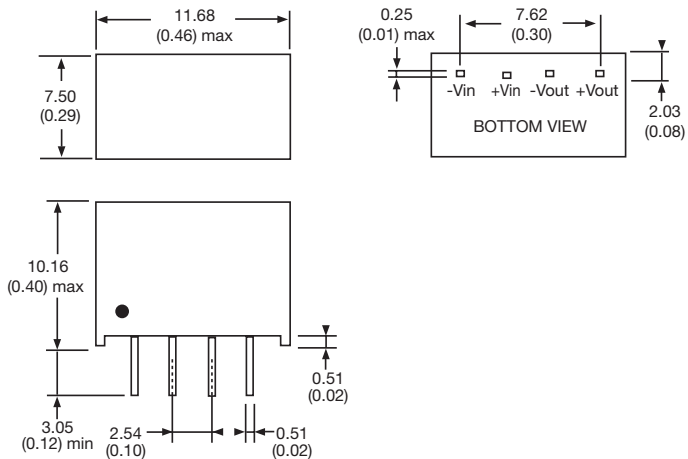
Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	-40		+85	°C	
Storage temperature	-40		+125	°C	
Case temperature			+100	°C	
Cooling	Convection cooled				

Safety approvals

Certification	Standard	Notes & conditions
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Mechanical details





Notes:

1. All dimensions in mm (inches).
2. Pin pitch tolerance: ± 0.35 (± 0.014), Case tolerance: ± 0.5 (± 0.02)
3. Weight: 1.8g (0.004lbs)

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