

0.25W Convection cooled

DC-DC converters

The IK series is housed in a SIP4 or DIP8 plastic case for PCB mounting. Featuring a $\pm 10\%$ input voltage range for 5, 12 & 24VDC nominal inputs, offering single outputs of 3.3, 5, 7.2, 9, 12, 15, 18 & 24VDC.

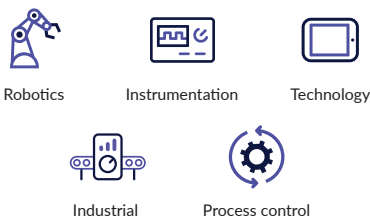
The 0.25W IK provides 1kVDC isolation between input and output as standard, with 3kVDC isolation available as an option. The operating temperature range is from -40°C to $+85^{\circ}\text{C}$.



Features

- ▶ Unregulated single output
- ▶ $\pm 10\%$ input range
- ▶ Single outputs 3.3 to 24VDC
- ▶ SIP4 or DIP8 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 ^(1,2)	Input voltage	Output voltage	Output current	Efficiency
IK0503SA	5.0VDC	3.3VDC	75.70mA	66%
IK0505SA		5.0VDC	50.00mA	66%
IK0507SA		7.2VDC	34.72mA	66%
IK0509SA		9.0VDC	27.77mA	68%
IK0512SA		12.0VDC	20.83mA	68%
IK0515SA		15.0VDC	16.67mA	68%
IK0518SA		18.0VDC	13.88mA	68%
IK0524SA		24.0VDC	10.41mA	70%

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Notes:

1. For DIP package, replace 'S' in model number with 'D'.

2. Add suffix '-H' to model number for 3000VDC isolation.

3. Operation at no load will not damage unit but it may not meet all specifications.

4. All dimensions in mm (inches).
5. Pin pitch tolerance: ± 0.35 (± 0.014)

6. Case tolerance: ± 0.5 (± 0.02)

7. Weight: SIP 1.4g (0.003lbs), DIP 1.8g (0.004lbs)

Models & ratings

Model number ^(1,2)	Input voltage	Output voltage	Output current	Efficiency
IK1203SA	12.0VDC	3.3VDC	75.70mA	65%
IK1205SA		5.0VDC	50.00mA	65%
IK1207SA		7.2VDC	34.72mA	68%
IK1209SA		9.0VDC	27.77mA	64%
IK1212SA		12.0VDC	20.83mA	62%
IK1215SA		15.0VDC	16.67mA	67%
IK1218SA		18.0VDC	13.88mA	67%
IK1224SA		24.0VDC	10.41mA	54%
IK2403SA	24.0VDC	3.3VDC	75.70mA	60%
IK2405SA		5.0VDC	50.00mA	62%
IK2407SA		7.2VDC	34.72mA	61%
IK2409SA		9.0VDC	27.77mA	62%
IK2412SA		12.0VDC	20.83mA	56%
IK2415SA		15.0VDC	16.67mA	56%
IK2418SA		18.0VDC	13.88mA	55%
IK2424SA		24.0VDC	10.41mA	59%

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Input

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

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		%	ΔV_{in}
Load regulation		10		%	20-100% load change, operation at no load will not damage unit but it may not meet all specifications. (3.3VDC models $\pm 20\%$)
Setpoint accuracy		± 3		%	
Ripple & noise		100		mV pk-pk	20MHz bandwidth
Temperature coefficient		0.02		%/ $^{\circ}$ C	
Maximum capacitive load		100		μ F	

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Efficiency	See models & ratings table				
Isolation voltage	1000			VDC	Add suffix '-H' to model number for 3000VDC isolation.
Isolation resistance		10 ⁹		Ω	
Isolation capacitance		60		pF	
Switching frequency		80		kHz	Variable
Mean time between failure		>1.1		Mhrs	MIL-HDBK-217F, +25°C GB

Environmental

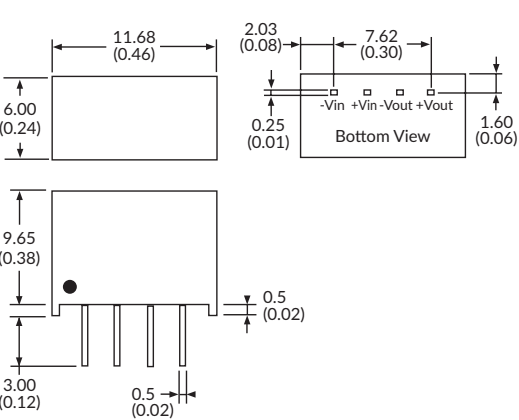
Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	-40		+85	°C	
Storage temperature	-40		+125	°C	
Case temperature			+100	°C	
Cooling	Convection cooled				

Safety approvals

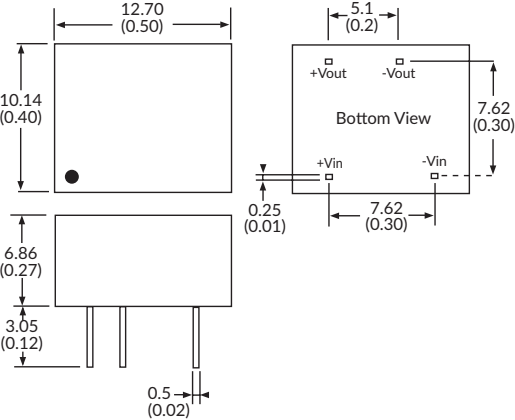
Certification	Standard	Notes & conditions
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Mechanical details

SIP package



DIP package



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