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IE series

XP Power

1W Convection cooled

DC-DC converters

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

The 1W IE provides 1kVDC isolation between input and output as standard, with 3kVDC isolation available as an option.



Features

- Unregulated single output
- ±10% input range
- Single outputs 3.3 to 24VDC
- SIP4 or DIP8 package
- 1.0kVDC isolation, 3.0kVDC option
- -40°C to +85°C operating temperature
- 3 year warranty

Applications

Robotics
Instrumentation
Technology
Industrial
Process control

Dimensions

See mechanical details

More resources

Click the link or scan the code

xppower.com

Models & ratings

Model number(1,2)	Input voltage(3)	No load input current	Output voltage	Output current	Efficiency
IE0303S	3.3VDC	25mA	3.3VDC	300mA	71%
IE0305S		25mA	5.0VDC	200mA	75%
IE0309S		30mA	9.0VDC	111mA	74%
IE0312S		45mA	12.0VDC	84mA	74%
IE0315S		40mA	15.0VDC	66mA	77%
IE0324S		40mA	24.0 VDC	42mA	77%

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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.

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Models & ratings

Model number[1,2]	Input voltage[3]	No load input current	Output voltage	Output current	Efficiency
IE0503S	5.0VDC	25mA	3.3VDC	300mA	72%
IE0505S		25mA	5.0VDC	200mA	75%
IE0509S		25mA	9.0VDC	111mA	77%
IE0512S		25mA	12.0VDC	84mA	78%
IE0515S		25mA	15.0VDC	66mA	78%
IE0524S		25mA	24.0 VDC	42mA	80%
IE1203S	12.0VDC	16mA	3.3VDC	300mA	72%
IE1205S		16mA	5.0VDC	200mA	75%
IE1209S		16mA	9.0VDC	111mA	77%
IE1212S		16mA	12.0VDC	84mA	80%
IE1215S		16mA	15.0VDC	66mA	78%
IE1224S		16mA	24.0 VDC	42mA	78%
IE1505S	15.0VDC	9mA	5.0 VDC	200mA	78%
IE2403S	24.0VDC	10mA	3.3VDC	300mA	72%
IE2405S		10mA	5.0VDC	200mA	75%
IE2409S		10mA	9.0VDC	111mA	77%
IE2412S		10mA	12.0VDC	84mA	80%
IE2415S		10mA	15.0VDC	66mA	78%
IE2424S		10mA	24.0 VDC	42mA	80%

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.

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				

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		%	3.3V models ±20%, 15V model ±8%
Setpoint accuracy		±3		%	
Ripple & noise			100	mV pk-pk	20MHz bandwidth
Temperature coefficient		0.02		%/°C	
Maximum capacitive load		220		µF	

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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	40		150	kHz	Variable
Mean time between failure		>1.1		Mhrs	MIL-HDBK-217F, +25°C GB
Case material	Non conductive black plastic (UL94V-0 rated)				
Potting material	Epoxy (UL94V-0 rated)				
Pin material	SIP Solder coated alloy 42, DIP solder coated brass				
Solder process			260	°C	1.5mm from case 10s max

Environmental

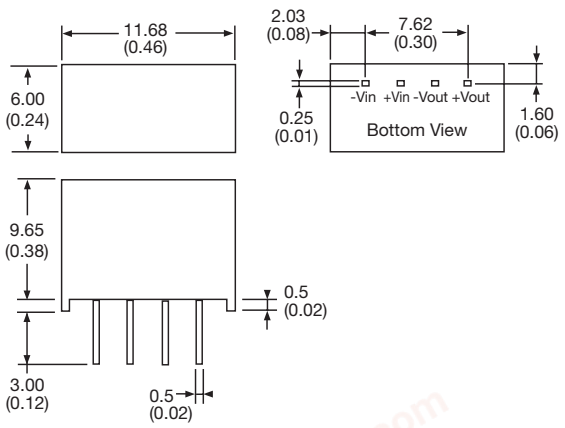
Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	-40		+85	°C	
Storage temperature	-40		+125	°C	
Case temperature			+100	°C	
Cooling	Convection cooled				

Safety approvals

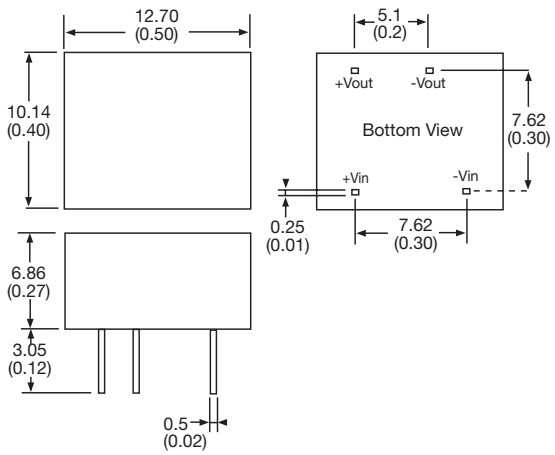
Certification	Standard	Notes & conditions
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Mechanical details

SIP package



DIP package



Notes:

1. All dimensions in mm (inches)
2. Pin pitch tolerance: ±0.35 (±0.014)
3. Case tolerance: ±0.5 (±0.02)
4. Weight: SIP 1.4g (0.003lbs), DIP 1.8g (0.004lbs)