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IM series

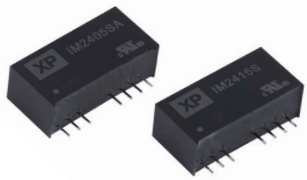
XP Power

2W

DC-DC converters

The IM series is housed in a SIP9 PCB mount plastic package. Featuring a 4:1 input voltage range of 9 to 36VDC or 18 to 75VDC with both single and dual outputs, singles have 3.3, 5, 12 or 15VDC with duals having ±5, ±12 or ±15VDC.

The 2W IM has regulated outputs and provides 1.5kVDC isolation between input and output, remote On/Off & short circuit protection are standard. Operating temperature range is from -40°C to +100°C, with derating above +75°C.



Features

- Regulated single & dual outputs
- 4:1 input range
- Single outputs 3.3 to 15VDC
- Dual outputs ±5.0 to ±15VDC
- SIP9 package
- 1.5kVDC isolation
- Continuous short circuit protection
- Remote On/Off
- -40°C to +100°C operating temperature
- Full power to +75°C
- 3 year warranty

Applications

Robotics

Instrumentation

Technology

Industrial

Household appliances

Dimensions

31.7 x 20.3 x 10.4mm (1.25" x 0.8" x 0.40")

Documentation

For further information click the link or scan the code

→ xppower.com

Models & ratings

Model number	Input voltage	No load input current(1,3)	Output voltage	Output current	Efficiency	Maximum capacitive load
IM2403SA	9.0-36.0VDC	10mA	3.3VDC	500mA	75%	2200µF
IM2405SA		10mA	5.0VDC	400mA	81%	1000µF
IM2412SA		10mA	12.0VDC	165mA	84%	165µF
IM2415SA		10mA	15.0VDC	135mA	85%	100µF
IM2405S		10mA	±5.0VDC	±200mA	81%	±470µF
IM2412S		10mA	±12.0VDC	±85mA	83%	±100µF
IM2415S		10mA	±15.0VDC	±65mA	82%	±47µF

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Notes:

1. Operation at no load will not damage the converter but may not meet all specifications.
2. When one output is set to 100% load and the other varies between 25%-100% load.
3. Input current measured at nominal input voltage

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Models & ratings

Model number	Input voltage	No load input current(1,3)	Output voltage	Output current	Efficiency	Maximum capacitive load
IM4803SA	18.0-75.0VDC	5mA	3.3VDC	500mA	75%	2200µF
IM4805SA		5mA	5.0VDC	400mA	80%	1000µF
IM4812SA		5mA	12.0VDC	165mA	84%	165µF
IM4815SA		5mA	15.0VDC	135mA	84%	100µF
IM4805S		5mA	±5.0VDC	±200mA	80%	±470µF
IM4812S		5mA	±12.0VDC	±85mA	81%	±100µF
IM4815S		5mA	±15.0VDC	±65mA	84%	±47µF

Notes:

1. Operation at no load will not damage the converter but may not meet all specifications.
2. When one output is set to 100% load and the other varies between 25%-100% load.
3. Input current measured at nominal input voltage

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage range	See models & ratings table				
Input reflected ripple current		20		mA pk-pk	12µH inductor and 47µF capacitor, 5Hz to 20MHz
Input filter	Capacitor				
Input surge		50		VDC	24VDC, 100ms
		100			48VDC, 100ms

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Output voltage	See models & ratings table				
Minimum load	0			%	No minimum load required
Line regulation			±0.5	%	
Load regulation			±0.5	%	From 10-100% load, operation at no load will not damage the converter but may not meet all specifications.
Setpoint accuracy			±1	%	
Ripple & noise		50		mV pk-pk	20MHz bandwidth
Temperature coefficient		0.02		%/°C	
Short circuit protection	Continuous with auto recovery (foldback)				
Cross regulation		±5		%	On dual outputs, when one output is set to 100% load and the other varies between 25%-100% load.
Remote on/off	Pin floating or pulled to -Vin				On
	Pin driven to +2.7 to 15 VDC with respect to -Vin				Off
			15	VDC	Vmax

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Efficiency	See models & ratings table				
Isolation voltage		1500		VDC	
Isolation capacitance			500	pF	
Isolation resistance		10^9		Ω	
Switching frequency		250		kHz	
Mean time between failure		>1.2		Mhrs	MIL-HDBK-217F, +25°C GB

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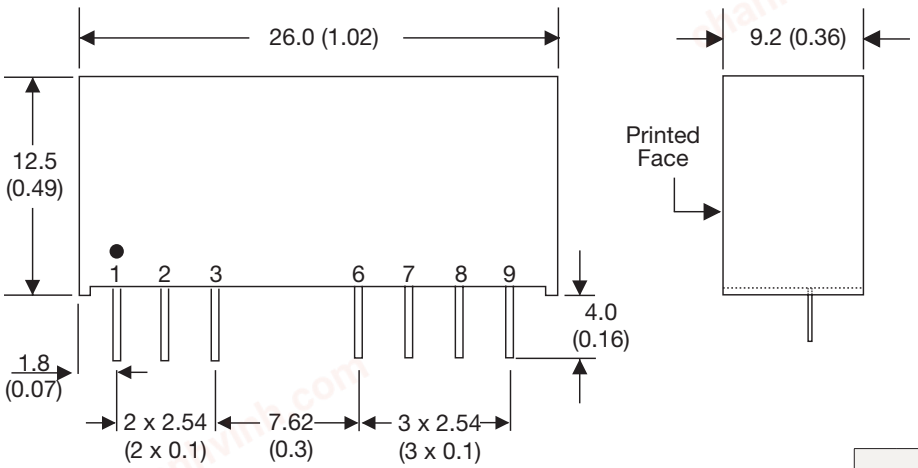
Environmental

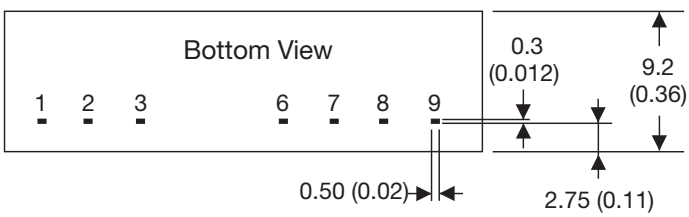
Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	-40		+100	°C	Derate from 100% load at +75°C to 0% load at +100°C
Storage temperature	-40		+125	°C	
Case temperature			+100	°C	
Cooling	Convection cooled				

Safety approvals

Certification	Standard	Notes & conditions
UL	UL60950-1, CAN/CSA C22.2 No.60950-1, UL62368-1	Information technology
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Mechanical details





Pin connections		
Pin	Single	Dual
1	-V Input	-V Input
2	+V Input	+V Input
3	Remote On/Off	Remote On/Off
6	+V Output	+V Output
7	N.C.	Common
8	N.C.	N.C.
9	-V Output	-V Output

Notes:

1. All dimensions in mm (inches)
2. Weight: 6.5g (0.014lbs)
3. Pin pitch tolerance: ±0.35 (±0.014)
4. Case tolerance: ±0.5 (±0.02)