

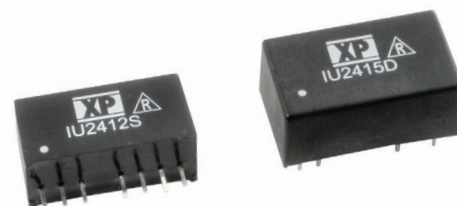
2W

Convection cooled

DC-DC converters

The IU series is housed in a SIP8 or DIP16 PCB mount plastic case. Featuring a 2:1 input voltage range of 4.5 to 9VDC, 9 to 18VDC, 18 to 36VDC or 36 to 72VDC with regulated single outputs of 3.3, 5, 9, 12, 15 & 24VDC and dual outputs ± 3.3 , ± 5 , ± 9 , ± 12 , ± 15 or ± 24 VDC.

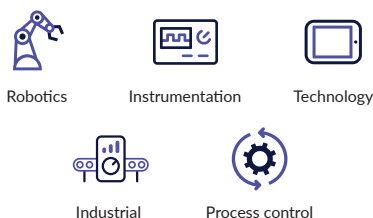
The 2W IU series has 1kVDC isolation (optional 3kV) between input and output, continuous short circuit protection is standard. Remote On/Off can be specified as an option on SIP versions. The operating temperature range is from -40°C to +85°C.



Features

- ▶ Regulated single & dual outputs
- ▶ 2:1 input range
- ▶ Single outputs 3.3 to 24VDC
- ▶ Dual outputs ± 3.3 to ± 24 VDC
- ▶ SIP8 or DIP16 package
- ▶ 1.0kVDC isolation, 3.0kVDC option
- ▶ Continuous short circuit protection
- ▶ Remote On/Off option on SIP8 models
- ▶ -40°C to +85°C operating temperature
- ▶ 3 year warranty

Applications



Dimensions

See mechanical details

More resources

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Models & ratings

Model number ⁽¹⁻⁵⁾	Input voltage	No load input current	Output voltage ⁽³⁾	Output current	Efficiency	Maximum capacitive load
IU0503SA	4.5-9.0VDC	15mA	3.3VDC	500mA	67%	3300μF
IU0505SA		15mA	5.0VDC	400mA	70%	3300μF
IU0509SA		30mA	9.0VDC	222mA	72%	470μF
IU0512SA		30mA	12.0VDC	167mA	72%	470μF
IU0515SA		30mA	15.0VDC	133mA	73%	470μF
IU0524SA		60mA	24.0VDC	83mA	75%	220μF

Continued on page 2

Notes:

- For dual inline package replace 'S' in model number with 'D'.
- For optional 3kVDC isolation add suffix '-H' to the model number.
- For dual output delete suffix 'A' & split output current equally between rails.
- For optional Remote On/Off on SIP models, add suffix '-R' to model number.
Applying 5VDC via 1 kΩ current limiting resistor and diode turns output off.
- Output capacitor of 100μF required to meet quoted ripple & noise.
- Minimum load of 25% required to meet load regulation & ripple & noise specifications.
- Operation at no load will not damage device but may not meet all specifications.
- Pin pitch tolerance: ± 0.35 (± 0.014), Case tolerance: ± 0.5 (± 0.02)
- Weight: SIP 4.0g (0.009lbs), DIP 6.0g (0.013lbs)



Models & ratings

Model number ⁽¹⁾	Input voltage	No load input current ⁽²⁾	Output voltage	Output current	Efficiency	Maximum capacitive load
IU1203SA	9.0-18.0VDC	15mA	3.3VDC	500mA	67%	3300μF
IU1205SA		15mA	5.0VDC	400mA	77%	3300μF
IU1209SA		15mA	9.0VDC	222mA	78%	470μF
IU1212SA		15mA	12.0VDC	167mA	80%	470μF
IU1215SA		15mA	15.0VDC	133mA	78%	470μF
IU1224SA		15mA	24.0VDC	83mA	80%	220μF
IU2403SA	18.0-36.0VDC	8mA	3.3VDC	500mA	70%	3300μF
IU2405SA		8mA	5.0VDC	400mA	77%	3300μF
IU2409SA		8mA	9.0VDC	222mA	80%	470μF
IU2412SA		8mA	12.0VDC	167mA	80%	470μF
IU2415SA		8mA	15.0VDC	133mA	80%	470μF
IU2424SA		8mA	24.0VDC	83mA	80%	220μF
IU4803SA	36.0-72.0VDC	6mA	3.3VDC	500mA	71%	3300μF
IU4805SA		6mA	5.0VDC	400mA	74%	3300μF
IU4809SA		6mA	9.0VDC	222mA	78%	470μF
IU4812SA		6mA	12.0VDC	167mA	78%	470μF
IU4815SA		6mA	15.0VDC	133mA	78%	470μF
IU4824SA		6mA	24.0VDC	83mA	80%	220μF

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Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage range	See models and ratings table				
Input reflected ripple current		35		mA pk-pk	12μH inductor and 47μF capacitor, 5Hz to 20MHz
Input filter	Capacitor				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Output voltage	See models & ratings table				
Minimum load	0			%	No minimum load required. Operation at no load will not damage device but may not meet all specifications.
Line regulation			±0.5	%	
Load regulation			±1		25-100% load change
Setpoint accuracy			±2	%	
Ripple & noise		80		mV pk-pk	For optional Remote On/Off on SIP models, add suffix '-R' to model number. Applying 5VDC via 1 kΩ current limiting resistor and diode turns output off.
Short circuit protection	Continuous with auto recover (foldback)				
Cross regulation		±5		%	Dual output models.
Temperature coefficient		0,02		%/°C	
Remote on/off	Module "on" if pin 3 is open circuit. Module "off" by driving 3-6mA into pin 3. Maximum applied voltage 9.7VDC relative to -Vin. See application note.				

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Efficiency	See models & ratings table				
Isolation voltage		1000		VDC	Optional 3000VDC. for optional 3kVDC isolation add suffix '-H' to the model number.
Isolation resistance		10 ⁹		Ω	
Isolation capacitance		60		pF	
Switching frequency		100-650		kHz	
Mean time between failure		>1.61		Mhrs	MIL-HDBK-217F, +25°C GB

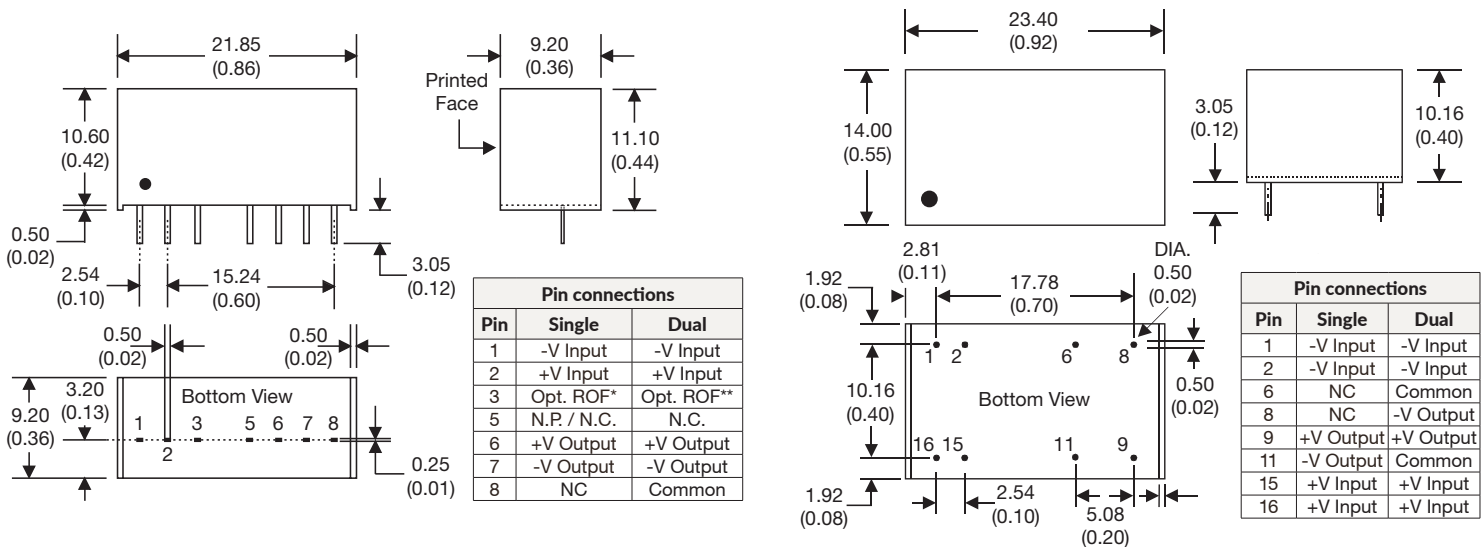
Environmental

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
UL	UL62368-1	
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Mechanical details



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