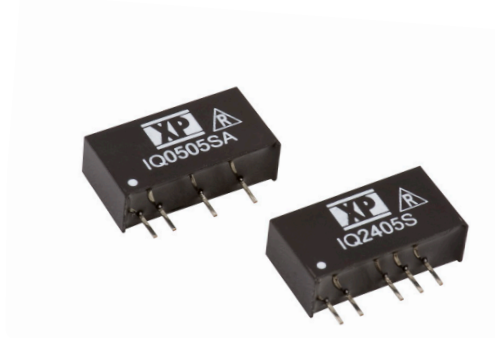


## 1W

DC-DC converters

The IQ series is housed in a SIP7 plastic case for PCB mounting. Featuring a  $\pm 10\%$  input voltage range for 5, 12, 15, 24 & 48VDC nominal inputs, offering single outputs of 5, 9, 12 or 15VDC.

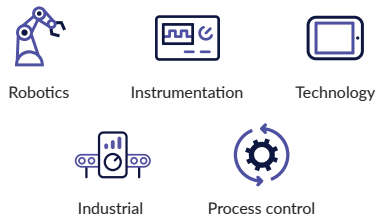
The 1W IQ provides 1kVDC isolation between input and output as standard, with 3kVDC isolation available as an option. The operating temperature range is from  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  with no derating.



### Features

- ▶ Semi-regulated single & dual outputs
- ▶  $\pm 10\%$  input range
- ▶ Single outputs 5.0 to 15VDC
- ▶ SIP7 package
- ▶ 1.0kVDC isolation, 3.0kVDC option
- ▶  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  operating temperature
- ▶ 3 year warranty

### Applications



### Dimensions

See mechanical details

### Models & ratings

Model number <sup>(3)</sup>	Input voltage	Output voltage	Output current	No load input current <sup>(1)</sup>	Max capacitive load	Load regulation	Efficiency
IQ0505SA	5.0VDC	5.0VDC	200mA	20mA	200 $\mu\text{F}$	6.0%	83%
IQ0509SA		9.0VDC	111mA	20mA	200 $\mu\text{F}$	5.5%	86%
IQ0512SA		12.0VDC	83mA	20mA	100 $\mu\text{F}$	5.5%	87%
IQ0515SA		15.0VDC	67mA	20mA	100 $\mu\text{F}$	5.0%	87%

Continued on page 2

#### Notes:

1. Operation at no load will not damage unit but it may not meet all specifications.
2. For optional 3000 VDC isolation, add suffix '-H' to the model number.
3. For dual output delete suffix 'A' and split output current equally between rails.

## Models & ratings

Model number <sup>(3)</sup>	Input voltage	Output voltage	Output current	No load input current <sup>(1)</sup>	Max capacitive load	Load regulation	Efficiency
IQ1205SA	12.0VDC	5.0VDC	200mA	15mA	200µF	4.0%	84%
IQ1209SA		9.0VDC	111mA	15mA	200µF	3.5%	86%
IQ1212SA		12.0VDC	83mA	15mA	100µF	3.5%	88%
IQ1215SA		15.0VDC	67mA	15mA	100µF	3.0%	88%
IQ1505SA	15.0VDC	5.0VDC	200mA	10mA	200µF	4.0%	84%
IQ1509SA		9.0VDC	111mA	10mA	200µF	3.5%	86%
IQ1512SA		12.0VDC	83mA	10mA	100µF	3.5%	87%
IQ1515SA		15.0VDC	67mA	10mA	100µF	3.0%	89%
IQ2405SA	24.0VDC	5.0VDC	200mA	7mA	200µF	4.0%	81%
IQ2409SA		9.0VDC	111mA	7mA	200µF	3.5%	84%
IQ2412SA		12.0VDC	83mA	7mA	100µF	3.5%	85%
IQ2415SA		15.0VDC	67mA	7mA	100µF	2.5%	86%
IQ4805SA	48.0VDC	5.0VDC	200mA	5mA	200µF	4.0%	78%
IQ4809SA		9.0VDC	111mA	5mA	200µF	3.5%	80%
IQ4812SA		12.0VDC	83mA	5mA	100µF	3.0%	81%
IQ4815SA		15.0VDC	67mA	5mA	100µF	3.0%	81%

### Notes:

1. Operation at no load will not damage unit but it may not meet all specifications.
2. For optional 3000 VDC isolation, add suffix '-H' to the model number.
3. For dual output delete suffix 'A' and split output current equally between rails.

## Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage range		±10		%	Nominal
Input reflected ripple current		20		mA pk-pk	5 & 12VDC, 5Hz to 20MHz
		30			15VDC, 5Hz to 20MHz
		40			24VDC, 5Hz to 20MHz
		50			48VDC, 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	See models & ratings table				
Setpoint accuracy		±3		%	
Ripple & noise		50		mV pk-pk	20MHz bandwidth
Temperature coefficient		0.02		%/°C	
Maximum capacitive load	See models & ratings table				

## 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 <sup>9</sup>		Ω	
Isolation capacitance		60		pF	
Switching frequency	55		85	kHz	Variable
Mean time between failure		>1.1		Mhrs	MIL-HDBK-217F, +25°C GB

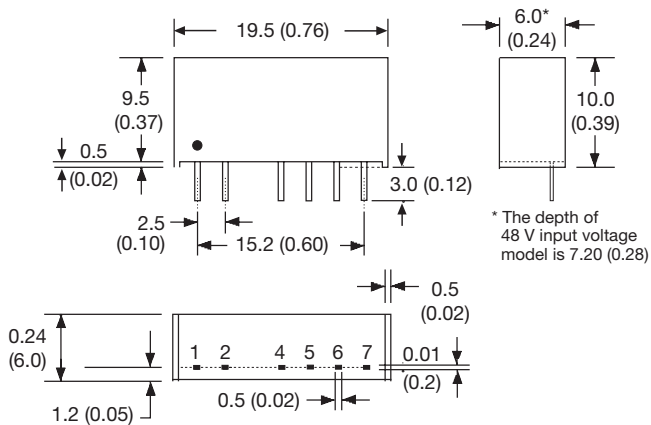
## Environmental

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



Pin connection				
Pin	Single	Dual	Single (-H)	Dual (-H)
1	+Vin	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin	-Vin
4	-Vout	-Vout	N.P	N.P
5	N.P	Common	-Vout	-Vout
6	+Vout	+Vout	N.P	Common
7	N.P	N.P	+Vout	+Vout

### Notes:

- All dimensions in mm (inches).
- Pin pitch tolerance: ±0.35 (±0.014)
- Case tolerance: ±0.5 (±0.02)
- Weight: 2.8g (0.06lbs)