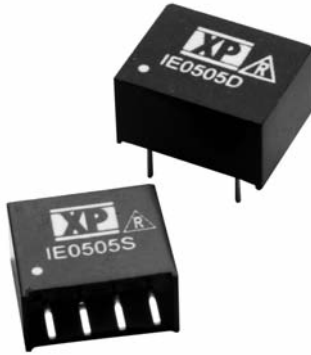


# IE SERIES

DC/DC Single Output: 1 Watt



## Features

- Single Output
- SIP or DIP Package
- 1000 VDC Isolation
- Optional 3000 VDC Isolation
- Optional 3000 VDC Isolation
- Small Package Sizes
- -40 °C to +85 °C Operation

## Specification

### Input

- Input Voltage Range • Nominal  $\pm 10\%$
- Input Reflected Ripple Current • 20 mA pk-pk through 12  $\mu$ H inductor 5Hz to 20 MHz
- Input Reverse Voltage Protection • None

### Output

- Output Voltage • See table
- Minimum Load • None<sup>(5)</sup>
- Line Regulation • 1.2%/1%  $\Delta$  Vin
- Load Regulation • 10% for a 20-100% load change<sup>(5)</sup> (3.3 V models  $\pm 20\%$ )
- Setpoint Accuracy •  $\pm 3\%$
- Ripple & Noise • 100 mV pk-pk max, 20 MHz bandwidth
- Temperature Coefficient • 0.02%/°C
- Maximum Capacitive Load • 220  $\mu$ F

### General

- Efficiency • See table
- Isolation Voltage • 1000 VDC minimum (3000 VDC -H option)
- Isolation Resistance • 10<sup>9</sup>  $\Omega$
- Isolation Capacitance • 60 pF typical
- Switching Frequency • 40-150 KHz variable
- MTBF • >1.1 Mhrs to MIL-HDBK-217F at 25 °C, GB

### Environmental

- Operating Temperature • -40 °C to +85 °C
- Storage Temperature • -40 °C to +125 °C
- Case Temperature • 100 °C max
- Cooling • Convection-cooled

### Notes

1. For DIP package, replace 'S' in model number with 'D'.
2. Add suffix '-H' to model number for 3000 VDC isolation.
3. For 48 VDC in, specify model number as IE48XXS (not available in DIP package).
4. 48 VDC input models dimension is 0.29 (7.5).
5. Operation at no load will not damage unit but it may not meet all specifications.
6. All dimensions in inches (mm).
7. Pin pitch tolerance:  $\pm 0.014$  ( $\pm 0.35$ )
8. Case tolerance:  $\pm 0.02$  ( $\pm 0.5$ )
9. Weight: SIP 0.003 lbs (1.4 g), DIP 0.004 lbs (1.8 g)

Input Voltage <sup>(3)</sup>	No Load Input Current	Output Voltage	Output Current	Efficiency	Model Number <sup>(1-2)</sup>
3.3 VDC	25 mA	3.3 V	300 mA	71%	IE0303S†
	25 mA	5.0 V	200 mA	75%	IE0305S†
	30 mA	9.0 V	111 mA	74%	IE0309S†
	45 mA	12.0 V	84 mA	74%	IE0312S†
	40 mA	15.0 V	66 mA	77%	IE0315S†
	40 mA	24.0 V	42 mA	77%	IE0324S†
5 VDC	25 mA	3.3 V	300 mA	72%	IE0503S†^
	25 mA	5.0 V	200 mA	75%	IE0505S†^
	25 mA	9.0 V	111 mA	77%	IE0509S†^
	25 mA	12.0 V	84 mA	78%	IE0512S†^
	25 mA	15.0 V	66 mA	78%	IE0515S†^
	25 mA	24.0 V	42 mA	80%	IE0524S†^
12 VDC	16 mA	3.3 V	300 mA	72%	IE1203S†^
	16 mA	5.0 V	200 mA	75%	IE1205S†^
	16 mA	9.0 V	111 mA	77%	IE1209S†^
	16 mA	12.0 V	84 mA	80%	IE1212S†^
	16 mA	15.0 V	66 mA	78%	IE1215S†^
	16 mA	24.0 V	42 mA	78%	IE1224S†^
24 VDC	10 mA	3.3 V	300 mA	72%	IE2403S†^
	10 mA	5.0 V	200 mA	75%	IE2405S†^
	10 mA	9.0 V	111 mA	77%	IE2409S†^
	10 mA	12.0 V	84 mA	80%	IE2412S†^
	10 mA	15.0 V	66 mA	78%	IE2415S†^
	10 mA	24.0 V	42 mA	80%	IE2424S†^

## Mechanical Details

