

# Q Series

0.5 WATTS - 100 - 10KV SINGLE OUTPUT DC/DC INDUSTRIAL

## Features

- Ultra-miniature case size
- No external components required
- Low ripple and EMI/RFI
- Proportional input/output
- Input/output isolation
- Short circuit protection



## Specifications

### INPUT

Voltage 0-5, 12 or 24VDC.

Typical turn-on voltage 0.7V

### OUTPUT

Power 0.5W

Voltage tolerance +5%, -10% typical at full load.

Isolation 500V +V out.

### ENVIRONMENTAL

Operating temperature -25°C to +70°C (Q30-Q101: -10°C to +60°C.)

Storage temperature -55°C to +105°C.

### GENERAL

Dimensions Case A&B: 12.7 x 12.7 x 12.7 mm.  
Case C: 21.59 x 21.59 x 21.59 mm.

Weight Case A&B: 4.25g. Case C: 28.3g.

Packaging Fully encapsulated.

Case material Glass-filled Epoxy.

### STANDARDS

Safety standard The Q Series is a component DC to HV DC converter, not a power supply. It operates from a low voltage DC and is fully encapsulated. For applications requiring safety approval, the Q Series should be considered a component not requiring individual certification.

## Selection Tables

### CASE A & B

PIN#	FUNCTION	QXX	QXXN
1	Input	(-)	(-)
2	Input	(+)	(+)
3	Output	(+)	(-)
4	Output	(-)	(+)

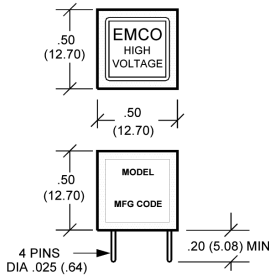
### CASE C

WIRE	COLOR	FUNCTION	QXX	QXXN
W1	Red	Input	(+)	(+)
W2	Black	Input	(-)	(-)
W3	Brn	Output	(+)	(-)
W4	Vio	Output	(-)	(+)



## Technical Illustration

### CASE A&B Q01 to Q20



**BOTTOM VIEW**

Pin Diameter .025

### PHYSICAL CHARACTERISTICS

SIZE: 0.5 x 0.5 x 0.5 (12.7 x 12.7 x 12.7)  
 WEIGHT: 0.15 Ounces Approx. (4.25 Grams)  
 PACKAGING: Fully Encapsulated  
 CASE MATERIAL: Glass-filled Epoxy  
 PINS: See Table

### ELECTRICAL SPECIFICATIONS

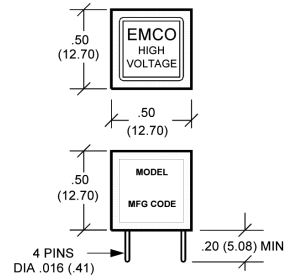
INPUT VOLTAGE: Models Q01-Q10: 0 to 5, 12 or 24 VDC  
 Models Q12-Q50: 0 to 5 VDC  
 TYPICAL TURN-ON VOLTAGE: 0.7 Volts  
 OUTPUT VOLTAGE TOLERANCE: +5%, -10%  
 At full rated output voltage, full load, 25°C.  
 ISOLATION: < +/- 500V BIAS ON OUTPUT RTN (PIN 4)  
 OPERATING TEMP: -25° to +70° C (Q30 - Q50: -10° to +60° C)  
 STORAGE TEMP: -55° to +105° C

Pin #	Function	Qxx	QxxN
1	Input	(-)	(-)
2	Input	(+)	(+)
3	Output	(+)	(-)
4	Output	(RTN)	(RTN)

Dimensions are in inches  
 Dimensional Tolerances: ± .03 (.76mm)  
 (Metric Equivalents in Parenthesis)

Post-wave solder installation recommended.

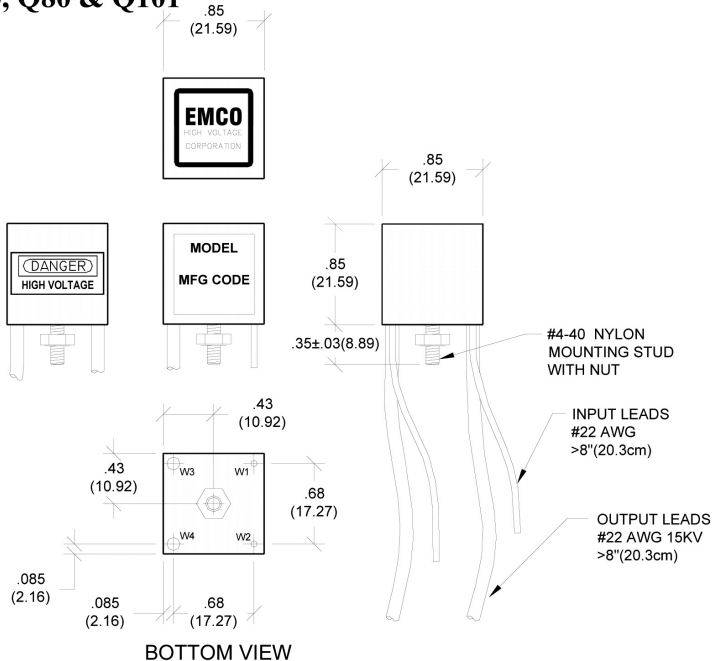
### CASE B Q30 to Q50



**BOTTOM VIEW**

Pin Diameter .016

### CASE C Q60, Q80 & Q101



**BOTTOM VIEW**

### PHYSICAL CHARACTERISTICS

SIZE: 0.85 x 0.85 x 0.85 (21.59 x 21.59 x 21.59)  
 WEIGHT: 1 Ounce (28.3 Grams)  
 PACKAGING: Fully Encapsulated  
 CASE MATERIAL: Glass-filled Epoxy

### ELECTRICAL SPECIFICATIONS

INPUT VOLTAGE: 0 to 5 VDC  
 TYPICAL TURN-ON VOLTAGE: 0.7 Volts  
 OUTPUT VOLTAGE TOLERANCE: +5%, -10%  
 At full rated output voltage, full load, 25°C.  
 ISOLATION: < +/- 500V BIAS ON OUTPUT RTN (W4)  
 OPERATING TEMP: -10° to +60° C  
 STORAGE TEMP: -20° to +105° C  
 NOTE: Do not allow output voltage to exceed maximum rating.

Wire #	Color	Function	Qxx	QxxN
W1	Red	Input	(+)	(+)
W2	Black	Input	(-)	(-)
W3	Brn	Output	(+)	(-)
W4	Vio	Output	(RTN)	(RTN)

Dimensions are in inches  
 Dimensional Tolerances: ± .03 (.76mm)  
 (Metric Equivalents in Parenthesis)

Post-wave solder installation recommended.