



# Quarter-Brick Series

## Single output



DC-DC CONVERTERS High Current, High Efficiency, Low Profile

2

For the most current data and application support visit [www.artesyn.com/powergroup/products.htm](http://www.artesyn.com/powergroup/products.htm)

**NEW Product**

Output Voltage	Input Current (Max.) <sup>(4)</sup>	Input Ripple Current <sup>(5)</sup>	Output Current (Max.)	Efficiency (Typ.)	Regulation			Ripple & Noise (pk - pk)	Model Number <sup>(6,9,10)</sup>
					Set Point Accuracy (Max.)	Line	Load		
48 Vin VALUE MODELS									
1.2 V	1.92 A	150 mA	50 A	88.5%	±1.5%	±0.1%	±0.2%	60 mV	LQS50A48-1V2J
1.5 V	2.36 A	150 mA	50 A	89.5%	±1.5%	±0.1%	±0.2%	60 mV	LQS50A48-1V5J
1.8 V	2.82 A	150 mA	50 A	90.4%	±1.5%	±0.1%	±0.2%	60 mV	LQS50A48-1V8J
48 Vin PERFORMANCE MODELS									
1.2 V	4.05 A	250 mA	100 A	86.0%	±1.5%	±0.1%	±0.2%	60 mV	LQS100A48-1V2J
1.5 V	3.8 A	200 mA	80 A	88.8%	±1.5%	±0.1%	±0.2%	60 mV	LQS80A48-1V5J
1.8 V	4.6 A	200 mA	80 A	90.0%	±1.5%	±0.1%	±0.2%	60 mV	LQS80A48-1V8J
2.5 V	4.1 A	200 mA	50 A	90.0%	±1.5%	±0.1%	±0.2%	60 mV	LQS50A48-2V5J
3.3 V	5.2 A	200 mA	50 A	91.0%	±1.5%	±0.1%	±0.2%	60 mV	LQS50A48-3V3J
48 Vin ULTRA MODELS									
1.5 V	4.8 A	200 mA	100 A	88.5%	±1.5%	±0.1%	±0.2%	60 mV	LQS100A48-1V5J
1.8 V	5.7 A	200 mA	100 A	89.5%	±1.5%	±0.1%	±0.2%	60 mV	LQS100A48-1V8J
2.5 V	6.2 A	200 mA	80 A	91.0%	±1.5%	±0.1%	±0.2%	60 mV	LQS80A48-2V5J
3.3 V	6.2 A	200 mA	60 A	91.0%	±1.5%	±0.1%	±0.2%	60 mV	LQS60A48-3V3J
5 V	6.2 A	200 mA	40 A	92.0%	±1.5%	±0.1%	±0.2%	60 mV	LQS40A48-5V0J <sup>(7)</sup>
24 Vin MODELS									
1.8 V	3.4 A	200 mA	30 A	91.0%	±1.5%	±0.1%	±0.2%	60 mV	LQS30A24-1V8J
3.3 V	6.5 A	300 mA	30 A	89.5%	±1.5%	±0.1%	±0.2%	60 mV	LQS30A24-3V3J

### Part Number System with Options

**LQS60A48-3V3RANJ**

**L** = Low Profile

**Q** = 1/4 Brick

**Type of output**  
S = Single

**Rated Output Current**  
40 A = 40 Amps, 60 A = 60 Amps etc.

**Nominal Rated Input Voltage**  
24 = 24 Volts (18 Vdc to 36 Vdc range)  
48 = 48 Volts (36 Vdc to 75 Vdc range)

**Output Voltage**  
1V5 = 1.5 Volts, 1V8 = 1.8 Volts etc.

#### RoHS Compliance (9)

J = Pb-free (RoHS 6/6 compliant)

#### Pin Length Options

Blank = 0.188" (4.78 mm)

N = 0.145" (3.68 mm)

K = 0.110" (2.79 mm)

#### Body Height, Package Type and Pin Length

A = 0.300" (7.62 mm), Through Hole,  
0.188" (4.78 mm) Pins

E = 0.340" (8.64 mm), Through Hole,  
0.188" (4.78 mm) Pins

S = 0.28" (7.11 mm), Surface Mount<sup>(6)</sup>

#### Remote ON/OFF Logic

Blank = Positive

R = Negative

### Notes

- 1  $di/dt = 1 \text{ A}/\mu\text{s}$ ,  $V_{in} = 48 \text{ Vdc}$ ,  $T_c = 25^\circ\text{C}$ , load change = 50% to 75%  $I_o$  max. and 75% to 50%  $I_o$  max. Deviation varies by model. For further details see longform datasheet.
- 2 Start-up into resistive load.
- 3 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 4 Recommended input fusing is up to 10 A HRC 200 V rated fuse.
- 5 Peak to peak measured without external  $\pi$  filter. Significant reduction possible with external filter. See Application Note 141 for further details.
- 6 'S' option applies to the 24 V models only.

- 7 Except LQS40A48-5V0J which has the double output pins.
- 8 Active low Remote ON/OFF is available. Standard product is Active High. When ordering active low parts, designate with the Suffix 'R' e.g. **LQS100A48-1V8RAJ**.
- 9 TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
- 10 NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at <http://www.artesyn.com/powergroup/products.htm> to find a suitable alternative.



# Quarter-Brick Series

## Single output



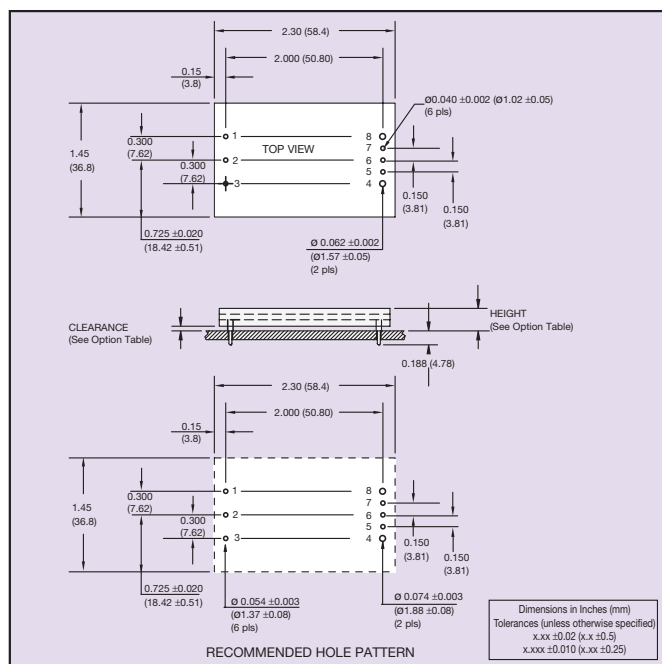
DC-DC CONVERTERS

High Current, High Efficiency, Low Profile

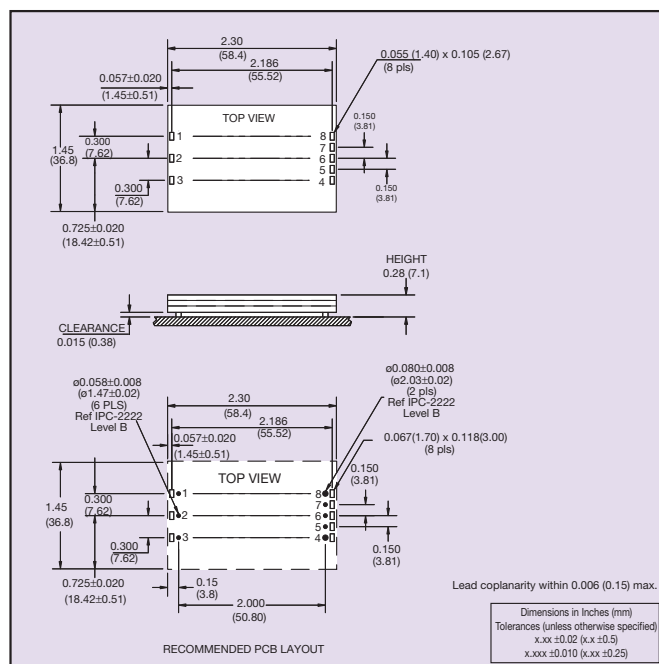
3

For the most current data and application support visit [www.artesyn.com/powergroup/products.htm](http://www.artesyn.com/powergroup/products.htm)

**NEW Product**



24 V/48 V Mechanical Drawing for Output Current of 50 A or Less  
(See Note 7)



24 V Surface-mount Mechanical Drawing and Pinout Table

PIN CONNECTIONS			
PIN NUMBER	FUNCTION	PIN NUMBER	FUNCTION
1	+Vin	5	-Sense
2	ON/OFF	6	Trim
3	-Vin	7	+Sense
4	-Vout	8	+Vout

Pin Connection Table

DIMENSION OPTIONS		
OPTION	CLEARANCE	HEIGHT
	±0.016 (0.41)	+0.022 (0.56) -0.030 (0.76)
A	0.030 (0.76)	0.300 (7.62)
E	0.070 (1.78)	0.340 (8.64)

Dimension Options Table



# Quarter-Brick Series

## Single output



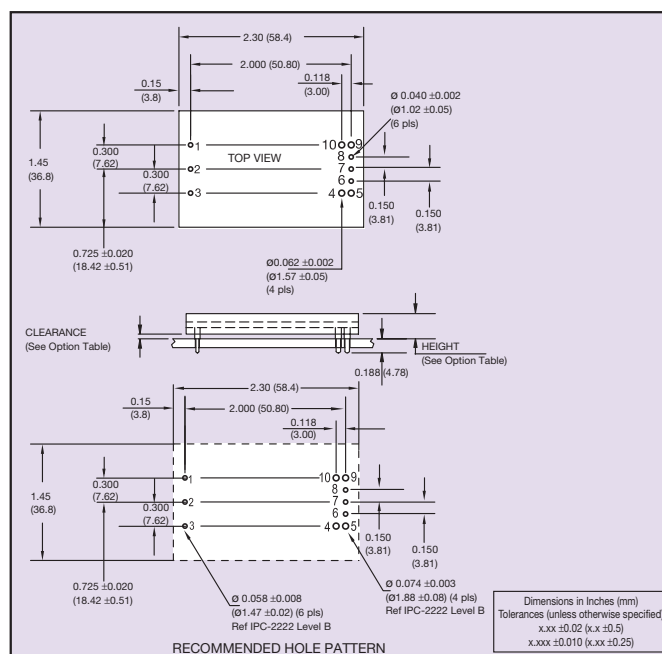
DC-DC CONVERTERS

High Current, High Efficiency, Low Profile

4

For the most current data and application support visit [www.artesyn.com/powergroup/products.htm](http://www.artesyn.com/powergroup/products.htm)

**NEW Product**



**48 V Mechanical Drawing for Output Current Greater than 50 A**  
**“The Double P” Pinout (7)**

PIN CONNECTIONS			
PIN NUMBER	FUNCTION	PIN NUMBER	FUNCTION
1	+Vin	6	-Sense
2	ON/OFF	7	Trim
3	-Vin	8	+Sense
4	-Vout	9	+Vout
5	-Vout	10	+Vout

**Pin Connection Table**

DIMENSION OPTIONS		
OPTION	CLEARANCE	HEIGHT
	±0.016 (0.41)	+0.022 (0.56)
		-0.030 (0.76)
A	0.030 (0.76)	0.300 (7.62)
E	0.070 (1.78)	0.340 (8.64)

**Dimension Options Table**

Datasheet © Artesyn Technologies® 2005

The information and specifications contained in this datasheet are believed to be correct at time of publication. However, Artesyn Technologies accepts no responsibility for consequences arising from printing errors or inaccuracies. The information and specifications contained or described herein are subject to change in any manner at any time without notice. No rights under any patent accompany the sale of any such product(s) or information contained herein.

**Please consult our website for the following items: ✓ Application Note ✓ Longform Datasheets**

**[www.artesyn.com](http://www.artesyn.com)**