



# Technical Specification

## PQ60240EGL03

**48Vin  
Input**

**24Vout  
Output**

**3A  
Current**

**2000Vdc  
Isolation**

**Eighth-brick  
DC/DC Converter**

The PQ60240EGL03 PowerQor® Giga eighth-brick converter is a next-generation, board-mountable, isolated, fixed switching frequency DC/DC converter that uses synchronous rectification to achieve extremely high conversion efficiency. The power dissipated by the converter is so low that a heatsink is not required, which saves cost, weight, height, and application effort. All of the power and control components are mounted to the multi-layer PCB substrate with high-yield surface mount technology. Since the PowerQor converter has no explicit thermal interfaces, it is extremely reliable. RoHS compliant (see page 12).



### Operational Features

- High efficiency, 90% at full rated load current
- Delivers up to 3 amps of output current (72W) with minimal derating - no heatsink required
- Wide input voltage range: 35V – 75V, with 100V 100ms input voltage transient capability
- Fixed frequency switching provides predictable EMI performance
- No minimum load requirement means no preload resistors required

### Mechanical Features

- Industry standard eighth-brick pin-out configuration
- Industry standard size: 0.90" x 2.3" (22.9x58.4mm)
- Total height only 0.349" (8.86mm), permits better air-flow and smaller card pitch
- Total weight: 0.68 oz. (19 grams)
- Flanged pins designed to permit surface mount soldering (avoid wave solder) using FPIP technique

### Control Features

- On/Off control referenced to input side (positive and negative logic options are available)
- Remote sense for the output voltage compensates for output distribution drops
- Output voltage trim permits custom voltages and voltage margining

### PQ60240EGL03 Module

### Protection Features

- Input under-voltage lockout disables converter at low input voltage conditions
- Output current limit and short circuit protection protects converter and load from damage and consequent hazardous conditions
- Active back bias limit prevents damage to converter from external load induced pre-bias
- Output over-voltage protection protects load from damaging voltages
- Thermal shutdown protects converter from abnormal environmental conditions

### Safety Features

- 2000V, 30 MΩ input-to-output isolation provides input/output ground separation
- UL 60950-1 recognized (US & Canada), basic insulation rating
- TUV certified to EN60950-1
- Meets 72/23/EEC and 93/68/EEC directives which facilitates CE Marking in user's end product
- Board and plastic components meet UL94V-0 flammability requirements