

Preliminary Product Brief

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For Discussion with Tyco Electronics Customers Only – Tyco Electronics Proprietary

tyco

Electronics

Q-Bus Series Power Modules

Industry standard quarter brick DC/DC converters,
QBE version 42Vdc-53Vdc input,
QBK version 36Vdc to 55Vdc input,
QBW version 36Vdc to 75Vdc,
All versions output voltage: 12Vdc



The Q-Bus series dc-dc converters are a new generation of power modules designed to support 12Vdc intermediate bus applications where multiple low voltages are generated using point of load (POL) converters. These modules are intended to generate a 12V bus at low cost and in a small footprint. By taking advantage of applications where a restricted input voltage range is available the module provides higher output power (300W) than is currently available in a quarter-brick package. The module uses open-frame packaging approach to offer low cost, while providing enhanced thermal performance due to the high efficiency. Higher thermal derating can be obtained by using the optional base plate and through connection to heat sinks. This module will operate over a various input voltage ranges of either 42V to 53Vdc, 36V to 55Vdc or 36V to 75Vdc and provide an adequately regulated DC output voltage of 12V with 18 to 25A output current capability.

Applications

- 12Vdc Intermediate bus voltage architectures
- Applications requiring 12Vdc up to 25A
- Servers and Storage Applications
- Access and Optical Network Equipment
- Enterprise Networks

- **Ultra High Efficiency:** up to 94% @ 12Vout, full load. Delivers up to 25A of output current.
- **Low Cost open frame design:** optional base plate for enhanced thermal performance.
- **Active current sharing:** ability to parallel converters

Specification

- Regulated output (+/-5%max)
- Monotonic start-up
- Load regulation $\pm 3\%$ max
- Line regulation $\pm 3\%$ max
- No minimum load required
- Low Ripple and noise (5Hz to 20MHz bandwidth)
 - RMS 50mV_{rms} (Typical)
 - Peak to peak 150mV_{pk-pk} (Typical)
- Operating temperature range: -40°C to 85°C
- 1500Vdc isolation voltage

Protection

- Output overvoltage protection
- Over-temperature protection
- Output current limiting, unlimited duration
- Input under voltage lock-out
- Input over voltage protection

Options

- Baseplate (-H option)
- Latched overcurrent protection
- Non-latching over-voltage protection
- Negative logic, Remote on/off
- Paralleling with active current sharing (-P option)

Note: This proposed product information sheet is only for discussion with customers to determine customer interest and requirements. No commitment has been made to sample or manufacture this product unless done so in writing by a Tyco Inc. representative.

Q-Bus single output series

High Efficiency Industry Standard Quarter Brick

Outline Drawing and Pin-out

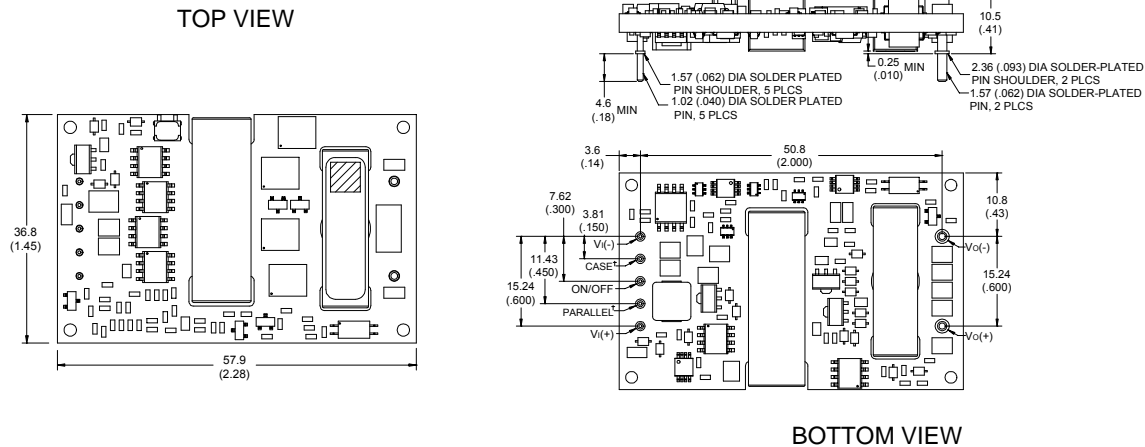
Physical Dimensions and design

Industry standard quarter brick open frame single board construction with external dimensions of 57.9mm x 36.8mm x 9.53mm (2.28" x 1.45" x 0.42"). The Q-Bus series has a robust construction able to withstand industry standard, soldering and cleaning processes.

Mechanical Specifications:

Dimensions are in millimeters (inches).

Tolerance: $x.x \pm 0.5$ mm ($x.xx$ in. ± 0.02 in.); $x.xx \pm 0.25$ mm ($x.xxx$ in. ± 0.010 in)



†Option Feature, Pin is not present unless one of these options specified.

Ordering Information

Please contact your Tyco Electronics sales representative for pricing, availability and optional features.

Product codes	Input Voltage	Output Voltage(s)	Output Current	Efficiency	Connector Type	Comcodes
QBE025A0B1	48V (42-53Vdc)	12V	25A	94%	Through hole	108981432
QBK020A0B1	48V (36-55Vdc)	12V	20A	94%	Through hole	108985656
QBK025A0B1	48V (36-55Vdc)	12V	25A	94%	Through hole	108998663
QBW018A0B1	48V (36-75Vdc)	12V	18A	93%	Through hole	
QBW018A0B-P58	48V (36-75Vdc)	12V	18A	93%	Through hole	108989760



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