

## Preliminary Product Brief \*

For Discussion with Tyco Electronics Customers Only – Tyco Electronics Proprietary



# QRW 40A single output series

Industry standard Quarter brick DC/DC converter, 36Vdc-75Vdc (48V) input voltage range, Output voltages available from 12V-1.0V



The QRW-series dc-dc converters are a new generation of DC/DC power modules designed for optimum efficiency and power density. The QRW provides up to 40A output current in an industry standard quarter brick, which makes it an ideal choice for small space, high current and low voltage applications. The converter uses synchronous rectification technology and innovative packaging techniques to achieve ultra high efficiency reaching 91% at 3.3V full load. Thanks to the ultra high efficiency of this converter, the power dissipation is such that for most applications a heat sink is not required. In addition, the QRW-series supports future migration of semiconductor and microprocessor supply voltages down to 1.0V.

## Applications

- Wireless Networks
- Access and Optical Network Equipment
- Enterprise Networks
- Latest generation ICs (DSP, FPGA, ASIC) and Microprocessor powered applications

- **Delivers up to 40A output current**
- **Ultra High Efficiency:** 91% @ 3.3V full load
- **Improved Thermal Performance:** 25A at 70°C at 1ms<sup>-1</sup> (200LFM)
- **High power density:** 100W/in<sup>3</sup>
- **Low output voltages down to 1V:** supports migration to future IC and microprocessor supply voltages
- **Active load sharing option:** Paralleling
- **Cost efficient open frame design**
- **Optional heat-sink:** to permit operation over extended ambient temperature ranges

## Specification

- Tightly regulated output, typical  $\pm 1\%$
- Monotonic start-up into pre-biased output
- Output voltage adjustment trim +10% / -20%
- Load regulation  $\pm 0.2\%$
- Line regulation  $\pm 0.2\%$
- No minimum load required
- Ripple and noise (5Hz to 20MHz bandwidth)
  - RMS 40mV<sub>rms</sub> (3.3V)
  - Peak to peak 150mV<sub>pk-pk</sub> (3.3V)
- Operating temperature range: -40°C to 110°C
- Designed to meet basic insulation
- 1500Vdc isolation voltage
- Remote output voltage sensing

## Protection

- Output overcurrent and overvoltage protection
- Over-temperature protection
- Input under voltage protection

## Options

- Positive remote on/off logic
- Active load sharing (Paralleling)
- Case ground pin
- Auto restart after fault shutdown
- Heatsink

I) This product is intended for integration into end-use equipment. All the required procedures for CE marking of end-use equipment should be followed.  
II) CSA is a registered trademark of Canadian Standards Association.  
III) UL is a registered trademark of Underwriters Laboratories, Inc.  
IV) VDE is a trademark of Verband Deutscher Elektrotechniker e.V.

# QRW 40A single output series

High Efficiency Industry Standard Quarter Brick

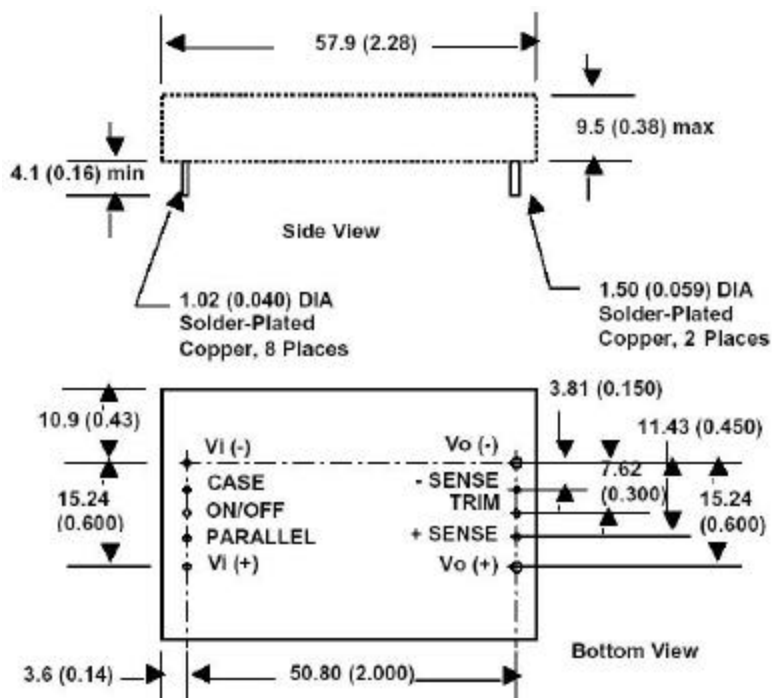
## Outline Drawing and Pin-out

### Physical Dimensions and design

Industry standard, Quarter brick size with external dimensions of 57.9mm x 36.8mm x 9.5mm (2.28" x 1.45" x 0.375")

Weight 38.0g (1.34oz)

The QRW series has a robust open frame construction able to withstand industry standard, through-hole handling, soldering and cleaning processes.



## 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
QRW010A0B1	48V (36-75Vdc)	12V	10A	92%	Through hole	T.B.D
QRW025A0A1	48V (36-75Vdc)	5V	25A	92%	Through hole	T.B.D
QRW035A0F1	48V (36-75Vdc)	3.3V	35A	91%	Through hole	T.B.D
QRW035A0G1	48V (36-75Vdc)	2.5V	35A	90%	Through hole	T.B.D
QRW040A0D1	48V (36-75Vdc)	2.0V	40A	T.B.D	Through hole	T.B.D
QRW040A0Y1	48V (36-75Vdc)	1.8V	40A	87%	Through hole	T.B.D
QRW040A0M1	48V (36-75Vdc)	1.5V	40A	85%	Through hole	T.B.D
QRW040A0P1	48V (36-75Vdc)	1.2V	40A	84%	Through hole	T.B.D
QRW040A0S1R01	48V (36-75Vdc)	1.0V	40A	83%	Through hole	T.B.D

-1 Standard negative remote on/off logic



Phone: 800-253-0490 Fax: 408-732-2002 www.xp-foresight.com

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