

**NEW Product**

- **Two independent outputs**
- **High full load efficiency**
- **Wide ambient temperature range of -40°C to +85°C**
- **Up to 100% load imbalance**
- **Tracking, monotonic start-up**
- **Starts into pre-biased outputs**
- **Basic insulation system**
- **Over-voltage and over-temperature protection**
- **100V, 100ms input voltage transient response**
- **Secondary side control, no optocouplers, fast transient load response**



These are new high efficiency, open-frame, isolated 40A converters in an industry standard dual quarter-brick footprint. These converters deliver high output current at low voltages, and excellent useable power density for today's high end applications. This series features an input voltage range of 36 to 75VDC and output voltages of 1.2V/3.3V, 1.5V/3.3V, 1.8V/3.3V 2.5V/3.3V, and 5.0V/3.3V. The output voltage on each model is adjustable from 90% to 110% of the nominal value. Typical efficiencies are 90%. This series also has a remote ON/OFF capability. Over-current and over-voltage protection features are included as standard. Designed to meet international safety agency approvals, including EN60950 and UL/cUL60950, this series reduces compliance costs and time to market.



**2 YEAR WARRANTY**

All specifications are typical at nominal input, full load at 25°C ambient unless otherwise stated

**SPECIFICATIONS**

**OUTPUT SPECIFICATIONS**

Voltage adjustability	Both outputs	±10% min.
Minimum load	Both outputs	0%
Ripple and noise	20MHz bandwidth	50mV pk-pk max. 15mV rms max.
Short circuit protection		Both outputs
Turn-on characteristics	Both outputs	Monotonic

**INPUT SPECIFICATIONS**

Input voltage range	48V nominal	36 to 75VDC
Input current	No load Remote OFF	80mA max. 6mA max.
Active high remote ON/OFF Logic compatibility		Open collector ref to -input Open circuit or >2.4VDC <0.4VDC
Undervoltage lockout	Power up Power down	35.5V (typ.) 33.5V (typ.)
Start-up time	Power up Remote ON/OFF	14ms (typ.) 14ms (typ.)

**EMC CHARACTERISTICS**

Immunity:		
ESD air enclosure	EN61000-4-2	8kV/6kV (O/P within spec.)
Radiated field enclosure	EN61000-4-3	10V/m (O/P within spec.)
Conducted	EN61000-4-6	10V (O/P within spec.)
Input transients		100V, 100ms

**GENERAL SPECIFICATIONS**

Efficiency		See table
Basic insulation	Input/output	2250VDC
Switching frequency	Fixed	480kHz
Approvals and standards	(See Notes 1 and 2)	EN60950 VDE UL/cUL 60950
Material flammability		UL94V-0
Weight		34g (1.2oz)
MTBF	Telcordia Tech SR-332	2,883,816 hours

**ENVIRONMENTAL SPECIFICATIONS**

Thermal performance	Operating ambient., temperature	-40°C to +85°C
	Non-operating	-55°C to +125°C

**PROTECTION**

Short-circuit		Continuous
Over-voltage		Non-latching
Thermal		125°C hot spot temperature with automatic recovery



# Quarter-Brick Series

Dual output



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

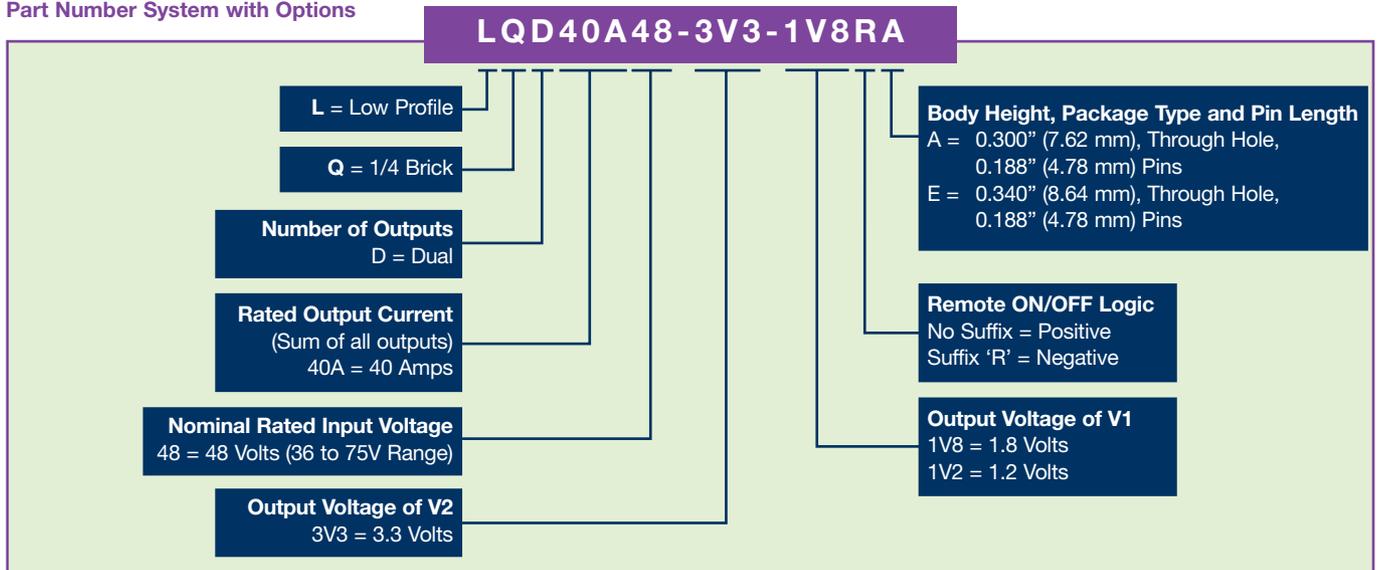
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**NEW Product**

OUTPUT VOLTAGE				OUTPUT				OVP		EFFICIENCY	
NOMINAL		INITIAL SET POINT <sup>(3)</sup>		REGULATION BAND		CURRENT		TRIP POINT		(TYP.)	MODEL NUMBER
1	2	1	2	1	2	1	2	1	2		
<b>QUARTER-BRICK DUAL OUTPUT PERFORMANCE MODELS</b>											
1.2V	3.3V	1.18 - 1.22V	3.25 - 3.35V	1.16 - 1.24V	3.2V - 3.4V	20A	20A	1.5V	4.0V	90.0%	LQD40A48-3V3-1V2
1.5V	3.3V	1.48 - 1.55V	3.25 - 3.35V	1.44 - 1.55V	3.2V - 3.4V	20A	20A	1.8V	4.0V	90.5%	LQD40A48-3V3-1V5
1.8V	3.3V	1.77 - 1.83V	3.25 - 3.35V	1.75 - 1.85V	3.2V - 3.4V	20A	20A	2.0V	4.0V	90.5%	LQD40A48-3V3-1V8
2.5V	3.3V	2.46 - 2.54V	3.25 - 3.35V	2.42 - 2.58V	3.2V - 3.4V	20A	20A	3.0V	4.0V	90.5%	LQD40A48-3V3-2V5
<b>QUARTER-BRICK DUAL OUTPUT VALUE MODELS</b>											
1.2V	3.3V	1.18 - 1.22V	3.25 - 3.35V	1.16 - 1.24V	3.20V - 3.40V	15A	15A	1.5V	4.0V	90.0%	LQD30A48-3V3-1V2
1.5V	3.3V	1.48 - 1.52V	3.25 - 3.35V	1.44 - 1.55V	3.20V - 3.40V	15A	15A	1.8V	4.0V	90.5%	LQD30A48-3V3-1V5
1.8V	3.3V	1.77 - 1.83V	3.25 - 3.35V	1.75 - 1.85V	3.20V - 3.40V	15A	15A	2.0V	4.0V	90.5%	LQD30A48-3V3-1V8
2.5V	3.3V	2.46 - 2.54V	3.25 - 3.35V	2.42 - 2.58V	3.20V - 3.40V	15A	15A	3.0V	4.0V	91.0%	LQD30A48-3V3-2V5
3.3V	5.0V	3.25 - 3.35V	4.92 - 5.08V	3.20 - 3.40V	4.85V - 5.15V	15A	10A	4.0V	6.0V	91.0%	LQD25A48-5V0-3V3

**Part Number System with Options**



**Notes**

- 1 User must provide recommended fuses in order to comply with safety approvals. See Application Note 137.
- 2 Maximum continuous output power.  
90 Watts for LQD40A48-3V3-1V2 models  
96 Watts for LQD40A48-3V3-1V5 models  
102 Watts for LQD40A48-3V3-1V8 models  
116 Watts for LQD40A48-3V3-2V5 models  
67.5 Watts for LQD30A48-3V3-1V2 models  
72 Watts for LQD30A48-3V3-1V5 models  
76.5 Watts for LQD30A48-3V3-1V8 models  
87 Watts for LQD30A48-3V3-2V5 models  
87.5 Watts for LQD25A48-5V0-3V3 models
- 3  $I_{o1} = I_{max}$ ,  $I_{o2} = I_{max}$ .

