

Quarter-Brick Series

Wide Input IBC

Total Power: 168W
Input Voltage: 36 - 75VDC
of Outputs: Single



Rev.04.02.08
qbwiibc
1 of 4

Special Features

- Wide input 36 Vdc to 75 Vdc
- Output voltage of 12 V \pm 10%
- Current rating 14 A
- Ultra high efficiency, 94.5% typical
- Industry standard quarter-brick footprint
- Low profile - 0.35"
- Remote ON/OFF
- Available RoHS compliant
- 2 Year Warranty

This series is a Quarter-Brick, wide-input intermediate bus converter (IBC). Capable of operating from any input voltage in the range 36 Vdc to 75 Vdc, this high efficiency isolated dc-dc converter module generates a semi-regulated 12 V output and can deliver up to 14 A. This series features a low profile open-frame construction and has an industry standard quarter-brick footprint.

Safety

UL/cUL : CAN/CSA 22.2 No.
60950-00 : UL 60950
UL 60950 File No. E174104

TÜV Product Service (EN60950)
Certificate No.
B 04 07 38572 046

Specifications

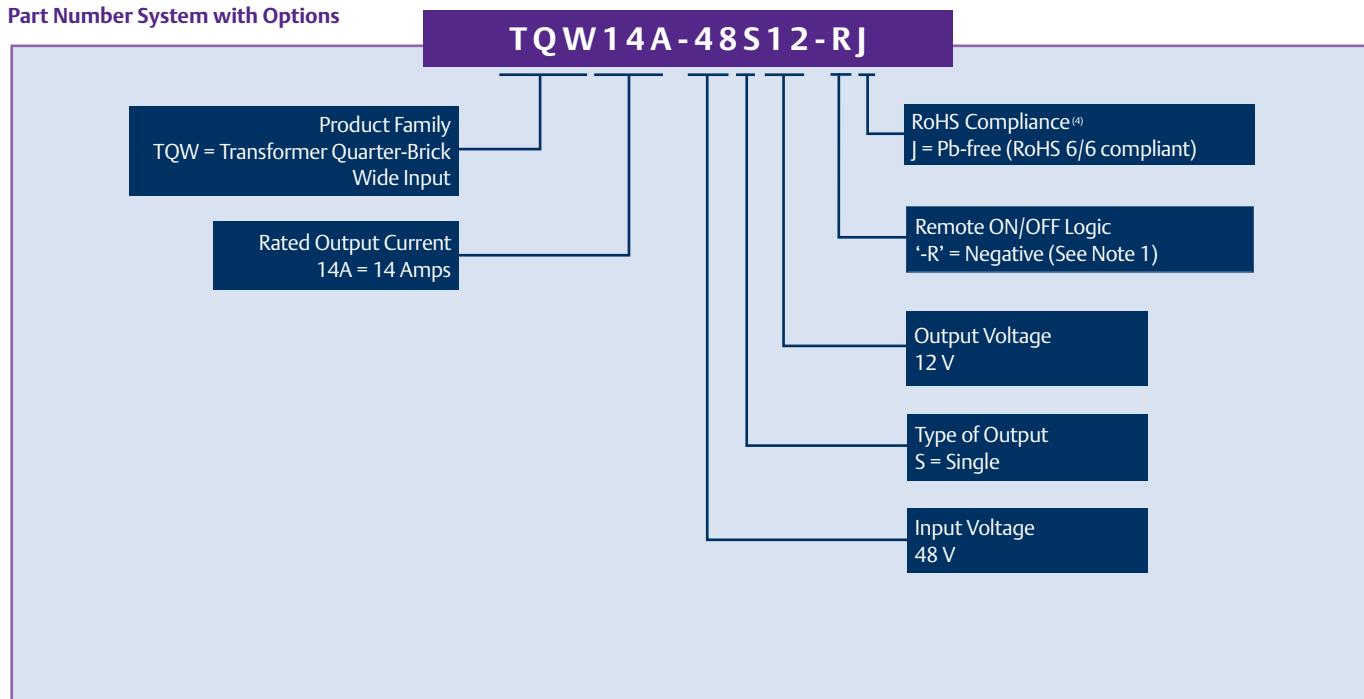
All specifications are typical at nominal input, full load at 25 °C unless otherwise stated.

OUTPUT SPECIFICATIONS			EMC CHARACTERISTICS		
Output voltage	(Nominal)	12 Vdc	Conducted emissions	EN55022	Level A
Output voltage range		10.8-13.2 Vdc	Radiated emissions	EN55022	Level B
Total regulation (Over line, load and temperature)		±10% max. 36-75 Vin ±5% max. 40-60 Vin	Immunity: ESD air	EN61000-4-2 8 kV	Level A
Output current		0 A min. 14 A max.	ESD contact	EN61000-4-2 6 kV	
Ripple and noise (See Note 2)	(0-20 MHz)	150 mV pk-pk	Radiated field enclosure	EN61000-4-3 10 V/m	
Output capacitance	External to unit	200 µF min.	Conducted (dc power)	EN61000-4-6 10 V	
INPUT SPECIFICATIONS			Conducted (signal)	EN61000-4-6 10 V	
Input voltage range			Input transients	ETS 300 132-2, ETR 283	
Input current	No load Max.	100 mA 3.9 A max. @ 48 Vin	GENERAL SPECIFICATIONS		
Active low remote ON/OFF (See Note 1)	ON OFF	Open collector ref to input >1.1 Vdc or floating <0.8 Vdc	Efficiency	94.5% typ.	
Start-up time	Power-up from Remote ON/OFF	15 ms typ.	Basic insulation	Input/output	2250 Vdc
ENVIRONMENTAL SPECIFICATIONS			Switching frequency	333 kHz	
PROTECTION			Approvals and standards	EN60950 (TÜV Product Service) UL/cUL60950	
Thermal performance (See Note 3)			Material flammability	UL94V-0	
Thermal			Weight	40 g (1.43 oz)	
Thermal			MTBF	MIL-HDBK-217F	156,000 hours
Thermal			Representative model:	14 A @ 48 Vin, 40 °C 100% load ground benign	Telcordia SR-332
Thermal					1,231,000 hours
Thermal			Hiccup, auto recovery		
Thermal			Auto recovery		

Specifications Contd.

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	TOTAL REGULATION	MODEL NUMBER ^(1,4)
168 W	36-75 Vdc	12 V	0 A	14 A	94.5%	±10%	TQW14A-48S12-RJ

Part Number System with Options

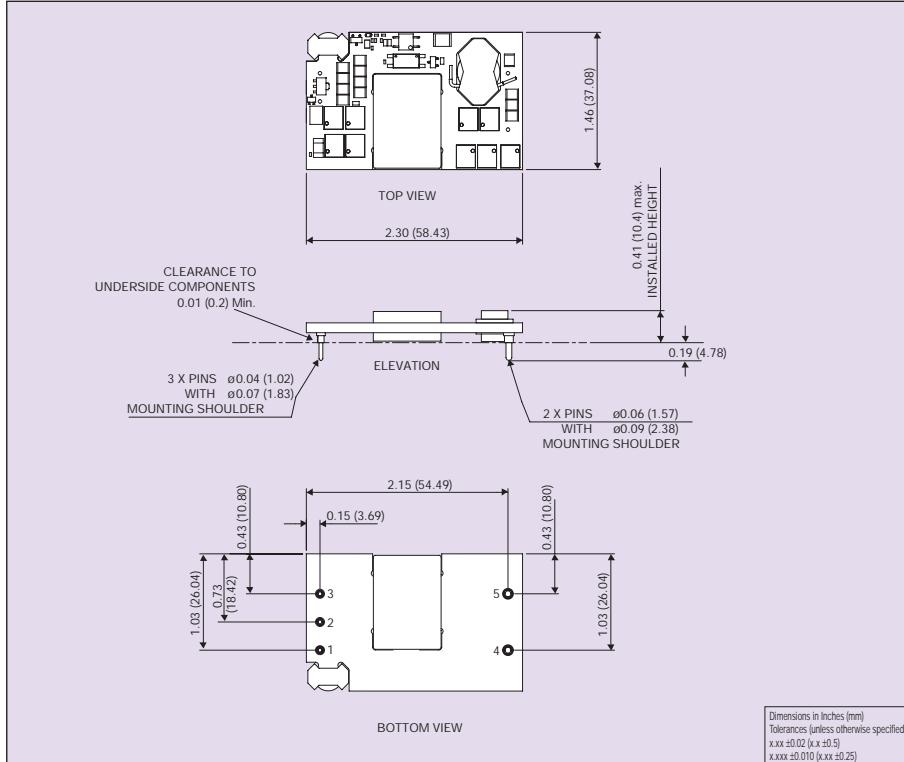


Notes

- 1 The standard product features active-low remote ON/OFF.
Active low ON/OFF
ON <0.7 V
OFF > 1.1 V or open circuit.
- 2 Tested with 4 x 47 µF tantalum capacitors plus 2 x 4.7 µF ceramic capacitors.
See Application Note 135 for set-up.
- 3 Derating curves available in both the Longform Datasheet and Application Note.
- 4 TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.

RECOMMENDED SYSTEM CAPACITANCE

Input capacitance	33 µF
Output capacitance	200 µF/10 mW ESR max.



Dimensions in Inches (mm)
Tolerances (unless otherwise specified)
x.xx ± 0.02 (x.x ± 0.5)
xxxx ± 0.010 (xxx ± 25)

PIN CONNECTIONS	
PIN NUMBER	FUNCTION
1	Vin+
2	Remote
3	Vin-
4	Vout+
5	Vout-

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