

Quarter-Brick Series

Fixed Ratio 2nd Generation IBC

Total Power: 600W
Input Voltage: 38 - 55VDC



Special Features

- 48 V input with isolated 9.6 V output
- Ultra-high efficiency, 97%
- Unprecedented usable output power levels
- High power density open-frame technology
- Wide operating ambient temperature range
- DOSA quarter-brick high current footprint and pinout
- Low profile, 0.48" (12.2 mm)
- Meets basic insulation requirements of EN60950-1
- Remote ON/OFF and overtemperature protection
- RoHS compliant
- 2 Year Warranty

Safety

- UL/cUL : CAN/CSA 22.2 No. 60950-1 : UL60950-1 File No. E135734
- VDE File No. 10401-3336-0206 Licence No. 40012752

Electrical Specifications

Input		
Input voltage range:		38-55 Vdc
Input current:	Remote OFF	6.5 mA typ.
Input current (max.):	(See Note 1)	13 A max. @ lo max. and Vin = min. rated
Input reflected ripple:	(See Note 4)	1200 mA (pk-pk) 35 mA rms
Remote ON/OFF Logic compatibility		(See Note 6)
ON		Open collector ref. to -Input > 2.4 Vdc
OFF:		< 0.4 Vdc
Undervoltage lockout:	Power up Power down	34.5 V 33 V
Start-up time: (See Note 3)	Power up Remote ON/OFF	11rms 2 rms
Output		
Line regulation:	Low line to high line	See table
Load regulation:	Full load to min. load	See Table
Total error band: (including setpoint, line, load and temperature)	Vin = 38 V to 55 V	7.0 - 11.0 Vdc
Minimum load:		0 A
Overshoot:	At turn-on and turn-off	None
Undershoot:		None
Ripple and Noise: 5-20 MHz	(See Note 2)	100 mV pk-pk typ. 20 mV rms typ.

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



Electrical Specifications Continued

EMC Characteristics		
Immunity:		
ESD air enclosure:	EN61000-4-2 8 kV, 6 kV	Air, contact
Input transients:	Input voltage	Duration before shutdown
	> 59 V	2 Seconds
	> 60 V	1 Second
	> 62 V	0 Seconds
General Specifications		
Efficiency:		97%
Basic insulation:	Input/output	2250 Vdc
Switching frequency:	Fixed	340 kHz typ.
Approvals and (Pending) standards:	(See Note 5)	EN60950-1 VDE UL/cUL60950-1
Material flammability:		UL94V-0
Weight:		59 g (2.08 oz)
MTBF representative model:	Telcordia Tech SR-332 48 Vin, 40 °C, 50% load ground benign	TBD hours
Protection:		
Short-circuit		Hiccup
Overvoltage:	(See Note 9)	Non-latching
Thermal		140 °C hot spot

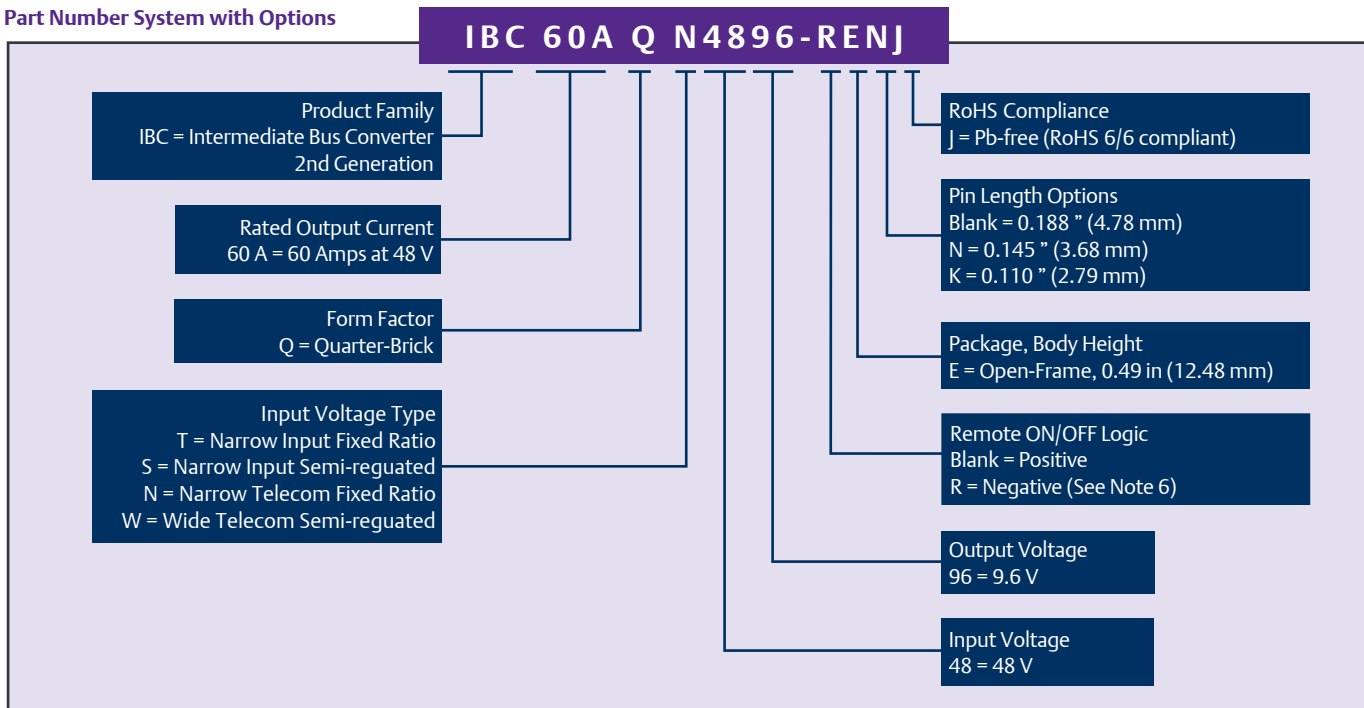
Environmental Specifications

Thermal Performance:	Operating ambient temperature	-40 °C - +85 °C
	Non-operating	-55 °C to +125 °C

Ordering Information

Ordering Information									
Output Power (Max.)	Input Voltage	Output Voltage	Output Current (min.)	Output Current max.)	Efficiency (typ)	Regulation			Model Numbers
						Set Point Accuracy	Line %	Load %	
642 W	38-55 Vdc	9.6 V	0 A	60 A	97%	--	32.5%	2.5%	IBC60AQN4896J

Part Number System with Options

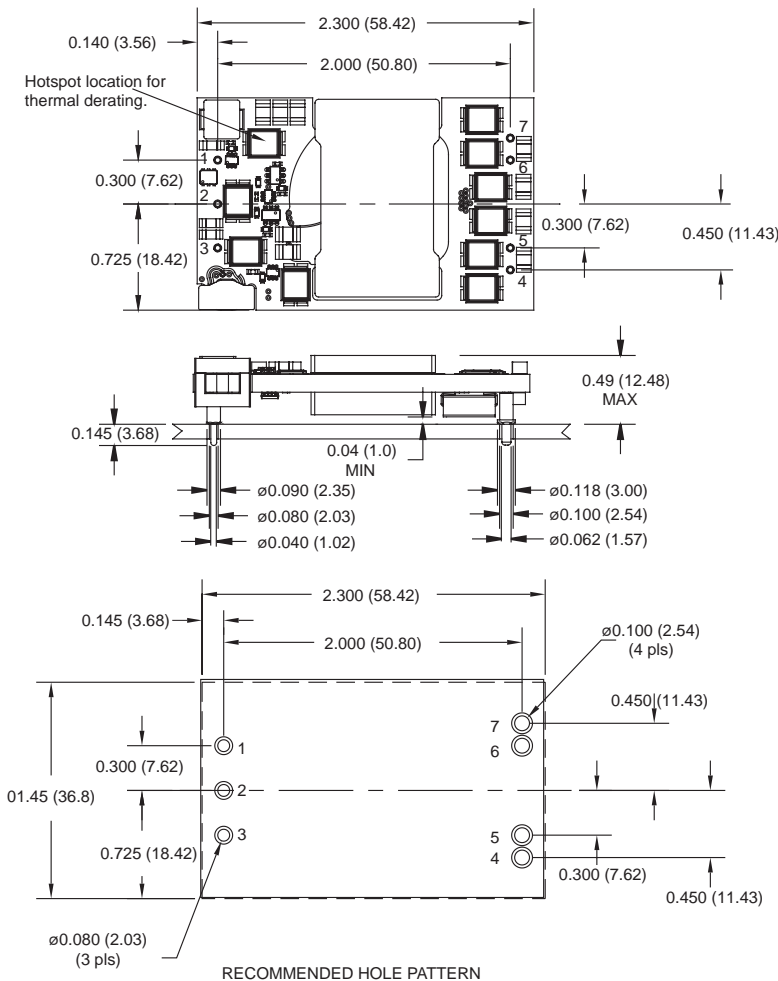


Notes

- 1 Recommended input fusing is a 20 A HRC 250 V rated fuse.
- 2 Measured with external filter. See Application Note 209 for details.
- 3 Start-up into resistive load.
- 4 Peak to peak measured without external Pi filter. Significant reduction possible with external filter. See Application Note 209 for details.
- 5 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 6 Active-low remote ON/OFF option is also available. Please add the suffix '-R' to the part number, e.g. IBC60AQN4896-REJ.
- 7 Maximum output power at maximum input voltage.
- 8 Efficiency at 100% maximum output voltage.
- 9 After an input overvoltage latch off, the input voltage must be returned to 55 V or lower for unit to restart.

CAUTION: Hazardous internal voltages and high temperatures. Ensure that unit is not user accessible.

Mechanical Drawing



RECOMMENDED HOLE PATTERN

Pin Connections	
Pin Number	Function
1	+ Vin
2	Remote ON/OFF
3	-Vin
4	+Vout
5	-Vout
6	+Vout
7	-Vout

Americas

5810 Van Allen Way
Carlsbad, CA 92008
USA
Telephone: +1 760 930 4600
Facsimile: +1 760 930 0698

Europe (UK)

Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX
United Kingdom
Telephone: +44 (0) 1384 842 211
Facsimile: +44 (0) 1384 843 355

Asia (HK)

14/F, Lu Plaza
2 Wing Yip Street
Kwun Tong, Kowloon
Hong Kong
Telephone: +852 2176 3333
Facsimile: +852 2176 3888

For global contact, visit:

www.PowerConversion.com
techsupport.embeddedpower@emerson.com

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

Emerson Network Power.
The global leader in enabling
business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- **Embedded Power**
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

EmersonNetworkPower.com

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co. ©2008 Emerson Electric Co.