

## IBC32 Eighth-Brick Series

Fixed Ratio  
2nd Generation IBC

**Total Power:** 300W  
**Input Voltage:** 38 - 55 Vdc

### 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
- Industry standard eighth-brick 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 60950-1, 1st Edition  
EN 60950-1 VDE



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## Electrical Specifications

Output		
Line regulation:	Low line to high line	See table
Load regulation	Full load to min. load	See table
Total error band (including set-point, 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	(See note 2)	100 mV pk-pk typ. 30 mV rms typ.
5 - 20 MHz		
Input		
Input voltage range	38 - 55 Vdc	
Input current	Remote OFF	7 mA typ.
Input current (max.)	(See note 1)	8.6 A max. @ Io max. and Vin = min. rated
Input reflected ripple	550 mA (pk-pk)	
(See note 4)	200 MA rms	
Remote ON/Off		(see note 6)
Logic compatibility		Open collector ref. to- input
On		>2.4 Vdc
OFF		<0.8 Vdc
Undervoltage lockout	Power-up	35 V
	Power-down	33.5 V
Startup time (see note 3)	Power-up	12 ms
	Remote ON/OFF	1 ms



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

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## EMC Characteristics

Immunity:		
ESD air enclosure	EN61000-4-2 8 kV, 6 kV	(Air contact)
Input transients:	Input voltage	Duration before shutdown
	>58 V	2 seconds
	>60 V	1 second
	>62 V	0 seconds

## General Specifications

Efficiency		97%
Basic insulation	Input/output	2250 Vdc
Switching frequency	Fixed	350 kHz typ.
Approvals and standards (see note 5)		EN60950-1 VDE UL/cUL60950-1
Material flammability		UL94V-0
Weight		37 g (1.31 oz)
MTBF	Telcordia Tech SR-332	2,100,000 hours
Representative model:	48 Vin, 40 °C, 50% load ground benign	

## Environmental Specifications

Thermal performance	Operating ambient, temperature	-40 °C to +85 °C
	Non-operating	-55 °C to +125 °C
<b>Protection</b>		
Short-circuit	Hiccup	
Overvoltage	(See note 9)	Non-latching
Thermal		125 °C hot spot

## Ordering Information

Output Power (Max.)	Input Voltage	Output Voltage	Output Current (Min.)	Output Current (Max.)	Efficiency (Typ.)	Set Point Accuracy %	Regulation <sup>2</sup> Line %	Load	Model Number
300 W	38 - 55 Vdc	9.6 V	0 A	32 A	97%	---	ΔVin/5	2.3%	IBC32AEN4896J

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

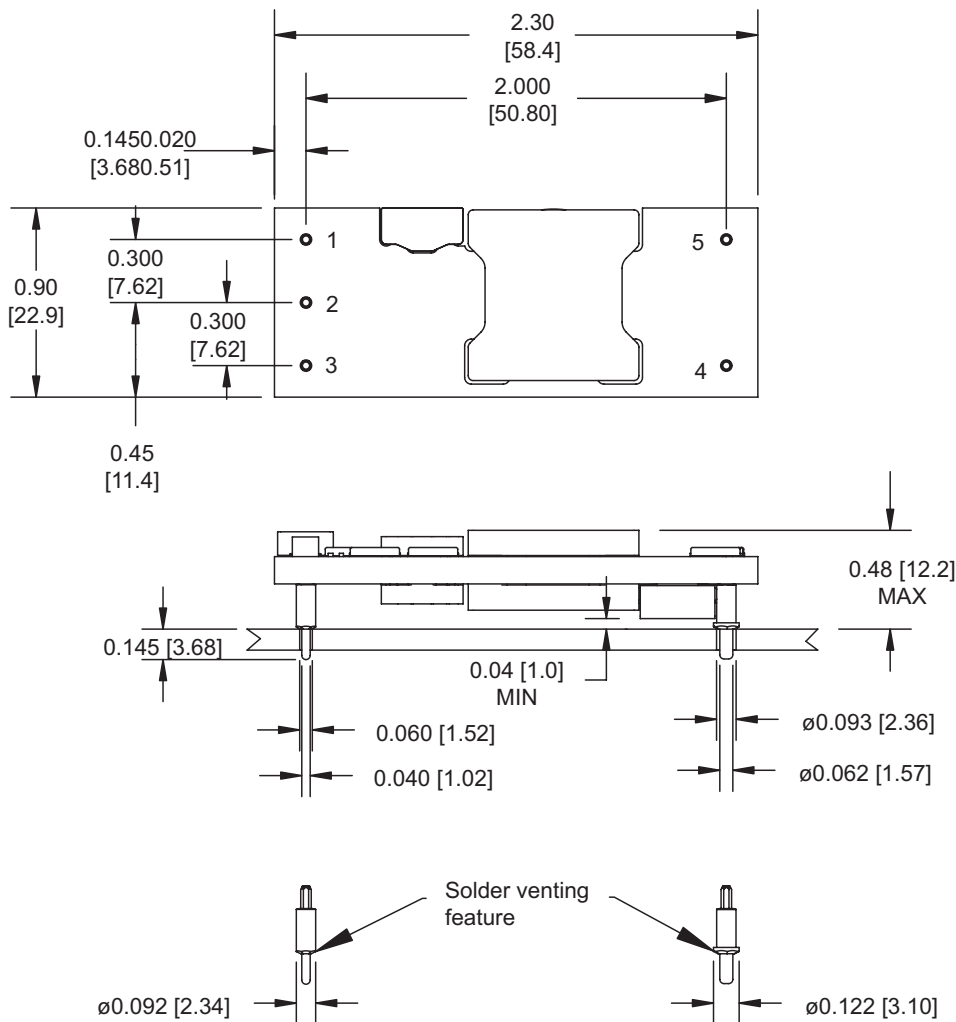
## Part Number System with Options

Product Family	Rated Output Current	Form Factor	Input Voltage Type	Input Voltage	Output Voltage	Remote ON/OFF Logic	Package, Body Height	Pin Length Options	RoHS Compliance <sup>(10)</sup>
<b>IBC</b>	<b>32A</b>	<b>E</b>	<b>N</b>	<b>48</b>	<b>96</b>	<b>R</b>	<b>E</b>	<b>N</b>	<b>J</b>
IBC Intermediate Bus Converter 2nd Generation	32 A = 32 Amps at 48 V	E = Eighth-Brick	T = Narrow Input Fixed Ratio S = Narrow Input Semi-regulated N = Narrow Telecom Fixed Ratio W = Wide Telecom Semi-regulated	48 = 48 V	96 = 9.6 V	Blank = Positive R = Negative (See Note 6)	E = Open-frame, 0.48 in (12.2 mm)	Blank = 0.188 " (4.78 mm) N = 0.145 " (3.68 mm) K = 0.110 " (2.79 mm)	J = Pb-free (RoHS 6/6 compliant)

### Notes

- 1 Recommended input fusing is a 20 A HRC 250 V rated fuse.
- 2 Measured with external filter. See Application Note 208 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 208 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. IBC32AEN4896-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.
- 10 TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.

## Mechanical Drawing



Dimensions in Inches (mm)  
Tolerances (unless otherwise specified)  
x.xx 0.02 (x.x 0.5)  
x.xxx 0.010 (x.xx 0.25)

### Pin connections

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

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