Rev.05.12.08
eighth_brick_300w_ibc32

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

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.
5 - 20 MHz		30 mV rms typ.
Input		
Input voltage range	38 - 55 Vdc	
Input current	Remote OFF	7 mA typ.
Input current (max.)	(See note 1)	8.6 A max. @ lo 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 compatiblity		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

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EMERSON™
Network Power

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

EMC Charateristics

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 Representative model:	Telcordia Tech SR-332 48 Vin, 40 °C, 50% load ground benign	2,100,000 hours

Environmental Specifications

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

Protection

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.)	Regulation[2] Set Point Accuracy %	Regulation[2] Line %	Regulation[2] 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.

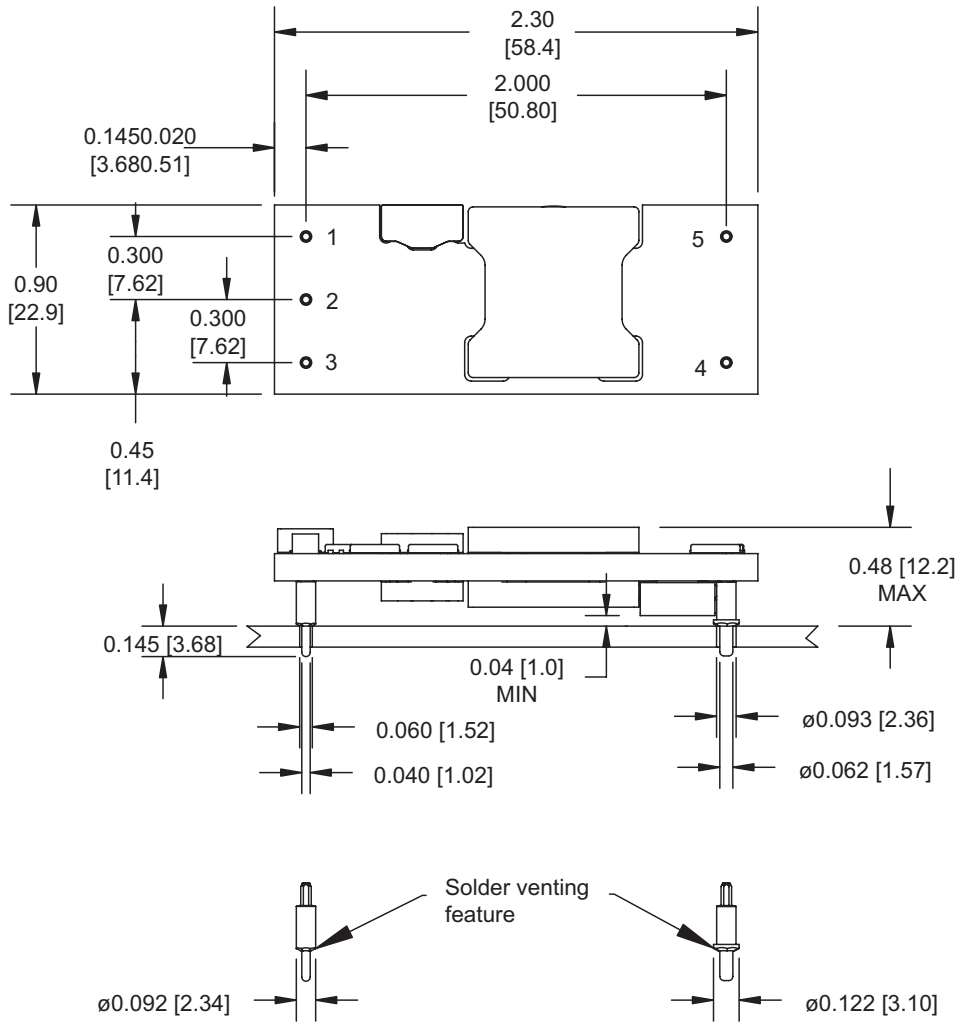
Part Number System with Options

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[10]
IBC	**32A**	**E**	**N**	**48**	**96**	**-**	**R**	**E**	**N**	**J**
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-reguated N = Narrow Telecom Fixed Ratio W = Wide Telecom Semi-reguated	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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