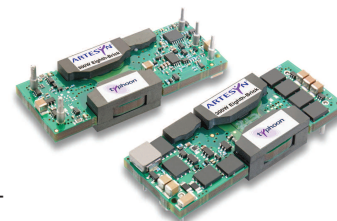


NEW Product



- **48 V input with isolated 12 V output**
- **Ultra-high efficiency, 95.5% 12 V @ 25 A**
- **Unprecedented usable output power levels**
- **High power density (362 W/in³) open-frame technology**
- **Wide operating ambient temperature range**
- **Industry standard eighth-brick footprint and pinout**
- **Low profile, 0.40" (10.2 mm)**
- **Meets basic insulation requirements of EN60950-1**
- **Remote ON/OFF and overtemperature protection**
- **Available RoHS compliant**

This is a new series of high power density, low profile Eighth-Brick Intermediate Bus Converters (IBC) targeted specifically at the computer, industrial electronics, and telecommunications distributed power markets. In a Distributed Power Architecture (DPA), these converters are intended to power multiple downstream non-isolated point-of-load (POL) converters. The elevated conversion efficiency, open-frame construction, and superior thermal performance of this series produces rated output currents up to 25 A and power densities as high as 362 W/in³. These superior performance levels enable these eighth-brick models to replace quarter-brick and half-brick converters in applications where footprint, profile, and cost are critical. The IBC25A fixed ratio model produces an unregulated 12 V output while the narrow and wide input IBC20A and IBC17A models produce a 12 V output semi-regulated with line and load variations. All models are fully protected against overcurrent, overvoltage, and overtemperature. A positive logic primary referenced remote ON/OFF input is included as standard with negative logic available as an option.



Patent No. 6,765,810
Other Patents Pending



2 YEAR WARRANTY

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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

Output setpoint accuracy	See Table	
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)	IBC25AET4812 IBC20AES4812 IBC17AEW4812	9.70-13.40 Vdc 11.52-12.48 Vdc 11.40-12.60 Vdc
Minimum load	0 A	
Overshoot	At turn-on and turn-off	None
Undershoot	None	
Ripple and noise 5-20 MHz	(See Note 2)	60 mV pk-pk typ. 20 mV rms typ.

INPUT SPECIFICATIONS

Input voltage range	See Table	
Input current	Remote OFF	6 mA typ.
Input current (max.)	(See Note 1)	6.9 A max. @ I _o max. and V _{in} = min. rated
Input reflected ripple (See Note 4)	IBC25AET4812 IBC20AES4812 IBC17AEW4812	550 mA (pk-pk) 230 mA (pk-pk) 230 mA (pk-pk)
Remote ON/OFF Logic compatibility ON OFF	(See Note 6) Open collector ref. to -input >2.4 Vdc <0.4 Vdc	
Undervoltage lockout: IBC25AET4812 and IBC20AES4812 IBC17AEW4812	Power up Power down Power up Power down	40 V 38 V 35.2 V 34 V
Start-up time (See Note 3)	Power up Remote ON/OFF	15 ms 5 ms

EMC CHARACTERISTICS

Immunity:		
ESD air enclosure	EN61000-4-2 8 kV, 6 kV	(air, contact)
Input transients:	IBC25AET4812 IBC20AES4812 IBC17AEW4812	60 V, 100 ms 60 V, 100 ms 100 V, 100 ms

GENERAL SPECIFICATIONS

Efficiency	See Table	
Basic insulation	Input/output	2250 Vdc
Switching frequency	Fixed	600 kHz typ.
Approvals and standards (See Note 5)	EN60950-1 VDE UL/cUL60950-1	
Material flammability	UL94V-0	
Weight	33 g (1.16 oz)	
MTBF	Telcordia Tech SR-332 5,500,000 hours	
Representative model:	48 Vin, 40 °C, 50% load ground benign	

ENVIRONMENTAL SPECIFICATIONS

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

Short-circuit	Hiccup
Overvoltage	Non-latching
Thermal	125 °C hot spot



Eighth-Brick Series

2nd Generation IBC



DC-DC CONVERTERS | 200-300 W Intermediate Bus Converters

2

For the most current data and application support visit www.artesyn.com/powergroup/products.htm

NEW Product

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION			MODEL NUMBER (6,7,8)
						SET POINT ACCURACY	LINE %	LOAD %	
300 W	42-53 Vdc	12 V	0 A	25 A	95.5%	----	+10,-12.5%	±1.5%	IBC25AET4812J
240 W	42-53 Vdc	12 V	0 A	20 A	94.5%	±0.25%	±0.3%	±1.5%	IBC20AES4812J
200 W	36-75 Vdc	12 V	0 A	17 A	94.0%	±0.25%	±1.0%	±1.5%	IBC17AEW4812J

Part Number System with Options

IBC 17A E W4812-RANJ

Product Family
IBC = Intermediate Bus Converter
2nd Generation

Rated Output Current
17A = 17 Amps etc.

Form Factor
E = Eighth-Brick
Q = Quarter-Brick
S = Sixteenth-Brick

Input Voltage Type
T = Narrow Input Fixed Ratio
S = Narrow Input Semi-regulated
N = Narrow Telecom Fixed Ratio
W = Wide Telecom Semi-regulated

RoHS Compliance (7)
J = Pb-free (RoHS 6/6 compliant)

Pin Length Options
Blank = 0.188 " (4.78 mm)
N = 0.145 " (3.68 mm)
K = 0.110 " (2.79 mm)

Package, Body Height
A = Open-Frame, 0.40 in (10.2 mm)
E = Open-Frame, 0.45 in (11.4 mm)

Remote ON/OFF Logic
Blank = Positive
R = Negative (See Note 6)

Output Voltage
12 = 12 V

Input Voltage
48 = 48 V

Notes

- 1 Recommended input fusing is a 20 A HRC 250 V rated fuse.
- 2 Measured with external filter. See Application Note 182 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 182 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. IBC17AEW4812-RAJ.
- 7 TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
- 8 NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at <http://www.artesyn.com/powergroup/products.htm> to find a suitable alternative.

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

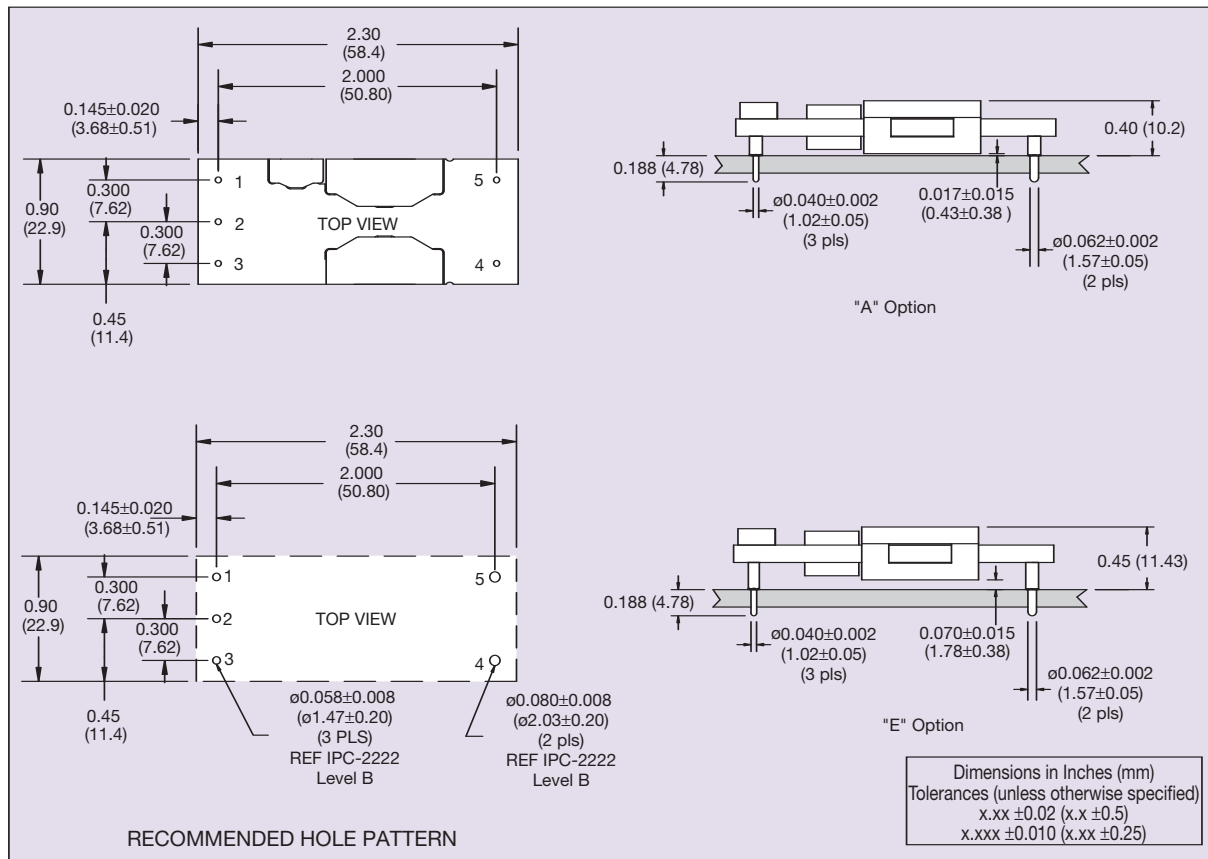
International Safety Standard Approvals



UL/cUL CAN/CSA 22.2 No. 60950-1 : UL60950-1
File No. E135734



VDE File No. 1040100-3336-0206. Licence No. 40012752



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

Figure 1 - Mechanical Drawing and Pinout Table