

# High Density DC-DC Modules

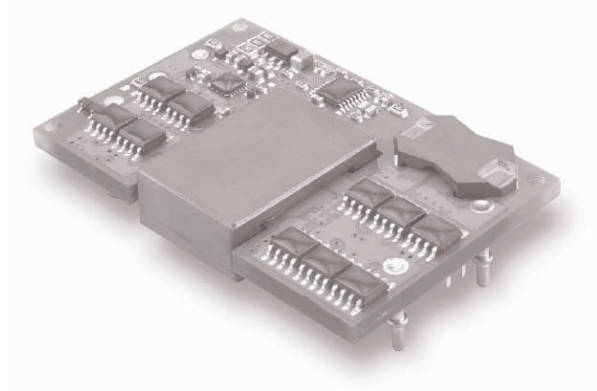


## ASBC Series 180-300 Watt Bus Converters

[www.powersolve.co.uk](http://www.powersolve.co.uk)

### Features

- Quarter brick package
- Efficiency to 95%
- Input under voltage protection
- Over current protection
- Over temperature protection
- Remote On/Off control
- 2250VDC isolation



### Electrical Specification

#### INPUT

Input Voltage Range	42 ~ 53V (ASBC300) 36 ~ 75V (ASBC180)
Undervoltage Lockout	40V (ASBC300 power up) 38.5V (ASBC300 power down) 34V (ASBC180 power up) 32.5V (ASBC180 power down)
Over voltage lockout (ASBC300)	57V (ASBC300 turn-off threshold)
Positive Logic Remote ON/OFF	Open collector ref. to -Input, Module ON: open circuit, Module OFF: <0.8VDC Add suffix N to Model Number for Negative Logic Remote ON/OFF control
Input Filter	PI Type

#### OUTPUT

Voltage Accuracy	±1.0% max. measured at 48Vin and no load
Transient Response	<200µsec for a 25% step load change
Ripple & Noise, 20MHz BW	60mV rms, 120mV pk-pk max. measured with a 10µF tantalum & 1.0µF ceramic capacitor across the output

#### ENVIRONMENTAL

Temperature coefficient	±0.03%/°C max.
Short Circuit Protection	Continuous
Line Regulation	±13.0% max (ASBC300) measured over full input voltage range ±10.0% max. (ASBC180) measured over full input voltage range
Load Regulation	±6.0% max. measured at 48Vin from 0-100% load
Over Voltage Protection trip range	120% ~ 140% of Vo nominal (ASBC180)
Current Limit	110% ~ 140% Nominal Output

#### GENERAL

Efficiency	See table
Isolation Voltage	2250VDC min
Isolation Resistance	10 <sup>7</sup> ohms min.
Switching Frequency	300KHz typ. (ASBC300) 340KHz typ. (ASBC180)
Over temperature protection	120°C typ.
Operating ambient temperature range	-40°C to +85°C
Storage temperature range	-40°C to +125°C
Dimensions:	Standard model 2.28 x 1.45 x 0.40 inches 57.9 x 36.8 x 10.2 mm
	Suffix 'H' model 2.28 x 1.45 x 0.50 inches 57.9 x 36.8 x 12.7 mm
Weight	42g

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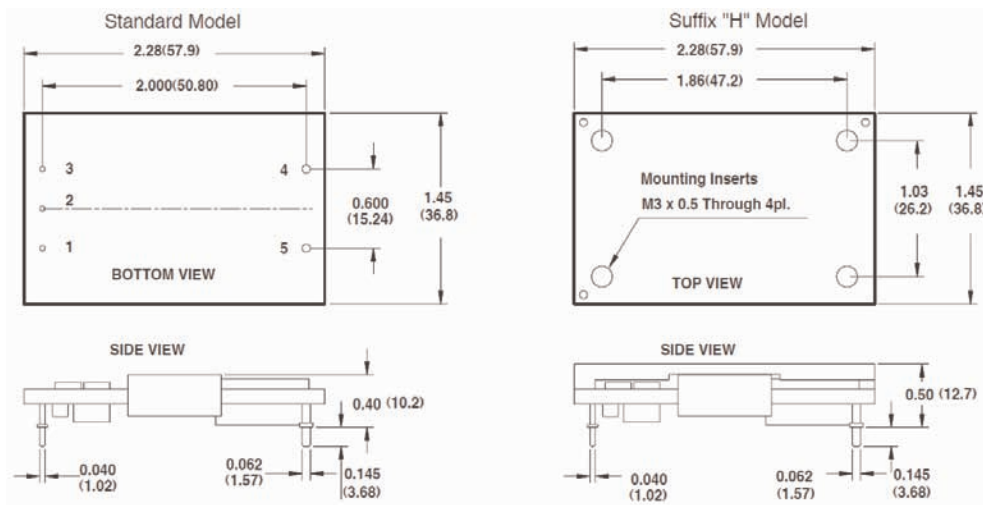
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## Output Voltage and Current Ratings

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.
				NO LOAD	FULL LOAD	
ASBC300-48S12	42.0 - 53.0VDC	12VDC	0 - 25A	100mA	6578mA	95
ASBC180-48S12	36.0 - 75.0VDC	12VDC	0 - 15A	70mA	3947mA	95

NOTE: Nominal Input Voltage 48VDC

## Mechanical and Connection Details

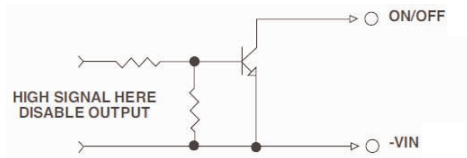


Pin Connection	
Pin	Function
1	+Vin
2	ON/OFF
3	-Vin
4	-Vout
5	+Vout

All dimensions in inches (mm)  
 Tolerances:  
 Inches x.xx ±0.02  
 x.xxx ±0.010  
 Millimeters x.x ±0.5  
 x.xx ±0.25

## Remote ON/OFF Control

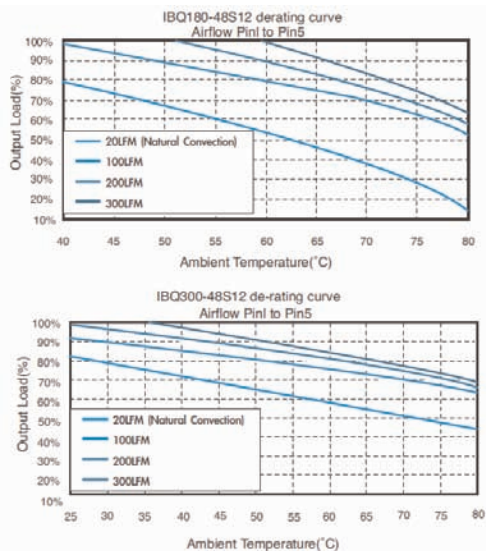
The ASBC Series allows the user to switch the module on and off electronically with the remote on/off feature. The ASBC Series are available with "positive logic" or "negative logic" (option).



## Logic Table

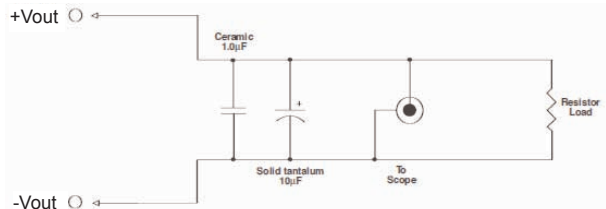
Logic State (Pin 2)	Negative Logic	Positive Logic
Logic low-Switch closed	Module on	Module off
Logic high-Switch open	Module off	Module on

## Derating Curves



## Output Noise

The output noise is measured with a 10µF tantalum and a 1.0µF ceramic capacitor across the output.



All specifications typical at nominal line, full load and 25°C unless otherwise stated.