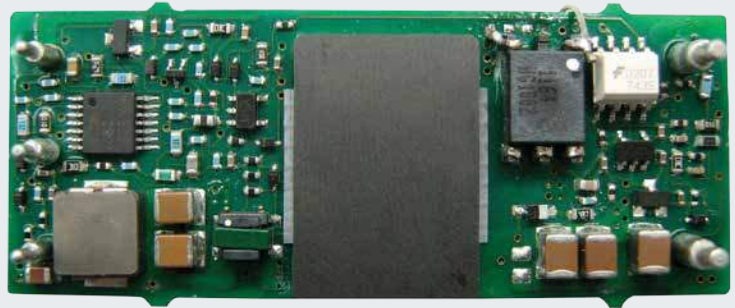


# ARTESYN IBC04-36S12

1/8<sup>th</sup> Brick Bus Converter



Advanced Energy's Artesyn IBC04-36S12 is the latest wide-range input isolated DC-DC converter specifically designed to supply non-isolated converter architectures. It operates from an ultra-wide input range of 18 Vdc to 60 Vdc and provides a regulated output voltage of 12 V. The output is rated to a power level up to 50 W.

Its protection features include non-latching OCP and OTP with non-latching OVP. It also has an enable pin on the primary side of the converter. The unit is an open frame design that is optimised for either contact-cooled applications or forced airflow applications.

## SPECIAL FEATURES

- Ultra wide input range
- Optimised for contact cooling
- Low ripple and noise
- Fixed switching frequency
- High capacitive load capability
- Pre-bias start-up capability
- Basic insulation system
- Through-hole termination
- Open frame construction

## SAFETY

- UL 60950-1
- CE Mark

## DATA SHEET

### Total Power:

50 W

### Input Voltage:

18 - 60 V

### Single Output:

12 V

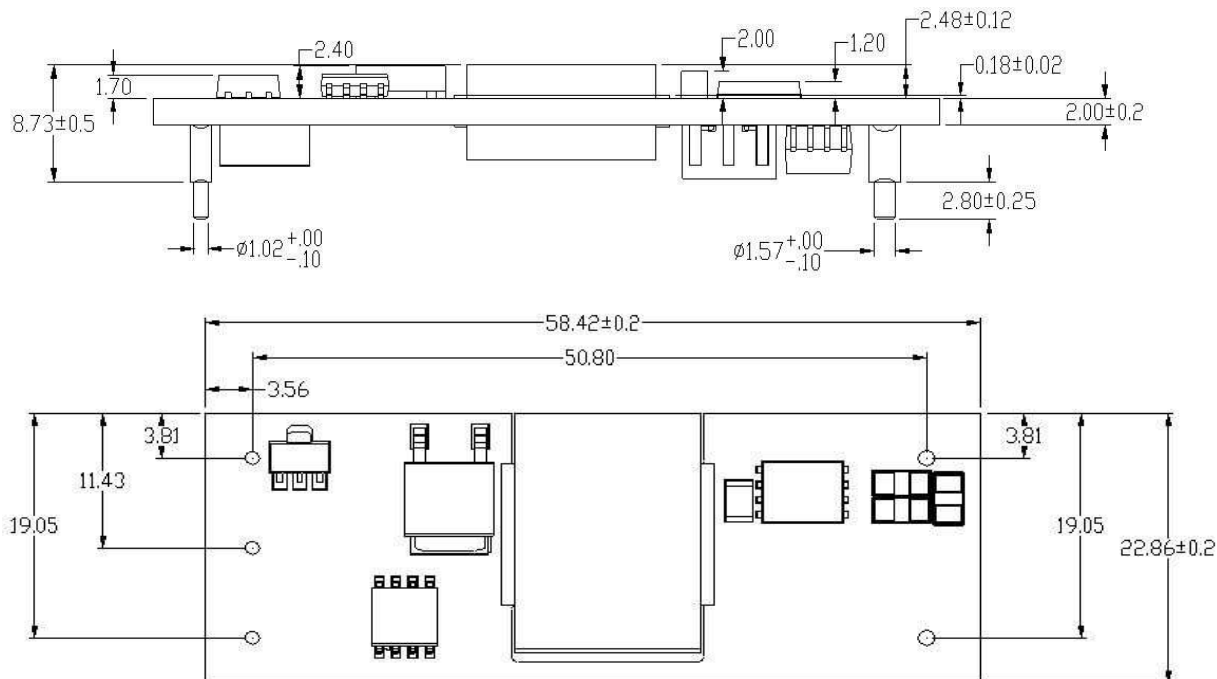
## ELECTRICAL SPECIFICATIONS

Input	
Input range	18 Vdc to 60 Vdc
Input surge	100 V for 100 mSec
Efficiency	92% typ (> 89.5% @ 2.8 A out - 4 A out & 18 Vin - 55 Vin)
Control	
Enable:	TTL compatible positive or negative enable
Output	
Output voltage	12 Vdc
Output current	0 A to 4 A
Ripple and noise	50 mV rms, 200 mV pk-pk
Regulation (total error band)	±5% Vout
Over current protection	5 A
Over voltage protection	15 V
Output overshoot	10% (Iout = Imax, Temperature = 25 °C)
Over temp protection	115 °C Typical
Output capacitance	0 µF to 2000 µF
Switching frequency	Fixed switching frequency 300 KHz Nominal (265 KHz min to 335 KHz Max at 25 °C)
Isolation voltage	1500 Vdc
Transient response	600 mV deviation 600 uS recovery (25% - 75% Iout)
UVLO Turn-on	18 Vdc
UVLO Turn-off	16 Vdc

## ENVIRONMENTAL SPECIFICATIONS

Storage temperature	-40 to +105 °C
Operating temperature	-40 to +85 °C (ambient)
MTBF	>1 Million hours target

## MECHANICAL SPECIFICATIONS



Pin #	Designation
PIN 1	+V <sub>IN</sub>
PIN 2	Enable
PIN 3	-V <sub>IN</sub>
PIN 4	-V <sub>OUT</sub>
PIN 5	+V <sub>OUT</sub>

## ORDERING INFORMATION

Input Voltage	Output Voltage	Output Current	Efficiency	Part Number
18 - 60 Vdc	12 V	4 A	91%	IBC04-36S12 (-SJ/-J)

## Note:

- Standard converter is negative enable
- '-SJ' = surface mount option RoHS-6 compliant
- '-J' = RoHS-6 compliant

## Notes

- 1 20 Mhz bandwidth. External 100 uF electrical capacitor and 1 uF ceramic capacitor placed across +Vout and -Vout; 150 uF e-cap or equivalent placed across +Vin and -Vin.
- 2 Efficiency measurements taken at full load and nominal line and Tamb = 25 °C
- 3 All specifications taken at nominal line, full load and Tamb = 25 °C unless otherwise noted
- 4 Mechanical dimensions are for reference only. Dimensions are in MM. Mechanical tolerance = ±0.5 mm
- 5 Technical reference notes should be consulted for detailed information when available.
- 6 All specifications are subject to change without notice
- 7 Warranty 2 years
- 8 The through-hole terminated modules are intended for wave-soldering process – special request for other manufacturing processes to be made to Artesyn.



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## ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE

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