Demo photo only. Actual marking may vary.

Evolving Sirius-Bishop series-**New** generation converter is composed of Isolated, board-mountable, fixed switching frequency dc-dc converters that use synchronous rectification to achieve extremely high power conversion efficiency. These DC-DC converter modules use advanced power processing, control and packaging technologies to enhance the performance, flexibility, reliability and cost effectiveness of mature power components. Each module is supplied completely encased to provide protection from the harsh environments seen in many industrial and transportation applications.

CE RoHS COMPLIANT REACH

Model Selection Guide

Typical @ Ta=+25°C under nominal line voltage and full load conditions unless noted.

Model	Input		Output			Efficiency @FL
	Voltage(V)		Voltage	Current	Power	
	Range	Nominal	(V)	(A)	(W)	Typ.(%)
ESBS018120-S-P-F30EC	9-36	24	12	2.5	30	88%
ESBS018120-D-P-F30EC	9-36	24	±12	±1.25	30	88%
ESBS018150-S-P-F30EC	9-36	24	15	2	30	88%
ESBS018150-D-P-F30EC	9-36	24	±15	±1	30	88%

Description: **E**volving **S**irius - **B**ishop series - **S**econd generation
New generation converter is composed of Isolated ,with **Positive** logicin a metal enclosure package, with **Non-Conductive Base**.

"E"nable polarity: "**-P**" for **Positive** logic **PI** Input Filter "**-N**" for negative logic **PI** Input Filter

※ The typ. Efficiency is for reference only.

Electrical Specifications

Input Specifications (Typical @ Ta=+25°C under nominal line voltage conditions unless noted.)

Parameter	Notes and Conditions	Min.	Typ.	Max.	Unit
Transient Input Voltage ranges	ESBS018models (100ms max)			50	VDC
Operating Input Voltage ranges	ESBS018models	9	24	36	VDC
Under-Voltage Lockout Start up voltage	ESBS018models			9	VDC
Under-Voltage Lockout Shutdown voltage	ESBS018models		8		VDC
Enable Function Input	Positive logic ON / OFF	Open or 8 ~ 20 / Short or 0 ~ 1.2			VDC
Input Filter	All models	Built-in Pi Filter			

Output Specifications

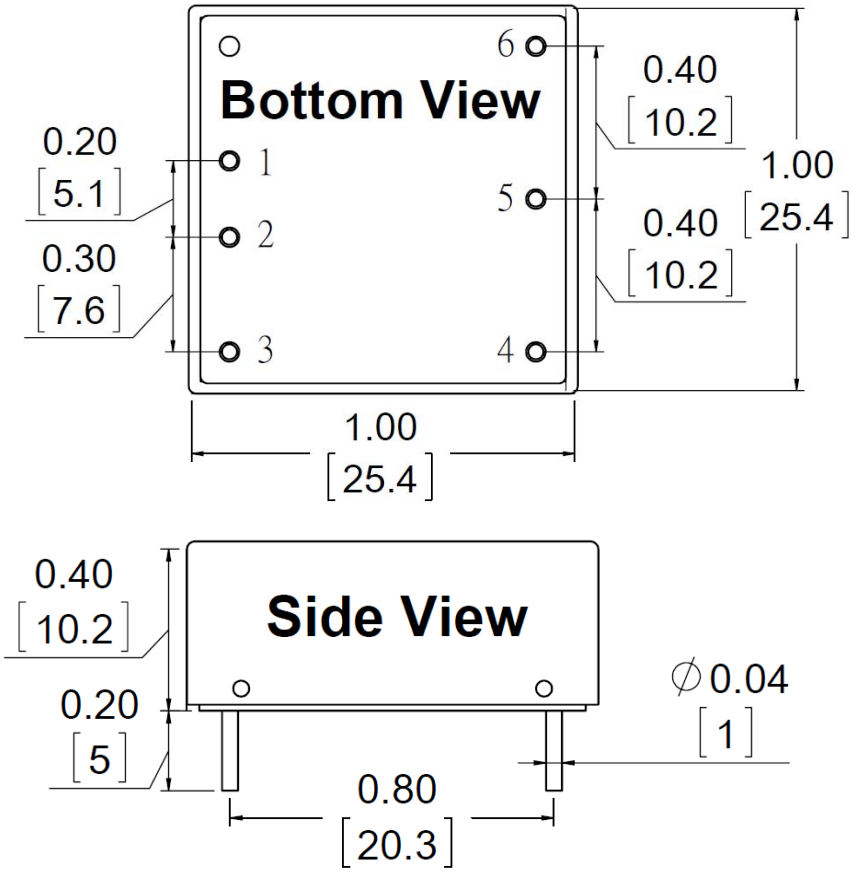
Parameter	Notes and Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy	V_{NOM} 50% Load			±1.5	%
Line Regulation	Low line to High line			±0.3	%
Load Regulation	10% to 100% load			±0.5	%
Output Ripple & Noise Voltage	Bandwidth 20MHz and with 1uF MLCC. Output Capacitor each output		1	1.5	mV_{pk-pk}
Temperature Coefficient				±0.04	% /˚C
Transient Recovery Time	25% load step change △Io/△t=2.5A/us		800		μSec.
Transient Peak Deviation			±2		%Vo
Start-Up time	When use Enable Function		20		mSec.
Trimming Output Voltage	V_{NOM} 10% Load		±10		%
Over voltage protection	V_{NOM} 10% Load		120		%
Output Power Protection	V_{NOM} (Current limit)		120		%

General Specifications

Parameter	Notes and Conditions	Min.	Typ.	Max.	Unit
Switching Frequency	V_{NOM}	200		330	KHz
Storage Temperature range	All models	-55		125	˚C
Operating Case Temperature	All models	-40		105	˚C
Over temperature Protection	All models, Auto. Recovery		110		
Isolation Voltage Input to Output	All models, 1 Minute		1600		VDC
Isolation Resistance Input to Output	All models, 500VDC,At 70%RH	100			MΩ
Isolation Capacitance Input to Output	All models		1500		pF
Humidity (non condensing)	All models			95	%
Calculated MTBF	BellCore-TR-332@ 50˚C G.B		TBD		M HR
Weight			15(0.5)		g (oz.)
Dimensions	1.00” x 1. 0” x 0.4” (25.4 x 25.4 x 10.16mm)				
Case Material	Aluminum + FR4 (Non-Conductive Base)				
Potting Material	Silicone				

It is recommended to protect the input by fuses or other protection devices.

Mechanical Drawing & Pin Assignments:



Pin#	Dual
1	+Vin
2	-Vin
3	Enable
4	-Vout
5	Com
6	+Vout

Note:
Dimensions in inches [mm]
Tolerances: .XX±0.02 [.X±0.5mm]
.XXX±0.001 [.X±0.025mm]
Pin Pitch tolerance: ±0.01 [0.25]

Pin Dimensions: .XX±0.02 [.X±0.5mm]