



Evolving Sirius-Chivalry 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.



Demo photo only. Actual marking may vary.

Model Selection Guide

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

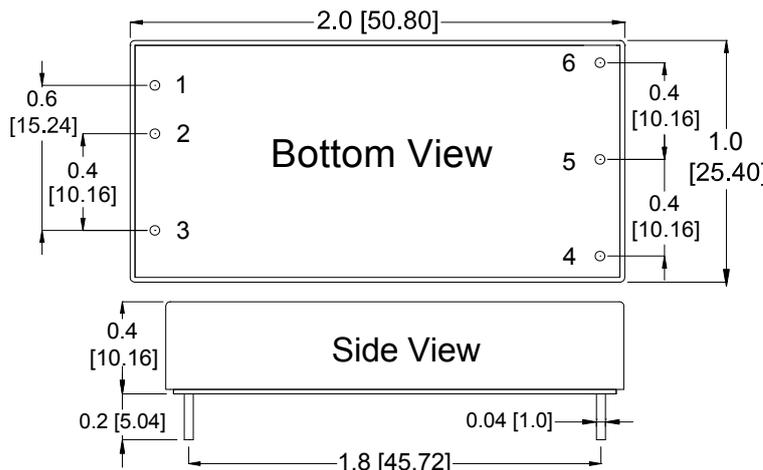
Model	Input		Output			Efficiency @FL
	Voltage(V)		Voltage	Current	Power	
	Range	Nominal	(V)	(A)	(W)	Typ.(%)
ESCS018050-S-P-F50EC	9-36	24	5	10	50	88%
ESCS018120-S-P-F50EC	9-36	24	12	4.16	50	89%
ESCS018150-S-P-F50EC	9-36	24	15	3.33	50	89%

Description: Evolving Sirius - Chivalry series - Second generation New generation converter is composed of Isolated , 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.

Mechanical Drawing & Pin Assignments:



Pin#	Single
1	+Vin
2	-Vin
3	Enable
4	Trim
5	-Vout
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]

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	ESCS018 models (100ms max)			50	VDC
Operating Input Voltage ranges	ESCS018 models	9	24	36	VDC
Under-Voltage Lockout Start up voltage	ESCS018 models			9	VDC
Under-Voltage Lockout Shutdown voltage	ESCS018 models		8		VDC
Enable Function Input	Positive ON logic 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	%V _{pk-pk}
Temperature Coefficient				±0.04	% / °C
Transient Recovery Time	25% load step change		800		µSec.
Transient Peak Deviation	ΔIo/ Δt=2.5A/us			±3	%Vo
Start-Up time	When use Enable Function		10		mSec.
Over voltage protection	V _{NOM} 10% Load		120		%
Output Power Protection	V _{NOM} (Hiccup Mode)		120		%

General Specifications

Parameter	Notes and Conditions	Min.	Typ.	Max.	Unit
Switching Frequency	V _{NOM}	220		330	KHz
Storage Temperature range	All models	-60		125	°C
Operating Case Temperature	All models	-40		105	°C
Over temperature Protection	All models, Auto. Recovery		110		
Isolation Voltage	All models, 1 Minute		2000		VDC
Input to Output					
Isolation Resistance	All models, 500VDC,At 70%RH	100			MΩ
Input to Output					
Isolation Capacitance	All models		1500		pF
Input to Output					
Humidity (non condensing)	All models			95	%
Calculated MTBF	BellCore-TR-332@ 50 °C G.B		TBD		M HR
Weight			31(1.09)		g (oz.)
Dimensions	2.0" x 1.0 " x 0.45" (50.8 x 25.4 x 11.4mm)				
Case Material	Aluminum + FR4 (Non-Conductive Base)				
Potting Material	Silicone				

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

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