Ready for your systems
Powergood

ESC SERIES
Ultra Wide Range

Features

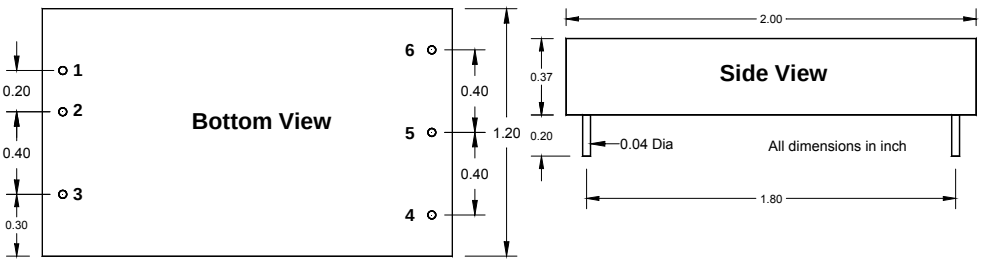
- High efficiency
- Save up to 40% board space
- Standard pin out; **Fully replaceable** with 2”x1.6” or 2”x2” standard case
- 1500V **Basic Insulation** (input to output)
- Patented architecture and control
- 4:1 wide input ranges: 9-36V and 18-75V
- **Built-in EMC** filter meets **EN 55022 class B** and **FCC Level B** without external components
- **UL60950/EN60950** recognized (pending)
- Input under-voltage lockout
- Output current limit and short circuit protection
- Output over voltage protection
- MTBF≥1,989,000 hours @50˚C GB (BellCore TR-332)

Selection Guide

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

Part Number	Input Voltage (V)	Input Current Full load (A)	Output Voltage (V)	Output Current (A)	Output Power (W)	Efficiency @FL Typ.(%)
ESC1833-08-E	9-36	1.69	3.3	8.0	26.4	87%
ESC1850-06-E	9-36	1.89	5.0	6.0	30	88%
ESC18120-S-E	9-36	1.96	12	2.5	30	86%
ESC18150-S-E	9-36	1.94	15	2.0	30	87%
ESC18120-D-E	9-36	±0.98	±12	±1.25	30	86%
ESC18150-D-E	9-36	±0.97	±15	±1.0	30	87%
ESC24240-D-E	18-36	±0.69	±24	±0.6	30	87%
ESC3633-08-E	18-75	0.84	3.3	8.0	26.4	87%
ESC3650-06-E	18-75	0.95	5.0	6.0	30	88%
ESC36120-S-E	18-75	0.98	12	2.5	30	86%
ESC36150-S-E	18-75	0.97	15	2.0	30	87%
ESC36120-D-E	18-75	±0.49	±12	±1.25	30	86%
ESC36150-D-E	18-75	±0.48	±15	±1.0	30	87%
ESC48240-D-E	36-75	±0.34	±24	±0.6	30	87%

Note: 24VDC output can be obtained by series connecting ±12VDC outputs with floating the Comm-Pin.
Enable Polarity: “**-1**” for positive logic Built-In EMC Input Filter
“**-0**” for negative logic Built-In EMC Input Filter



Pin#	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	Enable	Enable
4	Trim	-Vout
5	-Vout	Comm
6	+Vout	+Vout

The information and specifications contained in this data sheet are believed to be correct at time of publication. All specifications are subject to change without notice. No rights under any patent accompany the sale of any such products or information contained herein.

Electrical Specifications

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

Input

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Operating Input Voltage ranges	ESC18 models	9	18	36	VDC
	ESC24 models	18	24	36	VDC
	ESC36 models	18	36	75	VDC
	ESC48models	36	48	75	
Under-Voltage Lockout Turn-ON Threshold	ESC18 models	8.5			VDC
	ESC24 models/ ESC36 models	17.5			VDC
	ESC48 models	35			VDC
Under-Voltage Lockout Turn-OFF Threshold	ESC18 models			8	VDC
	ESC24 models/ ESC36 models			17	VDC
	ESC48 models			34	VDC
Input Current	See model selection guide, Standby mode (**OFF, UVLO**) 5mA				
High Input Level	Enable Function Input	3		5.5	VDC
Low Input Level		0		1.2	VDC
Input Filter	All models	Pi Filter			

Output

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Output Voltage Accuracy	50% Load			±1.5	%
Line Regulation	Low line to High line			±0.3	%
Load Regulation	10% to 100% load			±0.5	%
Ripple & Noise (20MHz bandwidth)	Over Line, Load & Temp.		80	150	mV pk-pk
				40	mV RMS
Temperature Coefficient				±0.04	% /˚C
Transient Recovery Time	25% load step change			800	µSec.
Transient Peck Deviation	25% load step change			2	%Vo
Start-Up Time			50	100	mSec.
Output Power Protection		100	120	140	%

General Specifications

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Switching Frequency		270	300	330	KHz
Storage Temperature range	All models	-55		125	˚C
Operating Case Temperature	All models	-40		100	˚C
Isolation Voltage	All models, 1 Minute			1500	VDC
Isolation Resistance	All models, 500VDC	10			MΩ
Isolation Capacitance	All models			1000	pF
Humidity	All models			95	%
Calculated **MTBF**	BellCore TR-332 @ 50˚C G.B.		1,989,000		Hours
Weight				34(1.3)	g (oz.)
Efficiency	See model selection guide				
Dimensions	2.0” x 1.2” x 0.35” (50.8 x 30.5 x 8.9mm)				
Case Material	Aluminum				

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