



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)

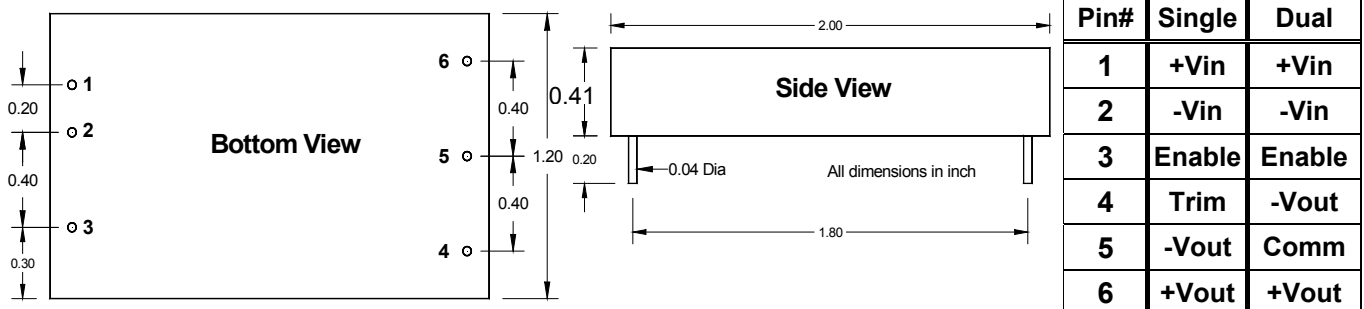
Selection Guide

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

Model	Input		Output			Efficiency @FL Typ.(%)
	Voltage (V)	Current Full load (A)	Voltage (V)	Current (A)	Power (W)	
ESC1833- 8- E	9-36	1.69	3.3	8.0	26.4	87%
ESC1850- 6- 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%
ESC3633- 8- E	18-75	0.84	3.3	8.0	26.4	87%
ESC3650- 6- 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	0.98	±12	±1.25	30	86%
ESC36150-D- E	18-75	0.96	±15	±1.0	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, "-P" for positive logic PI Input Filter
"-0" for negative logic Built-In EMC Input Filter, "-N" for negative logic PI Input Filter



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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			2	5	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		115	°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.

