



# ElectroCraft CompletePower™ Plus EZ Drive

## Simplified Speed Control

**Introducing ElectroCraft's EZ Drive,  
the newest addition to the ElectroCraft  
CompletePower™ Plus family of DC motor drives.**

The EZ Drive is a simple & cost effective BLDC speed control drive, offering several standard capacities in the model lineup. Customized versions are also offered to meet large volume OEM requirements.

- Compatible with Brushless DC motors from 12 to 48VDC and up to 24A continuous.
- Trapezoidal commutation.
- Mode of operation is speed control.

### Features:

- Brushless DC motor speed control.
- 2 quadrant control.
- Trapezoidal commutation.
- Halls only operation mode.
- Encoder feedback mode for low speed precision.
- Digital tach output for external speed monitoring.
- Built-in short-circuit, over-current, over-temperature and over-voltage protection.
- Easy to configure hardware settings supporting a wide range of BLDC motors.



### CPP Model Number:

CPP — A **2** **4** V **4** **8** A — **S** **A** — **EZ**

Continuous Current	Max Voltage	Revision	Form Factor
24 = 24A	12-48VDC		SA= Stand Alone
12 = 12A			PE = PCB Mount
06 = 6A			

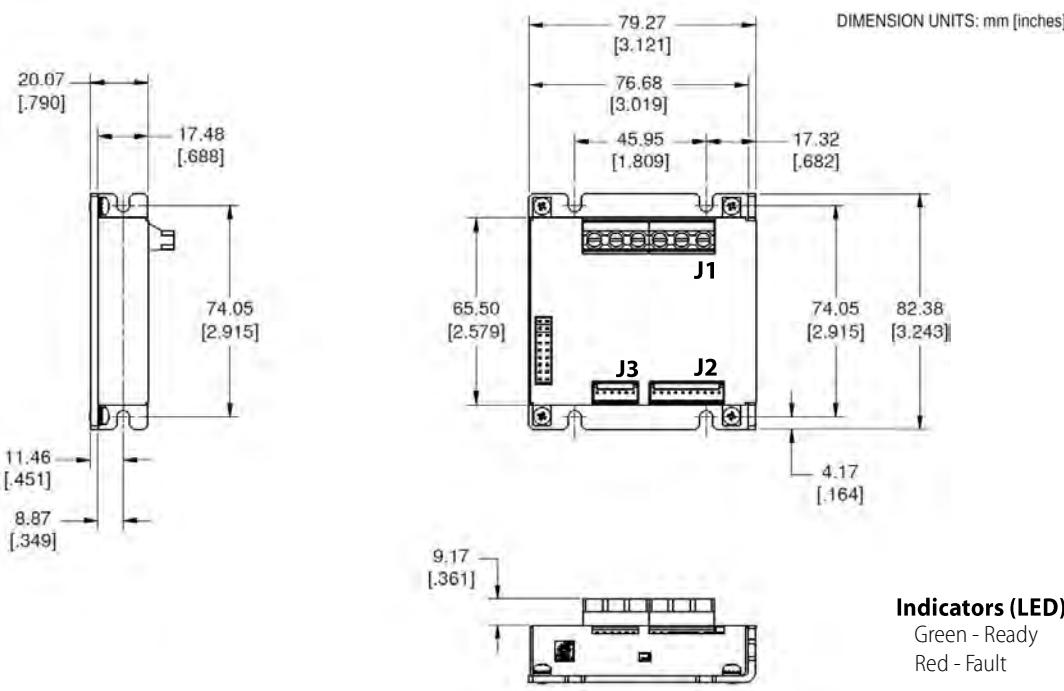
### Model Specifications

ElectroCraft CompletePower™ Plus EZ Drive	CPP-A06V48A-SA-EZ	CPP-A12V48A-SA-EZ	CPP-A24V48A-SA-EZ
<b>Characteristics</b>			
Input Voltage (VDC)		12 to 48	
Output Voltage (VDC)		12 to 48	
Output Power, Peak (W)	576	1152	2304
Continuous Current - Amps Peak of Sine	6	12	24
Continuous Current - Amps RMS	4.2	8.5	17.0
PWM Output Frequency (kHz)		25	
Efficiency		97%	
Derating for PCBA models w/out heat sink		25% of Rated Values	
<b>Control Methods</b>			
Analog Speed Control		0-10VDC	
Internal Speed Control		Hardware setting + user accessible potentiometer	
<b>Feedback</b>			
Hall Sensors		120°	
Encoder Feedback		Single phase pulse train, up to 20kHz	
Speed Resolution		32bit	
<b>Control Loops</b>			
Speed Loop Update		25kHz	
<b>Inputs</b>			
Hall Inputs		TTL, CMOS, Open Collector (0-5V)	
Digital Tach/Encoder Input		TTL, CMOS, Open Collector (0-5V)	
Digital Inputs		x3 (1 enable, 1 direction, 1 brake)	
Analog Input		0-10VDC command input for speed	
<b>Outputs</b>			
Digital Outputs		x2 (1 tach, 1 fault)	
Auxiliary Voltage for Feedback Device		5VDC / 250mA	
<b>Display</b>			
LED's		Green - Ready Red - Fault	
<b>Environment</b>			
Ambient Temperature		0 to 40°C	
Humidity		5% to 95% RH, Non-Condensing	
<b>Supported Motors</b>			
Brushless DC (BLDC)		ElectroCraft RPX, LRPX, RP, RPP, RPE, MP, MPW and 3rd party BLDC motors	

# ElectroCraft CompletePower™ Plus

## EZ Drive

### Simplified Speed Control



#### Indicators (LED)

Green - Ready  
Red - Fault

### Pinouts:

#### J1 – Power & Phase

Pin #	Name	I/O	Description
1	GND	Input	DC Power Input - supply return
2	Power	Input	DC Power Input - supply
3	PE	-	Connected to drive chassis
4	A	Output	BLDC Motor Phase A
5	B	Output	BLDC Motor Phase B
6	C	Output	BLDC Motor Phase C

#### J3 – Hall & Tach

Pin #	Name	I/O	Description
1	Hall 1	Input	Hall Signal A, internal pull-up to +5VDC
2	Hall 2	Input	Hall Signal B, internal pull-up to +5VDC
3	Hall 3	Input	Hall Signal C, internal pull-up to +5VDC
4	Tach In	Input	Digital Tach input, +5V digital pulse train
5	+5V Out	Output	+5V DC power, internally generated
6	GND	-	Digital ground

#### J2 – I/O

Pin #	Name	I/O	Description
1	Frame	-	Connected to drive chassis
2	Analog In	Input	Analog input for speed control
3	Enable	Input	Drive enable, digital input
4	Tach Out	Output	Tach (speed), digital output
5	Fault Out	Output	Fault, digital output
6	+5V Out	Output	+5V DC power, internally generated
7	NC	-	-
8	DIR	Input	Direction, digital input
9	Brake	Input	Brake, digital input
10	GND	-	Digital ground

Jumper	Name	Description
1	Speed Control Mode	ON: Speed control with potentiometer OFF: Speed control using external analog voltage
2	Feedback Mode	ON: Hall mode OFF: Tach mode
3	User Max Speed Setting	16 different settings Up to 18,000 RPM in Hall mode, 1000 RPM in Tach Mode
4		
5		
6		
7	User Max Current Setting	CPP-A06V48A-SA-EZ: 8 settings from 0.75A up to 6.0A CPP-A12V48A-SA-EZ: 8 settings from 1.5A up to 12A CPP-A24V48A-SA-EZ: 8 settings from 3.0A up to 24A
8		
9		



Your Genius. Our Drive.