

**Output Type:**  
PWM

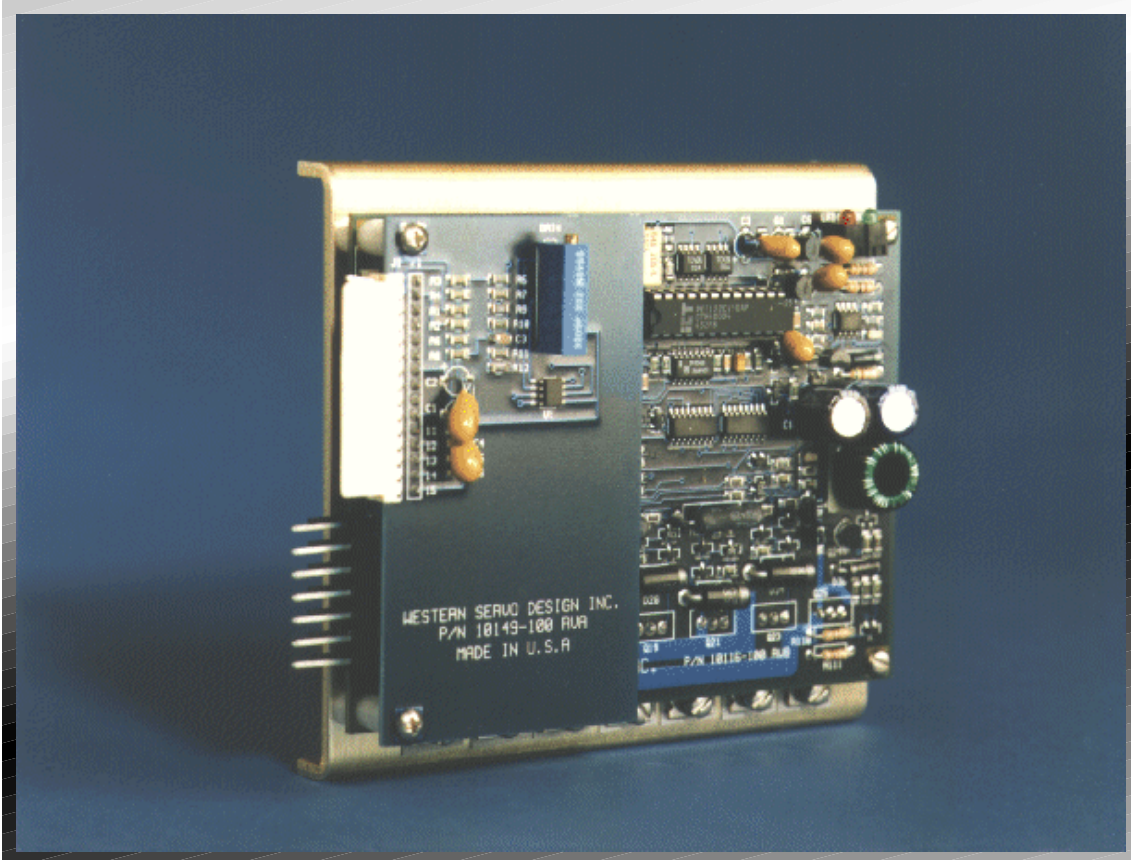
**Voltage:**  
Up to 60 VDC

**Amperage:**  
Up to 10 A Peak

**Mounting:**  
3E Edge Mount

**Modes:**  
Torque

**Commutation:**  
Digital Hall



# BPW-S3

Medium-Power Brushless PWM Servo Amplifier

The BPW-S3 is a medium power brushless PWM servo amplifier in a 3E size Edge Mount format. It is ideally suited to torque control applications or for velocity control using a digital position controller. This amplifier is designed for +/- 10V analog command input and self commutation using Digital Hall effect sensors. Look to the BPW-S4 if PWM command input is required.

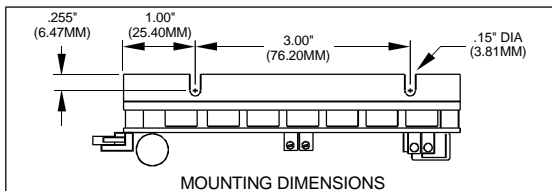
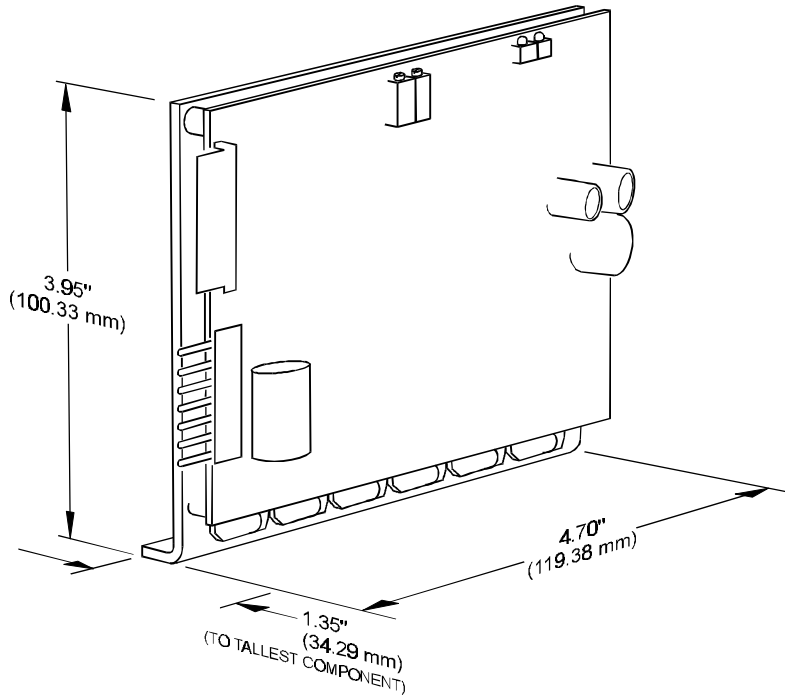
Built using Surface Mount Technology, the BPW-S3 offers many advanced features in a compact package. An on board converter powers all the amplifier circuitry and Hall Effect sensors by using the Bus Voltage, eliminating the need for an external Bias supply. This unit is ideal for upgrading older brush-type systems to brushless motors. The high PWM frequency allows for greater amplifier bandwidth and helps motors to run cooler. The BPW-S3 includes Travel Limit and Amp Enable inputs, and Current Monitor and Amp Fault outputs.

- ⦿ 3E size Edge Mount Format
- ⦿ Commutation using Digital Hall Sensors
- ⦿ ±10V Analog Command Input
- ⦿ Completely Powered from Bus Voltage
- ⦿ Travel Limits and Amp Enable Inputs
- ⦿ Over and Under Bus Voltage Shutdown
- ⦿ Over Current Bus Protection
- ⦿ Current Monitor and Amp Fault Outputs
- ⦿ PWM Frequency: 80 kHz
- ⦿ Bus Voltage: 20 - 60 VDC
- ⦿ Continuous Current: 5 Amperes
- ⦿ Designed for Three-Phase Wye or DeltaWound Motors
- ⦿ Advanced Design, Superior Quality and High Reliability
- ⦿ One Year Parts and Labor Warranty

## SPECIFICATIONS

Standard Models:	6/10
Bus Voltage	20 to 60 VDC
Peak Output Current*	10 A for 0.5 sec
Continuous Output Current*	5 A
Command Input Voltage	0 to $\pm 10$ V
Command Input Impedance	10 kOhm
Minimum Load Inductance	0 H
Switching Frequency	80 kHz
Torque Gain	1.0 A/V
Bandwidth	20 kHz
Weight	.46 Lb (209 grams)
Recommended Chassis	EPS, PDP, PBS

\*All ratings with forced air cooling to maintain 40°C heat sink temperature. Failure to keep constant air flow to the heat sink will reduce the output current capacity and may result in damage to the unit.



## PINOUTS

### J1: SIGNALS

*Single-Row 15 pin connector (standard)*

Pin	Function
1	Command Input
2	Command Return
3	Amp Enable In
4	Amp Fault Out
5	- Limit In
6	+ Limit In
7	No Connection
8	Current Monitor Out
9	Ground
10	No Connection
11	Hall Power (+5VDC) Out
12	Hall A
13	Hall B
14	Hall C
15	Hall Power Return

*Two-Row 16 pin connector (option)*

Pin	Function
1	Ground
2	Current Monitor Out
3	Hall Power Return
4	No Connection
5	Hall C
6	+ Limit In
7	Hall B
8	- Limit In
9	Hall A
10	Amp Fault Out
11	Hall Power (+5VDC) Out
12	Amp Enable In
13	Ground
14	Command Input Return
15	Command Input
16	Command Input

### J2: POWER & MOTOR

*Single-Row 7 pin connector (standard)*

Pin	Function
1	Bus Power Return
2	No Connection
3	Bus +V (20 to 60 Volts)
4	No Connection
5	Motor Phase A
6	Motor Phase B
7	Motor Phase C

*Terminal Strip 5 pin connector (option)*

Pin	Function
1	Bus Power Return
2	Bus +V (20 to 60 Volts)
3	Motor Phase A
4	Motor Phase B
5	Motor Phase C

### Ordering Information:

Product	Order Number
BPW-S3-6/10 Amplifier 60 VDC/10A Peak	WS-004-0006

### Represented By:

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