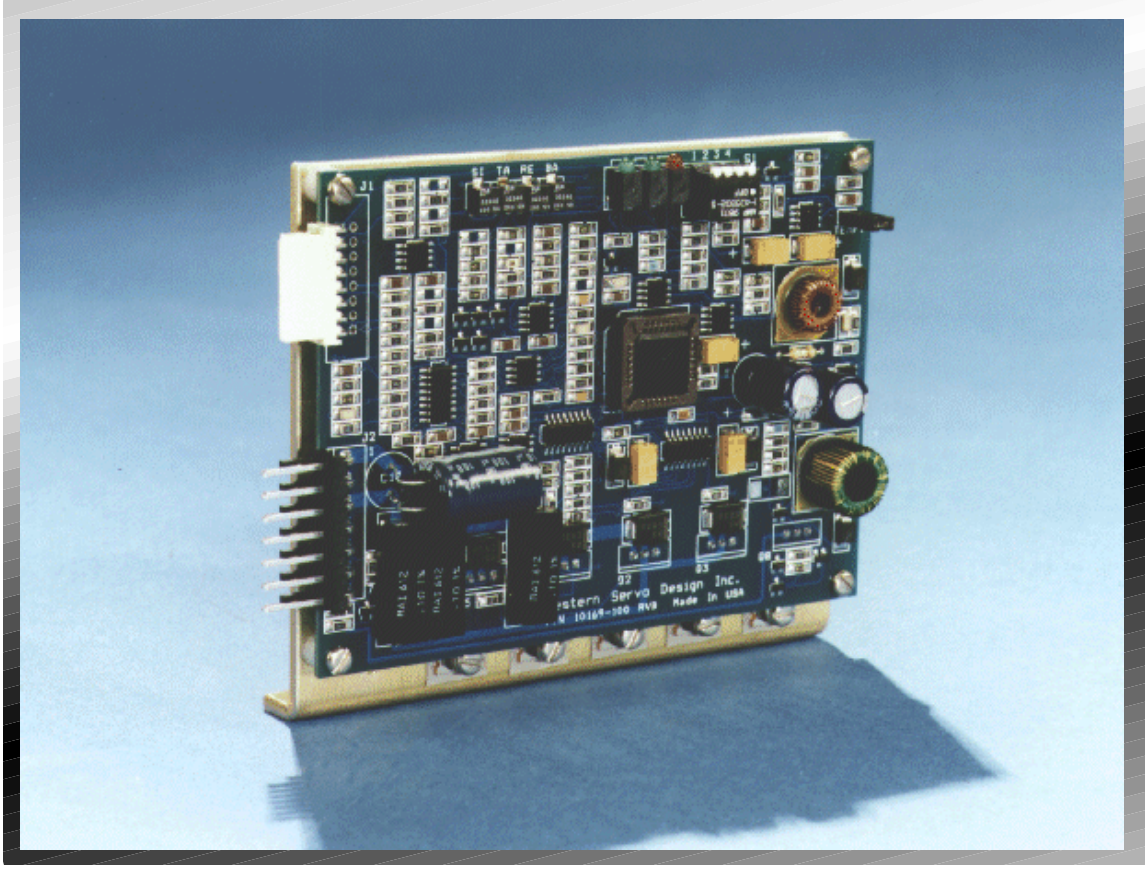
| Output Type: | Voltage: | Amperage: | Mounting: | Modes: | Command: |
|---|---|---|---|---|---|
| PWM | Up to 60 VDC | Up to 20 A Peak | 3E Edge Mount | Velocity or Torque | ±10V |

# PDH-S3

## Medium-Power Brush-Type PWM Servo Amplifier



The PDH-S3 is a medium power, brushed PWM servo amplifier in a 3E Edge Mount package. This multi-purpose amplifier contains both Velocity and Torque feedback loops. Inputs are provided to allow tachometer feedback in the Velocity Mode. The Torque Mode can be used for torque control applications, or in conjunction with a digital servo controller capable of computing Position and Velocity loop values. The Torque Mode can also be used for feedback in the Velocity Mode, with or without a position controller. The high switching frequency of the PDH-S3 allows the amplifier to drive very low inductance loads. Potentiometer adjustments for Signal Gain, Tach Gain, System Response, and Balance are provided. This amplifier is functionally similar to the PDH-S2 (which it replaces), and is built with Surface Mount ciruitry.

The Travel Limit and Amp Enable inputs are jumper selectable to accept normally open or normally closed switches.

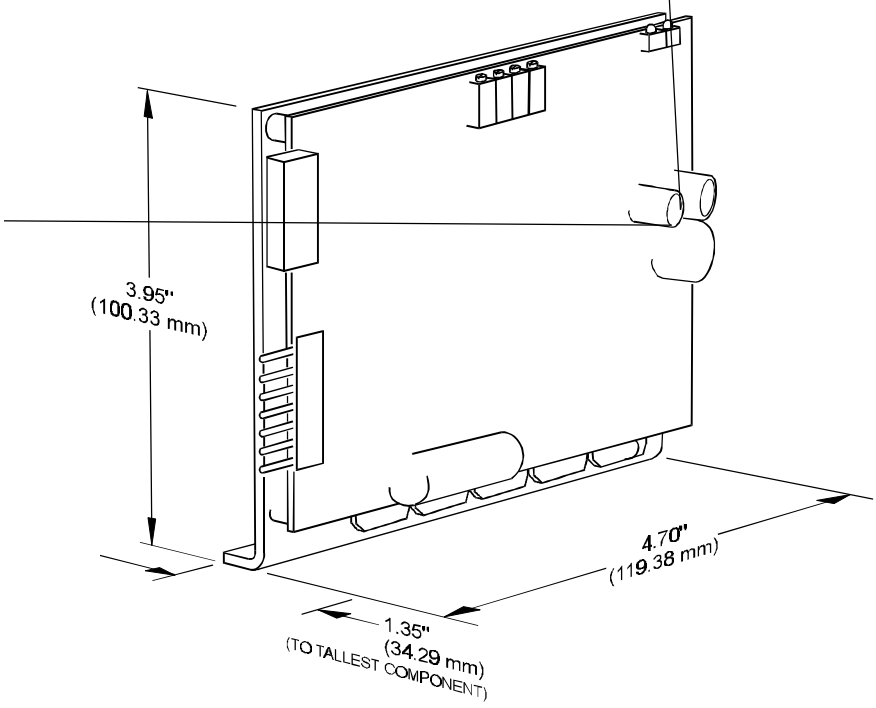
The PDH-S3 has over and under voltage shutdown as well as over current protection. Two LEDs indicate power on and fault conditions. An Amp Fault output can be used to indicate a fault condition to an external controller.

- 3E Edge Mount Packaging
- No External Bias Supply Required
- Shutdown in Over Voltage, Under Voltage, and Over Current Conditions
- Global "Amplifier Fault" Output
- Jumper Selectable Velocity or Torque Modes
- Jumper Selectable Switch Type (N.O. or N.C.) for Enable and Limit Inputs
- "Power On" and "Fault" LEDs
- PWM Frequency: 20 or 40 kHz
- Continuous Current: 5 or 10 Amperes
- High Bandwidth
- Bus Voltage: 20 - 60 VDC
- Advanced Design, High Quality and High Reliability at a Lower Cost

## SPECIFICATIONS

| Standard Models: | 6/10 | 6/20 |
|---|---|---|
| Bus Voltage | 20 to 60 VDC | 20 to 60 VDC |
| Peak Output Current* | 10 A for 0.5 sec | 20 A for 0.5 sec |
| Continuous Output Current* | 5 A | 10 A |
| Command Input Voltage | 0 to ±10 V | 0 to ±10 V |
| Tachometer Input Voltage | 0 to ±40 V | 0 to ±10 V |
| Command Input Impedance | 20 kOhm | 20 kOhm |
| Switching Frequency | 40 kHz | 20 kHz |
| Minimum Load Inductance | 0.2 mH | 0.2 mH |
| Torque Gain | 1.0 A/V | 2.0 A/V |
| Bandwidth | 20 kHz | 4 kHz |
| Weight | .28 Lb (127.0 g) | |
| Recommended Chassis | LDP, EPS | |

*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

*Two-Row 16 pin connector (standard)*

| Pin | Function |
|---|---|
| 1 | Amp Fault Return |
| 2 | + Limit In |
| 3 | Amp Fault Out (active high, open collector) |
| 4 | - Limit In |
| 5 | Ground |
| 6 | Optoisolator Power In (+12 V) |
| 7 | Ground |
| 8 | Amp Enable In |
| 9 | No Connection |
| 10 | + Tachometer In |
| 11 | No Connection |
| 12 | - Tachometer In |
| 13 | No Connection |
| 14 | Command Return |
| 15 | No Connection |
| 16 | Command In |

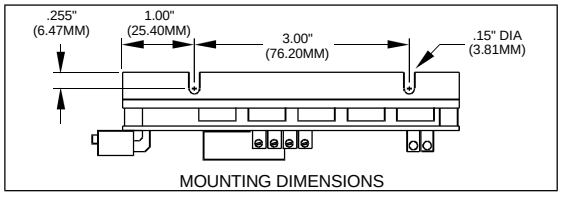
*Single-Row 8 pin connector (option)*

| Pin | Function |
|---|---|
| 1 | Command In |
| 2 | Command Return |
| 3 | + Tachometer In |
| 4 | - Tachometer In |
| 5 | Amp Enable In |
| 6 | Optoisolator Power In (+12 V) |
| 7 | - Limit In |
| 8 | + Limit In |

### J2: MOTOR & BUS POWER

| Pin | Function |
|---|---|
| 1 | Bus Ground |
| 2 | No Connection |
| 3 | Bus +V |
| 4 | No Connection |
| 5 | Motor Phase A |
| 6 | No Connection |
| 7 | Motor Phase B |

*Consult the User's Manual for jumper settings.*



MOUNTING DIMENSIONS

### Ordering Information:

| Product | Order Number |
|---|---|
| PDH-S3-6/10 Amp *60 VDC/10A Peak* | WS-003-0008 |
| PDH-S3-6/20 Amp *60 VDC/20A Peak* | WS-003-0009 |

### Represented By:

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