



## New DPS Series

### Digital Power Stage

Universal input Digital Servo-Amplifier Power Stage for OEM Brushless DC, AC Servo or Induction motor control applications.

### Technological Advancement

Combining more than 15 years of power electronics design and manufacturing experience, Automotion, Inc.'s new Digital Power Stage (DPS) offers OEM's the same core power-amplifier technology incorporated into the highly successful IPS and IDS brushless DC product lines as a stand-alone component.

For the first time ever, OEM motion engineers now have available to them a field tested and proven servo-amplifier power platform for directly imbedding proprietary control functionality. The new DPS provides all of the necessary isolation, fault protection and AC power conditioning required for customer-supplied control of brushless DC, AC or Induction Motors.

DPS platform-based OEM solutions benefit from an established history of product reliability, agency compliance work and high manufacturing volumes. These DPS platforms are designed to be used in high volume OEM machine control applications, where the cost, performance and overall motion system design can be optimized.

The DPS product line is designed and tested to meet the international compliance standards of IEC950, EN60950 and UL1950. CB scheme certificates and UL component recognition marks are available on selected models.

### Features

- A flexible interface allows pulse width modulation of all six output IGBT power transistors. The rugged IGBT Output Bridge is short circuit protected.
- Two isolated analog feedback signals provide high bandwidth sensing of motor current in phases one and two. This interface is compatible with the latest high performance third-party motion control cards offering direct PWM and digital current loop control.
- An integrated 20-Watt Universal Input Logic supply is included for powering user control circuitry.
- Integral motor supply has inrush limiting, shunt regulation and supplemental fuse protection.
- Digital Power Stages come in three amperage ratings: 10A crest (Trap)/7 Arms (Sine), 20A crest (Trap)/14 Arms (Sine), 30A crest (Trap)/21 Arms (Sine).
- A single AC input (single or three-phase) from 50 to 264 VAC, 50/60 Hz is all that's required to power up.
- Microprocessor based power-side monitoring, individually annunciates DPS platform status conditions for "No Guess Work" diagnostics.

# DPS SERIES

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"Putting Brushless Into Motion" ®

# AUTOMOTION®

## Pinouts

### Daughter Board Interface — J3

Pin	Description
1	Phase 1 High Side PWM, Active Low Input
2	Phase 1 Low Side PWM, Active Low Input
3	Phase 2 High Side PWM, Active Low Input
4	Phase 2 Low Side PWM, Active Low Input
5	Phase 3 High Side PWM, Active Low Input
6	Phase 3 Low Side PWM, Active Low Input
7	+5 VDC Output
8	Common Return
9	Enable/Reset, Active Low Input
10	Power Status, Serial Comm. Interface Output
11	Phase 1 Current Sense, Analog Output, +/- 1mA/A
12	Phase 2 Current Sense, Analog Output, +/- 1mA/A
13	Common Return
14	+5 VDC Output
15	Regulated Bias Supply for CS1 & CS2, +15 VDC
16	Regulated Bias Supply for CS1 & CS2, -15 VDC
17	Dedicated Common for CS1 & CS2
18	+18 VDC, 180 mA, Output
19	-18 VDC, 60 mA, Output
20	Common Return

### AC/DC Power — P1

- 1 Frame Ground
- 2 AC "NEU" or DC Input
- 3 AC "HOT" or DC Input

### Motor Phase— P2

- 1 Frame Ground
- 2 Phase 1, High Voltage PWM
- 3 Phase 2, High Voltage PWM
- 4 Phase 3, High Voltage PWM

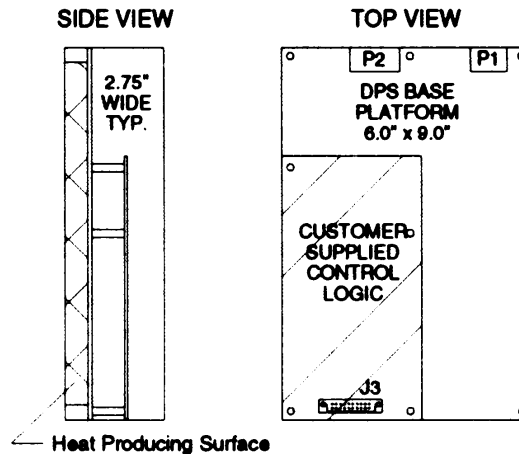
## Model Specifications

Model		10	20	30
Input Power	Volts	50 to 264 VAC, Single phase, or 70 to 400 VDC		
	Hz	50 to 60, or DC		
Motor Supply Rail	VDC	70 to 400, 310 Nominal		
Output Power Peak (1)	KW	2.2	4.3	6.5
Phase Cur. Peak	A (crest)	10	20	30
Phase Cur. Cont.	A	Application dependent, up to 70% maximum of peak crest rating in locked rotor/stalled condition		
Shunt Power Peak (2)	Watt	3200 Watt typ.		
Shunt Power Cont. (2)	Watt	50 Watt typ.		
Overtemp Trip	degC	60 on Cold Plate Surface		
Bridge PWM	KHz	5 to 20, User Determined		
Bridge Deadband	uSec	2.0, Minimum		
Load Inductance	mH	0.25 to 50		
Logic Power Output	VDC	+5V (+/-3% regulated), +18V, -18V (+/-10% regulated)		
	Amp	3.0, 0.180, 0.060		

(1) Based upon a motor rail voltage of 400 VDC and BEMF of 300 volts.

(2) External power resistor required, 50 Ohms min. Valves dependent upon resistor selected. Consult Automation.

## Dimensions



### Part Number

Model "10", "20", "30" (see table above)

Package Style: "A" Cold Plate, "B" Panel

Shunt Capacity: "0" None, "1" 55W Internal, "2" External

Specification: "00" Standard, "XX" Factory Assigned

DPS 30 A - 100

Note: Specifications subject to change without notice.



If you need more information, including custom user options available, please contact:  
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