

POWER STAGE SPECIFICATIONS	MODELS			
	BD30A8	BD25A20	BD40A8	BD40A20
DC SUPPLY VOLTAGE	20 - 80 V	40 - 190 V	20 - 80 V	40 - 190 V
PEAK CURRENT (2 sec. max., internally limited)	± 30 A	± 25 A	± 40 A	± 40 A
MAX. CONTINUOUS CURRENT (internally limited)	± 15 A	± 12.5 A	± 20 A	± 20 A
MINIMUM LOAD INDUCTANCE*	200 µH	250 µH	200 µH	250 µH
SWITCHING FREQUENCY	5 - 45 KHz			
HEATSINK (BASE) TEMPERATURE RANGE	-25° to +65° C, disables if > 65° C			
POWER DISSIPATION AT CONT. CURRENT	25 W	55 W	35 W	90 W
OVER-VOLTAGE SHUT-DOWN (self reset)	86 V	195 V	86 V	195 V

MECHANICAL SPECIFICATIONS	
POWER CONNECTOR	Screw terminals
SIGNAL CONNECTOR	Molex connector
SIZE	7.35 x 4.40 x 1.00 inches 186.7 x 111.7 x 25.4 mm
WEIGHT	1.5 lb. 0.68 kg

* Low inductance motors require external inductors.

PIN FUNCTIONS

CONNECTOR	PIN	NAME	DESCRIPTION / NOTES	I/O
P2	1	MOTOR A	Motor phase A connection	O
	2	MOTOR B	Motor phase B connection	O
	3	MOTOR C	Motor phase C connection	O
	4	POWER GND	Power ground	GND
	5	HIGH VOLTAGE	DC power input	I
P1	1	PWM+	Same as pin 9	I
	2	PWM-	Pulse width modulated digital input	I
	3	DIR+	Same as pin 9	I
	4	DIR-	Direction input	I
	5	INH+	Same as pin 9	I
	6	INH-	Pull low to enable	I
	7	+FAULT	Output transistor turns on and becomes high during output short circuit, over-voltage, over temperature, inhibit, and during power-up reset. Fault condition indicated by red LED.	O
	8	-FAULT		
	9	+5 IN	+5 V in to drive opto coupler inputs.	I
	10	+V HALL 30 mA OUT	Power for HALL sensors, short circuit protected, + 6 V @ 30 mA	O
	11	GND		GND
	12	HALL 1	HALL sensor inputs, logic levels,internal 2 K Ω pull-up. Maximum low level input is 1.5 V, minimum high level input is 3.5 V	I
	13	HALL 2		
	14	HALL 3		
	15	CURRENT MONITOR OUT	Current monitor. See B-20 for scaling.	O
	16	NC		

SET-UP

See section "G" for engineering and installation notes.

CURRENT LIMIT ADJUSTMENTS

These amplifiers feature peak and continuous current limit adjustments. DIP switches reduce both peak and continuous current limit. The ratio of peak/continuous current limit is fixed. The switches also adjust the scaling of CURR-MONITOR output.

SW3	SW2	SW1	Peak current (% of max.)	Continuous current (% of max. cont.)	Current Monitor	
					BD25/30	BD40
ON	ON	ON	100 %	100 %	4 A/V	4.8 A/V
OFF	ON	ON	50 %	50 %	2 A/V	2.4 A/V
OFF	OFF	ON	25 %	25 %	1 A/V	1.2 A/V
OFF	OFF	OFF	12.5 %	12.5 %	0.5 A/V	0.6 A/V

The actual current can be monitored at pin P1-15.

OPTICAL INPUT SIGNAL ISOLATION

PWM, DIR, INH, FAULT inputs are always isolated from the power section. If the isolation option is selected the Hall sensor inputs (P1-10 through 14) are also isolated.

ORDERING INFORMATION

Models: BD30A8X, BD25A20X, BD40A8X, BD40A20X

With isolation:

Models: BD30A8IX, BD25A20IX, BD40A8IX, BD40A20IX

X indicates the current revision letter.

MOUNTING DIMENSIONS: See page E-6.