

KBWA

Hybrid Drive™

A Digital AC Drive with Analog Interface

KBWA-22D Non-Vented NEMA 1 / IP 50 Enclosure

KBWA-23D Vented NEMA 1 / IP 20 Enclosure

Primary Features

Horsepower 1/8 to 1/2 HP*

Input 115 and 230 VAC - 1ph

Output 230 VAC - 3ph

Starting Torque 200%

Front Panel Power On/Off Switch

GFCI Compatible

With factory programming, allows the equipment to operate with Ground Fault Circuit Interruption circuit breakers or outlets.

Benefits

Saves Time

Easy to Install and Simple to Operate

Does not require programming or commissioning.

Up and running in less than 10 minutes.

Motors Last Longer

Proprietary CL Software

Provides overload protection, prevents motor burnout and eliminates nuisance tripping. UL approved as electronic overload protector for motors.

Energy Saving

Uses only the power the application requires.

Replacing constant speed with variable speed will significantly reduce energy costs.

Customization for OEM's

When an off the shelf drive does not meet your needs, we will work with you to provide a custom drive solution, Ready to Use, "Out-of-the-Box."

Customization includes: Pre-calibrating or programming of a stock control, adding a custom label or branding, custom software, PLC functions or designing a new control.

*Lower horsepower models available (KBWA-21D, 2P3D, 2P6D).



Automation and Control

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Additional Features

Sensorless Flux Vector Control

Flux Vector Compensation with Static Auto-Tune provides excellent speed regulation with high torque loads throughout the entire speed range. Auto energy saving at light loads. Smooth motor torque.

Electronic Inrush Current Limit (EICL™) Protection

Eliminates harmful inrush AC line current during power up.

Ride-Through

Provides smooth recovery to the previous set speed during a momentary power loss.

Holding Torque at Zero Speed

Resists motor shaft rotation when the drive is in "Stop" mode.

Regeneration Protection

Eliminates tripping due to high bus voltage caused by rapid deceleration of high inertial loads.

Undervoltage and Overvoltage Protection

Shuts down the drive if the AC line input voltage goes above or below the operating range.

Short Circuit Protection

Shuts down the drive if a short circuit occurs at the motor (phase-to-phase).

Trimpot Adjustments

Min. Speed, Max. Speed, Accel, Decel, Current Limit, Slip Comp.

Jumper Selections

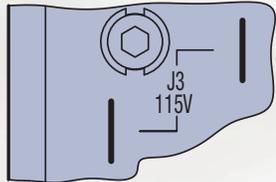
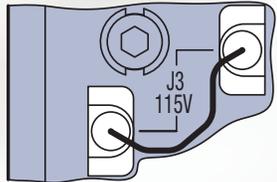
AC Line Input Voltage, 50Hz/60Hz, Motor Frequency, 1X/2X Motor RPM, Automatic/Manual Start Mode, Forward/Reverse Speed Select.

Drive Option

Supplied Forward-Stop-Reverse Switch

Provides motor reversing and stop functions.

Drive Input Voltage Settings

Drive Set for 208/230 Volt AC Line Input (J3 Not Installed) (Factory Setting)	Drive Set for 115 Volt AC Line Input (J3 Installed)
	

Visit kbelectronics.com

to learn about Build-A-Drive™, KB's New AC Inverter Program.



Applications

- Actuators • Air Cleaners • Amusement Rides
- Ball Pitching Machines • Blowers • Boat Lifts
- Bowling Alley Lane Cleaners • CNC • Conveyors
- Door and Gate Openers • Drilling • Duct Cleaners
- Dumbwaiters • Elevators and Hoists
- Exercise Equipment • Fabric Processing • Fans
- Feeders • Film Processing • Floor Cleaning
- Food Processing • Garment Cutting
- Grinding and Polishing • Hoppers • Horse Walkers
- HVAC • Indexers • Irrigation • Laminating
- Lift Station Pumps • Machine Tools
- Medical • Milling • Mixers • Oven Conveyors
- Packaging • Paint Blenders, Shakers, and Sprayers
- Paper Handling • Portable Equipment Used with GFCIs
- Pottery Wheels • Printing • Pumps • Range Hoods
- Sandblasting • Saws • Sewing • Stretch Wrap
- Textile • Treadmills • Therapeutic Vibrators
- Washing Machines • Wave Soldering
- Web Processing • Wheelchair Lifts
- Whole House Vacuums and Attic Fans
- Wire Feeders • Wood and Metal Lathes and Cutters
- Winders and Unwinders



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Ratings

115/230 VAC 1-Phase Input • 230 VAC 3-Phase Output

Model No.	Enclosure	Part No.	Ratings		Net Weight	
			HP, (kW)	Amps	Lbs.	kg
KBWA-22D	NEMA 1 / IP 50	9926	1/4, (0.19)	1.5 ¹	1.58	0.72
KBWA-23D	NEMA 1 / IP 20	9946	1/2, (0.37)	2.4 ²	1.58	0.72

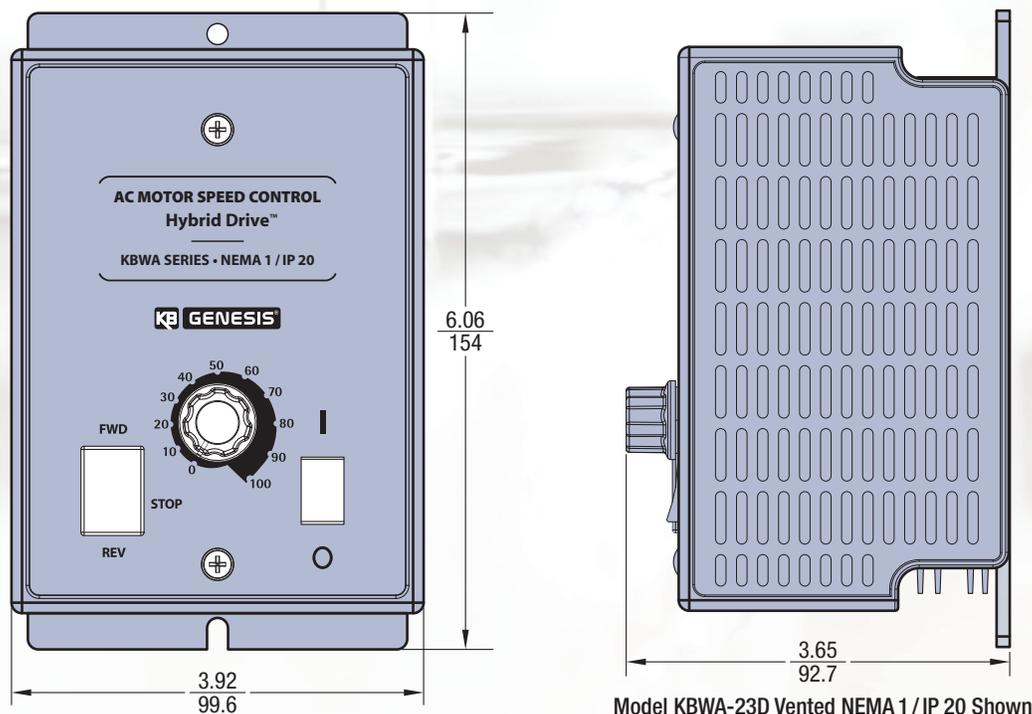
Notes: 1) Rated 1.3 Amps on 115 VAC input. 2) Rated 2.2 Amps on 115 VAC input.

Specifications

Maximum Load (% of Current Overload for 2 Minutes)	150
Switching Frequency (kHz)	8
Output Frequency Resolution (Hz)	0.06
Minimum Output Frequency to Motor (Hz)	0.3
Acceleration Time (Seconds)	0.3 – 20
Deceleration Time (Seconds)	0.3 – 20
Speed Range (Ratio)	60:1
Speed Regulation (30:1 Speed Range, 0 – Full Load) (% Base Speed)	2.5
Stalled Motor Trip Time (Seconds)	6
Braking	Regenerative*
Operating Temperature Range (°C / °F)	0 – 40 / 32 – 104
Storage Temperature (°C / °F)	-25 – +85 / -13 – +185

*DC Injection Braking – requires factory programming.

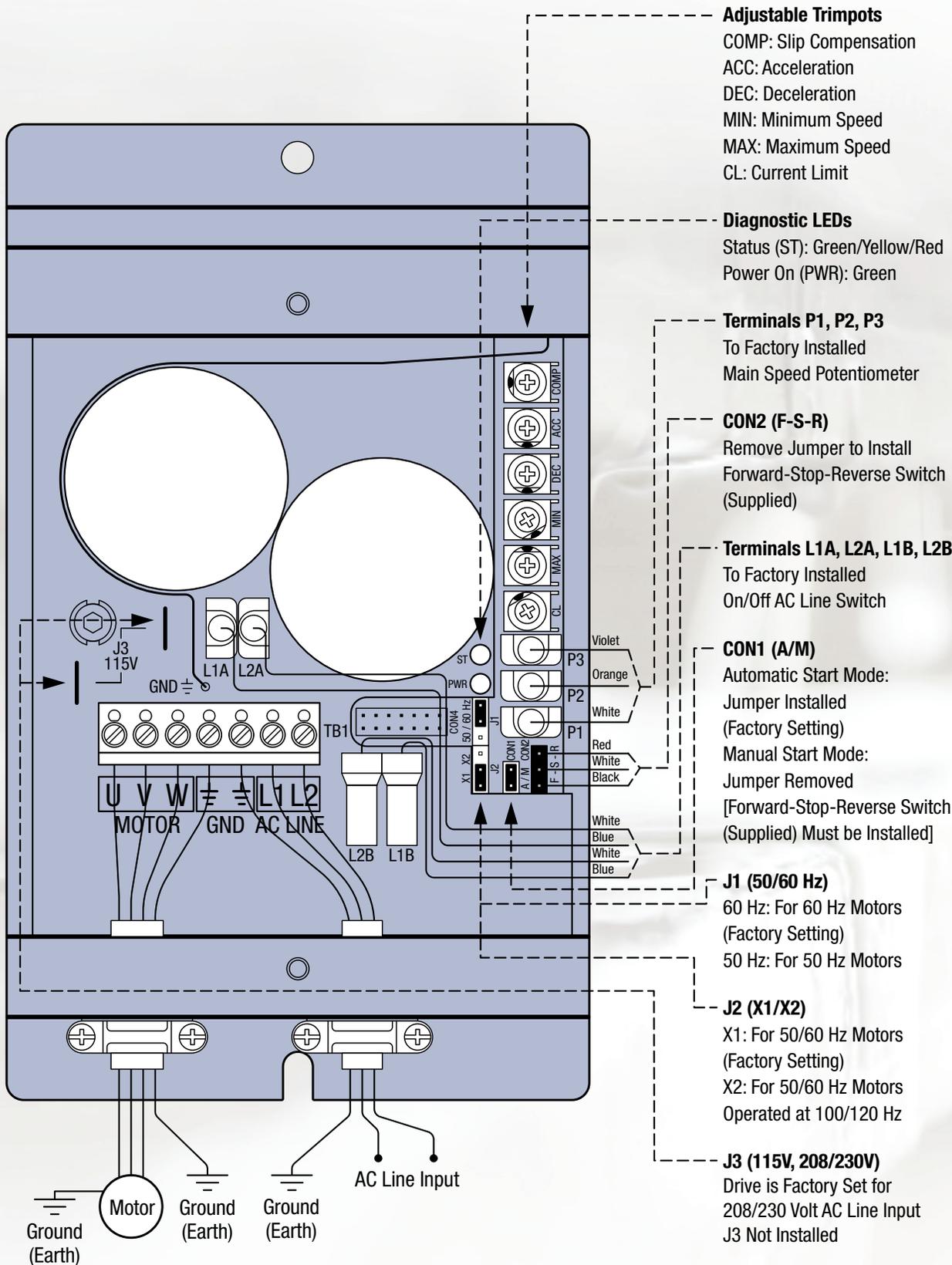
Dimensions – (Inches/mm)



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Automation and Control

Control Layout



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