KBNA 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* 1Ø Input 115 and 230 VAC, 50/60 Hz 3Ø Output 230 VAC 200% Starting Torque Front Panel Power On/Off Switch

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.

Economical to Use

Combines Soft Start with Variable Speed Adjustable Soft Start.

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.

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

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



KB Electronics, Inc. kbelectronics.com • info@kbelectronics.com









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

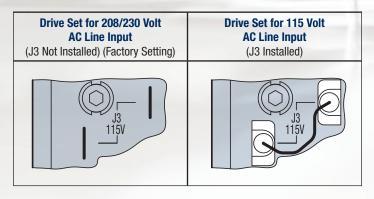
AC Line Input Voltage, 50Hz/60Hz, Motor Frequency, 1X/2X Motor RPM, Automatic/Manual Start Mode, Forward/Reverse Speed Select.

Drive Option

Supplied Forward-Stop-Reverse Switch

Provides motor reversing and stop functions.

Drive Input Voltage Settings



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



Automation and Control

KB Electronics, Inc. kbelectronics.com • info@kbelectronics.com AC MOTOR SPEED CONTROL Hybrid Drive" KRWA SERIES - NEMA 1 / IP 20 KRWA SER

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

Ratings

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

			Ratings		Net Weight	
Model No.	Enclosure	Part No.	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

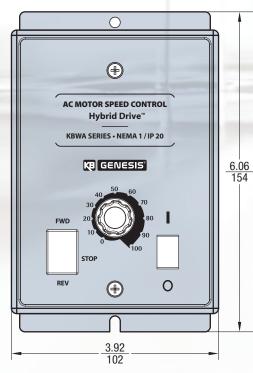
Notes: 1) Rated 1.3 Amps on 115 VAC input. 2) Rated 2.2 Amps on 115 VAC input.

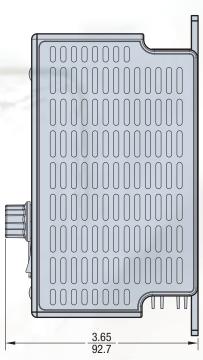
Specifications

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	DC Injection*		
Operating Temperature Range (°C / °F)	0 - 40 / 32 - 104		
Storage Temperature (°C / °F)	-25 - +85 / -13 - +185		

*Requires factory programming, optional regenerative braking module is available.

Dimensions - (Inches/mm)

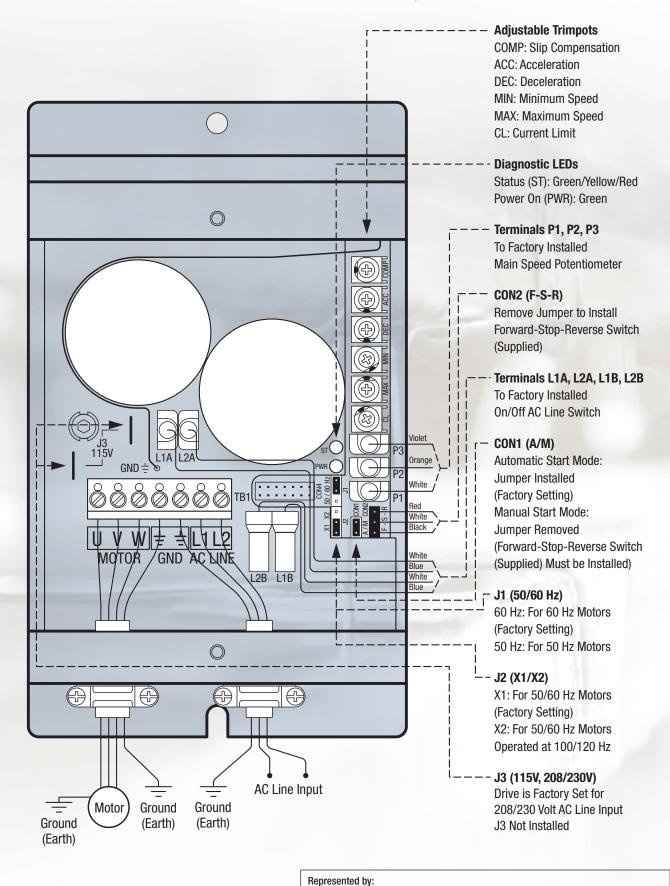




Model KBWA-23D Vented NEMA 1 / IP 20 Shown



KB Electronics, Inc. kbelectronics.com • info@kbelectronics.com .





KB ELECTRONICS, INC. (954) 346-4900 • Fax (954) 346-3377 Outside Florida Call Toll Free (800) 221-6570 info@kbelectronics.com • www.kbelectronics.com D-1040