

KBDA

Digital AC Drive with CSP™*

Rugged Die-Cast Aluminum NEMA 4X / IP65 Enclosure with Hinged Cover

Washdown and Watertight for Indoor and Outdoor Use

Primary Features

- Horsepower 1/8 to 5 HP, Programmable
- 115/230/460 VAC - 1ph & 3ph Input
- Output 230/460 VAC - 3ph for AC Induction Motors
- Starting Torque 200%
- Digital Display with LED Status Indicators
- FDA Approved Finish**

GFCI Compatible

Allows 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 commissioning.
With CSP™ you are 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, KB 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.

*CSP™ = Common Sense Programming. Parameters are organized into easy-to-understand intuitive groups.

**White cases only



Automation and Control

KB Electronics, Inc.
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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.

Multi-Function Output Relay

Can be used to turn equipment on or off, to signal a warning if the drive is put into "Stop" mode, or to signal if a fault has occurred.

Jog-Local/Remote

Set the drive to Jog Mode or changes between Local (Keypad) or Remote Operation.

Built-in Potentiometer

Quickest way to change motor speed.

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).

Drive Options

IODA Input/Output Multi-Function Board

Adds up to 17 points of additional I/O.

Modbus Serial Communication Module

See instruction manual for complete description.

Drive-Link™ Programming Kit

Allows PC programming.

On/Off AC Line Switch

Disconnects the AC line.

Class "A" (CE) RFI Filter

Installs inside the drive.

Liquidtight Fittings

Provides a liquid-tight seal for wiring the drive. Kit includes necessary liquidtight fittings.

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

Ratings

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

Model No.	Part No.		Ratings		Net Weight		Case
	Gray	White*	HP, (kW)	Amps	Lbs.	kg	
KBDA-24D	9536	9537	1, (0.75)	3.6	5.9	2.7	A
KBDA-27D**	9543	9544	2, (1.5)	6.7	10.3	4.7	B

**115 VAC Rating: 1.5 HP (1.13 kW), 5.5 Amps.

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

Model No.	Part No.		Ratings		Net Weight		Case
	Gray	White*	HP, (kW)	Amps	Lbs.	kg	
KBDA-29 (1P)	10003	10004	3, (2.25)	9	10.3	4.7	B

230 VAC 3-Phase Input • 230 VAC 3-Phase Output

Model No.	Part No.		Ratings		Net Weight		Case
	Gray	White*	HP, (kW)	Amps	Lbs.	kg	
KBDA-24P	9766	9767	1, (0.75)	3.6	5.9	2.7	A

230 VAC 1 & 3-Phase Input • 230 VAC 3-Phase Output

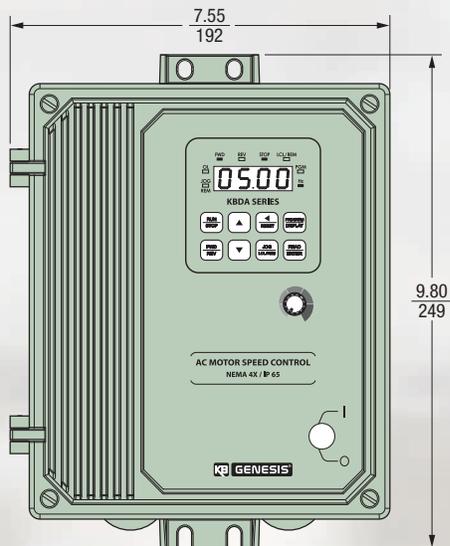
Model No.	Part No.		Ratings		Net Weight		Case
	Gray	White*	HP, (kW)	Amps	Lbs.	kg	
KBDA-29**	9545	9546	3, (2.25)	9	10.3	4.7	B

460 VAC 3-Phase Input • 460 VAC 3-Phase Output

Model No.	Part No.		Ratings		Net Weight		Case
	Gray	White*	HP, (kW)	Amps	Lbs.	kg	
KBDA-42	9763	9764	1, (0.75)	2	5.9	2.7	A
KBDA-45	9659	9660	3, (2.25)	5.5	10.3	4.7	B
KBDA-48	9661	9662	5, (3.75)	8.3	10.3	4.7	B

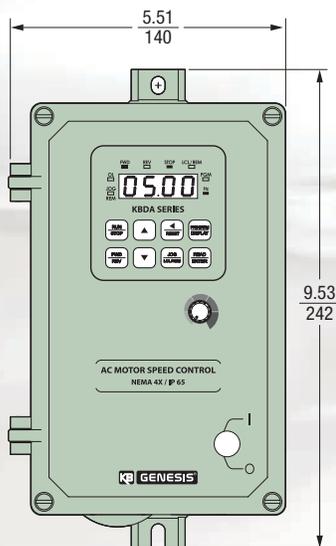
*FDA approved (white case only). **Rated 2 HP, 6.7 Amps w/ 1-Phase Input.

Case "B" – (Inches/mm)



Maximum Depth: 7.25
184

Case "A" – (Inches/mm)



Maximum Depth: 5.86
149

Specifications

Maximum Load (% of Current Overload for 2 Minutes)	150
Switching Frequency (kHz)	8, 10, 12
Output Frequency Resolution (Hz)	0.06
Minimum Output Frequency to Motor (Hz)	0.3
Acceleration Time (Seconds)	0.1 – 180.0
Deceleration Time (Seconds)	0.3 – 180.0
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

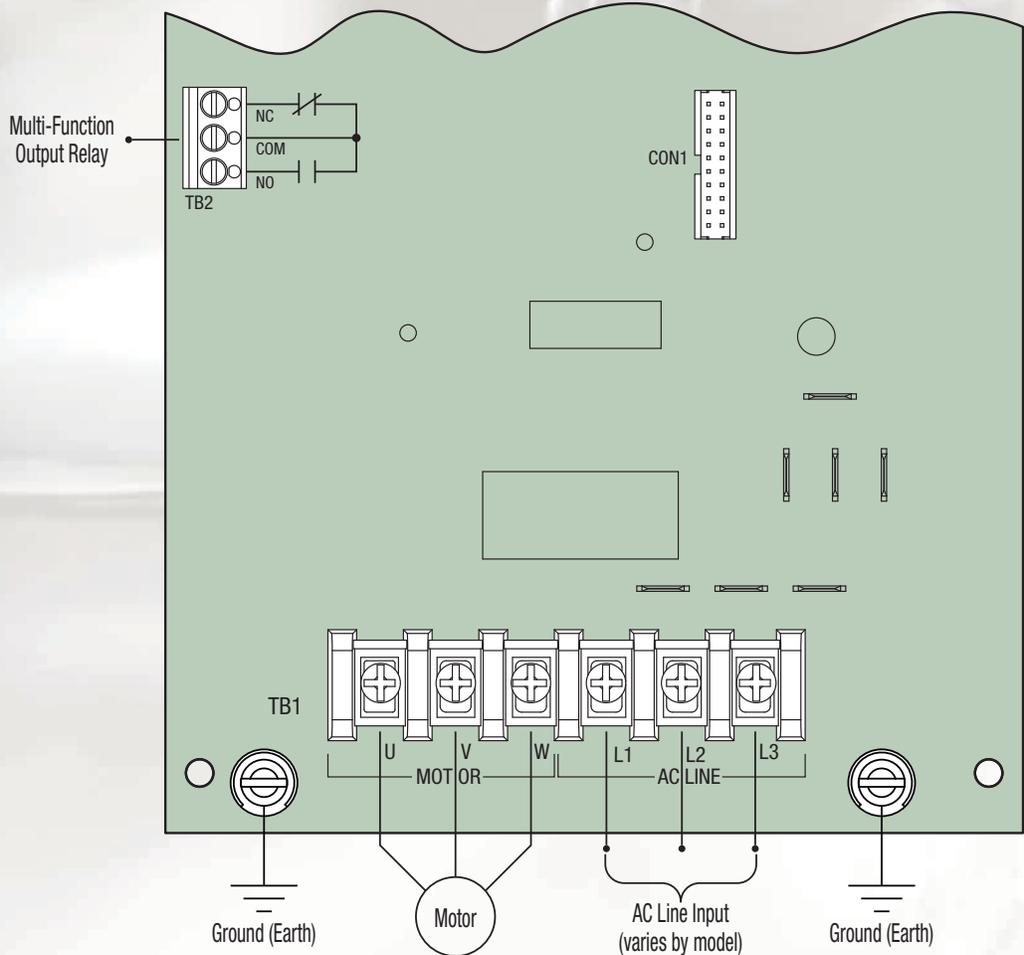
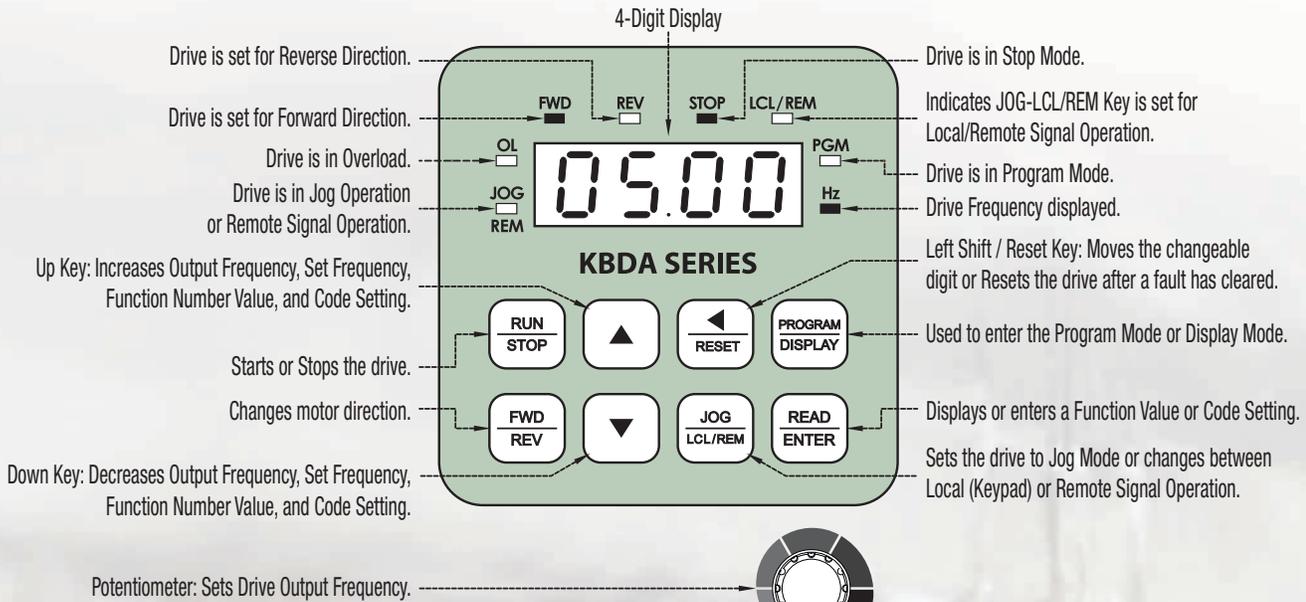
*DC Injection Braking – Programmable via keypad.



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Automation and Control

General Connection Diagram



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