KBAC

Hybrid AC Drive

A Digital Drive with Analog Interface

Rugged Die-Cast Aluminum NEMA-4X / IP-65 Enclosure with Hinged Cover

Primary Features

Horsepower 1/8 to 5 HP, Jumper Selectable
1Ø & 3Ø Input 115/230/460 VAC, 50/60 Hz
3Ø Output 230/460 VAC
200% Starting Torque
Diagnostic LED Status Indicators

c UL us RoHS COMPLIANT CE

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
Energy savings is realized by using variable motor speed vs. constant speed motors.

Economical to Use: Indoors or Out

Eliminates secondary enclosure
No holes to drill, no switches to install.
No need to derate drive for high starting torque applications.

Combines Soft Start with Variable Speed
Adjustable Soft Start.

KB Customization for OEM's

"You get exactly what you need. Nothing more, Nothing less."
Includes: custom label, preset calibration, installing drive options and custom software.
Ready to use out of the box.

GFCI software* *allows equipment to operate with Ground Fault Circuit Interruption circuit breakers or outlets.*

**With factory programming.*

KB GENESIS® Automation and Control

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

Designed and Assembled in USA

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.

Run/Fault Relay Output Contacts
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.

Start/Stop Switch
Provides electronic "Start" and "Stop" functions.

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).

Basic, Programmable, Trimpot Adjustments
Min. Speed, Max. Speed, Accel, Decel, Current Limit, Slip Comp.

Drive Options

On/Off AC Line Switch
Disconnects the AC line.

Forward-Stop-Reverse Switch
Provides motor reversing and stop functions.

Signal Isolator
Provides isolation between a non-isolated signal source and the drive.

Auto/Manual Switch
When used with the Signal Isolator, it selects the remote process signal or the Main Speed Potentiometer.

Class "A" (CE) RFI Filter
Installs inside the drive.

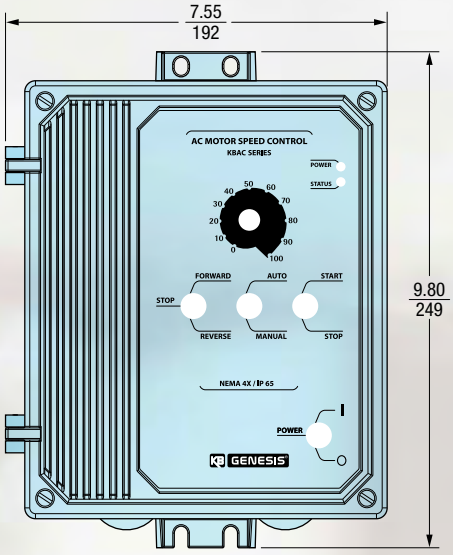
Liquidtight Fittings
Provides a liquid-tight seal for wiring the drive. Kit includes necessary liquid-tight fittings.

Learn about our BAD™ distributor program
www.kbelectronics.com/BAD.pdf

Applications

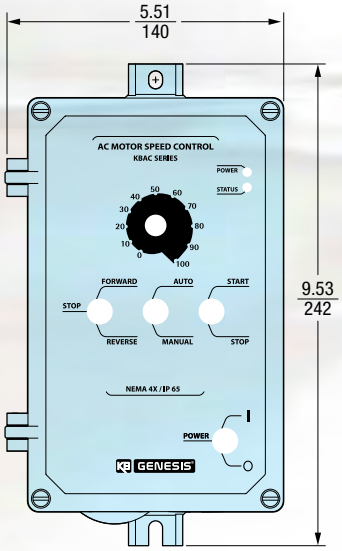
- Actuators • Air Cleaners • Amusement Rides
- Ball Pitching Machines • Blowers • Boat Lifts
- Bowling Alley Lane Cleaners • CNC • Conveyors
- Door and Gate Openers • Drilling • Duct Cleaners
- Dumbwaiters • Elevators and Hoists
- Exercise Equipment • Fabric Processing • Fans
- Feeders • Film Processing • 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

Case "B" – (Inches/mm)



Maximum Depth: 7.25 / 184

Case "A" – (Inches/mm)



Maximum Depth: 5.86 / 149

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	
KBAC-24D	9987	9988	1, (0.75)	3.6	5.9	2.7	A
KBAC-27D	9520	9521	2, (1.5)	6.7	10.3	4.7	B

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	
KBAC-29 (1P)	10001	10002	3, (2.25)	9.0	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	
KBAC-29	9528	9529	3, (2.25)	9.0	10.3	4.7	B

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

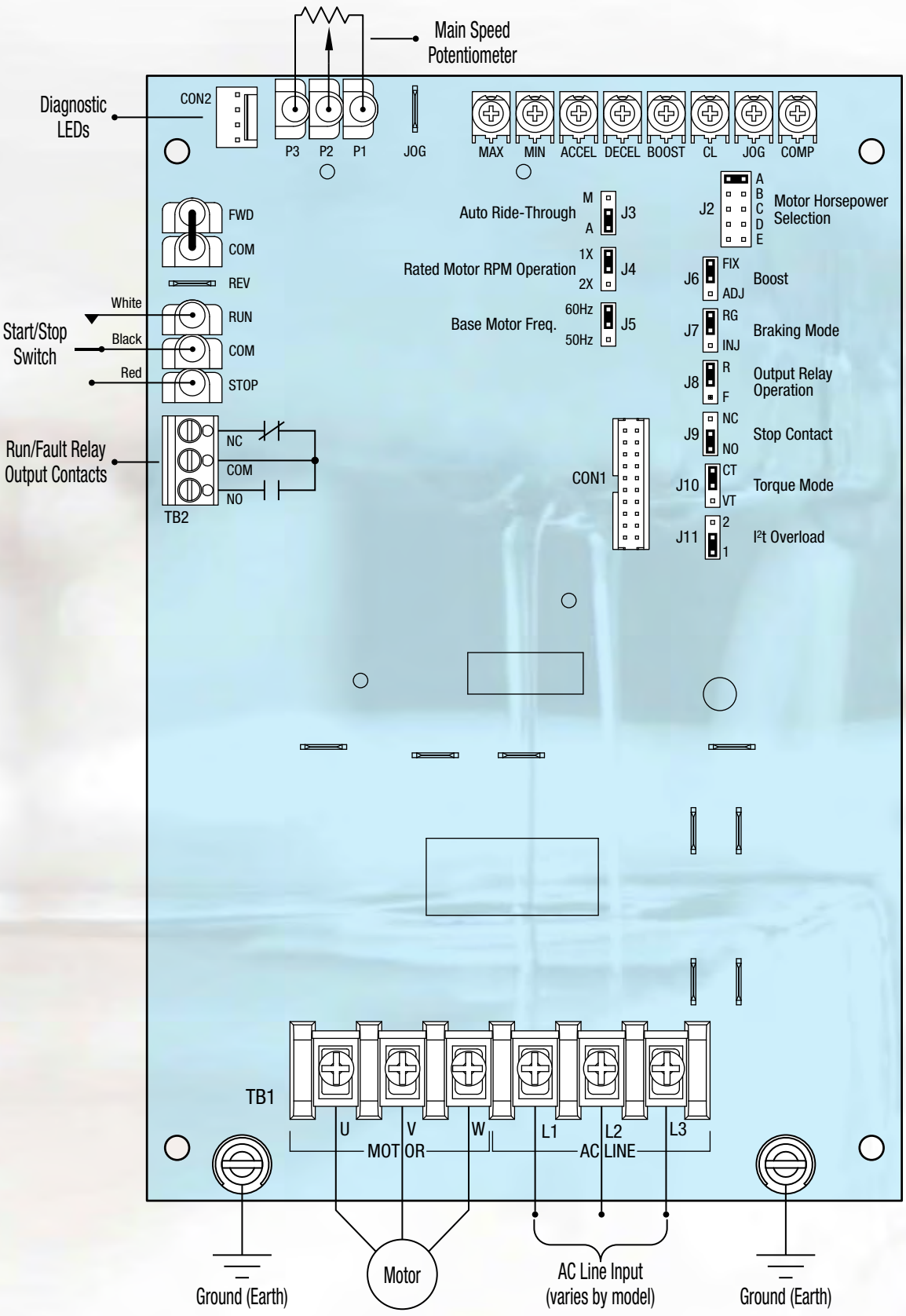
Model No.	Part No.		Ratings		Net Weight		Case
	Gray	White	HP, (kW)	Amps	Lbs.	kg	
KBAC-45	9530	9531	3, (2.25)	4.6	10.3	4.7	B
KBAC-48	9540	9541	5, (3.75)	8.3	10.3	4.7	B

Specifications

Maximum Load (% of Current Overload for 2 Minutes)	150
Carrier, Switching Frequency (kHz)	16, 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.*

General Connection Diagram



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