KBWK
Digital AC Drive with CSP™*
for 3-Phase AC Induction Motors
(Factory Programmable for PMAC Motors)
NEMA 1/IP 20 Enclosure

Primary Features
Horsepower 1/8 to 1/2 HP**
One Model for 115 and 230 VAC - 1ph Input
Output 230 VAC - 3ph
Starting Torque 200%
Ultra Bright Digital Display with LED Status Indicators
Front Panel Power On/Off Switch

GFCI Compatible
Contains proprietary software which prevents GFCI circuit breakers and outlets from tripping***.

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.
**Lower horsepower models available (KBWK-21D, 2P3D, 2P6D).
***Use program function F0.04 to set the drive for GFCI operation (may increase audible motor noise).
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.

Jog
Provides a fixed preset speed.

Built-in Potentiometer
Sets motor speed in lieu of keypad.

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 Input Voltage Settings

<table>
<thead>
<tr>
<th>Drive Set for 208/230 Volt AC Line Input (J3 Not Installed) (Factory Setting)</th>
<th>Drive Set for 115 Volt AC Line Input (J3 Installed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>J3 115V</td>
<td>L2A</td>
</tr>
</tbody>
</table>

Visit kbelectronics.com to learn about Build-A-Drive™, KB’s New AC Inverter Program and to watch the new KBAC installation demo video.
Specifications

| Maximum Load (% of Current Overload for 2 Minutes) | 150 |
| Switching Frequency (kHz) | 8, 12, 16 |
| Output Frequency Resolution (Hz) | 0.06 |
| Minimum Output Frequency to Motor (Hz) | 1 |
| Acceleration Time (Seconds) | 0.1 – 180 |
| Deceleration Time (Seconds) | 0.3 – 180 |
| 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.

Ratings

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Enclosure</th>
<th>Part No.</th>
<th>HP, (kW)</th>
<th>Amps</th>
<th>Lbs.</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>KBWK-23D</td>
<td>NEMA 1 / IP 20</td>
<td>8860</td>
<td>1/2, (0.37)</td>
<td>2.4¹</td>
<td>1.72</td>
<td>0.78</td>
</tr>
</tbody>
</table>

Notes: ¹ Rated 2.2 Amps on 115 VAC input.

Dimensions – (Inches/mm)

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

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