
INTRODUCING NEW KBAC SERIES MODELS

KBAC-217, KBAC-217S, KBAC-217F, KBAC-217SF

KBAC-416, KBAC-416S, KBAC-416F, KBAC-416SF

Hybrid Drive™

Digital AC Drive with Analog Interface
for 3ph Induction Motors

Rugged Die-Cast Aluminum NEMA 4X / IP65 Enclosure with Hinged Cover
Washdown and Watertight for Indoor and Outdoor Use



MODEL KBAC-416S SHOWN



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Automation and Control

DESCRIPTION

These new Models KBAC-217, 217S, 217F, 217SF and KBAC-416, 416S, 416F, 416SF have the same features as the other KBAC Series Drives, except for the additional features listed below. Models KBAC-217, 217S, 217F, 217SF are designed to operate 230 VAC 3ph induction motors up to 5 HP from a 208/230, 3ph, 50/60 Hz AC line input. Models KBAC-416, 416S, 416F, 416SF are designed to operate 460 VAC 3ph induction motors up to 10 HP from a 460 VAC, 3ph, 50/60 Hz AC line input. These drives have a selectable jumper for switching frequency (8 kHz and 12 kHz) and GFCI (standard and sensitive). "S" suffix models contain a factory installed On/Off AC Line Switch. "F" suffix models contain a factory installed RFI (EMI) AC Line filter.

Models KBAC-217, 217S, 217F, 217SF

HP: 5 (A), 3 (B), 2 (C) (Set with Jumper J2)
Input: 208/230 VAC, 3ph, 50/60 Hz
Output: 230 VAC, 3ph

Models KBAC-416, 416S, 416F, 416SF

HP: 10 (A), 7.5 (B), 5 (C) (Set with Jumper J2)
Input: 460 VAC, 3ph, 50/60 Hz
Output: 460 VAC, 3ph

Factory Installed On/Off AC Line Switch

Models KBAC-217S, 217SF, 416S, 416SF contain a factory installed On/Off AC Line Switch. The switch is equipped with a mechanical interlock that prevents the drive cover from being opened unless the switch is set to the OFF ("0") position. The switch also contains a safety lockout feature that can be used with a padlock which prevents the drive from being turned on while the related equipment is being serviced.

Switching Frequency (Jumper Selectable)

Jumper J12 allows the drive's switching frequency to be set to 8 kHz or 12 kHz.

8 kHz: The drive is factory set for 8 kHz switching frequency. This setting is suitable for most applications, such as general machinery and equipment that require constant torque operation.

12 kHz: For variable torque operation (applications such as HVAC, fans, pumps, etc.), the drive should be set for 12 kHz switching frequency. In addition, Jumper J10 should be set to the "VT" (Variable Torque) position, which will reduce motor noise and improve efficiency.

GFCI (Jumper Selectable)

Jumper J12 allows the drive to be used on standard (G1) or sensitive (G2) GFCIs. (May increase motor noise.)

AC Line Filter (Available for All Models)

Provides Class A RFI (EMI) suppression. Complies with CE Council Directive 89/336/EEC Industrial Standard. Add suffix "F" to any drive model.

Example: KBAC-217F or KBAC-217SF

RATINGS

208/230 VAC 3ph Input • 230 VAC 3ph Output

Model No.	Part No. Gray / White*	Ratings		Net Weight (Approximate)		Case Size
		HP (kW)	Amps	Lbs.	kg	
KBAC-217	8868 / 8879	5 (3.75)	17	22	10	C
KBAC-217S	8863 / 8855					
KBAC-217F	8861 / 8853					
KBAC-217SF	8869 / 8880					

460 VAC 3ph Input • 460 VAC 3ph Output

Model No.	Part No. Gray / White*	Ratings		Net Weight (Approximate)		Case Size
		HP (kW)	Amps	Lbs.	kg	
KBAC-416	8870 / 8881	10 (7.5)	16	22	10	C
KBAC-416S	8864 / 8856					
KBAC-416F	8874 / 8883					
KBAC-416SF	8871 / 8882					

"S" suffix models contain a factory installed On/Off AC Line Switch.

"F" suffix models contain a factory installed RFI (EMI) AC Line filter.

*White FDA approved finish.

SPECIFICATIONS

Enclosure Type (Washdown/Watertight for Indoor/Outdoor Use)	NEMA 4X / IP65	
Maximum Load (% of Current Overload for 2 Minutes)	150	
Switching Frequency (kHz)	8, 12*	
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 Speed) (% Base Speed)	2.5	
Stalled Motor Trip Time (Seconds)	6	
Braking	DC Injection*	
Dimensions (Approximate) (L x W x D)	Drives without "S" Suffix	14" x 10.5" x 8.5" 356 mm x 267 mm x 216 mm
	Drives with "S" Suffix	14" x 10.5" x 9" 356 mm x 267 mm x 227 mm
Operating Temperature Range (°C / °F)	0 – 40 / 32 – 104	
Operating Humidity Range (% Relative, Non-Condensing)	0 – 95	
Storage Temperature Range (°C / °F)	-25 – +85 / -13 – +185	

*Jumper selectable.

OPTIONAL ACCESSORIES

Forward-Stop-Reverse Switch (Part No. 8888): Provides motor reversing and stop functions.

Run-Stop-Jog Switch (Part No. 8889): Selects speed setting from either the Main Speed Potentiometer or the JOG Trimpot.

Signal Isolator Part No. 8890): Provides isolation between a non-isolated signal source and the drive.

Auto/Manual Switch (Part No. 8891): When used with the Signal Isolator, it selects the remote process signal or the Main Speed Potentiometer.

Liquidtight Fittings (Part No. 8892): Provides a liquidtight seal for wiring the drive. Kit includes necessary liquidtight fittings.

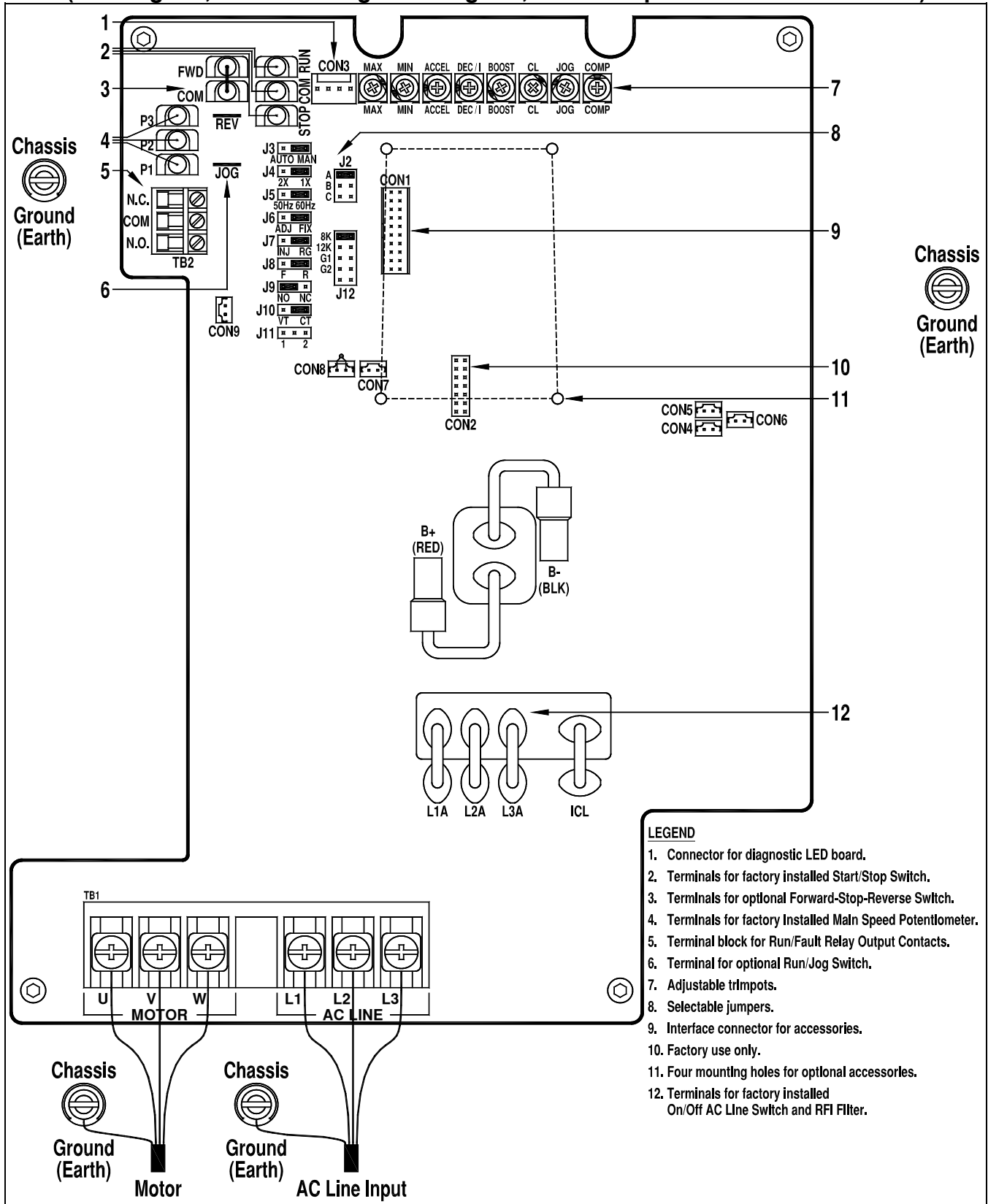


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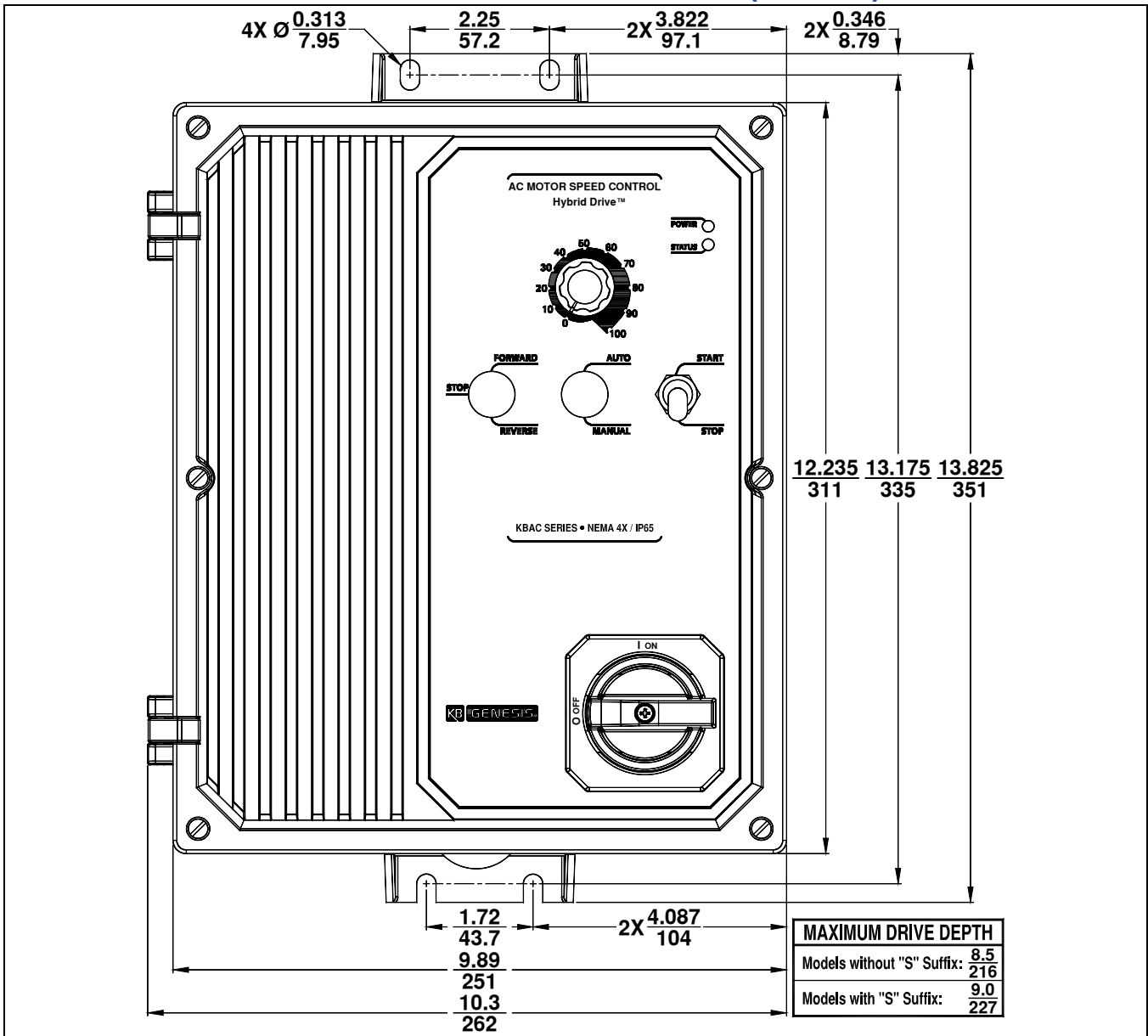
GENERAL CONNECTION DIAGRAM AND CONTROL LAYOUT

(See Legend, at Bottom Right of Diagram, for Description of Numbered Items)



- LEGEND**
1. Connector for diagnostic LED board.
 2. Terminals for factory installed Start/Stop Switch.
 3. Terminals for optional Forward-Stop-Reverse Switch.
 4. Terminals for factory Installed Main Speed Potentiometer.
 5. Terminal block for Run/Fault Relay Output Contacts.
 6. Terminal for optional Run/Jog Switch.
 7. Adjustable trimpots.
 8. Selectable jumpers.
 9. Interface connector for accessories.
 10. Factory use only.
 11. Four mounting holes for optional accessories.
 12. Terminals for factory installed On/Off AC Line Switch and RFI Filter.

MECHANICAL SPECIFICATIONS (IN / mm)



OTHER AC DRIVES AVAILABLE FROM KB ELECTRONICS, INC.

For Product Descriptions, See Our Inverter Selection Guide Online: <http://www.kbelectronics.com/InverterSelectionGuide.pdf>

- KBDA Series Digital Drives – NEMA 4X / IP65
- KBAC Series Hybrid Drives™ – NEMA 4X / IP65
- KBMK Series Digital Drives – NEMA 1 / IP50
- KBMA Series Hybrid Drives™ – NEMA 1 / IP50
- KBVF Series Hybrid Drives™ – Chassis / IP20
- KBDF Series Digital Drives – IP20
- KBWA Series Hybrid Drives™ – NEMA 1 / IP20 and NEMA 1 / IP50
- KBWK Series Digital Drives – NEMA 1 / IP20



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