

# Inverter Selection Guide

KB Electronics, Inc.



- Chassis / IP 20 models include Motor Filters to eliminate winding and bearing failures.
- Hybrid Drives are digital drives with an analog interface.
- Digital models feature LED displays with easy to use Common Sense Programming.
- All models can be customized for OEM's, Ready-to-Use, out of the box.
- A wide variety of factory installed options add to the drive versatility while maintaining low cost.



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Designed and  
Assembled in USA





### KBDA Digital Drive – NEMA 4X / IP 65

The KBDA Series of Digital Adjustable Frequency Drives consist of eight inverter models rated for 1/8 to 5 horsepower motors. These drives are housed in heavy duty NEMA 4X / IP 65 die-cast aluminum washdown/watertight enclosures for indoor or outdoor use.

**Options:** IODA Input/Output Multi-Function Module, Modbus Serial Communication Module, Drive-Link™ Programming Kit, On/Off AC Line Switch, Class “A” (CE) RFI Filter and Liquidtight Fittings.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase (Ø)	Model Number	Part No.		Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW				Gray	White*				Lbs.	kg	
1	0.75	115	1	KBDA-24D	9536	9537	16	0 – 208/230	3.6	5.9	2.7	A
		208/230					10					
1½	1.13	115	1	KBDA-27D	9543	9544	22	0 – 208/230	5.5	10.3	4.7	B
2	1.5	208/230					15		6.7			
3	2.25	208/230	1	KBDA-29 (1P)	10003	10004	20.5	0 – 208/230	9	10.3	4.7	B
1	0.75	208/230	3	KBDA-24P	9766	9767	4.7	0 – 208/230	3.6	5.9	2.7	A
2	1.5	208/230	1	KBDA-29	9545	9546	15	0 – 208/230	6.7	10.3	4.7	B
3	2.25		3				10.8		9			
1	0.75	400/460	3	KBDA-42	9763	9764	2.6	0 – 400/460	2	5.9	2.7	A
3	2.25	400/460	3	KBDA-45	9659	9660	5.3	0 – 400/460	4.6	10.3	4.7	B
5	3.75	400/460	3	KBDA-48	9661	9662	9.6	0 – 400/460	8.3	10.3	4.7	B

\*FDA approved (white cases only).



### KBAC Hybrid Drive™ – NEMA 4X / IP 65

The KBAC Series of Adjustable Frequency Drives consist of six inverter models rated for 1/8 to 5 horsepower motors. These drives are housed in heavy duty NEMA 4X / IP 65 die-cast aluminum washdown/watertight enclosures for indoor or outdoor use. Hybrid drives are a digital drive with an analog interface.

**Options:** On/Off AC Line Switch, Forward-Stop-Reverse Switch, Run-Stop-Jog Switch, Signal Isolator with Auto/Manual Switch, Class “A” (CE) RFI Filter and Liquidtight Fittings.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase (Ø)	Model Number	Part No.		Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW				Gray	White*				Lbs.	kg	
1	0.75	115	1	KBAC-24D	9987	9988	16	0 – 208/230	3.6	5.9	2.7	A
		208/230					10					
1½	1.13	115	1	KBAC-27D	9520	9521	22	0 – 208/230	5.5	10.3	4.7	B
2	1.5	208/230					15		6.7			
3	2.25	208/230	1	KBAC-29 (1P)	10001	10002	20.5	0 – 208/230	9	10.3	4.7	B
2	1.5	208/230	1	KBAC-29	9528	9529	15	0 – 208/230	6.7	10.3	4.7	B
3	2.25		3				10.8		9			
3	2.25	400/460	3	KBAC-45	9530	9531	5.3	0 – 400/460	4.6	10.3	4.7	B
5	3.75	400/460	3	KBAC-48	9540	9541	9.6	0 – 400/460	8.3	10.3	4.7	B

\*FDA approved (white cases only).



### KBMK Digital Drive – NEMA 1 / IP 50

The KBMK Series of Digital Adjustable Frequency Drives consist of two inverter models rated for 1/8 to 1 horsepower motors. These drives are housed in NEMA 1 / IP 50 aluminum enclosures. The KBMK-24DF contains a built-in CE approved AC Line Class “A” Industrial Standard RFI (EMI) Filter.

**Options:** IODA Input/Output Multi-Function Module and On/Off AC Line Switch.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase (Ø)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1	0.75	115	1	KBMK-24D	9680	16	0 – 208/230	3.6	2.26	1.03	C
		208/230				10					
1	0.75	115	1	KBMK-24DF	9681	16	0 – 208/230	3.6	2.26	1.03	C
		208/230				10					



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### KBMA Hybrid Drive™ – NEMA 1 / IP 50

The KBMA Series of Adjustable Frequency Drives consist of two inverter models rated for 1/8 to 1 horsepower motors. These drives are housed in NEMA 1 / IP 50 aluminum enclosures. The KBMA-24DF contains a built-in CE approved AC Line Class “A” Industrial Standard RFI (EMI) Filter. Hybrid drives are a digital drive with an analog interface.

**Option:** Forward-Stop-Reverse Switch.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase (Ø)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1	0.75	115	1	KBMA-24D	9533	16	0 – 208/230	3.6	2.42	1.09	C
		208/230				10					
1	0.75	115	1	KBMA-24DF	9534	16	0 – 208/230	3.6	2.48	1.12	C
		208/230				10					



### KBVF Hybrid Drive™ – Chassis / IP 20

The KBVF Series of Adjustable Frequency Drives consist of 16 inverter models rated for 1/10 to 5 horsepower motors. These chassis / IP 20 drives are ideal for OEM applications where digital programming and displays are not required. Hybrid drives are a digital drive with an analog interface.

**Options:** Drive-Link™ Programming Kit, SIVFR Signal Isolator and Run Fault Relay (Standard on 460 VAC models), DIVF Modbus Serial Communication Module, Class “A” or “B” (CE) RFI Filter, DBVF Dynamic Brake Module, Multi-Speed Board, KBRK Remote Digital Keypad (OEM applications only) and IOVF Input/Output Multi-Function Module.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase (Ø)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1/2	0.37	115	1	KBVF-13	9957	9.6	0 – 208/230	2.4	1.3	0.6	D
1	0.75	115	1	KBVF-14	9977	14	0 – 208/230	4	2.2	1.0	E
1/2	0.37	208/230	1	KBVF-23	9958	6	0 – 208/230	2.4	1.3	0.6	D
1	0.75	208/230	1	KBVF-24	9978	10	0 – 208/230	4	2.2	1	E
1/10	0.07	115	1	KBVF-21D*	9581	4	0 – 208/230	1	0.7	0.3	F
		208/230				2.5					
1/4	0.18	115	1	KBVF-22D*	9572	6	0 – 208/230	1.5	1.3	0.6	D
		208/230				3.8					
1/2	0.37	115	1	KBVF-23D*	9959	9.6	0 – 208/230	2.4	1.3	0.6	D
		208/230				6					
1	0.75	115	1	KBVF-24D*	9979	14	0 – 208/230	4	2.2	1	E
		208/230				10					
1½	1.13	115	1	KBVF-26D*	9496	22	0 – 208/230	5.5	2.9	1.3	G
		208/230				14					
1/2	0.37	208/230	3	KBVF-23P	9676	3.2	0 – 208/230	2.4	1.1	0.5	D
1	0.75	208/230	3	KBVF-24P	9677	5.2	0 – 208/230	4	2.2	1	E
2	1.5	208/230	1	KBVF-27	9591	17	0 – 208/230	6.7	4.1	1.9	H
			3			8.7					
2	1.5	208/230	1	KBVF-29	9593	17	0 – 208/230	6.7	4.6	2.1	H
			3			11.7		9			
1	0.75	400/460	3	KBVF-42**	9645	2.6	0 – 400/460	2	2.8	1.3	I
3	2.25	400/460	3	KBVF-45**	9590	5.3	0 – 400/460	4.6	4.1	1.9	J
5	3.75	400/460	3	KBVF-48**	9592	11	0 – 400/460	8.3	4.6	2.1	J

\*Models KBVF-21D, 22D, 23D, 24D and 26D are available in single voltage AC line input (115 or 208/230 VAC) and also contain a built-in Motor Filter to eliminate winding and bearing failures.

\*\*Contains SIVFR signal input isolation and Run/Fault output relay.



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### KBDF Digital Drive – IP 20

The KBDF Series of Adjustable Frequency Drives consist of 13 inverter models rated for 1/8 to 5 horsepower motors. These drives are housed in IP 20 enclosures. They are ideal for OEM applications where digital programming and displays are required. All models are available with a built-in CE approved AC Line Class “A” Industrial Standard RFI (EMI) Filter<sup>1</sup>.

**Options:** Memory Module, IODF Input/Output Multi-Function Expansion Module, Drive-Link™ Programming Kit and Modbus Serial Communication Module.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase (Ø)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1/2	0.37	115	1	KBDF-13	9623	9.6	0 – 208/230	2.4	2.8	1.27	K
1	0.75	115	1	KBDF-14	9624	14	0 – 208/230	4	2.8	1.27	
1½	1.13	115	1	KBDF-16	9625	22	0 – 208/230	5.5	2.8	1.27	
1/2	0.37	208/230	1	KBDF-23 <sup>1</sup>	9688	6	0 – 208/230	2.4	2.8	1.27	
1	0.75	208/230	1	KBDF-24 <sup>1</sup>	9689	10	0 – 208/230	4	2.8	1.27	
2	1.5	208/230	1	KBDF-27 <sup>1</sup>	9690	17	0 – 208/230	6.7	2.8	1.27	
1/2	0.37	115 208/230	1	KBDF-23D	9673	9.6 6	0 – 208/230	2.4	2.8	1.27	K
1	0.75	115 208/230	1	KBDF-24D	9674	14 10	0 – 208/230	4	2.8	1.27	
1½	1.13	115	1	KBDF-27D	9675	22	0 – 208/230	5.5	2.8	1.27	
2	1.5	208/230	1	KBDF-27D	9675	17		6.7			
2	1.5	208/230	1	KBDF-29 <sup>1,2</sup>	9641	17	0 – 208/230	6.7	4.2	1.93	L
3	2.25		3			11.7		9			
1	0.75	400/460	3	KBDF-42 <sup>1,2</sup>	9642	2.6	0 – 400/460	2	4.2	1.93	
3	2.25	400/460	3	KBDF-45 <sup>1,2</sup>	9643	5.3	0 – 400/460	4.6	4.2	1.93	
5	3.75	400/460	3	KBDF-48 <sup>1,2</sup>	9644	11	0 – 400/460	8.3	4.2	1.93	

1. Add “F” Suffix to Model Number for Built-In Class “A” (CE) RFI (EMI) AC Line Filter. Ex. KBDF-24F. 2. Available fourth quarter of 2012.



### KBWA Hybrid Drive™ – NEMA 1 Enclosures\*

The KBWA Series of Adjustable Frequency Drives consist of two inverter models rated for 1/8 to 1/2 horsepower\*\* motors. These drives are housed in NEMA 1 enclosures\*. Both models contain an On/Off AC Line Switch and a Main Speed Potentiometer. Hybrid drives are a digital drive with an analog interface.

**Option:** Supplied Forward-Stop-Reverse Switch.

Maximum HP		AC Line Voltage (50/60 Hz)	Phase (Ø)	Model Number	Part No.	Max. AC Line Current (Amps AC)	Voltage Range (Volts AC)	Max. Load Current (Amps/Phase)	Net Weight		Dim. Ref. Code
HP	kW								Lbs.	kg	
1/4	0.19	115 208/230	1	KBWA-22D	9926	6 3.8	0 – 208/230	1.3 1.5	1.58	0.72	M
1/2	0.37	115 208/230	1	KBWA-23D	9946	11 7	0 – 208/230	2.2 2.4	1.58	0.72	M

\* Model KBWA-22D (IP 50), model KBWA-23D (IP 20). \*\*Lower horsepower models available (KBWA-21D, 2P3D, 2P6D).

#### Dimensions (W x L x D)

Ref. Code	Inches	Millimeters
A	5.51 x 9.53 x 5.86	140 x 242 x 149
B	7.55 x 9.80 x 7.25	192 x 249 x 184
C	4.95 x 7 x 4.15	126 x 178 x 105
D	3.9 x 4.3 x 2.75	99 x 109 x 70
E	4.7 x 4.3 x 5	119 x 109 x 127

Ref. Code	Inches	Millimeters
F	3.9 x 4.3 x 2	99 x 109 x 51
G	4.7 x 5.7 x 4.5	119 x 145 x 114
H	4.7 x 7.5 x 4.45	119 x 191 x 113
I	4.1 x 9.31 x 2.75	103 x 236 x 70
J	4.7 x 8.75 x 4.45	119 x 222 x 113

Ref. Code	Inches	Millimeters
K	3.4 x 7.25 x 5.1	86.4 x 184 x 130
L	4.4 x 7.8 x 6.1	112 x 199 x 155
M	3.92 x 6.06 x 3.65	102 x 154 x 92.7



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