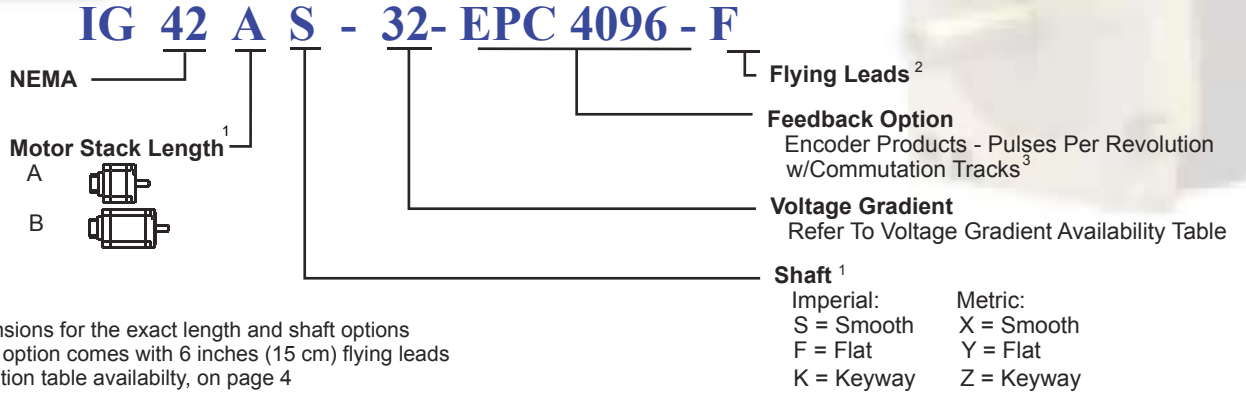


# IG 42 - F with EPC Feedback

## Model Numbering

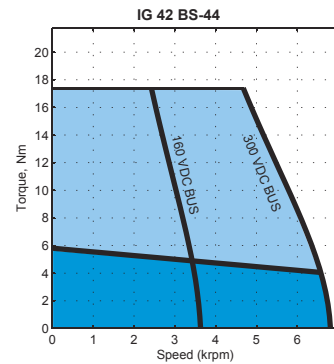
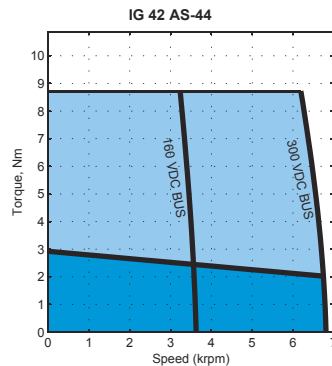


1. Refer to Dimensions for the exact length and shaft options
2. The F housing option comes with 6 inches (15 cm) flying leads
3. Refer to resolution table availability, on page 4

## Voltage Gradient

Voltage Constant $K_E$ (V/kRPM)		16	22	32	44	64	88	130	180	260	360
Frame Size	IG 34										
	IG 42										

## Performance Curves



Contact factory for torque-speed curves of other motors

OCT,31, 06

# IG 42 - F with EPC

## Motor Specification

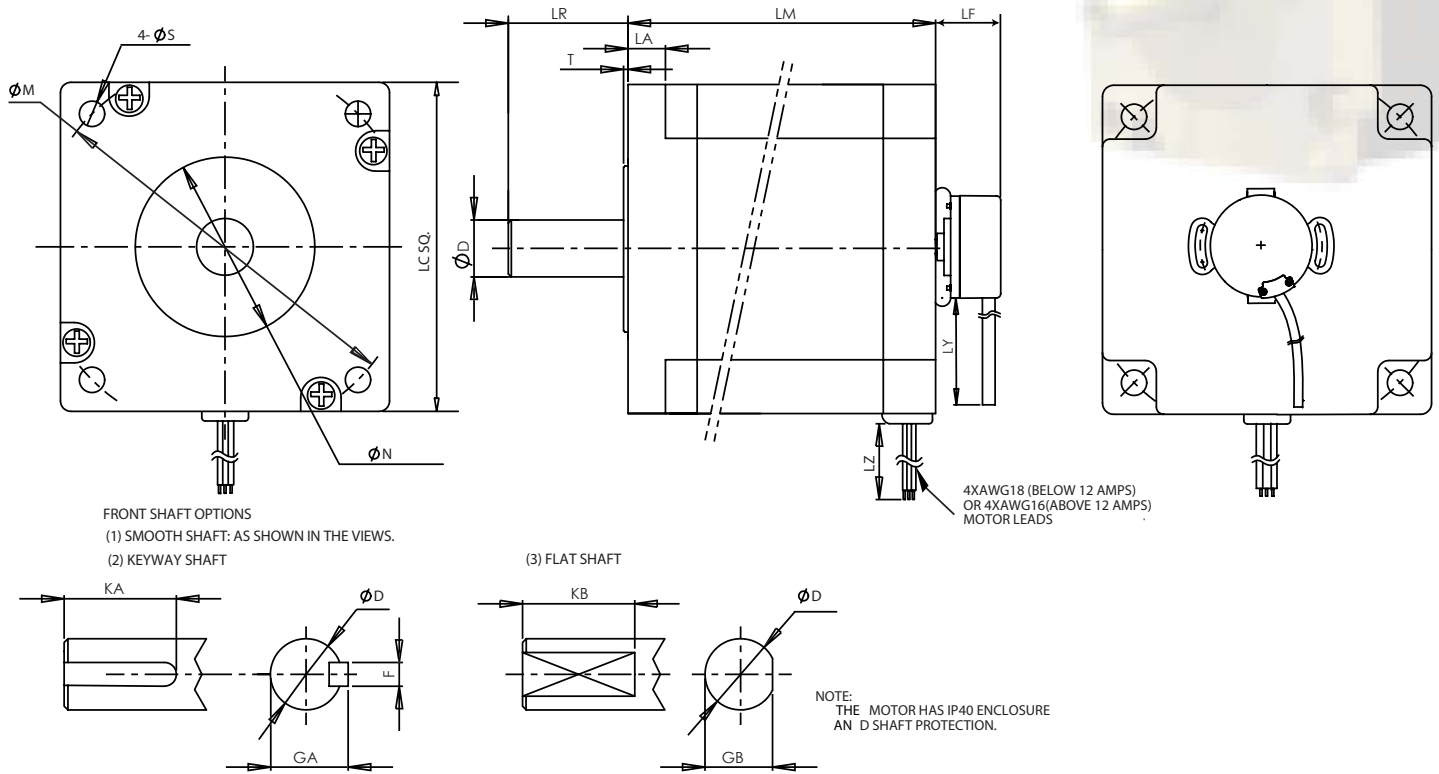


NEMA 42																		
Index	Model Number	Weight		Torque Constant (Peak) (L2L)		Voltage Constant	Cont. Stall Torque		Cont. Stall Current	Peak Stall Torque		Peak Stall Current	Max BEMF (Peak) (L2L)	Max Speed	L-to-L Resistance	L-to-L Inductance	Rotor Inertia	
		W		K <sub>T</sub>		K <sub>E</sub>	T <sub>cs</sub>		I <sub>cs</sub>	T <sub>p</sub>		I <sub>p</sub>	U <sub>max</sub>	n <sub>max</sub>	R	L	J	
		kg	lb	Nm/A	lb-in/amp	V/krpm	Nm	lb-in	A	Nm	lb-in	A	V	rpm	Ohms	mH	kg-cm <sup>2</sup>	lb-in-sec <sup>2</sup>
73	IG 42 AS - 32	5.50	12.13	0.35	3.12	32.00	2.90	25.67	8.22	8.70	77.00	24.65	192.00	6000	0.20	1.10	3.00	0.00266
74	IG 42 BS - 32	9.20	20.28	0.35	3.12	32.00	5.80	51.33	16.44	17.40	154.00	49.31	192.00	6000	0.16	1.40	6.00	0.00531
75	IG 42 AS - 44	5.50	12.13	0.49	4.29	44.00	2.90	25.67	5.98	8.70	77.00	17.93	264.00	6000	0.38	2.30	3.00	0.00266
76	IG 42 BS - 44	9.20	20.28	0.49	4.29	44.00	5.80	51.33	11.95	17.40	154.00	35.86	264.00	6000	0.33	2.90	6.00	0.00531
77	IG 42 AS - 64	5.50	12.13	0.71	6.25	64.00	2.90	25.67	4.11	8.70	77.00	12.33	384.00	6000	1.10	5.00	3.00	0.00266
78	IG 42 BS - 64	9.20	20.28	0.71	6.25	64.00	5.80	51.33	8.22	17.40	154.00	24.65	384.00	6000	0.69	6.40	6.00	0.00531
79	IG 42 AS - 88	5.50	12.13	0.97	8.59	88.00	2.90	25.67	2.99	8.70	77.00	8.97	528.00	6000	1.70	8.00	3.00	0.00266
80	IG 42 BS - 88	9.20	20.28	0.97	8.59	88.00	5.80	51.33	5.98	17.40	154.00	17.93	528.00	6000	1.15	10.50	6.00	0.00531
81	IG 42 AS - 130	5.50	12.13	1.43	12.69	130.00	2.90	25.67	2.02	8.70	77.00	6.07	780.00	6000	2.35	12.70	3.00	0.00266
82	IG 42 BS - 130	9.20	20.28	1.43	12.69	130.00	5.80	51.33	4.05	17.40	154.00	12.14	780.00	6000	1.80	16.70	6.00	0.00531
83	IG 42 AS - 180	5.50	12.13	1.98	17.57	180.00	2.90	25.67	1.46	7.50	66.38	3.78	1,080.00	6000	5.80	25.00	3.00	0.00266
84	IG 42 BS - 180	9.20	20.28	1.98	17.57	180.00	5.80	51.33	2.92	15.00	132.76	7.56	1,080.00	6000	3.50	32.00	6.00	0.00531
85	IG 42 AS - 260	5.50	12.13	2.87	25.38	260.00	2.90	25.67	1.01	7.50	66.38	2.62	1,560.00	6000	11.80	50.70	3.00	0.00266
86	IG 42 BS - 260	9.20	20.28	2.87	25.38	260.00	5.80	51.33	2.02	15.00	132.76	5.23	1,560.00	6000	7.50	67.00	6.00	0.00531
87	IG 42 AS - 360	5.50	12.13	3.97	35.14	360.00	2.90	25.67	0.73	7.50	66.38	1.89	2,160.00	6000	20.30	97.80	3.00	0.00266
88	IG 42 BS - 360	9.20	20.28	3.97	35.14	360.00	5.80	51.33	1.46	15.00	132.76	3.78	2,160.00	6000	14.20	128.00	6.00	0.00531

L2L: Line-to-Line

# IG 42 - F with EPC Feedback

## Drawing



Units: Inches (mm)

IG	LM	LF	LA	T	LR	LC	LP	LZ	LY	N	S	M	
42	A	4.449 (113)	1.00 (25.4)	0.49 (12.5)	0.059 (1.5)	2.126 (54)	4.332 (110.0)	0.433 (11)	12 (304.8)	12 (304.8)	2.186 <sup>0</sup> <sub>-0.0018</sub> (55.52 <sup>0</sup> <sub>-0.046</sub> )	0.335 (8.5)	4.950 (125.730)
	B	6.811 (173)											
	C	-											

IG	Imperial Shaft Option (S/F/K), Units: Inches						Metric Shaft Option (X/Y/Z), Units: mm					
	D	F	GA	KA	GB	KB	D	F	GA	KA	GB	KB
42	0.7500 <sup>0</sup> <sub>-0.0005</sub>	0.1875 <sup>0</sup> <sub>-0.0012</sub>	0.830 <sup>0</sup> <sub>-0.004</sub>	1.50	0.709 <sup>0</sup> <sub>-0.004</sub>	1.50	19 <sup>0</sup> <sub>-0.013</sub>	6 <sup>0</sup> <sub>-0.030</sub>	21.5 <sup>0</sup> <sub>-0.1</sub>	45	18.0 <sup>0</sup> <sub>-0.10</sub>	45.0



Jan, 19, 07

# IG 42 - F with EPC Feedback

## Power Cable Wire Code

Wire Color	Function
YEL	PHASE U
GRN	PHASE V
BLU	PHASE W
GRN/YEL	PE

## Encoder Products

### Encoder Products Data

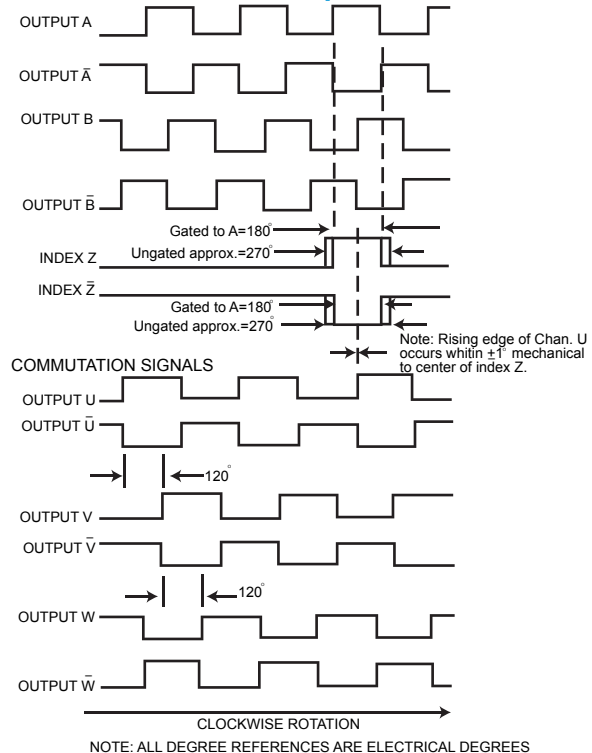
Parameter	Values
Input Voltage	5 VDC $\pm$ 10% Fixed Voltage
Input Current Requirement	100 mA max (65 mA typical) with no output load
Output Data	Incremental - Two square waves in quadrature with channel A leading B for clockwise shaft rotation as viewed from the encoder mounting face
Output Format	Line Driver - 20mA max per channel (meets RS 422 at 5 VDC)
Frequency Response	200 kHz standard, 300 kHz optional
Minimum Edge Separation	67.5° electrical
Commutation Format	8 poles
Commutation Accuracy	1° mechanical
Maximum Speed	8000 RPM
Termination	18" cable (foil and braid shield, 24 AWG conductors non-commutated, 28 AWG commutated),
Operating Temperature	-20 to +85° C standard
Storage Temperature	-25 to +85° C
Available line counts	200, 250, 256, 300, 315, 360, 400, 500, 512, 580, 600, 800, 1000, 1024, 1200, 1250, 2000, 2048, 2500, 2540

### Encoder Products Wiring

Wire Color	Function
BRN	CH A
YEL	CH A-
RED	CH B
GRN	CH B-
ORN	INDEX
BLU	INDEX-
VIO	CH U
GRY	CH U-
PNK	CH V
TAN	CH V-
RED/GRN	CH W
RED/YEL	CH W-
WHT	+5VDC
BLK	GND
SHIELD	SHIELD



### Encoder Products Output Waveforms



Jan, 11, 07