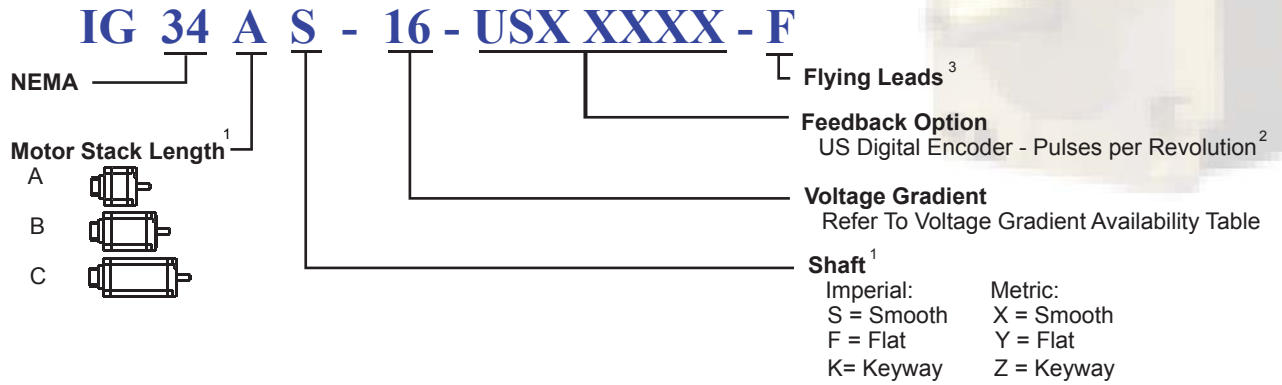


IG 34 - F Housing with USX Feedback

Model Numbering

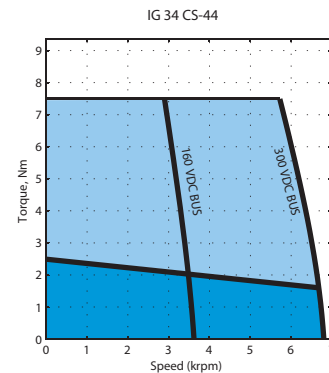
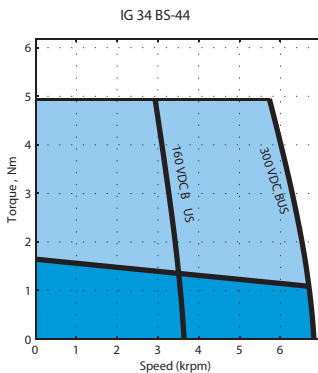
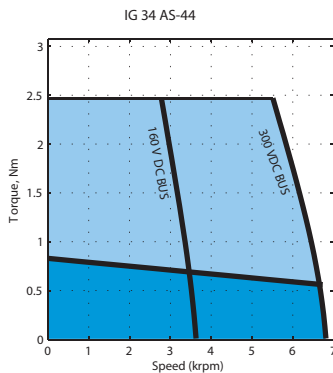


1. Refer to Dimensions for the exact length and shaft options
2. Refer to resolution table on page 4
3. The F housing option comes with 6 inches (15 cm) flying leads

Voltage Gradient

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

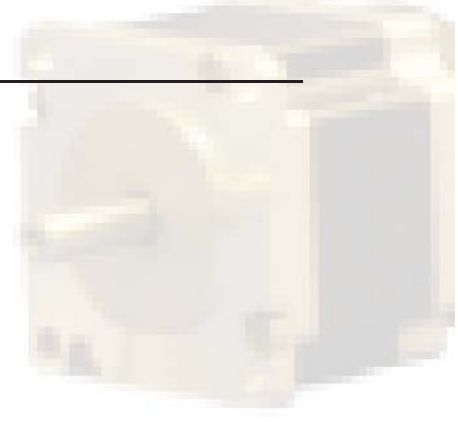
Performance Curves



Contact factory for torque-speed curves of other motors

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IG 34 - F with USX Feedback

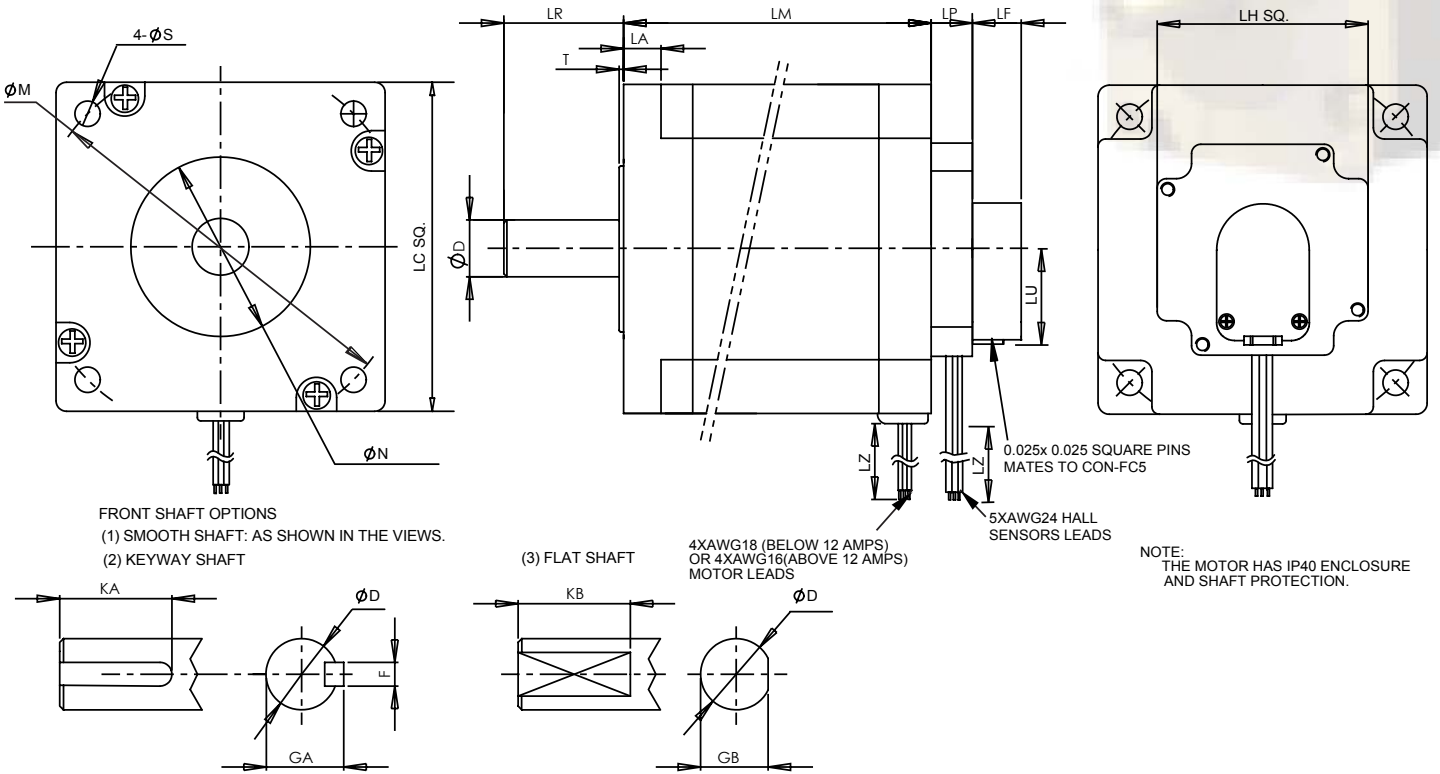


Electrical Specifications

NEMA 34		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	
Index	Model Number	W		K _T		K _E	T _{cs}		I _{cs}	T _P		I _P	U _{max}	n _{max}	R	L	J	
		kg	lb	Nm/A	lb-in/A	V/krpm	Nm	lb-in	A	Nm	lb-in	A	V	rpm	Ohms	mH	kg-cm ²	lb-in-sec ²
43	IG 34 AS - 16	1.90	4.19	0.18	1.56	16.00	0.82	7.26	4.65	2.46	21.77	13.94	128.00	8000	0.34	1.10	0.80	0.00071
44	IG 34 BS - 16	2.90	6.39	0.18	1.56	16.00	1.65	14.60	9.35	4.95	43.81	28.06	128.00	8000	0.14	0.45	1.60	0.00142
45	IG 34 CS - 16	3.90	8.60	0.18	1.56	16.00	2.50	22.13	14.17	7.50	66.38	42.51	128.00	8000	0.10	0.39	2.40	0.00212
46	IG 34 AS - 22	1.90	4.19	0.24	2.15	22.00	0.82	7.26	3.38	2.46	21.77	10.14	176.00	8000	0.81	2.50	0.80	0.00071
47	IG 34 BS - 22	2.90	6.39	0.24	2.15	22.00	1.65	14.60	6.80	4.95	43.81	20.40	176.00	8000	0.56	0.95	1.60	0.00142
48	IG 34 CS - 22	3.90	8.60	0.24	2.15	22.00	2.50	22.13	10.30	7.50	66.38	30.91	176.00	8000	0.20	0.70	2.40	0.00212
49	IG 34 AS - 32	1.90	4.19	0.35	3.12	32.00	0.82	7.26	2.32	2.46	21.77	6.97	256.00	8000	2.10	6.30	0.80	0.00071
50	IG 34 BS - 32	2.90	6.39	0.35	3.12	32.00	1.65	14.60	4.68	4.95	43.81	14.03	256.00	8000	0.74	2.70	1.60	0.00142
51	IG 34 CS - 32	3.90	8.60	0.35	3.12	32.00	2.50	22.13	7.08	7.50	66.38	21.25	256.00	8000	0.40	1.47	2.40	0.00212
52	IG 34 AS - 44	1.90	4.19	0.49	4.29	44.00	0.82	7.26	1.69	2.46	21.77	5.07	352.00	8000	3.80	12.30	0.80	0.00071
53	IG 34 BS - 44	2.90	6.39	0.49	4.29	44.00	1.65	14.60	3.40	4.95	43.81	10.20	352.00	8000	1.50	5.50	1.60	0.00142
54	IG 34 CS - 44	3.90	8.60	0.49	4.29	44.00	2.50	22.13	5.15	7.50	66.38	15.46	352.00	8000	1.10	3.50	2.40	0.00212
55	IG 34 AS - 64	1.90	4.19	0.71	6.25	64.00	0.82	7.26	1.16	2.46	21.77	3.49	512.00	8000	8.60	27.70	0.80	0.00071
56	IG 34 BS - 64	2.90	6.39	0.71	6.25	64.00	1.65	14.60	2.34	4.95	43.81	7.01	512.00	8000	3.45	12.30	1.60	0.00142
57	IG 34 CS - 64	3.90	8.60	0.71	6.25	64.00	2.50	22.13	3.54	7.50	66.38	10.63	512.00	8000	2.10	7.80	2.40	0.00212
58	IG 34 AS - 88	1.90	4.19	0.97	8.59	88.00	0.82	7.26	0.85	2.46	21.77	2.54	704.00	8000	13.50	45.20	0.80	0.00071
59	IG 34 BS - 88	2.90	6.39	0.97	8.59	88.00	1.65	14.60	1.70	4.95	43.81	5.10	704.00	8000	5.50	19.00	1.60	0.00142
60	IG 34 CS - 88	3.90	8.60	0.97	8.59	88.00	2.50	22.13	2.58	7.50	66.38	7.73	704.00	8000	3.50	12.50	2.40	0.00212
61	IG 34 AS - 130	1.90	4.19	1.43	12.69	130.00	0.82	7.26	0.57	2.46	21.77	1.72	1,040.00	8000	22.50	72.80	0.80	0.00071
62	IG 34 BS - 130	2.90	6.39	1.43	12.69	130.00	1.65	14.60	1.15	4.95	43.81	3.45	1,040.00	8000	8.30	30.00	1.60	0.00142
63	IG 34 CS - 130	3.90	8.60	1.43	12.69	130.00	2.50	22.13	1.74	7.50	66.38	5.23	1,040.00	8000	5.10	20.00	2.40	0.00212
64	IG 34 AS - 180	1.90	4.19	1.98	17.57	180.00	0.82	7.26	0.41	2.46	21.77	1.24	1,440.00	8000	46.00	141.30	0.80	0.00071
65	IG 34 BS - 180	2.90	6.39	1.98	17.57	180.00	1.65	14.60	0.83	4.95	43.81	2.49	1,440.00	8000	17.60	56.70	1.60	0.00142
66	IG 34 CS - 180	3.90	8.60	1.98	17.57	180.00	2.50	22.13	1.26	7.50	66.38	3.78	1,440.00	8000	10.20	38.00	2.40	0.00212
67	IG 34 AS - 260	1.90	4.19	2.87	25.38	260.00	0.82	7.26	0.29	2.46	21.77	0.86	2,080.00	8000	97.20	295.30	0.80	0.00071
68	IG 34 BS - 260	2.90	6.39	2.87	25.38	260.00	1.65	14.60	0.58	4.95	43.81	1.73	2,080.00	8000	33.50	118.50	1.60	0.00142
69	IG 34 CS - 260	3.90	8.60	2.87	25.38	260.00	2.50	22.13	0.87	7.50	66.38	2.62	2,080.00	8000	20.50	79.00	2.40	0.00212
70	IG 34 AS - 360	1.90	4.19	3.97	35.14	360.00	0.82	7.26	0.21	2.46	21.77	0.62	2,880.00	8000	173.00	568.00	0.80	0.00071
71	IG 34 BS - 360	2.90	6.39	3.97	35.14	360.00	1.65	14.60	0.42	4.95	43.81	1.25	2,880.00	8000	67.30	227.00	1.60	0.00142
72	IG 34 CS - 360	3.90	8.60	3.97	35.14	360.00	2.50	22.13	0.63	7.50	66.38	1.89	2,880.00	8000	18.70	153.00	2.40	0.00212

IG 34 - F with USX Feedback

Drawing



Units: Inches (mm)

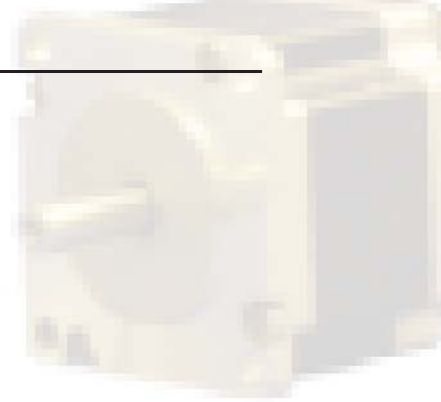
IG	LM	LF	LA	T	LR	LC	LP	LH	LZ	LU	N	S	M	
34	A	2.795 (71)	0.640 (16.3)	0.33 (8.4)	0.059 (1.5)	1.260 (32)	3.386 (86.0)	0.433 (11)	2.220 (56.4)	12 (304.8)	1.251 (31.7)	2.875 ⁰ _{-0.0012} (73.03 ⁰ _{-0.031})	0.217 (5.5)	3.875 (98.425)
	B	3.858 (98)												
	C	4.921 (125)												

Imperial Shaft Option (S/F/K), Units: Inches							Metric Shaft Option (X/Y/Z), Units: mm					
IG	D	F	GA	KA	GB	KB	D	F	GA	KA	GB	KB
34	0.5000 ⁰ _{-0.0005}	0.1250 ⁰ _{-0.001}	0.555 ⁰ _{-0.004}	1.00	0.473 ⁰ _{-0.004}	1.00	14 ⁰ _{-0.013}	5 ⁰ _{-0.08}	16.0 ⁰ _{-0.1}	45	13.0 ⁰ _{-0.1}	45.0



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IG 34 - F with USX Feedback



Power Cable Wire Code

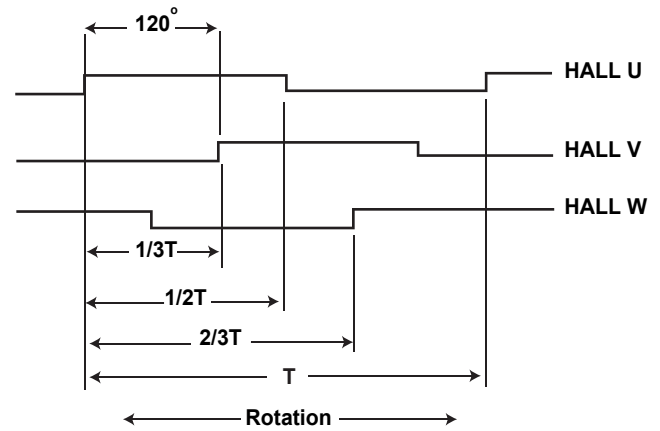
Wire Color	Function
YEL	PHASE U
GRN	PHASE V
BLU	PHASE W
GRN/YEL	PE

Hall Sensor

Hall Sensor Electrical Data

Parameter	Values
Supply Voltage, Vcc	Min. 4.5 V Max. 24 V
Supply Current	Max. 11.3 mA
Output Current	Max. 20 mA
Rise Time	Typ. 0.5 μ s Max. 1.5 μ s
Fall Time	Typ. 0.2 μ s Max. 1.5 μ s
Response Time	Typ. 4.0 μ s Max. 5 μ s
Operating Temperature	-40°C to 125°C (-40°F to 257°F)
Storage Temperature	-55°C to 165°C (-67°F to 329°F)

Hall Sensor Output Waveforms



T = Electrical Period

Hall Sensor Wiring Diagram

Wire Color	Function
RED	+Vcc
YEL	HALL U
GRN	HALL V
BLU	HALL W
BLK	GND

US Encoder

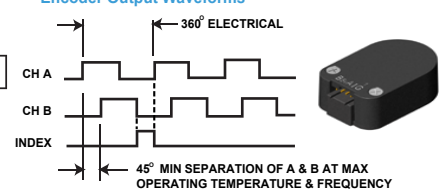
US Digital Encoder Data

Parameter	Values
Input Voltage, Vcc	Typ. +5VDC Min. 4.5 VDC Max. 5.5 VDC
Input Current Requirement	Typ. 57 mA Min. 30 mA Max. 85 mA
Output Voltage	Min. -0.5 VDC Max. Vcc
Output Current Per Channel	Min. -8.0 mA Max. 8.0 mA
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	TTL level output
Frequency Response	100 kHz
Minimum Edge Separation	45° electrical angle
Maximum Speed	6000 rpm
Operating Temperature	-40°C to 100°C
Storage Temperature	-15°C to 85°C
Available line counts	32 to 1250 ppr

E5S Encoder Wiring Diagram

Pin No.	Function
1	GND
2	INDEX
3	CH A
4	+5VDC
5	CH B

Encoder Output Waveforms



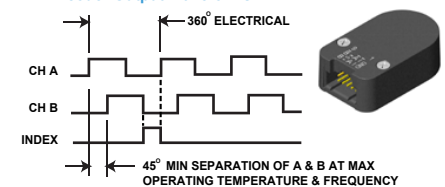
Mating Connector: CON-FC5-22AWG



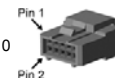
E5D Encoder Wiring Diagram

Wire #	Function
1	Ground
2	Ground
3	Index-
4	Index+
5	A- channel
6	A+ channel
7	+5VDC power
8	+5VDC power
9	B- channel
10	B+ channel

Encoder Output Waveforms



Mating Connector: CON-FC10



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