

# Motor Data

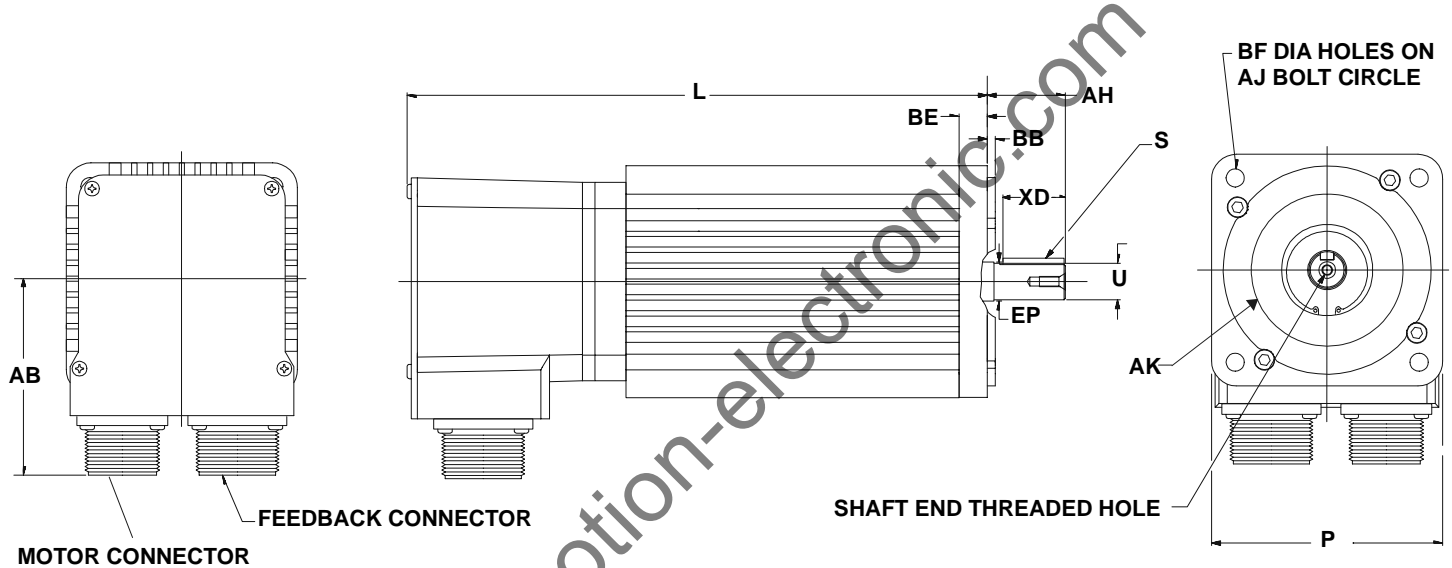
MOTOR MODEL		H-2005	H-3007	H-3016	H-4030-P	H-4030-M	H-4050
<b>MECHANICAL DATA (1)</b>							
Rotor Moment of Inertia	kg-m <sup>2</sup>	0.000015	0.000030	0.000080	0.00025	0.00025	0.00046
	lb-in-s <sup>2</sup>	0.00013	0.00027	0.00072	0.0022	0.0022	0.0041
Brake Motors Rotor Moment of Inertia	kg-m <sup>2</sup>	-	0.000038	0.000089	0.00033	0.00033	0.00054
	lb-in-s <sup>2</sup>	-	0.00034	0.00079	0.0029	0.0029	0.0048
Motor Weight: Net Shipping	kg/lb	2.2/4.9	2.6/5.7	4.1/9.0	6.8/15.0	6.8/15.0	9.7/21.4
	kg/lb	2.7/6.0	3.2/7.1	4.7/10.4	7.3/16.1	7.3/16.1	10.9/24.0
Brake Motor Weight: Net Shipping	kg/lb	-	3.4/7.5	4.9/10.8	8.8/19.4	8.8/19.4	11.8/26.0
	kg/lb	-	3.8/8.4	5.5/12.1	9.4/20.7	9.4/20.7	12.7/28.0
Damping	Nm/krpm	0.007	0.010	0.014	0.034	0.034	0.045
	lb-in/krpm	0.06	0.09	0.12	0.30	0.30	0.40
Friction Torque	Nm	0.014	0.014	0.028	0.034	0.034	0.068
	lb-in	0.12	0.12	0.25	0.30	0.30	0.60
Max. Operating Speed	rpm	6000	5000	5000	4000	4000	4000
<b>WINDING DATA (1)</b>							
Poles		4	6	6	6	6	6
Sine Wave K <sub>T</sub>	Nm/A	0.13	0.28	0.28	0.50	0.25	0.50
Torque Constant (2)	lb-in/A	1.17	2.5	2.5	4.4	2.2	4.4
Square Wave K <sub>T</sub>	Nm/A	0.14	0.31	0.31	0.54	0.27	0.54
Torque Constant (3)	lb-in/A	1.3	2.7	2.7	4.8	2.4	4.8
K <sub>E</sub> Voltage Constant (4)	V/krpm	16	34	34	60	30	60
Winding Resistance Phase to Phase at 25°C	Ohms ±10%	2.6	6.6	1.3	2.0	0.50	0.69
Winding Inductance Phase to Phase	mH	4.1	12	3.4	9.0	1.9	3.3
Thermal Resistance	°C/Watt	1.45	1.2	0.89	0.79	0.79	0.57
Dielectric Rating		Power Leads (R, S, T) to Ground: 1500 VACrms 50/60 Hz for 1 minute.					

MOTOR MODEL		H-4075	H-6100	H-6200	H-6300	H-8350	H-8500
<b>MECHANICAL DATA (1)</b>							
Rotor Moment of Inertia	kg-m <sup>2</sup>	0.00068	0.0014	0.0024	0.0034	0.0063	0.0094
	lb-in-s <sup>2</sup>	0.0060	0.012	0.021	0.030	0.056	0.083
Rotor Moment of Inertia Brake Motors	kg-m <sup>2</sup>	0.00076	0.0017	0.0027	0.0037	0.0093	0.012
	lb-in-s <sup>2</sup>	0.0067	0.015	0.024	0.033	0.082	0.109
Motor Weight: Net Shipping	kg/lb	12.9/28.4	18.3/40.3	27.0/59.5	34.8/76.7	44.1/97.2	58.1/128.1
	kg/lb	14.1/31.1	19.2/42.3	28.6/63.1	37.7/83.1	46.8/103.2	56.1/123.7
Brake Motor Weight: Net Shipping	kg/lb	14.9/32.8	22.5/49.6	31.6/69.7	39.2/86.4	50.9/112.2	61.8/136.2
	kg/lb	16.0/35.3	23.8/52.5	32.9/72.5	42.2/93.0	53.5/117.9	64.9/143.1
Damping	Nm/krpm	0.068	0.10	0.16	0.19	0.38	0.43
	lb-in/krpm	0.60	.90	1.4	1.7	3.4	3.8
Friction Torque	Nm	0.14	0.14	0.24	0.36	0.32	0.40
	lb-in	1.2	1.2	2.1	3.2	2.8	3.5
Max. Operating Speed	rpm	3000	3000	3000	3000	2000	2000
<b>WINDING DATA (1)</b>							
Poles		6	8	8	8	8	8
Sine Wave K <sub>T</sub>	Nm/A	0.74	0.68	0.66	0.70	0.86	0.92
Torque Constant (2)	lb-in/A	6.6	6.0	5.8	6.2	7.6	8.2
Square Wave K <sub>T</sub>	Nm/A	0.81	0.74	0.72	0.77	0.94	1.0
Torque Constant (3)	lb-in/A	7.2	6.6	6.4	6.8	8.3	9.0
K <sub>E</sub> Voltage Constant (4)	V/krpm	90	82	80	85	104	112
Winding Resistance Phase to Phase at 25°C	Ohms ±10%	0.90	0.49	0.18	0.12	0.13	0.10
Winding Inductance Phase to Phase	mH	5.4	4.4	2.2	1.2	2.5	2.4
Thermal Resistance	°C/Watt	0.48	0.34	0.31	0.24	0.23	0.21
Dielectric Rating		Power Leads (R, S, T) to Ground: 1500 VACrms 50/60 Hz for 1 minute.					
(1) Specifications are at 25°C unless otherwise noted. (3) Peak value of per phase square wave Amperes (2) Peak value of per phase sine wave Amperes (4) Peak value of sinusoidal phase to phase Volts							

## STORAGE AND OPERATING CONDITIONS

Ambient Temperature:	Operating: 0 to 40°C (32 to 104°F) Storage: -30 to 70°C (-25 to 158°F)
Relative Humidity:	5% to 95% non-condensing

# Dimensional Data



SHAFT END PLAY UNDER LOAD			
Maximum end play (All Motors) Direction	mm/in	Motor Series	Load (Kg/Lb)
→	0.025/0.001	H-2000/H-3000	4.54/10.0
		H-4000	9.09/20.0
←	0.025/0.001	H-6000/H-8000	22.7/50

Note: End play and load are measured in inches and pounds. Metric measurements are approximate conversions from inches and pounds.

SHAFT END THREADED HOLE		
Motor Series	Thread	Thread/Depth
H-2000	M3 x 0.5MM	10mm / 0.39in
H-3000	M4 x 0.7MM	
H-4000	M6 x 1.0MM	15mm / 0.59in
H-6000	M8 x 1.25MM	20mm / 0.79in
H-8000		

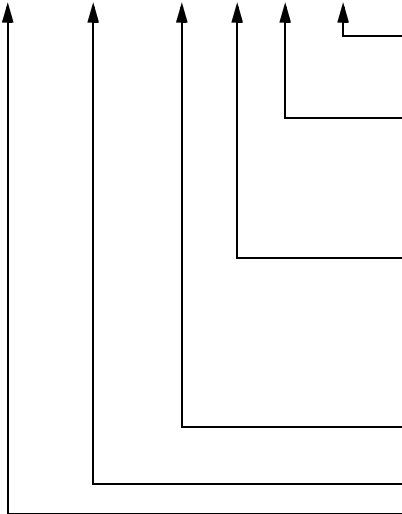
Note: Motors are manufactured to millimeter dimensions. Inch dimensions are approximate conversions from millimeters.



# Product Information

## Motor Part Number Identification

**H - 4030 - P - H 00 AA**



FACTORY DESIGNATED SPECIAL OPTIONS

AA = STANDARD FLANGE

AN = NEMA56C FLANGE

OPTIONS

00 = STANDARD

01 = 90 VDC BRAKE

04 = 24 VDC BRAKE

OPTICAL ENCODER LINE COUNT

F = 1000

H = 2000 (STANDARD)

K = 5000

L = 500

MOTOR WINDING KE DESIGNATOR

NOTE: Special Order Windings available

FRAME SIZE

SERIES DESIGNATOR

H = LOW INERTIA

## Disposal or Warranty Return of Motors

Motors may contain environmentally regulated materials, such as lead solder and circuit boards. When disposing of a motor, please recycle motors per regulations at your location. You may choose to return a motor for disposal by contacting your supplier.

Please contact the source that supplied the motor for warranty, non-warranty, or disposal work. All returned products require a Return Material Authorization (RMA) number for efficient processing and tracking.

## Technical Support

In the United States, hours for product assistance are 7:00 AM to 5:00 PM (CST), Monday through Friday at 1-800-328-3983 or via fax at 1-612-942-3636.

In Europe, product assistance can be obtained between 8:30 and 17:30 local time, Monday through Friday at (+44)1270 580142 or via fax at (+44)1270 580141.

**H-Series Motors**  
**Brushless Servo Motors**  
**Part Number 0013-1069-001 Rev A**

**Electro-Craft**<sup>®</sup>  
**MOTION CONTROL**

*Electro-Craft Motion Control*  
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