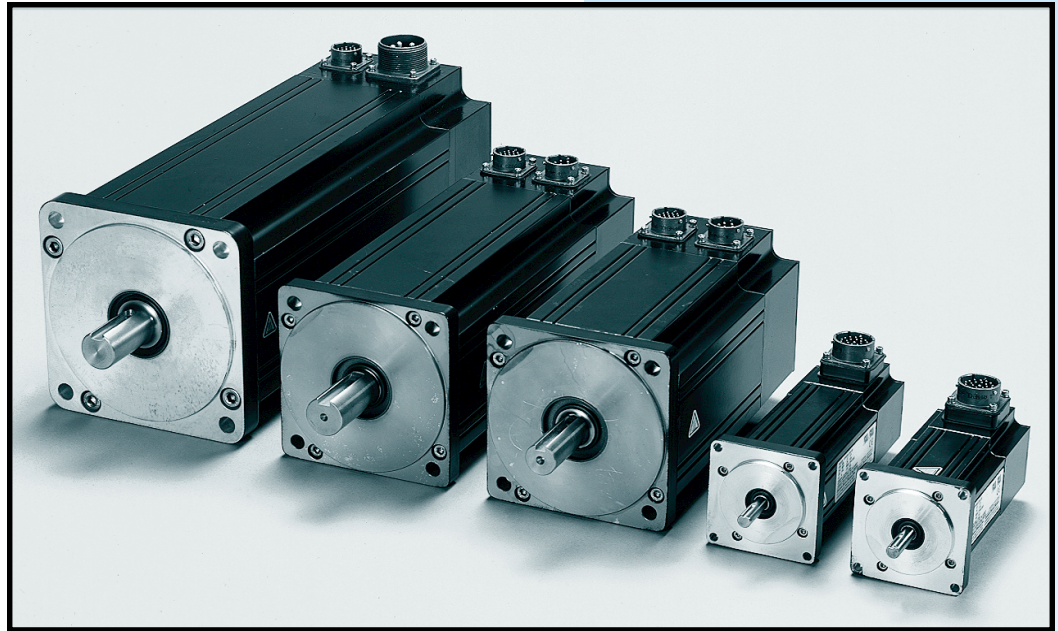


G-Series Servomotors

ORMEC's G-series AC brushless servomotors provide high torque-to-inertia ratios and excellent continuous torque and peak torque performance in a compact design. These industrial-quality servomotors incorporate high-energy, rare earth, neodymium-iron-boron magnets for excellent power density.

The G-Series servomotors also completely eliminate brush wear maintenance problems, and feature extremely durable construction which includes heavy duty bearings. Rugged MS connectors provide reliable interconnections to both motor and optical encoder.



ORMEC's G-series servomotors offer continuous stall torques from 5 to 640 lb-in (0.56 to 72 N-m).

Features

- Continuous stall torques from 5 to 640 in-lb (0.56 to 72 N-m)
- High peak torques from 10 to 1,239 in-lb (1.1 to 140 N-m)
- Rated power from 150 to 10,000 watts (0.20 to 13 HP)
- High maximum speeds up to 7,000 RPM
- Encoder resolutions of 8,000 counts per revolution standard (12,000 and 24,000 counts per revolution optional)
- Class F insulation providing long winding life under rated operating conditions
- Metric dimensions standard. NEMA mounting available for MAC-G005, G010, G016 & G030 through G115.
- Totally Enclosed, Non-Ventilated (TENV) IP-65 construction
- Stainless steel shaft standard on all models except MAC-G640
- Viton shaft seals are standard.
- Thermal overload switch mounted in motor windings is standard.
- Fail-safe holding brakes as option
- UL Recognized and CE Marked standard

Motor/Drive Combinations

Torque/speed performance for the G-Series is determined by the selected servodrive. All configuration parameters for matching drive to motor are stored on the ORION® controller and are downloaded automatically after each power-up.

Peak torques are also dependent on the selected servodrive, as is peak torque duration -- typically two seconds for the recommended drive.

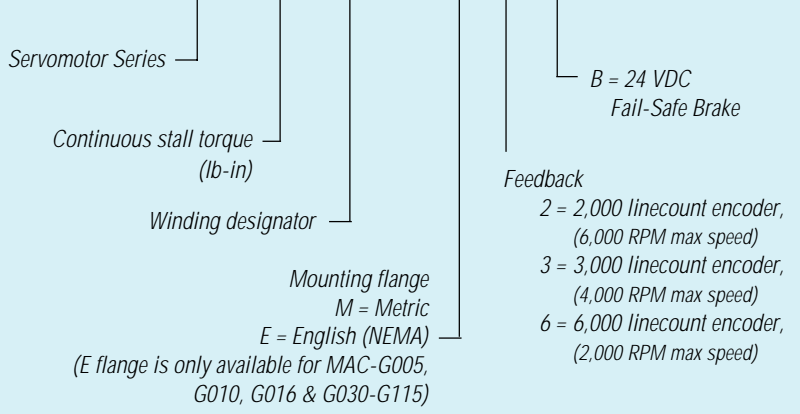
Refer to the following pages for design information on G-Series servomotors.

G Series References

- Overview pgs. 2-3**
- Specifications pgs. 4-10**
- Specs with brakes pg. 11**
- Connector Information pg. 12**
- Outline Drawings pgs. 12-16**

Understanding the G-Series Servomotor Model Numbers

MAC - G 030 A2 / M 2 B



G-Series Servomotors & Matching Servodrives

Servomotor Model Number	Max. Speed ⁽¹⁾ (RPM)	Peak / Stall Torque lb-in (N·m)	Motor Inertia lb-in-sec ² (kg·m ²)	Motor Length in (mm)	Motor /E Flange in (mm)	Motor /M Flange mm (in)	Input Power ^{(2) (3)} watts/amps
MAC-G005A1	5,000	10/5.0 (1.1/0.56)	0.074 x 10 ⁻³ (0.084 x 10 ⁻⁴)	5.60 (143)	2.25 (57)	66 (2.60)	170 / 1.5
MAC-G006A1	6,800	12/5.8 (1.4/0.66)	0.127 x 10 ⁻³ (0.14 x 10 ⁻⁴)	5.05 (128)	---	72 (2.84)	300 / 2.7
MAC-G006A2	4,600	14/5.8 (1.6/0.66)	0.127 x 10 ⁻³ (0.14 x 10 ⁻⁴)	5.05 (128)	---	72 (2.84)	250 / 1.1
MAC-G010A1	5,500	17/10 (1.9/1.1)	0.137 x 10 ⁻³ (0.15 x 10 ⁻⁴)	6.90 (173)	2.25 (57)	66 (2.60)	340 / 3.1
MAC-G010B1	3,500	16/9.4 (1.8/1.1)	0.137 x 10 ⁻³ (0.15 x 10 ⁻⁴)	6.90 (173)	2.25 (57)	66 (2.60)	220 / 2.0
MAC-G011A1	7,000	26/11 (3.0/1.3)	0.247 x 10 ⁻³ (0.28 x 10 ⁻⁴)	5.80 (147)	---	72 (2.84)	600 / 5.4
MAC-G011A2	5,600	24/11 (2.7/1.3)	0.247 x 10 ⁻³ (0.28 x 10 ⁻⁴)	5.80 (147)	---	72 (2.84)	500 / 2.2
MAC-G011B2	3,800	28/11 (3.2/1.3)	0.247 x 10 ⁻³ (0.28 x 10 ⁻⁴)	5.80 (147)	---	72 (2.84)	320 / 1.4
MAC-G015A1	6,300	25/15 (2.9/1.7)	0.357 x 10 ⁻³ (0.40 x 10 ⁻⁴)	6.55 (166)	---	72 (2.84)	750 / 6.8
MAC-G015A2	5,600	24/15 (2.7/1.7)	0.357 x 10 ⁻³ (0.40 x 10 ⁻⁴)	6.55 (166)	---	72 (2.84)	670 / 2.9
MAC-G015B2	3,700	29/15 (3.2/1.7)	0.357 x 10 ⁻³ (0.40 x 10 ⁻⁴)	6.55 (166)	---	72 (2.84)	430 / 1.9
MAC-G016A2	5,000	35/16 (4.0/1.8)	0.328 x 10 ⁻³ (0.37 x 10 ⁻⁴)	7.24 (184)	3.31 (84)	89 (3.50)	615 / 2.7
MAC-G016B2	2,500	42/16 (4.7/1.8)	0.328 x 10 ⁻³ (0.37 x 10 ⁻⁴)	7.24 (184)	3.31 (84)	89 (3.50)	300 / 1.3
MAC-G019A1	5,625	41/19 (4.7/2.1)	0.467 x 10 ⁻³ (0.53 x 10 ⁻⁴)	7.30 (185)	---	72 (2.84)	935 / 8.5
MAC-G019A2	5,000	50/19 (5.6/2.1)	0.467 x 10 ⁻³ (0.53 x 10 ⁻⁴)	7.30 (185)	---	72 (2.84)	850 / 3.7
MAC-G019B2	3,700	29/17 (3.2/2.0)	0.467 x 10 ⁻³ (0.53 x 10 ⁻⁴)	7.30 (185)	---	72 (2.84)	550 / 2.4
MAC-G030A2	5,000	68/30 (7.7/3.4)	0.828 x 10 ⁻³ (0.94 x 10 ⁻⁴)	8.74 (222)	3.31 (84)	89 (3.50)	1,250 / 5.3
MAC-G030B2	2,600	67/30 (7.6/3.4)	0.828 x 10 ⁻³ (0.94 x 10 ⁻⁴)	8.74 (222)	3.31 (84)	89 (3.50)	620 / 2.7
MAC-G040A2	3,500	102/39 (11/4.4)	1.23 x 10 ⁻³ (1.39 x 10 ⁻⁴)	10.3 (260)	3.31 (84)	89 (3.50)	1,100 / 4.8
MAC-G040B2	1,700	61/39 (6.9/4.4)	1.23 x 10 ⁻³ (1.39 x 10 ⁻⁴)	10.3 (260)	3.31 (84)	89 (3.50)	480 / 2.1
MAC-G055A2	3,500	102/54 (11/6.1)	2.43 x 10 ⁻³ (2.74 x 10 ⁻⁴)	8.61 (219)	5.00 (127)	114 (4.50)	1,430 / 6.2
MAC-G055A4	1,850	102/54 (11/6.1)	2.43 x 10 ⁻³ (2.74 x 10 ⁻⁴)	8.61 (219)	5.00 (127)	114 (4.50)	850 / 3.7
MAC-G080A2	3,500	173/83 (20/9.4)	4.93 x 10 ⁻³ (5.57 x 10 ⁻⁴)	11.1 (282)	5.00 (127)	114 (4.50)	2,310 / 10
MAC-G080A4	1,850	203/83 (23/9.4)	4.93 x 10 ⁻³ (5.57 x 10 ⁻⁴)	11.1 (282)	5.00 (127)	114 (4.50)	1,320 / 5.7
MAC-G115A2	3,500	203/116 (23/13)	7.23 x 10 ⁻³ (8.17 x 10 ⁻⁴)	13.6 (345)	5.00 (127)	114 (4.50)	3,300 / 14
MAC-G115A4	1,850	203/116 (23/13)	7.23 x 10 ⁻³ (8.17 x 10 ⁻⁴)	13.6 (345)	5.00 (127)	114 (4.50)	1,870 / 8.1
MAC-G130A2	2,700	220/130 (25/15)	9.43 x 10 ⁻³ (10.7 x 10 ⁻⁴)	11.3 (287)	---	142 (5.59)	2,750 / 12
MAC-G130A4	1,750	213/130 (24/15)	9.43 x 10 ⁻³ (10.7 x 10 ⁻⁴)	11.3 (287)	---	142 (5.59)	1,870 / 8.1
MAC-G210A2	2,700	458/210 (52/24)	19.0 x 10 ⁻³ (21.5 x 10 ⁻⁴)	14.0 (355)	---	142 (5.59)	4,730 / 21
MAC-G210A4	1,750	361/210 (41/24)	19.0 x 10 ⁻³ (21.5 x 10 ⁻⁴)	14.0 (355)	---	142 (5.59)	3,190 / 14
MAC-G280A2	2,700	641/280 (72/32)	28.6 x 10 ⁻³ (32.3 x 10 ⁻⁴)	16.7 (423)	---	142 (5.59)	6,270 / 27
MAC-G280A4	1,750	752/280 (85/32)	28.6 x 10 ⁻³ (32.3 x 10 ⁻⁴)	16.7 (423)	---	142 (5.59)	4,180 / 18
MAC-G360A2	2,000	851/360 (96/41)	38.2 x 10 ⁻³ (43.2 x 10 ⁻⁴)	19.4 (493)	---	142 (5.59)	6,270 / 27
MAC-G360A4	1,750	752/360 (85/41)	38.2 x 10 ⁻³ (43.2 x 10 ⁻⁴)	19.4 (493)	---	142 (5.59)	5,390 / 23
MAC-G640A2	2,400	1,239/640 (140/72)	71.8 x 10 ⁻³ (81.2 x 10 ⁻⁴)	15.7 (398)	---	190 (7.48)	11,000 / 48

¹ Actual maximum speed is dependent on motor encoder resolution. Refer to "Understanding the G-Series Servomotor Model Numbers" on page 1 for further information.

³ Current listed in amps is the recommended slow-blow fuse capacity for each leg of the three phase power. To select fuses for the system, add the recommended fuse capacities for each servomotor/drive combination in the system.

² Power listed is the required incoming line power in watts when the motor is operating at rated output. To determine total incoming power requirements, add up the listed values for each servomotor/drive combination in the system.

G-Series Compatibility Chart

ORMEC's all-digital drive technology provides the ability to control a variety of servomotors with a single servodrive. The chart below provides an overview of ServoWire drive compatibility with the G-series servomotors.

The recommended servodrive (☼) below provides sufficient power to provide the continuous and peak torques specified for the corresponding servomotor.

Compatible servodrives (✓) may

be used instead of the recommended servodrive to increase the amount of peak torque, and also allow each servodrive model to support a wider range of motors, simplifying the stocking of spare parts.

Servomotor Model Number	Single Phase Drives (No Regen)			Three Phase Drives (External Regen)					
	SAC-SYW203 SMS-203 G03	SAC-SYW205 SMS-205 G05	SAC-SYW210 SMS-210 G10	SAC-SYW217 SMS-217 G17	SAC-SYW220 SMS-220 G20	SAC-SYW225 SMS-225 G25	SAC-SYW235 SMS-235 G35	SAC-SYW260 SMS-260 G60	
MAC-G005A1	☼	✓	✓						
MAC-G006A1		☼	✓						
MAC-G006A2	☼	✓	✓						
MAC-G010A1		☼	✓	✓					
MAC-G010B1	☼	✓	✓						
MAC-G011A1			☼	✓	✓				
MAC-G011A2		☼	✓						
MAC-G011B2	☼	✓	✓						
MAC-G015A1			☼	✓	✓				
MAC-G015A2		☼	✓	✓					
MAC-G015B2	☼	✓	✓						
MAC-G016A2		☼	✓						
MAC-G016B2	☼	✓	✓						
MAC-G019A1				☼	✓				
MAC-G019A2			☼	✓	✓				
MAC-G019B2	☼	✓	✓						
MAC-G030A2			☼	✓	✓				
MAC-G030B2		☼	✓						
MAC-G040A2			☼	✓	✓				
MAC-G040B2	☼	✓	✓						
MAC-G055A2			☼	✓	✓				
MAC-G055A4		☼	✓						
MAC-G080A2				☼	✓	✓			
MAC-G080A4			☼	✓	✓				
MAC-G115A2					☼	✓	✓		
MAC-G115A4			☼	✓	✓				
MAC-G130A2				☼	✓	✓			
MAC-G130A4			☼	✓	✓				
MAC-G210A2					☼	✓	✓		
MAC-G210A4				☼	✓	✓			
MAC-G280A2							☼	✓	
MAC-G280A4						☼	✓		
MAC-G360A2							☼	✓	
MAC-G360A4						☼	✓		
MAC-G640A2								☼	

☼ Recommended drive model ✓ Compatible drive model



G-Series AC Brushless Servomotors

! All specifications and "Torque/Speed Curves" shown on this page reflect performance with the specific servodrive models listed below.

Performance Specifications (1)	Units	G005A1	G006A1	G006A2	G010A1	G010B1
Maximum Speed ⁽²⁾	RPM	5,000	6,800	4,600	5,500	3,500
Continuous Stall Torque	lb-in	5.0	5.8	5.8	10.0	9.4
	N-m	0.56	0.66	0.66	1.1	1.1
Rated Speed	RPM	3,700	4,800	4,000	3,800	2,100
Rated Torque (at rated speed)	lb-in	3.5	4.8	5.0	7.0	8.4
	N-m	0.40	0.55	0.56	0.79	0.95
Rated Power	HP	0.20	0.36	0.31	0.42	0.27
	watts	150	270	230	310	200
Peak Torque ⁽⁴⁾	lb-in	10	12	14	17	16
	N-m	1.1	1.4	1.6	1.9	1.8
Continuous Stall Torque/Inertia	radians/sec ²	67,568	45,669	45,669	72,993	68,613

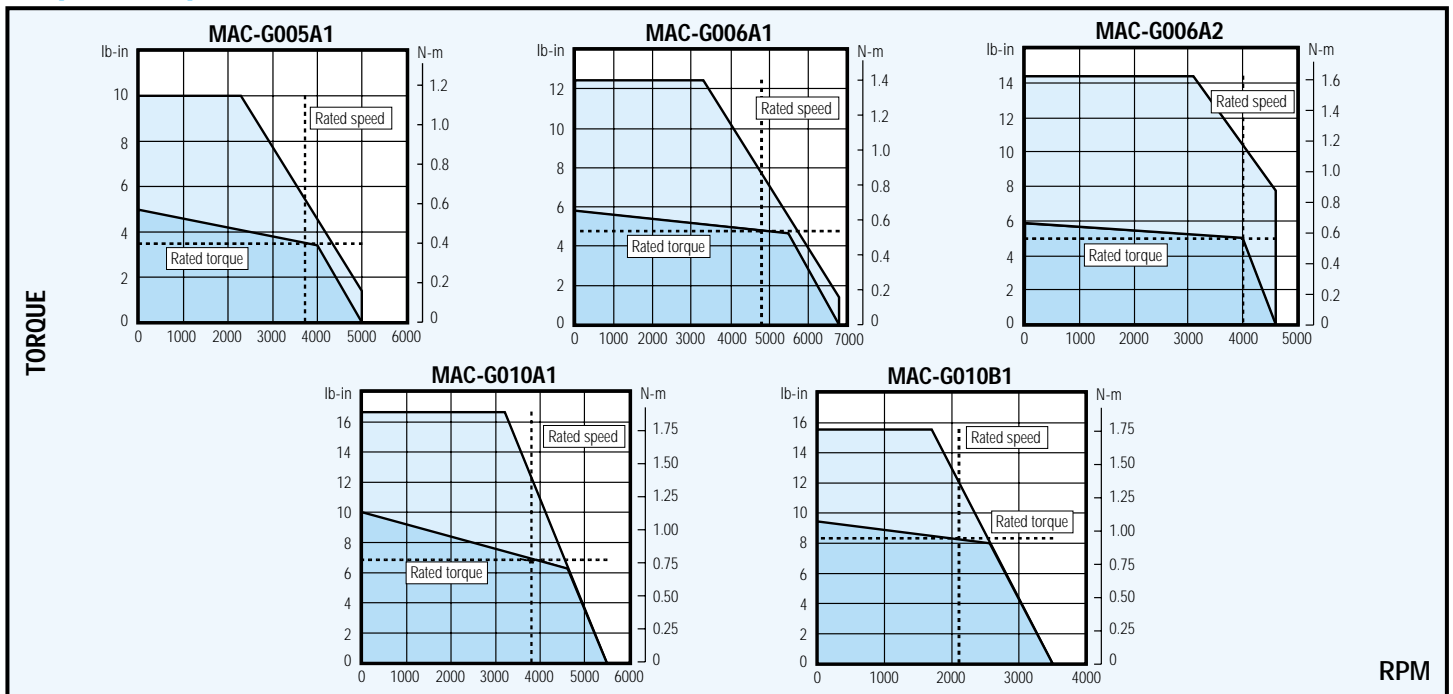
Mechanical/Thermal Specifications						
Moment of Inertia	lb-in-sec ² x10 ⁻³	0.074	0.127	0.127	0.137	0.137
	kg-m ² x10 ⁻⁴	0.084	0.143	0.143	0.155	0.155
Friction Torque, Static	lb-in	0.50	0.60	0.60	0.80	0.80
	N-m	0.056	0.068	0.068	0.090	0.090
Servomotor Weight	lbs	3.0	3.5	3.5	4.0	4.0
	kg	1.4	1.6	1.6	1.8	1.8
Maximum Radial Shaft Load (centered 1" (25mm) from motor face)	lbs	20	35	35	20	20
	N	89	156	156	89	89
Maximum Axial Shaft Load	lbs	15	20	20	15	15
	N	67	89	89	67	67

Electrical Specifications						
Torque Sensitivity	lb-in/Amps _{Rms/Ø}	2.4	1.8	3.6	2.5	3.9
	N-m/Amps _{Rms/Ø}	0.28	0.21	0.40	0.28	0.44
Servodrive Model Numbers		SAC-SW203	SAC-SW205	SAC-SW203	SAC-SW205	SAC-SW203
		SMS-203	SMS-205	SMS-203	SMS-205	SMS-203
		G03-AE	G05-AE	G03-AE	G05-AE	G03-AE
Servodrive Input Power	volts AC	115	115	230	115	115
Continuous Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	2.0	3.1	1.6	4.1	2.5
Peak Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	6.2	9.8	4.9	12	7.7

NOTES: (1) Ratings are obtained with servomotor ambient temperature of 25C with motor mounted to a 10" x 10" x 1/4" (MAC-G005 & G010) or 6" x 6" x 1/4" (MAC-G006) aluminum heatsink. Maximum case temperature is 100C---except for model MAC-G006 which has a maximum case temperature of 85C. (2) Actual maximum motor speed dependent on motor encoder resolution. Refer to chart on page 1. (3) Insulation Class for all models is: F. (4) Motor's peak torque is limited by peak current of the servodrive. The next larger drive may be used to increase the amount of peak torque available. Consult ORMEC for details. (5) Motor current specifications independent of drive selected.

Torque vs. Speed Characteristics

□ A: Intermittent Duty Zone □ B: Continuous Duty Zone





G-Series AC Brushless Servomotors

! All specifications and "Torque/Speed Curves" shown on this page reflect performance with the specific servodrive models listed below.

Performance Specifications (1) Units		G011A1	G011A2	G011B2	G015A1	G015A2	G015B2
Maximum Speed ⁽²⁾	RPM	7,000	5,600	3,800	6,300	5,600	3,700
Continuous Stall Torque	lb-in	11	11	11	15	15	15
	N-m	1.3	1.3	1.3	1.7	1.7	1.7
Rated Speed	RPM	4,900	4,000	2,400	4,500	4,000	2,400
Rated Torque (at rated speed)	lb-in	9.4	9.8	10	13	13	14
	N-m	1.1	1.1	1.2	1.4	1.5	1.6
Rated Power	HP	0.72	0.62	0.39	0.91	0.82	0.52
	watts	540	460	290	680	610	390
Peak Torque ⁽⁴⁾	lb-in	26	24	28	25	24	29
	N-m	3.0	2.7	3.2	2.9	2.7	3.2
Continuous Stall Torque/Inertia	radians/sec ²	44,534	44,534	44,534	42,017	42,017	42,017

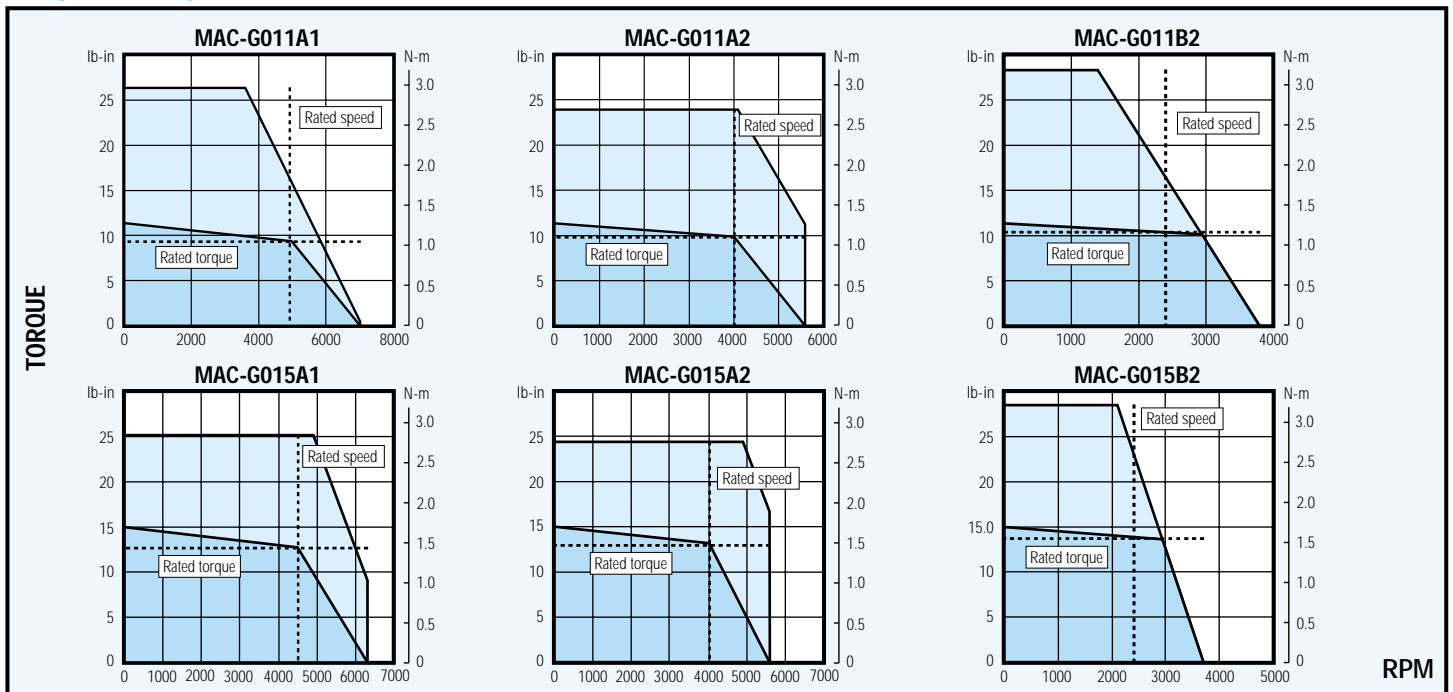
Mechanical/Thermal Specifications		G011A1	G011A2	G011B2	G015A1	G015A2	G015B2
Moment of Inertia	lb-in-sec ² x10 ⁻³	0.247	0.247	0.247	0.357	0.357	0.357
	kg-m ² x10 ⁻⁴	0.279	0.279	0.279	0.403	0.403	0.403
Friction Torque, Static	lb-in	0.80	0.80	0.80	1.0	1.0	1.0
	N-m	0.090	0.090	0.090	0.11	0.11	0.11
Servomotor Weight	lbs	4.4	4.4	4.4	5.3	5.3	5.3
	kg	2.0	2.0	2.0	2.4	2.4	2.4
Maximum Radial Shaft Load (centered 1" (25mm) from motor face)	lbs	35	35	35	35	35	35
	N	156	156	156	156	156	156
Maximum Axial Shaft Load	lbs	15	15	15	15	15	15
	N	67	67	67	67	67	67

Electrical Specifications		G011A1	G011A2	G011B2	G015A1	G015A2	G015B2
Torque Sensitivity	lb-in/Amps _{Rms/Ø}	2.0	3.6	7.0	1.9	3.6	7.1
	N-m/Amps _{Rms/Ø}	0.22	0.40	0.79	0.21	0.41	0.80
Servodrive Model Numbers		SAC-SW210	SAC-SW205	SAC-SW203	SAC-SW210	SAC-SW205	SAC-SW203
		SMS-210	SMS-205	SMS-203	SMS-210	SMS-205	SMS-203
		G10-AE	G05-AE	G03-AE	G10-AE	G05-AE	G03-AE
Servodrive Input Power	volts AC	115	230	230	115	230	230
Continuous Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	5.8	3.2	1.6	8.0	4.2	2.1
Peak Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	17	9.8	4.8	24	12	6.4

NOTES: (1) Ratings are obtained with servomotor ambient temperature of 25C with motor mounted to a 6" x 6" x 1/4" aluminum heatsink. Maximum case temperature is 85C. (2) Actual maximum motor speed dependent on motor encoder resolution. Refer to chart on page 1. (3) Insulation Class for all models is: F. (4) Motor's peak torque is limited by the peak current of the servodrive. The next larger drive may be used to increase the amount of peak torque available. Consult an ORMEC Applications Engineer for details. (5) Motor current specifications independent of drive selected.

Torque vs. Speed Characteristics

□ A: Intermittent Duty Zone □ B: Continuous Duty Zone





G-Series AC Brushless Servomotors

! All specifications and "Torque/Speed Curves" shown on this page reflect performance with the specific servodrive models listed below.

Performance Specifications (1)	Units	G016A2	G016B2	G019A1	G019A2	G019B2
Maximum Speed ⁽²⁾	RPM	5,000	2,500	5,625	5,000	3,700
Continuous Stall Torque	lb-in	16	16	19	19	17
	N-m	1.8	1.8	2.1	2.1	2.0
Rated Speed	RPM	3,600	1,600	4,500	4,000	2,500
Rated Torque (at rated speed)	lb-in	13	15	16	16	17
	N-m	1.5	1.7	1.8	1.8	1.9
Rated Power	HP	0.75	0.38	1.1	1.0	0.67
	watts	560	280	850	770	500
Peak Torque ⁽⁴⁾	lb-in	35	42	41	50	29
	N-m	4.0	4.7	4.7	5.6	3.2
Continuous Stall Torque/Inertia	radians/sec ²	48,780	48,780	40,685	40,685	36,403

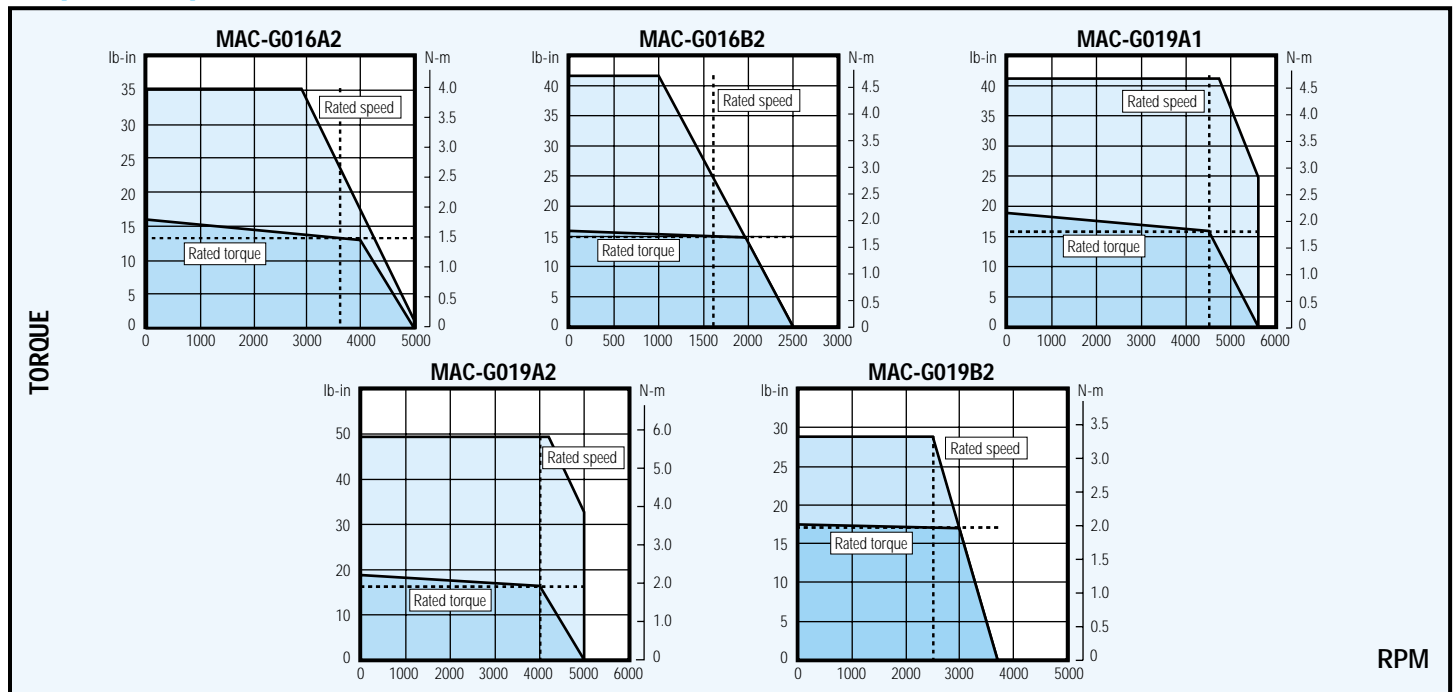
Mechanical/Thermal Specifications						
Moment of Inertia	lb-in-sec ² x10 ⁻³	0.328	0.328	0.467	0.467	0.467
	kg-m ² x10 ⁻⁴	0.371	0.371	0.528	0.528	0.528
Friction Torque, Static	lb-in	0.40	0.40	1.2	1.2	1.2
	N-m	0.045	0.045	0.14	0.14	0.14
Servomotor Weight	lbs	8.3	8.3	6.2	6.2	6.2
	kg	3.8	3.8	2.8	2.8	2.8
Maximum Radial Shaft Load (centered 1" (25mm) from motor face)	lbs	40	40	35	35	35
	N	178	178	156	156	156
Maximum Axial Shaft Load	lbs	25	25	15	15	15
	N	111	111	67	67	67

Electrical Specifications						
Torque Sensitivity	lb-in/Amp _{Rms/0}	5.2	10	1.8	3.7	7.1
	N-m/Amp _{Rms/0}	0.59	1.2	0.21	0.42	0.81
Servodrive Model Numbers		SAC-SW205	SAC-SW203	SAC-SW217	SAC-SW210	SAC-SW203
		SMS-205	SMS-203	SMS-217	SMS-210	SMS-203
		G05-AE	G03-AE	G17-AE	G10-AE	G03-AE
Servodrive Input Power	volts AC	230	230	115	230	230
Continuous Motor Current ⁽⁵⁾	Amps _{Rms/0}	3.1	1.6	11	5.1	2.6
Peak Motor Current ⁽⁵⁾	Amps _{Rms/0}	11	5.7	31	16	7.9

NOTES: (1) Ratings are obtained with servomotor ambient temperature of 25°C with motor mounted to a 10" x 10" x 1/4" (MAC-G016) or 6" x 6" x 1/4" (MAC-G019) aluminum heatsink. Maximum case temperature is 100°C. (2) Actual maximum motor speed dependent on motor encoder resolution. Refer to chart on page 1. (3) Insulation Class for all models is: F. (4) Motor's peak torque is limited by the peak current of the servodrive. The next larger drive may be used to increase peak torque available. Consult an ORMEC Applications Engineer for details. (5) Motor current specifications independent of drive selected.

Torque vs. Speed Characteristics

■ A: Intermittent Duty Zone ■ B: Continuous Duty Zone





G-Series AC Brushless Servomotors

! All specifications and "Torque/Speed Curves" shown on this page reflect performance with the specific servodrive models listed below.

Performance Specifications (1) Units		G030A2	G030B2	G040A2	G040B2	G055A2	G055A4
Maximum Speed ⁽²⁾	RPM	5,000	2,600	3,500	1,700	3,500	1,850
Continuous Stall Torque	lb-in	30	30	39	39	54	54
	N-m	3.4	3.4	4.4	4.4	6.1	6.1
Rated Speed	RPM	3,700	1,700	2,500	1,000	2,500	1,300
Rated Torque (at rated speed)	lb-in	26	28	36	37	47	50
	N-m	2.9	3.2	4.0	4.2	5.3	5.7
Rated Power	HP	1.5	0.75	1.3	0.58	1.7	1.0
	watts	1,100	560	1,000	430	1,300	770
Peak Torque ⁽⁴⁾	lb-in	68	67	102	61	102	102
	N-m	7.7	7.6	11	6.9	11	11
Continuous Stall Torque/Inertia	radians/sec ²	36,232	36,232	31,707	31,707	22,222	22,222

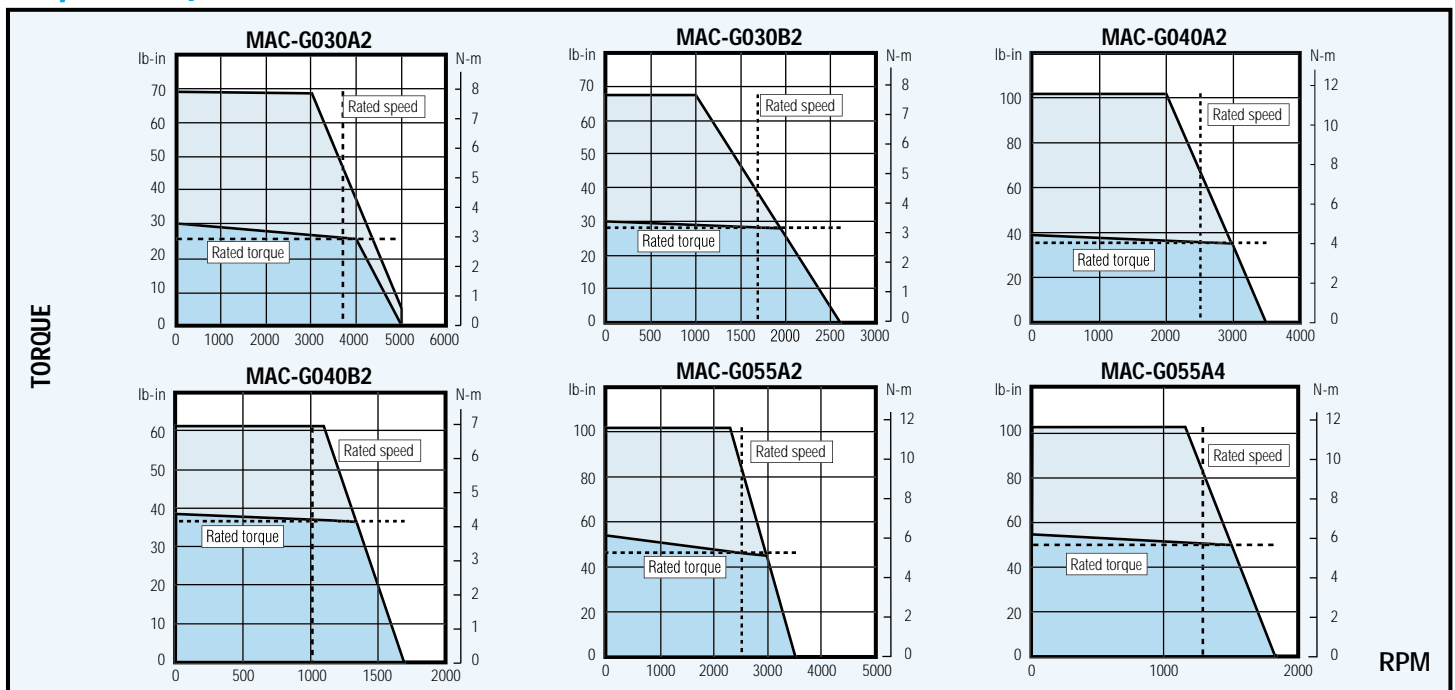
Mechanical/Thermal Specifications		G030A2	G030B2	G040A2	G040B2	G055A2	G055A4
Moment of Inertia	lb-in-sec ² x10 ⁻³	0.828	0.828	1.23	1.23	2.43	2.43
	kg-m ² x10 ⁻⁴	0.936	0.936	1.39	1.39	2.74	2.74
Friction Torque, Static	lb-in	0.50	0.50	0.60	0.60	1.0	1.0
	N-m	0.056	0.056	0.068	0.068	0.11	0.11
Servomotor Weight	lbs	12	12	15	15	20	20
	kg	5.4	5.4	6.6	6.6	9.1	9.1
Maximum Radial Shaft Load (centered 1" (25mm) from motor face)	lbs	40	40	40	40	100	100
	N	178	178	178	178	445	445
Maximum Axial Shaft Load	lbs	25	25	25	25	50	50
	N	111	111	111	111	222	222

Electrical Specifications		G030A2	G030B2	G040A2	G040B2	G055A2	G055A4
Torque Sensitivity	lb-in/Amp _{Rms/Ø}	5.1	10	7.6	15	7.6	15
	N-m/Amp _{Rms/Ø}	0.58	1.1	0.86	1.7	0.86	1.7
Servodrive Model Numbers		SAC-SW210	SAC-SW205	SAC-SW210	SAC-SW203	SAC-SW210	SAC-SW205
		SMS-210	SMS-205	SMS-210	SMS-203	SMS-210	SMS-205
		G10-AE	G05-AE	G10-AE	G03-AE	G10-AE	G05-AE
Servodrive Input Power	volts AC	230	230	230	230	230	230
Continuous Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	6.0	3.0	5.1	2.4	7.1	3.6
Peak Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	22	11	19	9.1	25	12

NOTES: (1) Ratings are obtained with servomotor ambient temperature of 25C with motor mounted to a 10" x 10" x 1/4" (MAC-G030 & G040) and 10" x 10" x 1/2" (MAC-G055) aluminum heatsink. Maximum case temperature is 100C. (2) Actual maximum motor speed dependent on motor encoder resolution. Refer to chart on page 1. (3) Insulation Class for all models is: F. (4) Motor's peak torque is limited by the peak current of the servodrive. The next larger drive may be used to increase the amount of peak torque available. Consult an ORMEC Applications Engineer for details. (5) Motor current specifications independent of drive selected.

Torque vs. Speed Characteristics

■ A: Intermittent Duty Zone ■ B: Continuous Duty Zone





G-Series AC Brushless Servomotors

! All specifications and "Torque/Speed Curves" shown on this page reflect performance with the specific servodrive models listed below.

Performance Specifications (1) Units		G080A2	G080A4	G115A2	G115A4	G130A2	G130A4
Maximum Speed ⁽²⁾	RPM	3,500	1,850	3,500	1,850	2,700	1,750
Continuous Stall Torque	lb-in	83	83	116	116	130	130
	N-m	9.4	9.4	13	13	15	15
Rated Speed	RPM	2,600	1,400	2,600	1,400	1,800	1,200
Rated Torque (at rated speed)	lb-in	71	76	100	107	119	121
	N-m	8.0	8.6	11	12	13	14
Rated Power	HP	2.8	1.6	4.0	2.3	3.4	2.3
	watts	2,100	1,200	3,000	1,700	2,500	1,700
Peak Torque ⁽⁴⁾	lb-in	203	203	203	203	220	213
	N-m	23	23	23	23	25	24
Continuous Stall Torque/Inertia	radians/sec ²	16,836	16,836	16,044	16,044	13,786	13,786

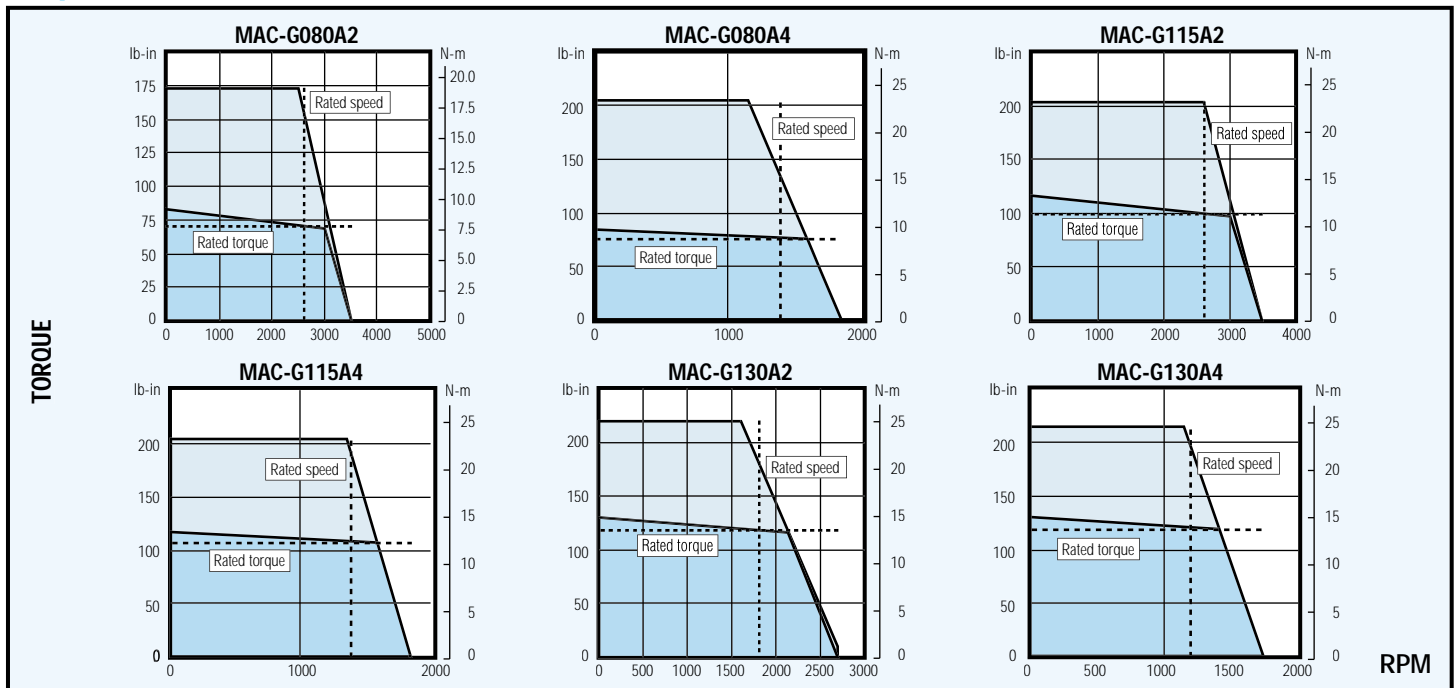
Mechanical/Thermal Specifications							
Moment of Inertia	lb-in-sec ² x10 ⁻³	4.93	4.93	7.23	7.23	9.43	9.43
	kg-m ² x10 ⁻⁴	5.57	5.57	8.17	8.17	10.7	10.7
Friction Torque, Static	lb-in	1.4	1.4	1.8	1.8	2.4	2.4
	N-m	0.16	0.16	0.20	0.20	0.27	0.27
Servomotor Weight	lbs	29	29	37	37	36	36
	kg	13	13	17	17	16	16
Maximum Radial Shaft Load (centered 1" (25mm) from motor face)	lbs	100	100	100	100	150	150
	N	445	445	445	445	667	667
Maximum Axial Shaft Load	lbs	50	50	50	50	50	50
	N	222	222	222	222	222	222

Electrical Specifications							
Torque Sensitivity	lb-in/Amp _{Rms/Ø}	7.6	15	7.6	15	9.6	16
	N-m/Amp _{Rms/Ø}	0.86	1.7	0.86	1.7	1.1	1.8
Servodrive Model Numbers		SAC-SW217	SAC-SW210	SAC-SW220	SAC-SW210	SAC-SW217	SAC-SW210
		SMS-217	SMS-210	SMS-220	SMS-210	SMS-217	SMS-210
		G17-AE	G10-AE	G20-AE	G10-AE	G17-AE	G10-AE
Servodrive Input Power	volts AC	230	230	230	230	230	230
Continuous Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	11	5.5	15	7.7	13	8.2
Peak Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	38	19	54	27	39	24

NOTES: (1) Ratings are obtained with servomotor ambient temperature of 25C with motor mounted to a 12" x 12" x 1/2" aluminum heatsink. Maximum case temperature is 100C. (2) Actual maximum motor speed dependent on motor encoder resolution. Refer to chart on page 1. (3) Insulation Class for all models is: F. (4) Motor's peak torque is limited by the peak current of the servodrive. The next larger drive may be used to increase the amount of peak torque available. Consult an ORMEC Applications Engineer for details. (5) Motor current specifications independent of drive selected.

Torque vs. Speed Characteristics

■ A: Intermittent Duty Zone ■ B: Continuous Duty Zone





G-Series AC Brushless Servomotors

! All specifications and "Torque/Speed Curves" shown on this page reflect performance with the specific servodrive models listed below.

Performance Specifications (1)	Units	G210A2	G210A4	G280A2	G280A4
Maximum Speed ⁽²⁾	RPM	2,700	1,750	2,700	1,750
Continuous Stall Torque	lb-in	210	210	280	280
	N-m	24	24	32	32
Rated Speed	RPM	2,000	1,300	2,000	1,300
Rated Torque (at rated speed)	lb-in	184	191	245	252
	N-m	21	22	28	28
Rated Power	HP	5.8	3.9	7.6	5.1
	watts	4,300	2,900	5,700	3,800
Peak Torque ⁽⁴⁾	lb-in	458	361	641	752
	N-m	52	41	72	85
Continuous Stall Torque/Inertia	radians/sec ²	11,053	11,053	9,790	9,790

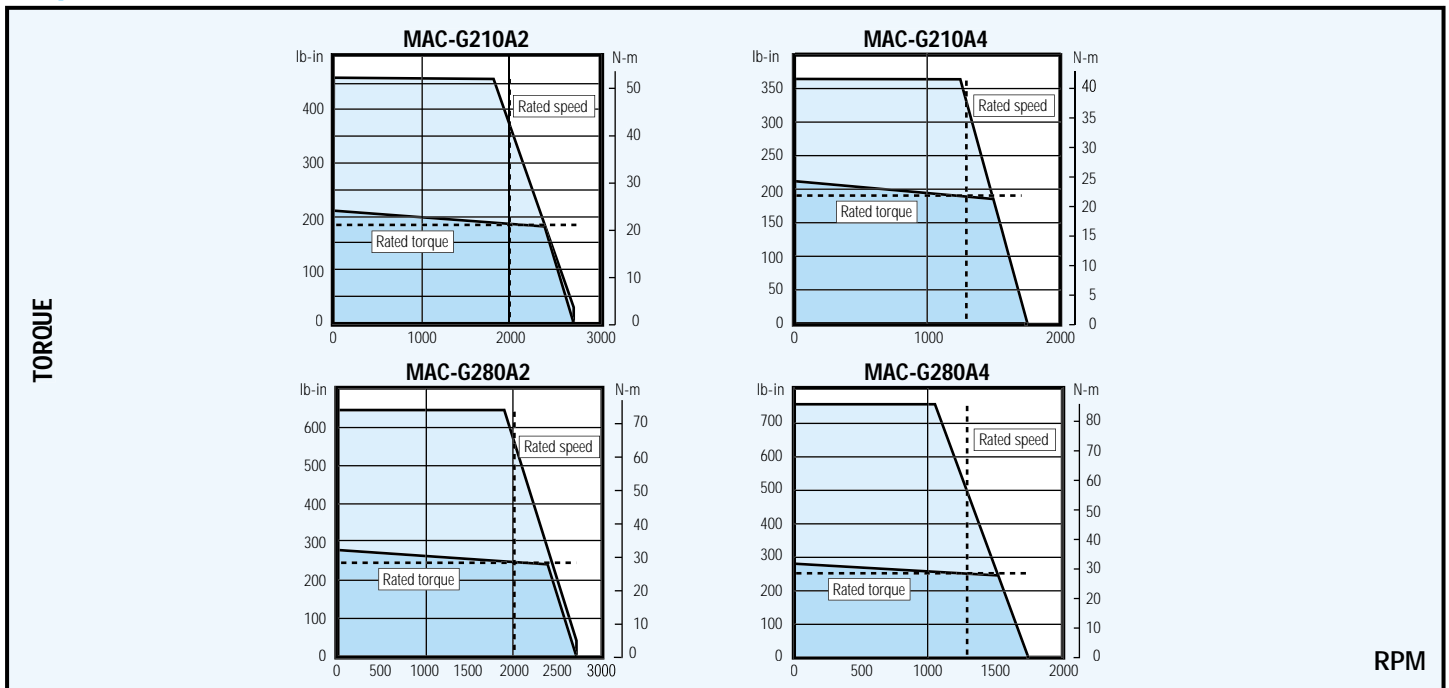
Mechanical/Thermal Specifications					
Moment of Inertia	lb-in-sec ² x10 ⁻³	19.0	19.0	28.6	28.6
	kg-m ² x10 ⁻⁴	21.5	21.5	32.3	32.3
Friction Torque, Static	lb-in	3.0	3.0	3.6	3.6
	N-m	0.34	0.34	0.41	0.41
Servomotor Weight	lbs	51	51	66	66
	kg	23	23	30	30
Maximum Radial Shaft Load (centered 1" (25mm) from motor face)	lbs	150	150	150	150
	N	667	667	667	667
Maximum Axial Shaft Load	lbs	50	50	50	50
	N	222	222	222	222

Electrical Specifications					
Torque Sensitivity	lb-in/Amp _{Rms/Ø}	9.6	16	9.6	16
	N-m/Amp _{Rms/Ø}	1.1	1.8	1.1	1.8
Servodrive Model Number		SAC-SW225	SAC-SW217	SAC-SW235	SAC-SW225
		SMS-225	SMS-217	SMS-235	SMS-225
		G25-AE	G17-AE	G35-AE	G25-AE
Servodrive Input Power	volts AC	230	230	230	230
Continuous Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	22	13	29	17
Peak Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	65	38	87	51

NOTES: (1) Ratings are obtained with servomotor ambient temperature of 25C with motor mounted to a 12" x 12" x 1/2" aluminum heatsink. Maximum case temperature is 100C. (2) Actual maximum motor speed dependent on motor encoder resolution. Refer to chart on page 1. (3) Insulation Class for all models is: F. (4) Motor's peak torque is limited by the peak current of the servodrive. The next larger drive may be used to increase the amount of peak torque available. Consult an ORMEC Applications Engineer for details. (5) Motor current specifications independent of drive selected.

Torque vs. Speed Characteristics

□ A: Intermittent Duty Zone □ B: Continuous Duty Zone





G-Series AC Brushless Servomotors

! All specifications and "Torque/Speed Curves" shown on this page reflect performance with the specific servodrive models listed below.

Performance Specifications (1)	Units	G360A2	G360A4	G640A2
Maximum Speed ⁽²⁾	RPM	2,000	1,750	2,400
Continuous Stall Torque	lb-in	360	360	640
	N-m	41	41	72
Rated Speed	RPM	1,500	1,300	1,600
Rated Torque (at rated speed)	lb-in	321	323	580
	N-m	36	36	66
Rated Power	HP	7.6	6.6	13
	watts	5,700	4,900	10,000
Peak Torque ⁽⁴⁾	lb-in	851	752	1,239
	N-m	96	85	140
Continuous Stall Torque/Inertia	radians/sec ²	10,286	10,286	8,989

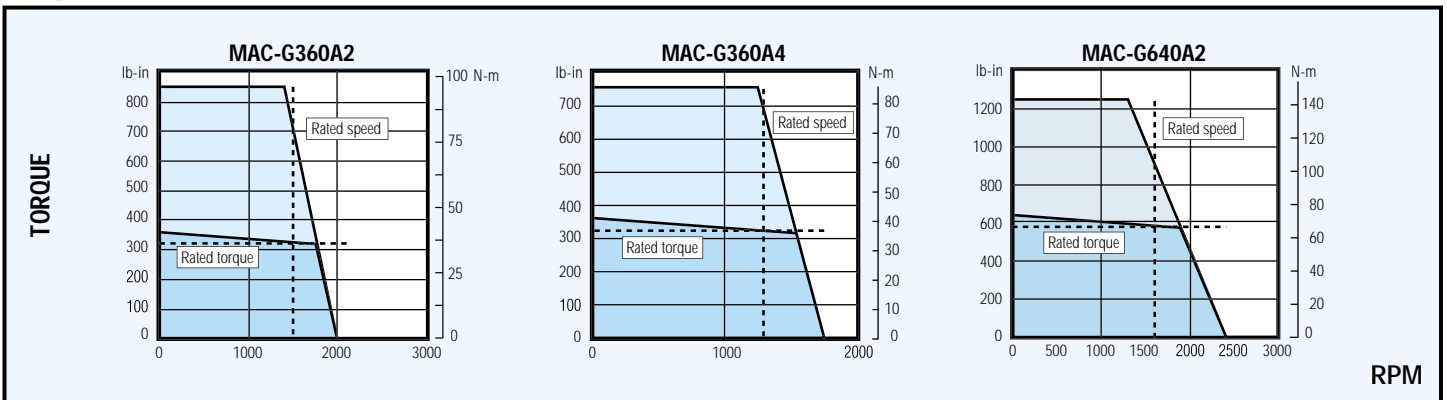
Mechanical/Thermal Specifications				
Moment of Inertia	lb-in-sec ² x10 ⁻³	35.0	35.0	71.2
	kg-m ² x10 ⁻⁴	39.6	39.6	80.5
Friction Torque, Static	lb-in	4.2	4.2	9.8
	N-m	0.47	0.47	1.1
Servomotor Weight	lbs	83	83	98
	kg	38	38	44
Maximum Radial Shaft Load (centered 1" (25mm) from motor face)	lbs	150	150	250
	N	667	667	1,112
Maximum Axial Shaft Load	lbs	50	50	100
	N	222	222	445

Electrical Specifications				
Torque Sensitivity	lb-in/Amp _{Rms/Ø}	13	16	11
	N-m/Amp _{Rms/Ø}	1.4	1.8	1.2
Servodrive Model Numbers		SAC-SW235	SAC-SW225	SAC-SW260
		SMS-235	SMS-225	SMS-260
		G35-AE	G25-AE	G60-AE
Servodrive Input Power	volts AC	230	230	230
Continuous Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	28	22	59
Peak Motor Current ⁽⁵⁾	Amps _{Rms/Ø}	83	66	163

NOTES: (1) Ratings are obtained with servomotor ambient temperature of 25C with motor mounted to a 12" x 12" x 1/2" (MAC-G360) or 14" x 14" x 3/4" (MAC-G640) aluminum heatsink. Maximum case temperature is 100C. (2) Actual maximum motor speed dependent on motor encoder resolution. Refer to chart on page 1. (3) Insulation Class for all models is: F. (4) Motor's peak torque is limited by the peak current of the servodrive. The next larger drive may be used to increase peak torque available. Consult an ORMEC Applications Engineer for details. (5) Motor current specifications independent of drive selected.

Torque vs. Speed Characteristics

■ A: Intermittent Duty Zone ■ B: Continuous Duty Zone



Specifications for G-Series Servomotors with Fail-Safe Brakes

Frame Size Ref ⁽¹⁾	Servomotor Model Number	Brake Holding Torque ⁽²⁾ lb-in (N-m)	Continuous Stall Torque to Inertia Ratio (rad/sec ²)	Motor Moment of Inertia lb-in-sec ² (kg-m ²)	Motor Length in (mm)	Motor Weight lb (kg)	Brake Current @24 Vdc (milliamps)
A	MAC-G005A1	10 (1.1)	50,556	0.099 x 10 ⁻³ (0.112 x 10 ⁻⁴)	6.80 (173)	3.8 (1.7)	210
B	MAC-G006A1	24 (2.7)	29,457	0.197 x 10 ⁻³ (0.222 x 10 ⁻⁴)	6.55 (167)	6.5 (2.9)	600
	MAC-G006A2	24 (2.7)	29,457	0.197 x 10 ⁻³ (0.222 x 10 ⁻⁴)	6.55 (167)	6.5 (2.9)	600
A	MAC-G010A1	10 (1.1)	61,767	0.162 x 10 ⁻³ (0.183 x 10 ⁻⁴)	8.00 (203)	4.8 (2.2)	210
	MAC-G010B1	10 (1.1)	58,296	0.162 x 10 ⁻³ (0.183 x 10 ⁻⁴)	8.00 (203)	4.8 (2.2)	210
B	MAC-G011A1	24 (2.7)	35,658	0.317 x 10 ⁻³ (0.358 x 10 ⁻⁴)	7.45 (186)	7.4 (3.4)	600
	MAC-G011A2	24 (2.7)	35,658	0.317 x 10 ⁻³ (0.358 x 10 ⁻⁴)	7.45 (186)	7.4 (3.4)	600
	MAC-G011B2	24 (2.7)	35,658	0.317 x 10 ⁻³ (0.358 x 10 ⁻⁴)	7.45 (186)	7.4 (3.4)	600
	MAC-G015A1	24 (2.7)	35,137	0.427 x 10 ⁻³ (0.482 x 10 ⁻⁴)	8.05 (207)	8.3 (3.8)	600
	MAC-G015A2	24 (2.7)	35,137	0.427 x 10 ⁻³ (0.482 x 10 ⁻⁴)	8.05 (207)	8.3 (3.8)	600
	MAC-G015B2	24 (2.7)	35,137	0.427 x 10 ⁻³ (0.482 x 10 ⁻⁴)	8.05 (207)	8.3 (3.8)	600
C	MAC-G016A2	60 (6.8)	33,473	0.478 x 10 ⁻³ (0.540 x 10 ⁻⁴)	8.74 (222)	10.5 (4.8)	520
	MAC-G016B2	60 (6.8)	33,473	0.478 x 10 ⁻³ (0.540 x 10 ⁻⁴)	8.74 (222)	10.5 (4.8)	520
B	MAC-G019A1	24 (2.7)	35,016	0.537 x 10 ⁻³ (0.607 x 10 ⁻⁴)	8.80 (224)	9.2 (4.2)	600
	MAC-G019A2	24 (2.7)	35,016	0.537 x 10 ⁻³ (0.607 x 10 ⁻⁴)	8.80 (224)	9.2 (4.2)	600
	MAC-G019B2	24 (2.7)	32,521	0.537 x 10 ⁻³ (0.607 x 10 ⁻⁴)	8.80 (224)	9.2 (4.2)	600
C	MAC-G030A2	60 (6.8)	30,675	0.978 x 10 ⁻³ (1.11 x 10 ⁻⁴)	10.3 (261)	10.5 (4.8)	520
	MAC-G030B2	60 (6.8)	30,675	0.978 x 10 ⁻³ (1.11 x 10 ⁻⁴)	10.3 (261)	10.5 (4.8)	520
	MAC-G040A2	60 (6.8)	28,302	1.38 x 10 ⁻³ (1.56 x 10 ⁻⁴)	11.8 (299)	16.8 (7.6)	520
	MAC-G040B2	60 (6.8)	28,302	1.38 x 10 ⁻³ (1.56 x 10 ⁻⁴)	11.8 (299)	16.8 (7.6)	520
D	MAC-G055A2	240 (27)	16,226	3.33 x 10 ⁻³ (3.76 x 10 ⁻⁴)	10.6 (270)	26.0 (11.8)	880
	MAC-G055A4	240 (27)	16,226	3.33 x 10 ⁻³ (3.76 x 10 ⁻⁴)	10.6 (270)	26.0 (11.8)	880
	MAC-G080A2	240 (27)	14,242	5.83 x 10 ⁻³ (6.59 x 10 ⁻⁴)	13.1 (333)	34.6 (15.7)	880
	MAC-G080A4	240 (27)	14,242	5.83 x 10 ⁻³ (6.59 x 10 ⁻⁴)	13.1 (333)	34.6 (15.7)	880
	MAC-G115A2	240 (27)	14,296	8.13 x 10 ⁻³ (9.18 x 10 ⁻⁴)	15.6 (397)	43.0 (19.5)	880
	MAC-G115A4	240 (27)	14,296	8.13 x 10 ⁻³ (9.18 x 10 ⁻⁴)	15.6 (397)	43.0 (19.5)	880
E	MAC-G130A2	360 (41)	11,113	11.7 x 10 ⁻³ (13.2 x 10 ⁻⁴)	14.0 (356)	48.0 (21.8)	1,130
	MAC-G130A4	360 (41)	11,113	11.7 x 10 ⁻³ (13.2 x 10 ⁻⁴)	14.0 (356)	48.0 (21.8)	1,130
	MAC-G210A2	360 (41)	9,860	21.3 x 10 ⁻³ (24.1 x 10 ⁻⁴)	16.7 (424)	63.0 (28.6)	1,130
	MAC-G210A4	360 (41)	9,860	21.3 x 10 ⁻³ (24.1 x 10 ⁻⁴)	16.7 (424)	63.0 (28.6)	1,130
	MAC-G280A2	360 (41)	9,062	30.9 x 10 ⁻³ (34.9 x 10 ⁻⁴)	19.4 (492)	78.0 (35.4)	1,130
	MAC-G280A4	360 (41)	9,062	30.9 x 10 ⁻³ (34.9 x 10 ⁻⁴)	19.4 (492)	78.0 (35.4)	1,130
	MAC-G360A2	360 (41)	9,652	37.3 x 10 ⁻³ (42.1 x 10 ⁻⁴)	22.1 (561)	93.0 (42.2)	1,130
	MAC-G360A4	360 (41)	9,652	37.3 x 10 ⁻³ (42.1 x 10 ⁻⁴)	22.1 (561)	93.0 (42.2)	1,130
F	MAC-G640A2	1,080 (122)	8,027	79.7 x 10 ⁻³ (90.1 x 10 ⁻⁴)	18.7 (494)	122 (55.3)	1,400

⁽¹⁾ Frame Option Availability Chart

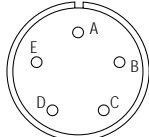
Ref	Frame	Metric (M)	NEMA (E)
A	2 inch	66 mm	or Size 23
B	2.75 inch	72 mm	--
C	3 inch	89 mm	or Size 34
D	4 inch	114 mm	or Size 56
E	6 inch	142 mm	--
F	8 inch	190 mm	--

⁽²⁾ Caution: The built-in fail-safe brake is designed for holding and not for decelerating the motor. In normal operation, the brake should be applied only after the motor is stopped. Fail-safe brakes are useful in applications when a servomotor is used to control a vertical axis. A servomotor with a fail-safe brake prevents the movable part from dropping due to gravity when the system power is turned off.

Servomotor Connectors

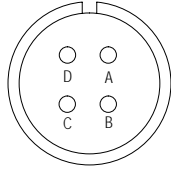
MOTOR CONNECTORS

A	Phase V
B	Phase U
C	Phase W
D	Case Gnd
E	N.C.



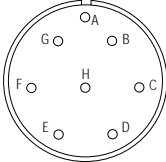
PT02E-14-5P

A	Phase V
B	Phase U
C	Phase W
D	Case Gnd



MS-3102A-22-22P,
MS-3102A-32-17P

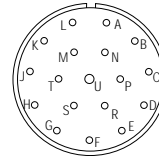
A	Phase V
B	Phase U
C	Phase W
D	Case Gnd
E	Brake Shield
F	+ Brake
G	- Brake
H	N.C.



PT02E-16-8P

FEEDBACK CONNECTOR

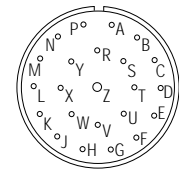
A	Thermal Sensor
B	Channel B
C	Channel /B
D	UVW Shield
E	Channel W
F	Channel V
G	Channel U
H	N.C.
J	N.C.
K	+5vDC Input
L	Thermal Sensor
M	Channel Z
N	Channel A
P	Channel A/
R	Channel W/
S	Channel V/
T	Encoder Gnd
U	Channel Z/



PT02E-14-18P

MOTOR / FEEDBACK CONNECTOR

A	Phase V
B	Phase U
C	Phase W
D	Case Gnd
E	+5vDC Input
F	Channel B
G	Channel A
H	Channel Z
J	Channel W
K	Channel W/
L	Channel V/
M	Channel U/
N	UVW Shield
P	+ Brake or N.C.
R	Thermal Switch
S	Thermal Switch
T	Encoder Gnd
U	Channel B/
V	Channel A/
W	Channel Z/
X	Channel V/
Y	Channel U
Z	- Brake or N.C.



PT02E-16-23P

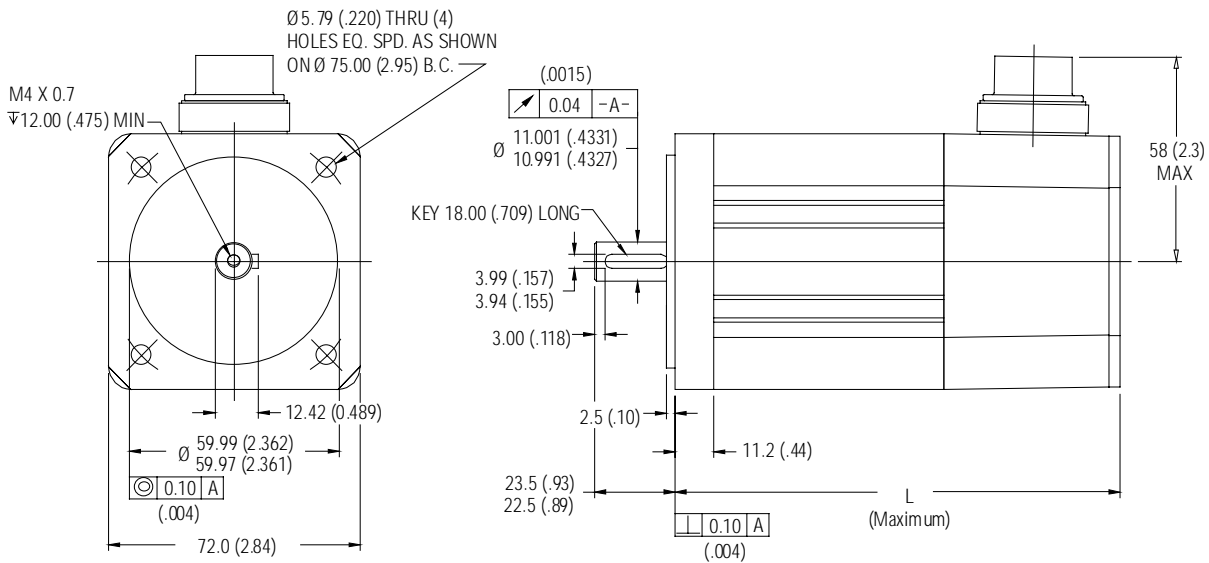
MATING CONNECTOR SELECTION CHART

Motor Type	Motor Connector	Mating	Feedback Connector	Mating
Motors (no brake)				
MAC-G005, 006, 010, 011, 015, 019	PT02E-16-23P	PT06E-16-23S(SR)	----	----
MAC-G016, 030, 040, 055, 080, 115	PT02E-14-5P	PT06E-14-5S(SR)	PT02E-14-18P	PT06E-14-18S(SR)
MAC-G130, 210, 280, 360	MS-3102A-22-22P	MS-3106F-22-22S	PT02E-14-18P	PT06E-14-18S(SR)
MAC-G640	MS-3102A-32-17P	MS-3106F-32-17S	PT02E-14-18P	PT06E-14-18S(SR)
Motors (with fail-safe brake)				
MAC-G005, 006, 010, 011, 015, 019	PT02E-16-23P	PT06E-16-23S(SR)	----	----
MAC-G016, 030, 040, 055, 080, 115	PT02E-16-8P	PT06E-16-8S(SR)	PT02E-14-18P	PT06E-14-18S(SR)
MAC-G130, 210, 280, 360	MS-3102A-22-22P	MS-3106F-22-22S	PT02E-16-23P	PT06E-16-23S(SR)
MAC-G640	MS-3102A-32-17P	MS-3106F-32-17S	PT02E-16-23P	PT06E-16-23S(SR)

Outline Drawings:

METRIC FRAME All dimensions in millimeters (inches)

G006A1/M, G006A2/M, G011A1/M, G011A2/M, G011B2/M, G015A1/M, G015A2/M, G015B2/M, G019A1/M, G019A2/M & G019B2/M



Dimensions	L
MAC-G006A1 & A2	128.1 (5.05)
MAC-G011A1, A2 & B2	147.3 (5.80)
MAC-G015A1, A2 & B2	166.4 (6.55)
MAC-G019A1, A2 & B2	185.4 [7.30]

Notes:

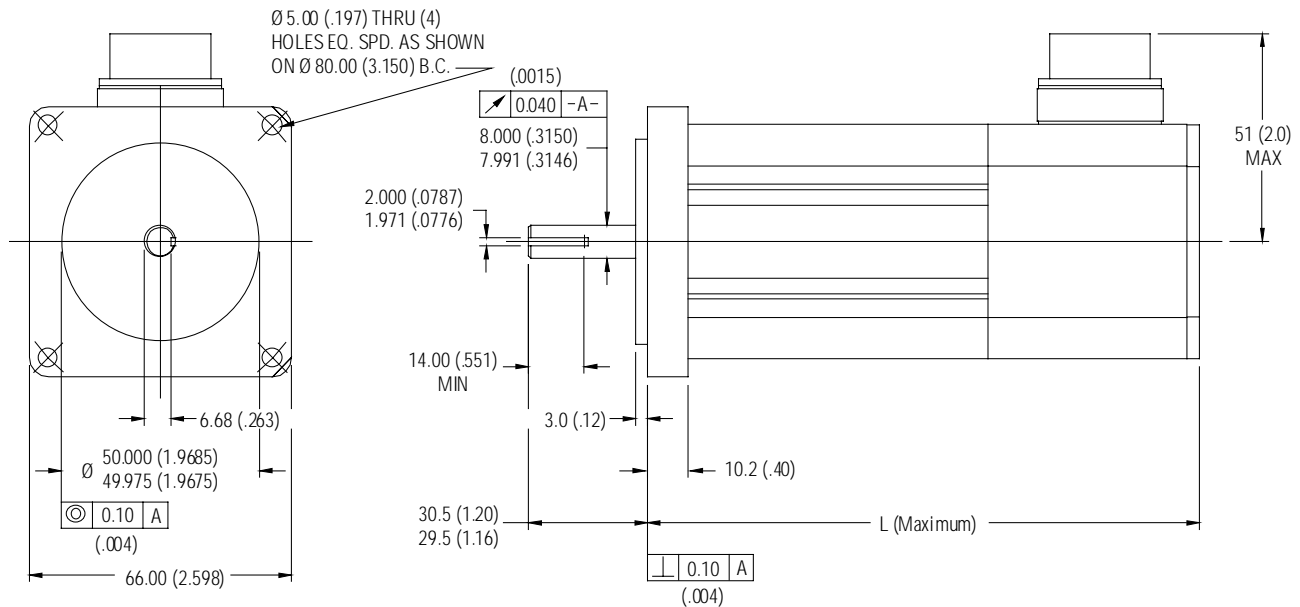
Brake option adds 38.1 mm (1.5 inches) to L.

Minimum cable clearance from motor centerline for the motor cable is 191 mm (7.5 inches)

Outline Drawings:

METRIC FRAME All dimensions in millimeters (inches)

G005A1/M, G010A1/M & G010B1/M



Dimensions (M)	L
MAC-G005A1	140.0 (5.5)
MAC-G010A1 & B1	170.0 (6.7)

Notes:

Brake option adds 30.5 mm (1.2 inches) to L.

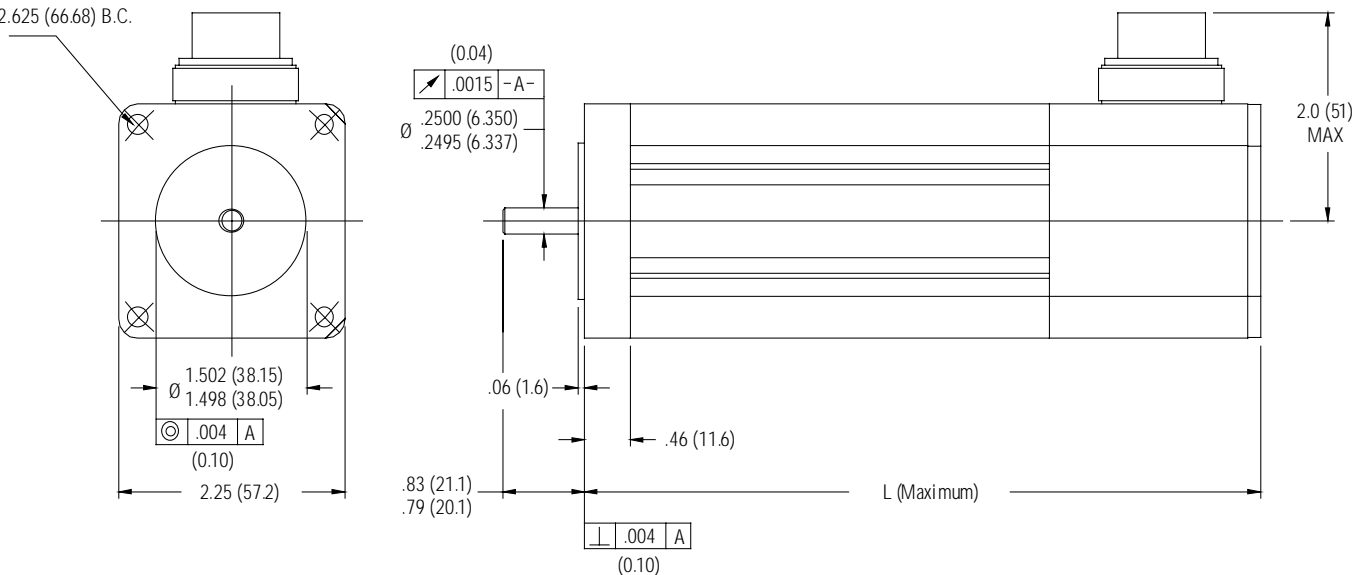
Minimum cable clearance from motor centerline for the motor cable is 178 mm (7.0 inches).

Outline Drawings:

NEMA FRAME SIZE: 23 All dimensions in inches (millimeters)

G005A1/E, G010A1/E & G010B1/E

Ø 0.205 (5.21) THRU (4)
EQ. SPD. AS SHOWN ON Ø
2.625 (66.68) B.C.



Dimensions (E)	L
MAC-G005A1 & B1	5.6 (141)
MAC-G010A1 & B1	6.8 (172)

Notes:

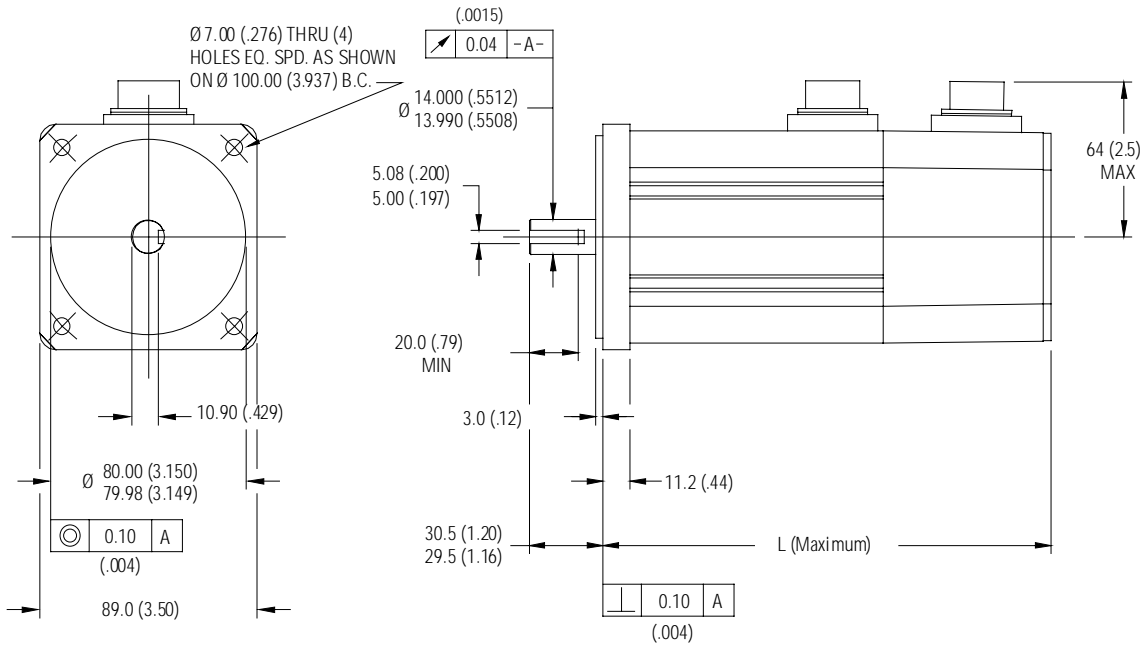
Brake option adds 1.2 inches (30.5 mm) to L.

Minimum cable clearance from motor centerline for the motor cable is 7.0 inches (178 mm).

Outline Drawings:

METRIC FRAME All dimensions in millimeters (inches)

G016A2/M, G016B2/M, G030A2/M, G030B2/M, G040A2/M & G040B2/M



Dimensions (M)	L
MAC-G016A2 & B2	183.9 (7.24)
MAC-G030A2 & B2	222.0 (8.74)
MAC-G040A2 & B2	260.1 (10.24)

Notes:

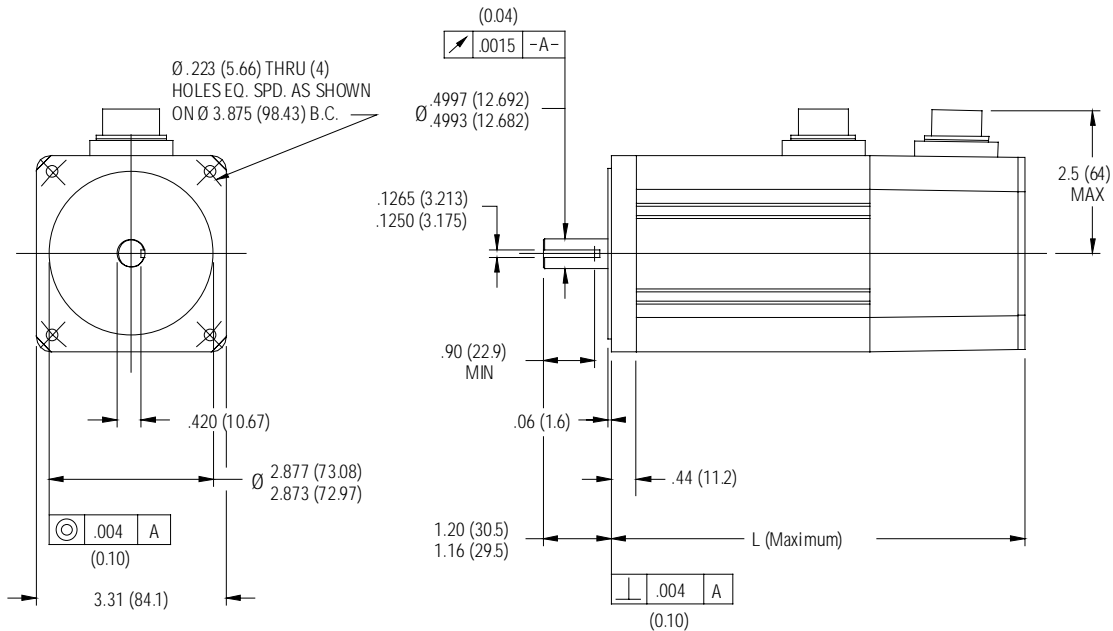
Brake option adds 38.1 mm (1.5") to L.

Minimum cable clearance from motor centerline for the encoder cable is 178 mm (7.0 inches); for the motor cable it is 178 mm (7.0 inches).

Outline Drawings:

NEMA FRAME SIZE: 34 All dimensions in inches (millimeters)

G016A2/E, G016B2/E, G030A2/E, G030B2/E, G040A2/E & G040B2/E



Dimensions (E)	L
MAC-G016A2 & B2	7.24 (183.9)
MAC-G030A2 & B2	8.74 (222.0)
MAC-G040A2 & B2	10.24 (260.1)

Notes:

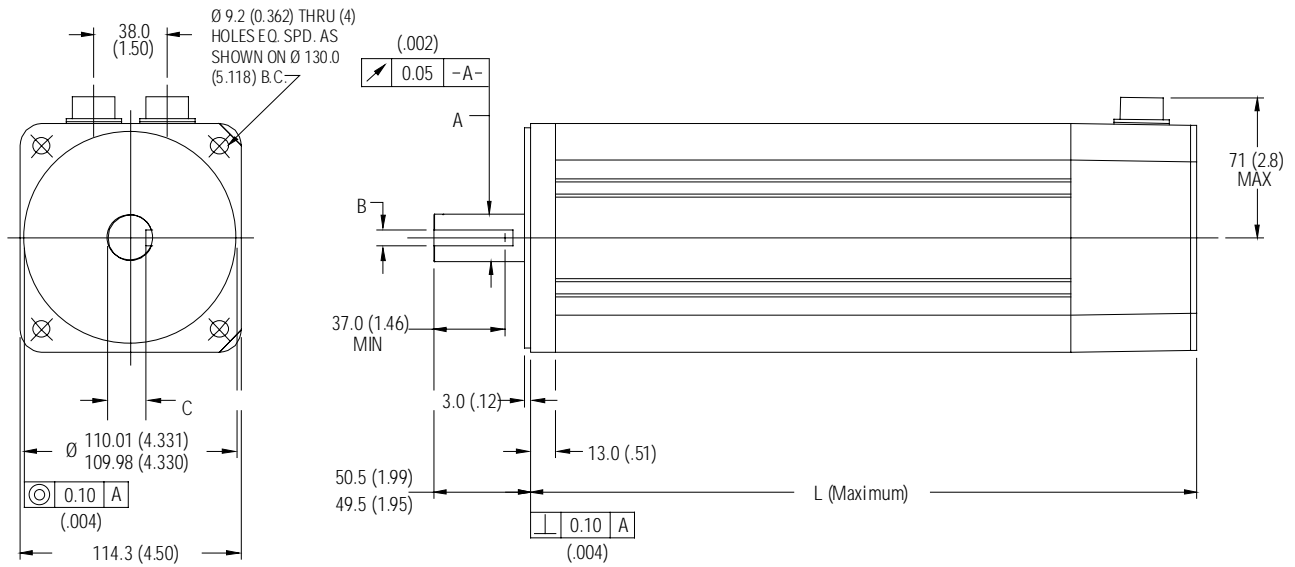
Brake option adds 1.5 inches (38.1 mm) to L.

Minimum cable clearance from motor centerline for the encoder cable is 7.0 inches (178 mm); for the motor cable it is 7.0 inches (178 mm)

Outline Drawings:

METRIC FRAME All dimensions in millimeters [inches]

G055A2/M, G055A4/M, G080A2/M, G080A4/M, G115A2/M & G115A4/M



Dimensions (M)	A	B	C	L
MAC-G055A2 & A4	Ø 19.000 (.7480) 18.987 (.7475)	6.00 (.240)	15.5 (.61)	218.2 (8.59)
MAC-G080A2 & A4	Ø 24.000 (.9449) 23.987 (.9444)	8.00 (.315) 7.96 (.313)	20.0 (.79)	281.7 (11.09)
MAC-G115A2 & A4			20.0 (.79)	345.2 (13.59)

Notes:

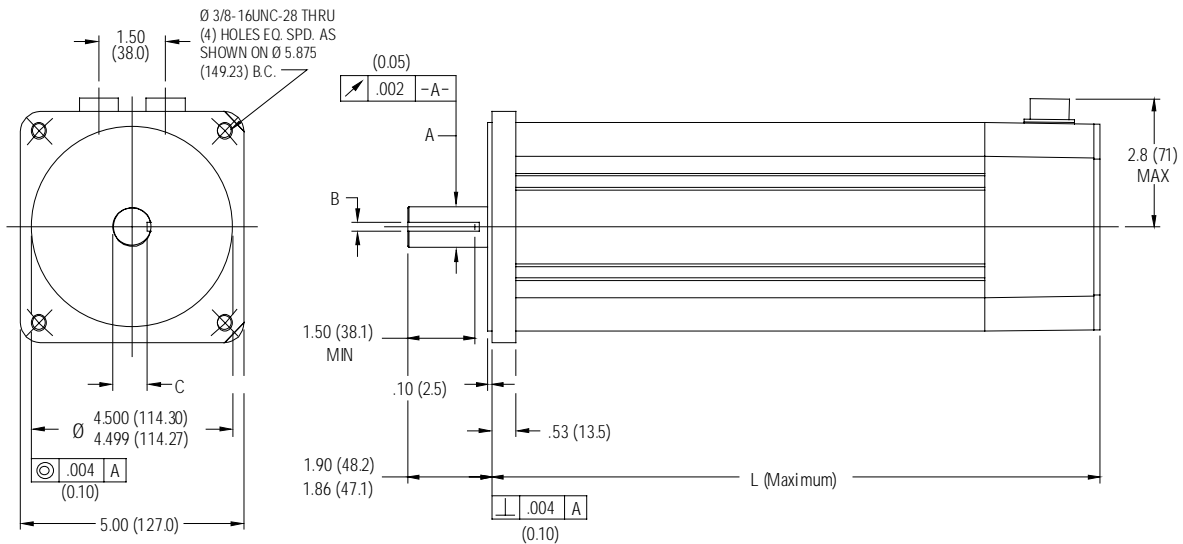
Brake option adds 50.8 mm (2.0 inches) to L.

Minimum cable clearance from motor centerline for the encoder cable is 191mm (7.5 inches); for the motor cable it is 191 mm (7.5 inches).

Outline Drawings:

NEMA FRAME SIZE: 56 All dimensions in inches [millimeters]

G055A2/E, G055A4/E, G080A2/E, G080A4/E, G115A2/E & G115A4/E



Dimensions (E)	A	B	C	L
MAC-G055A2 & A4	Ø .6245 (15.862) .6241 (15.852)	.1890 (4.801) .1875 (4.763)	.51 (13.0)	8.61 (218.7)
MAC-G080A2 & A4	Ø .8750 (22.225) .8745 (22.212)		.77 (19.6)	11.11 (282.2)
MAC-G115A2 & A4			.77 (19.6)	13.61 (345.7)

Notes:

Brake option adds 2.0 inches (50.8 mm) to L.

Minimum cable clearance from motor centerline for the encoder cable is 7.5 inches (191 mm); for the motor cable it is 7.5 inches (191 mm).

