Ratings and Specifications

Time Rating: Continuous
Insulation Resistance: 500 VDC, 10 MΩ min.
Ambient Temperature: 0 to 40˚C
Excitation: Permanent magnet
Withstand Voltage: 1500 VAC for one minute

Enclosure: Self-cooled, air-cooling (Only self-cooled type available for SGLGW-30A linear servomotor)
Ambient Humidity: 20% to 80% (no condensation)
Allowable Winding Temperature: 130˚C (Thermal class B)

●With Standard-force Magnetic Ways

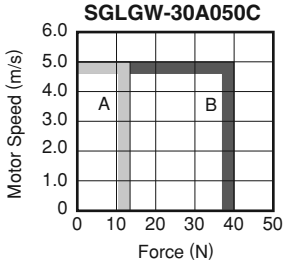
Linear Servomotor Model SGLGW-		30A		40A			60A			90A		
		050C	080C	140C	253C	365C	140C	253C	365C	200C	370C	535C
Peak Speed*	m/s	5	5	5	5	5	4.8	4.8	4.8	4	4	4
Rated Force*	N	12.5	25	47	93	140	70	140	210	325	550	750
Rated Current*	A_{rms}	0.51	0.79	0.8	1.6	2.4	1.2	2.2	3.3	4.4	7.5	10.2
Peak Force*	N	40	80	140	280	420	220	440	660	1300	2200	3000
Peak Current*	A_{rms}	1.62	2.53	2.4	4.9	7.3	3.5	7.0	10.5	17.6	30.0	40.8
Moving Coil Mass	kg	0.10	0.15	0.34	0.60	0.87	0.42	0.76	1.10	2.15	3.6	4.9
Force Constant	N/A_{rms}	26.4	33.9	61.5	61.5	61.5	66.6	66.6	66.6	78.0	78.0	78.0
BEMF Constant	V/(m/s)	8.8	11.3	20.5	20.5	20.5	22.2	22.2	22.2	26.0	26.0	26.0
Motor Constant	$N/\sqrt{W}$	3.7	5.6	7.8	11.0	13.5	11.1	15.7	19.2	26.0	36.8	45.0
Electrical Time Constant	ms	0.2	0.4	0.4	0.4	0.4	0.5	0.5	0.5	1.4	1.4	1.4
Mechanical Time Constant	ms	7.30	4.78	5.59	4.96	4.77	3.41	3.08	2.98	3.18	2.66	2.42
Thermal Resistance (With heat sink)	K/W	5.19	3.11	1.67	0.87	0.58	1.56	0.77	0.51	0.39	0.26	0.22
Thermal Resistance (Without heat sink)	K/W	8.13	6.32	3.02	1.80	1.23	2.59	1.48	1.15	1.09	0.63	0.47
Magnetic Attraction	N	0	0	0	0	0	0	0	0	0	0	0
Applicable SERVOPACK	SGDV	R70A	R90A	R90A	1R6A	2R8A	1R6A	2R8A	5R5A	120A	180A	200A

Notes:
1 The items marked with an * and Force and Speed Characteristics (the table on the next page) are the values at a motor winding temperature of 100˚C during operation in combination with a SERVOPACK. The others are at 20˚C.
2 The above specifications show the values under the cooling condition when a heat sink (aluminium board) listed in the following table is mounted on the moving coil.
Heat Sink Size 200 mm × 300 mm × 12 mm : SGLGW-30A050C, -30A080C, -40A140C, -60A140C
300 mm × 400 mm × 12 mm : SGLGW-40A253C, -60A253C
400 mm × 500 mm × 12 mm : SGLGW-40A365C, -60A365C
800 mm × 900 mm × 12 mm : SGLGW-90A200C, -90A370C, -90A535C

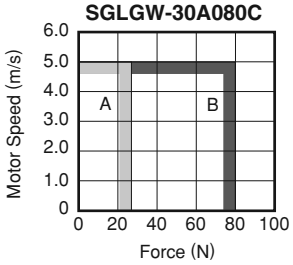
Ratings and Specifications

● Force and Speed Characteristics A : Continuous Duty Zone B : Intermittent Duty Zone

SGLGW-30A050C



SGLGW-30A080C



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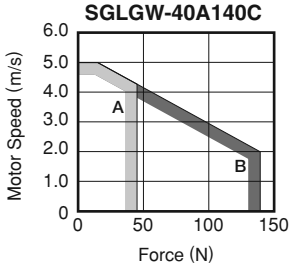

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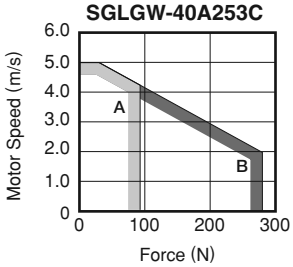

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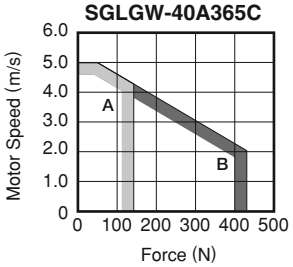

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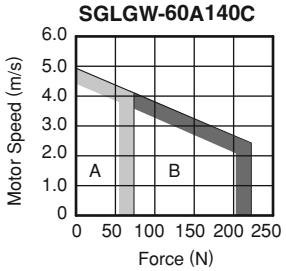

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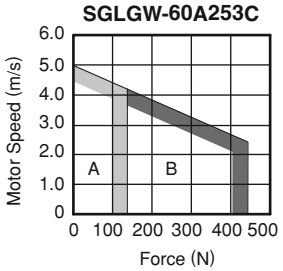

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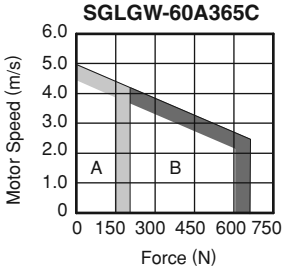
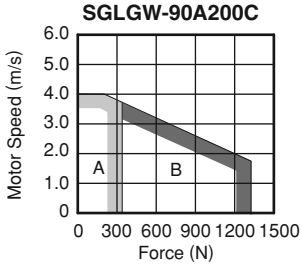


SGLGW-90A200C



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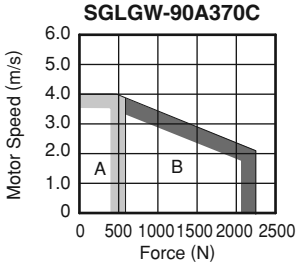

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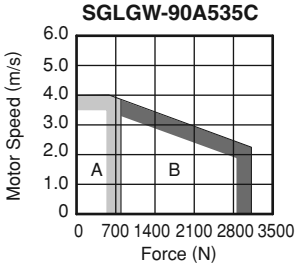


Note: When the effective force during intermittent duty is within the rated force, the servomotor can be used within the intermittent duty zone.

●With High-force Magnetic Ways

Linear Servomotor Model SGLGW-		40A			60A		
		140C	253C	365C	140C	253C	365C
Peak Speed*	m/s	4.2	4.2	4.2	4.2	4.2	4.2
Rated Force*	N	57	114	171	85	170	255
Rated Current*	A_{rms}	0.8	1.6	2.4	1.2	2.2	3.3
Peak Force*	N	230	460	690	360	720	1080
Peak Current*	A_{rms}	3.2	6.5	9.7	5.0	10.0	14.9
Moving Coil Mass	kg	0.34	0.60	0.87	0.42	0.76	1.10
Force Constant	N/A_{rms}	76.0	76.0	76.0	77.4	77.4	77.4
BEMF Constant	V/(m/s)	25.3	25.3	25.3	25.8	25.8	25.8
Motor Constant	$N/\sqrt{W}$	9.6	13.6	16.7	12.9	18.2	22.3
Electrical Time Constant	ms	0.4	0.4	0.4	0.5	0.5	0.5
Mechanical Time Constant	ms	3.69	3.24	3.12	2.52	2.29	2.21
Thermal Resistance (With heat sink)	K/W	1.67	0.87	0.58	1.56	0.77	0.51
Thermal Resistance (Without heat sink)	K/W	3.02	1.80	1.23	2.59	1.48	1.15
Magnetic Attraction	N	0	0	0	0	0	0
Applicable SERVOPACK	SGDV	1R6A	2R8A	3R8A	1R6A	3R8A	7R6A

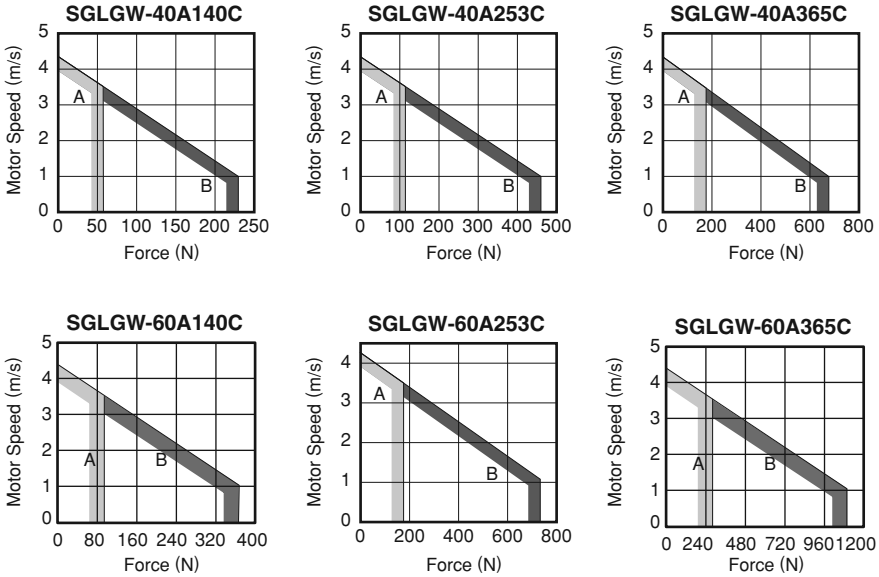
Notes: 1 The items marked with an * and Force and Speed Characteristics (the table on the next page) are the values at a motor winding temperature of 100˚C during operation in combination with a SERVOPACK. The others are at 20˚C.

2 The above specifications show the values under the cooling condition when a heat sink (aluminium board) listed in the following table is mounted on the moving coil.

Heat Sink Size	
200 mm × 300 mm × 12 mm : SGLGW-40A140C, **-60A140C**	
300 mm × 400 mm × 12 mm : SGLGW-40A253C, **-60A253C**	
400 mm × 500 mm × 12 mm : SGLGW-40A365C, **-60A365C**	

Ratings and Specifications

●Force and Speed Characteristics A : Continuous Duty Zone B : Intermittent Duty Zone



Note: When the effective force during intermittent duty is within the rated force, the servomotor can be used within the intermittent duty zone.

●Mechanical Specifications

(1) Impact Resistance

· Impact acceleration: 196 m/s^2

· Impact occurrences: twice

(2) Vibration Resistance

The linear servomotors will withstand the following vibration acceleration in three directions: Vertical, side to side, and front to back.

· Vibration acceleration: 49 m/s^2