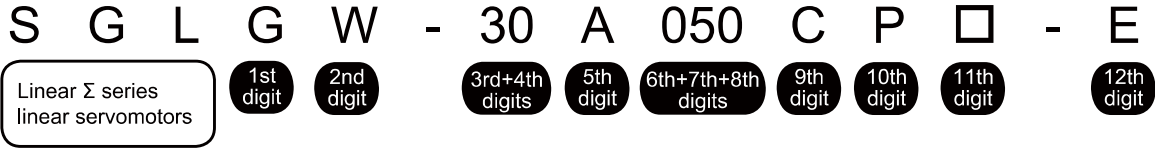


SGLG Servomotors

Model Designations

Moving Coil



1st digit Servomotor Type

Code	Specification
G	Coreless model

2nd digit Moving Coil/Magnetic Way

Code	Specification
W	Moving coil

3rd+4th digits Magnet Height

Code	Specification
30	30 mm
40	40 mm
60	60 mm
90	86 mm

5th digit Power Supply Voltage

Code	Specification
A	200 VAC

6th+7th+8th digits Length of Moving Coil

Code	Specification
050	50 mm
080	80 mm
140	140 mm
200	199 mm
253	252.5 mm
365	365 mm
370	367 mm
535	535 mm

9th digit Design Revision Order

A, B...

10th digit Sensor Specification and Cooling Method

Code	Specifications		Applicable Models
	Polarity Sensor (Hall Sensor)	Cooling Method	
None	None	Self-cooled	All models
C	None	Air-cooled	SGLGW
H	Yes	Air-cooled	-40A, -60A, -90A
P	Yes	Self-cooled	All models

11th digit Connector for Servomotor Main Circuit Cable

Code	Specification	Applicable Models
None	Connector from Tyco Electronics Japan G.K.	All models
D	Connector from Interconnectron GmbH	SGLGW -30A, -40A, -60A

12th digit EU Directive Certification

Code	Specification
E	Certified
None	Not certified

Note:

This information is provided to explain model numbers. It is not meant to imply that models are available for all combinations of codes.

Magnetic Way



1st digit Servomotor Type
(Same as for the moving coil.)

2nd digit Moving Coil/Magnetic Way

Code	Specification
M	Magnetic way

3rd+4th digits Magnet Height
(Same as for the moving coil.)

5th+6th+7th digits Length of Magnetic Way

Code	Specification
090	90 mm
108	108 mm
216	216 mm
225	225 mm
252	252 mm
360	360 mm
405	405 mm
432	432 mm
450	450 mm
504	504 mm

9th digit Options

Code	Specification	Applicable Models
None	Standard-force	All models
-M	High-force	SGLGM-40, -60

8th digit Design Revision Order

A, B, C*...

*1 The SGLGM-40 and SGLGM-60 also have a "CT" code.

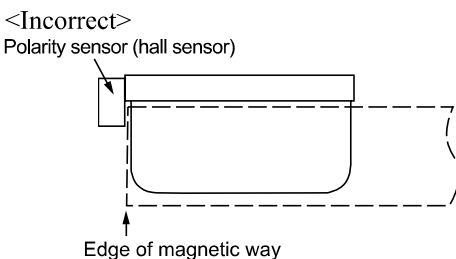
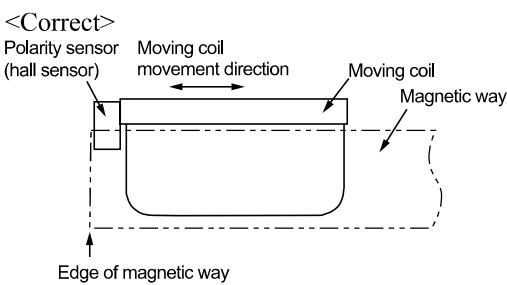
- C = Without mounting holes on the bottom
- CT = With mounting holes on the bottom

Note:

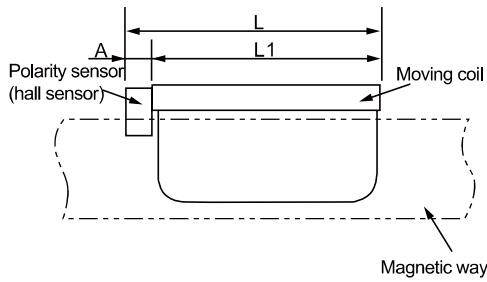
This information is provided to explain model numbers. It is not meant to imply that models are available for all combinations of codes.

Precautions on Moving Coils with Polarity Sensors (Hall Sensors)

When you use a moving coil with a polarity sensor (hall sensor), the magnetic way must cover the bottom of the polarity sensor (hall sensor). Refer to the example that shows the correct installation. When determining the length of the moving coil's stroke or the length of the magnetic way, consider the total length (L) of the moving coil and the polarity sensor (hall sensor). Refer to the following table.



■ Total Length of Moving Coil with Polarity Sensor (Hall Sensor)



Moving Coil Model SGLGW-	Length of Moving Coil L1 [mm]	Length of Polarity Sensor (Hall Sensor) A [mm]	Total Length L [mm]	
30A050□P□	50	0	50	
30A080□P□	80	(Included in the length of moving coil.)	80	
40A140□H□ 40A140□P□	140	16	156	
40A253□H□ 40A253□P□	252.5		268.5	
40A365□H□ 40A365□P□	365		381	
60A140□H□ 60A140□P□	140	16	156	
60A253□H□ 60A253□P□	252.5		268.5	
60A365□H□ 60A365□P□	365		381	
90A200□H□ 90A200□P□	199	0	199	
90A370□H□ 90A370□P□	367		(Included in the length of moving coil.)	367
90A535□H□ 90A535□P□	535		535	

Ratings and Specifications

Specifications: With Standard-Force Magnetic Way

Linear Servomotor Moving Coil Model SGLGW-	30A		40A			60A			90A		
	050C	080C	140C	253C	365C	140C	253C	365C	200C	370C	535C
Time Rating	Continuous										
Thermal Class	B										
Insulation Resistance	500 VDC, 10 MΩ min.										
Withstand Voltage	1500 VAC for 1 minute										
Excitation	Permanent magnet										

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Linear Servomotor Moving Coil Model SGLGW-		30A		40A			60A			90A		
		050C	080C	140C	253C	365C	140C	253C	365C	200C	370C	535C
Cooling Method		Self-cooled or air-cooled (Only self-cooled models are available for the SGLGW-30A.)										
Protective Structure		IP00										
Environmental Conditions	Surrounding Air Temperature	0°C to 40°C (with no freezing)										
	Surrounding Air Humidity	20% to 80% relative humidity (with no condensation)										
	Installation Site	Must be indoors and free of corrosive and explosive gases. Must be well-ventilated and free of dust and moisture. Must facilitate inspection and cleaning. Must have an altitude of 1000 m or less. Must be free of strong magnetic fields.										
Shock Resistance	Impact Acceleration Rate	196 m/s ²										
	Number of Impacts	2 times										
Vibration Resistance	Vibration Acceleration Rate	49 m/s ² (the vibration resistance in three directions, vertical, side-to-side, and front-to-back)										

Ratings: With Standard-Force Magnetic Way

Linear Servomotors Moving Coil Model SGLGW-		30A		40A			60A			90A		
		050C	080C	140C	253C	365C	140C	253C	365C	200C	370C	535C
Rated Motor Speed (Reference Speed during Speed Control) <i>*1</i>	m/s	1.5	1.5	2.0	2.0	2.0	2.3	2.3	2.3	1.8	1.5	1.5
Maximum Speed <i>*1</i>	m/s	5.0	5.0	5.0	5.0	5.0	4.8	4.8	4.8	4.0	4.0	4.0
Rated Force <i>*1, *2</i>	N	12.5	25	47	93	140	70	140	210	325	550	750
Maximum Force <i>*1</i>	N	40	80	140	280	420	220	440	660	1300	2200	3000
Rated Current <i>*1</i>	Arms	0.51	0.79	0.80	1.6	2.4	1.2	2.2	3.3	4.4	7.5	10.2
Maximum Current <i>*1</i>	Arms	1.6	2.5	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	1.1	2.2	3.6	4.9
Force Constant	N/Arms	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 _{rms} /(m/s)/phase	8.80	11.3	20.5	20.5	20.5	22.2	22.2	22.2	26.0	26.0	26.0
Motor Constant	N/√W	3.66	5.63	7.79	11.0	13.5	11.1	15.7	19.2	26.0	36.8	45.0
Electrical Time Constant	ms	0.19	0.41	0.43	0.43	0.43	0.45	0.45	0.45	1.4	1.4	1.4
Mechanical Time Constant	ms	7.5	4.7	5.6	5.0	4.8	3.4	3.1	3.0	3.3	2.7	2.4
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

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Linear Servomotors Moving Coil Model SGLGW-		30A		40A			60A			90A		
		050C	080C	140C	253C	365C	140C	253C	365C	200C	370C	535C
Maximum Allowable Payload	kg	1.7	3.4	5.9	12	18	9.9	19	48	110	190	260
Maximum Allowable Payload (With External Regenerative Resistor)	kg	1.7	3.4	5.9	12	18	9.9	19	48	110	190	260
Combined Magnetic Way, SGLGM-		30□□□A		40□□□C□			60□□□C□			90□□□A		
Combined Serial Converter Unit, JZDP-□□□□-		250	251	252	253	254	258	259	260	264	265	266
Applicable SERVOPACKs	SGDXS-	R70A	R90A	1R6A	2R8A	1R6A	2R8A	5R5A	120A	180A	200A	
	SGDXW-	1R6A			2R8A	1R6A	2R8A	5R5A	-			

*1 These values are for operation in combination with a SERVOPACK when the temperature of the armature winding is 100°C. The values for other items are at 20°C. These are typical values.

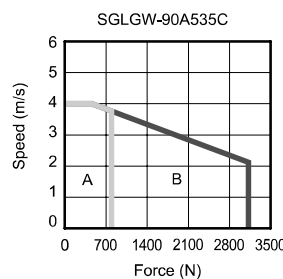
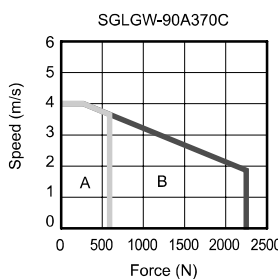
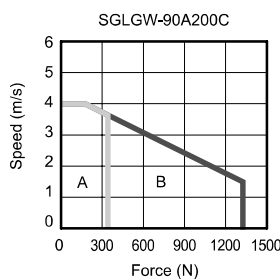
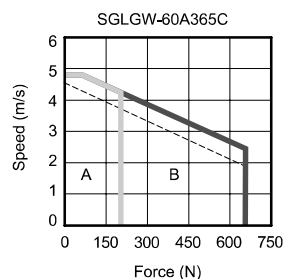
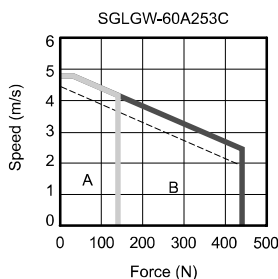
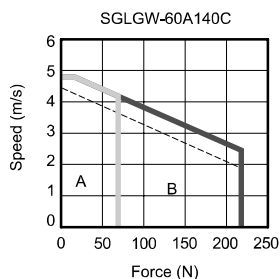
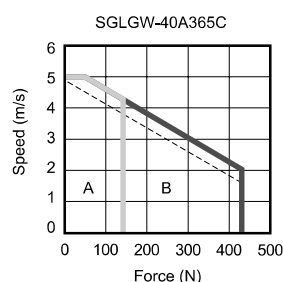
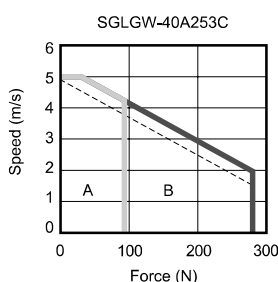
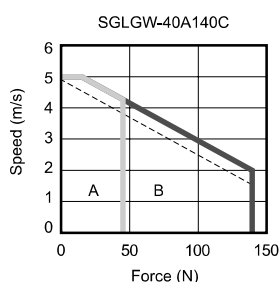
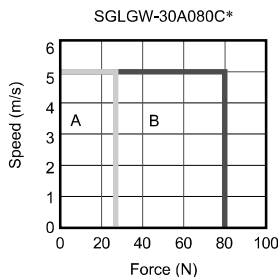
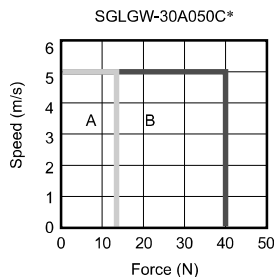
*2 The rated forces are the continuous allowable force values at a surrounding air temperature of 40°C with an aluminum heat sink of the dimensions given in the following table.

Heat Sink Dimensions

- 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

Force-Motor Speed Characteristics

- A** : Continuous duty zone ——— (solid lines): With three-phase 200-V input
B : Intermittent duty zone - - - - - (dotted lines): With single-phase 200-V input



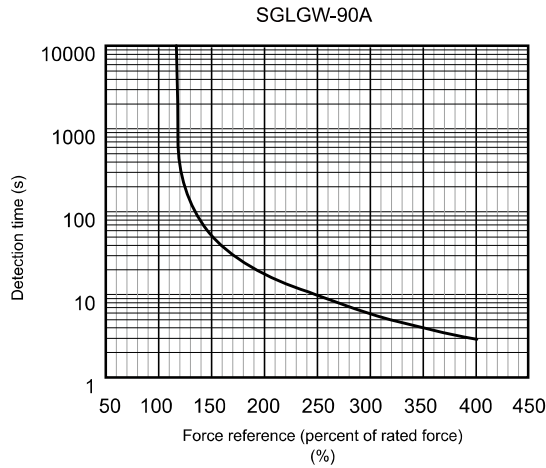
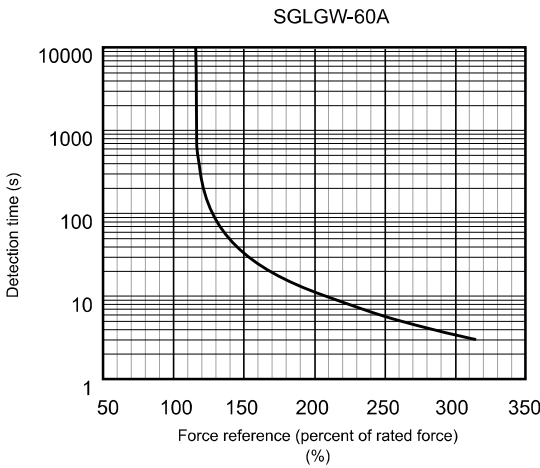
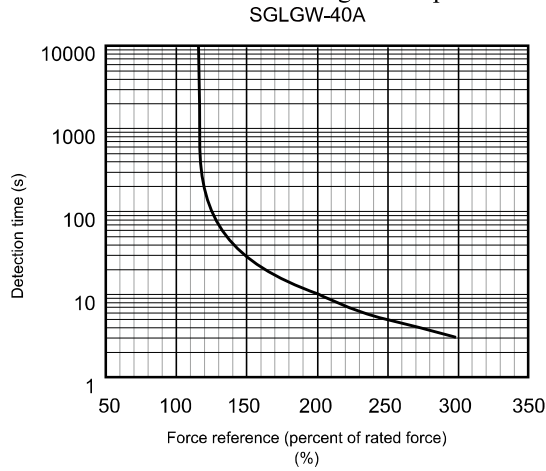
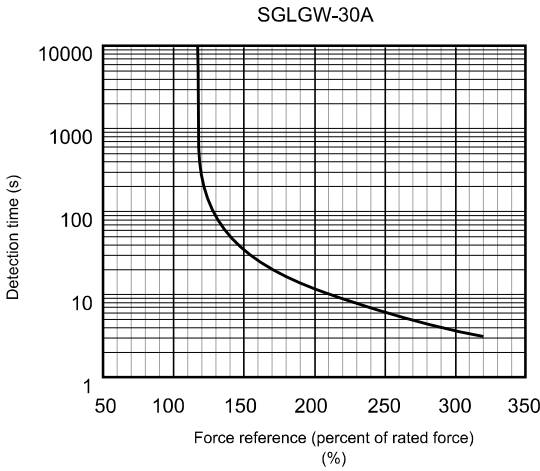
*1 The characteristics are the same for three-phase 200 V and single-phase 200 V.

Note:

1. These values are for operation in combination with a SERVOPACK when the temperature of the armature winding is 100°C. These are typical values.
2. The characteristics in the intermittent duty zone depend on the power supply voltage.
3. If the effective force is within the allowable range for the rated force, the servomotor can be used within the intermittent duty zone.
4. If you use a servomotor main circuit cable that exceeds 20 m, the intermittent duty zone in the torque-motor speed characteristics will become smaller because the voltage drop increases.

Servomotor Overload Protection Characteristics

The overload detection level is set for hot start conditions with a servomotor surrounding air temperature of 40°C.



Note:

The above overload protection characteristics do not mean that you can perform continuous duty operation with an output of 100% or higher. Use the servomotor so that the effective force remains within the continuous duty zone given in [Force-Motor Speed Characteristics on page 303](#).

Specifications: With High-Force Magnetic Way

Linear Servomotor Moving Coil Model SGLGW-	40A			60A		
	140C	253C	365C	140C	253C	365C
Time Rating	Continuous					
Thermal Class	B					
Insulation Resistance	500 VDC, 10 MΩ min.					
Withstand Voltage	1,500 VAC for 1 minute					
Excitation	Permanent magnet					
Cooling Method	Self-cooled or air-cooled					
Protective Structure	IP00					

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Linear Servomotor Moving Coil Model SGLGW-		40A			60A		
		140C	253C	365C	140C	253C	365C
Environmental Conditions	Surrounding Air Temperature	0°C to 40°C (with no freezing)					
	Surrounding Air Humidity	20% to 80% relative humidity (with no condensation)					
	Installation Site	Must be indoors and free of corrosive and explosive gases. Must be well-ventilated and free of dust and moisture. Must facilitate inspection and cleaning. Must have an altitude of 1,000 m or less. Must be free of strong magnetic fields.					
Shock Resistance	Impact Acceleration Rate	196 m/s ²					
	Number of Impacts	2 times					
Vibration Resistance	Vibration Acceleration Rate	49 m/s ² (the vibration resistance in three directions, vertical, side-to-side, and front-to-back)					

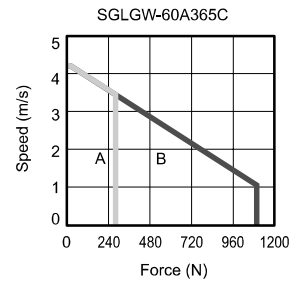
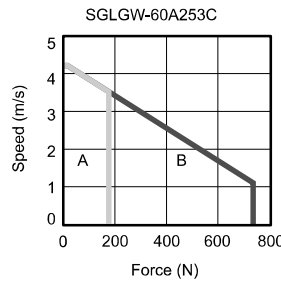
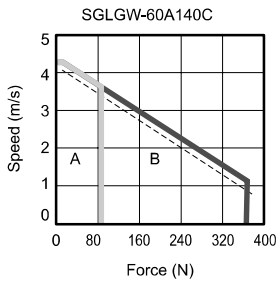
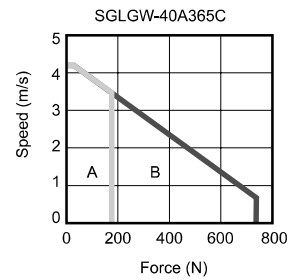
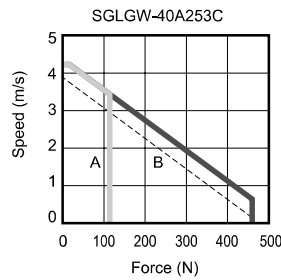
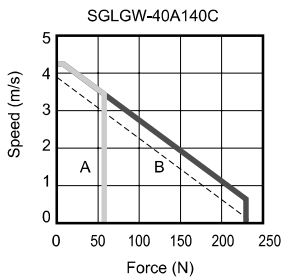
Ratings: With High-Force Magnetic Way

Linear Servomotor Moving Coil Model SGLGW-		40A			60A		
		140C	253C	365C	140C	253C	365C
Rated Motor Speed (Reference Speed during Speed Control) ^{*1}	m/s	1.0	1.0	1.0	1.0	1.0	1.0
Maximum Speed ^{*1}	m/s	4.2	4.2	4.2	4.2	4.2	4.2
Rated Force ^{*1} , ^{*2}	N	57	114	171	85	170	255
Maximum Force ^{*1}	N	230	460	690	360	720	1080
Rated Current ^{*1}	Arms	0.80	1.6	2.4	1.2	2.2	3.3
Maximum Current ^{*1}	Arms	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	1.1
Force Constant	N/Arms	76.0	76.0	76.0	77.4	77.4	77.4
BEMF Constant	V _{rms} / (m/s)/phase	25.3	25.3	25.3	25.8	25.8	25.8
Motor Constant	N/ \sqrt{W}	9.62	13.6	16.7	12.9	18.2	22.3
Electrical Time Constant	ms	0.43	0.43	0.43	0.45	0.45	0.45
Mechanical Time Constant	ms	3.7	3.2	3.1	2.5	2.3	2.2
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
Maximum Allowable Payload	kg	12	24	58	18	61	91
Maximum Allowable Payload (With External Regenerative Resistor)	kg	12	24	58	18	61	91
Combined Magnetic Way, SGLGM-		40□□□C□-M			60□□□C□-M		
Combined Serial Converter Unit JZDP-□□□□-		255	256	257	261	262	263
Applicable SERVOPACKs	SGDXS-	1R6A	2R8A	3R8A	1R6A	3R8A	7R6A
	SGDXW-	1R6A	2R8A	5R5A	1R6A	5R5A	7R6A

- *1 These values are for operation in combination with a SERVOPACK when the temperature of the armature winding is 100°C. The values for other items are at 20°C. These are typical values.
- *2 The rated forces are the continuous allowable force values at a surrounding air temperature of 40°C with an aluminum heat sink of the dimensions given in the following table.
< Heat Sink Dimensions >
 - 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

Force-Motor Speed Characteristics

- A** : Continuous duty zone ——— (solid lines): With three-phase 200-V input
- B** : Intermittent duty zone - - - - - (dotted lines): With single-phase 200-V input



Note:

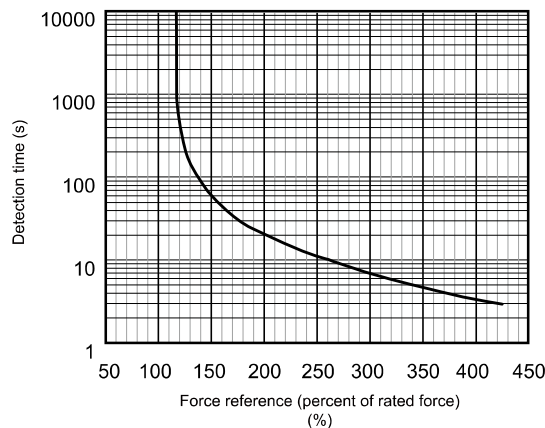
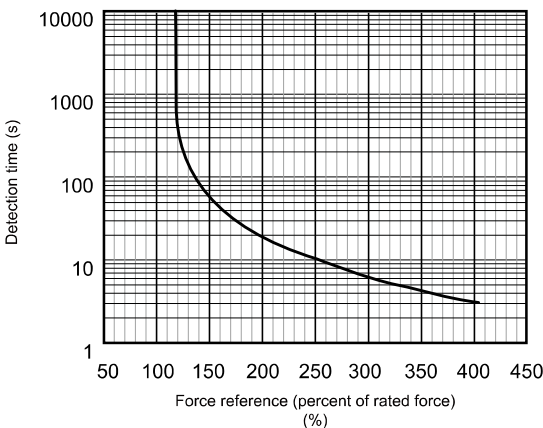
1. These values are for operation in combination with a SERVOPACK when the temperature of the armature winding is 100°C. These are typical values.
2. The characteristics in the intermittent duty zone depend on the power supply voltage.
3. If the effective force is within the allowable range for the rated force, the servomotor can be used within the intermittent duty zone.
4. If you use a servomotor main circuit cable that exceeds 20 m, the intermittent duty zone in the torque-motor speed characteristics will become smaller because the voltage drop increases.

Servomotor Overload Protection Characteristics

The overload detection level is set for hot start conditions with a servomotor surrounding air temperature of 40°C.

SGLGW-40A with High-Force Magnetic Way

SGLGW-60A with High-Force Magnetic Way



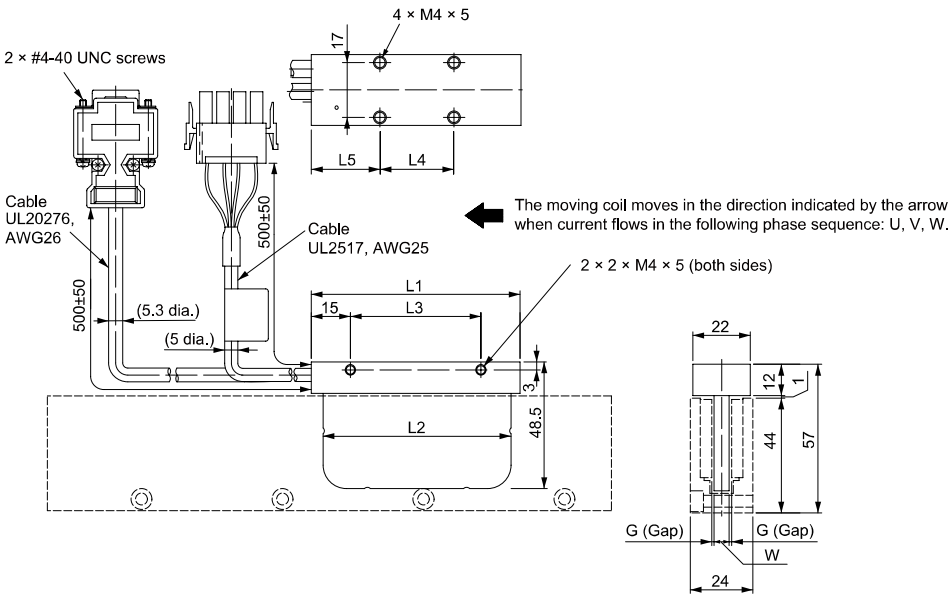
Note:

The above overload protection characteristics do not mean that you can perform continuous duty operation with an output of 100% or higher. Use the servomotor so that the effective force remains within the continuous duty zone given in *Force-Motor Speed Characteristics on page 306*.

External Dimensions

SGLGW-30

■ Moving Coils: SGLGW-30A□□□C□

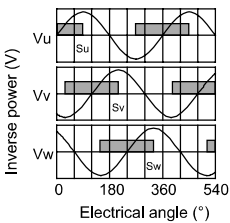


Moving Coil Model SGLGW-	L1	L2	L3	L4	L5	W	G (Gap)	Approx. Mass *1 [kg]
30A050C□	50	48	30	20	20	5.9	0.85	0.14
30A080C□	80	72	50	30	25	5.7	0.95	0.19

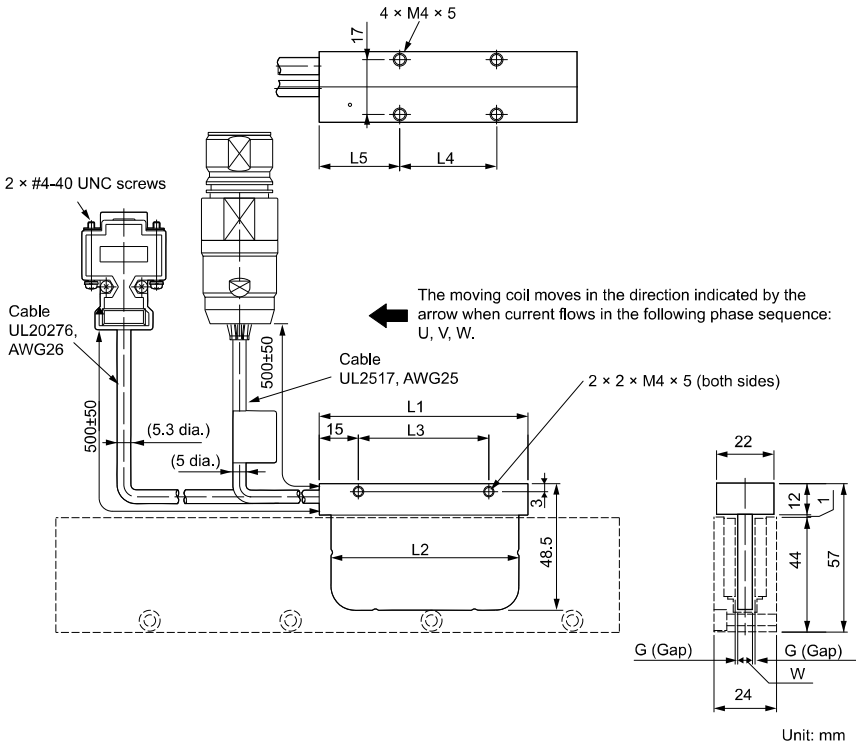
*1 The mass is for a moving coil with a polarity sensor (hall sensor).

◆ Polarity Sensor (Hall Sensor) Output Signal

The figure on the right shows the relationship between the Su, Sv, and Sw polarity sensor (hall sensor) output signals and the inverse power of each motor phase Vu, Vv, and Vw when the moving coil moves in the direction indicated by the arrow in the dimensional drawings of the moving coil.



■ Moving Coils: SGLGW-30A□□□C□D

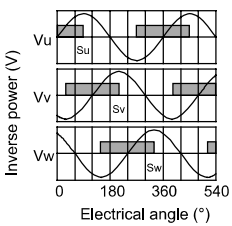


Moving Coil Model SGLGW-	L1	L2	L3	L4	L5	W	G (Gap)	Approx. Mass *1 [kg]
30A050C□D	50	48	30	20	20	5.9	0.85	0.14
30A080C□D	80	72	50	30	25	5.7	0.95	0.19

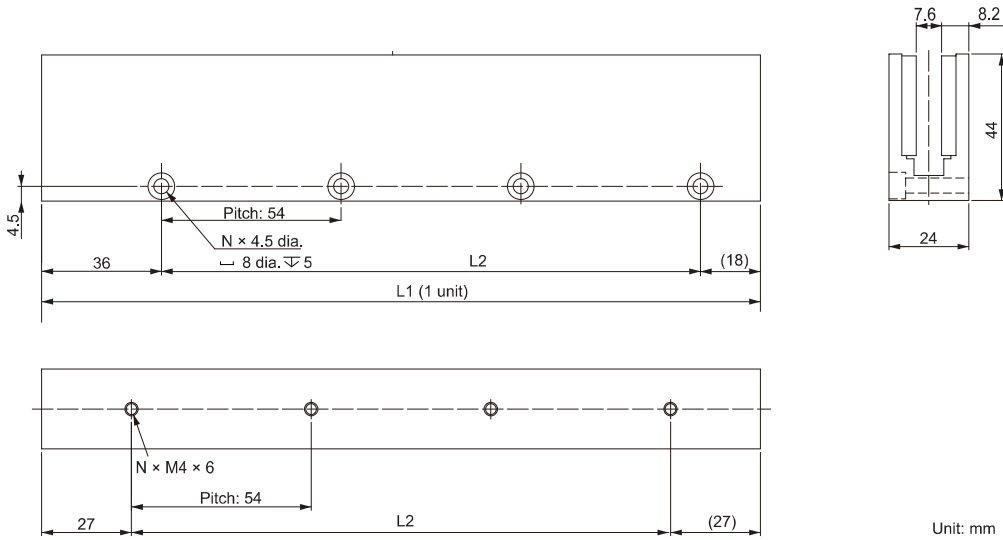
*1 The mass is for a moving coil with a polarity sensor (hall sensor).

◆ Polarity Sensor (Hall Sensor) Output Signal

The figure on the right shows the relationship between the Su, Sv, and Sw polarity sensor (hall sensor) output signals and the inverse power of each motor phase Vu, Vv, and Vw when the moving coil moves in the direction indicated by the arrow in the dimensional drawings of the moving coil.



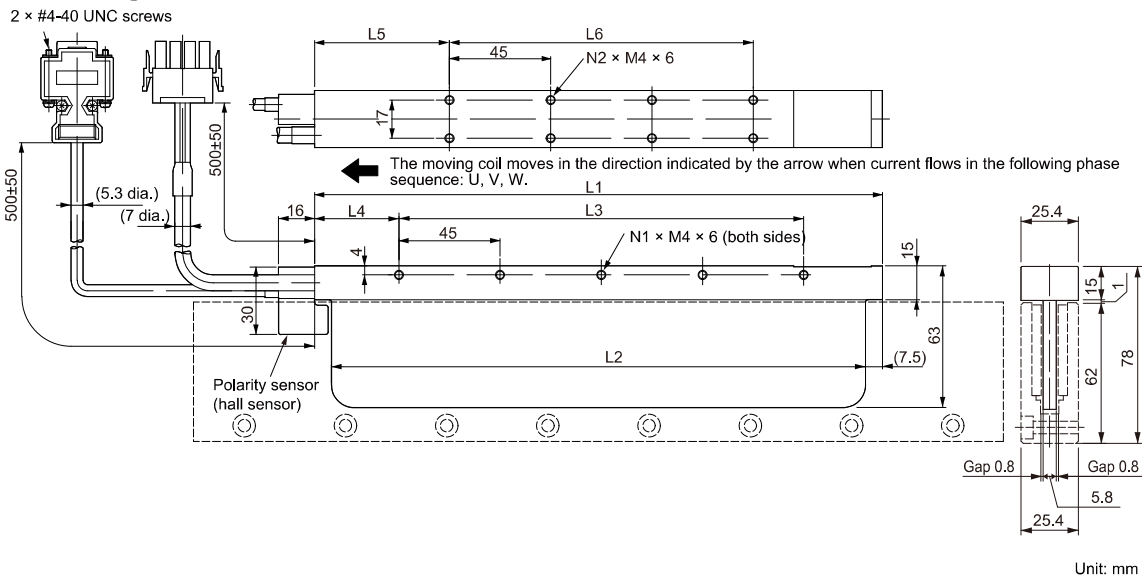
■ Standard-Force Magnetic Ways: SGLGM-30□□□A



Magnetic Way Model SGLGM -	L1	L2	N	Approx. Mass [kg]
30108A	108 ^{-0.1} _{-0.3}	54	2	0.6
30216A	216 ^{-0.1} _{-0.3}	162	4	1.1
30432A	432 ^{-0.1} _{-0.3}	378	8	2.3

SGLGW-40

■ Moving Coils: SGLGW-40A□□□C□

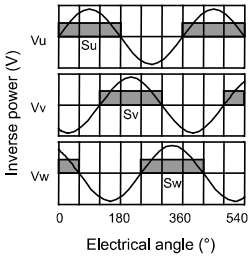


Moving Coil Model SGLGW-	L1	L2	L3	L4	L5	L6	N1	N2	Approx. Mass *1 [kg]
40A140C□	140	125	90	30	52.5	45	3	4	0.40
40A253C□	252.5	237.5	180	37.5	60	135	5	8	0.66
40A365C□	365	350	315	30	52.5	270	8	14	0.93

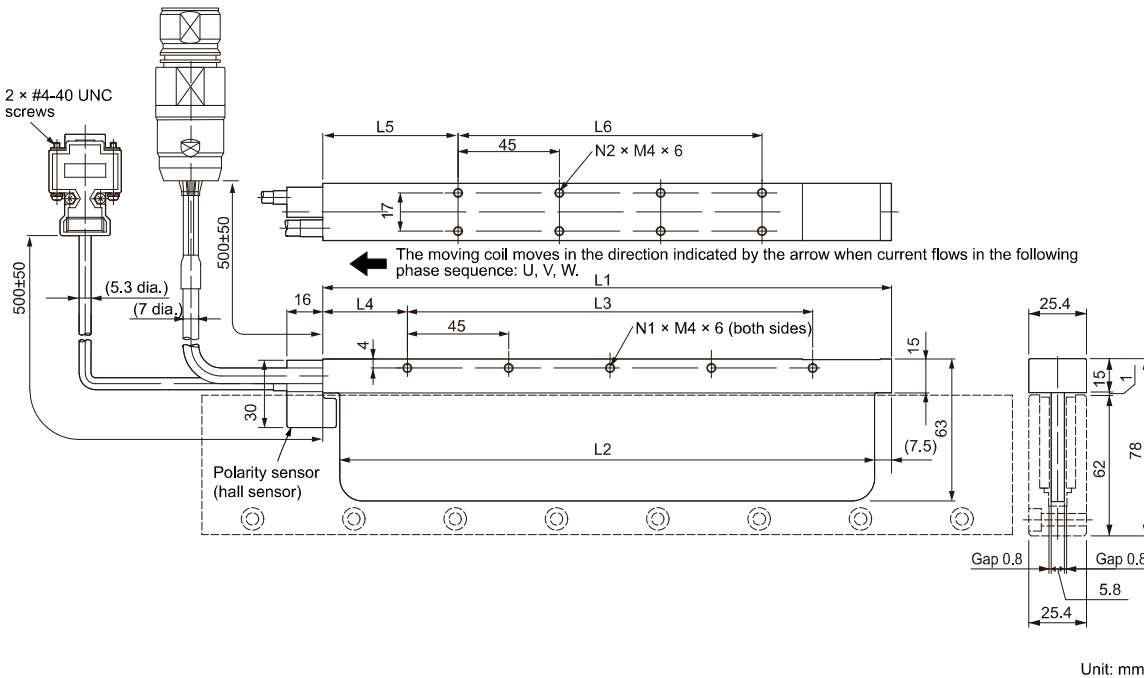
*1 The mass is for a moving coil with a polarity sensor (hall sensor).

◆ Polarity Sensor (Hall Sensor) Output Signal

The figure on the right shows the relationship between the Su, Sv, and Sw polarity sensor (hall sensor) output signals and the inverse power of each motor phase Vu, Vv, and Vw when the moving coil moves in the direction indicated by the arrow in the dimensional drawings of the moving coil.



■ Moving Coils: SGLGW-40A□□□C□D

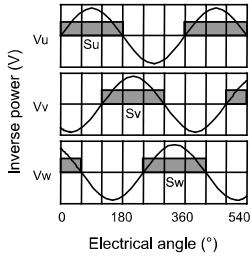


Moving Coil Model SGLGW-	L1	L2	L3	L4	L5	L6	N1	N2	Approx. Mass *1 [kg]
40A140C□D	140	125	90	30	52.5	45	3	4	0.40
40A253C□D	252.5	237.5	180	37.5	60	135	5	8	0.66
40A365C□D	365	350	315	30	52.5	270	8	14	0.93

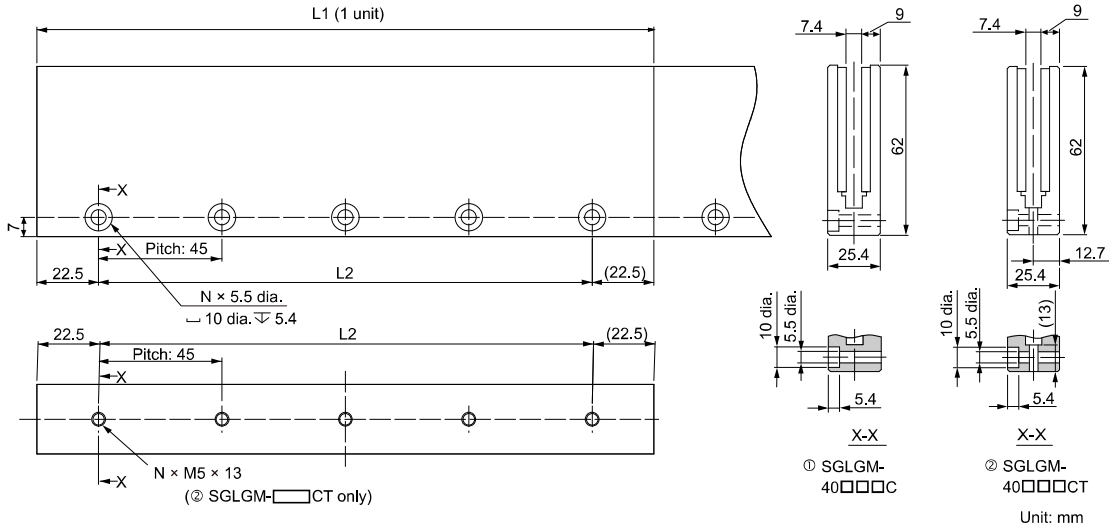
*1 The mass is for a moving coil with a polarity sensor (hall sensor).

◆ Polarity Sensor (Hall Sensor) Output Signal

The figure on the right shows the relationship between the Su, Sv, and Sw polarity sensor (hall sensor) output signals and the inverse power of each motor phase Vu, Vv, and Vw when the moving coil moves in the direction indicated by the arrow in the dimensional drawings of the moving coil.

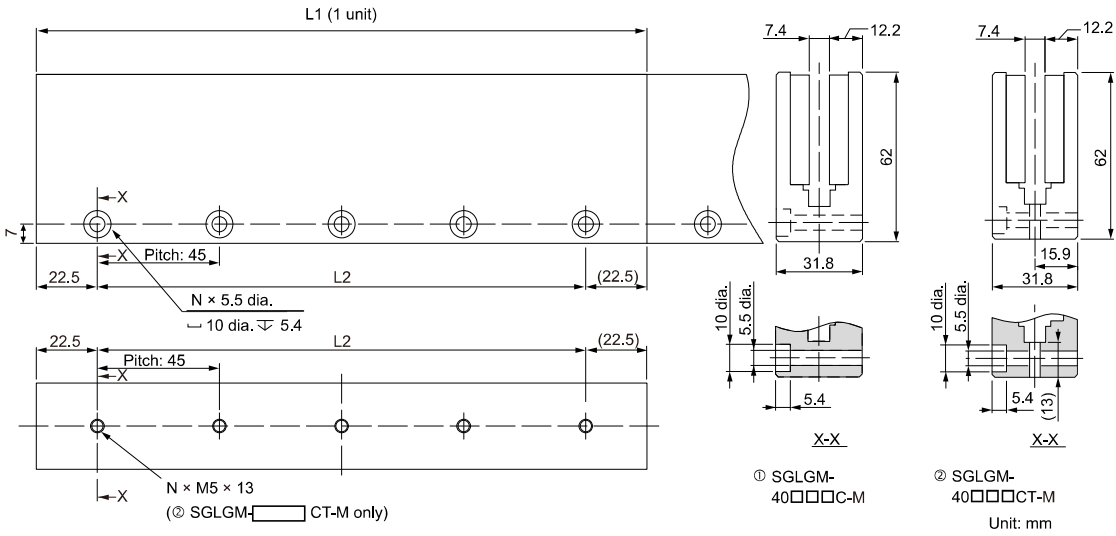


■ **Standard-Force Magnetic Ways: SGLGM-40□□□C(without Mounting Holes on the Bottom)**
SGLGM-40□□□CT(with Mounting Holes on the Bottom)



Type	Magnetic Way Model SGLGM-	L1	L2	N	Approx. Mass [kg]
Standard-Force	40090C or 40090CT	90 ^{-0.1} _{-0.3}	45	2	0.8
	40225C or 40225CT	225 ^{-0.1} _{-0.3}	180	5	2.0
	40360C or 40360CT	360 ^{-0.1} _{-0.3}	315	8	3.1
	40405C or 40405CT	405 ^{-0.1} _{-0.3}	360	9	3.5
	40450C or 40450CT	450 ^{-0.1} _{-0.3}	405	10	3.9

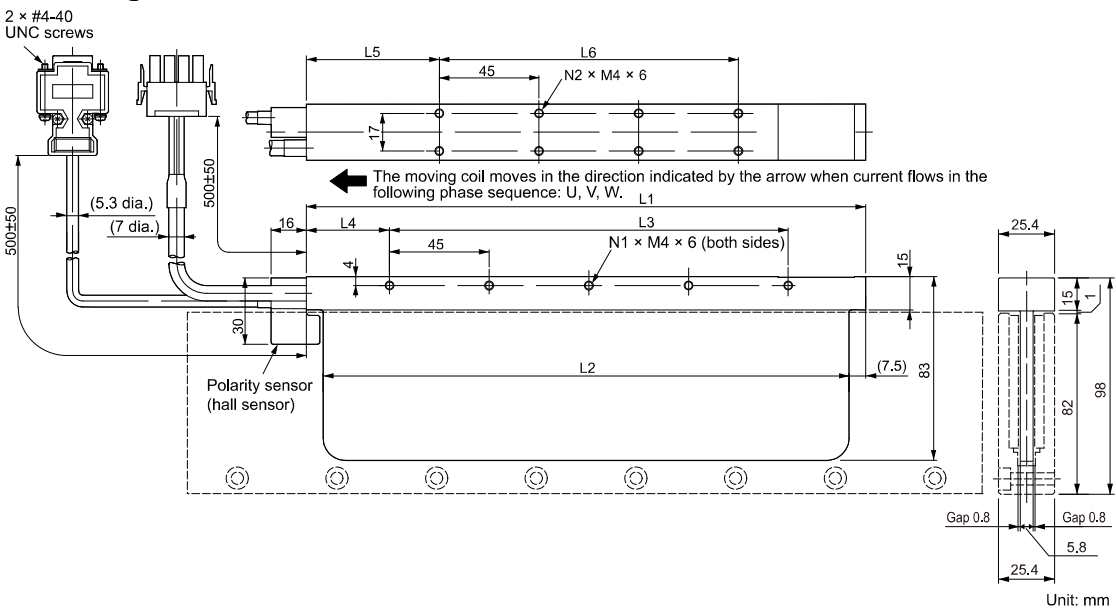
■ High-Force Magnetic Ways: SGLGM-40□□□C-M (without Mounting Holes on the Bottom)
SGLGM-40□□□CT-M (with Mounting Holes on the Bottom)



Type	Magnetic Way Model SGLGM-	L1	L2	N	Approx. Mass [kg]
High-Force	40090C-M or 40090CT-M	90 ^{-0.1} _{-0.3}	45	2	1.0
	40225C-M or 40225CT-M	225 ^{-0.1} _{-0.3}	180	5	2.6
	40360C-M or 40360CT-M	360 ^{-0.1} _{-0.3}	315	8	4.1
	40405C-M or 40405CT-M	405 ^{-0.1} _{-0.3}	360	9	4.6
	40450C-M or 40450CT-M	450 ^{-0.1} _{-0.3}	405	10	5.1

SGLGW-60

■ Moving Coils: SGLGW-60A□□□C□

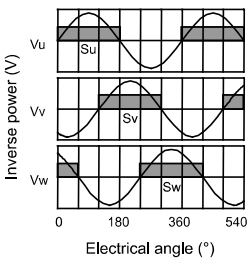


Moving Coil Model SGLGW-	L1	L2	L3	L4	L5	L6	N1	N2	Approx. Mass ^{*1} [kg]
60A140C□	140	125	90	30	52.5	45	3	4	0.48
60A253C□	252.5	237.5	180	37.5	60	135	5	8	0.82
60A365C□	365	350	315	30	52.5	270	8	14	1.16

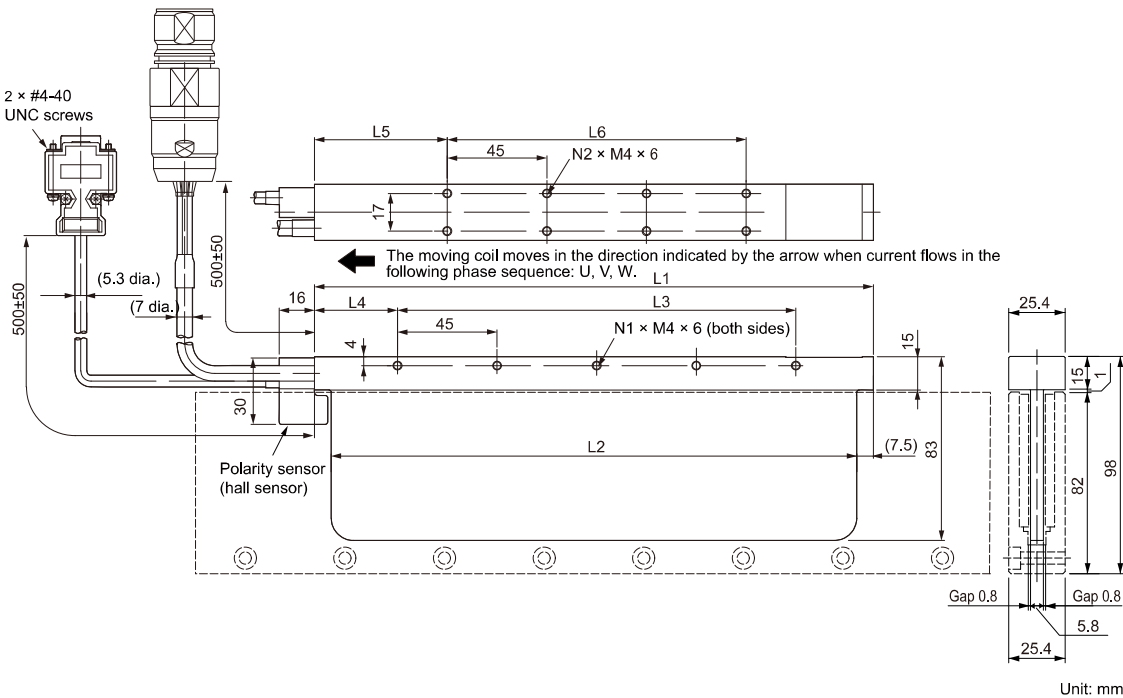
*1 The mass is for a moving coil with a polarity sensor (hall sensor).

◆ Polarity Sensor (Hall Sensor) Output Signal

The figure on the right shows the relationship between the Su, Sv, and Sw polarity sensor (hall sensor) output signals and the inverse power of each motor phase Vu, Vv, and Vw when the moving coil moves in the direction indicated by the arrow in the dimensional drawings of the moving coil.



■ Moving Coils: SGLGW-60A□□□C□D

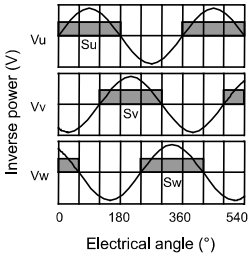


Moving Coil Model SGLGW-	L1	L2	L3	L4	L5	L6	N1	N2	Approx. Mass ^{*1} [kg]
60A140C□D	140	125	90	30	52.5	45	3	4	0.48
60A253C□D	252.5	237.5	180	37.5	60	135	5	8	0.82
60A365C□D	365	350	315	30	52.5	270	8	14	1.16

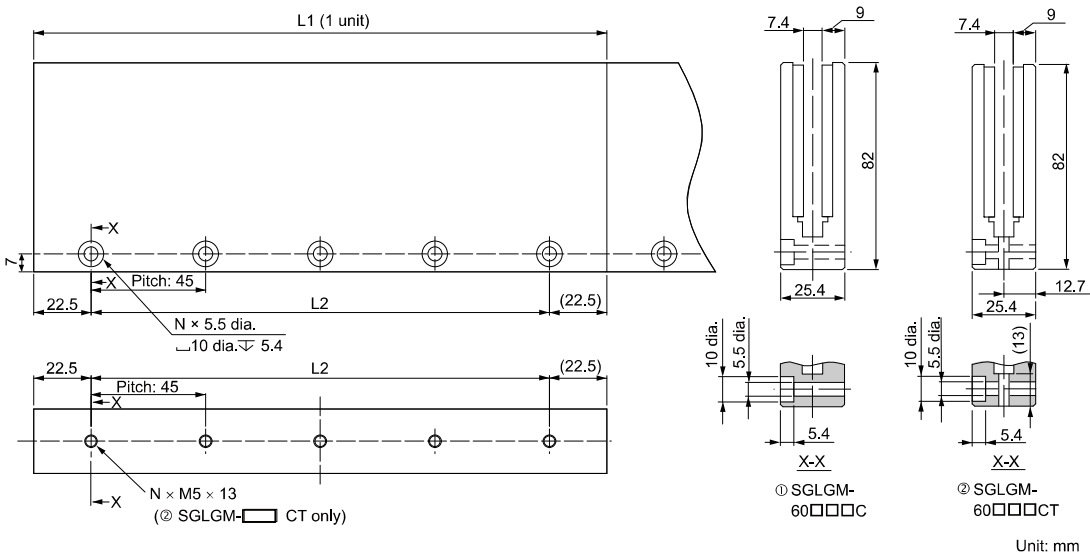
*1 The mass is for a moving coil with a polarity sensor (hall sensor).

◆ Polarity Sensor (Hall Sensor) Output Signal

The figure on the right shows the relationship between the Su, Sv, and Sw polarity sensor (hall sensor) output signals and the inverse power of each motor phase Vu, Vv, and Vw when the moving coil moves in the direction indicated by the arrow in the dimensional drawings of the moving coil.



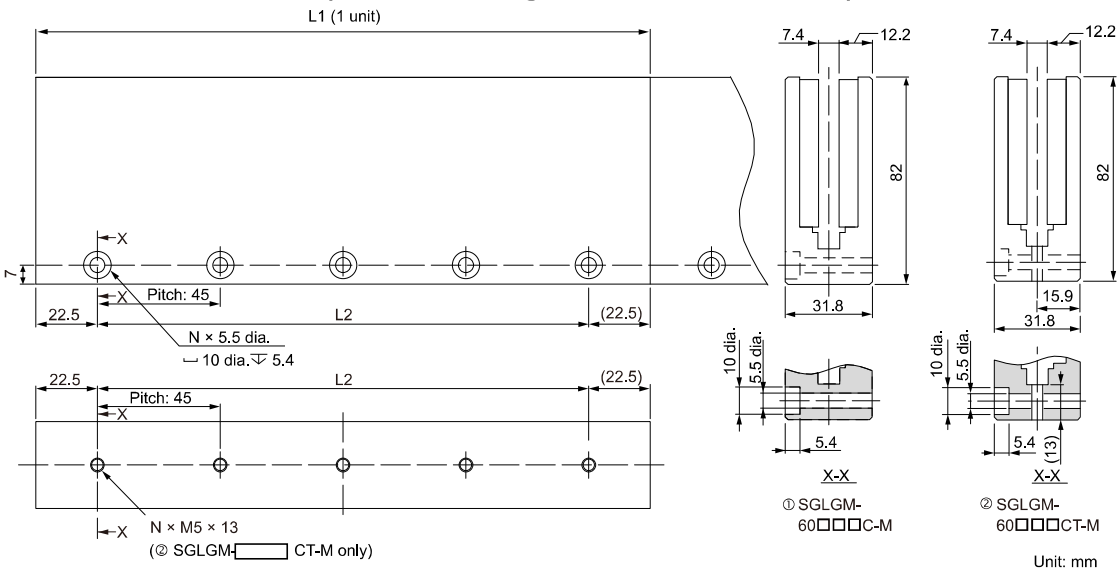
■ Standard-Force Magnetic Ways: SGLGM-60□□□C(without Mounting Holes on the Bottom) SGLGM-60□□□CT(with Mounting Holes on the Bottom)



Unit: mm

Type	Magnetic Way Model SGLGM-	L1	L2	N	Approx. Mass [kg]
Standard-Force	60090C or 60090CT	90 ^{-0.1} _{-0.3}	45	2	1.1
	60225C or 60225CT	225 ^{-0.1} _{-0.3}	180	5	2.6
	60360C or 60360CT	360 ^{-0.1} _{-0.3}	315	8	4.1
	60405C or 60405CT	405 ^{-0.1} _{-0.3}	360	9	4.6
	60450C or 60450CT	450 ^{-0.1} _{-0.3}	405	10	5.1

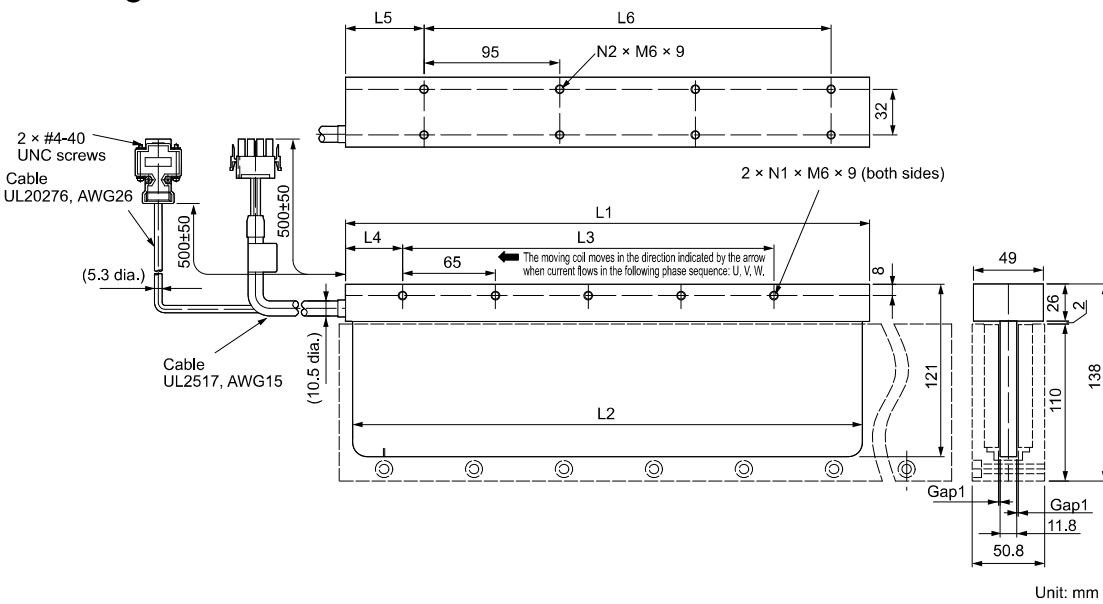
■ High-Force Magnetic Ways: SGLGM-60□□□C-M (without Mounting Holes on the Bottom)
SGLGM-60□□□CT-M (with Mounting Holes on the Bottom)



Type	Magnetic Way Model SGLGM-	L1	L2	N	Approx. Mass [kg]
High-Force	60090C-M or 60090CT-M	90 ^{-0.1} _{-0.3}	45	2	1.3
	60225C-M or 60225CT-M	225 ^{-0.1} _{-0.3}	180	5	3.3
	60360C-M or 60360CT-M	360 ^{-0.1} _{-0.3}	315	8	5.2
	60405C-M or 60405CT-M	405 ^{-0.1} _{-0.3}	360	9	5.9
	60450C-M or 60450CT-M	450 ^{-0.1} _{-0.3}	405	10	6.6

SGLGW-90

■ Moving Coils: SGLGW-90A□□□C□

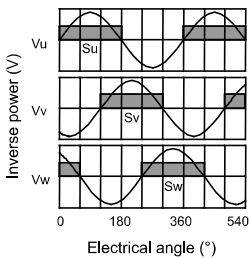


Moving Coil Model SGLGW-	L1	L2	L3	L4	L5	L6	N1	N2	Approx. Mass ^{*1} [kg]
90A200C□	199	189	130	40	60	95	3	4	2.2
90A370C□	367	357	260	40	55	285	5	8	3.65
90A535C□	535	525	455	40	60	380	8	10	4.95

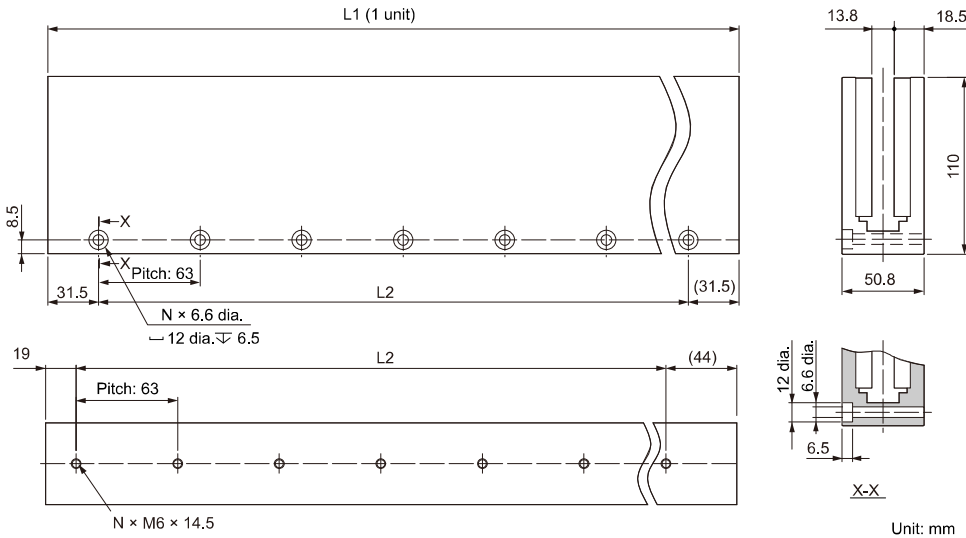
*1 The mass is for a moving coil with a polarity sensor (hall sensor).

◆ Polarity Sensor (Hall Sensor) Output Signal

The figure on the right shows the relationship between the Su, Sv, and Sw polarity sensor (hall sensor) output signals and the inverse power of each motor phase Vu, Vv, and Vw when the moving coil moves in the direction indicated by the arrow in the dimensional drawings of the moving coil.



■ Standard-Force Magnetic Ways: SGLGM-90□□□A



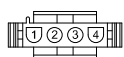
Magnetic Way Model SGLGM -	L1	L2	N	Approx. Mass [kg]
90252A	252 ^{-0.1} _{-0.3}	189	4	7.3
90504A	504 ^{-0.1} _{-0.3}	441	8	14.7

Connector Specifications

SGLGW-30

■ SGLGW-30A□□□C□

· Servomotor Connector



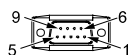
1	Phase U	Red	3	Phase W	Blue
2	Phase V	White	4	FG	Green

Plug: 350779-1
Pins: 350924-1 or 770672-1
From Tyco Electronics Japan G.K.

Mating Connector

Cap: 350780-1
Socket: 350925-1 or 770673-1

· Polarity Sensor (Hall Sensor) Connector



1	+5V (power supply)	6	Not used
2	Phase U	7	
3	Phase V	8	
4	Phase W	9	
5	0 V (power supply)	-	-

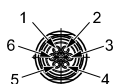
Pin connector: 17JE-23090-02 (D8C)-CG
From DDK Ltd.

Mating Connector

Socket connector: 17JE-13090-02 (D8C) A-CG
Studs: 17L-002C or 17L-002C1

■ SGLGW-30A□□□C□D

· Servomotor Connector



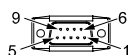
1	Phase U	Red	4	Not used	-
2	Phase V	White	5	Not used	-
3	Phase W	Blue	6	FG	Green

Extension: SROC06JM5CN169
Pins: 021.423.1020
From Interconnectron GmbH

Mating Connector

Plug: SPUC06KFSDN236
Socket: 020.030.1020

· Polarity Sensor (Hall Sensor) Connector



1	+5V (power supply)	6	Not used
2	Phase U	7	
3	Phase V	8	
4	Phase W	9	
5	0 V (power supply)	-	-

Pin connector: 17JE-23090-02 (D8C)-CG

From DDK Ltd.

Mating Connector

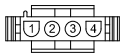
Socket connector: 17JE-13090-02 (D8C) A-CG

Studs: 17L-002C or 17L-002C1

SGLGW-40

■ SGLGW-40A□□□C□

· Servomotor Connector



1	Phase U	Red	3	Phase W	Blue
2	Phase V	White	4	FG	Green

Plug: 350779-1

Pins: 350561-3 or 350690-3 (No.1 to 3)

350654-1 or 350669-1 (No. 4)

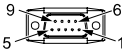
From Tyco Electronics Japan G.K.

Mating Connector

Cap: 350780-1

Socket: 350570-3 or 350689-3

· Polarity Sensor (Hall Sensor) Connector



1	+5V (power supply)	6	Not used
2	Phase U	7	
3	Phase V	8	
4	Phase W	9	
5	0 V (power supply)	-	-

Pin connector: 17JE-23090-02 (D8C)-CG

From DDK Ltd.

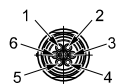
Mating Connector

Socket connector: 17JE-13090-02 (D8C) A-CG

Studs: 17L-002C or 17L-002C1

■ SGLGW-40A□□□C□D

· Servomotor Connector



1	Phase U	Red	4	Not used	-
2	Phase V	White	5	Not used	-
3	Phase W	Blue	6	FG	Green

Extension: SROC06JMSCN169

Pins: 021.423.1020

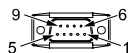
From Interconnectron GmbH

Mating Connector

Plug: SPUC06KFSDN236

Socket: 020.030.1020

· Polarity Sensor (Hall Sensor) Connector



1	+5V (power supply)	6	Not used
2	Phase U	7	
3	Phase V	8	
4	Phase W	9	
5	0 V (power supply)	-	-

Pin connector: 17JE-23090-02 (D8C)-CG

From DDK Ltd.

Mating Connector

Socket connector: 17JE-13090-02 (D8C) A-CG

Studs: 17L-002C or 17L-002C1

SGLGW-60

■ SGLGW-60A□□□C□

· Servomotor Connector



1	Phase U	Red	3	Phase W	Blue
2	Phase V	White	4	FG	Green

Plug: 350779-1

Pins: 350561-3 or 350690-3 (No.1 to 3)

350654-1 or 350669-1 (No. 4)

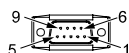
From Tyco Electronics Japan G.K.

Mating Connector

Cap: 350780-1

Socket: 350537-3 or 350689-3

· Polarity Sensor (Hall Sensor) Connector



1	+5V (power supply)	6	Not used
2	Phase U	7	
3	Phase V	8	
4	Phase W	9	
5	0 V (power supply)	-	-

Pin connector: 17JE-23090-02 (D8C)-CG

From DDK Ltd.

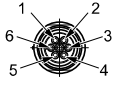
Mating Connector

Socket connector: 17JE-13090-02 (D8C) A-CG

Studs: 17L-002C or 17L-002C1

■ SGLGW-60A□□□C□D

· Servomotor Connector



1	Phase U	Red	4	Not used	-
2	Phase V	White	5	Not used	-
3	Phase W	Blue	6	FG	Green

Extension: SROC06JMSCN169

Pins: 021.423.1020

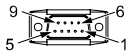
From Interconnectron GmbH

Mating Connector

Plug: SPUC06KFSDN236

Socket: 020.030.1020

· Polarity Sensor (Hall Sensor) Connector



1	+5V (power supply)	6	Not used
2	Phase U	7	
3	Phase V	8	
4	Phase W	9	
5	0 V (power supply)	-	-

Pin connector: 17JE-23090-02 (D8C)-CG

From DDK Ltd.

Mating Connector

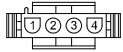
Socket connector: 17JE-13090-02 (D8C) A-CG

Studs: 17L-002C or 17L-002C1

SGLGW-90

■ SGLGW-90A□□□C□

· Servomotor Connector



1	Phase U	Red	3	Phase W	Blue
2	Phase V	White	4	FG	Green

Plug: 350779-1

Pins: 350218-3 or 350547-3 (No.1 to 3)

350654-1 or 350669-1 (No. 4)

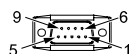
From Tyco Electronics Japan G.K.

Mating Connector

Cap: 350780-1

Socket: 350537-3 or 350550-3

· Polarity Sensor (Hall Sensor) Connector



1	+5 V (DC)	6	Not used
2	Phase U	7	
3	Phase V	8	
4	Phase W	9	
5	0 V (power supply)	-	

Pin connector: 17JE-23090-02 (D8C)-CG

From DDK Ltd.

Mating Connector

Socket connector: 17JE-13090-02 (D8C) A-CG

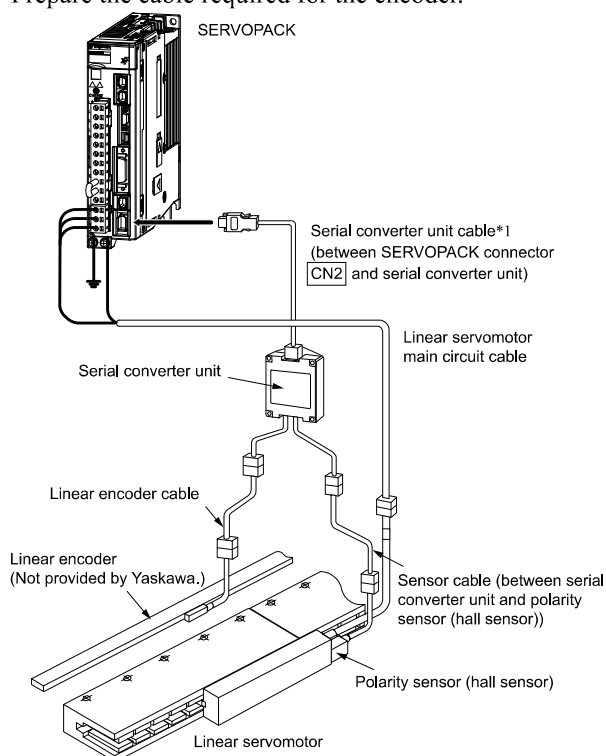
Studs: 17L-002C or 17L-002C1

Selecting Cables

Cable Configurations

Refer to [Recommended Linear Encoders on page 382](#) to select a linear encoder.

Prepare the cable required for the encoder.



*1 You can connect directly to an absolute linear encoder.

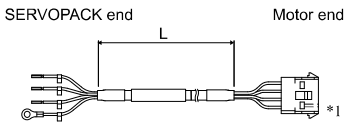
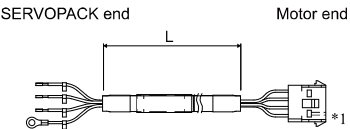
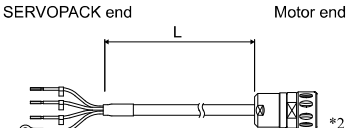
Note:

Refer to the following manual for the following information.

- Cable dimensional drawings and cable connection specifications
- Order numbers and specifications of individual connectors for cables
- Order numbers and specifications for wiring materials

Σ-X-Series AC Servo Drive Peripheral Device Selection Manual (Manual No.: SIEP C710812 12)

Linear Servomotor Main Circuit Cables

Linear Servomotor Model	Length (L)	Order Number	Appearance
SGLGW-30A, -40A, -60A	1 m	JZSP-CLN11-01-E	
	3 m	JZSP-CLN11-03-E	
	5 m	JZSP-CLN11-05-E	
	10 m	JZSP-CLN11-10-E	
	15 m	JZSP-CLN11-15-E	
	20 m	JZSP-CLN11-20-E	
SGLGW-90A	1 m	JZSP-CLN21-01-E	
	3 m	JZSP-CLN21-03-E	
	5 m	JZSP-CLN21-05-E	
	10 m	JZSP-CLN21-10-E	
	15 m	JZSP-CLN21-15-E	
	20 m	JZSP-CLN21-20-E	
SGLGW-30A□□□□□D, 40A□□□□□D, 60A□□□□□D	1 m	JZSP-CLN14-01-E	
	3 m	JZSP-CLN14-03-E	
	5 m	JZSP-CLN14-05-E	
	10 m	JZSP-CLN14-10-E	
	15 m	JZSP-CLN14-15-E	
	20 m	JZSP-CLN14-20-E	

*1 Connector from Tyco Electronics Japan G.K.

*2 Connector from Interconnectron GmbH