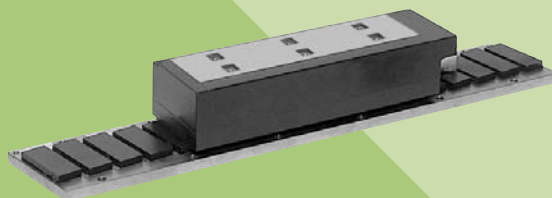


# Linear Servomotors

# SGLFW

(With F-type iron core)



## Model Designations

### ● Moving Coil

S G L F W - 20 A 090 A P □

Linear  $\Sigma$  Series Linear Servomotor

1st digit 2nd digit 3rd+4th digits 5th digit 6th+7th+8th digits 9th digit 10th digit 11th digit

#### 1st digit Servomotor Type

Code	Specifications
F	F-type iron core

#### 2nd digit Moving Coil/ Magnetic Way

Code	Specifications
W	Moving Coil

#### 3rd+4th digits Magnet Height

#### 5th digit Voltage

Code	Specifications
A	200 VAC
D	400 VAC

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

#### 9th digit Design Revision Order

A, B...

#### 10th digit Hall Sensor

Code	Specifications
P	With hall sensor
Blank	Without hall sensor

#### 11th digit Connector for Main Circuit Cable

Code	Specifications	Applicable Model
Blank	Connector by Tyco Electronics AMP K.K.	All models
D	Connector by Interconnectron GmbH	SGLFW-35,-50,-1Z□200B,-1ZD380B

### ● Magnetic Way

S G L F M - 20 324 A □

Linear  $\Sigma$  Series Linear Servomotor

1st digit 2nd digit 3rd+4th digits 5th+6th+7th digits 8th digit 9th digit

#### 1st digit Servomotor Type

(Same as that of the moving coil)

#### 2nd digit Moving Coil/ Magnetic Way

Code	Specifications
M	Magnetic Way

#### 3rd+4th digits Magnet Height

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

#### 8th digit Design Revision Order

A, B...

#### 9th digit Options

Code	Specifications
Blank	Standard
C	With magnet cover

## Features

- Direct-feed mechanism for high-speed and high-precision positioning.
- The magnetic attraction force between the moving and stationary members can be used effectively to increase the rigidity of the linear guidance by preloading the linear motion bearings.
- The magnetic preloading on certain types of compliant linear motion bearings can help increase the system's frequency response, improving its deceleration and settling performances.

## Application Examples

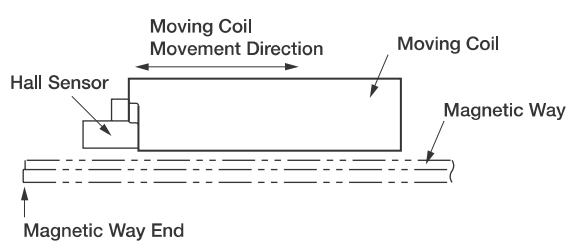
- Feeders and loaders
- Semiconductor equipment
- LCD manufacturing equipment

### ● Precautions on Moving Coil with Hall Sensor

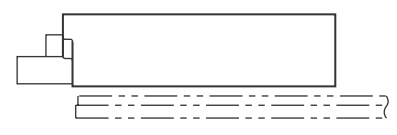
When using a moving coil with a hall sensor, the magnetic way must completely cover the bottom of the hall sensor. Refer to the example showing the correct installation.

When determining the length of the moving coil's stroke or the length of the magnetic way, consider the total length of the moving coil and the hall sensor unit. Refer to the following table.

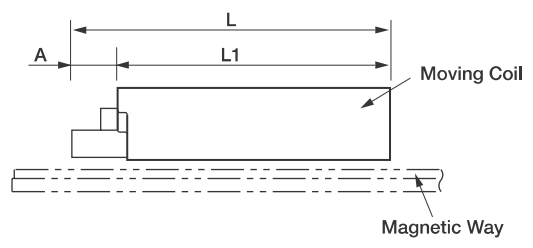
<Correct>



<Incorrect>



### The total length of moving coil with hall sensor



Moving Coil Model SGLFW-	Length of Moving Coil L1 (mm)	Length of Hall Sensor Unit A (mm)	Total Length L (mm)
20A090AP□	91	22	113
20A120AP□	127		149
35□120AP□	127	22	149
35□230AP□	235		257
50□200□P□	215	22	237
50□380□P□	395		417
1Z□200□P□	215	22	237
1Z□380□P□	395		417

## 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

**Ambient Humidity:** 20% to 80% (no condensation)

**Allowable Winding Temperature:** 130°C (Thermal class B)

### 200-V Class

Linear Servomotor Model SGLFW- <input type="text"/>		20A		35A		50A		1ZA	
		090A	120A	120A	230A	200B	380B	200B	380B
Peak Speed	m/s	5.0	5.0	5.0	5.0	5.0	5.0	4.9	4.9
Rated Force*	N	25	40	80	160	280	560	560	1120
Rated Current*	Arms	0.70	0.80	1.4	2.8	5.0	10.0	8.7	17.5
Peak Force*	N	86	125	220	440	600	1200	1200	2400
Peak Current*	Arms	3.0	2.9	4.4	8.8	12.4	25.0	21.6	43.6
Moving Coil Mass	kg	0.7	0.9	1.3	2.3	3.5	6.9	6.4	11.5
Force Constant	N/Arms	36.0	54.0	62.4	62.4	60.2	60.2	69.0	69.0
BEMF Constant	V/ (m/s)	12.0	18.0	20.8	20.8	20.1	20.1	23.0	23.0
Motor Constant	N/√W	7.9	9.8	14.4	20.4	34.3	48.5	52.4	74.0
Electrical Time Constant	ms	3.2	3.3	3.6	3.6	15.9	15.8	18.3	18.3
Mechanical Time Constant	ms	11.0	9.3	6.2	5.5	3.0	2.9	2.3	2.1
Thermal Resistance (With Heat Sink)	K/W	4.35	3.19	1.57	0.96	0.56	0.38	0.47	0.2
Thermal Resistance (Without Heat Sink)	K/W	7.69	5.02	4.10	1.94	1.65	0.95	1.3	0.73
Magnetic Attraction	N	314	462	809	1590	1650	3260	3300	6520
Applicable SERVOPACK	SGDV-	1R6	1R6	1R6	3R8	5R5	120A	120A	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 (aluminum board) listed in the following table is mounted on the moving coil.

Heat Sink Size	:125 mm × 125 mm × 13 mm: SGLFW-20A090A, -20A120A
	254 mm × 254 mm × 25 mm: SGLFW-35A120A, -35A230A
	400 mm × 500 mm × 40 mm: SGLFW-50A200B, -50A380B, -1ZA200B
	600 mm × 762 mm × 50 mm: SGLFW-1ZA380B

### 400-V Class

Linear Servomotor Model SGLFW- <input type="text"/>		35D		50D		1ZD		1ED	
		120A	230A	200B	380B	200B	380B	380B	560B
Peak Speed	m/s	4.5	4.5	5.0	5.0	5.0	5.0	2.4	2.4
Rated Force*	N	80	160	280	560	560	1120	1500	2250
Rated Current*	Arms	0.6	1.3	2.3	4.5	4.9	9.8	6.4	9.6
Peak Force*	N	220	440	600	1200	1200	2400	3600	5400
Peak Current*	Arms	2.0	4.0	5.6	11.0	12.3	24.6	18.1	27.2
Moving Coil Mass	kg	1.3	2.3	3.5	6.9	6.4	11.5	20	29
Force Constant	N/Arms	136.0	136.0	134.7	134.7	122.6	122.6	250	250
BEMF Constant	V/ (m/s)	45.3	45.3	44.9	44.9	40.9	40.9	83.2	83.2
Motor Constant	N/√W	14.2	20.1	33.4	47.2	51.0	72.1	95.4	117
Electrical Time Constant	ms	3.7	3.6	15.0	15.0	17.4	17.2	16.9	16.9
Mechanical Time Constant	ms	5.2	5.1	3.2	3.2	2.5	2.2	2.2	2.1
Thermal Resistance (With Heat Sink)	K/W	1.57	0.96	0.56	0.38	0.47	0.2	0.19	0.15
Thermal Resistance (Without Heat Sink)	K/W	4.1	1.94	1.65	0.95	1.3	0.73	0.45	0.37
Magnetic Attraction	N	810	1590	1650	3260	3300	6520	9780	14600
Applicable SERVOPACK	SGDV-	1R9D	1R9D	3R5D	5R4D	5R4D	120D	8R4D	120D

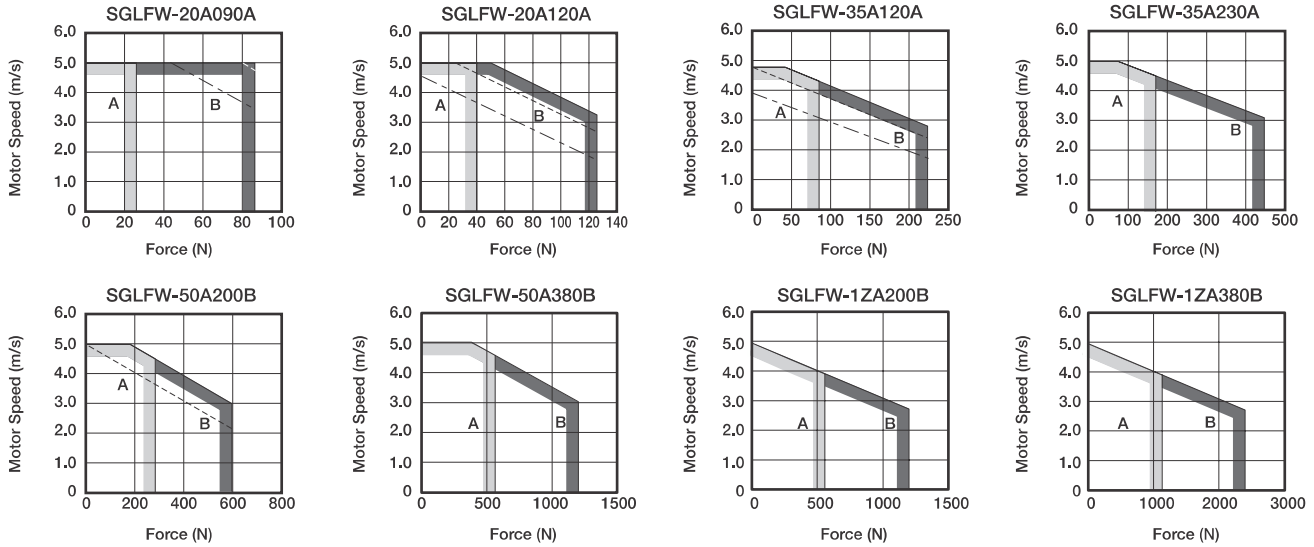
Notes: 1 The items marked with an \* and *Force and Speed Characteristics* (the table on the next page) are the values at a motor winding temperature of 100°C during operation in combination with a SERVOPACK. The others are at 20°C.

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

Heat Sink Size	:254 mm × 254 mm × 25 mm: SGLFW-35D120A, -35D230A
	400 mm × 500 mm × 40 mm: SGLFW-50D200B, -50D380B, -1ZD200B
	600 mm × 762 mm × 50 mm: SGLFW-1ZD380B
	600 mm × 762 mm × 50 mm: SGLFW-1ED380B, SGLFW-1ED560B

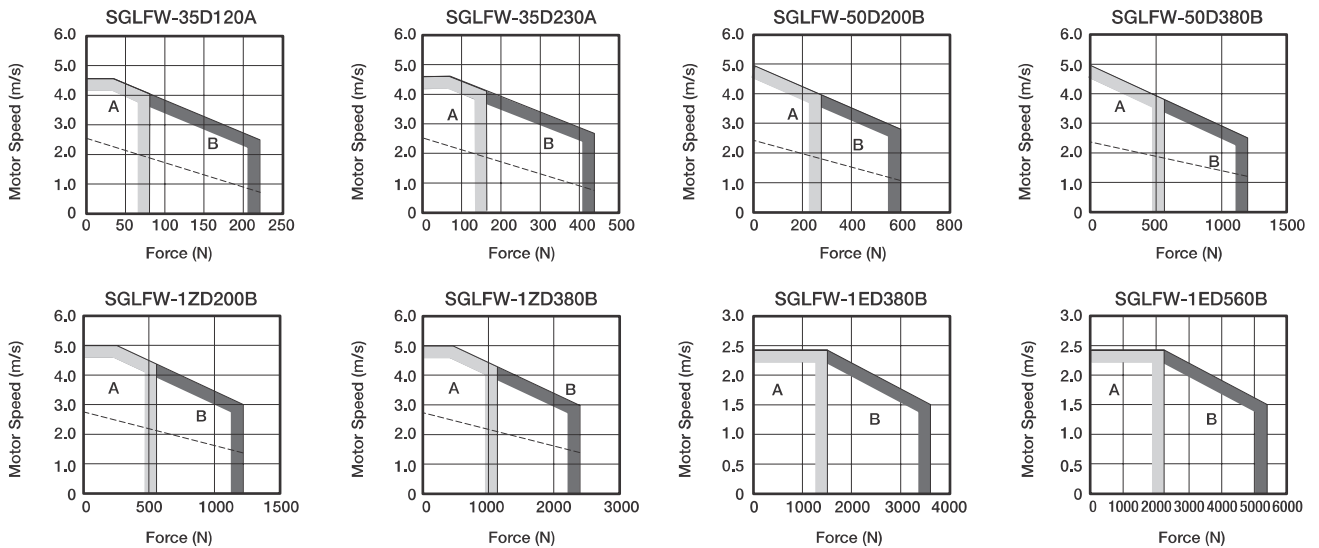
**Ratings and Specifications**

● **Force and Speed Characteristics** **A** : Continuous Duty Zone **B** : Intermittent Duty Zone  
200-V Class



Notes: 1 The characteristics of the intermittent duty zone differ depending on the supply voltages. The solid, dotted, and dashed-dotted lines of the intermittent duty zone indicate the characteristics when a servomotor runs with the following combinations:  
 ● The solid line: With a three-phase 200 V SERVOPACK  
 ● The dotted line: With a single-phase 200 V SERVOPACK  
 ● The dashed-dotted line: With a single-phase 100 V SERVOPACK  
 2 When the effective force is within the rated force, the servomotor can be used within the intermittent duty zone.

**400-V Class**



Notes: 1 The characteristics of the intermittent duty zone differ depending on the supply voltages. The solid and dotted lines of the intermittent duty zone indicate the characteristics when a servomotor runs with the following combinations:  
 ● The solid line: With a three-phase 400 V SERVOPACK  
 ● The dotted line: With a three-phase 200 V SERVOPACK  
 2 When using the servomotor with a three-phase 200-V input power supply, a different serial converter unit is required. For details, contact your Yaskawa representative.  
 3 When the effective force 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<sup>2</sup>
- Impact occurrences: twice

(2) Vibration Resistance

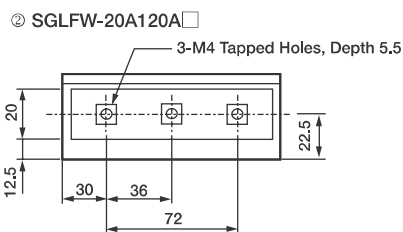
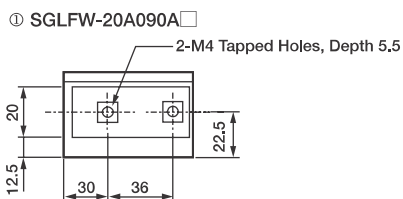
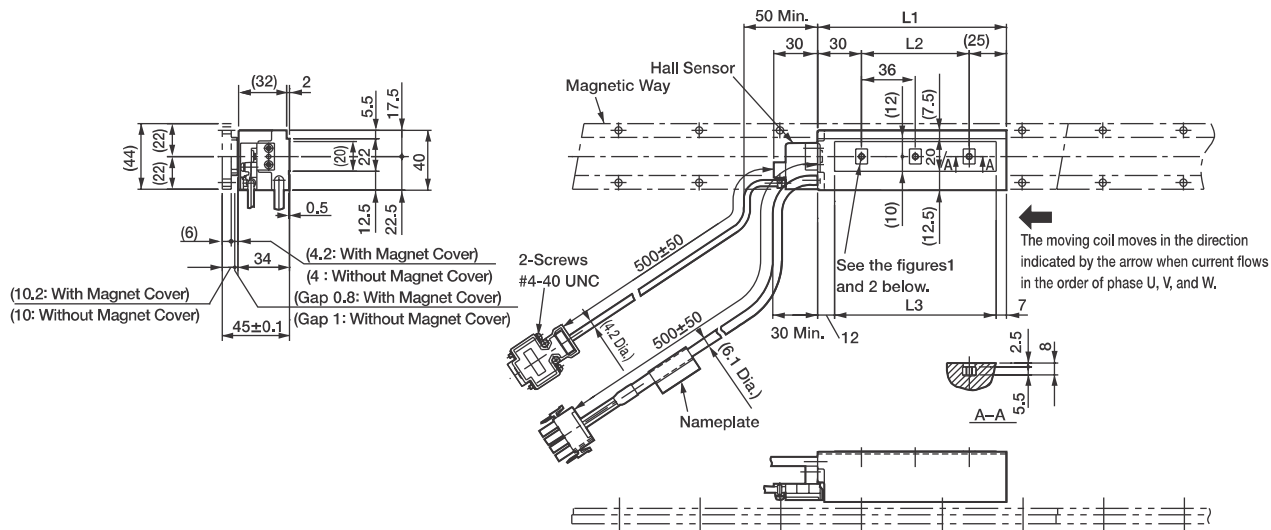
The linear servomotors will withstand the following vibration acceleration in three directions: Vertical, side to side, and front to back.

- Vibration acceleration: 49 m/s<sup>2</sup>

**External Dimensions** Units: mm

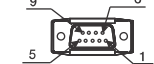
(1) SGLFW-20

- Moving Coil: SGLFW-20A□□□A□ (With a connector by Tyco Electronics AMP K.K.)



Moving Coil Model SGLFW-	L1	L2	L3	Approx. Mass kg
20A090A□	91	36	72	0.7
20A120A□	127	72	108	0.9

**Hall Sensor Connector Specifications**



Pin Connector :  
17JE-13090-02 (D8C)  
by DDK Ltd.

The Mating Connector

Socket Connector:  
17JE-13090-02 (D8C)  
Stud: 17L-002C or  
17L-002C1

Pin No.	Signal
1	+5V (Power supply)
2	Phase U
3	Phase V
4	Phase W
5	0V (Power supply)
6	Not used
7	Not used
8	Not used
9	Not used

**Linear Servomotor Connector Specifications**



Plug: 350779-1  
Pin : 350218-3 or  
350547-3 (No.1 to 3)  
350654-1  
350669-1 (No.4)  
by Tyco Electronics AMP K.K.

The Mating Connector

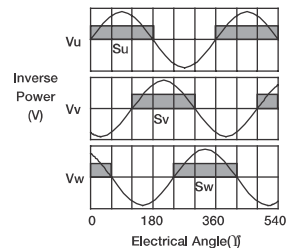
Cap : 350780-1  
Socket: 350536-3 or  
350550-3

Pin No.	Signal	Wire Color
1	Phase U	Red
2	Phase V	White
3	Phase W	Black
4	FG	Green

Note: Models compatible with connectors by Interconnectron GmbH are also available.

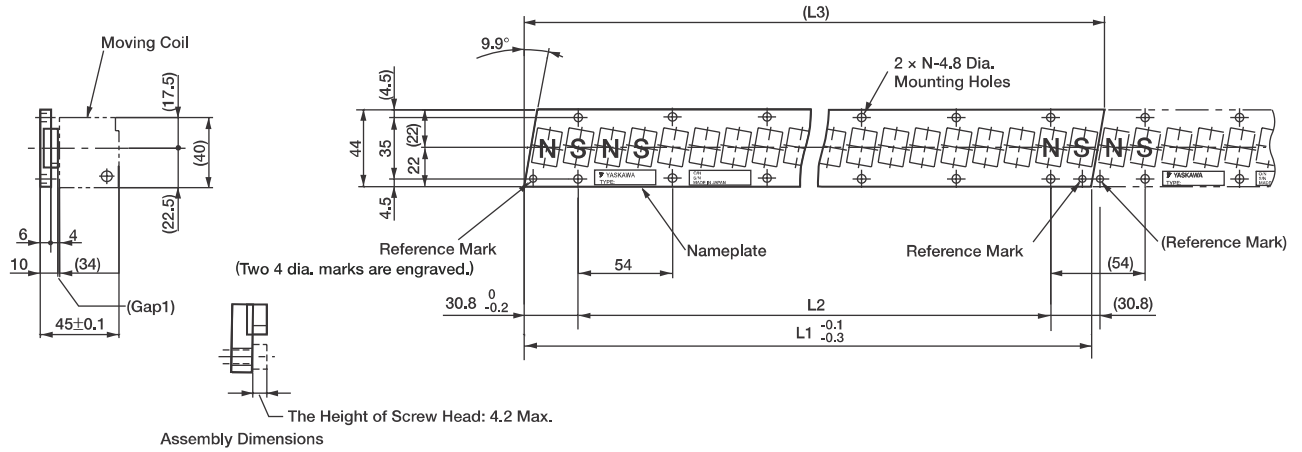
**Hall Sensor Output Signals**

When the moving coil moves in the direction indicated by the arrow in the figure, the relationship between the hall sensor output signals  $S_u$ ,  $S_v$ ,  $S_w$  and the inverse power of each motor phase  $V_u$ ,  $V_v$ ,  $V_w$  becomes as shown in the figure below.



External Dimensions Units: mm

● Magnetic Way: SGLFM-20□□□A



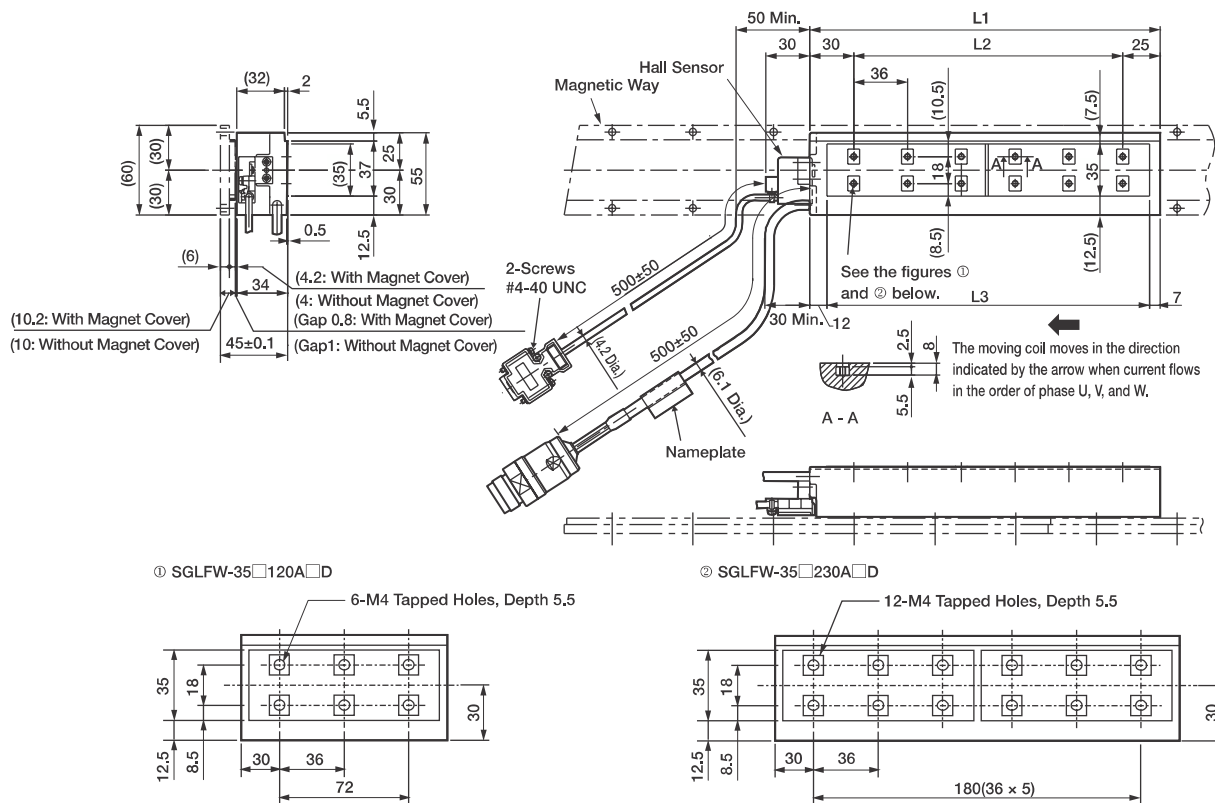
- Notes: 1 Multiple SGLFM-20□□□A magnetic ways can be connected. Connect magnetic ways so that the reference marks match one on the other in the same direction as shown in the figure.  
 2 If you have a pacemaker or any other electronic medical device, do not go near the magnetic way of the linear servomotor.

Magnetic Way Model SGLFM-	L1 <sup>-0.1</sup> <sub>-0.3</sub>	L2	(L3)	N	Approx. Mass kg
20324A	324	270 (54 × 5)	(331.6)	6	0.9
20540A	540	486 (54 × 9)	(547.6)	10	1.4
20756A	756	702 (54 × 13)	(763.6)	14	2

**External Dimensions** Units: mm

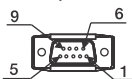
(2) SGLFW-35

- Moving Coil: SGLFW-35□□□□A□D (With a connector by Interconnectron GmbH)



Moving Coil Model SGLFW-	L1	L2	L3	N	Approx. Mass kg
35□120A□D	127	72	108	6	1.3
35□230A□D	235	180	216	12	2.3

**Hall Sensor  
Connector Specifications**



Pin Connector :  
17JE-23090-02 (D8C)  
by DDK Ltd.

The Mating Connector

Socket Connector:  
17JE-13090-02 (D8C)  
Stud: 17L-002C or  
17L-002C1

Pin No.	Signal
1	+5V (Power supply)
2	Phase U
3	Phase V
4	Phase W
5	0V (Power supply)
6	Not used
7	Not used
8	Not used
9	Not used

**Linear Servomotor  
Connector Specifications**



Extension: ARRA06AMRPN182  
Pin : 021.279.1020  
by Interconnectron GmbH

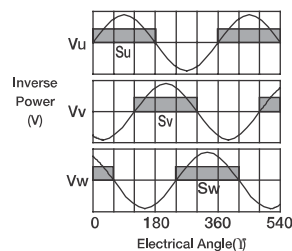
The Mating Connector

Plug : APRA06BFRDN170  
Socket: 020.105.1020

Pin No.	Name
1	Phase U
2	Phase V
4	Phase W
5	Not used
6	Not used
⊕	Ground

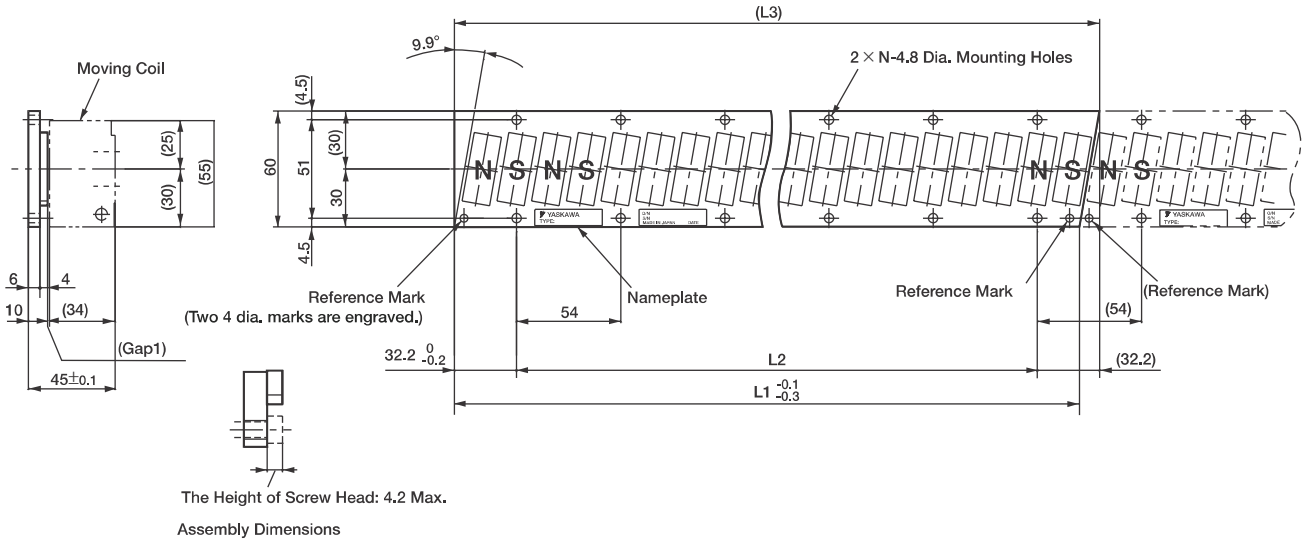
**Hall Sensor Output Signals**

When the moving coil moves in the direction indicated by the arrow in the figure, the relationship between the hall sensor output signals  $S_u$ ,  $S_v$ ,  $S_w$  and the inverse power of each motor phase  $V_u$ ,  $V_v$ ,  $V_w$  becomes as shown in the figure below.



**External Dimensions** Units: mm

• Magnetic Way: SGLFM-35□□□A



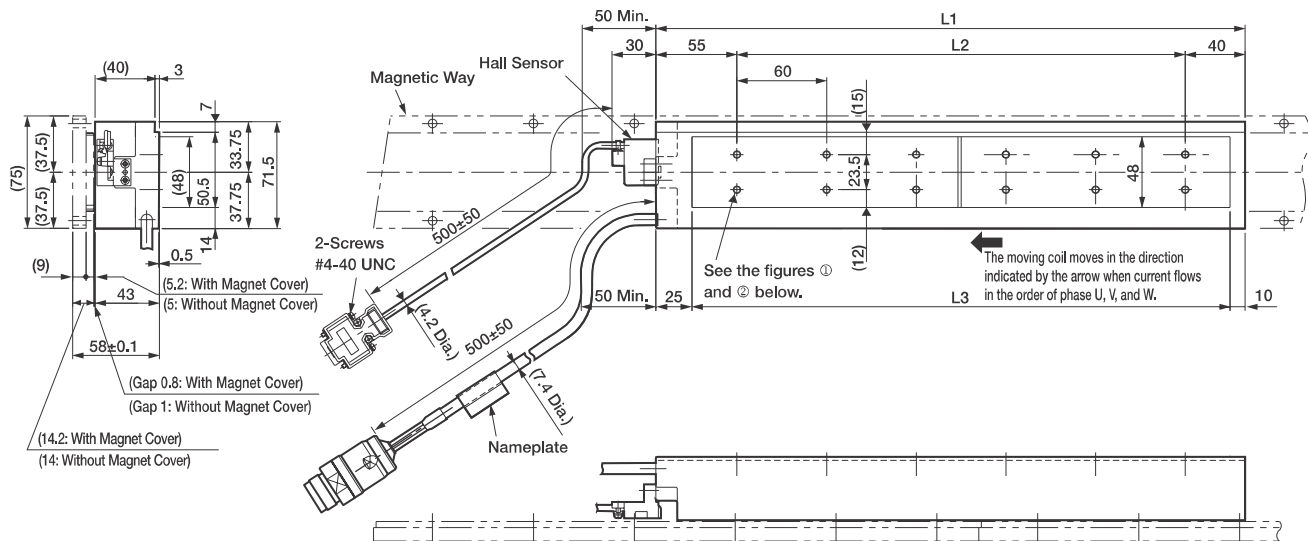
- Notes: 1 Multiple SGLFM-35□□□A magnetic ways can be connected. Connect magnetic ways so that the reference marks match one on the other in the same direction as shown in the figure.  
2 If you have a pacemaker or any other electronic medical device, do not go near the magnetic way of the linear servomotor.

Magnetic Way Model SGLFM-	L1 <sup>-0.1</sup> <sub>-0.3</sub>	L2	(L3)	N	Approx. Mass kg
35324A	324	270 (54 × 5)	(334.4)	6	1.2
35540A	540	486 (54 × 9)	(550.4)	10	2
35756A	756	702 (54 × 13)	(766.4)	14	2.9

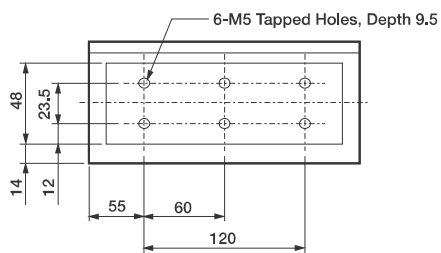


**External Dimensions** Units: mm

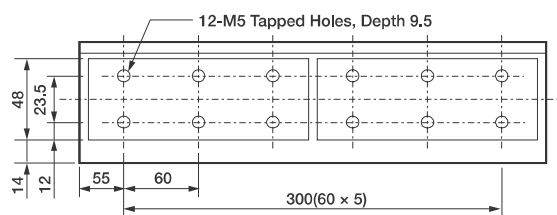
● Moving Coil: SGLFW-50□□□□B□D (With a connector by Interconnectron GmbH)



① SGLFW-50□200B□D

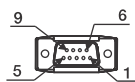


② SGLFW-50□380B□D



Moving Coil Model SGLFW-	L1	L2	L3	N	Approx. Mass kg
50□200B□D	215	120	180	6	3.5
50□380B□D	395	300	360	12	6.9

**Hall Sensor  
Connector Specifications**



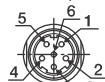
Pin Connector :  
17JE-23090-02 (D8C)  
by DDK Ltd.

The Mating Connector

Socket Connector:  
17JE-13090-02 (D8C)  
Stud: 17L-002C or  
17L-002C1

Pin No.	Signal
1	+5V (Power supply)
2	Phase U
3	Phase V
4	Phase W
5	0V (Power supply)
6	Not used
7	Not used
8	Not used
9	Not used

**Linear Servomotor  
Connector Specifications**



Extension: ARRA06AMRPN182  
Pin : 021.279.1020  
by Interconnectron GmbH

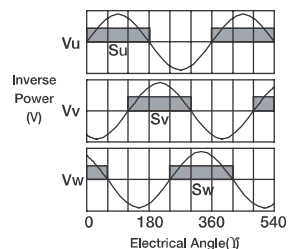
The Mating Connector

Plug : APRA06BFRDN170  
Socket: 020.105.1020

Pin No.	Name
1	Phase U
2	Phase V
4	Phase W
5	Not used
6	Not used
⊕	Ground

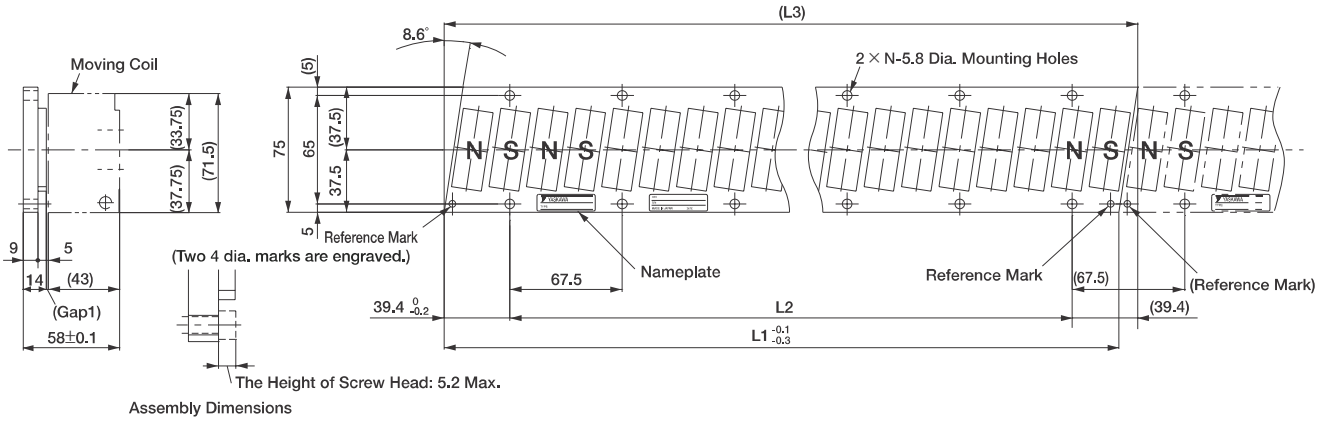
**Hall Sensor Output Signals**

When the moving coil moves in the direction indicated by the arrow in the figure, the relationship between the hall sensor output signals  $S_u$ ,  $S_v$ ,  $S_w$  and the inverse power of each motor phase  $V_u$ ,  $V_v$ ,  $V_w$  becomes as shown in the figure below.



External Dimensions Units: mm

• Magnetic Way: SGLFM-50□□□A



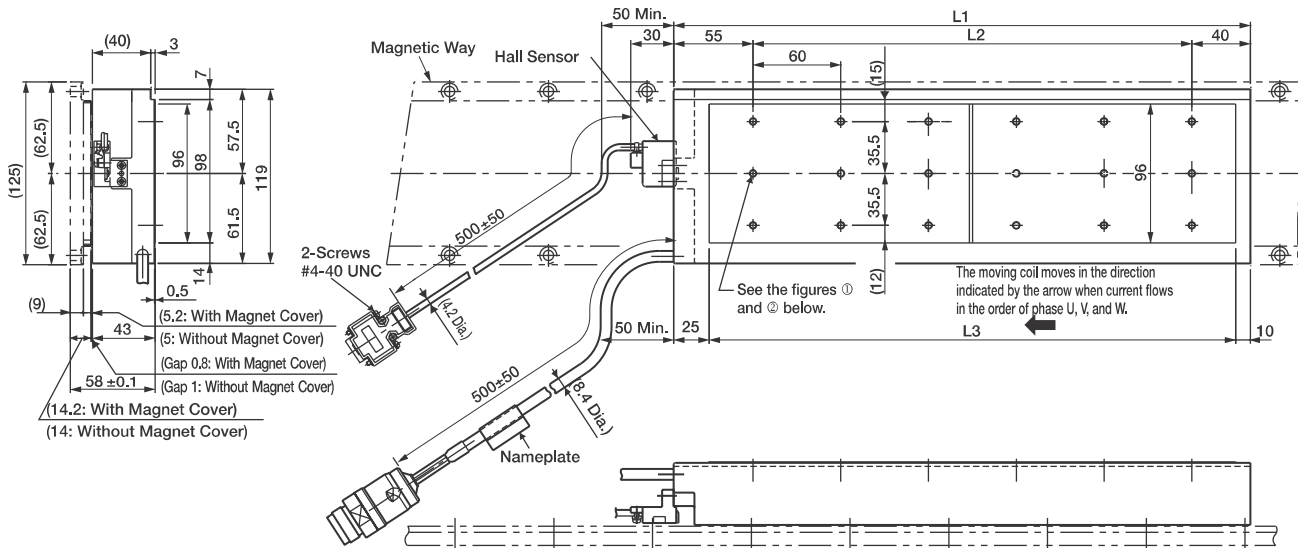
- Notes: 1 Multiple SGLFM-50□□□A magnetic ways can be connected. Connect magnetic ways so that the reference marks match one on the other in the same direction as shown in the figure.  
 2 If you have a pacemaker or any other electronic medical device, do not go near the magnetic way of the linear servomotor.

Magnetic Way Model SGLFM-	L1 <sup>+0.1</sup> <sub>-0.3</sub>	L2	(L3)	N	Approx. Mass kg
50405A	405	337.5 (67.5 × 5)	(416.3)	6	2.8
50675A	675	607.5 (67.5 × 9)	(686.3)	10	4.6
50945A	945	877.5 (67.5 × 13)	(956.3)	14	6.5

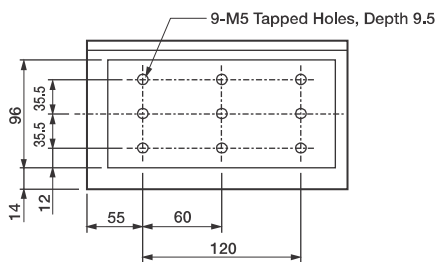
**External Dimensions** Units: mm

**(4) SGLFW-1Z**

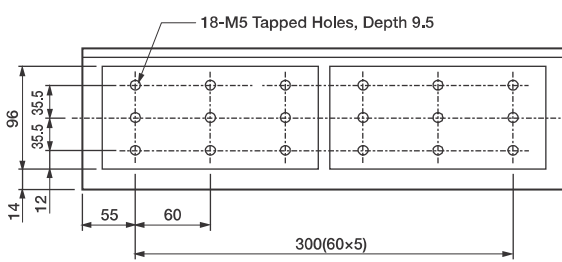
- Moving Coil: SGLFW-1Z□□□□B□D (With a connector by Interconnectron GmbH)



① SGLFW-1Z□200B□D



② SGLFW-1ZD380B□D



Moving Coil Model SGLFW-	L1	L2	L3	N	Approx. Mass kg
1Z□200B□D	215	120	180	9	6.4
1ZD380B□D	395	300	360	18	11.5

**Hall Sensor  
Connector Specifications**



Pin Connector :  
17JE-23090-02 (D8C)  
by DDK Ltd.

**The Mating Connector**

Socket Connector:  
17JE-13090-02 (D8C)  
Stud: 17L-002C or  
17L-002C1

Pin No.	Signal
1	+5V (Power supply)
2	Phase U
3	Phase V
4	Phase W
5	0V (Power supply)
6	Not used
7	Not used
8	Not used
9	Not used

**Linear Servomotor  
Connector Specifications**



Extension: ARRA06AMRPN182  
Pin : 021.279.1020  
by Interconnectron GmbH

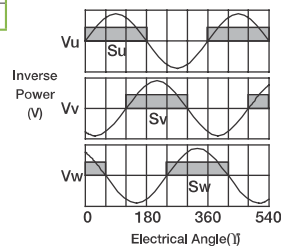
**The Mating Connector**

Plug : APRA06BFRDN170  
Socket: 020.105.1020

Pin No.	Name
1	Phase U
2	Phase V
4	Phase W
5	Not used
6	Not used
⊕	Ground

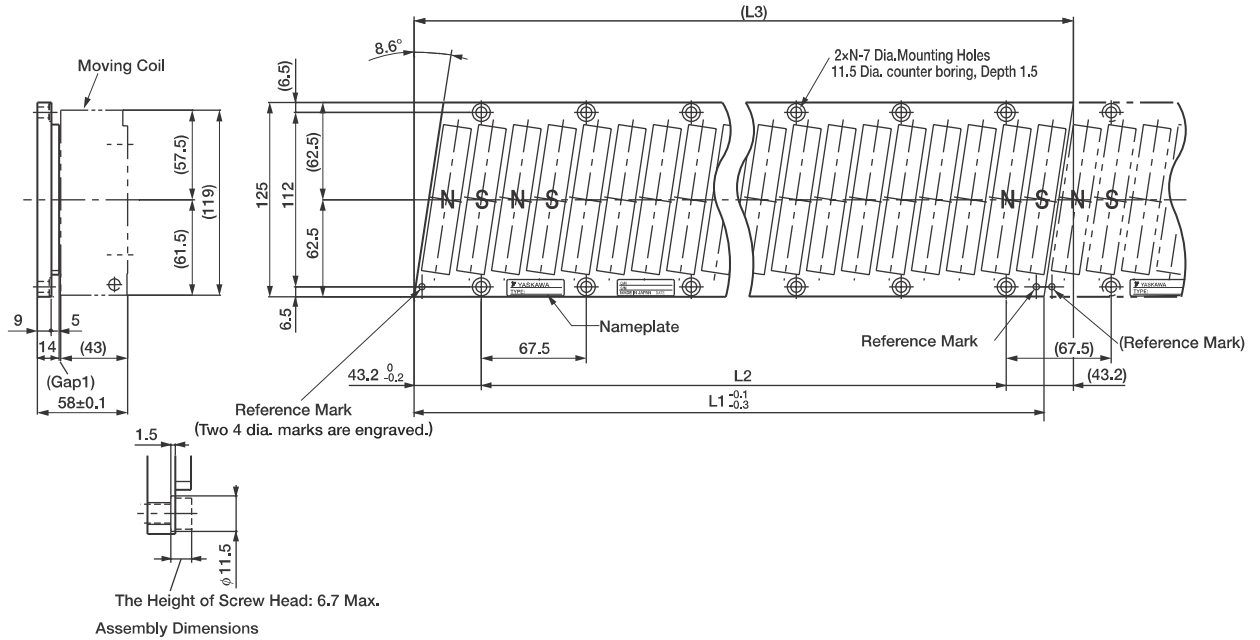
**Hall Sensor Output Signals**

When the moving coil moves in the direction indicated by the arrow in the figure, the relationship between the hall sensor output signals Su, Sv, Sw and the inverse power of each motor phase Vu, Vv, Vw becomes as shown in the figure below.



External Dimensions Units: mm

• Magnetic Way: SGLFM-1Z□□□A



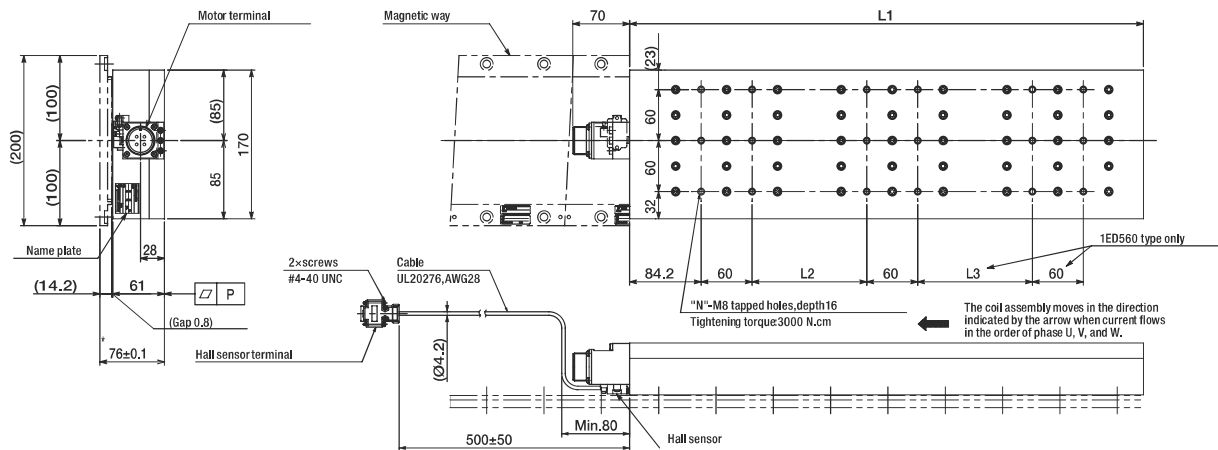
- Notes: 1 Multiple SGLFM-1Z□□□A magnetic ways can be connected. Connect magnetic ways so that the reference marks match one on the other in the same direction as shown in the figure.  
 2 If you have a pacemaker or any other electronic medical device, do not go near the magnetic way of the linear servomotor.

Magnetic Way Model SGLFM-	L1 $^{0.1}_{-0.3}$	L2	L3	N	Approx. Mass kg
1Z405A	405	337.5 (67.5 × 5)	(423.9)	6	5
1Z675A	675	607.5 (67.5 × 9)	(693.9)	10	8.3
1Z945A	945	877.5 (67.5 × 13)	(963.9)	14	12

External Dimensions Units: mm

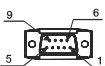
(4) SGLFW-1ED

- Moving Coil: SGLFW-1ED□□□B□ (With a connector by Tyco Electronics AMP K.K.)



Units: mm

Hall sensor Connector specifications



Pin connector type: 17JE-23090-02 (D8C) made by DDK Ltd.

The mating connector  
Socket connector type: 17JE-13090-02 (D8C)  
Stud type: 17L-002C or 17L-002C1

Pin No.	Name
1	+5V (Power supply)
2	Phase U
3	Phase V
4	Phase W
5	0V (Power supply)
6	Not used
7	Not used
8	Not used
9	Not used

Linear Motor Connector specifications



Receptacle type: MS3102A-22-22P made by DDK Ltd.

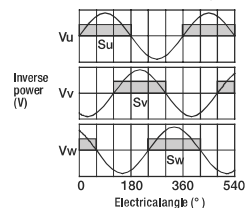
The mating connector

L-shaped plug type: MS3108E22-22S

Pin No.	Name
A	Phase U
B	Phase V
C	Phase W
D	Ground

Hall sensor output signals

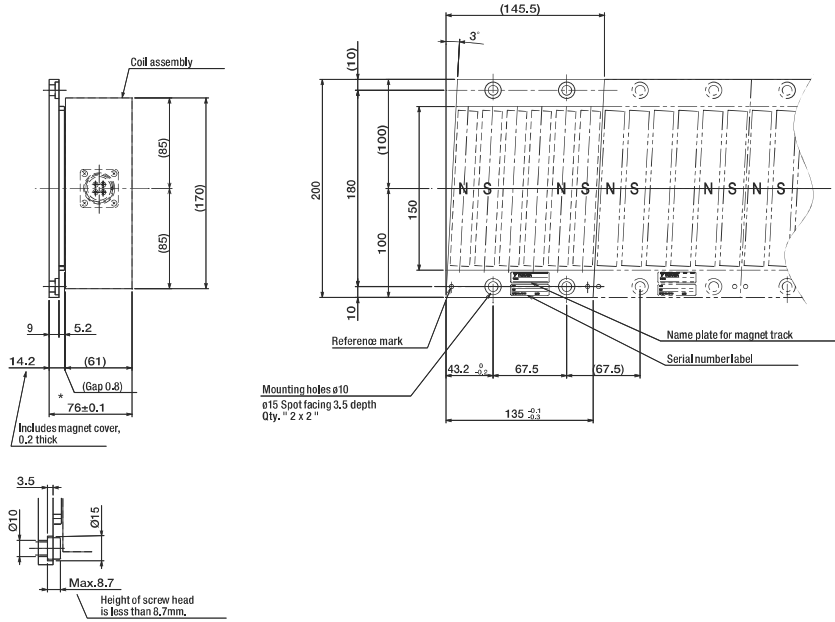
When the coil assembly moves in the direction indicated by the arrow in the figure, the relationship between the hall sensor output signals Su, Sv, Sw and the inverse power of each motor phase Vu, Vv, Vw becomes as shown in the figure below



Moving Coil Model SGLFW-	L1	L2	L3	N	P	Approx. Mass kg
1ED380B□	390	120	-	12	0.3	20
1ED560B□	600	135	135	18	0.5	29

External Dimensions Units: mm

• Magnetic Way: SGLFM-1E135A



Detail drawing of mounting

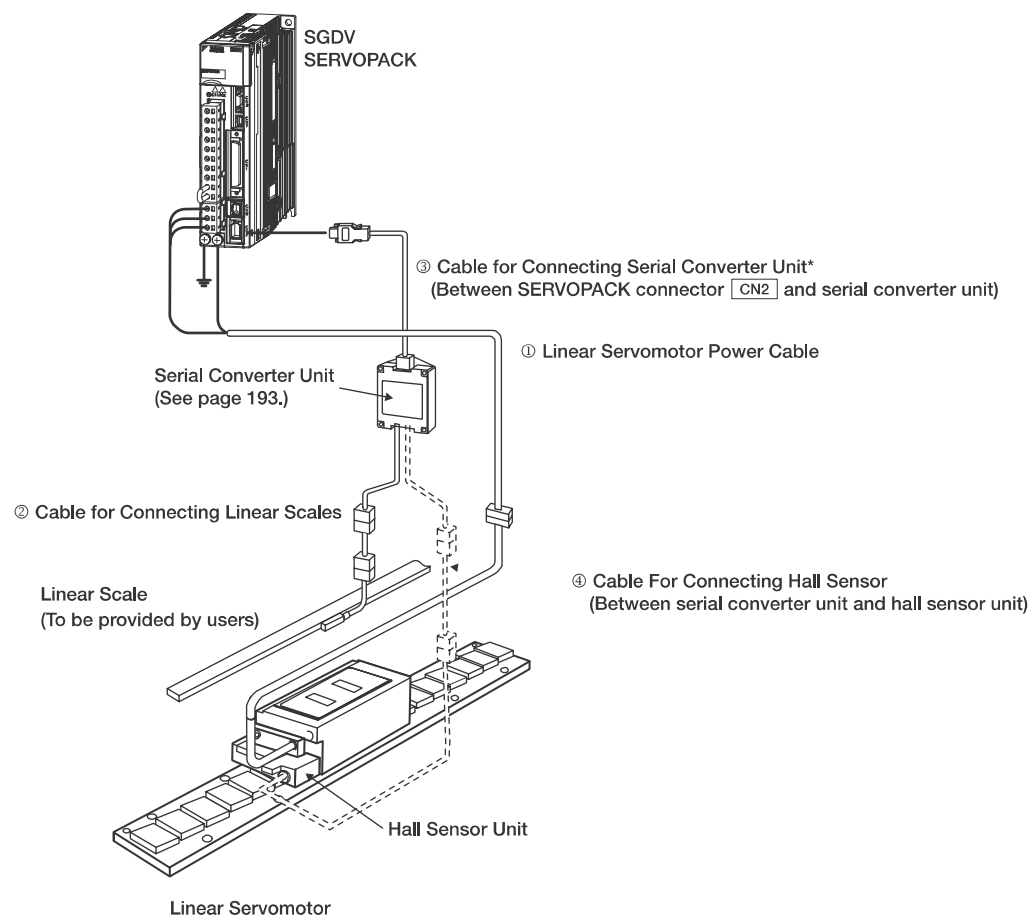
Notes: 1 Multiple SGLFM-1E135A magnetic ways can be connected. Connect magnetic ways so that the reference marks match one on the other in the same direction as shown in the figure.

2 If you have a pacemaker or any other electronic medical device, do not go near the magnetic way of the linear servomotor.

Magnetic Way Model SGLFM-	Approx. Mass kg
1E135A	2.5

Selecting Cables

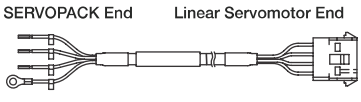
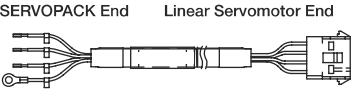
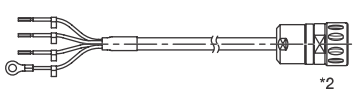
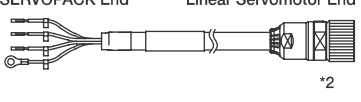
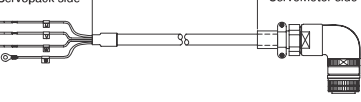
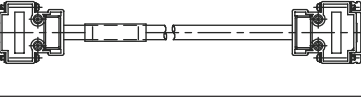
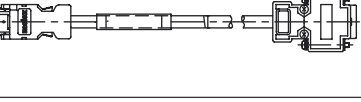

● Cables Connections



\*: A serial converter unit can be connected directly to an absolute linear scale.

Selecting Cables

● Cables

Name	Applicable Linear Servomotor Model	Length	Order No.	Specifications	Details
① Linear Servomotor Power Cables	SGLFW-20, -35	1 m	JZSP-CLN11-01-E	 <p>SERVOPACK End    Linear Servomotor End</p> <p>*1</p>	(1)
		3 m	JZSP-CLN11-03-E		
		5 m	JZSP-CLN11-05-E		
		10 m	JZSP-CLN11-10-E		
		15 m	JZSP-CLN11-15-E		
	SGLFW-50, -1Z	1 m	JZSP-CLN21-01-E	 <p>SERVOPACK End    Linear Servomotor End</p> <p>*1</p>	(2)
		3 m	JZSP-CLN21-03-E		
		5 m	JZSP-CLN21-05-E		
		10 m	JZSP-CLN21-10-E		
		15 m	JZSP-CLN21-15-E		
	SGLFW-35, 50, 1Z A□□□□□D	3 m	DP9325254-03G	 <p>SERVOPACK End    Linear Servomotor End</p> <p>*2</p>	(3)
		5 m	DP9325254-05G		
		10 m	DP9325254-10G		
		15 m	DP9325254-15G		
		20 m	DP9325254-20G		
	SGLFW-35, 50, 1Z D□□□□□D	1 m	JZSP-CMM20D15-01G	 <p>SERVOPACK End    Linear Servomotor End</p> <p>*2</p>	(4)
		3 m	JZSP-CMM20D15-03G		
		5 m	JZSP-CMM20D15-05G		
		10 m	JZSP-CMM20D15-10G		
		15 m	JZSP-CMM20D15-15G		
SGLFW-1E D□□□□□	1 m	JZSP-CVMCA13-01-E-G#	 <p>Servopack side    Servomotor side</p>	(5)	
	3 m	JZSP-CVMCA13-03-E-G#			
	5 m	JZSP-CVMCA13-05-E-G#			
	10 m	JZSP-CVMCA13-10-E-G#			
	15 m	JZSP-CVMCA13-15-E-G#			
② Cables for Connecting Linear Scales <sup>3</sup>	All models	1 m	JZSP-CLL00-01-E-G#	 <p>Serial Converter Unit End    Linear Scale End</p>	(5)
		3 m	JZSP-CLL00-03-E-G#		
		5 m	JZSP-CLL00-05-E-G#		
		10 m	JZSP-CLL00-10-E-G#		
		15 m	JZSP-CLL00-15-E-G#		
③ Cables for Connecting Serial Converter Units	All models	1 m	JZSP-CLP70-01-E-G#	 <p>SERVOPACK End    Serial Converter Unit End</p>	(6)
		3 m	JZSP-CLP70-03-E-G#		
		5 m	JZSP-CLP70-05-E-G#		
		10 m	JZSP-CLP70-10-E-G#		
		15 m	JZSP-CLP70-15-E-G#		
④ Cables for Connecting Hall Sensors	All models	1 m	JZSP-CLL10-01-E-G#	 <p>Serial Converter Unit End    Hall Sensor Unit End</p>	(7)
		3 m	JZSP-CLL10-03-E-G#		
		5 m	JZSP-CLL10-05-E-G#		
		10 m	JZSP-CLL10-10-E-G#		
		15 m	JZSP-CLL10-15-E-G#		

\*1: Connector by Tyco Electronics AMP K.K.

\*2: Connector by Interconnectron GmbH

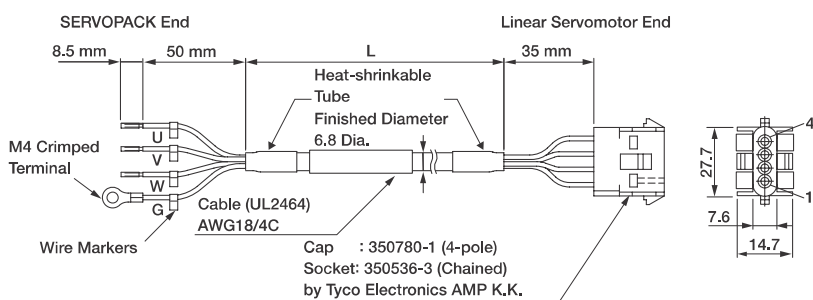
\*3: When using serial converter unit JZDP-G00□-□□□-E, the maximum cable length is 3 m.

Note: The digit "#" of the order number represents the design revision.



Selecting Cables

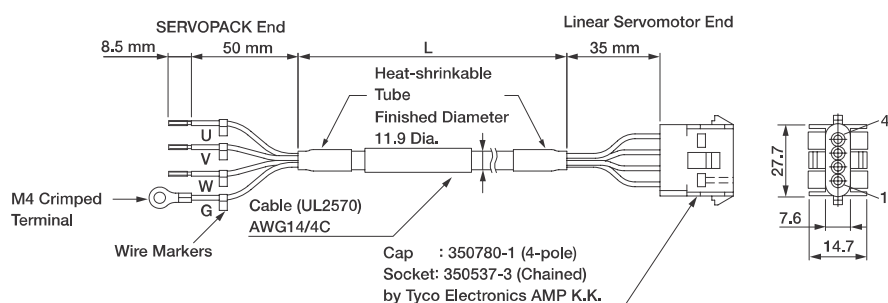
(1) Linear Servomotor Power Cables: JZSP-CLN11-□□-E



• Wiring Specifications

SERVOPACK-end Leads		Linear Servomotor-end Connector	
Wire Color	Signal	Signal	Pin No.
Red	Phase U	Phase U	1
White	Phase V	Phase V	2
Blue	Phase W	Phase W	3
Green/yellow	FG	FG	4

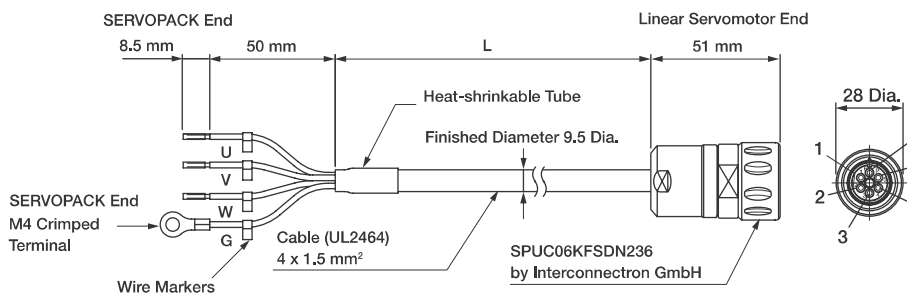
(2) Linear Servomotor Power Cables: JZSP-CLN21-□□-E



• Wiring Specifications

SERVOPACK-end Leads		Linear Servomotor-end Connector	
Wire Color	Signal	Signal	Pin No.
Red	Phase U	Phase U	1
White	Phase V	Phase V	2
Blue	Phase W	Phase W	3
Green/yellow	FG	FG	4

(3) Linear Servomotor Power Cables: DP9325254-□□G

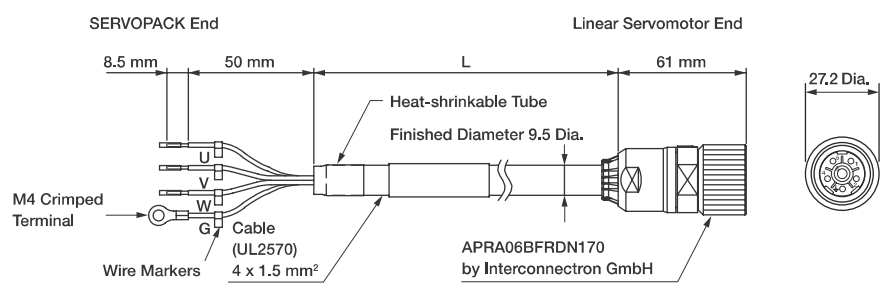


• Wiring Specifications

SERVOPACK-end Leads		Linear Servomotor-end Connector	
Wire Color	Signal	Signal	Pin No.
Black 1	Phase U	Phase U	1
Black 2	Phase V	Phase V	2
Black 3	Phase W	Phase W	3
Green/yellow	FG	—	4
		—	5
		FG	6

Selecting Cables

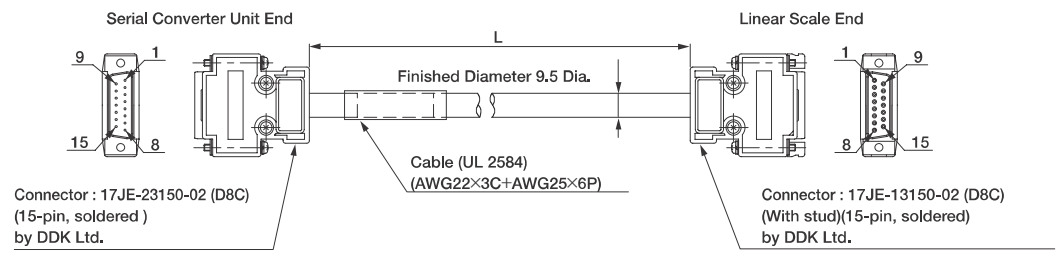
(4) Linear Servomotor Power Cables: JZSP-CLN15-□□-E-G#



• Wiring Specifications

SERVOPACK-end Leads		Linear Servomotor-end Connector	
Wire Color	Signal	Signal	Pin No.
Black 1	Phase U	Phase U	1
Black 2	Phase V	Phase V	2
Black 3	Phase W	FG	3
Green/yellow	FG	Phase W	4
		—	5
		—	6

(5) Cables for Connecting Linear Scales: JZSP-CLL00-□□-E-G#



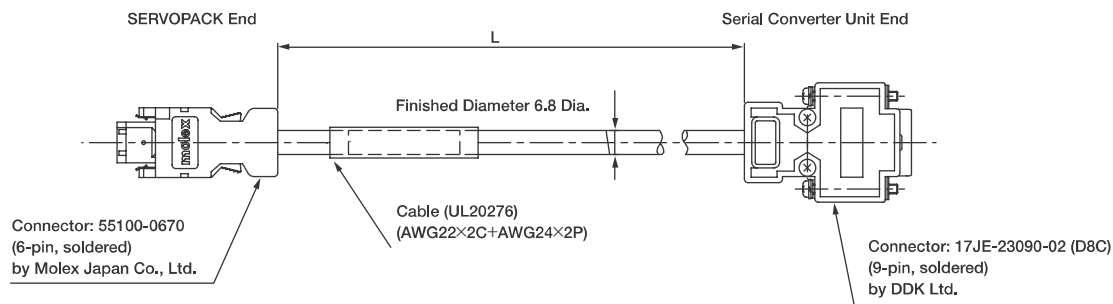
• Wiring Specifications

Serial Converter Unit End		Linear Scale End	
Pin No.	Signal	Pin No.	Signal
1	/Cos (V1-)	1	/Cos (V1-)
2	/Sin (V2-)	2	/Sin (V2-)
3	Ref (V0+)	3	Ref (V0+)
4	+5V	4	+5V
5	5Vs	5	5Vs
6	BID	6	BID
7	Vx	7	Vx
8	Vq	8	Vq
9	Cos (V1+)	9	Cos (V1+)
10	Sin (V2+)	10	Sin (V2+)
11	/Ref (V0+)	11	/Ref (V0-)
12	0V	12	0V
13	0Vs	13	0Vs
14	DIR	14	DIR
15	Inner	15	Inner
Case	Shield	Case	Shield

Linear Servomotors

Selecting Cables

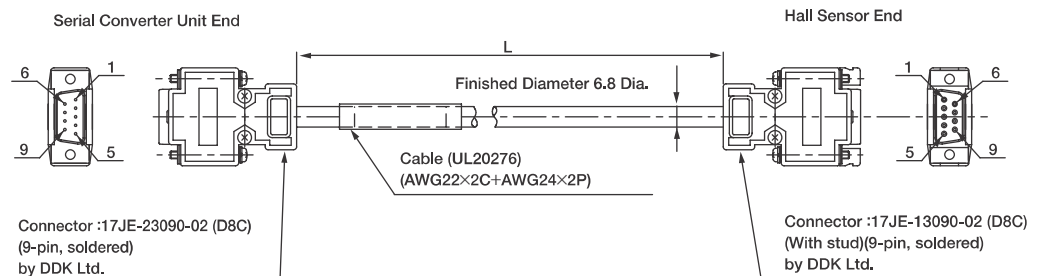
(6) Cables for Connecting Serial Converter Units: JZSP-CLP70-□□-E-G#



• Wiring Specifications

SERVOPACK End			Serial Converter Unit End		
Pin No.	Signal	Wire Color	Pin No.	Signal	Wire Color
1	PG5V	Red	1	+5V	Red
2	PG0V	Black	5	0V	Black
3	-	-	3	-	-
4	-	-	4	-	-
5	PS	Light blue	2	Phase S output	Light blue
6	/PS	Light blue/white	6	Phase /S output	Light blue/white
Shell	Shield	-	Case	Shield	-
			7	-	-
			8	-	-
			9	-	-

(7) Cables for Connecting Hall Sensors: JZSP-CLL10-□□-E-G#



• Wiring Specifications

Serial Converter Unit End		Hall Sensor End	
Pin No.	Signal	Pin No.	Signal
1	+5V	1	+5V
2	Phase U input	2	Phase U input
3	Phase V input	3	Phase V input
4	Phase W input	4	Phase W input
5	0V	5	0V
6	-	6	-
7	-	7	-
8	-	8	-
9	-	9	-
Case	Shield	Case	Shield

