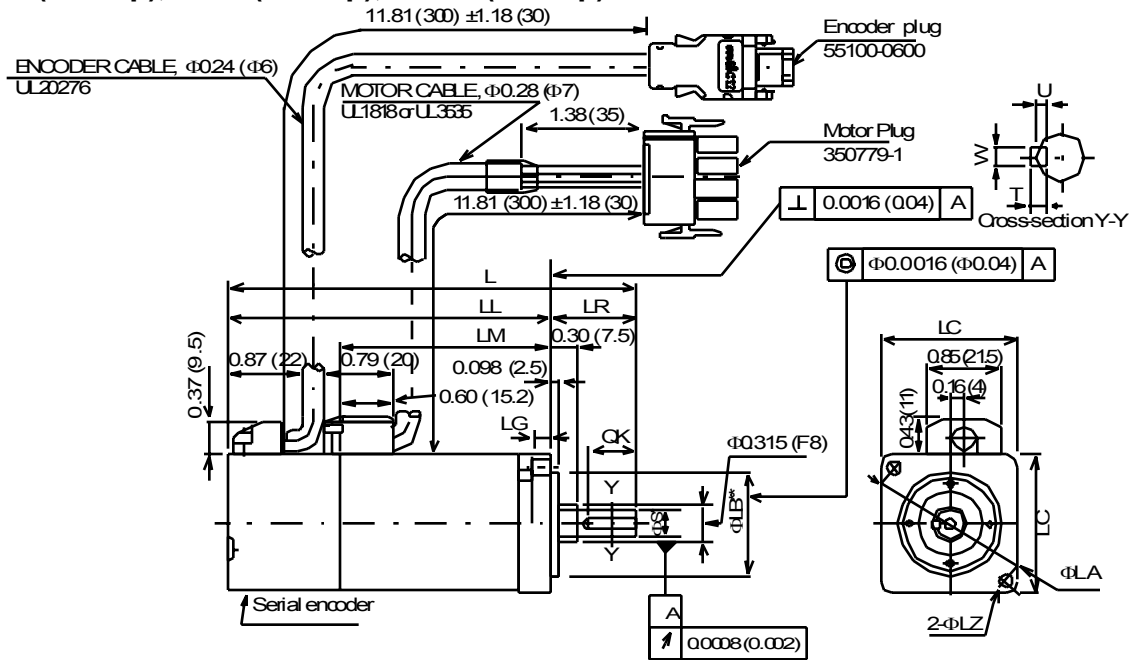


Dimensions in inches (mm)

(1) 13-Bit Incremental Encoder, without Brake

SGMAH Servomotors

- 30W (0.04hp), 50W (0.07hp), 100W (0.13hp)

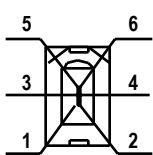


Type SGMAH-†	QK	U	W	T	L	LL	LM	LR	LG	LC	φLA	φLZ	φS*	φLB**	Output W (hp)	Approx. Mass lb (kg)	Allowable Radial Load lb (N)	Allowable Thrust Load lb (N)
A3□□F2□	Without Keyway				3.72 (94.5)	2.74 (69.5)	1.44 (36.5)								30 (0.04)	0.66 (0.3)	15 (68)	12 (54)
A3□□F4□	0.55 (14)	0.047 (1.2)	0.079 (2)	0.079 (2)									0.24 (6)	1.18 (30)	50 (0.07)	0.88 (0.4)		
A5□□F2□	Without Keyway				4.02 (102)	3.03 (77)	1.73 (44)	0.98 (25)	0.20 (5)	1.57 (40)	1.81 (46)	0.17 (4.3)			100 (0.13)	1.10 (0.5)	17 (78)	
A5□□F4□	0.55 (14)	0.047 (1.2)	0.079 (2)	0.079 (2)									0.31 (8)					
01□□F2□	Without Keyway				4.7 (119.5)	3.72 (94.5)	2.42 (61.5)											
01□□F4□	0.55 (14)	0.07 (1.8)	0.12 (3)	0.12 (3)														

† Some motor dimensions vary for motors with the optional shaft seal: see p. 7 for details.

Specified Tolerances				
Dimension	*φS		**φLB	
Unit	Diameter	Tolerance	Diameter	Tolerance
in	0.2362	+0.0000-0.0003	1.181	+0.0000 -0.0008
	0.3150	+0.0000-0.0004		
mm	6.000	+0.000 -0.008	30.000	+0.000 -0.021
	8.000	+0.000 -0.009		

Encoder Plug



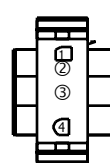
Encoder Connection		
Pin	Output	Wire Color
1	PG 5V	Red
2	PG 0V	Black
3	—	—
4	—	—
5	Data +	Light Blue
6	Data -	White/Light Blue

Plug: 55100-0600 (Molex)

Mating connector:

Socket: 54280-0600

Motor Plug



Motor Connection		
Pin	Output	Wire Color
2	Phase U	Red
2	Phase V	White
3	Phase W	Blue
4	FG (Frame Ground)	Green/Yellow

Plug: 350779-1 (AMP)

Pin: 350561-3 or 350690-3 (Nos. 1 to 3)

Ground pin: 770210-1 (No 4)

Mating connector:

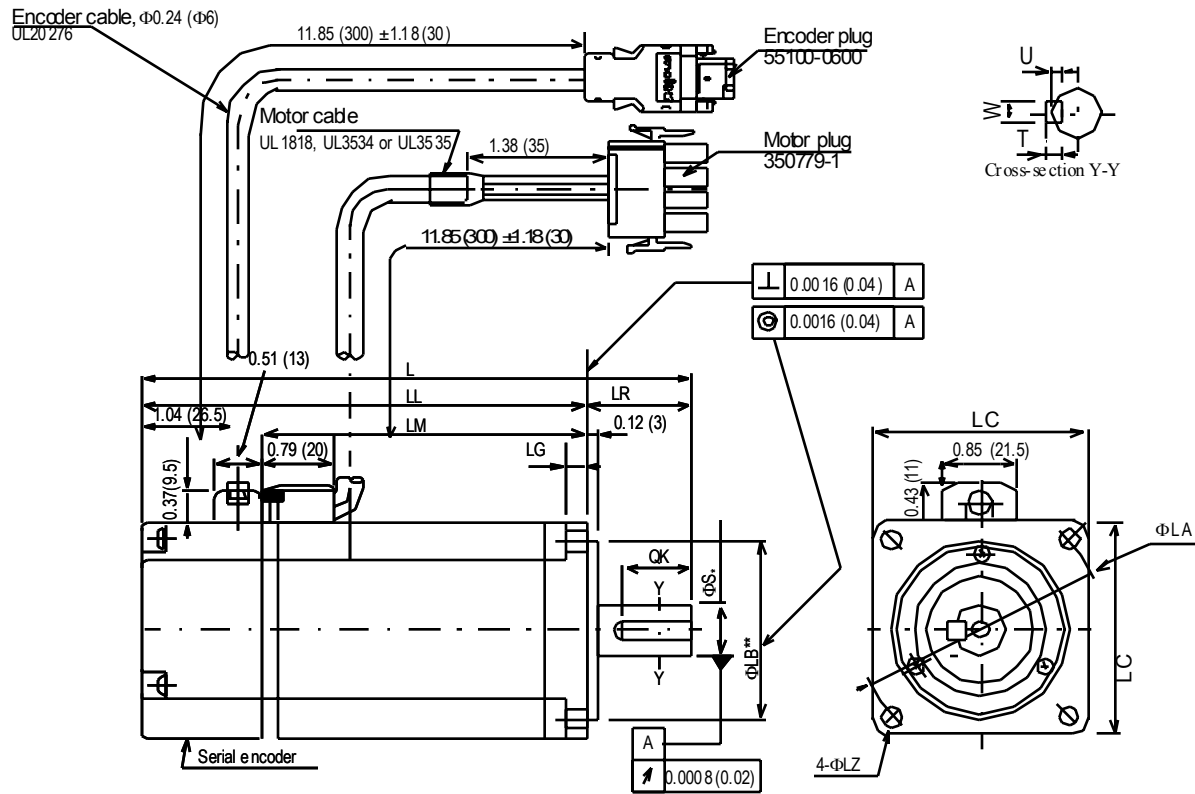
Cap: 350780-1

Socket: 350570-3 or 350689-3

LEGEND System Components

SGMAH Servomotors

- 200W (0.27hp), 400W (0.53hp), 750W (1.01hp)



Type SGMAH-	L	LL	LM	LR	LG	LC	ΦLA	ΦLZ	ΦS*	ΦLB**	QK	U	W	T	Output W (hp)	Approximate Mass lb (kg)	Allowable Radial Load lb (N)	Allowable Thrust Load lb (N)
02A□F4□	4.98 (126.5)	3.8 (96.5)	2.46 (62.5)	1.18 (30)	0.24 (6)	2.36 (60)	2.76 (70)	0.22 (5.5)	0.55 (14)	1.97 (50)	0.79 (20)	0.12 (3)	0.2 (5)	0.2 (5)	200 (0.27)	2.43 (1.1)	55 (245)	17 (74)
04A□F4□	6.08 (154.5)	4.9 (124.5)	3.56 (90.5)		0.31 (8)	3.15 (80)	3.54 (90)	0.28 (7)	0.63 (16)	2.76 (70)	1.18 (30)	0.12 (3)	0.2 (5)	0.2 (5)	400 (0.53)			
08A□F4□	7.28 (185)	5.71 (145)	4.37 (111)	1.57 (40)	0.31 (8)	3.15 (80)	3.54 (90)	0.28 (7)	0.63 (16)	2.76 (70)	1.18 (30)	0.12 (3)	0.2 (5)	0.2 (5)	750 (1.01)	7.5 (3.4)	88 (392)	33 (147)

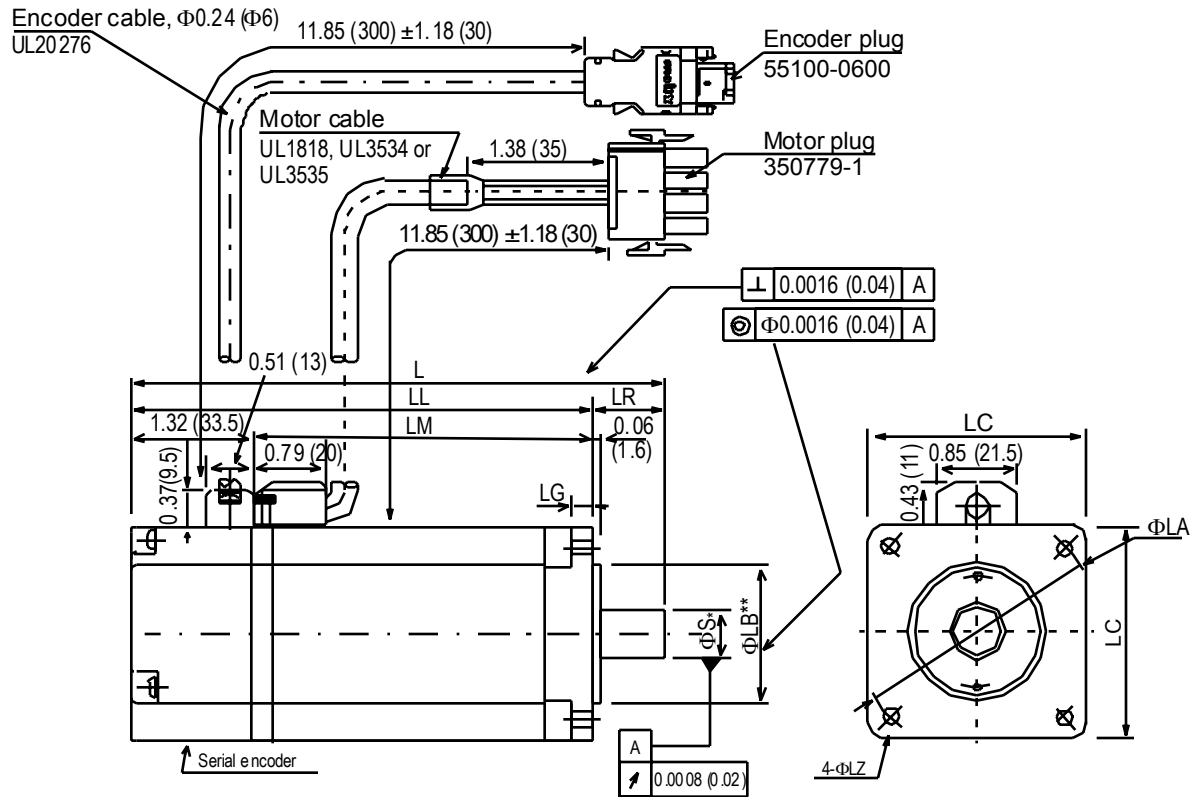
* Please see the following table for dimension tolerances.

Specified Tolerances				
Dimension	*ΦS		**ΦLB	
	Diameter	Tolerance	Diameter	Tolerance
in	0.5512	+0.0000-0.0004	1.9685	+0.0000-0.0010
	0.6299	+0.0000-0.0004	2.7559	+0.0000-0.0012
mm	14.000	+0.000-0.011	50.000	+0.000-0.025
	16.000	+0.000-0.011	70.000	+0.000-0.030

LEGEND System Components

SGMAH Servomotors

- 200W (0.27hp), 400W (0.54hp) with NEMA 23* Flange/Pilot

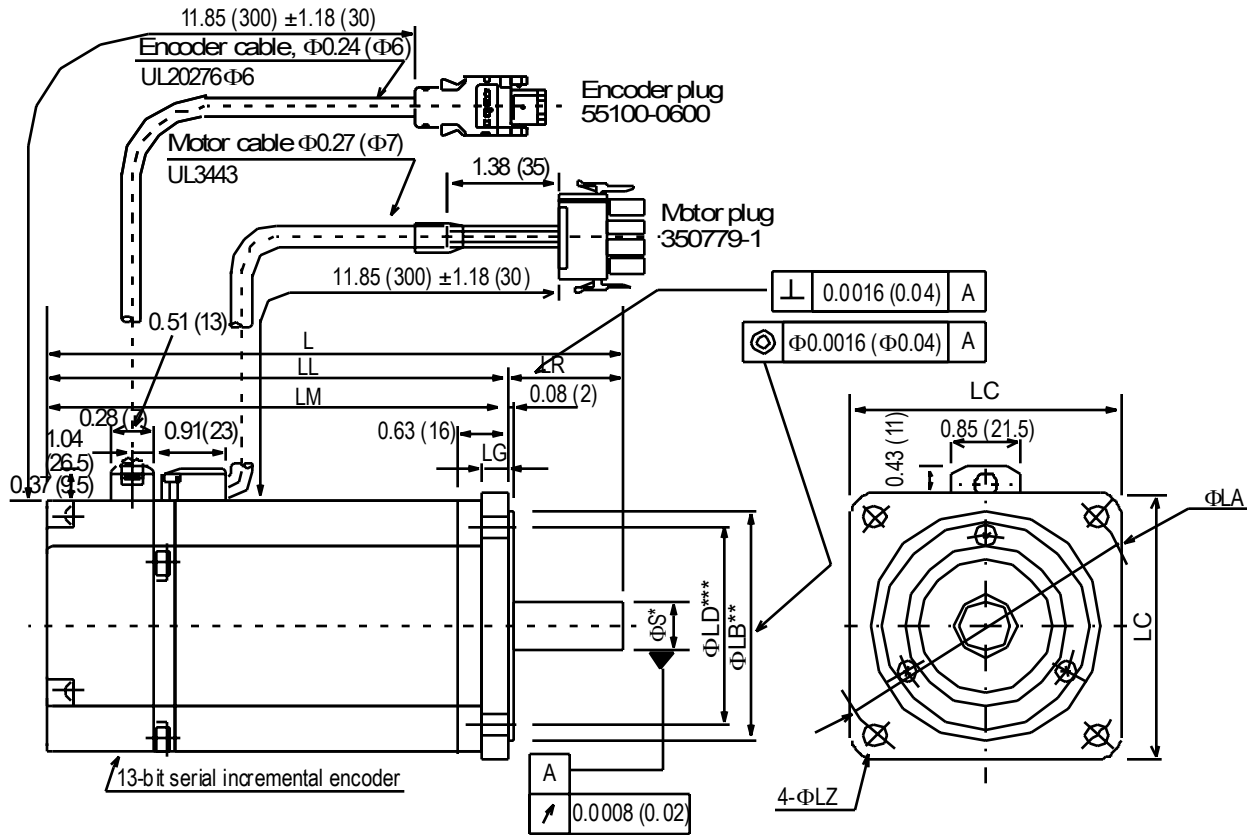


Type SGMAH-	L	LL	LM	LR	LG	LC	φLA	φLZ	φS*	φLB**	Output W (hp)	Approximate Mass lb (kg)	Allowable Radial Load lb (N)	Allowable Thrust Load lb (N)
02□AN21	4.67 (118.5)	3.9 (98.5)	2.56 (65)	0.79 (20)	0.24 (6)	2.36 (60)	2.63 (66.7)	0.18 (4.5)	0.50 (12.7)	1.5 (38.1)	200 (0.27)	2.43 (1.1)	55 (245)	17 (74)
04□AN21	5.77 (146.5)	5.0 (126.5)	3.66 (93)								400 (0.53)			

Specified Tolerances				
Dimension	*φS		**φLB	
Unit	Diameter	Tolerance	Diameter	Tolerance
in	0.5000	+0 -0.00043	1.5000	+0.0000 -0.00098
mm	12.7	+0 -0.011	38.1	+0.0000 -0.025

* For servo application torques: shaft diameter is 0.5in (12.7mm) rather than 0.25 (6.35mm), as is in typical NEMA 23.

• 750W (1.01hp) with NEMA 34* Flange/Pilot



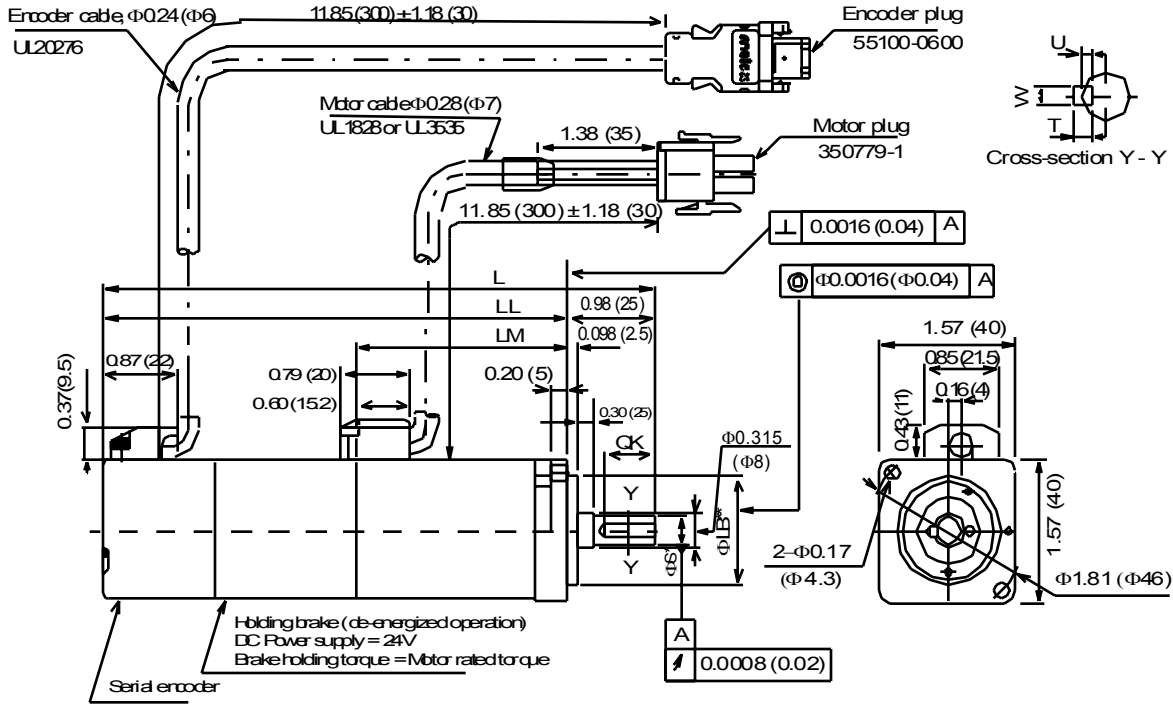
Type SGMAH	L	LL	LM	LR	LG	LC	ΦLA	ΦLZ	ΦS*	ΦLB**	ΦLD***	Output W (hp)	Approx Mass lb (kg)	Allowable Radial Load lb (N)	Allowable Thrust Load lb (N)
08AAN21	7.20 (183)	5.75 (146)	4.43 (112.5)	1.46 (37)	0.31 (8)	3.35 (85)	3.87 (98.4)	0.28 (7)	0.63 (16)	2.87 (73)	2.60 (66)	750 (1.01)	7.5 (3.4)	88 (392)	33 (147)

Specified Tolerances						
Dimension	*ΦS		**ΦLB		**ΦLD	
Unit	Diameter	Tolerance	Diameter	Tolerance	Diameter	Tolerance
in	0.625	+0.0000-0.00043	2.874	+0.0000 -0.0012	2.598	+0.0012 -0
mm	15.875	+0.0000 -0.011	73.000	?	66.000	+0.003 -0

* For servo application torques: shaft diameter is 0.0.625in (15.875mm) rather than 0.375 (9.525mm), as is in typical NEMA 34.

(2) 13-Bit Incremental Encoder, with Brake

SGMAH Servomotors

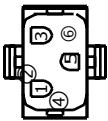


Type SGMAH-	U	W	T	L	LL	LM	ΦS*	ΦLB**	QK	Output W (hp)	Approximate Mass lb (kg)	Allowable Radial Load lb (N)	Allowable Thrust Load lb (N)
A3□□F2C	0.047 (1.2)	0.079 (2)		4.96 (126)	3.98 (101)	1.44 (36.5)	0.24 (6)	1.18 (30)	0.55 (14)	30 (0.04)	1.32 (0.6)	15 (68)	12 (54)
A3□□F4C				5.26 (133.5)	4.27 (108.5)	1.73 (44.0)				50 (0.07)	1.54 (0.7)		
A5□□F2C				5.26 (133.5)	4.27 (108.5)	1.73 (44.0)				50 (0.07)	1.54 (0.7)		
A5□□F4C													
01□□F2C	0.07 (1.8)	0.12 (3)	0.12 (3)	6.3 (160)	5.31 (135)	2.42 (61.5)	0.31 (8)		0.55 (14)	100 (0.13)	1.76 (0.8)	18 (78)	
01□□F4C													

Specified Tolerances				
Dimension	*ΦS		**ΦLB	
Unit	Diameter	Tolerance	Diameter	Tolerance
in	0.2362	+0.0000-0.0003	1.181	+0.0000-0.0008
	0.3150	+0.0000-0.0004		
mm	6.000	+0.000-0.008	30.000	+0.000-0.021
	8.000	+0.000-0.009		

Connector Specifications:

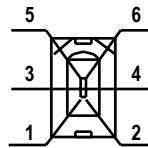
Motor Plug



Motor Connection		
1	Phase U	Red
2	Phase V	White
3	Phase W	Blue
4	FG (Frame Ground)	Green/Yellow
5	Brake Terminal	Red
6	Brake Terminal	Black

Plug: 350715-1 (AMP)
 Pin: 350561-3 or 350690-3 (except No. 4)
 Ground pin: 770210-1 (No. 4)
 Mating connector:
 Cap: 350781-1
 Socket: 350570-3 or 350689-3

Encoder Plug

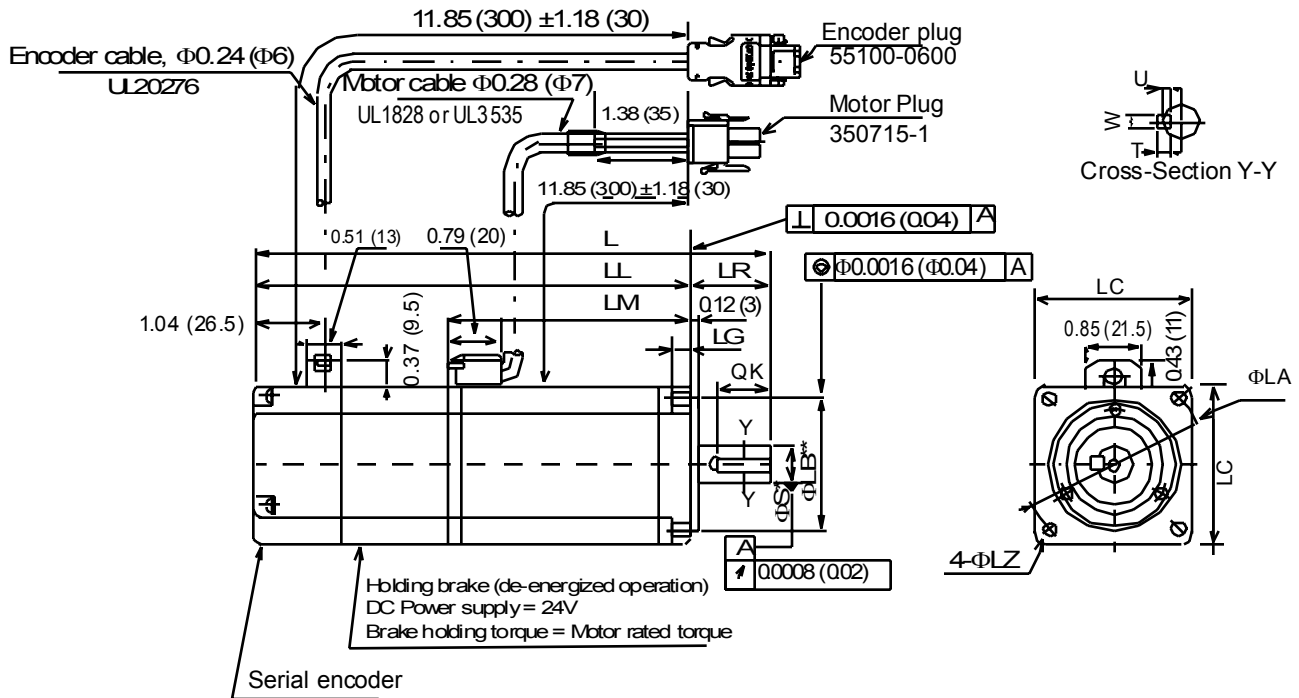


Encoder Connection		
1	PG 5V	Red
2	PG 0V	Black
3	—	—
4	—	—
5	Data +	Light Blue
6	Data -	White/Light Blue

Plug: 55100-0600 (Molex)
 Mating connector:
 Socket: 54280-0600

LEGEND System Components

- 200W (0.27hp), 300W (0.40hp), 400W (0.53hp), 750W (1.01hp)



SGMAH Servomotors

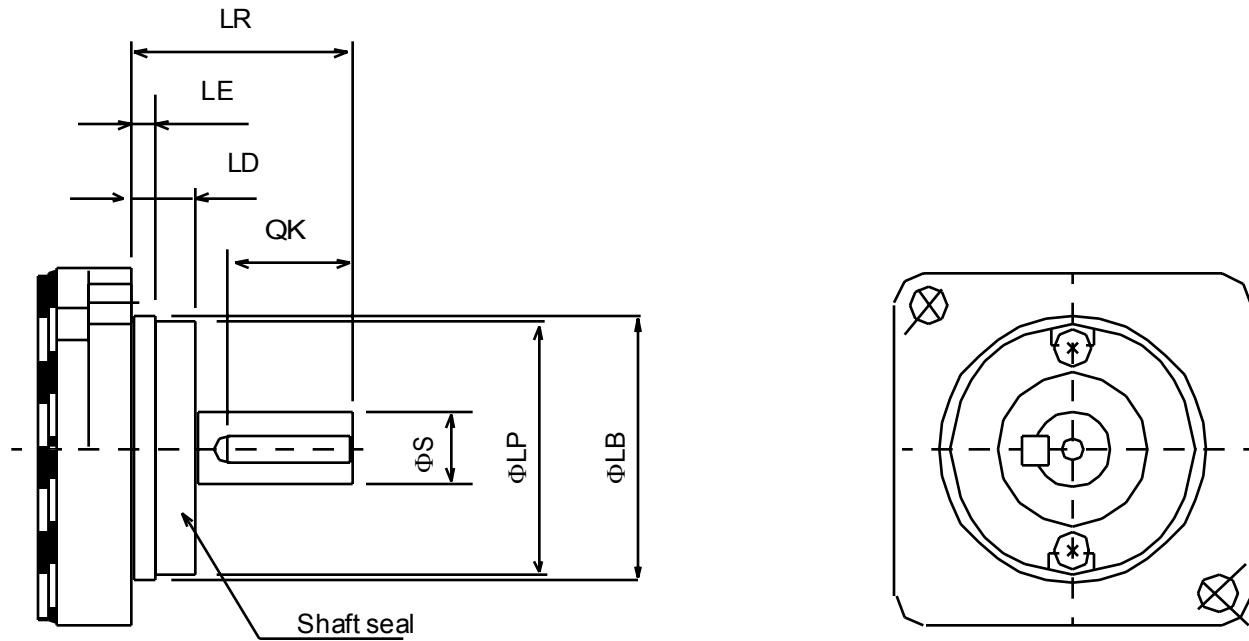
Type SGMAH-	U	W	T	L	LL	LM	LR	LG	LC	ΦLA	ΦLZ	ΦS^*	ΦLB^{**}	QK	Output W (hp)	Approximate Mass lb (kg)	Allowable Radial Load lb (N)	Allowable Thrust Load lb (N)	
02A□F4C	0.12 (3)	0.2 (5)		6.54 (166)	5.35 (136)	2.46 (62.5)	1.18 (30)	0.24 (6)	2.36 (60)	2.76 (70)	0.22 (5.5)	0.55 (14)	1.97 (50)	0.79 (20)	200 (0.27)	3.53 (1.6)	55 (245)	17 (74)	
04A□F4C				7.64 (194)	6.46 (164)	3.56 (90.5)										400 (0.53)			4.85 (2.2)
08A□F4C				9.04 (229.5)	7.46 (189.5)	4.37 (111)	1.57 (40)	0.31 (8)	3.15 (80)	3.54 (90)	0.28 (7)	0.64 (16)	2.76 (70)	1.18 (30)	750 (1.01)	9.48 (4.3)			88 (392)

Specified Tolerances				
Dimension	* ΦS		** ΦLB	
Unit	Diameter	Tolerance	Diameter	Tolerance
in	0.5512	+0.0000-0.0004	1.9685	+0 -0.0010
	0.6299	+0.0000-0.0004	2.7558	+0 -0.0012
mm	14.000	+0.000 -0.011	50.000	+0 -0.025
	16.000	+0.000 -0.011	70.00	+0 -0.03

Dimension Modifications for Motors with Optional Shaft Seal

SGMAH
Servomotors

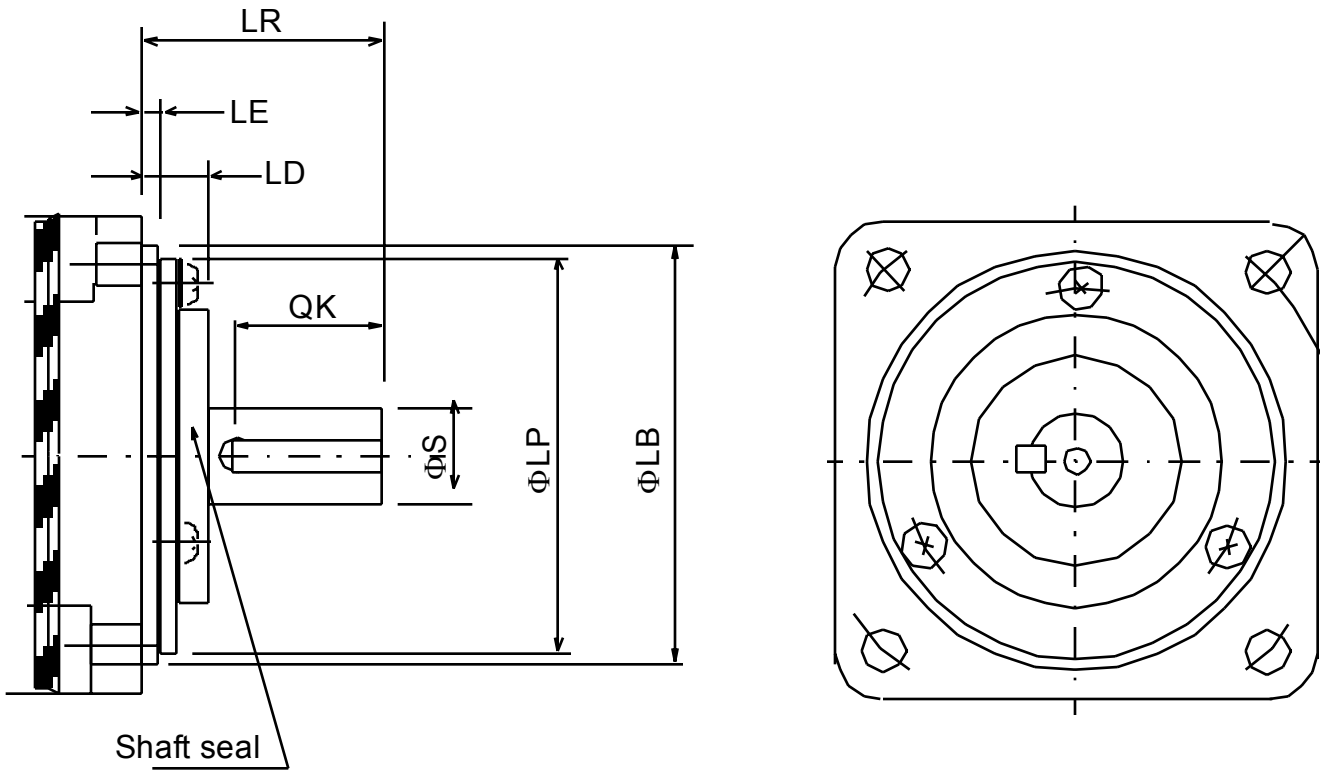
- 30W (0.04hp), 50W (0.07hp), 100W (0.13hp)



Type SGMAH-	QK	ΦLB*	ΦS*	LE	LR	LD	ΦLP
A3	0.55 (14)	1.18 (30)	0.236 (6)	0.10 (2.5)	0.98 (25)	0.30 (7.5)	1.14 (28)
A5							
01							

* Tolerances for diameters LB and S are the same as those for motors without shaft seals.

- 200W (0.27hp), 400W (0.53hp), 750W (1.01hp)



Type SGMAH-	QK	φLB*	φS*	LE	LR	LD	φLP
02	0.55 (14)	1.97 (50)	0.55 (14)	0.12 (3)	1.18 (30)	0.39 (10)	1.89 (48)
04							
08	0.98 (25)	2.76 (70)	0.63 (16)		1.57 (40)	0.43 (11)	2.60 (66)

* Tolerances for diameters LB and S are the same as those for motors without shaft seals.

Torque Reduction Factor for SGMAH motors equipped with a shaft seal:

Servo Motor Model	A3	A5	01	02	04	08
Torque Reduction Factor	70%	80%	90%	90%	95%	95%

For example: The SGMAH-A3 continuous and peak torque rating should be reduced to 70% of the listed catalog specification.