



## Low Voltage DC Brushless Servo Motor With Encoder Feedback

### Flange Size 40 Series Data List

SEMAL Series Specification		SEMAL4-A3A0A	SEMAL4-A5A0A	SEMAL4-01A0A
Power	W	30	50	100
Pole No.	Pole	8	8	8
Rated Torque	[N m]	0.10	0.16	0.32
Max. Torque	[N m]	0.29	0.48	0.95
Rated Speed	[rpm]	3,000	3,000	3,000
Max. Speed	[rpm]	5,000	5,000	5,000
Rated Current	[A]	1.07	1.20	1.38
Rated Voltage	[V]	38.10	45.80	52.20
No-load Current	[A]	0.11	0.08	0.09
Max. current	[A]	3.6	3.6	4.95
BEMF	V/Krpm	7.78	10.99	12.66
Inertia	[gf cm s <sup>2</sup> ]	0.0167	0.0245	0.0435
Phase Inductance	[mH]	4.270	4.391	3.366
Phase Resistance	[Ω]	5.845	5.577	3.443
Torque Constant	[Kgf cm/A]	1.010	1.450	2.525
Encoder Type	[P/r]	2,048	2,048	2,048

### Flange Size 40 Series Drawing

#### Plug Specification

Pin No.	color	Phase
1	red	U
2	white	V
3	black	W
4	green	GND

(Power connector Pin)

Pin No.	color	Phase
1	red	BK+
2	white	BK-

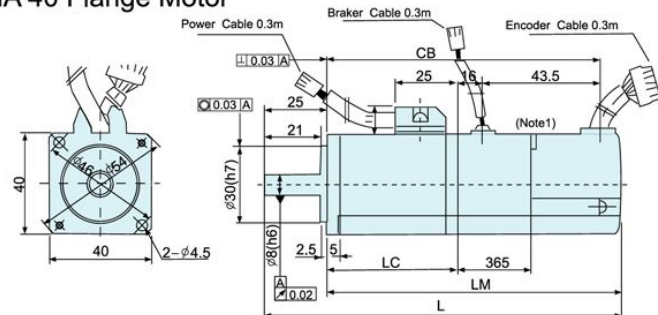
(Brake connector Pin)

Pin No.	Phase	Pin No.	Phase
1	A	9	V
2	Ā	10	V̄
3	B	11	W
4	B̄	12	W̄
5	Z	13	+5V
6	Z̄	14	0V
7	U	15	Shield
8	Ū		

(Encode connector Pin)



#### SEMA 40 Flange Motor



Model	Size				Wheight (kg)
	L	LM	LC	CB	
SEMA-01A	124.5(161)	99.5(136)	66.5	89.5(126)	0.5(0.85)

- Note:**
- Use DC24V as input power of motors with brakers.
  - Sizes in ( ) are for motors with brakers.
  - Please contact us if the chart for oilseal motor is needed, the sizes between oilseal motor and standard motor are different.



## Low Voltage DC Brushless Servo Motor With Encoder Feedback

### Flange Size 60 Series Data List

SEMAL Series Specification		SEMAL6-0101A0A	SEMAL6-02A0A	SEMAL6-03A0A	SEMAL6-04A0A
Power	W	100	200	300	400
Pole No.	Pole	8	8	8	8
Rated Torque	[N m]	0.32	0.64	0.80	1.27
Max.Torque	[N m]	0.95	1.91	1.99(250%)	3.82
Rated Speed	[rpm]	3,000	3,000	3,000	3,000
Max. Speed	[rpm]	5,000	5,000	5,000	5,000
Rated Current	[A]	1.65	1.63	2.04	2.89
Rated Voltage	[V]	48.7	98.8	98.8	96.2
No-load Current	[A]	0.10	0.10	0.10	0.12
Max.current	[A]	4.95	4.95	9.6	9.6
BEMF	V/Krpm	13.6	29.2	29.2	29.5
Inertia	[gf cm s <sup>2</sup> ]	0.116	0.186	0.186	0.328
Phase Inductance	[mH]	3.686	7.607	7.607	3.660
Phase Resistance	[Ω]	1.248	2.077	2.077	0.820
Torque Constant	[Kgf cm/A]	2.095	4.245	4.185	4.690
Encoder Type	[P/r]	3,000	3,000	3,000	3,000

### Flange Size 60 Series Drawing



#### Plug Specification



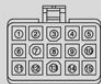
Pin No.	color	Phase
1	red	U
2	white	V
3	black	W
4	green	GND

(Power connector Pin)



Pin No.	color	Phase
1	red	BK+
2	white	BK-

(Brake connector Pin)



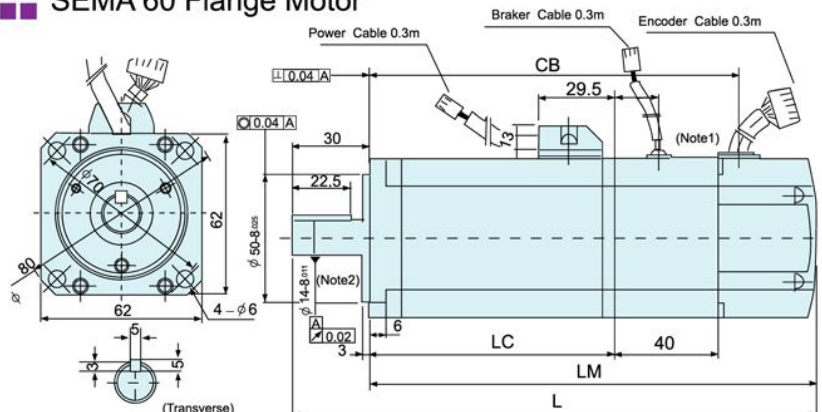
Pin No.	Phase	Pin No.	Phase
1	A	9	V
2	A̅	10	V̅
3	B	11	W
4	B̅	12	W̅
5	Z	13	+5V
6	Z̅	14	0V
7	U	15	Shield
8	U̅		

(Encode connector Pin)

#### Note:

- Use DC24V as input power of motors with brakers.
- Sizes in ( ) are for motors with brakers.
- Please contact us if the chart for oilseal motor is needed, the sizes between oilseal motor and standard motor are different.

#### SEMA 60 Flange Motor



Model	Size				Wheight (kg)
	L	LM	LC	CB	
SEMA-02A	136(176)	106(146)	66	73.5(113.5)	1.08(1.66)
SEMA-04A	164(204)	134(174)	94	101.5(141.5)	1.58(2.16)



## Low Voltage DC Brushless Servo Motor With Encoder Feedback

### 28VDC Series Data List

SEMA Series Specification		SEMA4-01A0A	SEMA6-02A0A	SEMA6-03A0A	SEMA8-05A0A
Power	W	100	200	300	500
Pole No.	Pole	8	8	8	8
Rated Torque	[N m]	0.32	0.64	0.95	1.59
Rated Speed	[rpm]	3,000	3,000	3,000	3,000
Rated Current	[A]	2.38	5.0	6.31	9.62
Rated Voltage	[V]	29.1	28.5	29.7	30.0
No-load Current	[A]	0.10	0.10	0.12	0.12
Inertia	[gf cm s <sup>2</sup> ]	0.0435	0.186	0.328	1.114
Phase Inductance	[mH]	2.132	1.316	0.742	0.660
Phase Resistance	[Ω]	2.556	0.400	0.181	0.251
Torque Constant	[Kgf cm/A]	1.424	1.326	1.574	1.709
Encoder Type	[P/r]	2,048	2,500	2,500	2,500

### Plug Specification

Pin No.	color	Phase
1	red	U
2	white	V
3	black	W
4	green	GND

(Power connector Pin)

Pin No.	color	Phase
1	red	BK+
2	white	BK-

(Brake connector Pin)

Pin No.	Phase	Pin No.	Phase
1	A	9	V
2	A	10	V
3	B	11	W
4	B	12	W
5	Z	13	+5V
6	Z	14	0V
7	U	15	Shield
8	U		

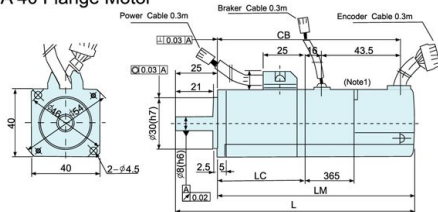
(Encode connector Pin)

#### Note:

1. Use DC24V as input power of motors with brakers.
2. Sizes in ( ) are for motors with brakers.
3. Please contact us if the chart for oilseal motor is needed, the sizes between oilseal motor and standard motor are different.

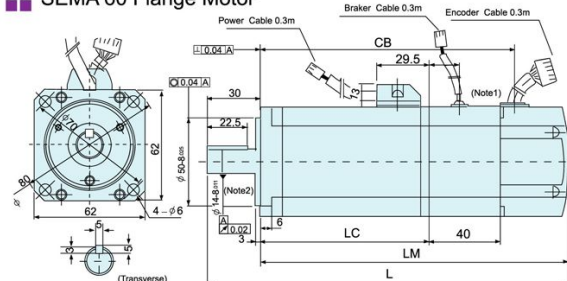


### SEMA 40 Flange Motor



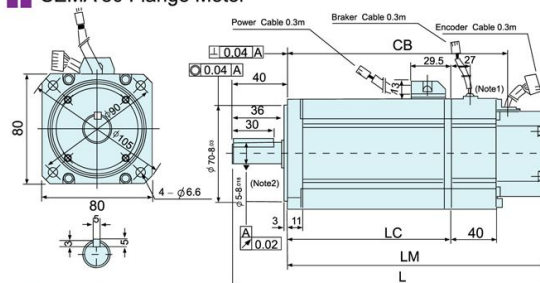
Model	Size				Wheight (kg)
	L	LM	LC	CB	
SEMA-01A	124.5(161)	99.5(136)	66.5	89.5(126)	0.5(0.85)

### SEMA 60 Flange Motor



Model	Size				Wheight (kg)
	L	LM	LC	CB	
SEMA-02A	136(176)	106(146)	66	73.5(113.5)	1.08(1.66)
SEMA-04A	164(204)	134(174)	94	101.5(141.5)	1.58(2.16)

### SEMA 80 Flange Motor



Model	Size					Wheight (kg)
	L	LM	LC	CB	S	
SEMA-06A	178(218)	138(178)	99	106.5(147)	16	2.52(3.56)

More High Power Low Voltage DC Brushless Servo Motor Information ,call our local engineer.