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**LMS**



**Induction Motor / Reversible Motor / Speed Variable Motor**

**Brake Motor / Speed Variable Brake Motor**

**LUSON**  
**Motion System Ltd.**



Made in Taiwan

# LMS

## About LMS

Luson Motion System Ltd. (LMS) introduces taiwan technology, a professional manufacturer of gear motors and reducers. The main products are miniature and Middle gear motors, all of which are under CE certification. We have accumulated experience in several decades to produce motors, and are devoted to develop new products to support domestic and international customers upon our high quality and service.

Luson Motion System Ltd. (LMS) utilizes advanced high-tech instruments and equipment, fulfilling quality control; moreover, satisfying demand and expectation from customers by means of our thoughtful, attentive, and quick reactive service. Our professional team group is going to be sustainable operation toward international service and sales around the world.



## Index

- 03 [Standard regulation of motor](#)
- 04 [Article-K series](#)
- 05 [AC motor \(IK/RK\)](#)
- 06 [Motor with terminal box](#)
- 07 [Speed variable motor](#)
- 08 [Brake motor](#)
- 09 [Clutch brake motor](#)
- 10 [Alloy worm motor](#)
- 11 [Torque motor](#)
- 13 [Motor with reducer](#)
- 15 [Reducer](#)
- 16 [Middle reducer](#)
- 17 [Speed controller](#)
- 18 [Wiring diagram](#)
- 21 [List of motor specifications](#)
- 25 [Permissible torque when motor plug-in](#)
- 26 [Article-L series](#)
- 27 [LH Horizontal aluminum alloy motor shell](#)
- 28 [LV Vertical aluminum alloy motor shell](#)

AC motor (IK/RK)

p5



Speed variable motor

p7



Brake motor

p8



Controller

p19



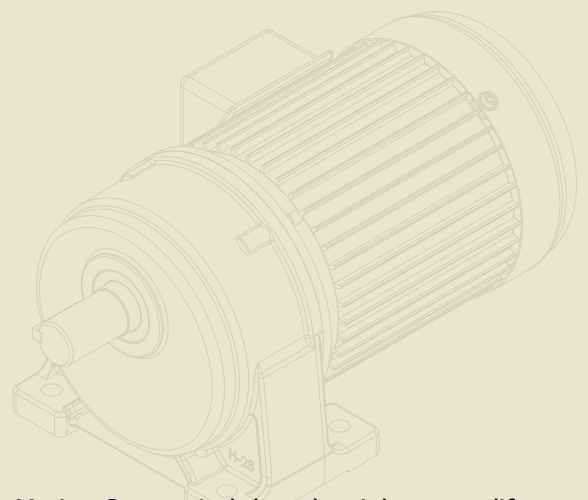
LH horizontal aluminum alloy motor shell

p29



LV vertical aluminum alloy motor shell

p30



Luson Motion System Ltd. has the right to modify product designing, please contact us to request the latest specifications.

# Standard Regulation of Motor

Item	Three phase alternating current motor	Single phase alternating current motor
Ingress protection	IP-23	
Motor case	Aluminum	
Initialization mode	Start directly	Capacitor-start Capacitor-start + Centrifugal switch
Rated time	Induction	
Insulation	F class	
Environment	Temperature 0°C~ 40°C(no freeze)	
	Humidity 85% below (freeze prevent)	
Pole	2P, 4P	
Altitude	Below the altitude of 1000m	
Install environmental limitation	Should be installed in indoor area	
	Do not close to easy-explosive and flammable place.	
	Avoid illumination, water, oil or other liquids.	
	Avoid continuous vibration or hit.	
	Less salty environment.	
	Avoid electromagnetic interference.	
	Not being in the radiate, magnetic or vacuum area.	

## Operation Tips /

1. Installation, movement, and motor-check are prohibited while motor is electrified.
2. Do not touch motor directly or grounded while installing, or staff may get electric shock.
3. Cut the power off immediately while abnormal situation happened, or it is possible to get electric shock or hurt, even the fire could happen.
4. Cut the power off when power failure, otherwise after power is back on, human or device could be hurt, if the motor start abruptly.
5. After cutting the power off, do not touch capacitor terminal within 30 seconds, or it is possible to get electric shock due to remaining current.
6. Do not overload, otherwise electric shock, human hurt or device damage could be happened.
7. Do not touch rotating parts (output shaft, heat sink fan.etc..) while the motor is running.

## Indication of Motor

4 IK 25 GN - A M					
Dimension	Type	Output	Shaft	Voltage & Pole	Accessory
2 : 60mm 3 : 70mm 4 : 80mm 5 : 90mm	IK: Induction TK: Torque RK: Reversible  * Reversible * Time for terminating is shorter. * 30 mins rated time limited	6 : 6W 15 : 15W 25 : 25W 40 : 40W 60 : 60W 90 : 90W 120 : 120W 150 : 150W (3Ø) 180 : 180W(2P)	A : Round Shaft A(K): Round Shaft with keyway AK: Worm gear GN: Pinion Cut Shaft GU: Enhanced Pinion Cut Shaft (60-150W) GA: Alloy Worm GS: Spur Clutch Brake (Thick) (40-120W) Note: Add "R" means speed variable motor.	A : 1Ø110V4P B : 1Ø110V2P C : 1Ø220V4P CE : 1Ø240V4P(50Hz) D : 1Ø220V2P S : 3Ø220V4P T : 3Ø220V2P U : 3Ø380V4P X : 3Ø400/460V4P Y : 3Ø220/380V4P Y1 : 3Ø230/460V4P Y2 : 3Ø240/480V4P Y3 : 3Ø208/415V4P Y4 : 3Ø220/440V4P (2P: High Speed) (4P: Low Speed)	F: Fan M: Power off Brakes MB: Power on Brakes P : Thermal Switch T : Terminal Box (55*55) FF: Forced Fan

## Indication of Reducer

4 GN 100 K			
Dimension	Type	Ratio	Bearing Type
2 : 60mm 3 : 70mm 4 : 80mm 5 : 90mm	GN : Pinion Cut Shaft GU : Enhanced Pinion Cut Shaft (60~150W) GA : Alloy Worm	100 : 1/100 10XK : Middle Reducer	GN { K : Standard model+ Ball Bearing B : Standard model+ Balls only for output shaft rest are metal.  GU { K : Ear+ Ball Bearing KB : Standard model+ Ball Bearing

## Indication of Combined Motor

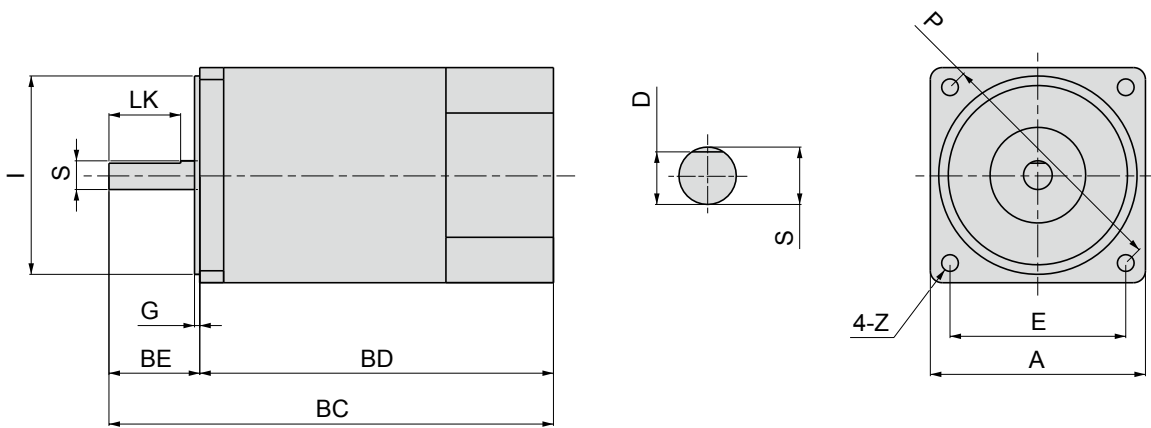
M 5 40 - 0 0 1 FF - (K)							
Model	Dimension	Output	Shaft	Type	Voltage	Accessory	Other
M: Speed Variable Motor (without controller)	2 : 60mm 3 : 70mm 4 : 80mm 5 : 90mm	6 : 6W 15 : 15W 25 : 25W 40 : 40W 60 : 60W 90 : 90W 120 : 120W 150 : 150W	0 : Round Shaft 4 : GN 5 : GU 6 : GS 7 : GA	0 : Induction 1 : Reversible  * Reversible * Time for terminating is shorter. * 30 mins rated time limited.	1 : 1Ø110V 2 : 1Ø220V 2E : 1Ø220~240V /50Hz	M : Power off Brakes MB : Power on Brakes F : Fan FF : Forced Fan 2P : 2P 4P : 4P	(K): Keyway AK: Worm gear

□ 120W above: 30 mins rated time limited.

\* Please contact us while the motor is running under the low temperature environment.

# AC Motor(IK/RK)

IK motor is suitable for application of operating continuously.  
 RK motor is suitable for application of reversing its direction repeatedly (30 mins rated time limited).



## Dimension (mm)

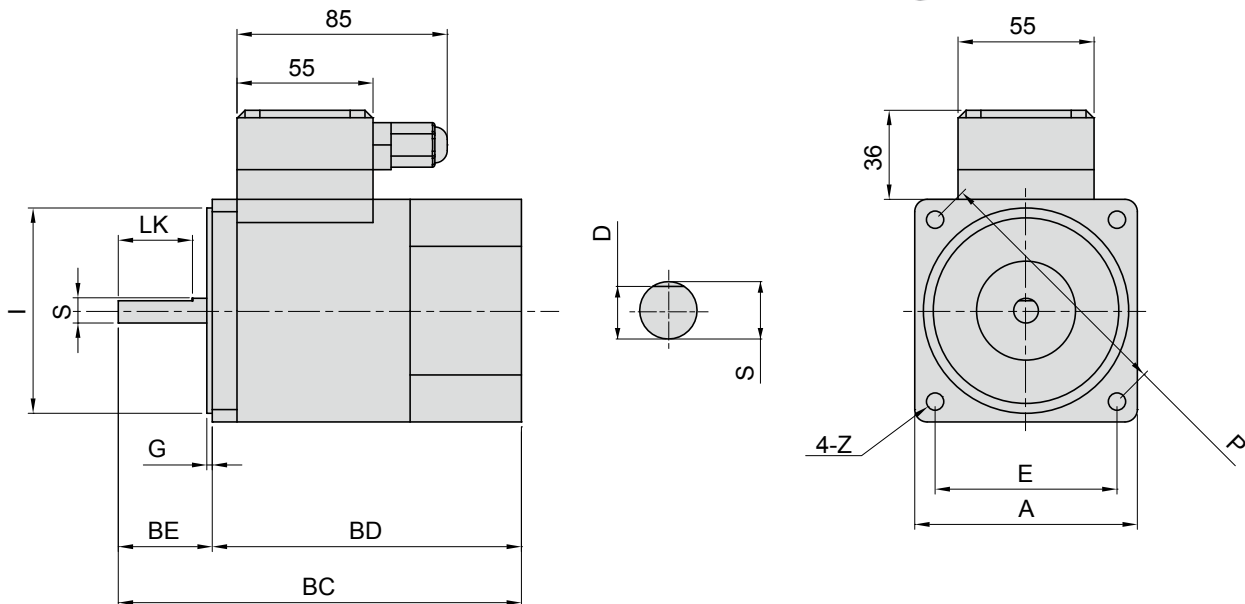
Model	Output (w)	A	BC	BD	BE	I	G	P	Z	E	Output Shaft			Weight (KG)
											LK	S	D	
2	6W	60	100	76	24	54	2.2	70	5	49.5	18	6	5.2	0.8
3	15W	70	112	80	32	64	2.2	82	6	58	25	6	5.2	1.1
4	25W	80	118	86	32	73	2.2	94	7	66.5	25	8	7	1.5
5	40W	90	144	106	38	83	2.2	104	7	73.6	30	10	9	2.4
	60W	90	163	125	38	83	2.2	104	7	73.6	30	12	11	2.5
	90W	90	186	148	38	83	2.2	104	7	73.6	30	12	11	3.3
	120W	90	186	148	38	83	2.2	104	7	73.6	30	12	11	3.3
	150W	90	186	148	38	83	2.2	104	7	73.6	30	12	11	3.3

□ 120W above: 30 mins rated time limited.

**"Rated Time limited" means motor must be cooled down after 30mins continuous running. Otherwise, motor is possible to be damaged.**

# Motor with Terminal Box

Conforms to Europe safety standards, IP54 are available to be ordered.



## Dimension (mm)

Model	Output (w)	A	BC	BD	BE	I	G	P	Z	E	Output Shaft			Weight (KG)
											LK	S	D	
2	6W	60	100	76	24	54	2.2	70	5	49.5	18	6	5.2	1.02
3	15W	70	112	80	32	64	2.2	82	6	58	25	6	5.2	1.38
4	25W	80	118	86	32	73	2.2	94	7	66.5	25	8	7	1.6
5	40W	90	144	106	38	83	2.2	104	7	73.6	30	10	9	2.78
	60W	90	163	125	38	83	2.2	104	7	73.6	30	12	11	2.78
	90W	90	186	148	38	83	2.2	104	7	73.6	30	12	11	3.65
	120W	90	186	148	38	83	2.2	104	7	73.6	30	12	11	3.65
	150W	90	186	148	38	83	2.2	104	7	73.6	30	12	11	3.65

□ 120W above: 30 mins rated time limited.

\* Reversible motor: 30 mins rated time limited.



# Speed Variable Motor

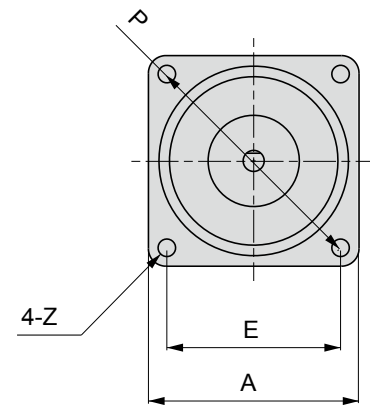
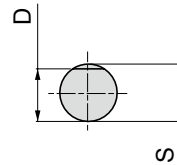
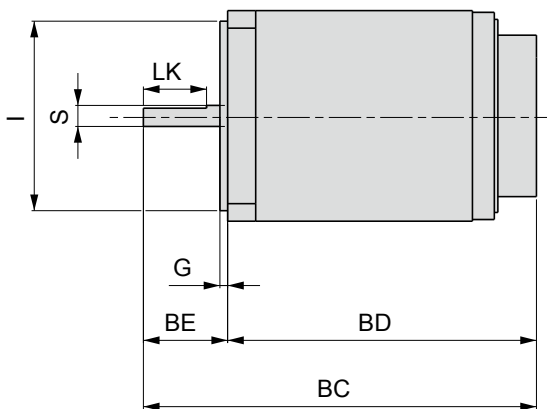
Continuous variable transmission is suitable for operation of speed control with single phase motor. Speed control range:

90-1350 rpm/min (50Hz)

90-1600 rpm/min (60Hz)

Note 1: Three-phase motor is requested to cooperate with inverter.

Note 2: Speed control range is restricted to no-loading circumstance.



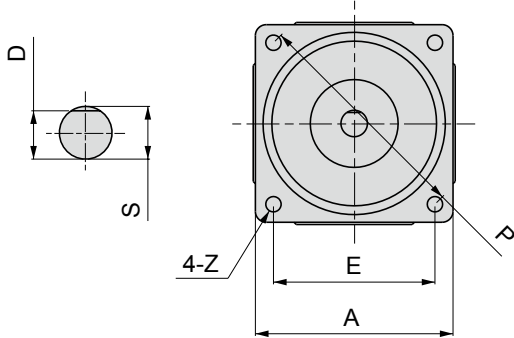
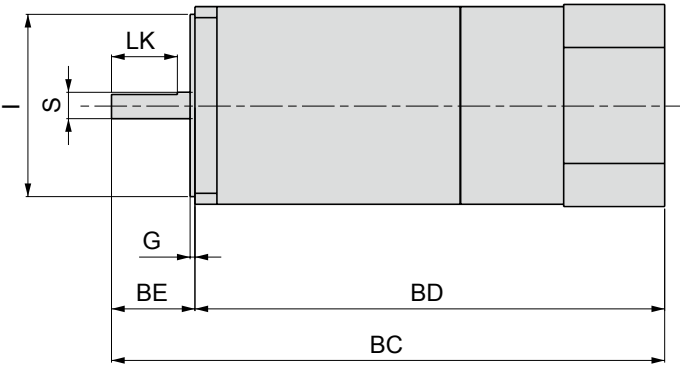
Dimension (mm)

Model	Output (w)	A	BC	BD	BE	I	G	P	Z	E	Output Shaft			Weight (KG)
											LK	S	D	
2	6W	60	112	88	24	54	2.2	70	5	49.5	18	6	5.2	0.9
3	15W	70	124	92	32	64	2.2	82	6	58	25	6	5.2	1.6
4	25W	80	130	98	32	73	2.2	94	7	66.5	25	8	7	2.5
5	40W	90	156	118	38	83	2.2	104	7	73.6	30	10	9	2.6
	60W	90	175	137	38	83	2.2	104	7	73.6	30	12	11	3.4
	90W	90	200	162	38	83	2.2	104	7	73.6	30	12	11	3.4
	120W	90	200	162	38	83	2.2	104	7	73.6	30	12	11	3.4
	150W	90	200	162	38	83	2.2	104	7	73.6	30	12	11	3.4

\* Reversible motor: 30 mins rated time limited.

# Brake Motor

Suitable for applications where the load must always be held in place. Power off activates electromagnetic brake for load holding. Apply for vertical lifting system.



## Dimension (mm)

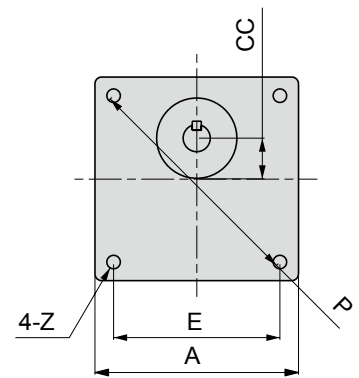
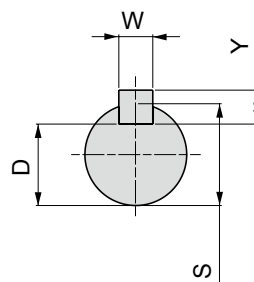
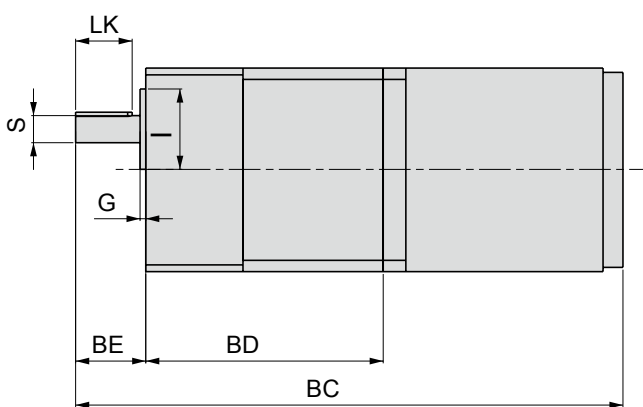
Model	Output (w)	A	BC	BD	BE	I	G	P	Z	E	Output Shaft			Weight (KG)
											LK	S	D	
2	6W	60	152.5	128.5	24	54	2.2	70	5	49.5	18	6	5.2	1
3	15W	70	164.2	132.2	32	64	2.2	82	6	58	25	6	5.2	1.5
4	25W	80	169.2	137.2	32	73	2.2	94	7	66.5	25	8	7	2
5	40W	90	200.5	162.5	38	83	2.2	104	7	73.6	30	10	9	3
	60W	90	226.5	188.5	38	83	2.2	104	7	73.6	30	12	11	3.3
	90W	90	251.9	213.9	38	83	2.2	104	7	73.6	30	12	11	4
	120W	90	251.9	213.9	38	83	2.2	104	7	73.6	30	12	11	4

□ 120W above: 30 mins rated time limited.

\* Reversible motor: 30 mins rated time limited.

# Clutch Brake Motor

Precisely position.  
Idea for high-frequency starting and stopping.



## Dimension (mm)

Model	Output (w)		A	BC	BD	BE	I	G	P	Z	E	CC	Output Shaft			Weight (KG)
													S	D	WxYxLK	
5	40W (GN)	3~18R	90	246	105	35	34	2.2	104	M6	73.6	18	12	9.5	4x4x25	5.52
		20~180R	90	262	121	35	34	2.2	104	M6	73.6	18	12	9.5	4x4x25	5.54
	60W (GN)	3~18R	90	265	105	35	34	2.2	104	M6	73.6	18	12	9.5	4x4x25	5.52
		20~180R	90	281	121	35	34	2.2	104	M6	73.6	18	12	9.5	4x4x25	5.54
	60W(GU)	90	287	127	35	34	2.2	104	M6	73.6	18	15	12	5x5x25	5.54	
	90W(GU)	90	313	127	38	34	2.2	104	M6	73.6	18	15	12	5x5x25	6.39	
	120W(GU)	90	313	127	38	34	2.2	104	M6	73.6	18	15	12	5x5x25	6.39	

\* Reversible motor: 30 mins rated time limited.

□ 120W above: 30 mins rated time limited.

# Alloy Worm Motor

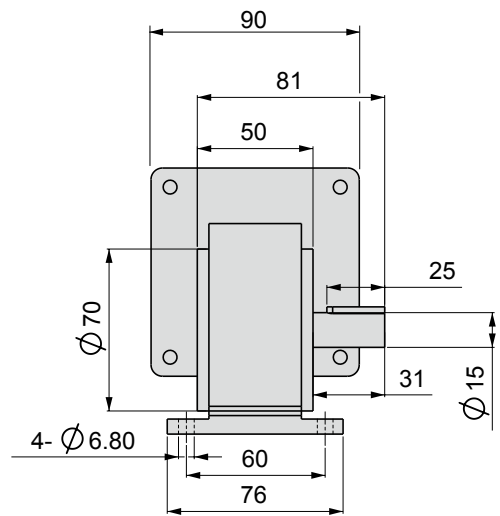
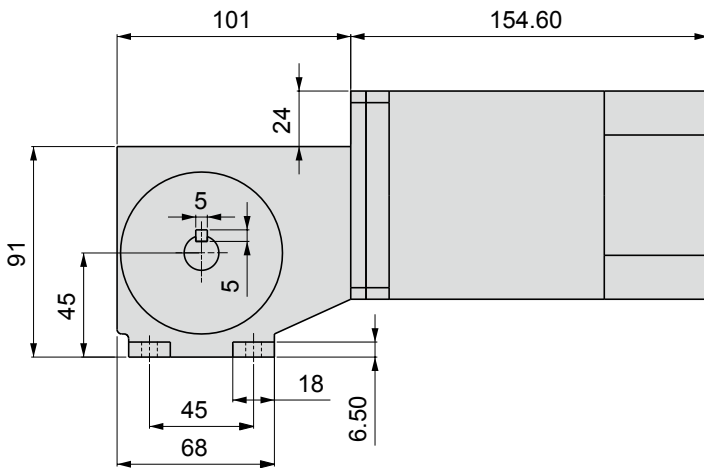
**L**



**D**



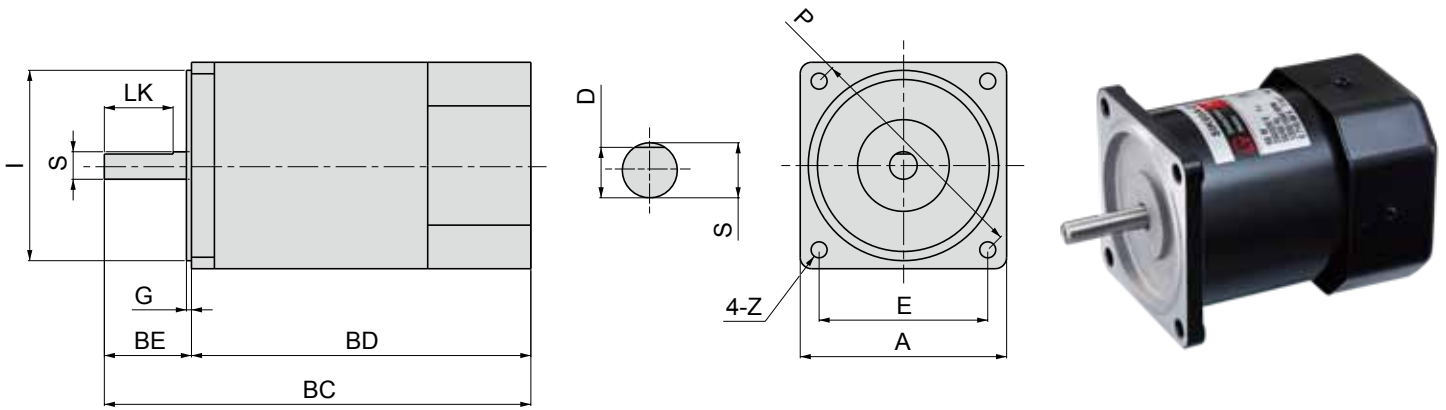
**R**



## Standard Specification

Item	Standard Specification
Ratio	5, 10, 15, 20, 30, 40, 50, 60 etc. ( 90W R30 above only for light loading)
Efficiency	36-70% (Vary by reducer ratio)
Maintenance	R25 above: 50Kgcm
Over-Hanging Load	40/60W:40Kg
Thrust Load	40/60/90:15Kg
Ambient Temperature	0°C~+40°C
Ambient humidity	Below 85% (No Mist)
Shaft Direction	R : Right Shaft L : Left Shaft D : Double Output Shaft

# Torque Motor



## Dimension (mm)

Model	A	BC	BD	BE	I	G	P	Z	E	Output Shaft			Weight (KG)
										LK	S	D	
2TK3A(GN)-A	60	100	76	24	54	2.5	70	5	49.5	18	6	5.2	0.96
3TK6A(GN)-A	70	112	80	32	64	2.5	82	6	58	25	6	5.2	1.32
4TK10A(GN)-A	80	118	86	32	73	2.5	94	7	66.5	25	8	7	1.54
5TK20A(GN)-A	90	144	106	38	83	3	104	7	73.6	30	10	9	2.72
	90	163	125	38	83	3	104	7	73.6	30	12	11	2.72
5TK40A(GN/GU)-AF	90	186	148	38	83	3	104	7	73.6	30	12	11	3.59

## ■ Motors of features

1. Torque motor is a specialized form of induction motor which is capable of operating indefinitely while stalled. 60V for operating indefinitely; 60V above for short-time operating; 100V only for 5 minutes operating.

Torque will be enhanced while stalled, however over mechanical enduring torque and hard hit stop are prohibited.

2. A common application of a torque motor would be the supply-and take-up reel motor in a tape drive. Motors allow a relatively constant light tension to be applied to the tape.

## ■ Types of torque motors

1. Inside torque motor(controller is included)  
Voltage adjust controller is equipped inside terminal box.
2. Torque motor(controller is not included)  
Voltage adjust controller is equipped outside of motor.

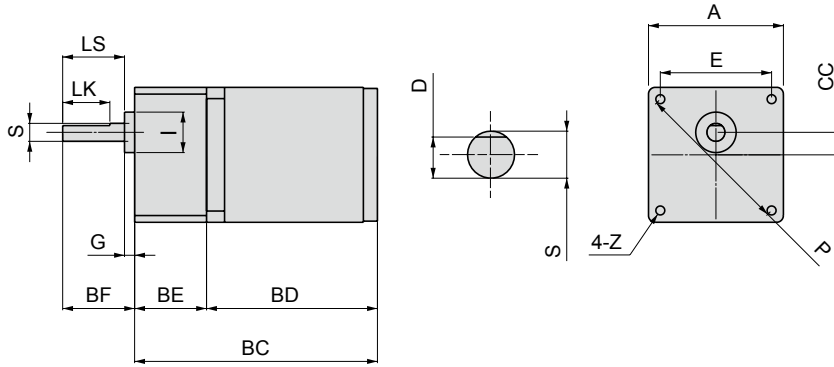
## Standard Specification

Motor Type	Operating Time	Output (W)	Voltage (V)	Frequency (HZ)	Rated RPM (rpm)	Starting Torque (Kgcm)	Rated Torque (Kgcm)	Rated Current (A)	Capacitor Capacity (μF)
2TK3A(GN)-A	5 mins/ Indefinite	3/1	110/60	50	750	0.7/0.25	0.39/0.13	0.49/0.3	7
		3.5/1.2	110/60	60	900	0.7/0.25	0.38/0.13	0.49/0.3	7
3TK6A(GN)-A	5 mins/ Indefinite	6/2.5	110/60	50	750	1.4/0.55	0.78/0.32	0.72/0.48	10
		7.5/2.7	110/60	60	900	1.4/0.45	0.82/0.29	0.72/0.48	8
4TK10A(GN)-A	5 mins/ Indefinite	10/3.5	110/60	50	750	2.2/0.75	1.30/0.46	0.91/0.55	12
		12/3.5	110/60	60	900	2.1/0.7	1.30/0.38	0.91/0.55	8
5TK20A(GN)-A	5 mins/ Indefinite	20/6	110/60	50	750	3.5/1.1	2.6/0.78	1.22/0.76	15
		20/6	110/60	60	900	3.0/1.0	2.2/0.65	1.22/0.76	12
5TK40A(GN/GU)-AF	5 mins/ Indefinite	40/14	110/60	50	750	7.6/3.2	5.2/1.85	1.7/1	40
		40/14	110/60	60	900	6.3/2.3	4.4/1.55	1.7/1	25
2TK3A(GN)-C	5 mins/ Indefinite	3/1	220/110	50	750	0.7/0.25	0.39/0.13	0.23/0.15	1.5
		3.5/1.2	220/110	60	900	0.7/0.25	0.38/0.13	0.25/0.16	1.5
3TK6A(GN)-C	5 mins/ Indefinite	6/2.5	220/110	50	750	1.4/0.55	0.78/0.32	0.4/0.22	2
		7.5/2.7	220/110	60	900	1.4/0.45	0.82/0.29	0.4/0.25	2
4TK10A(GN)-C	5 mins/ Indefinite	10/3.5	220/110	50	750	2.2/0.75	1.30/0.46	0.47/0.27	2
		12/3.5	220/110	60	900	2.1/0.7	1.30/0.38	0.51/0.31	2
5TK20A(GN)-C	5 mins/ Indefinite	20/6	220/110	50	750	3.5/1.1	2.6/0.78	0.74/0.4	3
		20/6	220/110	60	900	3.0/1.0	2.2/0.65	0.72/0.39	3
5TK40A(GN/GU)-CF	5 mins/ Indefinite	40/14	220/110	50	750	7.6/3.2	5.2/1.85	1.1/0.6	6
		40/14	220/110	60	900	6.3/2.3	4.4/1.55	1.08/0.55	6

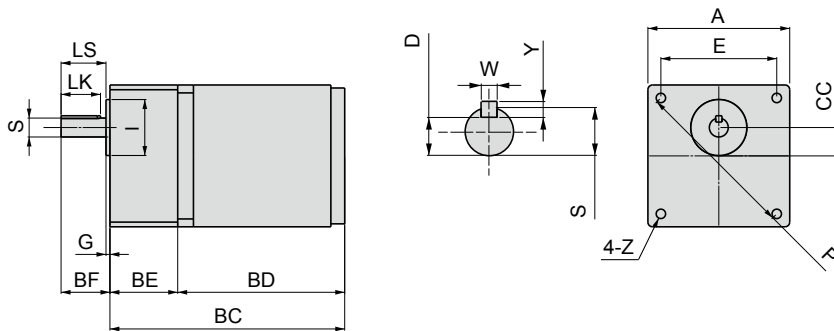
- Add "R" means torque motor with voltage adjust controller.
- Voltage : 110/60 (Supply voltage is 110V, however adjusting to 110V by VR for 5 mins operating, to 60V below for indefinite operating.)  
Voltage : 220/110 (Supply voltage is 220V, however adjusting to 220V by VR for 5 mins operating, to 110V below for indefinite operating.)

# Motor with Reducer

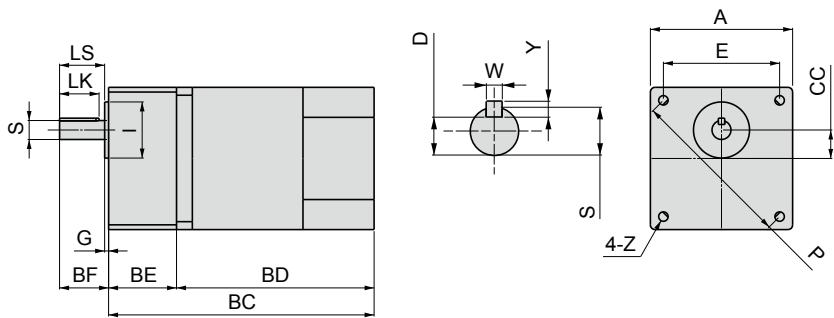
6W



15W-40W



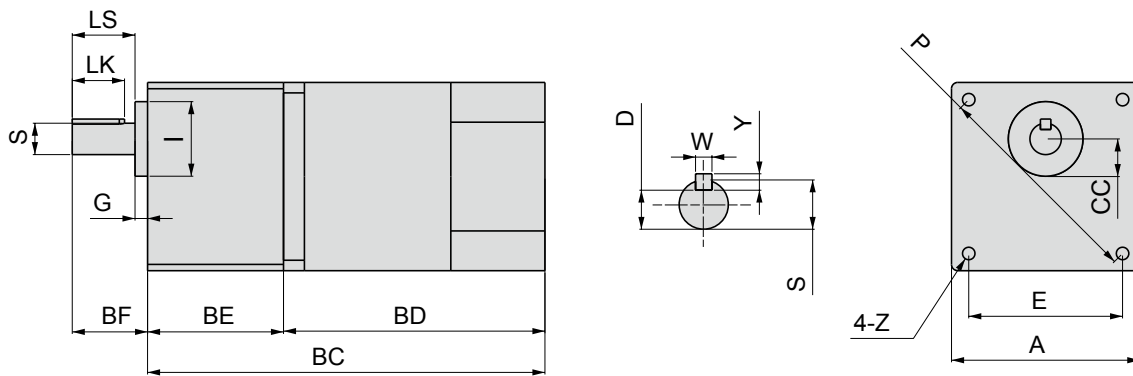
60W



## Dimension (mm)

Model	Output (w)	Ratio	A	BC	BE	BD	BF	CC	I	G	P	Z	E	Output Shaft			
														LS	S	D	WxYxLK
2	6W (GN)	3~18	60	108	32	76	32	10	18	4.5	70	M4	49.5	27	8	7	--
		20~180		118	42												
3	15W (GN)	3~18	70	112	32	80	32	15	30	2	82	M5	58	27	10	7.5	4x4x25
		20~180		122	42												
4	25W (GN)	3~18	80	122	36	86	32	15	34	2.5	94	M5	66.5	28	10	7.5	4x4x25
		20~180		136	50												
5	40W (GN)	3~18	90	149	43	106	32	18	34	2.5	104	M6	73.6	30	12	9.5	4x4x25
		20~180		165	59												
	60W (GN)	3~18	90	168	43	125	32	18	34	2.5	104	M6	73.6	30	12	9.5	4x4x25
		20~180		184	59												

# Motor with Reducer



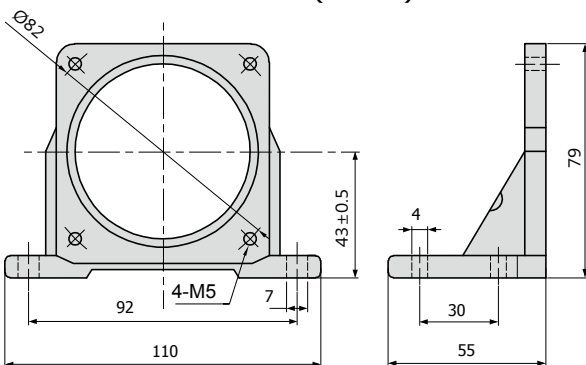
## Dimension (mm)

Model	Output (w)	A	BC	BE	BD	BF	CC	I	G	P	Z	E	Output Shaft			
													LS	S	D	WxYxLK
5 (GU)	60W	90	190	65	125	36	18	34	6	104	M6	73.6	30	15	12	5x5x25
	90W	90	213	65	148	36	18	34	6	104	M6	73.6	30	15	12	5x5x25
	120W	90	213	65	148	36	18	34	6	104	M6	73.6	30	15	12	5x5x25
	150W	90	213	65	148	36	18	34	6	104	M6	73.6	30	15	12	5x5x25

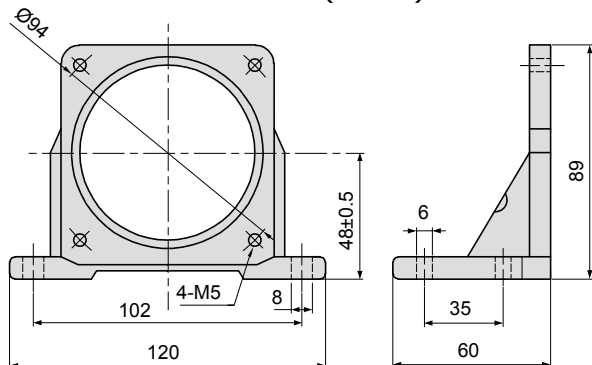
□ 120W above: 30 mins rated time limited.

## L Stand

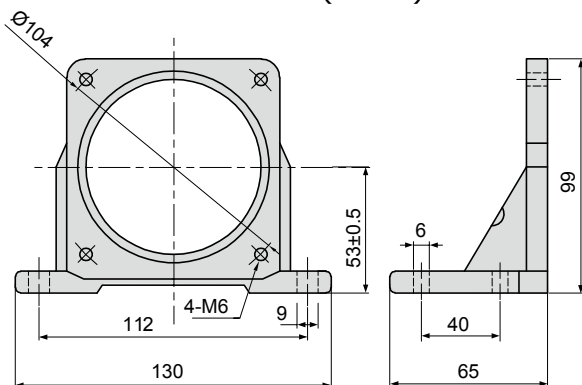
PAL-3N (70mm)



PAL-4N (80mm)

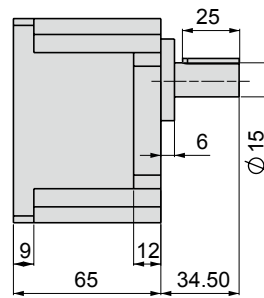
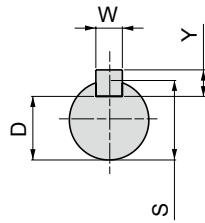
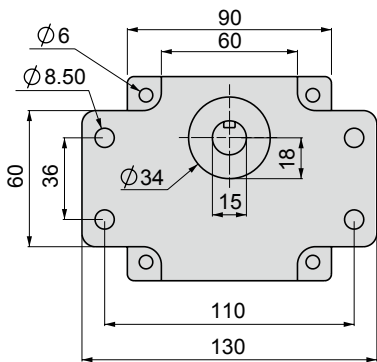


PAL-5N (90mm)

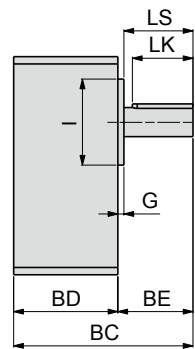
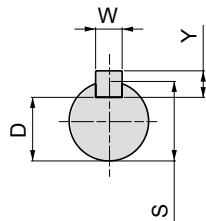
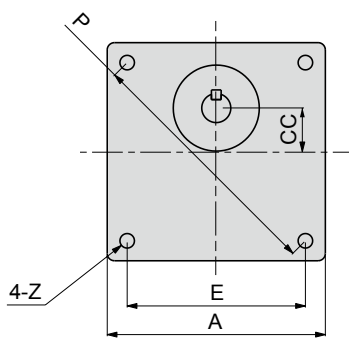




# Reducer



With Ear(GU Option)



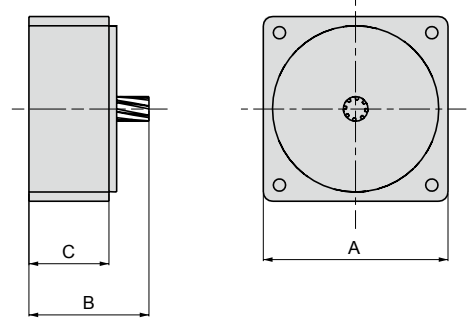
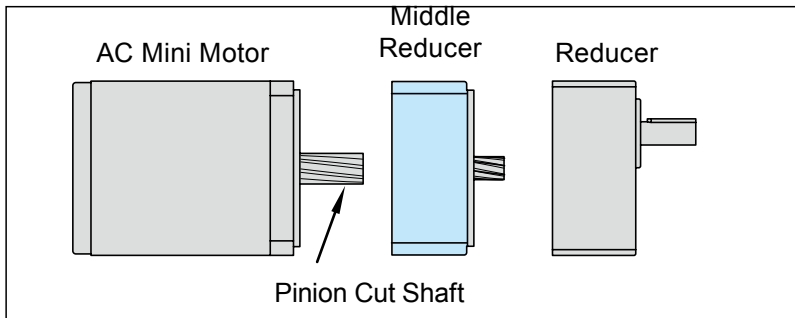
Standard model

## Dimension (mm)

Model	Output (w)	Ratio	A	BC	BD	BE	CC	I	G	P	Z	E	Output Shaft				Weight (KG)
													LS	S	D	WxYxLK	
2	6W (GN)	3~18	60	64	32	32	10	18	4.5	70	M4	49.5	27.5	8	7	--	0.34
		20~180		74	42												0.39
3	15W (GN)	3~18	70	64	32	32	15	30	2	82	M5	58	30	10	7.5	4x4x25	0.52
		20~180		74	42												0.58
4	25W (GN)	3~18	80	68	36	32	15	34	2.5	94	M5	66.5	29.5	10	7.5	4x4x25	0.66
		20~180		82	50												0.81
5	40W (GN)	3~18	90	74	43	32	18	34	2.5	104	M6	73.6	28.5	12	9.5	4x4x25	1.2
		20~180		90	59												1.4
	60W (GN)	3~18	90	74	43	32	18	34	2.5	104	M6	73.6	28.5	12	9.5	4x4x25	1.2
		20~180		90	59												1.4
	60W (GU)	3~18	90	101	65	36	18	34	6	104	M6	73.6	30	15	12	5x5x25	1.2
		20~180		90	65												1.4
	90W (GU)	3~18	90	101	65	36	18	34	6	104	M6	73.6	30	15	12	5x5x25	1.2
		20~180		90	65												1.4
120W (GU)	3~18	90	101	65	36	18	34	6	104	M6	73.6	30	15	12	5x5x25	1.2	
	20~180		90	65												1.4	
150W (GU)	3~18	90	101	65	36	18	34	6	104	M6	73.6	30	15	12	5x5x25	1.2	
	20~180		90	65												1.4	

## 1:10

If reducer can not provide enough ratio, it could be considered to add one or more reducer to get preferable ratio.



### Standard Specification

Item	Standard Specification
Ratio	1 : 10 Middle Reducer
Type	6W, 15W, 25W, 40W, 60W, 90W, GN, GU etc.

### Dimension (mm)

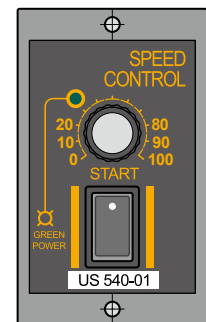
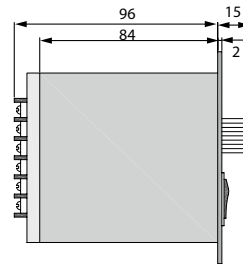
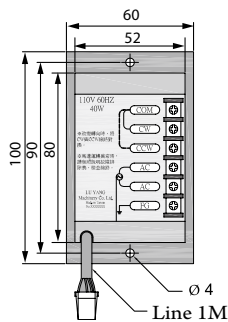
Model	Output (w)	A	B	C
2	6W	60	39	26
3	15W	70	39	26
4	25W	80	39	26
5	GN 40W~60W	90	59	40
	GU 60W~150W	90	59	40

# Combinated Speed Controller

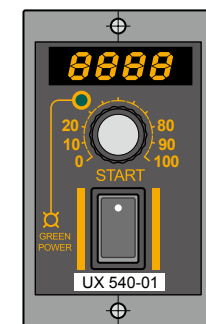
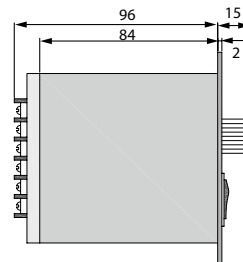
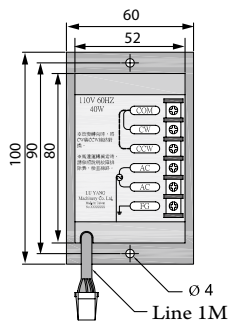
## Indication of Combinated Speed Controller

	<b>US</b>	<b>315</b>	<b>-0</b>	<b>2</b>	<b>SA</b>	
<b>Model</b>	<b>Output identification</b>		<b>Type</b>	<b>Voltage</b>		<b>Other</b>
US Combinated Speed Controller UX Digital Speed Controller	206 : 6W 315 : 15W 425 : 25W 540 : 40W 560 : 60W 590 : 90W 5120 : 120W		0 : Induction 1 : Reversible	1 : 1Ø110V 2 : 1Ø220~240V		SA : Slow Accelerate SD : Slow Decelerate A: Enhanced Capacitor E : 50Hz

## US Combinated Speed Controller

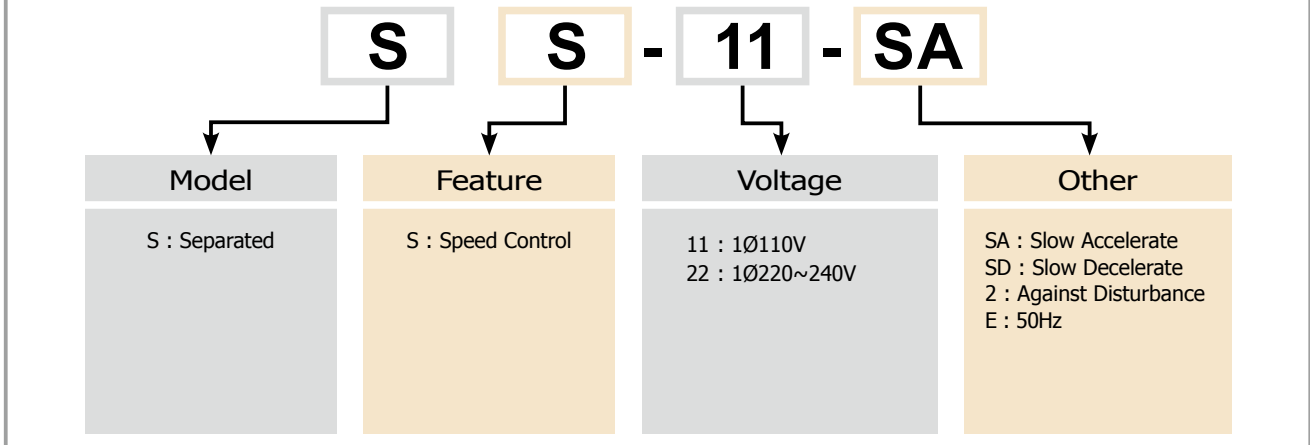


## UX Combinated Digital Speed Controller

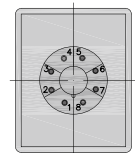
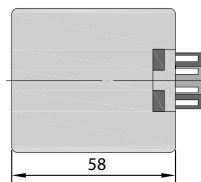
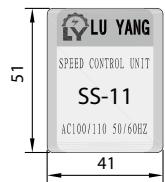


Model	Voltage (V)	Frequency (Hz)	Rated Current (A)	Output (W)	Speed Range	Speed Rate of Change (%)	Velocity Reaction	Electronic Brake	Velocity Safety	Ambient Condition
US01	110V±10	50 / 60	5	6-120	90~1400 / 90~1600	5%	0.5 Sec.	--	great	-10°C~+50°C
US02	220V±10									

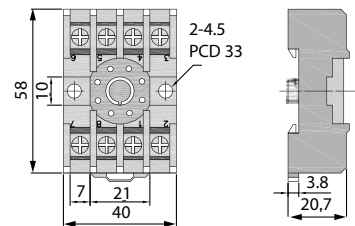
## Indication of Separated Speed Controller



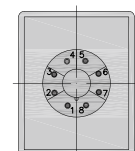
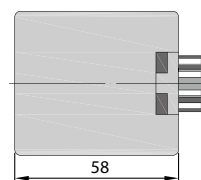
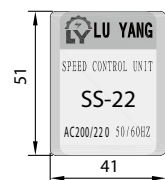
## SS-11 Separated Speed Controller



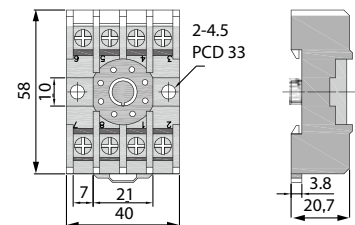
■ Controller Foot Place



## SS-22 Separated Speed Controller



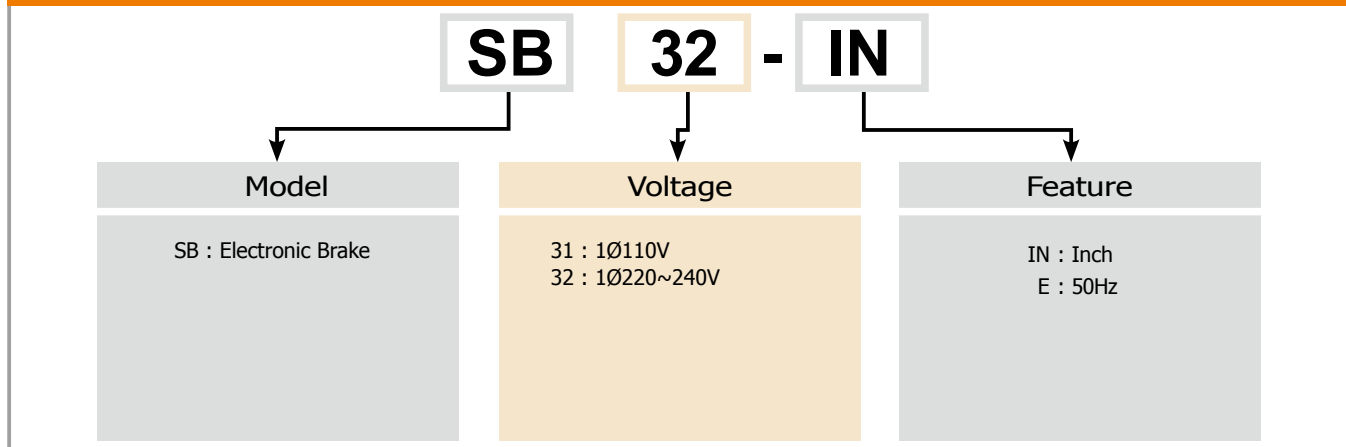
■ Controller Foot Place



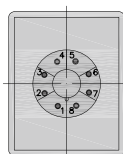
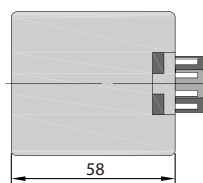
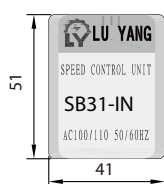
Model	Voltage (V)	Frequency (Hz)	Rated Current (A)	Output (W)	Speed Range	Speed Rate of Change (%)	Velocity Reaction	Electronic Brake	Velocity Safety	Ambient Condition
SS11	110V±10	50 / 60	5	6-120	90~1400 / 90~1600	5%	0.5 Sec.	--	great	-10°C~+50°C
SS22	220V±10									

# Electronic Instantaneous Brake

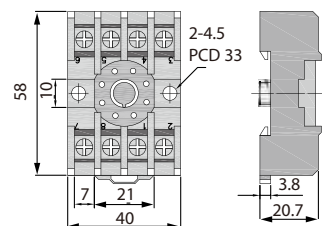
## Indication of Electronic Instantaneous Brake



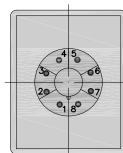
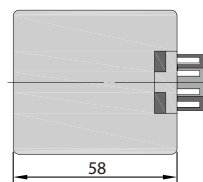
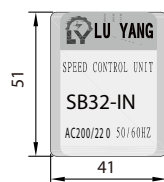
## SB31-IN Electronic Instantaneous Brake



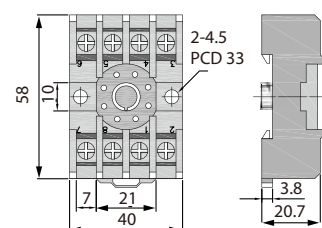
■ Controller Foot Place



## SB32-IN Electronic Instantaneous Brake



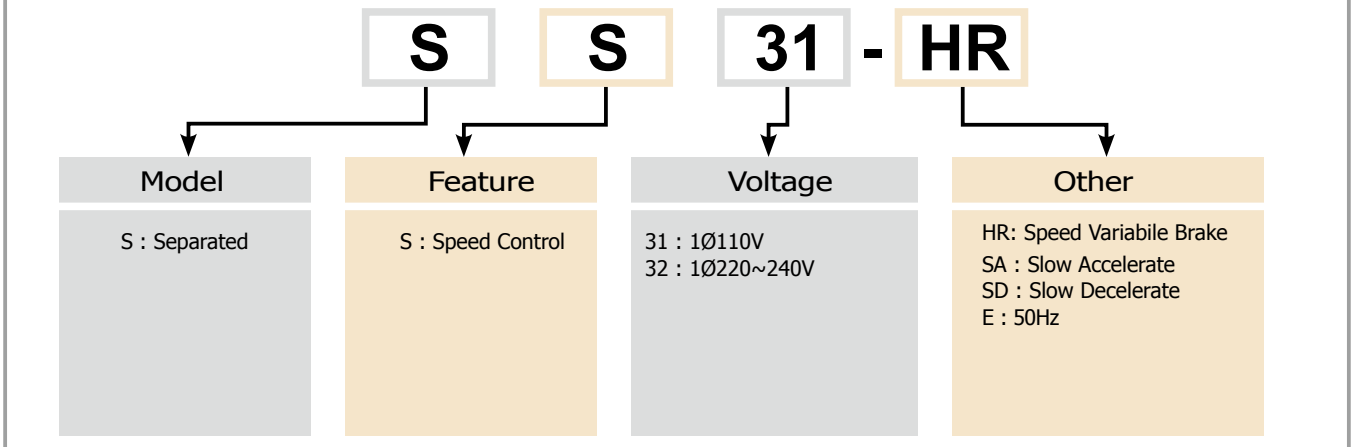
■ Controller Foot Place



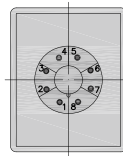
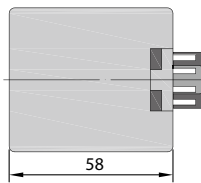
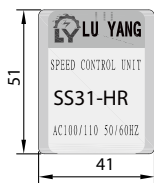
Model	Voltage (V)	Frequency (Hz)	Rated Current (A)	Output (W)	Speed Range	Speed Rate of Change (%)	Velocity Reaction	Electronic Brake	Velocity Safety	Ambient Condition
SB31	110V±10	50 / 60	5	6-120	90~1400 / 90~1600	5%	0.5 Sec.	good	great	-10°C~+50°C
SB32	220V±10	50 / 60	5	6-120	90~1400 / 90~1600	5%	0.5 Sec.	good	great	-10°C~+50°C

# Separated Speed Variable Brake

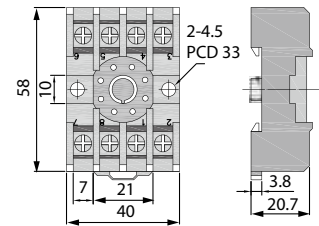
## Indication of Separated Speed Variable Brake



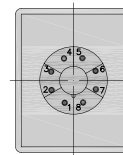
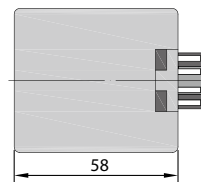
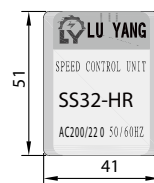
## SS31-HR Electronic Brake + Speed Variable



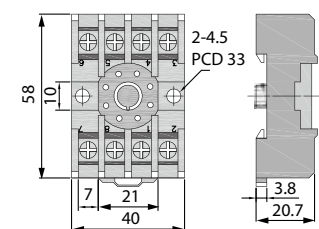
Controller Foot Place



## SS32-HR Electronic Brake + Speed Variable



Controller Foot Place



Model	Voltage (V)	Frequency (Hz)	Rated Current (A)	Output (W)	Speed Range	Speed Rate of Change (%)	Velocity Reaction	Electronic Brake	Velocity Safety	Ambient Condition
SS31HR	110V±10	50 / 60	5	6-120	90~1400 /	5%	0.5 Sec.	good	great	-10°C~+50°C
SS32HR	220V±10				90~1600					

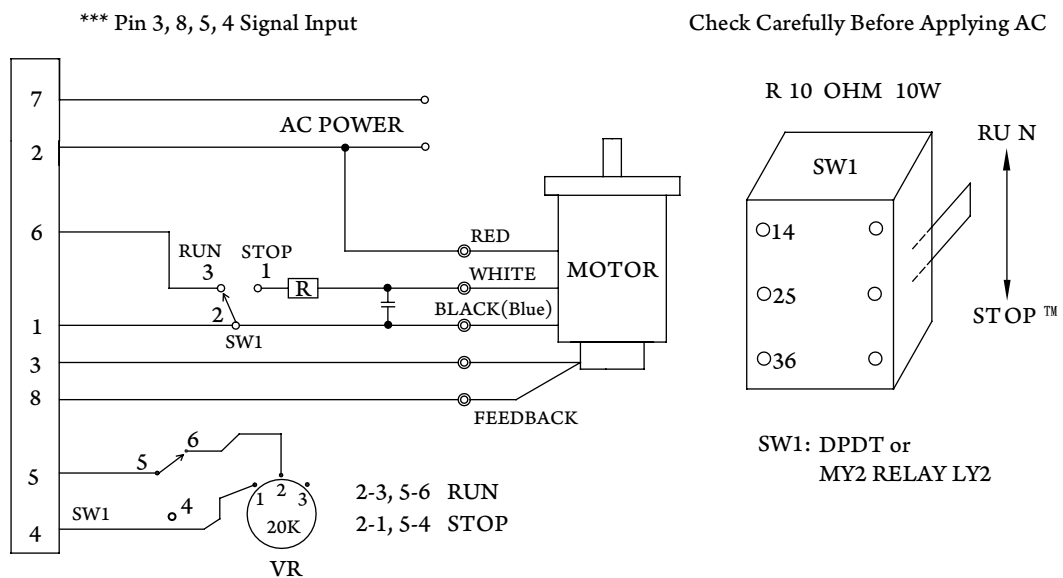
# Wiring Diagram

## Wiring Diagram of Controller

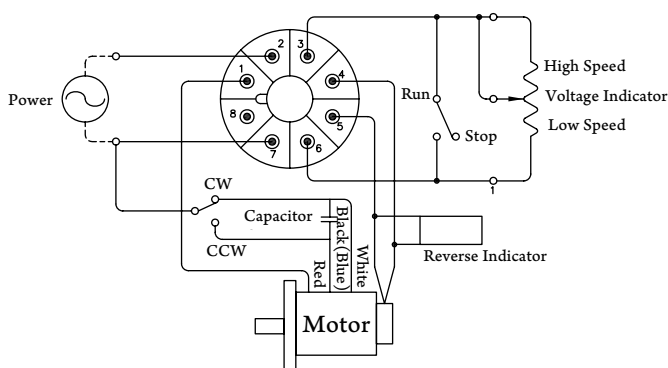
Note:

1. Confirm controller and motor output specification before wiring.
2. While using motor overheated protection, it should be connected in series with motor control cables.
3. Speed variable motor with fan should be connected to entry power.
4. As speed variable motor with excitationless brake, excitationless power supply should be connected in parallel with motor power supply.
5. As motor stops 0.5 seconds, it isn't allowed to run CW or CCW at this moment.
6. The switch contact must be AC 125V 5A or AC 250V 5A above.
7. The motor is allowed to use under 90°C.

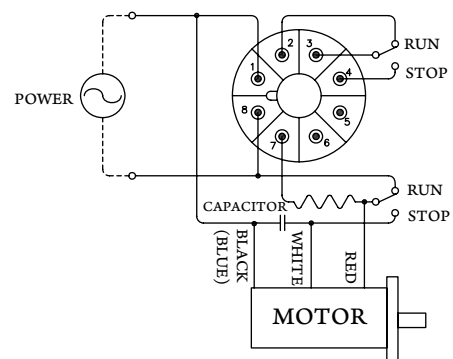
### SS31-HR SS32-HR(8Pin)



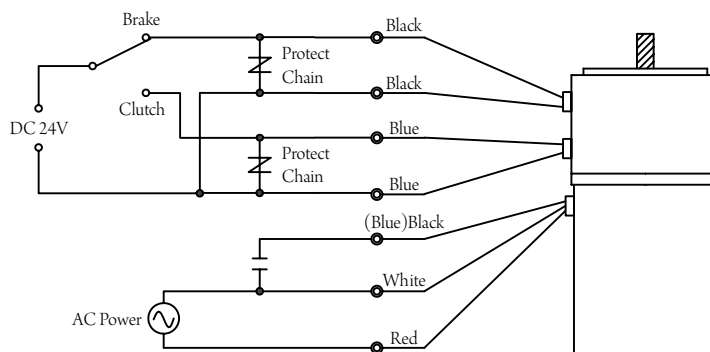
### SS11 SS22



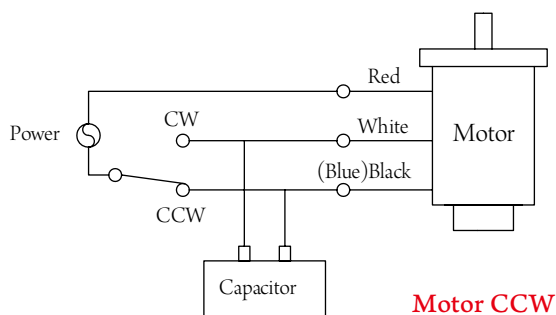
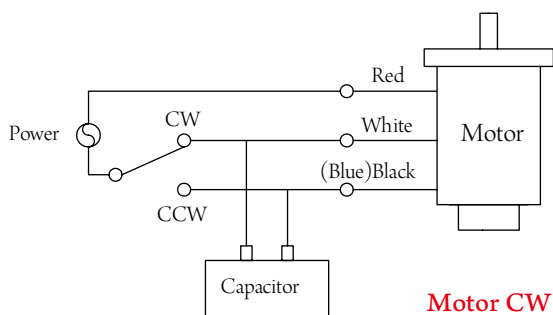
### SB31-IN SB32-IN



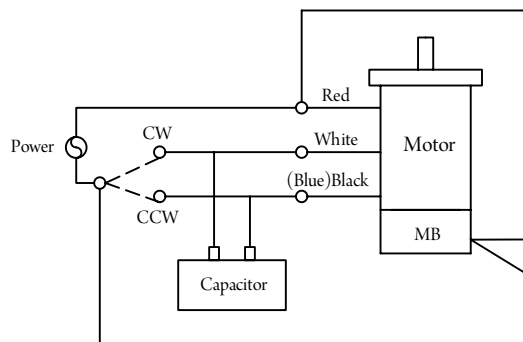
## Wiring Diagram of Clutch Brake Motor



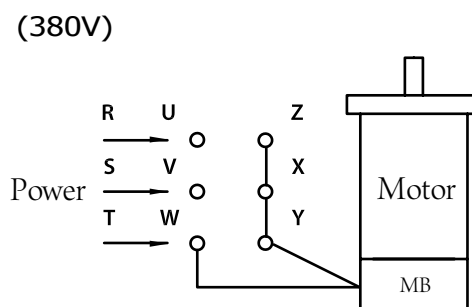
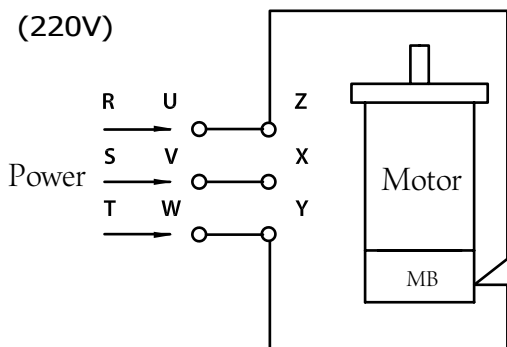
## Wiring Diagram of Single Phase Motor



## Wiring Diagram of Single Phase Brake Motor



## Wiring Diagram of Three Phase Brake Motor (6 Wires)





# List of Motor Specifications

## Induction Motor & Continuous Ratings

Model		Output (W)	Voltage (V)	Pole (P)	Frequency (Hz)	Starting Torque (Kgcm)	Rated Torque (Kgcm)	Rated Current (A)	Rated RPM (r/min)	Capacitor Capacity (μ)
Round Shaft	GN/GU									
2IK6A-A	2IK6GN-A	6	1Ø 110	4	50	0.44	0.50	0.25	1200	2.5(250V)
					60	0.45	0.38	0.22	1400	
2IK6A-C	2IK6GN-C		1Ø 220	4	50	0.40	0.45	0.18	1200	0.8(450V)
					60	0.53	0.38	0.14	1400	
3IK15A-A	3IK15GN-A	15	1Ø 110	4	50	0.81	1.22	0.38	1200	4(250V)
					60	1.00	0.98	0.34	1400	
3IK15A-C	3IK15GN-C		1Ø 220	4	50	0.88	1.22	0.21	1200	1(450V)
					60	0.86	0.97	0.19	1400	
3IK15A-S	3IK15GN-S	15	3Ø 220	4	50	3.6	1.37	0.19	1250	--
					60	4.2	1.1	0.17	1450	
3IK15A-U	3IK15GN-U		3Ø 380	4	50	3.6	1.37	0.1	1250	--
					60	4.2	1.1	0.09	1450	
4IK25A-A	4IK25GN-A	25	1Ø 110	4	50	1.30	1.87	0.65	1250	6(250V)
					60	1.20	1.48	0.62	1500	
4IK25A-C	4IK25GN-C		1Ø 220	4	50	1.45	1.82	0.3	1250	1.5(450V)
					60	1.57	1.50	0.27	1500	
4IK25A-S	4IK25GN-S	25	3Ø 220	4	50	5.94	2.06	0.27	1300	--
					60	4.86	1.63	0.24	1550	
4IK25A-U	4IK25GN-U		3Ø 380	4	50	5.90	1.75	0.16	1300	--
					60	4.86	1.46	0.14	1550	
5IK40A-A	5IK40GN-A	40	1Ø 110	4	50	2.26	3.00	0.76	1300	10(250V)
					60	2.17	2.50	0.72	1550	
5IK40A-C	5IK40GN-C		1Ø 220	4	50	2.17	3.40	0.4	1300	2.5(450V)
					60	2.15	2.84	0.38	1550	
5IK40A-S	5IK40GN-S	40	3Ø 220	4	50	12.3	3.17	0.48	1350	--
					60	9.26	2.80	0.44	1600	
5IK40A-U	5IK40GN-U		3Ø 380	4	50	9.45	2.58	0.26	1350	--
					60	12.06	3.00	0.24	1600	
5IK60A-A	5IK60(GN-GU)-A	60	1Ø 110	4	50	3.52	4.86	1.2	1300	14(250V)
					60	3.65	4	1.14	1550	
5IK60A-C	5IK60(GN-GU)-C		1Ø 220	4	50	3.86	5	0.71	1300	3.5(450V)
					60	3.56	3.85	0.68	1550	
5IK60A-S	5IK60(GN-GU)-S	60	3Ø 220	4	50	15.2	4.3	0.62	1350	--
					60	11.8	4	0.56	1600	
5IK60A-U	5IK60(GN-GU)-U		3Ø 380	4	50	15	4.85	0.34	1350	--
					60	11.5	3.88	0.31	1600	
5IK90A-A	5IK90GU-A	90	1Ø 110	4	50	4.87	5.96	1.6	1300	22(250V)
					60	5	5.1	1.56	1550	
5IK90A-C	5IK90GU-C		1Ø 220	4	50	4.5	6.35	0.85	1300	5(450V)
					60	4.2	5.2	0.95	1550	
5IK90A-S	5IK90GU-S	90	3Ø 220	4	50	15.4	5.8	0.84	1350	--
					60	12	5.5	0.76	1600	
5IK90A-U	5IK90GU-U		3Ø 380	4	50	15.2	6.35	0.5	1350	--
					60	11.7	5.38	0.45	1600	
5IK120A-A	5IK120GU-A	120	1Ø 110	4	50	5.47	7.76	2.14	1300	25(250V)
					60	5.6	6.9	2.1	1550	
5IK120A-C	5IK120GU-C		1Ø 220	4	50	5.81	7.9	0.95	1300	6(450V)
					60	5.51	6.75	1	1550	
5IK120A-S	5IK120GU-S	120	3Ø 220	4	50	20.9	7.7	1.31	1350	--
					60	17.5	7.4	1.28	1600	
5IK120A-U	5IK120GU-U		3Ø 380	4	50	20.7	8.25	0.49	1350	--
					60	17.2	7.28	0.47	1600	
5IK150A-A	5IK150GU-A	150	1Ø 110	4	50	12.97	9.46	3	1300	30(250V)
					60	13.1	8.6	2.68	1600	
5IK150A-C	5IK150GU-C		1Ø 220	4	50	13.31	9.6	1.21	1300	8(450V)
					60	13.01	8.45	1.24	1600	
5IK150A-S	5IK150GU-S	150	3Ø 220	4	50	28.4	9.4	1.33	1300	--
					60	25	9.1	1.3	1600	
5IK150A-U	5IK150GU-U		3Ø 380	4	50	28.2	9.95	0.51	1300	--
					60	24.7	8.98	0.49	1600	

# List of Motor Specifications

## Reversible Motor & 30 Min Ratings

Model		Output (W)	Voltage (V)	Pole (P)	Frequency (Hz)	Starting Torque (Kgcm)	Rated Torque (Kgcm)	Rated Current (A)	Rated RPM (r/min)	Capacitor Capacity (μ)
Round Shaft	GN/GU									
2RK6A-A	2RK6GN-A	6	1Ø 110	4	50	0.55	0.51	0.25	1250	3(250V)
					60	0.54	0.42	0.28	1550	
2RK6A-C	2RK6GN-C		1Ø 220	4	50	0.62	0.46	0.12	1250	1(450V)
					60	0.60	0.40	0.14	1550	
3RK15A-A	3RK15GN-A	15	1Ø 110	4	50	1.11	1.23	0.42	1250	6(250V)
					60	1.10	1.00	0.46	1550	
3RK15A-C	3RK15GN-C		1Ø 220	4	50	1.14	1.27	0.2	1250	1.5(450V)
					60	1.15	1.03	0.22	1550	
4RK25A-A	4RK25GN-A	25	1Ø 110	4	50	1.50	1.91	0.6	1250	8(250V)
					60	1.50	1.55	0.68	1550	
4RK25A-C	4RK25GN-C		1Ø 220	4	50	2.05	1.90	0.33	1250	2(450V)
					60	2.09	1.54	0.36	1550	
5RK40A-A	5RK40GN-A	40	1Ø 110	4	50	2.54	3.25	0.85	1250	12(250V)
					60	2.73	2.56	1	1550	
5RK40A-C	5RK40GN-C		1Ø 220	4	50	2.91	3.11	0.45	1250	3(450V)
					60	2.80	2.49	0.47	1550	
5RK60A-A	5RK60(GN-GU)-A	60	1Ø 110	4	50	2.52	3.36	1.74	1250	16(250V)
					60	2.65	2.5	1.85	1550	
5RK60A-C	5RK60(GN-GU)-C		1Ø 220	4	50	2.86	3.5	0.72	1250	4(450V)
					60	2.56	2.35	0.76	1550	
5RK60A-S	5RK60(GN-GU)-S	60	3Ø 220	4	50	14.2	2.8	0.64	1250	
					60	10.8	2.5	0.58	1550	
5RK60A-U	5RK60(GN-GU)-U		3Ø 380	4	50	14	3.35	0.36	1250	
					60	10.5	2.38	0.33	1550	
5RK90A-A	5RK90GU-A	90	1Ø110	4	50	3.87	4.46	1.9	1200	25(250V)
					60	4	3.6	2	1500	
5RK90A-C	5RK90GU-C		1Ø220	4	50	3.5	4.85	0.95	1200	6(450V)
					60	3.2	3.7	1	1500	
5RK90A-S	5RK90GU-S	90	3Ø 220	4	50	14.4	4.3	0.86	1200	
					60	11	4	0.76	1500	
5RK90A-U	5RK90GU-U		3Ø 380	4	50	14.2	4.85	0.52	1200	
					60	10.7	3.88	0.47	1500	
5RK120A-A	5RK120GU-A	120	1Ø 110	4	50	4.47	6.26	2.1	1200	27(250V)
					60	4.6	5.4	2.25	1550	
5RK120A-C	5RK120GU-C		1Ø 220	4	50	4.81	6.4	0.95	1200	7(450V)
					60	4.51	5.25	1	1550	
5RK120A-S	5RK120GU-S	120	3Ø 220	4	50	19.9	6.2	1.12	1200	
					60	16.5	5.9	1.1	1550	
5RK120A-U	5RK120GU-U		3Ø 380	4	50	19.7	6.75	0.52	1200	
					60	16.2	5.78	0.5	1550	
5RK150A-A	5RK150GU-A	150	1Ø 110	4	50	11.97	7.96	2.5	1250	30(250V)
					60	12.1	7.1	2.65	1600	
5RK150A-C	5RK150GU-C		1Ø 220	4	50	12.31	8.1	1.21	1250	8(450V)
					60	12.01	6.95	1.28	1600	
5RK150A-S	5RK150GU-S	150	3Ø 220	4	50	27.4	7.9	1.14	1250	
					60	24	7.6	1.12	1600	
5RK150A-U	5RK150GU-U		3Ø 380	4	50	27.2	8.45	0.54	1250	
					60	23.7	7.48	0.52	1600	

# Permissible Torque When Motor Plug-In

## 60Hz Maximum Permissible Torque(Kgcm)

Output (W)	Ratio (R)	3	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
	RPM	600	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	
6W	Torque (T)	1.0	1.5	1.8	2.3	2.8	3.9	4.7	5.6	7.0	8.3	10	13.8	16	20	24	30	30	30	30	
15W		2.6	3.9	4.7	5.8	7.0	9.8	11.8	15	19	23	27.6	38.4	46	50	50	50	50	50	50	50
25W		4.1	6.3	7.6	9.5	11.4	16	19	23	31	37	45	62	75	80	80	80	80	80	80	80
40W		6.3	10	12	15	19	26	30	37	45	54	65	90	100	100	100	100	100	100	100	100
60W		10	16	19	24	28	40	47	55	69	83	100	138	160	175	200	200	200	200	200	200
90W		14	24	28	35	42	60	70	80	103	124	149	200	200	200	200	200	200	200	200	200
120W		19	30	37	46	55	70	83	100	125	150	180	200	200	200	200	200	200	200	200	200
150W		26	39	48	60	72	82	98	125	150	180	200	200	200	200	200	200	200	200	200	200

□ 120W above: 30 mins rated time limited.

## 50Hz Maximum Permissible Torque(Kgcm)

Output (W)	Ratio (R)	3	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	
	(W)	500	300	250	200	166	120	100	83	60	50	42	30	25	20	17	15	12.5	10	8.3	
6W	Torque (T)	1.2	1.9	2.3	2.9	3.4	4.7	5.7	6.8	9.3	11	13	16	20	24	30	30	30	30	30	
15W		3.0	4.7	5.7	7.1	8.5	11.8	14.2	18	23	28	33	46	50	50	50	50	50	50	50	50
25W		5.0	7.8	9.4	11.8	14.1	19.6	23	28	38	46	55	76	80	80	80	80	80	80	80	80
40W		7.3	12	14.7	18	22	30	36	43	54	65	77	100	100	100	100	100	100	100	100	100
60W		12	19	22	28	34	48	55	62	82	98	118	164	196	200	200	200	200	200	200	200
90W		17	28	34	43	51	67	80	96	125	150	178	200	200	200	200	200	200	200	200	200
120W		24	40	48	60	71	89	107	129	162	194	200	200	200	200	200	200	200	200	200	200
150W		34	57	67	83	98	118	143	173	200	200	200	200	200	200	200	200	200	200	200	200

□ 120W above: 30 mins rated time limited.

## Indication of L-Series Motor

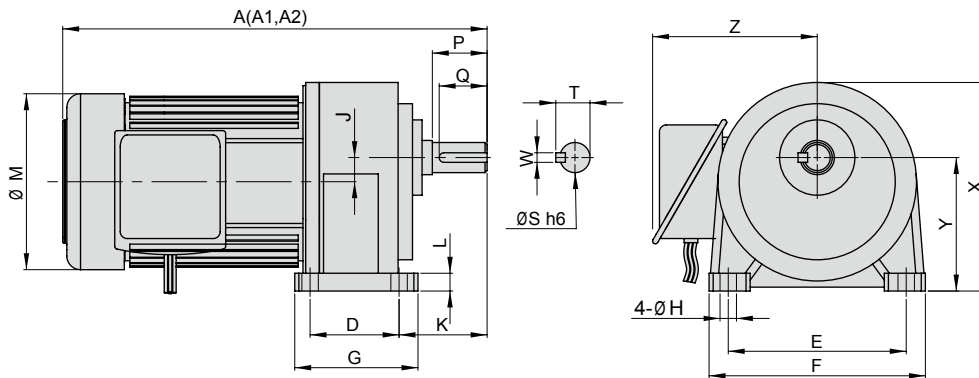
Model	Frame	Output	Ratio	Voltage	Accessory
J220 Vertical Motor(For Carton Sealer only)	16 : Ø16 (For Carton Sealer only)	100 : 100W(1/8HP)	3-1800	AC : 1 Phase110/220V	M : Electromagnetic Brake
LH Horizontal Aluminum Alloy Motor Shell	18 : Ø18	200 : 200W(1/4HP)		AV : 1 Phase110/220V	
LV Vertical Aluminum Alloy Motor Shell	22 : Ø22	400 : 400W(1/2HP)		AVE : 1 Phase110/220V	MB : Electrify Electromagnetic Brake
LHD Horizontal Double Shaft Type Reducer	28 : Ø28	750 : 750W(1HP)		CE : 1 Phase 120/240V	
LVD Vertical Double Shaft Type Reducer	32 : Ø32	1500 : 1500W(2HP)		S3 : 3 Phase 220/380V	
LHM Horizontal Type Reducer Motor Plug-in	40 : Ø40	2200 : 2200W(3HP)		S4 : 3 Phase 220/440V	
LVM Vertical Type Reducer Motor Plug-in	50 : Ø50	3700 : 3700W(5HP)		S7 : 3 Phase 230/415V	

### Terminal Box Direction

Type	G1-Left Side (Standard Type)	G2-Right Side	G3-Upper Side	G4-Lower Side
LH				
LV				
Wire Inlet Direction	LD                      LT	RD                      RT	TL                      TR	DL                      DR
	LF                      LB	RF                      RB	TF                      TB	DF                      DB

\* Please contact us while the motor is running under the low temperature environment.

# LH Horizontal Aluminum Alloy Motor Shell



## Dimension (mm)

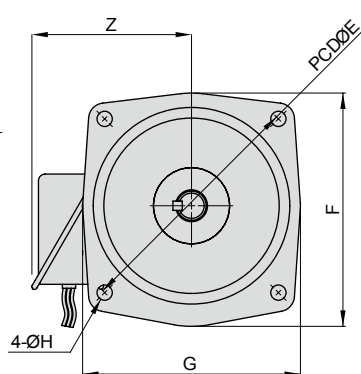
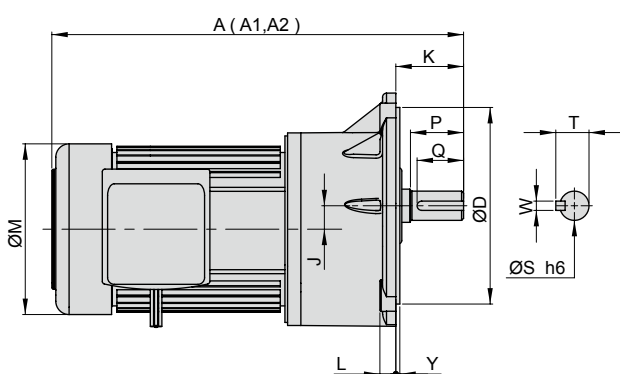
Output W (HP)	Ratio	Housing	Code	A	A1	A2	D	E	F	G	H	J	K	L	M	X	Y	Z	Output Shaft				
																			S	P	W	T	Q
100W (1/8 HP)	3~50 (60~200)	1	18	250	285	250	40	110	135	65	9	16	45	10	130	131	88.5	120	18	29	5	20	25
	60~200	2	22	280	320	280	65	130	158	90	11	17.65	60	13	130	153	97.5	120	22	40	7	25	35
200W (1/4 HP)	3~10 (12.5~90)	1	18	270	305	290	40	110	135	65	9	16	45	10	130	131	88.5	120	18	29	5	20	25
	12.5~90 (100~200)	2	22	305	340	325	65	130	158	90	11	17.65	60	13	130	153	97.5	120	22	40	7	25	35
	100~200	3	28	315	350	335	90	140	180	120	11	24.22	66.5	16	130	174	116	120	28	45	7	31	40
400W (1/2 HP)	3~10 (12.5~90)	2	22	325	340	370	65	130	158	90	11	17.65	60	13	130	153	97.5	135	22	40	7	25	35
	12.5~90 (100~200)	3	28	335	350	380	90	140	180	120	11	24.22	66.5	16	130	174	116	135	28	45	7	31	40
	100~200	4	32	400	410	450	130	170	210	165	13	30.22	70	20	130	198	130	135	32	55	10	35.5	50
750W (1 HP)	(3~25)	2	22	345	355	400	65	130	158	90	11	17.65	60	13	162	153	97.5	135	22	40	7	25	35
	3~25 (30~120)	3	28	360	370	410	90	140	180	120	11	24.22	66.5	16	162	174	116	135	28	45	7	31	40
	30~120 (125~200)	4	32	400	410	450	130	170	210	165	13	30.22	70	20	162	198	130	135	32	55	10	35.5	50
	125~200	5	40	465	465	500	150	210	265	198	15	36	89	24	162	250	160	135	40	65	10	43.5	60
1500W (2 HP)	3~30 (40~100)	4	32	460	465	450	130	170	210	165	13	30.22	70	20	192	198	130	146	32	55	10	35.5	50
	40~100 (110~150)	5	40	510	510	510	150	210	265	198	15	36	89	24	192	250	160	146	40	65	10	43.5	60
	110~180	6	50	560	560	560	170	265	319	238	18	51	120	31.5	192	308	200	146	50	80	14	54	75
2200W (3 HP)	3~40 (45~80)	5	40	530	530	-	150	210	265	198	15	36	89	24	220	250	160	160	40	65	10	43.5	60
	45~80	6	50	580	580	-	170	265	319	238	18	51	120	31.5	220	308	200	160	50	80	14	54	75
3700W (5 HP)	3~10 (15~60)	5	40	560	560	-	150	210	265	198	15	36	89	24	220	250	160	160	40	65	10	43.5	60
	15~60	6	50	620	620	-	170	265	319	238	18	51	120	31.5	220	308	200	160	50	80	14	54	75

\* Ratio shown in parenthesis ( ) are used for light loading/ light.

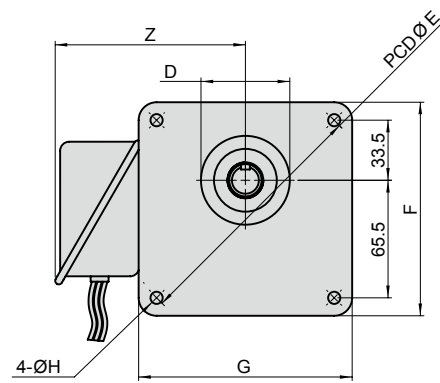
NOTES/ 1) A: With 3 phase aluminum motor - A1: With 3 phase brake motor. A2: With single phase aluminum motor.

2) Refer to dimension of single phase brake motor, please contact us.

# LV Vertical Aluminum Alloy Motor Shell



A Type Flange  
(Code 22, 28, 32, 40, 50)



\* B Type Flange  
(Code 18)

## Dimension (mm)

Output W (HP)	Ratio	Housing	Code	A	A1	A2	D	E	F	G	H	J	K	L	M	Y	Z	Output Shaft				
																		S	P	W	T	Q
100W (1/8 HP)	3~50 (60~200)	1	18*	250	285	250	50	140	119	119	9	16	40	12	130	-	120	18	35	5	20	25
	60~200	2	22	280	320	280	148	185	176	164	11	17.65	47	12	130	3	120	22	40	7	25	35
200W (1/4 HP)	3~10 (12.5~90)	1	18*	270	305	290	50	140	119	119	9	16	40	12	130	-	120	18	35	5	20	25
	12.5~90 (100~200)	2	22	305	340	325	148	185	176	164	11	17.65	47	12	130	3	120	22	40	7	25	35
	100~200	3	28	315	350	335	170	220	216	216	11	24.22	60	15	130	6	120	28	45	7	31	40
400W (1/2 HP)	3~10 (12.5~90)	2	22	325	340	370	148	185	176	164	11	17.65	47	12	130	3	135	22	40	7	25	35
	12.5~90 (100~200)	3	28	335	350	380	170	220	216	216	11	24.22	60	15	130	6	135	28	45	7	31	40
	100~200	4	32	400	410	450	185	255	241	225	13	30.22	65	15	130	4	135	32	55	10	35.5	50
750W (1 HP)	(3~25)	2	22	345	355	400	148	185	176	164	11	17.65	47	12	162	3	135	22	40	7	25	35
	3~25 (30~120)	3	28	360	370	410	170	220	216	216	11	24.22	60	15	162	6	135	28	45	7	31	40
	30~120 (125~200)	4	32	400	410	450	185	255	241	225	13	30.22	65	15	162	4	135	32	55	10	35.5	50
	125~200	5	40	465	465	500	230	310	291	272	15	36	85	21	162	5	135	40	65	10	43.5	60
1500W (2 HP)	3~30 (40~100)	4	32	460	465	450	185	255	241	225	13	30.22	65	15	192	4	146	32	55	10	35.5	50
	40~100 (110~150)	5	40	510	510	510	230	310	291	272	15	36	85	21	192	5	146	40	65	10	43.5	60
	110~180	6	50	560	560	560	280	390	369	341	18	51	92	25	192	5	146	50	80	14	54	75
2200W (3 HP)	3~40 (45~80)	5	40	530	530	-	230	310	291	272	15	36	85	21	220	5	160	40	65	10	43.5	60
	45~100	6	50	580	580	-	280	390	369	341	18	51	92	25	220	5	160	50	80	14	54	75
3700W (5 HP)	3~10 (15~60)	5	40	560	560	-	230	310	291	272	15	36	85	21	220	5	160	40	65	10	43.5	60
	15~60	6	50	620	620	-	280	390	369	341	18	51	92	25	220	5	160	50	80	14	54	75

\* Code 18 : Belongs to B type flange

# Ratio shown in parenthesis ( ) are used for light loading/ light.

NOTES/ 1) A: With 3 phase aluminum motor - A1: With 3 phase brake motor. A2: With single phase aluminum motor.

2) Refer to dimension of single phase brake motor, please contact us.