BRUSHLESS DC MOTOR UNIT - B Series



□60mm

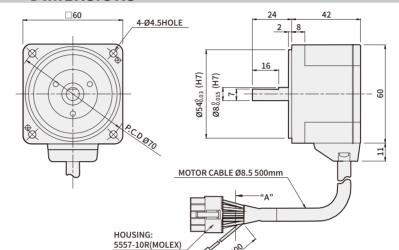
AC voltage input

DIMENSIONS

K6BS20N■

(Weight: 0.5Kg)

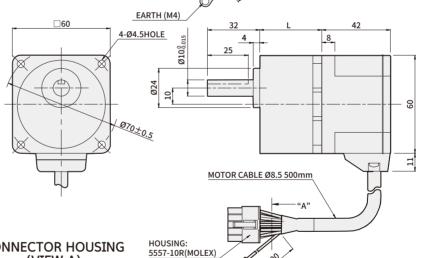




K6BH20N■ + K6H□B

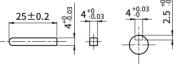
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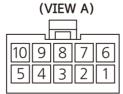




EARTH (M4)

* KEY · KEY GROOVE(ACCESSORY) * CONNECTOR HOUSING





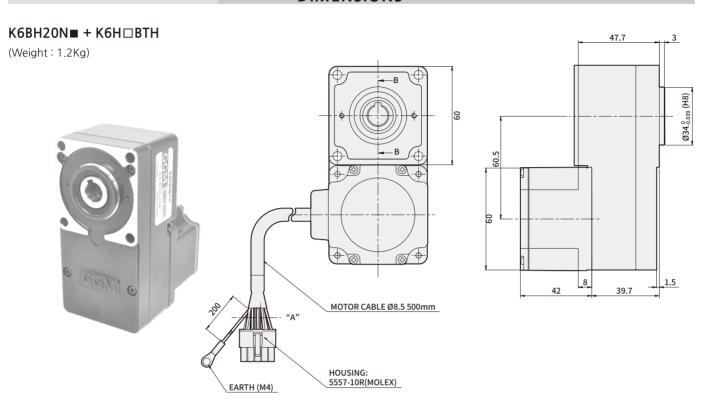
	· I IN WIAI									
PIN No.	COLOR	SIGNAL								
1	BLUE	U								
2	-	-								
3	GREEN	Ground								
4	YELLOW	Vcc								
5	ORANGE	Hw								
6	PURPLE	V								
7	GRAY	W								
8		(Drain)								
9	BROWN	Hu								
10	WHITE	Hv								

MOTOR PRODUCT NAME	GEARHEAD PRODUCT NAME	DECELERATION RATIO	L	FIXING BOLT
		5~20	34	M4 P0.7×50
K6BH20N■	К6Н□В	30~100	38	M4 P0.7×55
		200	43	M4 P0.7×60

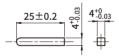
- * In dimension, in of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)
- * In \square of name, it represents a deceleration ratio.
- $\star \ \ \text{Geared motor is included with fixing bolt set (flat washer, spring washer, hexagonal nut 4pcs each)}$



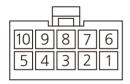
DIMENSIONS

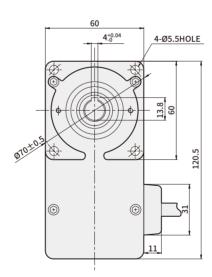


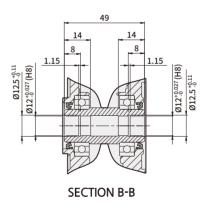
*KEY (ACCESSORY)



* CONNECTOR HOUSING (VIEW A)







PIN No.	COLOR	SIGNAL
1	BLUE	U
2	-	-
3	GREEN	Ground
4	YELLOW	Vcc
5	ORANGE	Hw
6	PURPLE	V
7	GRAY	W
8		(Drain)
9	BROWN	Hu
10	WHITE	Hv

MOTOR PRODUCT NAME	GEARHEAD PRODUCT NAME	DECELERATION RATIO	FIXING BOLT	
K6BH20N■	К6Н□ВТН	5~200	M5 P0.8×65	

- * In Dimension, in of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)
- * In \square of name, it represents a deceleration ratio.
- * Mounting bolt sets are included in flat type gearbox.

 M5×65L (flat washer, spring washer, hexagonal nut 4pcs each)



Specification

Product	GEAR TYPE	K6BH20NU	K6BH20NC	K8BH40NU	K8BH40NC	K9BH90NU	K9BH90NC	K9BH150NC	K10BH200NC	K10BH400NC
name	D-CUT TYPE	K6BS20NU	K6BS20NC	K8BS40NU	K8BS40NC	K9BS90NU	K9BS90NC	K9BS150NC	K10BS200NC	K10BS400NC
Rating ou	tput (continuous) W	2	0	4	0	9	0	150	200	400
	Voltage V	100~115	200~230	100~115	200~230	100~115	200~230	200~230	200~230	200~230
Power	Frequency Hz					50/60				
input	Rating input A	0.95	0.55	1.45	0.85	2.55	1.45	2.1	2.8	5.6
	Maximum A	1.55	0.9	2.5	1.4	3.9	2.4	4	5.1	7.8
Rating to	orque N·m(kgf·cm)	0.1((1.0)	0.2(2.0)		0.45(4.5)		0.49(4.9)	0.65(6.5)	1.3(13)
Starting t	torque N·m(kgf·cm)	0.12	(1.2) 0.24(2.4)		0.54	(5.4)	0.63(6.3)	1.15(11.5)	1.8(18)	
Rating ro	otation speed r/min		2,000 3,000							
Speed co	ontrol range r/min		100~2,000 100~3,000					100~4,000		
Allowed inertia load moment of motor	J kg·m²	0.5×10 ⁻⁴		1.8>	1.8×10⁻⁴ 5.8>		<10 ⁻⁴	5.8×10 ⁻⁴	8.75×10 ⁻⁴	15×10 ⁻⁴
Speed	Load		less tha	n or equal to	5 ±1% (0~R	ating torque	e, If rotating	at the rated	d speed)	
change	Voltage	les	s than or ec	jual to ±1%	(Power volt	age ±10%,	If rotation a	t the rated s	peed No loa	ad)
rate	Temperature		less thai	n or equal to	±1% (0~+	40℃, If rotat	tion at the r	ated speed I	No load)	

Common Specification

Items	Specifications
Rotation speed setting method	Controller panel's speed
Acceleration time/ deceleration time	0.5~10 seconds: 2000r/min no load (It may change depending on the load size). To set acceleration time, it is set at slow start on the front panel. To set deceleration time, it is set at slow stop.
Input signal	Photo coupler input method, operating at input resistance of 10kΩ DC 12V±10%,Common in EXT, CW, and CCW
Output signal	Open collector output, External use conditions: less than 26.4V 10mA, common in SPEED OUT/ALARM OUT
Protection function	If the following protection function is operating, then control unit alarm signal gets generated and motor stops automatically. Overload protection function: If more than the rated torque is applied to the motor for more than 5 seconds. Overvoltage protection function: If voltage applied to the control unit goes over the upper bound of the rating voltage allowance. Open phase protection: If cable sensor line gets disconnected during motor operation. Undervoltage protection: If voltage applied to the control unit is less than the lower bound of the rating voltage allowance. Over speed protection: If motor rotation speed is faster than 2500r/min.
Motor insulation class	E Type(120℃)
Rated time	Continuous



→ Normal specifications

lter	ms	Motor	Control unit				
Insulation Resistance		After continuously operating at room temperature and humidity, it should begreater than 100MΩ between coil and case when measured with DC 500V MEGA TESTER	Protection ground terminal and power input should be greater than 100MQ when measure with DC 500V MEGA TESTER				
Dielectric Strength		After continuously operating at room temperature and humidity, there shouldn't be any problem if 60Hz, 1500V is applied for more than 1 minute between coil and case	There shouldn't be nay problem if 60Hz, 1500V is applied for more than 1 minute between protection ground terminal and power input				
Temperature rise		After operating continuously at room temperature and humidity, the temperature increase should be less than 60°C and less than 50°C of temperature increase on the case surface when measure with thermo couple					
	Used Ambient temperature	೦℃~+40℃ (There should not be any freeze)					
Used environment	Used Ambient Humidity	less than 85% (no	dew condensation)				
	Ambient environment	No corrosive gas or dusts					
Conservation	Ambient temperature	-25 ~ +70℃ (There should not be any freeze)					
environment Ambient Humidity		less than 85% (no dew condensation)					
Protection	on class	IP65(Except for the mounting part on the output part)	IP10				

Delivery effciency of gearhead

Product	Deceleration ratio	5	10	15	20	30	50	100	200	
	К6Н□В		90)%		86%			81%	
	K8H□B		90)%		86%			81%	
	К9Н□В		90)%		86%			81%	
name	K10H□BU		90)%		86% 81%			%	
	K6H□BTH	80%				85%				
	K8H□BTH	85%								
	K9H□BTH	85%								



→ Allowed torque of combination type

- · ·	Decelera	ation ratio	5	10	15	20	30	50	100	200
Product name	Speed contro	ol range[r/min]	20~400	10~200	6.7~133	5~100	3.3~67	2~40	1~20	0.5~10
	K6BH20N ■ + K	6Н□В	0.45	0.9	1.4	1.8	2.6	4.3	6	6
	K8BH40N ■ + K	8H□B	0.9	1.8	2.7	3.6	5.2	8.6	16	16
	K9BH90N ■ + K	9H□B	2	4.1	6.1	8.1	11.6	19.4	30	30
K	6BH20N■ + K6	H□BTH	0.4	0.85	1.3	1.7	2.6	4.3	8.5	17
K	8BH40N■ + K8	H□BTH	0.85	1.7	2.6	3.4	5.1	8.5	17	34
K	9BH90N■ + K9	H□BTH	1.9	3.8	5.7	7.7	11.5	19.1	38.3	68
Product	Decelera	ation ratio	5	10	15	20	30	50	100	200
name	Speed contro	ol range[r/min]	20~600	10~300	6.7~200	5~150	3.3~100	2~60	1~30	0.5~15
k	(9BH150N ■ + K	(9H□B	2.4	4.7	7.1	9.5	13.6	22.7	30	30
KS	9BH150N■ + K9	H□BTH	2	4.1	6.2	8.3	12.4	20.8	41.6	68
Product	Decelera	ation ratio	5	10	15	20	30	50	100	200
name	Speed contro	ol range[r/min]	20~800	10~400	6.7~267	5~200	3.3~133	2~80	1~40	0.5~20
K100112001	NC - K10HERH	100~3000r/min	2.9	5.9	8.8	11.7	16.8	28	52.7	70
K TUBHZUUI	K10BH200NC + K10H□BU 4000r/min		2.0	4.1	6.1	8.1	11.6	19.4	36.5	63
100~3000r/min K10BH400NC + K10H□BU		5.9	11.7	17.6	23.4	33.5	55.9	70	70	
N (UBH4UUI	AC + KIUH□BU	4000r/min	4.3	8.6	12.8	17.1	24.5	40.9	63	63

^{*} In dimension, in ■ of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V)

^{*} Rotation direction shows the same _____ color as the motor. In other cases, it's the opposite.

^{*} Flat Gearbox viewed from front side is opposite rotation direction with motor.

^{*} Flat Gearbox viewed from back side is same rotation direction with motor.



→ Allowed overhang load and allowed thrust

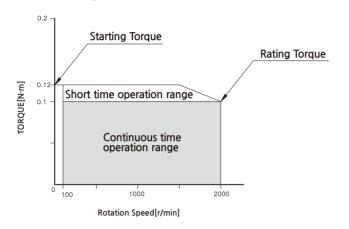
				Allowed ov	erhand load				
Produ	Product name			of output part		of output part	Allowed t	hrust load	
			N	kgf	N	kgf	N	kgf	
		5	100	10	150	15			
	K6BH20N■ + K6H□B	10,15,20	150	15	200	20	40	4	
		30,50,100,200	200	20	300	30			
		5	200	20	250	25			
	K8BH40N■ + K8H□B	10,15,20	300	30	350	35	100	10	
		30,50,100,200	450	45	550	55	-		
		5	300	30	400	40			
	KPBH90N■ (K9BH150NC) + K9H□B	10,15,20	400	40	500	50	150	15	
	, Kaller	30,50,100,200	500	50	650	65			
GEARED MOTOR		5,10,15,20	550	55	800	80	200	20	
	K10BH200NC (K10BH400NC) + K10H□BU	30,50	1000	100	1250	125	300	30	
	, KIOII	100,200	1400	140	1700	170	400	40	
	K6BH20N■	5,10	450	45	370	37	200	20	
	+ K6H□BTH	15~200	500	50	400	40	200	20	
	K8BH40N■	5,10	800	80	660	66	400	40	
	+ K8H□BTH	15~200	1200	120	1000	100	400	40	
	L'ORLIGON I—	5,10	900	90	770	77			
	(K9BH90N■ (K9BH150N■) + K9H□BTH	15,20	1300	130	1110	111	500	50	
	. KSHLIDIII	30,50,100,200	1500	150	1280	128			
	K6BS	20N ■	70	7	100	10			
MOTOR	K8BS	40N ■	120	12	140	14		to weigh thrust. e, keep it under	
WOTOR	K9BS90N■,	,K9BS150NC	160	16	170	17		notor weight.	
	K10BS200NC	,K10BS400NC	197	19.7	220	22			

- * In dimension, in of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V).
- $\star~$ In \square of name, it represents a deceleration ratio.
- * Permissible overhang load can be withdrawn by calculation.

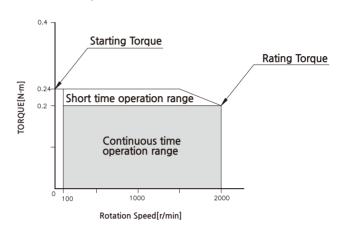


Rotation speed - torque characteristic

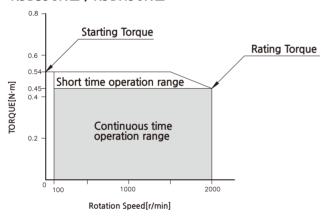
K6BS20N■ / K6BH20N■



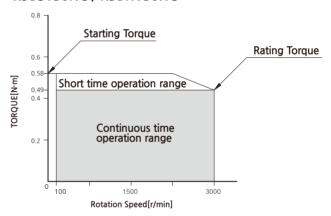
K8BS40N■ / K8BH40N■



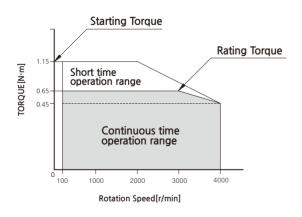
K9BS90N■ / K9BH90N■



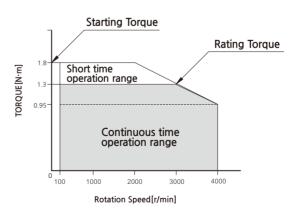
K9BS150NC / K9BH150NC



K10BS200NC



K10BS400NC



^{*} In Dimension, in ■ of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)





□80mm

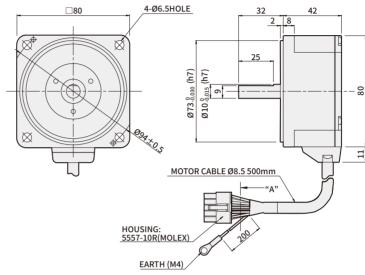
AC voltage input

DIMENSIONS

K8BS40N■

(Weight: 0.8Kg)

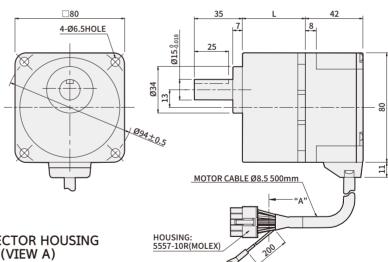




K8BH40N■ + K8H□B

(Weight: 1.7Kg)





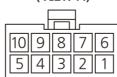
EARTH (M4)

*KEY · KEY GROOVE (ACCESSORY) *CONNECTOR HOUSING









PIN No.	COLOR	SIGNAL
1	BLUE	U
2	-	-
3	GREEN	Ground
4	YELLOW	Vcc
5	ORANGE	Hw
6	PURPLE	V
7	GRAY	W
8		(Drain)
9	BROWN	Hu
10	WHITE	Hv

MOTOR PRODUCT NAME	GEARHEAD PRODUCT NAME	DECELERATION RATIO	L	FIXING BOLT
		5~20	41	M6 P1.0×65
K8BH40N■	К8Н□В	30~100	46	M6 P1.0×70
		200	51	M6 P1.0×75

- * In dimension, in of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)
- * In \square of name, it represents a deceleration ratio.
- * Geared motor is included with fixing bolt set. (flat washer, spring washer, hexagonal nut 4pcs each)



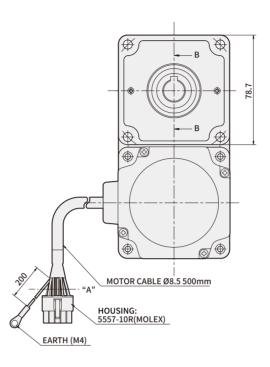


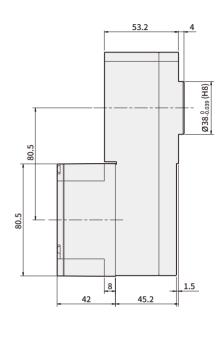
DIMENSIONS

K8BH40N■ + K8H□BTH

(Weight: 2.3Kg)



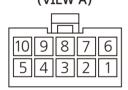


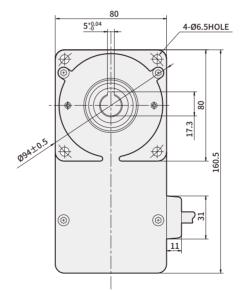


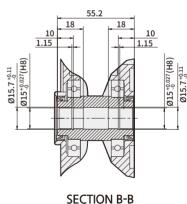
* KEY (ACCESSORY)



* CONNECTOR HOUSING (VIEW A)







PIN No.	COLOR	SIGNAL
1	BLUE	U
2	-	-
3	GREEN	Ground
4	YELLOW	Vcc
5	ORANGE	Hw
6	PURPLE	V
7	GRAY	W
8		(Drain)
9	BROWN	Hu
10	WHITE	Hv

MOTOR PRODUCT NAME	GEARHEAD PRODUCT NAME	DECELERATION RATIO	FIXING BOLT
K8BH40N■	К8Н□ВТН	5~200	M6 P1.0×70

- * In Dimension, in \blacksquare of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)
- * In \square of name, it represents a deceleration ratio.
- * Mounting bolt sets are included in flat type gearbox. M6×70L (flat washer, spring washer, hexagonal nut 4pcs each)



Specification

Product	GEAR TYPE	K6BH20NU	K6BH20NC	K8BH40NU	K8BH40NC	K9BH90NU	K9BH90NC	K9BH150NC	K10BH200NC	K10BH400NC
name	D-CUT TYPE	K6BS20NU	K6BS20NC	K8BS40NU	K8BS40NC	K9BS90NU	K9BS90NC	K9BS150NC	K10BS200NC	K10BS400NC
Rating ou	tput (continuous) W	2	0	4	0	9	0	150	200	400
	Voltage V	100~115	200~230	100~115	200~230	100~115	200~230	200~230	200~230	200~230
Power	Frequency Hz					50/60				
input	Rating input A	0.95	0.55	1.45	0.85	2.55	1.45	2.1	2.8	5.6
	Maximum A	1.55	0.9	2.5	1.4	3.9	2.4	4	5.1	7.8
Rating torque N·m(kgf·cm)		0.1((1.0)	0.2(2.0)		0.45	(4.5)	0.49(4.9)	0.65(6.5)	1.3(13)
Starting t	torque N·m(kgf·cm)	0.12	(1.2)	1.2) 0.24(2.4)		0.54	(5.4)	0.63(6.3)	1.15(11.5)	1.8(18)
Rating ro	otation speed r/min		2,000 3,000							
Speed co	ontrol range r/min		100~2,000					100~3,000	100~	4,000
Allowed inertia load moment of motor	J kg·m²	0.5>	<10 ⁻⁴	1.8×10 ⁻⁴		5.8×10 ⁻⁴		5.8×10 ⁻⁴	8.75×10 ⁻⁴	15×10 ⁻⁴
Speed	Load	Load less than or equal to ±1% (0~			5 ±1% (0~R	Rating torque, If rotating at the rated speed)				
change	change Voltage less than or equal to ±1% (Power voltage ±10%, If rotation a				t the rated s	peed No loa	ad)			
rate	Temperature		less thai	n or equal to	±1% (0~+	40℃, If rotat	tion at the r	ated speed I	No load)	

Common Specification

Items	Specifications
Rotation speed setting method	Controller panel's speed
Acceleration time/ deceleration time	0.5~10 seconds: 2000r/min no load (It may change depending on the load size). To set acceleration time, it is set at slow start on the front panel. To set deceleration time, it is set at slow stop.
Input signal	Photo coupler input method, operating at input resistance of 10kΩ DC 12V±10%,Common in EXT, CW, and CCW
Output signal	Open collector output, External use conditions: less than 26.4V 10mA, common in SPEED OUT/ALARM OUT
Protection function	If the following protection function is operating, then control unit alarm signal gets generated and motor stops automatically. Overload protection function: If more than the rated torque is applied to the motor for more than 5 seconds. Overvoltage protection function: If voltage applied to the control unit goes over the upper bound of the rating voltage allowance. Open phase protection: If cable sensor line gets disconnected during motor operation. Undervoltage protection: If voltage applied to the control unit is less than the lower bound of the rating voltage allowance. Over speed protection: If motor rotation speed is faster than 2500r/min.
Motor insulation class	E Type(120℃)
Rated time	Continuous



→ Normal specifications

Items		Motor	Control unit		
Insulation Resistance		After continuously operating at room temperature and humidity, it should begreater than 100MΩ between coil and case when measured with DC 500V MEGA TESTER	Protection ground terminal and power input should be greater than 100MQ when measure with DC 500V MEGA TESTER		
Dielectric Strength		After continuously operating at room temperature and humidity, there shouldn't be any problem if 60Hz, 1500V is applied for more than 1 minute between coil and case	There shouldn't be nay problem if 60Hz, 1500V is applied for more than 1 minute between protection ground terminal and power input		
Temperature rise		After operating continuously at room temperature and humidity, the temperature increase should be less than 60°C and less than 50°C of temperature increase on the case surface when measure with thermo couple			
	Used Ambient temperature	೦℃~+40℃ (There sho	uld not be any freeze)		
Used environment	Used Ambient Humidity	less than 85% (no	dew condensation)		
	Ambient environment	No corrosive	gas or dusts		
Conservation	Ambient temperature	-25 ~ +70℃ (There should not be any freeze)			
environment	Ambient Humidity	less than 85% (no dew condensation)			
Protection	on class	IP65(Except for the mounting part on the output part)	IP10		

Delivery effciency of gearhead

	Deceleration ratio	5	10	15	20	30	50	100	200
	К6Н□В		90)%		86%			81%
	K8H□B		90)%		86%			81%
Product	К9Н□В		90)%		86%			81%
name	K10H□BU		90%			86% 81			%
	K6H□BTH	80%				85%			
	K8H□BTH	85%							
	K9H□BTH				85	5%			



→ Allowed torque of combination type

- · ·	Decelera	ation ratio	5	10	15	20	30	50	100	200
Product name	Speed contro	ol range[r/min]	20~400	10~200	6.7~133	5~100	3.3~67	2~40	1~20	0.5~10
	K6BH20N ■ + K	6Н□В	0.45	0.9	1.4	1.8	2.6	4.3	6	6
	K8BH40N ■ + K	8H□B	0.9	1.8	2.7	3.6	5.2	8.6	16	16
	K9BH90N ■ + K	9H□B	2	4.1	6.1	8.1	11.6	19.4	30	30
K	6BH20N■ + K6	H□BTH	0.4	0.85	1.3	1.7	2.6	4.3	8.5	17
K	K8BH40N■ + K8H□BTH		0.85	1.7	2.6	3.4	5.1	8.5	17	34
K	9BH90N■ + K9	H□BTH	1.9	3.8	5.7	7.7	11.5	19.1	38.3	68
Product	Deceleration ratio		5	10	15	20	30	50	100	200
name	Speed contro	ol range[r/min]	20~600	10~300	6.7~200	5~150	3.3~100	2~60	1~30	0.5~15
k	(9BH150N ■ + K	(9H□B	2.4	4.7	7.1	9.5	13.6	22.7	30	30
KS	9BH150N■ + K9	H□BTH	2	4.1	6.2	8.3	12.4	20.8	41.6	68
Product	Decelera	ation ratio	5	10	15	20	30	50	100	200
name	Speed contro	ol range[r/min]	20~800	10~400	6.7~267	5~200	3.3~133	2~80	1~40	0.5~20
K100112001	100~3000r/min		2.9	5.9	8.8	11.7	16.8	28	52.7	70
K10BH200NC + K10H□BU 4000r/min		2.0	4.1	6.1	8.1	11.6	19.4	36.5	63	
100~3000r/min K10BH400NC + K10H□BU		5.9	11.7	17.6	23.4	33.5	55.9	70	70	
N (UBH4UUI	AC + KIUH□BU	4000r/min	4.3	8.6	12.8	17.1	24.5	40.9	63	63

^{*} In dimension, in ■ of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V)

^{*} Rotation direction shows the same _____ color as the motor. In other cases, it's the opposite.

^{*} Flat Gearbox viewed from front side is opposite rotation direction with motor.

^{*} Flat Gearbox viewed from back side is same rotation direction with motor.



→ Allowed overhang load and allowed thrust

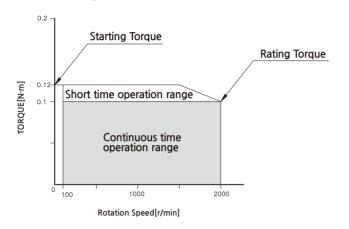
Product name				Allowed ov	erhand load				
		Deceleration ratio		of output part		of output part	Allowed t	hrust load	
			N	kgf	N	kgf	N	kgf	
		5	100	10	150	15			
	K6BH20N■ + K6H□B	10,15,20	150	15	200	20	40	4	
		30,50,100,200	200	20	300	30			
		5	200	20	250	25			
	K8BH40N■ + K8H□B	10,15,20	300	30	350	35	100	10	
		30,50,100,200	450	45	550	55			
		5	300	30	400	40			
	KPBH90N■ (K9BH150NC) + K9H□B	10,15,20	400	40	500	50	150	15	
		30,50,100,200	500	50	650	65			
		5,10,15,20	550	55	800	80	200	20	
	K10BH200NC (K10BH400NC) + K10H□BU	30,50	1000	100	1250	125	300	30	
	· KTONI DO	100,200	1400	140	1700	170	400	40	
	K6BH20N■	5,10	450	45	370	37	200	20	
	+ K6H□BTH	15~200	500	50	400	40	200	20	
	K8BH40N■	5,10	800	80	660	66	400	40	
	+ K8H□BTH	15~200	1200	120	1000	100	400	40	
	L'ORLIGON —	5,10	900	90	770	77			
	(K9BH90N■ (K9BH150N■) + K9H□BTH	15,20	1300	130	1110	111	500	50	
	. KSHLIDIII	30,50,100,200	1500	150	1280	128			
	K6BS	20N ■	70	7	100	10			
MOTOR	K8BS	40N ■	120	12	140	14	Be careful not to weigh thr If it's inevitable, keep it und 50% of the motor weigh		
WOTOR	K9BS90N■,	,K9BS150NC	160	16	170	17			
	K10BS200NC	,K10BS400NC	197	19.7	220	22			

- * In dimension, in of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V).
- $\star~$ In \square of name, it represents a deceleration ratio.
- * Permissible overhang load can be withdrawn by calculation.

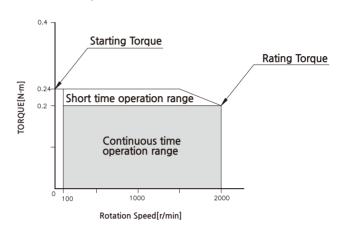


Rotation speed - torque characteristic

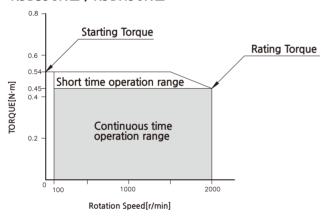
K6BS20N■ / K6BH20N■



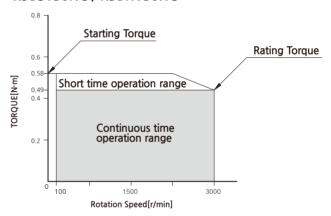
K8BS40N■ / K8BH40N■



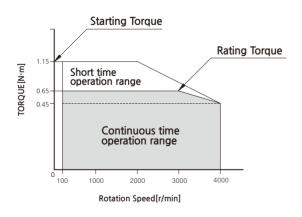
K9BS90N■ / K9BH90N■



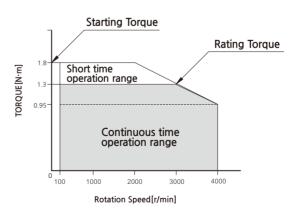
K9BS150NC / K9BH150NC



K10BS200NC



K10BS400NC



^{*} In Dimension, in ■ of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)





□90mm

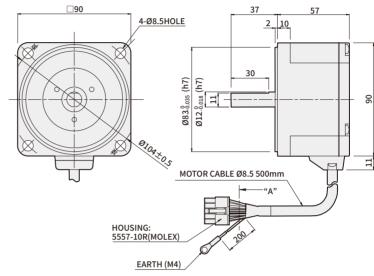
AC voltage input

DIMENSIONS

K9BS90N■

(Weight: 1.3Kg)

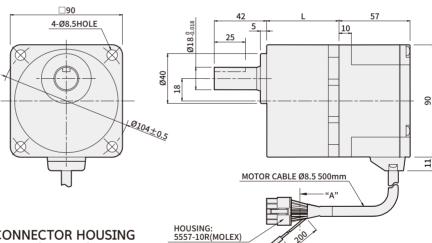




K9BH90N■ + K9H□B

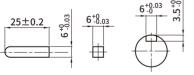
(Weight: 2.6Kg)





EARTH (M4)

* KEY · KEY GROOVE (ACCESSORY)





10 9 8	7	6				
5 4 3	2	1				

* PTN MAP

* LIN MAL							
PIN No.	COLOR	SIGNAL					
1	BLUE	U					
2	-	-					
3	GREEN	Ground					
4	YELLOW	Vcc					
5	ORANGE	Hw					
6	PURPLE	V					
7	GRAY	W					
8		(Drain)					
9	BROWN	Hu					
10	WHITE	Hv					

MOTOR PRODUCT NAME	GEARHEAD PRODUCT NAME	DECELERATION RATIO	L	FIXING BOLT
		5~20	45	M8 P1.25×75
K9BH90N■	К9Н□В	30~100	58	M8 P1.25×90
		200	64	M8 P1.25×95

- * In dimension, in of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)
- * In \square of name, it represents a deceleration ratio.
- * Geared motor is included with fixing bolt set. (flat washer, spring washer, hexagonal nut 4pcs each)



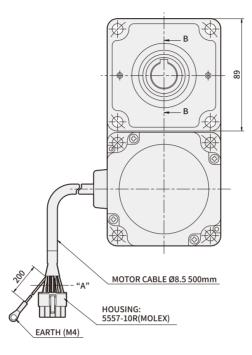


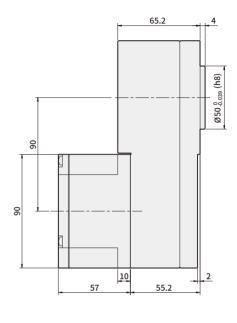
DIMENSIONS

K9BH90N■ + K9H□BTH

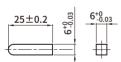
(Weight: 3.4Kg)



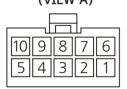


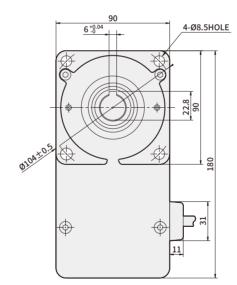


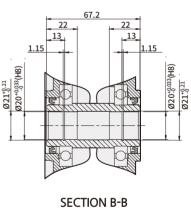
KEY (ACCESSORY)



* CONNECTOR HOUSING (VIEW A)







* PIN MAP

PIN No.	COLOR	SIGNAL
1	BLUE	U
2	-	-
3	GREEN	Ground
4	YELLOW	Vcc
5	ORANGE	Hw
6	PURPLE	V
7	GRAY	W
8		(Drain)
9	BROWN	Hu
10	WHITE	Hv

MOTOR PRODUCT NAME	GEARHEAD PRODUCT NAME	DECELERATION RATIO	FIXING BOLT
K9BH90N■	К9Н□ВТН	5~200	M8 P1.25×90

- * In Dimension, in of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)
- * In □ of name, it represents a deceleration ratio.
- Mounting bolt sets are included in flat type gearbox.
 M8×90L (flat washer, spring washer, hexagonal nut 4pcs each)



Specification

Product	GEAR TYPE	K6BH20NU	K6BH20NC	K8BH40NU	K8BH40NC	K9BH90NU	K9BH90NC	K9BH150NC	K10BH200NC	K10BH400NC
name	D-CUT TYPE	K6BS20NU	K6BS20NC	K8BS40NU	K8BS40NC	K9BS90NU	K9BS90NC	K9BS150NC	K10BS200NC	K10BS400NC
Rating output (continuous) W		2	0	4	0	9	0	150	200	400
	Voltage V	100~115	200~230	100~115	200~230	100~115	200~230	200~230	200~230	200~230
Power	Frequency Hz					50/60				
input	Rating input A	0.95	0.55	1.45	0.85	2.55	1.45	2.1	2.8	5.6
	Maximum A	1.55	0.9	2.5	1.4	3.9	2.4	4	5.1	7.8
Rating torque N·m(kgf·cm)		0.1((1.0)	0.2(2.0)	0.45	(4.5)	0.49(4.9)	0.65(6.5)	1.3(13)
Starting t	torque N·m(kgf·cm)	0.12	(1.2)	0.24	(2.4)	0.54(5.4) 0.63(6.3		0.63(6.3)	1.15(11.5)	1.8(18)
Rating ro	otation speed r/min			2,0	2,000 3,000					
Speed co	ontrol range r/min			100~	2,000			100~3,000	100~	4,000
Allowed inertia load moment of motor	J kg·m²	0.5>	<10 ⁻⁴	10 ⁻⁴ 1.8×10 ⁻⁴ 5.8×10 ⁻⁴			5.8×10 ⁻⁴	8.75×10 ⁻⁴	15×10 ⁻⁴	
Speed	Load		less tha	n or equal to	5 ±1% (0~R	ating torque	e, If rotating	at the rated	d speed)	
change	Voltage	les	s than or ec	jual to ±1%	(Power volt	age ±10%,	If rotation a	t the rated s	peed No loa	ad)
rate	Temperature		less thai	n or equal to	±1% (0~+	40℃, If rotat	tion at the r	ated speed I	No load)	

Common Specification

Items	Specifications	
Rotation speed setting method	Controller panel's speed	
Acceleration time/ deceleration time	0.5~10 seconds: 2000r/min no load (It may change depending on the load size). To set acceleration time, it is set at slow start on the front panel. To set deceleration time, it is set at slow stop.	
Input signal	Photo coupler input method, operating at input resistance of 10kΩ DC 12V±10%,Common in EXT, CW, and CCW	
Output signal Open collector output, External use conditions: less than 26.4V 10mA, common in SPEED OUT/ALA		
Protection function	If the following protection function is operating, then control unit alarm signal gets generated and motor stops automatically. Overload protection function: If more than the rated torque is applied to the motor for more than 5 seconds. Overvoltage protection function: If voltage applied to the control unit goes over the upper bound of the rating voltage allowance. Open phase protection: If cable sensor line gets disconnected during motor operation. Undervoltage protection: If voltage applied to the control unit is less than the lower bound of the rating voltage allowance. Over speed protection: If motor rotation speed is faster than 2500r/min.	
Motor insulation class	E Type(120℃)	
Rated time	Continuous	



→ Normal specifications

lter	ms	Motor	Control unit				
Insulation	Resistance	After continuously operating at room temperature and humidity, it should begreater than 100MΩ between coil and case when measured with DC 500V MEGA TESTER	Protection ground terminal and power input should be greater than 100MQ when measure with DC 500V MEGA TESTER				
Dielectric	Strength	After continuously operating at room temperature and humidity, there shouldn't be any problem if 60Hz, 1500V is applied for more than 1 minute between coil and case There shouldn't be nay problem if 60Happlied for more than 1 minute between ground terminal and power input					
Temperature rise		After operating continuously at room temperature and humidity, the temperature increase should be less than 60°C and less than 50°C of temperature increase on the case surface when measure with thermo couple					
	Used Ambient temperature	೦℃~+40℃ (There sho	uld not be any freeze)				
Used environment	Used Ambient Humidity	less than 85% (no	dew condensation)				
	Ambient environment	No corrosive gas or dusts					
Conservation	Ambient temperature	-25 ~ +70℃ (There sho	ould not be any freeze)				
environment	Ambient Humidity	less than 85% (no	dew condensation)				
Protection	on class	IP65(Except for the mounting part on the output part)	IP10				

Delivery effciency of gearhead

	Deceleration ratio	5	10	15	20	30	50	100	200
	К6Н□В		90)%		86%			81%
	K8H□B		90)%		86%			81%
Product	К9Н□В		90)%		86% 81			81%
name	K10H□BU		90)%		86% 81%			%
	K6H□BTH	80%			85%	85%			
	K8H□BTH	85%							
	K9H□BTH	8				5%			



→ Allowed torque of combination type

- · ·	Decelera	ation ratio	5	10	15	20	30	50	100	200
Product name	Speed contro	ol range[r/min]	20~400	10~200	6.7~133	5~100	3.3~67	2~40	1~20	0.5~10
K6BH20N■ + K6H□B		0.45	0.9	1.4	1.8	2.6	4.3	6	6	
	K8BH40N ■ + K	8H□B	0.9	1.8	2.7	3.6	5.2	8.6	16	16
	K9BH90N ■ + K	9H□B	2	4.1	6.1	8.1	11.6	19.4	30	30
K	6BH20N■ + K6	H□BTH	0.4	0.85	1.3	1.7	2.6	4.3	8.5	17
K	8BH40N■ + K8	H□BTH	0.85	1.7	2.6	3.4	5.1	8.5	17	34
K	9BH90N■ + K9	H□BTH	1.9	3.8	5.7	7.7	11.5	19.1	38.3	68
Product	Decelera	ation ratio	5	10	15	20	30	50	100	200
name	Speed contro	Speed control range[r/min]		10~300	6.7~200	5~150	3.3~100	2~60	1~30	0.5~15
k	(9BH150N ■ + K	(9H□B	2.4	4.7	7.1	9.5	13.6	22.7	30	30
KS	9BH150N■ + K9	H□BTH	2	4.1	6.2	8.3	12.4	20.8	41.6	68
Product	Decelera	ation ratio	5	10	15	20	30	50	100	200
name	Speed contro	ol range[r/min]	20~800	10~400	6.7~267	5~200	3.3~133	2~80	1~40	0.5~20
K100112001	NC - K10HERH	100~3000r/min	2.9	5.9	8.8	11.7	16.8	28	52.7	70
K10BH200NC + K10H□BU		4000r/min	2.0	4.1	6.1	8.1	11.6	19.4	36.5	63
K10BH400NC + K10H□BU 100~3000r/min 4000r/min		5.9	11.7	17.6	23.4	33.5	55.9	70	70	
			4.3	8.6	12.8	17.1	24.5	40.9	63	63

^{*} In dimension, in ■ of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V)

^{*} Rotation direction shows the same _____ color as the motor. In other cases, it's the opposite.

^{*} Flat Gearbox viewed from front side is opposite rotation direction with motor.

^{*} Flat Gearbox viewed from back side is same rotation direction with motor.



→ Allowed overhang load and allowed thrust

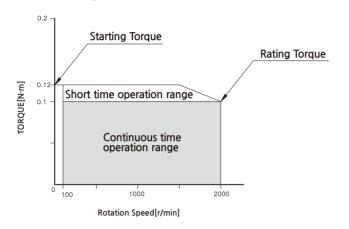
Product name				Allowed ov	erhand load			
		Deceleration ratio		of output part		of output part	Allowed t	hrust load
			N	kgf	N	kgf	N	kgf
		5	100	10	150	15		
	K6BH20N■ + K6H□B	10,15,20	150	15	200	20	40	4
		30,50,100,200	200	20	300	30		
		5	200	20	250	25		
	K8BH40N■ + K8H□B	10,15,20	300	30	350	35	100	10
		30,50,100,200	450	45	550	55		
		5	300	30	400	40		
	KPBH90N■ (K9BH150NC) + K9H□B	10,15,20	400	40	500	50	150	15
	1 K911⊔b	30,50,100,200	500	50	650	65		
GEARED MOTOR	MOTOR	5,10,15,20	550	55	800	80	200	20
	K10BH200NC (K10BH400NC) + K10H□BU	30,50	1000	100	1250	125	300	30
	, KIOII	100,200	1400	140	1700	170	400	40
	K6BH20N■	5,10	450	45	370	37	200	20
	+ K6H□BTH	15~200	500	50	400	40	200	20
	K8BH40N■	5,10	800	80	660	66	400	40
	+ K8H□BTH	15~200	1200	120	1000	100	400	40
	L'ORLIGON —	5,10	900	90	770	77		
	(K9BH90N■ (K9BH150N■) + K9H□BTH	15,20	1300	130	1110	111	500	50
	. KSHLIDIII	30,50,100,200	1500	150	1280	128		
	K6BS	20N ■	70	7	100	10		
MOTOR	K8BS	40N ■	120	12	140	14		to weigh thrust. e, keep it under
WOTOR	K9BS90N■,	,K9BS150NC	160	16	170	17		notor weight.
	K10BS200NC	,K10BS400NC	197	19.7	220	22		

- * In dimension, in of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V).
- $\star~$ In \square of name, it represents a deceleration ratio.
- * Permissible overhang load can be withdrawn by calculation.

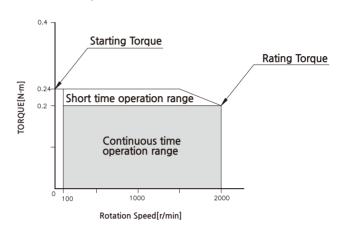


Rotation speed - torque characteristic

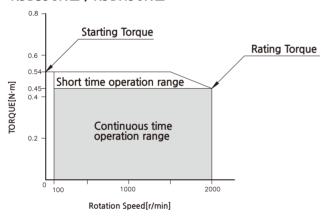
K6BS20N■ / K6BH20N■



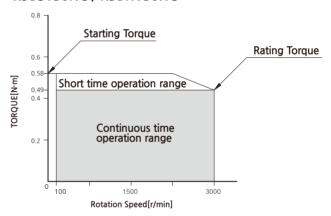
K8BS40N■ / K8BH40N■



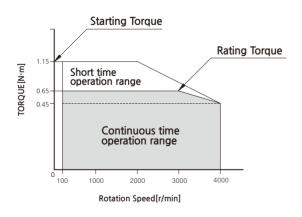
K9BS90N■ / K9BH90N■



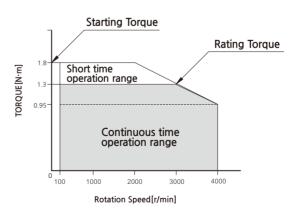
K9BS150NC / K9BH150NC



K10BS200NC



K10BS400NC



^{*} In Dimension, in ■ of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)





□90mm

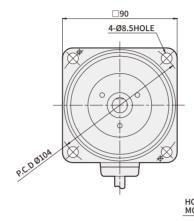
AC voltage input

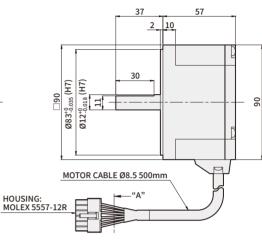
DIMENSIONS

K9BS150NC

(Weight: 1.3Kg)



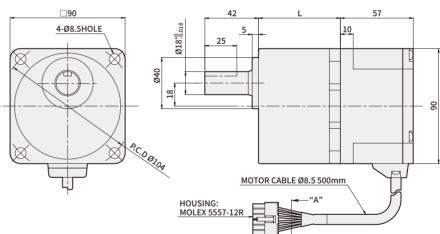




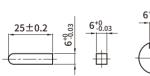
K9BH150NC + K9H□B

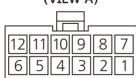
(weight: 2.6Kg)





*KEY · KEY GROOVE (ACCESSORY) *CONNECTOR HOUSING





MOTOR PRODUCT NAME	GEARHEAD PRODUCT NAME	DECELERATION RATIO	L	FIXING BOLT
		5~20	45	M8 P1.25×75
K9BH150NC	К9Н□В	30~100	58	M8 P1.25×90
		200	64	M8 P1.25×95

* In \square of name, it represents a deceleration ratio.

PIN No.	COLOR	SIGNAL
1	GRAY	W
2	-	-
3	-	-
4	ORANGE	Hw
5	WHITE	Hv
6	BROWN	Hu
7	PURPLE	V
8	BLUE	U
9	GREEN& YELLOW	FG
10		(DRAIN)
11	YELLOW	Vcc
12	GREEN	Ground

^{*} Geared motor is included with fixing bolt set. (flat washer, spring washer, hexagonal nut 4pcs each)

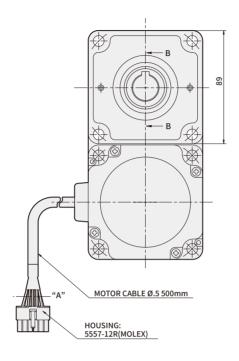


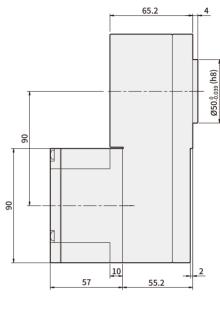
DIMENSIONS

K9BH150NC + K9H□BTH

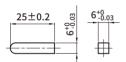
(Weight: 3.4Kg)



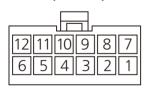


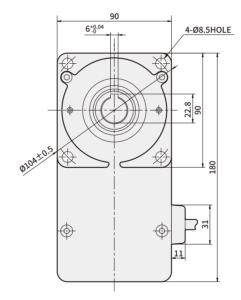


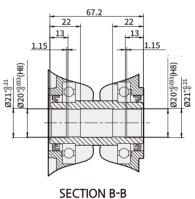
*KEY (ACCESSORY)



* CONNECTOR HOUSING (VIEW A)







PIN No.	COLOR	SIGNAL
1	GRAY	W
2	-	-
3	-	-
4	ORANGE	Hw
5	WHITE	Hv
6	BROWN	Hu
7	PURPLE	V
8	BLUE	U
9	GREEN& YELLOW	FG
10		(DRAIN)
11	YELLOW	Vcc
12	GREEN	Ground

MOTOR PRODUCT NAME	GEARHEAD PRODUCT NAME	DECELERATION RATIO	FIXING BOLT
K9BH150NC	К9Н□ВТН	5~200	M8 P1.25×90

- * In □ of name, it represents a deceieration ratio.
- * Mounting bolt sets are included in flat type gearbox. M8×90L (flat washer, spring washer, hexagonal nut 4pcs each)



Specification

Product	GEAR TYPE	K6BH20NU	K6BH20NC	K8BH40NU	K8BH40NC	K9BH90NU	K9BH90NC	K9BH150NC	K10BH200NC	K10BH400NC
name	D-CUT TYPE	K6BS20NU	K6BS20NC	K8BS40NU	K8BS40NC	K9BS90NU	K9BS90NC	K9BS150NC	K10BS200NC	K10BS400NC
Rating output (continuous) W		2	0	4	0	9	0	150	200	400
	Voltage V	100~115	200~230	100~115	200~230	100~115	200~230	200~230	200~230	200~230
Power	Frequency Hz					50/60				
input	Rating input A	0.95	0.55	1.45	0.85	2.55	1.45	2.1	2.8	5.6
	Maximum A	1.55	0.9	2.5	1.4	3.9	2.4	4	5.1	7.8
Rating torque N·m(kgf·cm)		0.1((1.0)	0.2(2.0)	0.45	(4.5)	0.49(4.9)	0.65(6.5)	1.3(13)
Starting t	torque N·m(kgf·cm)	0.12	(1.2)	0.24	(2.4)	0.54(5.4) 0.63(6.3		0.63(6.3)	1.15(11.5)	1.8(18)
Rating ro	otation speed r/min			2,0	000	3,000				
Speed co	ontrol range r/min			100~	2,000			100~3,000	100~	4,000
Allowed inertia load moment of motor	J kg·m²	0.5>	<10 ⁻⁴	10 ⁻⁴ 1.8×10 ⁻⁴ 5.8×10 ⁻⁴			5.8×10 ⁻⁴	8.75×10 ⁻⁴	15×10 ⁻⁴	
Speed	Load		less tha	n or equal to	5 ±1% (0~R	ating torque	e, If rotating	at the rated	d speed)	
change	Voltage	les	s than or ec	jual to ±1%	(Power volt	age ±10%,	If rotation a	t the rated s	peed No loa	ad)
rate	Temperature		less thai	n or equal to	±1% (0~+	40℃, If rotat	tion at the r	ated speed I	No load)	

Common Specification

Items	Specifications
Rotation speed setting method	Controller panel's speed
Acceleration time/ deceleration time	0.5~10 seconds: 2000r/min no load (It may change depending on the load size). To set acceleration time, it is set at slow start on the front panel. To set deceleration time, it is set at slow stop.
Input signal	Photo coupler input method, operating at input resistance of 10kΩ DC 12V±10%,Common in EXT, CW, and CCW
Output signal	Open collector output, External use conditions: less than 26.4V 10mA, common in SPEED OUT/ALARM OUT
Protection function	If the following protection function is operating, then control unit alarm signal gets generated and motor stops automatically. Overload protection function: If more than the rated torque is applied to the motor for more than 5 seconds. Overvoltage protection function: If voltage applied to the control unit goes over the upper bound of the rating voltage allowance. Open phase protection: If cable sensor line gets disconnected during motor operation. Undervoltage protection: If voltage applied to the control unit is less than the lower bound of the rating voltage allowance. Over speed protection: If motor rotation speed is faster than 2500r/min.
Motor insulation class	E Type(120℃)
Rated time	Continuous



→ Normal specifications

lter	ms	Motor	Control unit				
Insulation	Resistance	After continuously operating at room temperature and humidity, it should begreater than 100MΩ between coil and case when measured with DC 500V MEGA TESTER	Protection ground terminal and power input should be greater than 100MQ when measure with DC 500V MEGA TESTER				
Dielectric	Strength	After continuously operating at room temperature and humidity, there shouldn't be any problem if 60Hz, 1500V is applied for more than 1 minute between coil and case	There shouldn't be nay problem if 60Hz, 1500V is applied for more than 1 minute between protection ground terminal and power input				
Temperature rise		After operating continuously at room temperature and humidity, the temperature increase should be less than 60°C and less than 50°C of temperature increase on the case surface when measure with thermo couple					
	Used Ambient temperature	0℃~+40℃ (There should not be any freeze)					
Used environment	Used Ambient Humidity	less than 85% (no	dew condensation)				
	Ambient environment	No corrosive	gas or dusts				
Conservation	Ambient temperature	-25 ~ +70℃ (There sho	ould not be any freeze)				
environment	Ambient Humidity	less than 85% (no	o dew condensation)				
Protection	on class	IP65(Except for the mounting part on the output part)	IP10				

Delivery effciency of gearhead

	Deceleration ratio	5	10	15	20	30	50	100	200
	К6Н□В		90)%			81%		
	K8H□B		90)%		86%			81%
Product	К9Н□В		90)%		86%			81%
name	K10H□BU		90)%		86% 81%			
	K6H□BTH	80%				85%			
	K8H□BTH								
	K9H□BTH				85	5%			



→ Allowed torque of combination type

- · ·	Decelera	ation ratio	5	10	15	20	30	50	100	200
Product name	Speed contro	ol range[r/min]	20~400	10~200	6.7~133	5~100	3.3~67	2~40	1~20	0.5~10
	K6BH20N ■ + K	6Н□В	0.45	0.9	1.4	1.8	2.6	4.3	6	6
	K8BH40N ■ + K	8H□B	0.9	1.8	2.7	3.6	5.2	8.6	16	16
	K9BH90N ■ + K	9H□B	2	4.1	6.1	8.1	11.6	19.4	30	30
K	6BH20N■ + K6	H□BTH	0.4	0.85	1.3	1.7	2.6	4.3	8.5	17
K	8BH40N■ + K8	H□BTH	0.85	1.7	2.6	3.4	5.1	8.5	17	34
K	9BH90N■ + K9	H□BTH	1.9	3.8	5.7	7.7	11.5	19.1	38.3	68
Product	Decelera	Deceleration ratio		10	15	20	30	50	100	200
name	Speed control range[r/min]		20~600	10~300	6.7~200	5~150	3.3~100	2~60	1~30	0.5~15
k	(9BH150N ■ + K	(9H□B	2.4	4.7	7.1	9.5	13.6	22.7	30	30
KS	9BH150N■ + K9	H□BTH	2	4.1	6.2	8.3	12.4	20.8	41.6	68
Product	Decelera	ation ratio	5	10	15	20	30	50	100	200
name	Speed contro	ol range[r/min]	20~800	10~400	6.7~267	5~200	3.3~133	2~80	1~40	0.5~20
K100112001	NC - K10HERH	100~3000r/min	2.9	5.9	8.8	11.7	16.8	28	52.7	70
K TUBHZUUI	K10BH200NC + K10H□BU 4000r/min		2.0	4.1	6.1	8.1	11.6	19.4	36.5	63
K100114001	NC + K10HERH	100~3000r/min	5.9	11.7	17.6	23.4	33.5	55.9	70	70
N (UBH4UUI	NC + K10H□BU	4000r/min	4.3	8.6	12.8	17.1	24.5	40.9	63	63

^{*} In dimension, in ■ of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V)

^{*} Rotation direction shows the same _____ color as the motor. In other cases, it's the opposite.

^{*} Flat Gearbox viewed from front side is opposite rotation direction with motor.

^{*} Flat Gearbox viewed from back side is same rotation direction with motor.



→ Allowed overhang load and allowed thrust

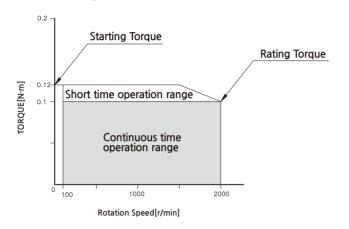
				Allowed ov	erhand load		Allowed thrust load		
Produ	ct name	Deceleration ratio		of output part		of output part	Allowed to	hrust load	
			N	kgf	N	kgf	N	kgf	
		5	100	10	150	15			
	K6BH20N■ + K6H□B	10,15,20	150	15	200	20	40	4	
		30,50,100,200	200	20	300	30			
		5	200	20	250	25			
	K8BH40N■ + K8H□B	10,15,20	300	30	350	35	100	10	
		30,50,100,200	450	45	550	55			
	KPBH90N■ (K9BH150NC) + K9H□B	5	300	30	400	40			
		10,15,20	400	40	500	50	150	15	
		30,50,100,200	500	50	650	65			
GEARED MOTOR	K10BH200NC (K10BH400NC) + K10H□BU	5,10,15,20	550	55	800	80	200	20	
		30,50	1000	100	1250	125	300	30	
		100,200	1400	140	1700	170	400	40	
	K6BH20N■	5,10	450	45	370	37	200	20	
	+ K6H□BTH	15~200	500	50	400	40	200	20	
	K8BH40N■	5,10	800	80	660	66	400	40	
	+ K8H□BTH	15~200	1200	120	1000	100	400	40	
	L'ORLIGON I—	5,10	900	90	770	77			
	(K9BH90N■ (K9BH150N■) + K9H□BTH	15,20	1300	130	1110	111	500	50	
	. KSHLIDIII	30,50,100,200	1500	150	1280	128			
	K6BS	20N ■	70	7	100	10	Be careful not to weigh thru: If it's inevitable, keep it unde		
MOTOR	K8BS	40N ■	120	12	140	14			
WOTOR	K9BS90N■,	,K9BS150NC	160	16	170	17		notor weight.	
	K10BS200NC	,K10BS400NC	197	19.7	220	22			

- * In dimension, in of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V).
- $\star~$ In \square of name, it represents a deceleration ratio.
- * Permissible overhang load can be withdrawn by calculation.

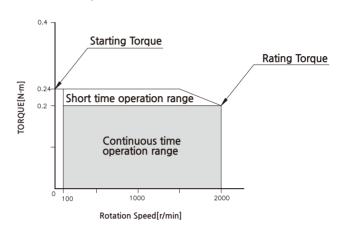


Rotation speed - torque characteristic

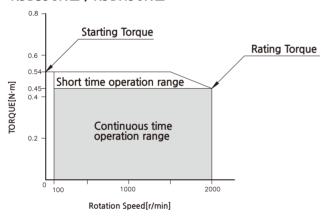
K6BS20N■ / K6BH20N■



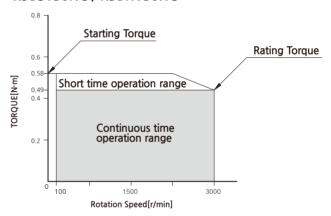
K8BS40N■ / K8BH40N■



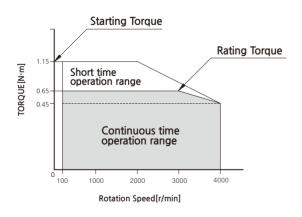
K9BS90N■ / K9BH90N■



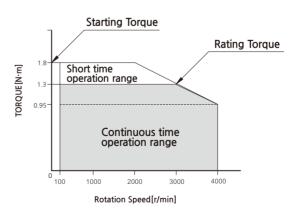
K9BS150NC / K9BH150NC



K10BS200NC



K10BS400NC



^{*} In Dimension, in ■ of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)

BRUSHLESS DC MOTOR UNIT - B Series



□104mm

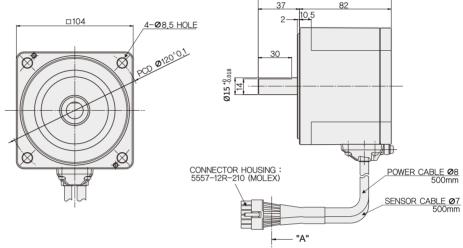
AC voltage input

DIMENSIONS

K10BS200NC K10BS400NC

(Weight: 2.4Kg)

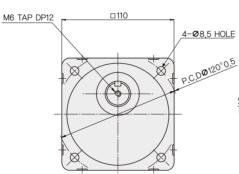


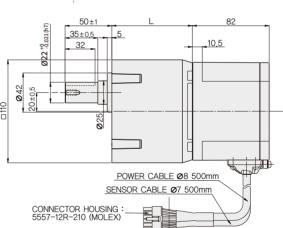


K10BH200NC + K10H□BU K10BH400NC + K10H□BU

(Weight: 5.4Kg)



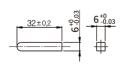




* KEY · KEY GROOVE (ACCESSORY)

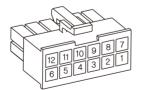
O KEY

O KEY GROOVE





* CONNECTOR HOUSING (VIEW A)



MOTOR PRODUCT NAME	GEARHEAD PRODUCT NAME	DECELERATION RATIO	L	FIXING BOLT
K10BH200NC		5~20	60	M8 P1.25×95
	— K10H□BU	30~50	72	M8 P1.25×110
K10BH400NC		100~200	86	M8 P1.25×120

- * In \square of name, it represents a deceleration ratio.
- * Geared motor is included with fixing bolt set (normal WASHER, SPRING, WASHER, cube nut; 4 each)

PIN No.	COLOR	SIGNAL
1	GRAY	W
2	-	-
3	-	-
4	ORANGE	Hw
5	WHITE	Hv
6	BROWN	Hu
7	PURPLE	V
8	BLUE	U
9	GREEN- YELLOW	FG
10	-	-
11	YELLOW	Vcc
12	GREEN	Ground





Specification

Product	GEAR TYPE	K6BH20NU	K6BH20NC	K8BH40NU	K8BH40NC	K9BH90NU	K9BH90NC	K9BH150NC	K10BH200NC	K10BH400NC
name	D-CUT TYPE	K6BS20NU	K6BS20NC	K8BS40NU	K8BS40NC	K9BS90NU	K9BS90NC	K9BS150NC	K10BS200NC	K10BS400NC
Rating ou	tput (continuous) W	2	0	4	0	9	0	150	200	400
	Voltage V	100~115	200~230	100~115	200~230	100~115	200~230	200~230	200~230	200~230
Power	Frequency Hz					50/60				
input	Rating input A	0.95	0.55	1.45	0.85	2.55	1.45	2.1	2.8	5.6
	Maximum A	1.55	0.9	2.5	1.4	3.9	2.4	4	5.1	7.8
Rating to	orque N·m(kgf·cm)	0.1((1.0)	0.2(2.0)	0.45(4.5)		0.49(4.9)	0.65(6.5)	1.3(13)
Starting t	torque N·m(kgf·cm)	0.12	(1.2)	.2) 0.24(2.4		0.54(5.4)		0.63(6.3)	1.15(11.5)	1.8(18)
Rating ro	otation speed r/min		2,000 3,000							
Speed co	ontrol range r/min		100~2,000 100~3,000 100~4,00						4,000	
Allowed inertia load moment of motor	ia d J kg·m² 0.5×10 ⁻⁴		1.8>	1.8×10 ⁻⁴		5.8×10 ⁻⁴		8.75×10 ⁻⁴	15×10 ⁻⁴	
Speed	Load		less tha	n or equal to	5 ±1% (0~R	ating torque	e, If rotating	at the rated	d speed)	
change	Voltage	les	s than or ec	jual to ±1%	(Power volt	age ±10%,	If rotation a	t the rated s	peed No loa	ad)
rate	Temperature		less thai	n or equal to	±1% (0~+	40℃, If rotat	tion at the r	ated speed I	No load)	

Common Specification

Items	Specifications
Rotation speed setting method	Controller panel's speed
Acceleration time/ deceleration time	0.5~10 seconds: 2000r/min no load (It may change depending on the load size). To set acceleration time, it is set at slow start on the front panel. To set deceleration time, it is set at slow stop.
Input signal	Photo coupler input method, operating at input resistance of 10kΩ DC 12V±10%,Common in EXT, CW, and CCW
Output signal	Open collector output, External use conditions: less than 26.4V 10mA, common in SPEED OUT/ALARM OUT
Protection function	If the following protection function is operating, then control unit alarm signal gets generated and motor stops automatically. Overload protection function: If more than the rated torque is applied to the motor for more than 5 seconds. Overvoltage protection function: If voltage applied to the control unit goes over the upper bound of the rating voltage allowance. Open phase protection: If cable sensor line gets disconnected during motor operation. Undervoltage protection: If voltage applied to the control unit is less than the lower bound of the rating voltage allowance. Over speed protection: If motor rotation speed is faster than 2500r/min.
Motor insulation class	E Type(120℃)
Rated time	Continuous



→ Normal specifications

lter	ms	Motor	Control unit				
Insulation	Resistance	After continuously operating at room temperature and humidity, it should begreater than 100MΩ between coil and case when measured with DC 500V MEGA TESTER	Protection ground terminal and power input should be greater than 100MQ when measure with DC 500V MEGA TESTER				
Dielectric	Strength	After continuously operating at room temperature and humidity, there shouldn't be any problem if 60Hz, 1500V is applied for more than 1 minute between coil and case	There shouldn't be nay problem if 60Hz, 1500V is applied for more than 1 minute between protection ground terminal and power input				
Temperature rise		After operating continuously at room temperature and humidity, the temperature increase should be less than 60°C and less than 50°C of temperature increase on the case surface when measure with thermo couple					
	Used Ambient temperature	0℃~+40℃ (There should not be any freeze)					
Used environment	Used Ambient Humidity	less than 85% (no	dew condensation)				
	Ambient environment	No corrosive	gas or dusts				
Conservation	Ambient temperature	-25 ~ +70℃ (There sho	ould not be any freeze)				
environment	Ambient Humidity	less than 85% (no	o dew condensation)				
Protection	on class	IP65(Except for the mounting part on the output part)	IP10				

Delivery effciency of gearhead

	Deceleration ratio	5	10	15	20	30	50	100	200
	К6Н□В		90)%			81%		
	K8H□B		90)%		86%			81%
Product	К9Н□В		90)%		86%			81%
name	K10H□BU		90)%		86% 81%			
	K6H□BTH	80%				85%			
	K8H□BTH								
	K9H□BTH				85	5%			



→ Allowed torque of combination type

- · ·	Decelera	ation ratio	5	10	15	20	30	50	100	200
Product name	Speed contro	ol range[r/min]	20~400	10~200	6.7~133	5~100	3.3~67	2~40	1~20	0.5~10
	K6BH20N ■ + K	6Н□В	0.45	0.9	1.4	1.8	2.6	4.3	6	6
	K8BH40N ■ + K	8H□B	0.9	1.8	2.7	3.6	5.2	8.6	16	16
	K9BH90N ■ + K	9H□B	2	4.1	6.1	8.1	11.6	19.4	30	30
K	6BH20N■ + K6	H□BTH	0.4	0.85	1.3	1.7	2.6	4.3	8.5	17
K	8BH40N■ + K8	H□BTH	0.85	1.7	2.6	3.4	5.1	8.5	17	34
K	9BH90N■ + K9	H□BTH	1.9	3.8	5.7	7.7	11.5	19.1	38.3	68
Product	Decelera	Deceleration ratio		10	15	20	30	50	100	200
name	Speed control range[r/min]		20~600	10~300	6.7~200	5~150	3.3~100	2~60	1~30	0.5~15
k	(9BH150N ■ + K	(9H□B	2.4	4.7	7.1	9.5	13.6	22.7	30	30
KS	9BH150N■ + K9	H□BTH	2	4.1	6.2	8.3	12.4	20.8	41.6	68
Product	Decelera	ation ratio	5	10	15	20	30	50	100	200
name	Speed contro	ol range[r/min]	20~800	10~400	6.7~267	5~200	3.3~133	2~80	1~40	0.5~20
K100112001	NC - K10HERH	100~3000r/min	2.9	5.9	8.8	11.7	16.8	28	52.7	70
K TUBHZUUI	K10BH200NC + K10H□BU 4000r/min		2.0	4.1	6.1	8.1	11.6	19.4	36.5	63
K100114001	NC + K10HERH	100~3000r/min	5.9	11.7	17.6	23.4	33.5	55.9	70	70
N (UBH4UUI	NC + K10H□BU	4000r/min	4.3	8.6	12.8	17.1	24.5	40.9	63	63

^{*} In dimension, in ■ of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V)

^{*} Rotation direction shows the same _____ color as the motor. In other cases, it's the opposite.

^{*} Flat Gearbox viewed from front side is opposite rotation direction with motor.

^{*} Flat Gearbox viewed from back side is same rotation direction with motor.



→ Allowed overhang load and allowed thrust

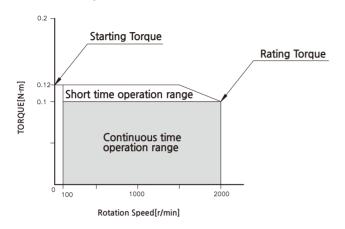
Product name		Deceleration ratio	Allowed overhand load					
			From the end of output part 10mm		From the end of output part 20mm		Allowed thrust load	
			N	kgf	N	kgf	N	kgf
GEARED MOTOR	K6BH20N■ + K6H□B	5	100	10	150	15	40	4
		10,15,20	150	15	200	20		
		30,50,100,200	200	20	300	30		
	K8BH40N■ + K8H□B	5	200	20	250	25	100	10
		10,15,20	300	30	350	35		
		30,50,100,200	450	45	550	55		
	KPBH90N■ (K9BH150NC) + K9H□B	5	300	30	400	40	150	15
		10,15,20	400	40	500	50		
		30,50,100,200	500	50	650	65		
	K10BH200NC (K10BH400NC) + K10H□BU	5,10,15,20	550	55	800	80	200	20
		30,50	1000	100	1250	125	300	30
		100,200	1400	140	1700	170	400	40
	K6BH20N■ + K6H□BTH	5,10	450	45	370	37	- 200	20
		15~200	500	50	400	40		
	K8BH40N■ + K8H□BTH	5,10	800	80	660	66	- 400	40
		15~200	1200	120	1000	100		
	K9BH90N■ (K9BH150N■) + K9H□BTH	5,10	900	90	770	77	500	50
		15,20	1300	130	1110	111		
		30,50,100,200	1500	150	1280	128		
MOTOR	K6BS20N■		70	7	100	10	·Be careful not to weigh thrust. If it's inevitable, keep it under 50% of the motor weight.	
	K8BS40N■		120	12	140	14		
	K9BS90N■,K9BS150NC		160	16	170	17		
	K10BS200NC,K10BS400NC		197	19.7	220	22		

- * In dimension, in of name represents power voltage U(single-phase 100~115V), and C(single-phase 200~230V).
- $\star~$ In \square of name, it represents a deceleration ratio.
- * Permissible overhang load can be withdrawn by calculation.

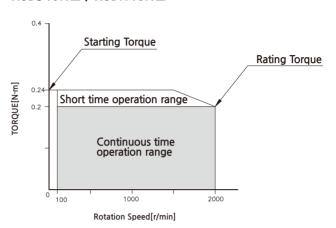


Rotation speed - torque characteristic

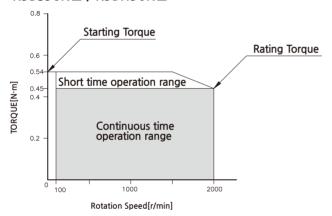
K6BS20N■ / K6BH20N■



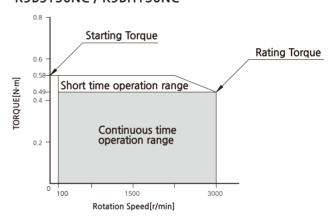
K8BS40N■ / K8BH40N■



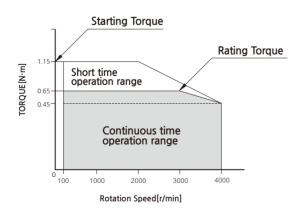
K9BS90N■ / K9BH90N■



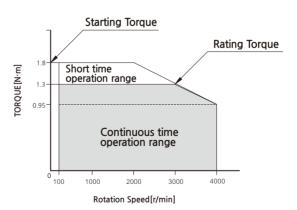
K9BS150NC / K9BH150NC



K10BS200NC



K10BS400NC



^{*} In Dimension, in ■ of name represents power voltage U(single-phase 100~115V), C(single-phase 200~230V)