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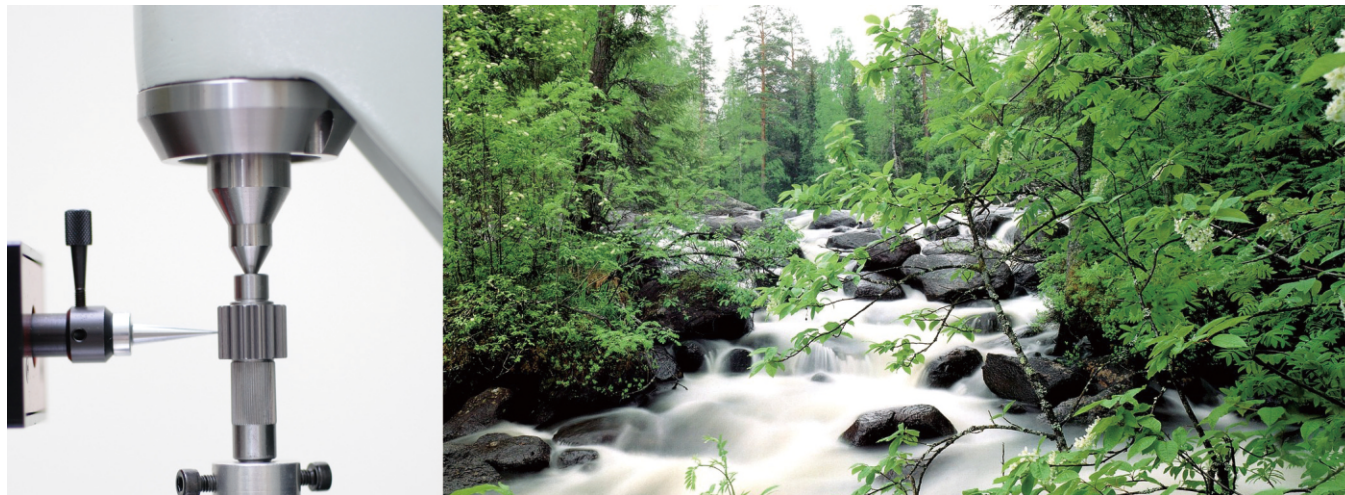
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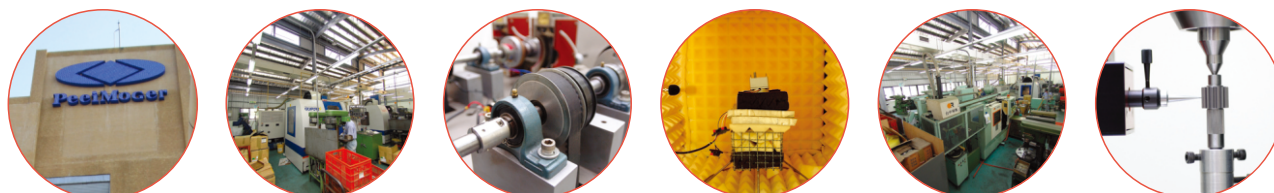
◆ Our Business Philosophy

Through careful due diligence and responsible attitude, PEI-EI strives to provide top leading products and cutting-edge services to satisfy the biggest demands from customers. In Pursuing of product perfection and excellence is the ultimate goal.

◆ Our Operating Strategies

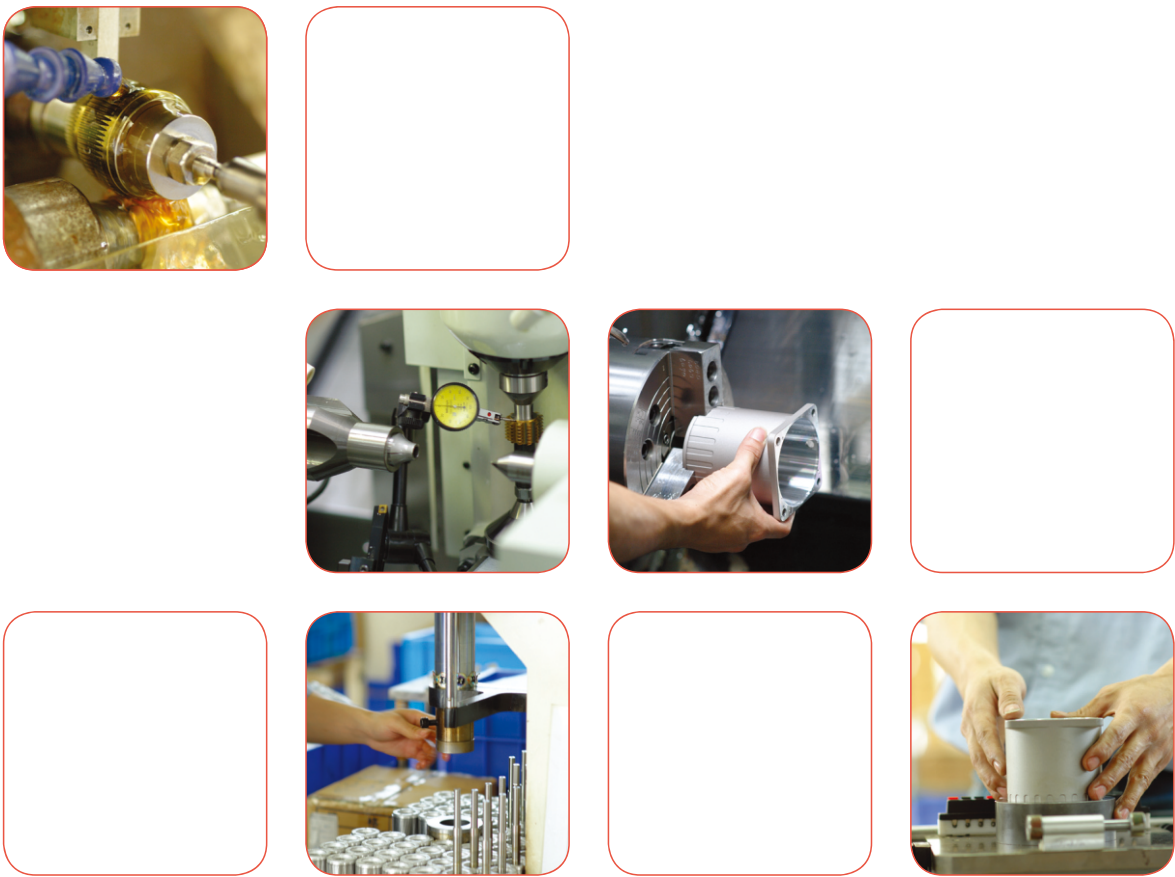
New : Constant update with new concepts
Fast : Short lead time with on-time delivery
Honesty : Building trust with clients
Simple : To be simple and pragmatic

◆ The Company History



The Most Competent Machine Tools

The most competent CNC computer processing equipments were invested to promote our state of the art facility. Accompanied by our top graduate engineers, each of our product components were manufactured with the highest standard in precision and accuracy.



Utilizing Precision Equipment

"Total quality control" is not only a slogan at PEI-EI, it is our persistence in pursuing of perfection and excellence on the products. PEI-EI requires the highest standards in inspection from raw materials to the finish products. Strict QC guidelines to ensure each product passes through our precise inspection equipment.



Product Applications

Compact motors are often needed for both home and business applications



For projector screen

Either for business conferences or home theaters

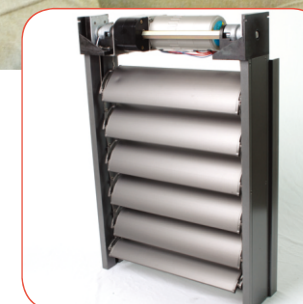
For automatic sealer

They can be seen in these beverage sealers



For Cash Register/Counter

They can also be used in cash registers



For auto-curtain

As well as in some of the high end automatic curtain



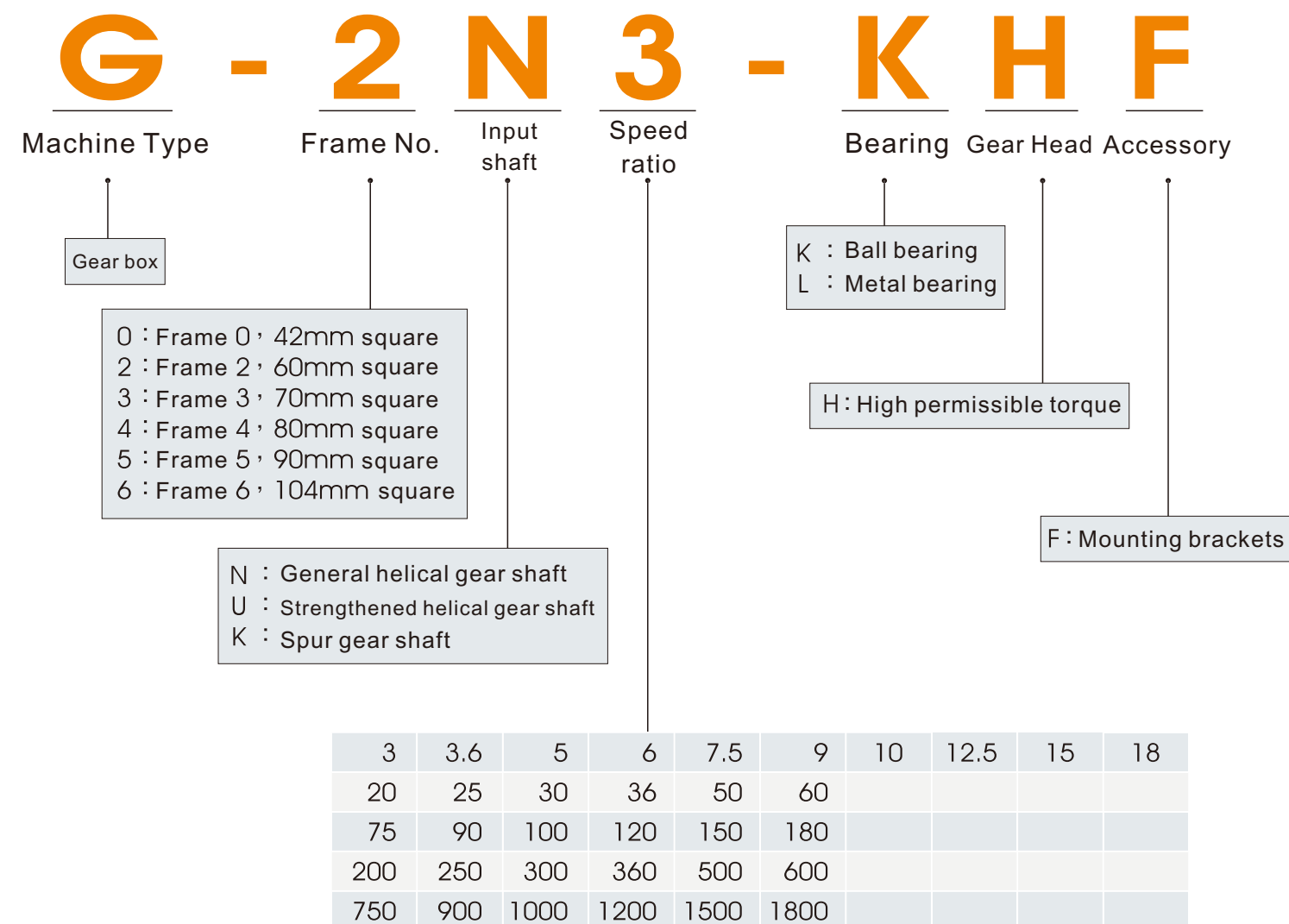
產品特點

- 設計標準
 - 1) 符合國際電工委員會IEC34
 - 2) 通過CE安全認證
 - 3) 通過UL安全認證
 - 4) 通過3C安全認證
- 產品造型
 - 1) 美觀的香檳色系列
 - 2) 專利的散熱造型結構
 - 3) 接線盒空間大，可四個方向任意出線
- 優越的性能
 - 1) 高效率
 - 2) 低噪音
 - 3) 低溫昇
 - 4) 選擇多元化
- 滿足客戶的實際需求
 - 包括結構，電氣性能及其他特殊需求

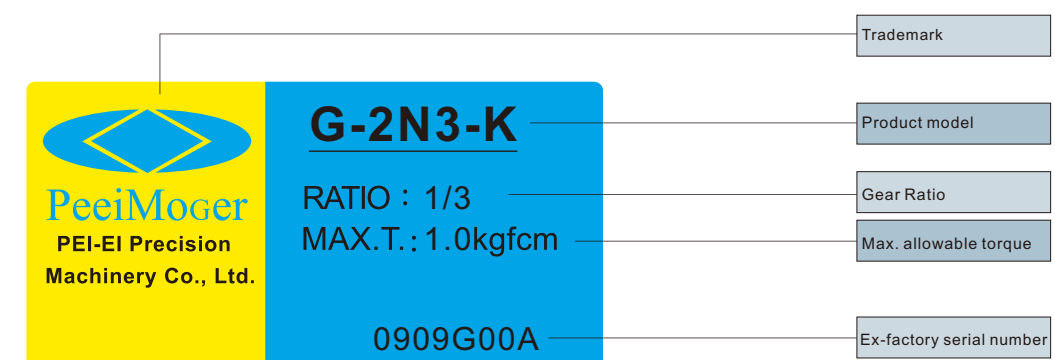
Product Feature

- Design
 - 1) International Electro-technical Commission-IEC34
 - 2) CE Certification
 - 3) UL Certification
 - 4) 3C Certification
- Structure
 - 1) Beautiful champagne Series
 - 2) Patented thermal modeling structure
 - 3) Large space in terminal box, cable entry can be from either side
- Performance
 - 1) Higher Efficiency
 - 2) Lower Noise
 - 3) Higher Reliability
 - 4) Choice of diversification
- Customer Satisfaction
 - Including mechanical structure, electrical performance, other specific requirements, and etc.

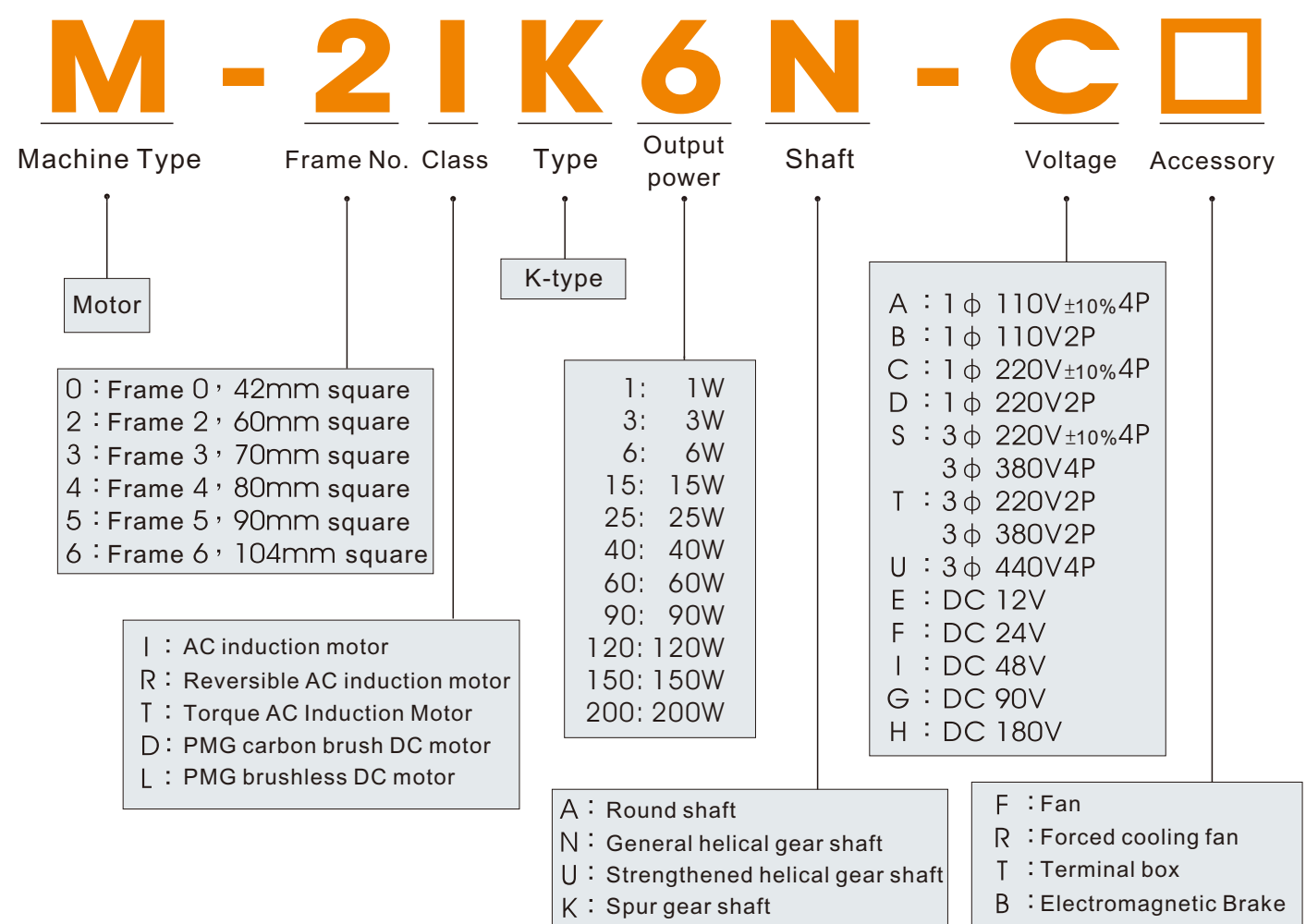
Gear Head Models



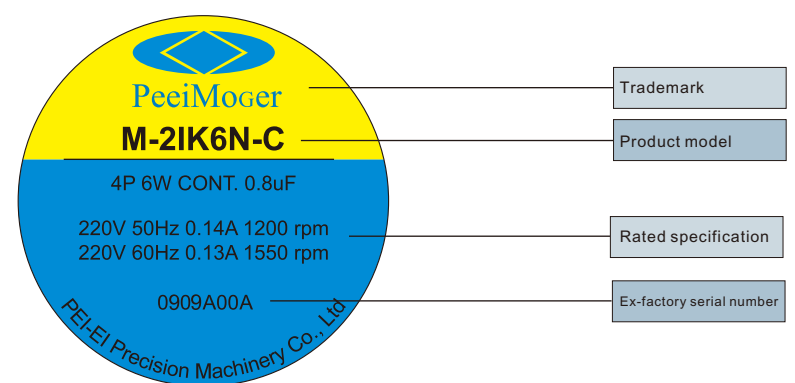
Gear Head Label



AC Induction Motor Models



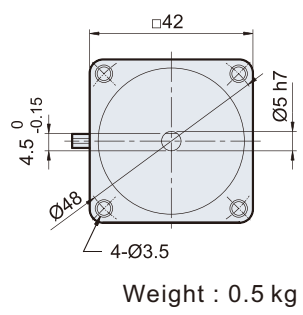
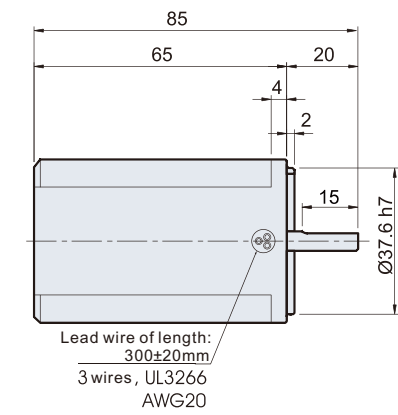
Machine type



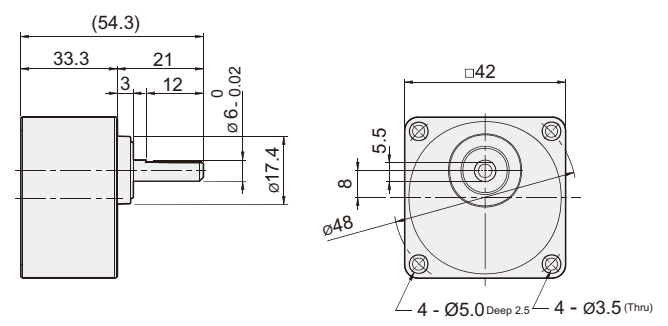
Note: The accessories are arranged in top-down sequential order.

Induction Motors 【Frame0】 【1W, 3W】

Single-phase Induction Motor
M-0IK1A-□ / M-0IK3A-□



Gear Head
G-0N□-L

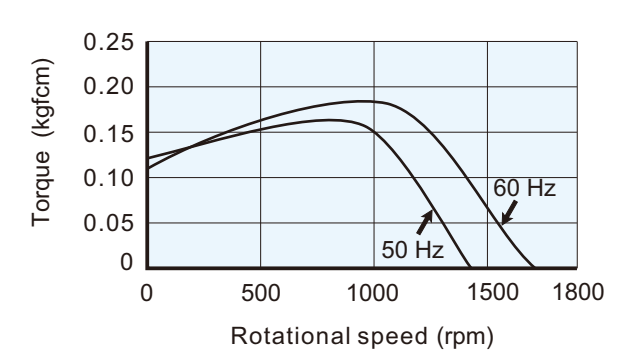


Permissible Torque of Gear Head

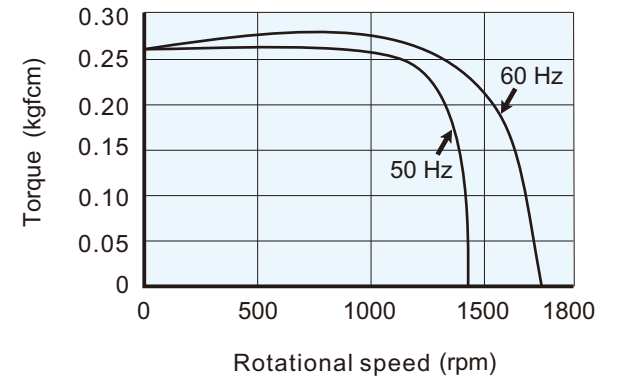
Model	Speed (rpm)								
		300	150	100	75	50	25	22.5	12.5
G-0N□-L	50Hz	5	10	15	20	30	-	-	120
	60Hz	-	-	-	-	-	60	80	-
Max. allowable torque (kgfcm)		1	2	2	3	3	5	5	5

Characteristics of Induction Motors

M-0IK1A-A



M-0IK3A-A



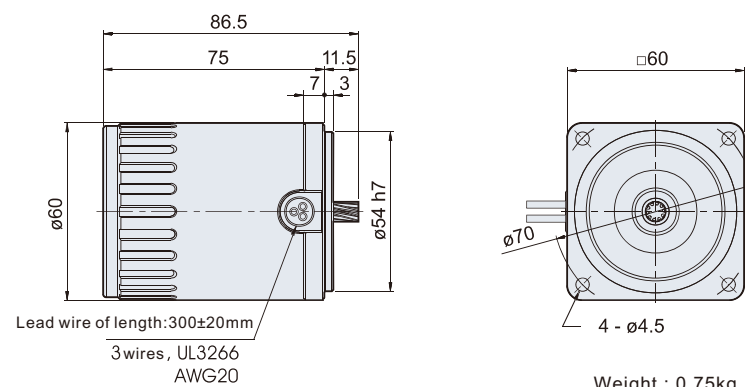
Specifications of Single-phase Induction Motors 15 min rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-0IK1A-A M-0IK1N-A	1	1φ110	50	0.16	1175	0.09	0.16	0.12	1.2	G-0N□-L	-	-
			60	0.14	1400	0.07	0.15	0.11				
M-0IK3A-A M-0IK3N-A	3	1φ110	50	0.17	1100	0.22	0.18	0.26	2.0			
			60	0.16	1500	0.20	0.18	0.26				

Induction Motors 【Frame2】 【6W】

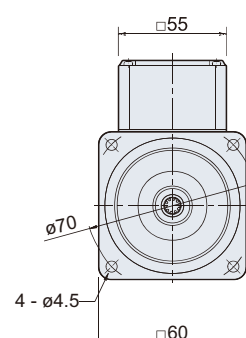
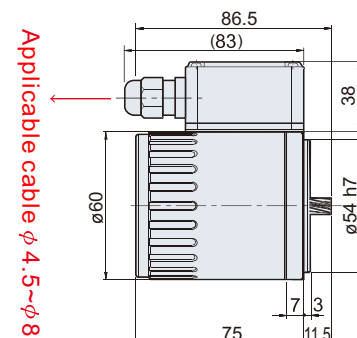
Single-phase Induction Motor

M-2IK6N-□



Single-phase Induction Motors with Terminal Box Type

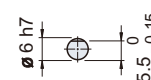
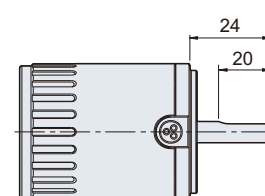
M-2IK6N-□T



Weight : 0.83kg

Round Shaft Specification

M-2IK6A-□□



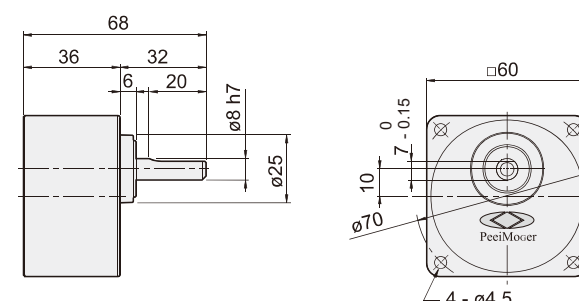
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Specifications of Single-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-2IK6N-A M-2IK6A-A	6	1φ100	50	0.19	1275	0.46	0.29	0.40	3.0	G-2N□-L	G-2N□-K	G-2N10X-K
			60	0.18	1650	0.36	0.29	0.40				
	6	1φ110	50	0.20	1300	0.45	0.32	0.40	2.5			
			60	0.16	1675	0.35	0.31	0.40				
	6	1φ115	50	0.22	1300	0.45	0.33	0.40	2.5			
			60	0.16	1675	0.35	0.32	0.40				
	6	1φ120	50	0.24	1250	0.47	0.30	0.40	2.0			
			60	0.17	1675	0.35	0.33	0.40				
M-2IK6N-C M-2IK6A-C	6	1φ200	50	0.10	1300	0.45	0.14	0.40	0.8			
			60	0.10	1625	0.36	0.14	0.40				
	6	1φ220	50	0.10	1300	0.45	0.14	0.40	0.6			
			60	0.09	1625	0.36	0.14	0.40				
	6	1φ230	50	0.10	1325	0.44	0.15	0.40	0.6			
			60	0.09	1625	0.36	0.15	0.40				
	6	1φ240	50	0.11	1325	0.44	0.16	0.40	0.6			
			60	0.09	1650	0.36	0.16	0.40				

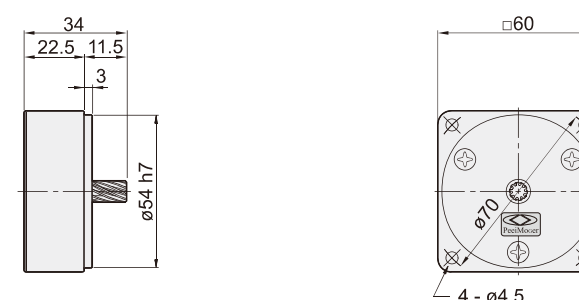
Gear Head

G-2N□-K
L



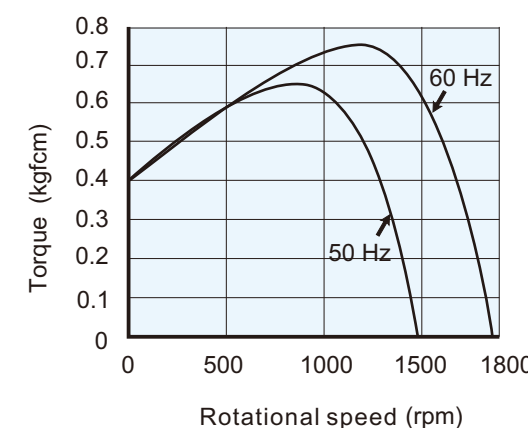
Decimal Gear Head

G-2N10X-K

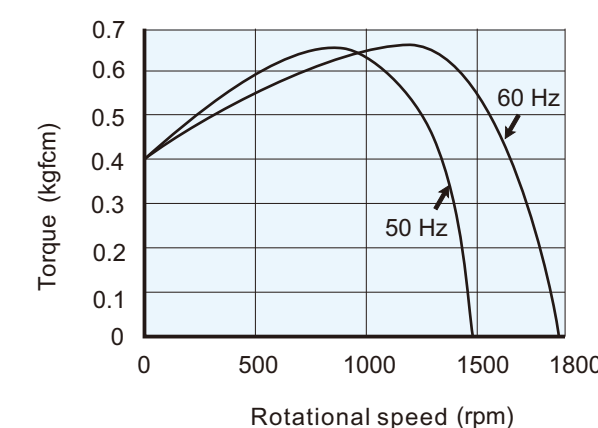


Characteristics of Induction Motors

M-2IK6N-A / M-2IK6A-A



M-2IK6N-C / M-2IK6A-C



Permissible Torque of Gear Head

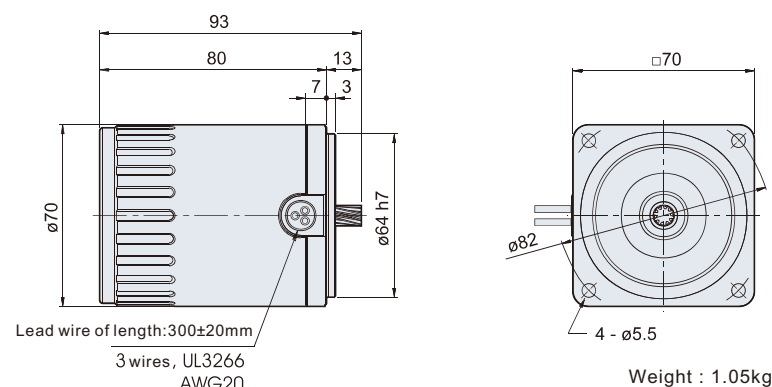
Model	Speed (rpm)	Coupled decimal gear head															
		50Hz	60Hz	7.5	10	15	20	30	45	60	90	120	180	270	360	540	720
	Gear ratio	3	4	5	6	8	10	12	15	20	25	30	40	50	60	80	100
G-2N□-K L	Max. allowable torque (kgfcm)	1.0	1.6	2.5	2.7	3.4	4.1	5.0	5.4	6.7	8.1	9.7	16	23	25	25	25
		25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Induction Motors 【Frame3】 【15W】

Single-phase Induction Motor

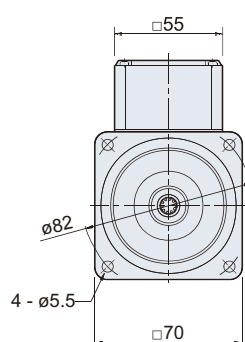
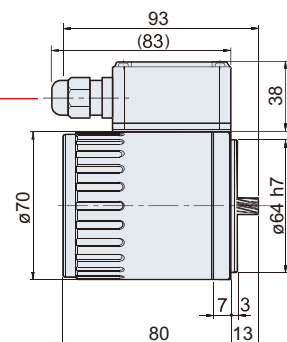
M-3IK15N-□



Single-phase Induction Motors with Terminal Box Type

M-3IK15N-□T

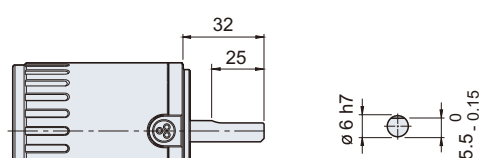
Applicable cable φ 4.5~φ 8



Weight : 1.2kg

Round Shaft Specification

M-3IK15A-□□



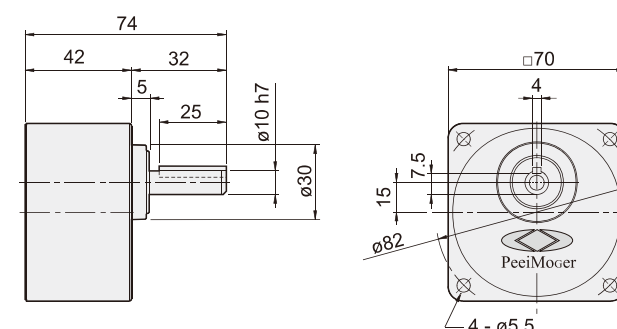
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Specifications of Single-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-3IK15N-A M-3IK15A-A	15	1φ 100	50	0.32	1225	1.19	0.49	0.65	5.0	G-3N□-L	G-3N□-K	G-3N10X-K
			60	0.31	1575	0.93	0.47	0.65				
	15	1φ 110	50	0.34	1225	1.19	0.54	0.65	4.0			
			60	0.28	1575	0.93	0.50	0.65				
	15	1φ 115	50	0.34	1275	1.15	0.57	0.65	4.0			
			60	0.30	1600	0.92	0.55	0.65				
	15	1φ 120	50	0.38	1250	1.17	0.59	0.65	3.5			
			60	0.28	1600	0.92	0.54	0.65				
M-3IK15N-C M-3IK15A-C	15	1φ 200	50	0.17	1250	1.17	0.26	0.65	1.5			
			60	0.19	1575	0.93	0.26	0.65				
	15	1φ 220	50	0.17	1225	1.19	0.27	0.65	1.0			
			60	0.15	1550	0.95	0.26	0.65				
	15	1φ 230	50	0.18	1250	1.17	0.28	0.65	1.0			
			60	0.15	1575	0.93	0.27	0.65				
	15	1φ 240	50	0.20	1225	1.19	0.30	0.65	0.8			
			60	0.15	1550	0.95	0.27	0.65				

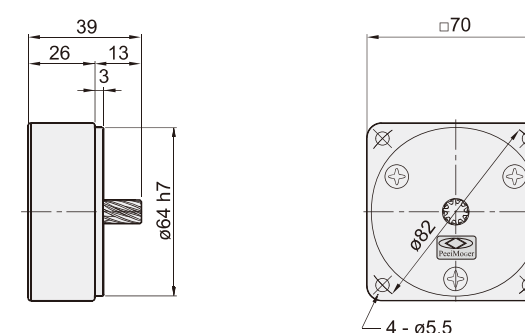
Gear Head

G-3N□-K



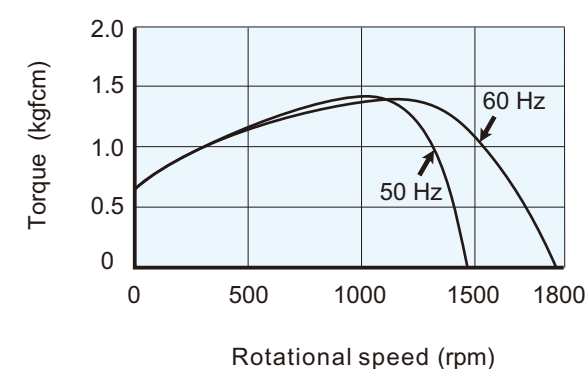
Decimal Gear Head

G-3N10X-K

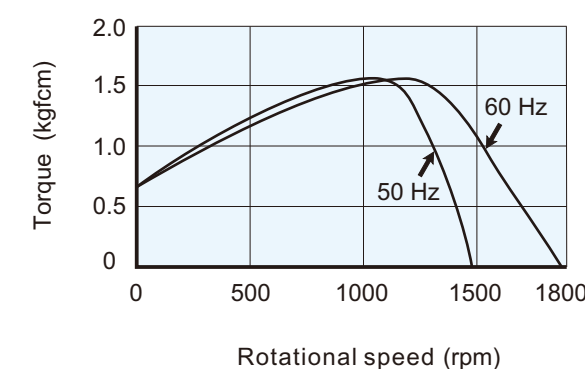


Characteristics of Induction Motors

M-3IK15N-A / M-3IK15A-A



M-3IK15N-C / M-3IK15A-C



Permissible Torque of Gear Head

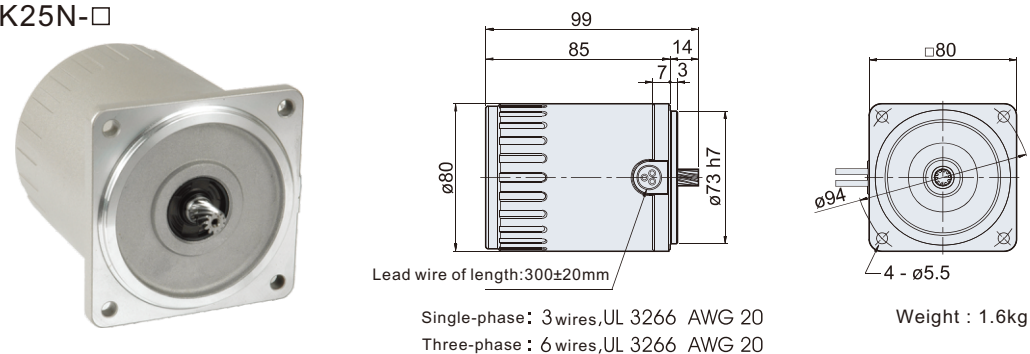
Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-3N□-K L	Max. allowable torque(kgfc ^m)		2.4	4.0	6.0	6.7	8.2	10	12	13	16	19	23	39	50	50	50	50	50	50	50	50	50	50	50

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions. The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Induction Motors 【Frame4】 【25W】

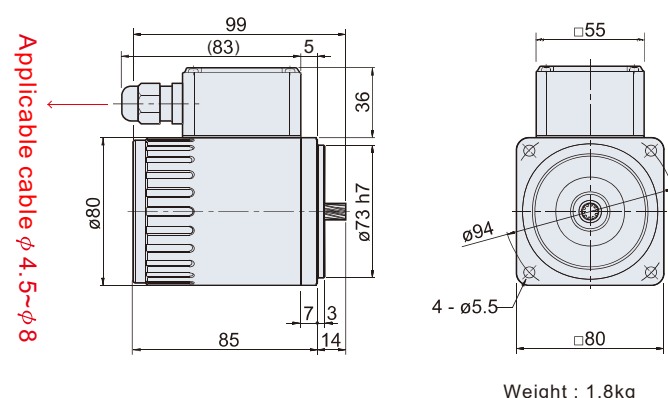
Single-phase/Three-phase Induction Motor

M-4IK25N-□



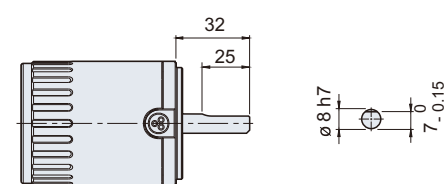
Single-phase/Three-phase Induction Motors with Terminal Box Type

M-4IK25N-□T



Round Shaft Specification

M-4IK25A-□

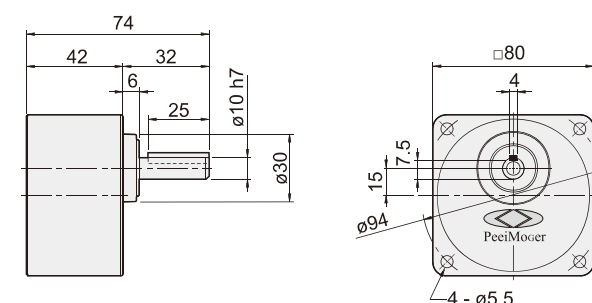


Specifications of Single-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μ F	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-4IK25N-A M-4IK25A-A	25	1 ϕ 100	50	0.51	1275	1.91	0.96	1.20	7.0	G-4N□-L	G-4N□-K	G-4N10X-K
			60	0.50	1525	1.60	0.88	1.20				
	25	1 ϕ 110	50	0.53	1300	1.88	1.05	1.20	6.0			
			60	0.43	1625	1.50	0.97	1.20				
	25	1 ϕ 115	50	0.53	1325	1.84	1.10	1.20	6.0			
			60	0.44	1625	1.50	1.01	1.20				
	25	1 ϕ 120	50	0.55	1325	1.84	1.14	1.20	5.0			
			60	0.46	1625	1.50	1.07	1.20				
M-4IK25N-C M-4IK25A-C	25	1 ϕ 200	50	0.25	1275	1.91	0.47	1.20	2.0			
			60	0.27	1525	1.60	0.44	1.20				
	25	1 ϕ 220	50	0.25	1300	1.88	0.51	1.20	1.5			
			60	0.23	1575	1.55	0.48	1.20				
	25	1 ϕ 230	50	0.25	1325	1.84	0.54	1.20	1.5			
			60	0.23	1625	1.50	0.50	1.20				
	25	1 ϕ 240	50	0.29	1300	1.88	0.56	1.20	1.2			
			60	0.24	1600	1.53	0.52	1.20				

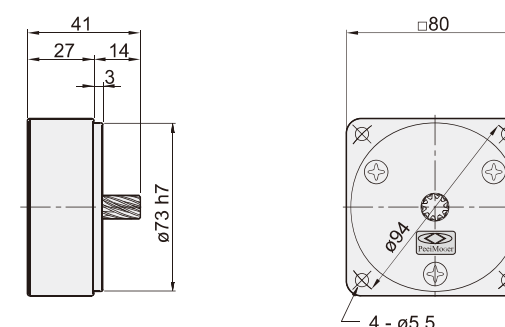
Gear Head

G-4N□-K

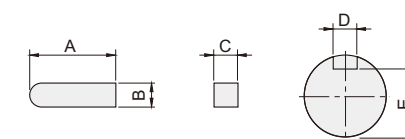


Decimal Gear Head

G-4N10X-K



Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-4N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.15}

Weight List of Gear Head

Model	Weight (kg)
G-4N3-K / L~G-4N18-K / L	0.60
G-4N20-K / L~G-4N60-K / L	0.65
G-4N75-K / L~G-4N180-K / L	0.71
G-4N10X-K	0.41

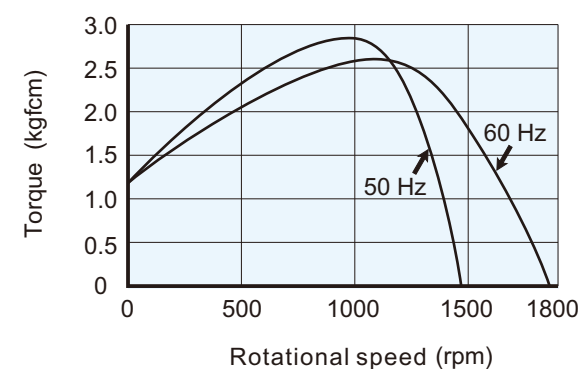
Specifications of Three-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-4IK25N-S M-4IK25A-S	25	3ϕ 200	50	0.26	1325	1.84	0.66	5.00	-	G-4N□-L	G-4N□-K	G-4N10X-K
			60	0.21	1575	1.55	0.61	5.00				
	25	3ϕ 220	50	0.29	1350	1.81	0.72	5.00	-			
			60	0.23	1625	1.50	0.68	5.00				
	25	3ϕ 230	50	0.31	1375	1.77	0.76	5.00	-			
			60	0.24	1625	1.50	0.71	5.00				
	25	3ϕ 380	50	0.16	1350	1.81	0.41	5.00	-			
			50	0.17	1375	1.77	0.43	5.00				
25	3ϕ400	60	0.13	1625	1.50	0.40	5.00	-				
		60	0.13	1625	1.50	0.40	5.00					
M-4IK25N-U M-4IK25A-U	25	3ϕ415	50	0.11	1325	1.84	0.31	5.00	-			
			60	0.10	1575	1.55	0.29	5.00				
	25	3ϕ440	50	0.12	1350	1.81	0.32	5.00	-			
			60	0.10	1625	1.50	0.30	5.00				
	25	3ϕ460	50	0.13	1375	1.77	0.34	5.00	-			
			60	0.10	1625	1.50	0.32	5.00				

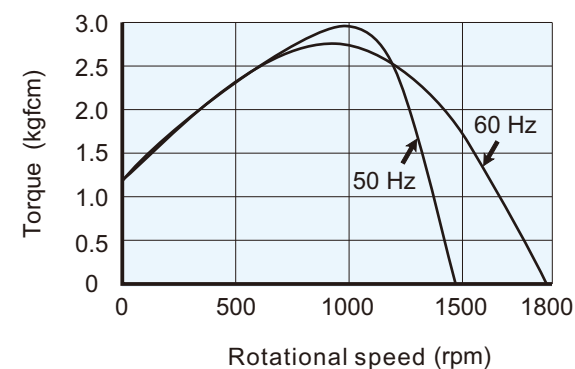
Note: If you use the inverter, Installing the sine wave filter on the inverter output side

Characteristics of Single-phase Induction Motors

M-4IK25N-A / M-4IK25A-A

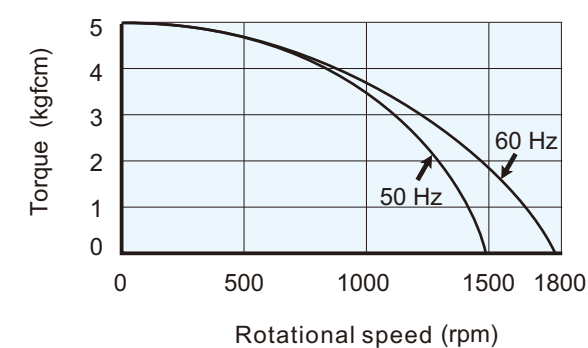


M-4IK25N-C / M-4IK25A-C

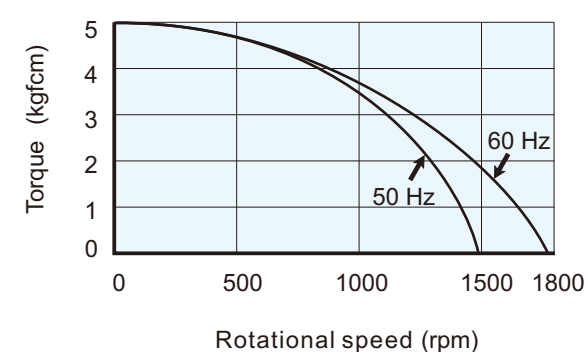


Characteristics of Three-phase Induction Motors

M-4IK25N-S / M-4IK25A-S



M-4IK25N-U / M-4IK25A-U



Permissible Torque of Gear Head

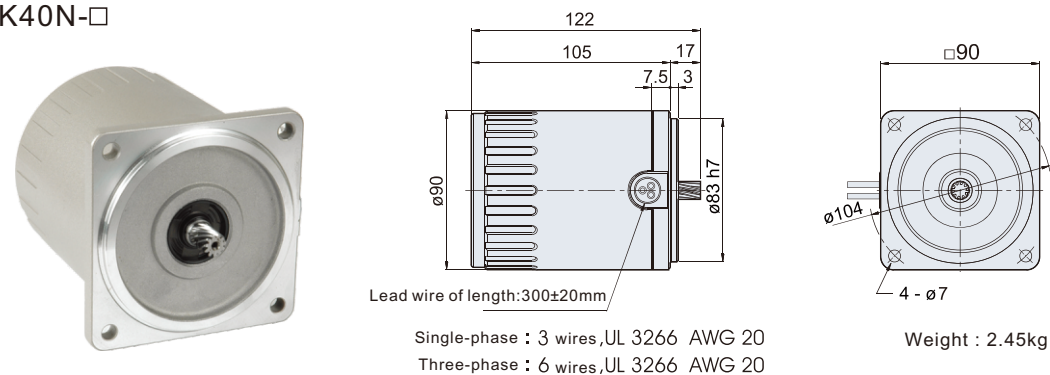
		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-4N _L ^K	Max. allowable torque(kgfcm)	4.0	6.7	10	11	13	16	20	21	26	32	39	65	80	80	80	

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

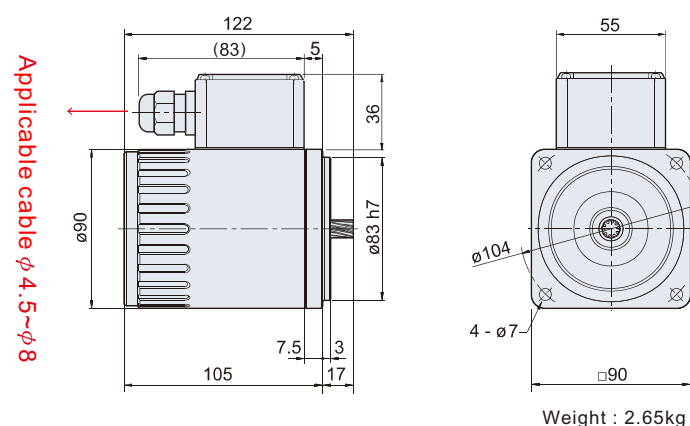


Induction Motor 【Frame5】 【40W】

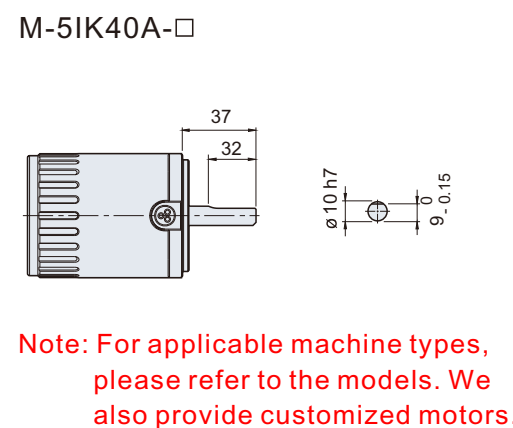
- Single-phase/Three-phase Induction Motor
M-5IK40N-□



- Single-phase/Three-phase Induction Motors with Terminal Box Type
M-5IK40N-□T



- Round Shaft Specification

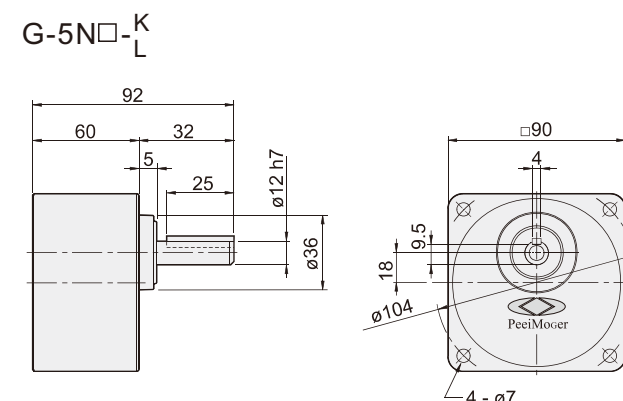


Note: For applicable machine types, please refer to the models. We also provide customized motors.

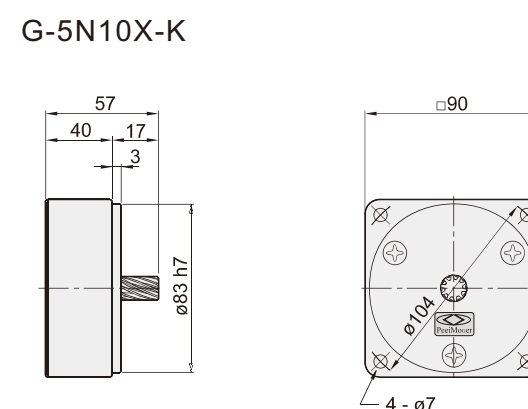
- Specifications of Single-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK40N-A M-5IK40A-A	40	1φ100	50	0.78	1375	2.84	2.21	2.00	12.0	G-5N□-L	G-5N□-K	G-5N10X-K
			60	0.77	1675	2.33	2.03	2.00				
	40	1φ110	50	0.81	1375	2.84	2.24	2.00	10.0			
			60	0.77	1675	2.33	2.18	2.00				
	40	1φ115	50	0.78	1400	2.79	2.30	2.00	10.0			
			60	0.71	1700	2.29	2.26	2.00				
	40	1φ120	50	0.88	1400	2.79	2.42	2.00	8.0			
			60	0.66	1700	2.29	2.34	2.00				
M-5IK40N-C M-5IK40A-C	40	1φ200	50	0.31	1350	2.89	0.70	2.00	2.5			
			60	0.33	1650	2.36	0.64	2.00				
	40	1φ220	50	0.30	1375	2.84	0.77	2.00	2.3			
			60	0.29	1675	2.33	0.70	2.00				
	40	1φ230	50	0.32	1375	2.84	0.82	2.00	2.3			
			60	0.31	1675	2.33	0.74	2.00				
	40	1φ240	50	0.29	1400	2.79	0.85	2.00	2.0			
			60	0.28	1675	2.33	0.78	2.00				

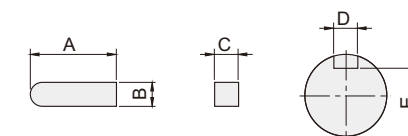
- Gear Head



- Decimal Gear Head



- Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

- Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

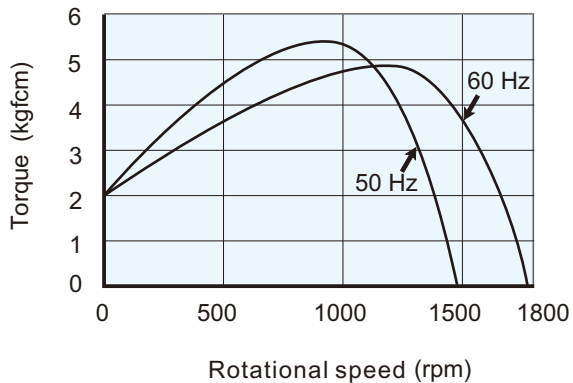
- Specifications of Three-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK40N-S M-5IK40A-S	40	3ϕ 200	50	0.28	1350	2.89	0.86	7.00	-	G-5N□-L	G-5N□-K	G-5N10X-K
			60	0.26	1600	2.44	0.80	7.00				
	40	3ϕ 220	50	0.30	1375	2.84	0.93	7.00	-			
			60	0.26	1650	2.36	0.67	7.00				
	40	3ϕ 230	50	0.30	1375	2.84	0.93	7.00	-			
			60	0.26	1675	2.33	0.91	7.00				
	40	3ϕ 380	50	0.17	1375	2.84	0.53	7.00	-			
			60	0.16	1650	2.36	0.53	7.00				
M-5IK40N-U M-5IK40A-U	40	3ϕ415	50	0.16	1375	2.84	0.48	7.00	-			
			60	0.14	1650	2.36	0.45	7.00				
	40	3ϕ440	50	0.16	1400	2.78	0.51	7.00	-			
			60	0.14	1675	2.33	0.48	7.00				
	40	3ϕ460	50	0.17	1400	2.78	0.53	7.00	-			
			60	0.14	1675	2.33	0.50	7.00				

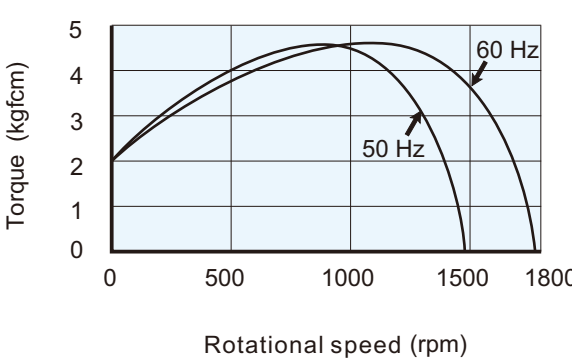
Note: If you use the inverter, Installing the sine wave filter on the inverter output side

Characteristics of Single-phase Induction Motors

M-5IK40N-A / M-5IK40A-A

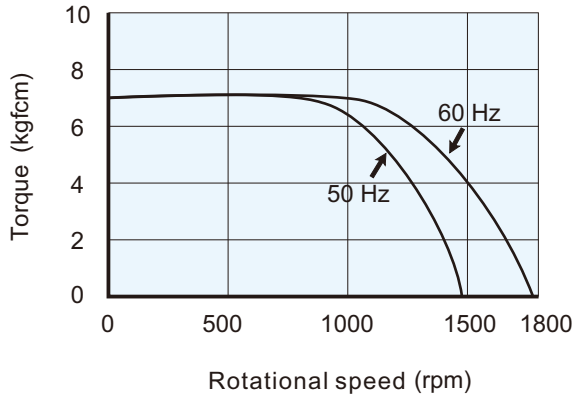


M-5IK40N-C / M-5IK40A-C

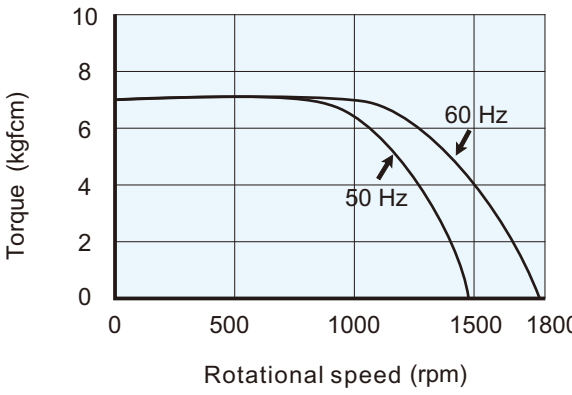


Characteristics of Three-phase Induction Motors

M-5IK40N-S / M-5IK40A-S



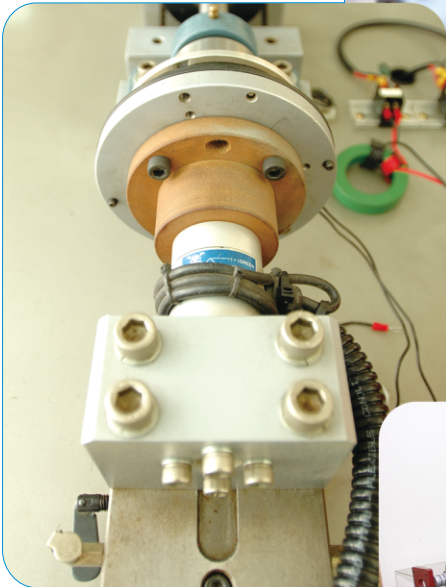
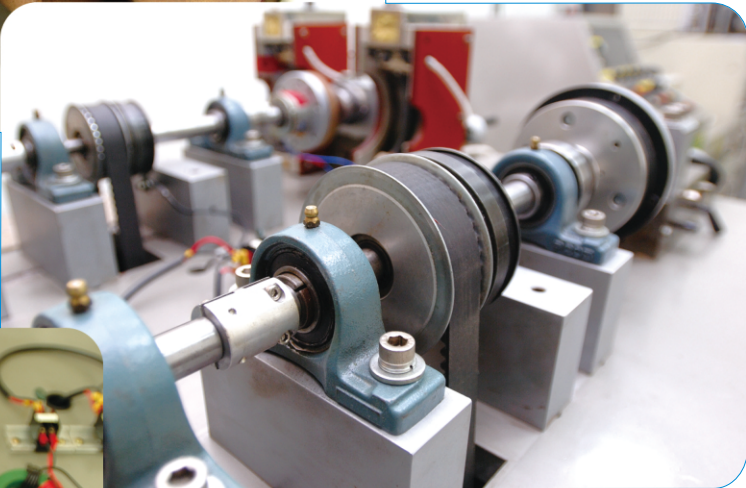
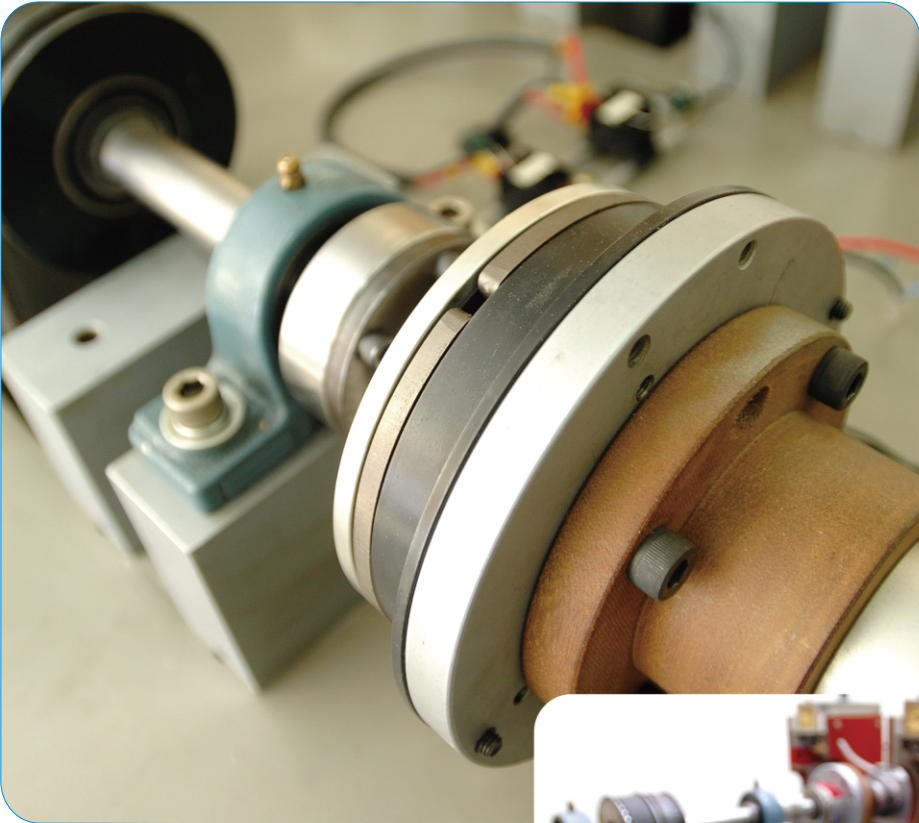
M-5IK40N-U / M-5IK40A-U



Permissible Torque of Gear Head

																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5N□ _L K	Max. allowable torque(kgfc _m)		6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100	100	100	100	100	100	100	100

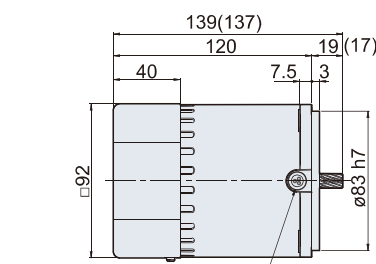
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Induction Motor 【Frame5】 【60W】

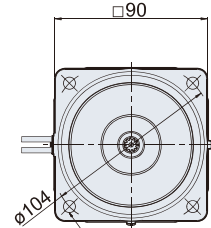
Single-phase/Three-phase Induction Motor

M-5IK60^N-□F



Lead wire of length: 300±20mm

Single-phase : 3 wires, UL 3266 AWG 20
Three-phase : 6 wires, UL 3266 AWG 20

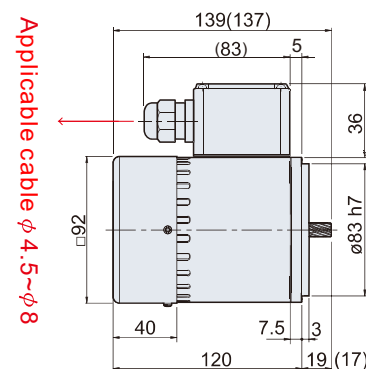


Weight : 2.6kg

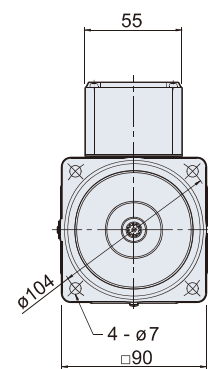
- The dimensions inside the brackets belong to N-type gear shafts, which are coupled to those of the gear head and the intermediate gear head, and should match with G-5N□-K

Single-phase/Three-phase Induction Motors with Terminal Box Type

M-5IK60^N-□FT



Applicable cable φ 4.5~φ 8

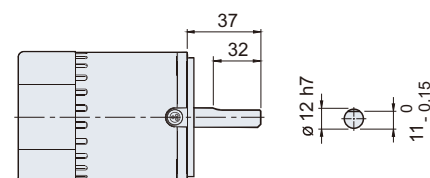


Weight : 2.8kg

- The dimensions inside the brackets belong to N-type gear shafts, which are coupled to those of the gear head and the intermediate gear head, and should match with G-5N□-K

Round Shaft Specification

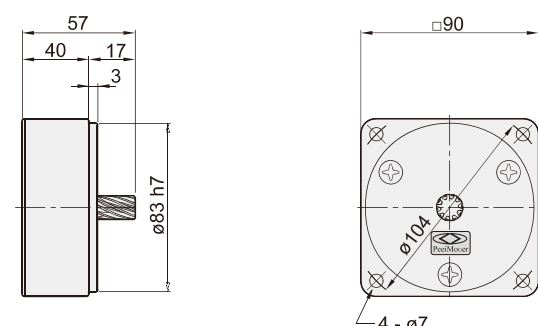
M-5IK60A-□F



Note: For applicable machine types, please refer to the models. We also provide customized motors.

Decimal Gear Head

G-5N10X-K

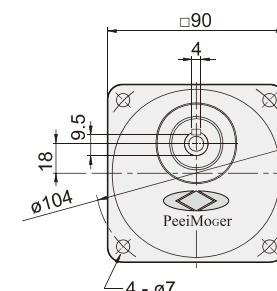
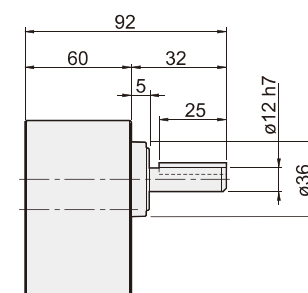


Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

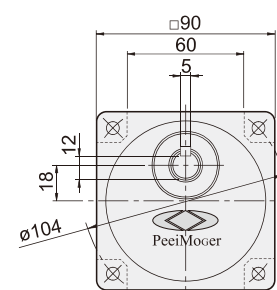
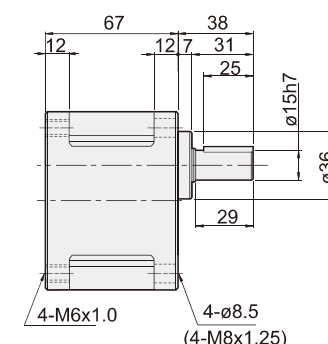
Gear Head

G-5N□-K



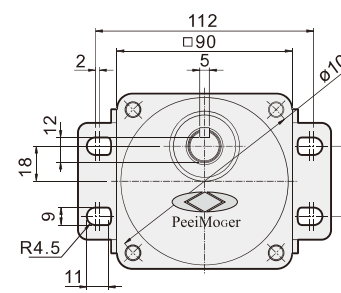
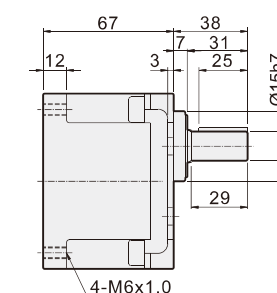
Gear Head

G-5U□-K



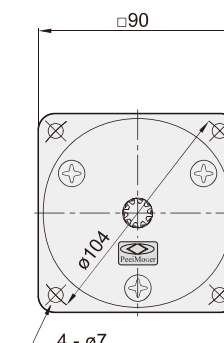
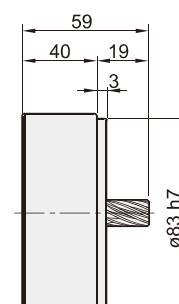
Gear Head with Mounting Brackets

G-5U□-KF

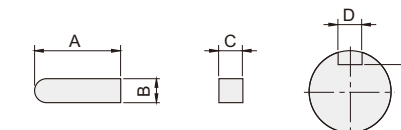


Decimal Gear Head

G-5U10X-K

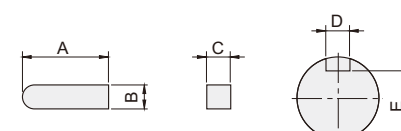


Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Weight List of Gear Head

Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73
G-5U10X-K	0.64

Specifications of Single-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μ F	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK60 _N -AF M-5IK60A-AF	60	1 ϕ 100	50	1.08	1350	4.33	2.32	3.00	18.0	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
			60	1.12	1650	3.54	2.15	3.00				
	60	1 ϕ 110	50	1.04	1375	4.25	2.50	3.00	16.0			
			60	1.07	1675	3.49	2.38	3.00				
	60	1 ϕ 115	50	1.08	1375	4.25	2.54	3.00	16.0			
			60	1.12	1675	3.49	2.52	3.00				
60	1 ϕ 120	50	1.18	1375	4.25	2.74	3.00	14.0				
		60	0.97	1700	3.44	2.65	3.00					
M-5IK60 _N -CF M-5IK60A-CF	60	1 ϕ 200	50	0.52	1375	4.25	1.12	3.00	5.0			
			60	0.57	1675	3.49	1.03	3.00				
	60	1 ϕ 220	50	0.51	1375	4.25	1.22	3.00	4.0			
			60	0.49	1675	3.49	1.13	3.00				
	60	1 ϕ 230	50	0.51	1400	4.18	1.24	3.00	4.0			
			60	0.49	1700	3.44	1.20	3.00				
	60	1 ϕ 240	50	0.60	1375	4.25	1.30	3.00	3.0			
			60	0.45	1675	3.49	1.19	3.00				

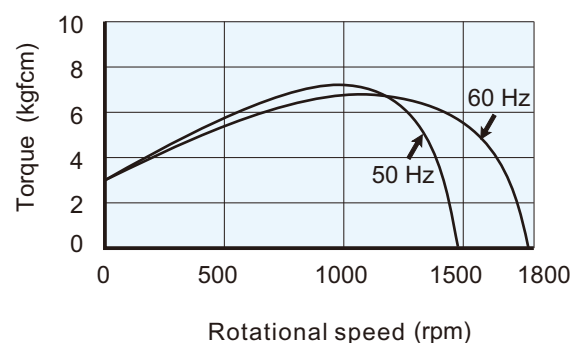
Specifications of Three-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK60 ^N -SF M-5IK60A-SF	60	3ϕ 200	50	0.45	1350	4.33	1.22	9.00	-	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
			60	0.36	1625	3.60	1.12	9.00				
	60	3ϕ 220	50	0.49	1375	4.25	1.34	9.00	-			
			60	0.41	1650	3.54	1.27	9.00				
	60	3ϕ 230	50	0.50	1400	4.18	1.28	9.00	-			
			60	0.41	1675	3.49	1.31	9.00				
	60	3ϕ 380	50	0.27	1375	4.25	0.76	9.00	-			
			60	0.28	1400	4.18	0.72	9.00				
M-5IK60 ^N -UF M-5IK60A-UF	60	3ϕ 400	50	0.23	1675	3.49	0.75	9.00	-			
			60	0.23	1675	3.49	0.75	9.00				
	60	3ϕ 415	50	0.25	1400	4.18	0.70	9.00	-			
			60	0.20	1675	3.49	0.70	9.00				
	60	3ϕ 440	50	0.28	1400	4.18	0.66	9.00	-			
			60	0.22	1675	3.49	0.76	9.00				
	60	3ϕ 460	50	0.31	1400	4.18	0.63	9.00	-			
			60	0.23	1700	3.44	0.73	9.00				

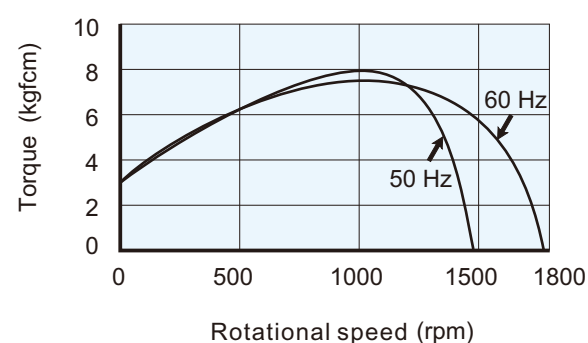
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Induction Motors

M-5IK60^N-AF / M-5IK60A-AF

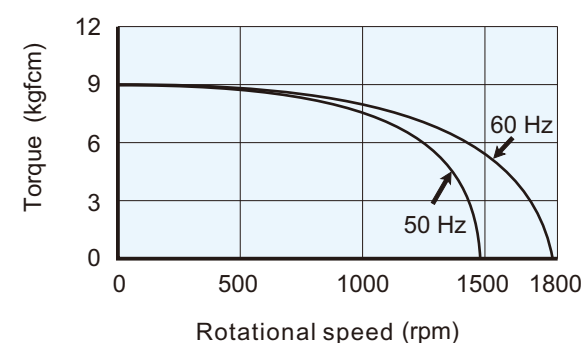


M-5IK60^N-CF / M-5IK60A-CF

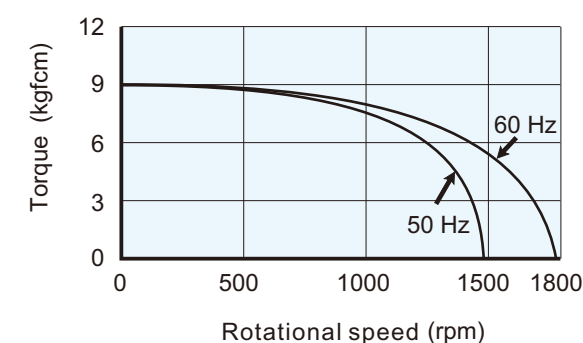


Characteristics of Three-phase Induction Motors

M-5IK60^N-SF / M-5IK60A-SF



M-5IK60^N-UF / M-5IK60A-UF



Permissible Torque of Gear Head

Model		Coupled decimal gear head															
		Speed (rpm)															
		50Hz	60Hz	75Hz	100Hz	120Hz	150Hz	180Hz	200Hz	300Hz	500Hz	750Hz	1000Hz	1500Hz	2000Hz	3000Hz	4000Hz
G-5N□-K	Max. allowable torque(kgfcm)	3.6	6	9	10	15	18	20	30	36	60	90	120	180	200	300	400
		3.6	6	9	10	15	18	20	30	36	60	90	120	180	200	300	400

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

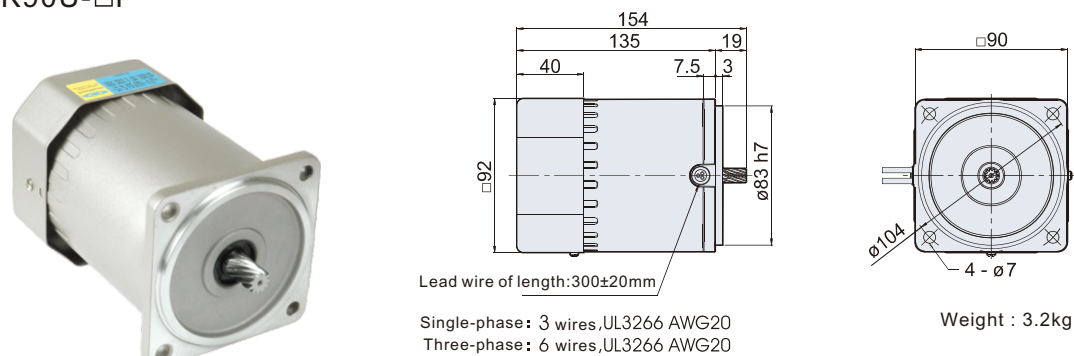
Permissible Torque of Gear Head

Model		Coupled decimal gear head															
		Speed (rpm)															
		50Hz	60Hz	75Hz	100Hz	120Hz	150Hz	180Hz	200Hz	300Hz	500Hz	750Hz	1000Hz	1500Hz	2000Hz	3000Hz	4000Hz
G-5U□-K	Max. allowable torque(kgfcm)	3.6	6	9	10	15	18	20	30	36	60	90	120	180	200	300	400
		3.6	6	9	10	15	18	20	30	36	60	90	120	180	200	300	400

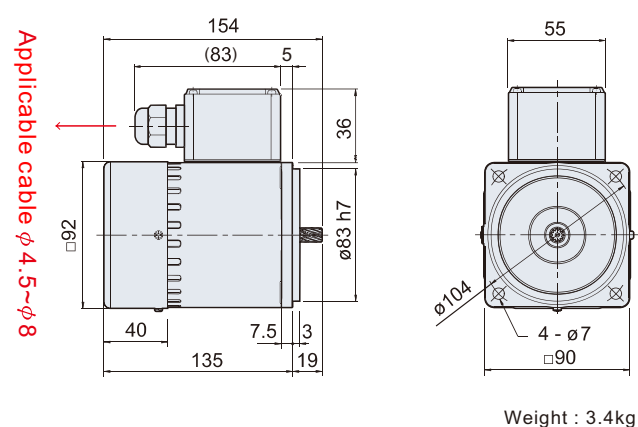
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Induction Motors 【Frame5】 【90W】

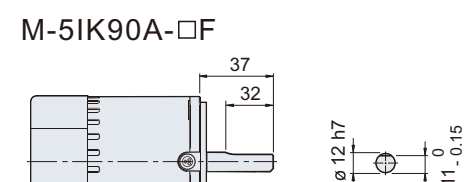
- Single-phase/Three-phase Induction Motor
M-5IK90U-□F



- Single-phase/Three-phase Induction Motors with Terminal Box Type
M-5IK90U-□FT

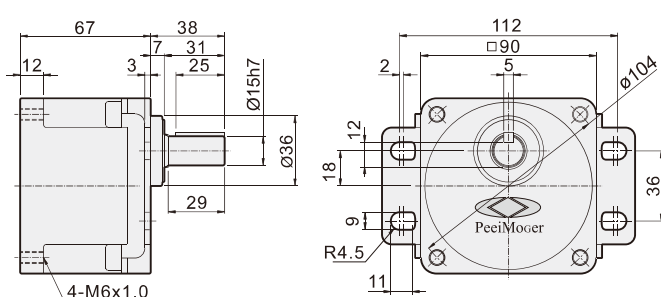


- Round Shaft Specification



Note: For applicable machine types, please refer to the models. We also provide customized motors.

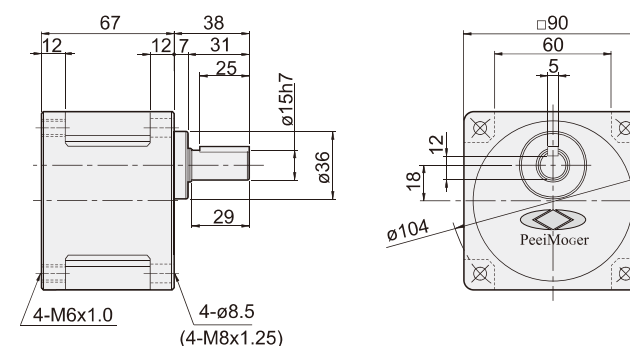
- Gear Head with Mounting Brackets
G-5U□-KF



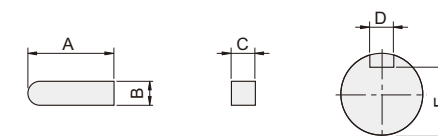
- Weight List of Gear Head

Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

- Gear Head
G-5U□-K

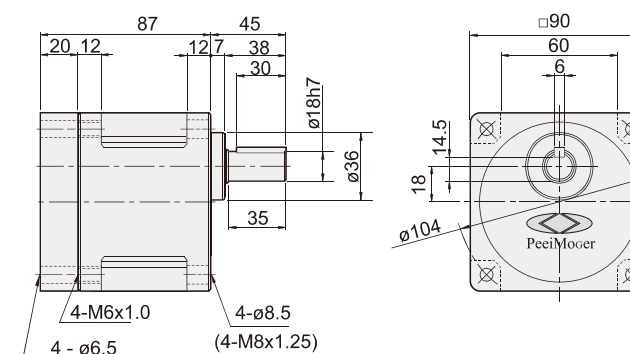


- Gear Head: Key and Key slot Dimension

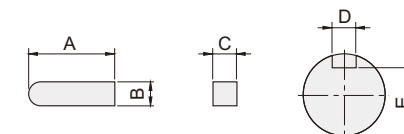


Model	A	B	C	D	E
G-5U□-K	25	$5_{-0.03}^0$	$5_{-0.03}^0$	$5_{+0.05}^0$	$12_{-0.15}^0$

- Gear Head
G-5U□-KH

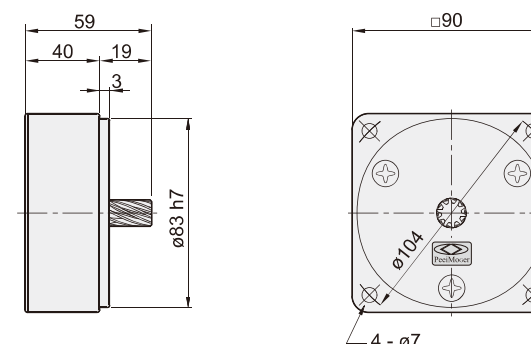


- Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	$6_{-0.03}^0$	$6_{-0.03}^0$	$6_{+0.05}^0$	$14.5_{-0.15}^0$

- Decimal Gear Head
G-5U10X-K



- Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μ F	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK90U-AF M-5IK90A-AF	90	1 ϕ 100	50	1.40	1350	6.49	3.24	4.50	25.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	1.54	1650	5.31	3.00	4.50				
	90	1 ϕ 110	50	1.40	1375	6.37	3.63	4.50	20.0			
			60	1.37	1675	5.23	3.49	4.50				
	90	1 ϕ 115	50	1.51	1375	6.37	3.79	4.50	20.0			
			60	1.29	1675	5.23	3.47	4.50				
	90	1 ϕ 120	50	1.66	1375	6.37	3.88	4.50	18.0			
			60	1.41	1675	5.23	4.16	4.50				
M-5IK90U-CF M-5IK90A-CF	90	1 ϕ 200	50	0.71	1350	6.49	1.75	4.50	6.0			
			60	0.75	1650	5.31	1.57	4.50				
	90	1 ϕ 220	50	0.68	1375	6.37	1.91	4.50	5.0			
			60	0.69	1675	5.23	1.81	4.50				
	90	1 ϕ 230	50	0.72	1375	6.37	1.94	4.50	5.0			
			60	0.71	1675	5.23	1.90	4.50				
	90	1 ϕ 240	50	0.85	1375	6.37	2.11	4.50	4.0			
			60	0.60	1675	5.23	1.95	4.50				

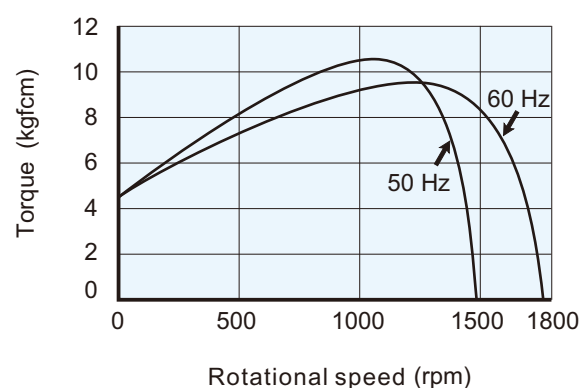
Specifications of Three-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediat speed ratio
M-5IK90U-SF M-5IK90A-SF	90	3ϕ 200	50	0.65	1375	6.37	2.59	15.00	-	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	0.55	1650	5.31	2.07	15.00				
	90	3ϕ 220	50	0.79	1375	6.37	2.35	15.00	-			
			60	0.58	1675	5.23	2.20	15.00				
	90	3ϕ 230	50	0.84	1400	6.26	2.25	15.00	-			
			60	0.61	1675	5.23	2.11	15.00				
	90	3ϕ 380	50	0.41	1400	6.26	1.36	15.00	-			
			60	0.46	1400	6.26	1.30	15.00				
90	3ϕ400	50	0.46	1400	6.26	1.30	15.00	-				
		60	0.35	1675	5.23	1.21	15.00					
M-5IK90U-UF M-5IK90A-UF	90	3ϕ415	50	0.31	1375	6.37	1.22	15.00	-			
			60	0.25	1650	5.31	1.09	15.00				
	90	3ϕ440	50	0.34	1375	6.37	1.15	15.00	-			
			60	0.27	1650	5.31	1.03	15.00				
	90	3ϕ460	50	0.36	1400	6.26	1.10	15.00	-			
			60	0.27	1675	5.23	0.99	15.00				

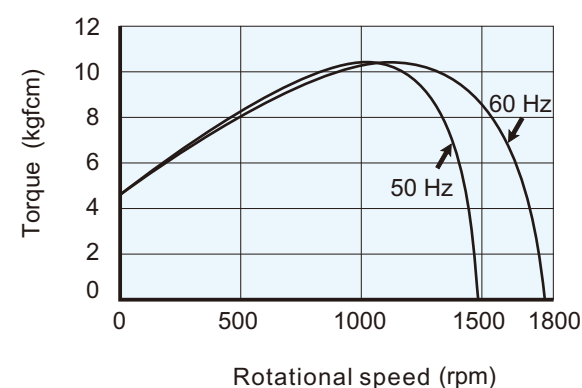
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Induction Motors

M-5IK90U-AF / M-5IK90A-AF

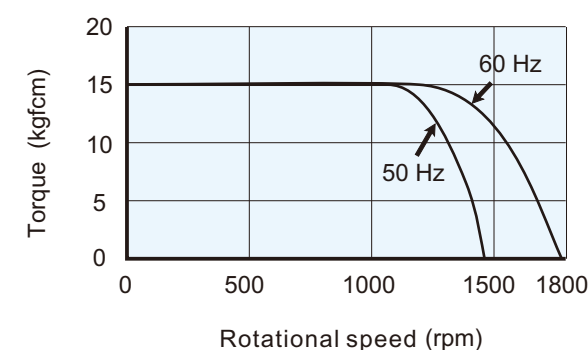


M-5IK90U-CF / M-5IK90A-CF

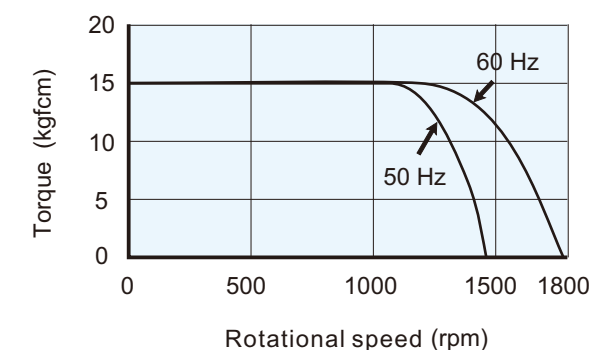


Characteristics of Three-phase Induction Motors

M-5IK90U-SF / M-5IK90A-SF



M-5IK90U-UF / M-5IK90A-UF



Permissible Torque of Gear Head

Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
		3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
G-5U \square -K	Max. allowable torque(kgfcm)	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

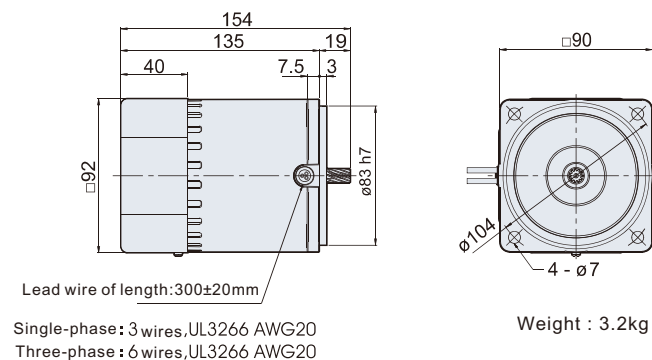
Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
		3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
G-5U \square -KH	Max. allowable torque(kgfcm)	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Induction Motors 【Frame5】 【120W】

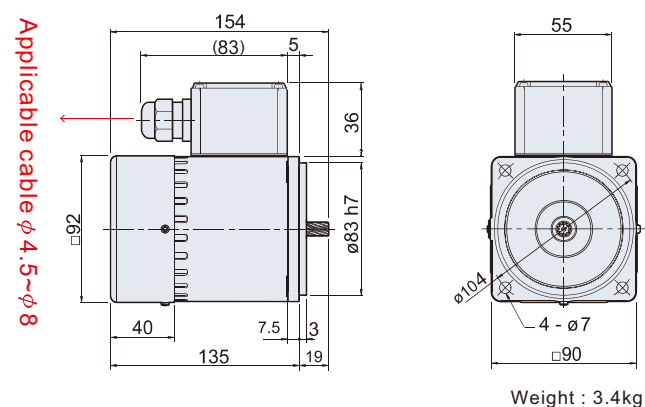
Single-phase/Three-phase Induction Motor

M-5IK120U-□F



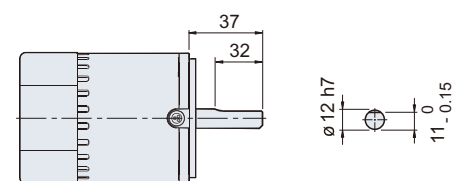
Single-phase/Three-phase Induction Motors with Terminal Box Type

M-5IK120U-□FT



Round Shaft Specification

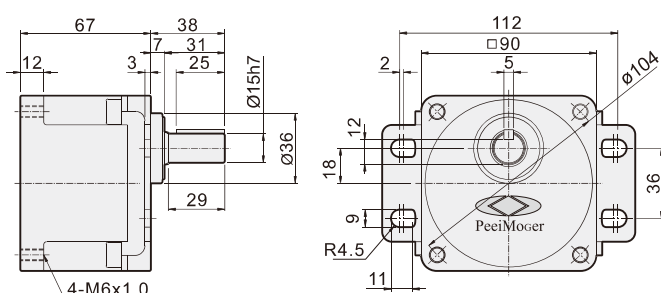
M-5IK120A-□F



Note: For applicable machine types, please refer to the models. We also provide customized motors.

Gear Head with Mounting Brackets

G-5U□-KF

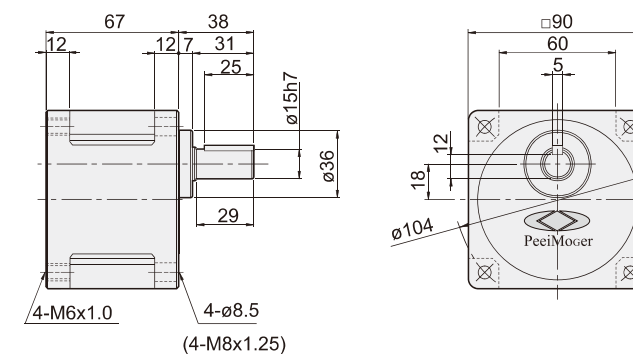


Weight List of Gear Head

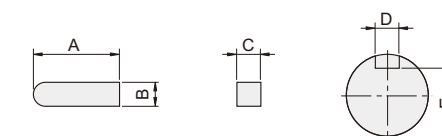
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-K



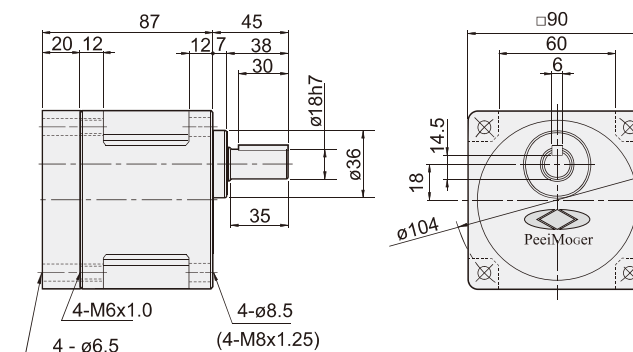
Gear Head: Key and Key slot Dimension



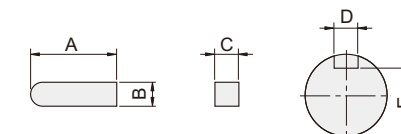
Model	A	B	C	D	E
G-5U□-K	25	$5_{-0.03}^0$	$5_{-0.03}^0$	$5_{+0.05}^0$	$12_{-0.15}^0$

Gear Head

G-5U□-KH



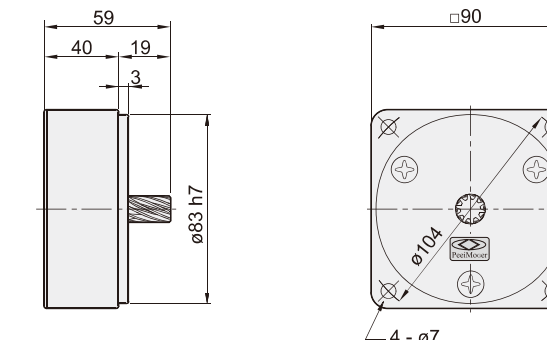
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	$6_{-0.03}^0$	$6_{-0.03}^0$	$6_{+0.05}^0$	$14.5_{-0.15}^0$

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK120U-AF M-5IK120A-AF	120	1φ100	50	2.24	1300	8.99	4.01	6.00	30.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	1.98	1600	7.30	2.97	6.00				
	120	1φ110	50	1.77	1325	8.82	3.51	6.00	28.0			
			60	1.78	1650	7.08	3.24	6.00				
	120	1φ115	50	1.71	1350	8.66	3.77	6.00	28.0			
			60	1.74	1675	6.98	3.34	6.00				
	120	1φ120	50	1.72	1350	8.66	3.85	6.00	25.0			
			60	1.66	1675	6.98	3.70	6.00				
M-5IK120U-CF M-5IK120A-CF	120	1φ200	50	0.98	1275	9.17	1.73	6.00	7.0			
			60	0.94	1600	7.30	1.57	6.00				
	120	1φ220	50	0.80	1325	8.82	1.85	6.00	6.0			
			60	0.89	1625	7.19	1.75	6.00				
	120	1φ230	50	0.84	1325	8.82	1.90	6.00	6.0			
			60	0.91	1625	7.19	1.80	6.00				
	120	1φ240	50	0.87	1325	8.82	2.00	6.00	5.0			
			60	0.79	1650	7.08	1.96	6.00				

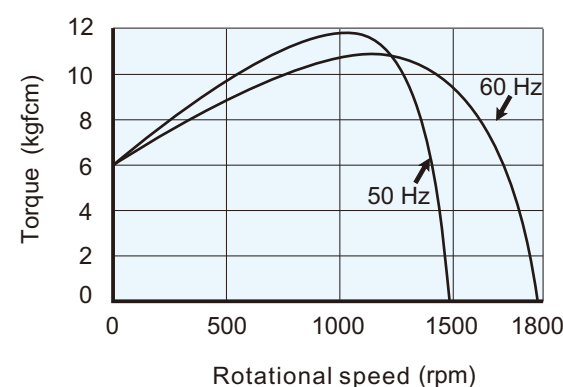
Specifications of Three-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK120U-SF M-5IK120A-SF	120	3φ 200	50	0.75	1300	8.99	2.59	18.00	-	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	0.67	1575	7.42	2.07	18.00				
	120	3φ 220	50	0.81	1350	8.66	2.35	18.00	-			
			60	0.68	1550	7.54	2.04	18.00				
	120	3φ 230	50	0.89	1350	8.66	2.25	18.00	-			
			60	0.65	1650	7.08	1.95	18.00				
	120	3φ 380	50	0.45	1350	8.66	1.36	18.00	-			
			60	0.48	1375	8.50	1.30	18.00				
120	3φ 400	50	0.37	1650	7.08	1.12	18.00	-				
		60	0.37	1650	7.08	1.12	18.00					
M-5IK120U-UF M-5IK120A-UF	120	3φ 415	50	0.35	1300	8.99	1.22	18.00	-			
			60	0.31	1575	7.42	1.09	18.00				
	120	3φ 440	50	0.38	1325	8.82	1.15	18.00	-			
			60	0.31	1600	7.30	1.03	18.00				
	120	3φ 460	50	0.38	1350	8.66	1.10	18.00	-			
			60	0.31	1625	7.19	0.99	18.00				

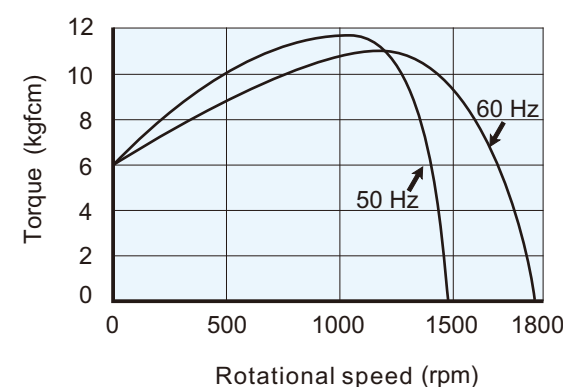
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Induction Motors

M-5IK120U-AF / M-5IK120A-AF

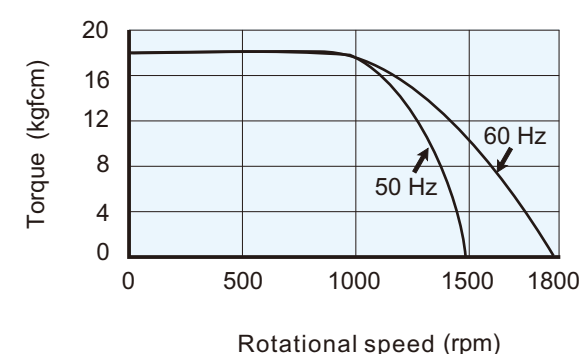


M-5IK120U-CF / M-5IK120A-CF

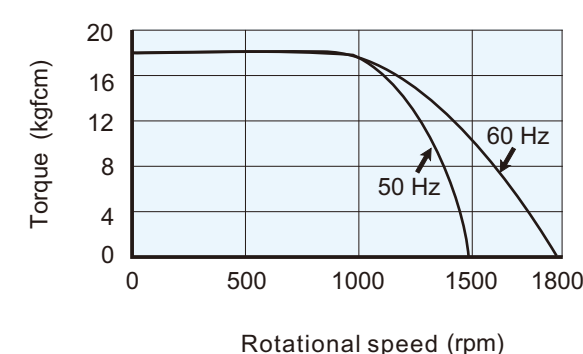


Characteristics of Three-phase Induction Motors

M-5IK120U-SF / M-5IK120A-SF



M-5IK120U-UF / M-5IK120A-UF



Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
	Gear ratio	50Hz	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	200
G-5U□-K	Max. allowable torque(kgfcm)	14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

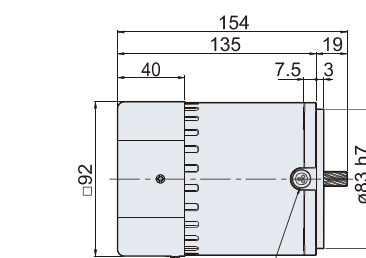
		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
	Gear ratio	50Hz	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	200
G-5U□-KH	Max. allowable torque(kgfcm)	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300	300

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Induction Motors 【Frame5】 【150W】

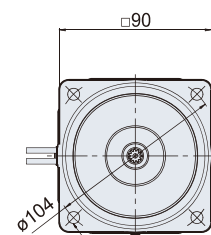
Single-phase/Three-phase Induction Motor

M-5IK150U-□F



Lead wire of length: 300±20mm

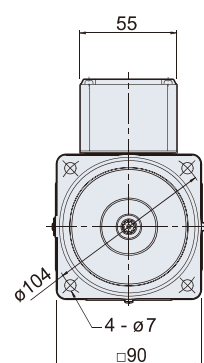
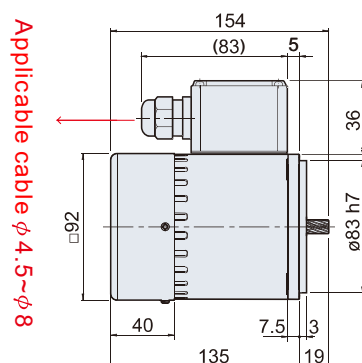
Single-phase: 3 wires, UL3266 AWG20
Three-phase: 6 wires, UL3266 AWG20



Weight : 3.2kg

Single-phase/Three-phase Induction Motors with Terminal Box Type

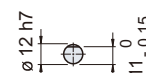
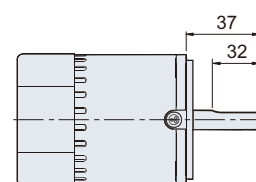
M-5IK150U-□FT



Weight : 3.4kg

Round Shaft Specification

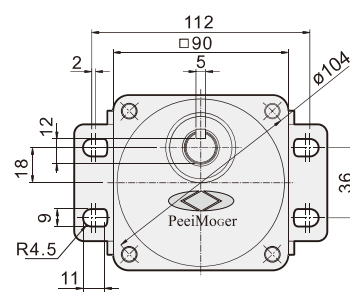
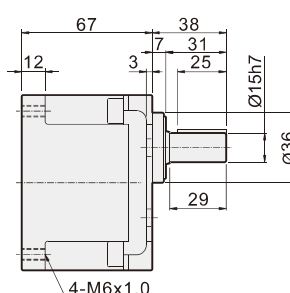
M-5IK150A-□F



Note: For applicable machine types, please refer to the models. We also provide customized motors.

Gear Head with Mounting Brackets

G-5U□-KF

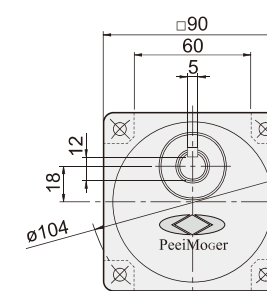
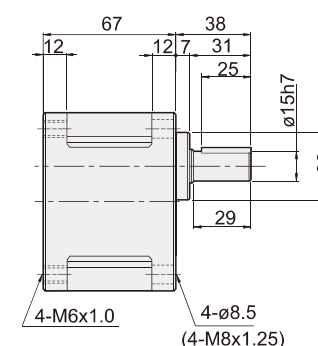


Weight List of Gear Head

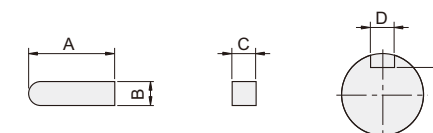
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-K



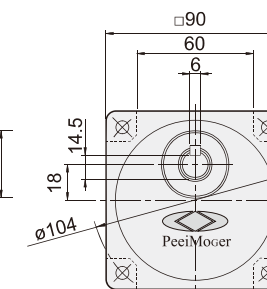
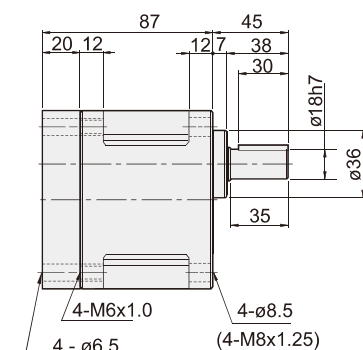
Gear Head: Key and Key slot Dimension



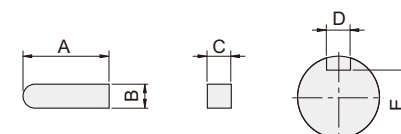
Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head

G-5U□-KH



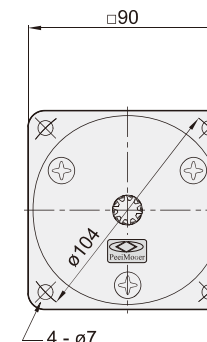
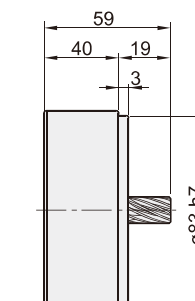
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK150U-AF M-5IK150A-AF	150	1φ100	50	2.62	1275	11.46	4.51	7.50	36.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	2.45	1575	9.27	3.47	7.50				
	150	1φ110	50	2.11	1300	11.24	4.26	7.50	32.0			
			60	2.14	1625	8.99	3.81	7.50				
	150	1φ115	50	2.00	1325	11.02	4.46	7.50	32.0			
			60	2.25	1625	8.99	4.13	7.50				
	150	1φ120	50	2.05	1325	11.02	4.27	7.50	28.0			
			60	2.28	1650	8.85	5.03	7.50				
M-5IK150U-CF M-5IK150A-CF	150	1φ200	50	1.11	1300	11.24	2.35	7.50	9.0			
			60	1.18	1625	8.99	2.17	7.50				
	150	1φ220	50	1.07	1325	11.02	2.42	7.50	7.0			
			60	1.31	1625	8.99	2.77	7.50				
	150	1φ230	50	1.21	1325	11.02	2.59	7.50	7.0			
			60	1.09	1650	8.85	2.82	7.50				
	150	1φ240	50	1.33	1325	11.02	2.59	7.50	6.0			
			60	0.94	1650	8.85	2.68	7.50				

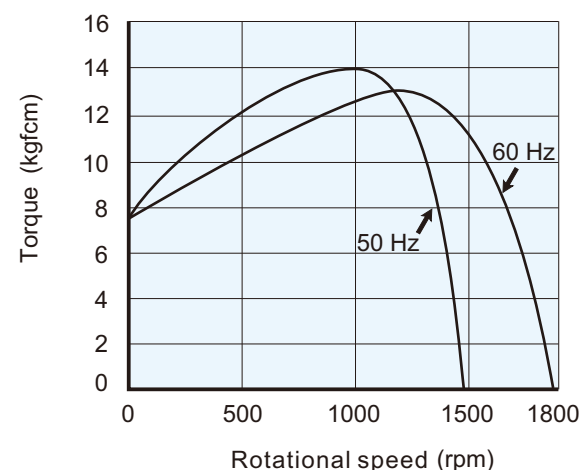
Specifications of Three-phase Induction Motors Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK150U-SF M-5IK150A-SF	150	3φ200	50	0.96	1275	11.46	2.54	20.00	-	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	0.86	1525	9.58	2.36	20.00				
	150	3φ220	50	1.08	1325	11.02	2.80	20.00	-			
			60	0.82	1600	9.13	2.60	20.00				
	150	3φ230	50	1.17	1350	10.82	2.88	20.00	-			
			60	0.83	1625	8.99	2.70	20.00				
	150	3φ380	50	0.60	1325	11.02	1.70	20.00	-			
			60	0.65	1350	10.82	1.79	20.00				
M-5IK150U-UF M-5IK150A-UF	150	3φ415	50	0.41	1275	11.46	1.20	20.00	-			
			60	0.38	1525	9.58	1.12	20.00				
	150	3φ440	50	0.43	1300	11.24	1.23	20.00	-			
			60	0.37	1575	9.27	1.18	20.00				
	150	3φ460	50	0.45	1325	11.02	1.30	20.00	-			
			60	0.38	1575	9.27	1.25	20.00				

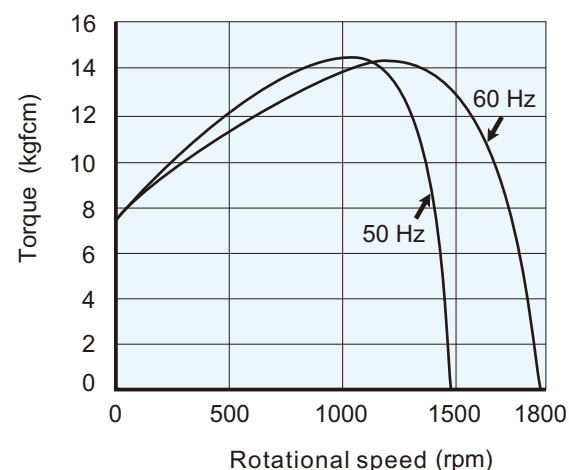
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Induction Motors

M-5IK150U-AF / M-5IK150A-AF

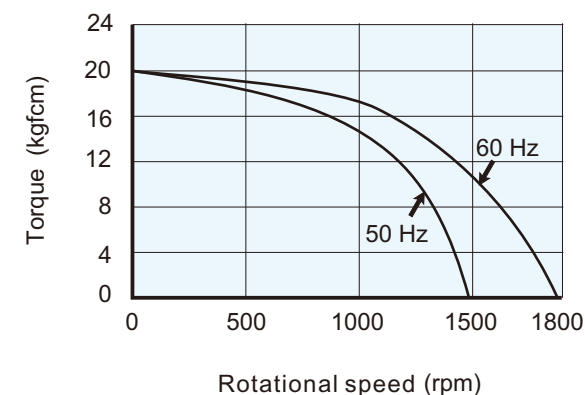


M-5IK150U-CF / M-5IK150A-CF

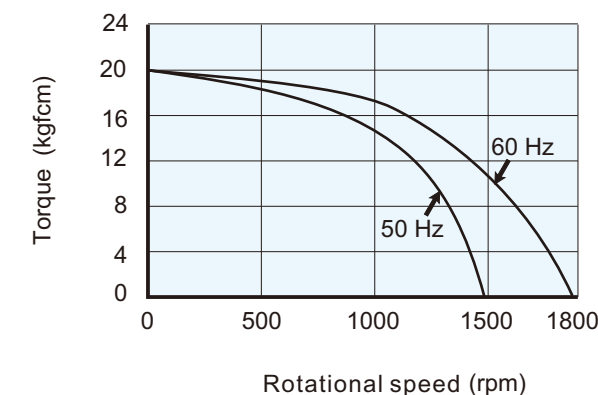


Characteristics of Three-phase Induction Motors

M-5IK150U-SF / M-5IK150A-SF



M-5IK150U-UF / M-5IK150A-UF



Permissible Torque of Gear Head

Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
		3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
G-5U□-K	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
	60Hz	3.6	6	9	10	-	15	18	-	30	36	60	90	120	180	200	200
Max. allowable torque(kgfcm)		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

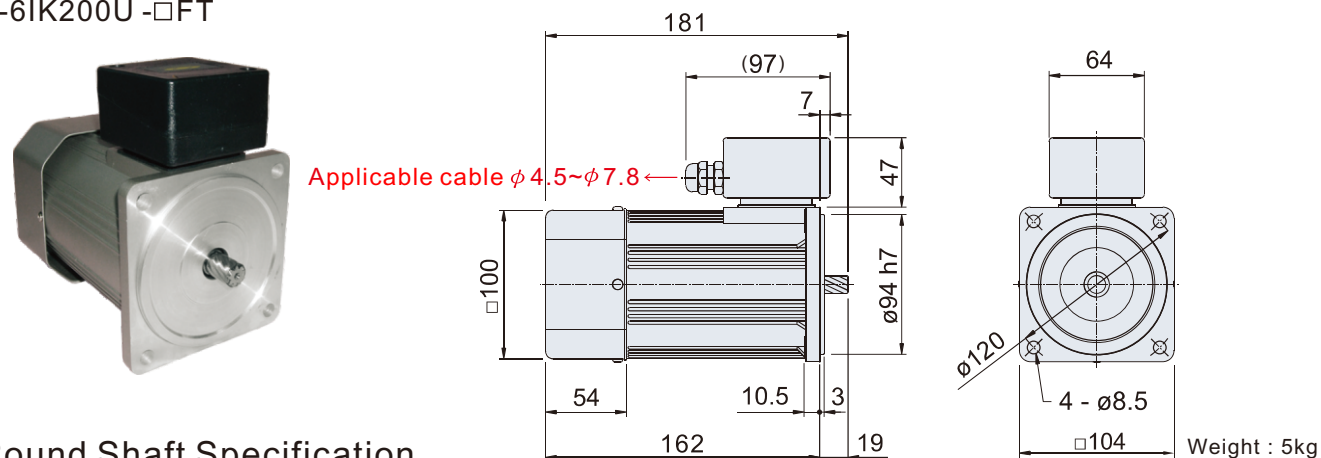
Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
		3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
G-5U□-KH	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
	60Hz	3.6	6	9	10	-	15	18	-	30	36	60	90	120	180	200	200
Max. allowable torque(kgfcm)		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Induction Motors 【Frame6】 【200W】

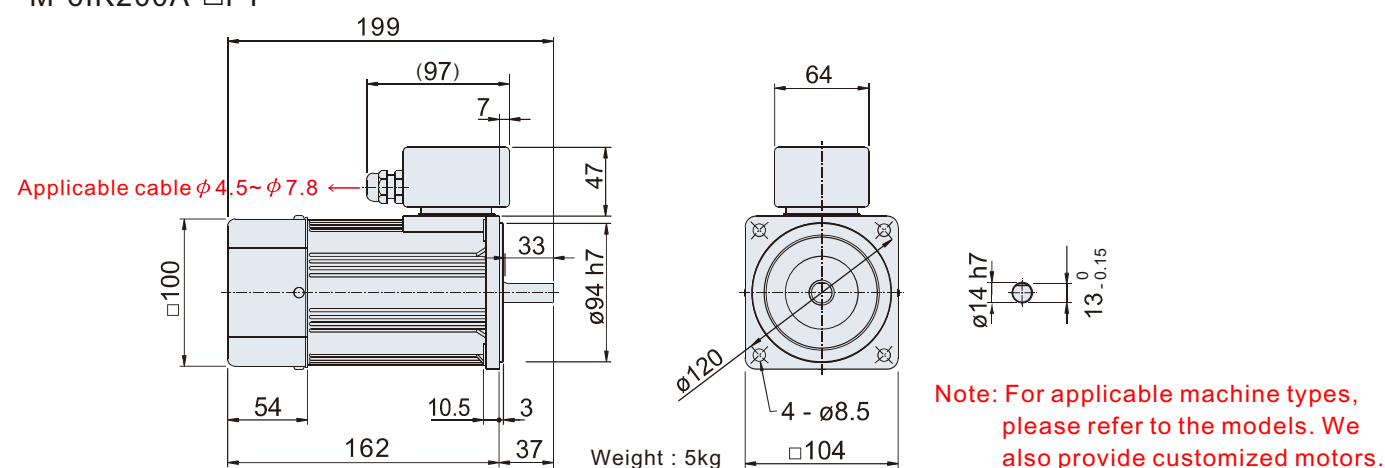
Single-phase/Three-phase Induction Motors with Terminal Box Type

M-6IK200U -□FT



Round Shaft Specification

M-6IK200A-□FT

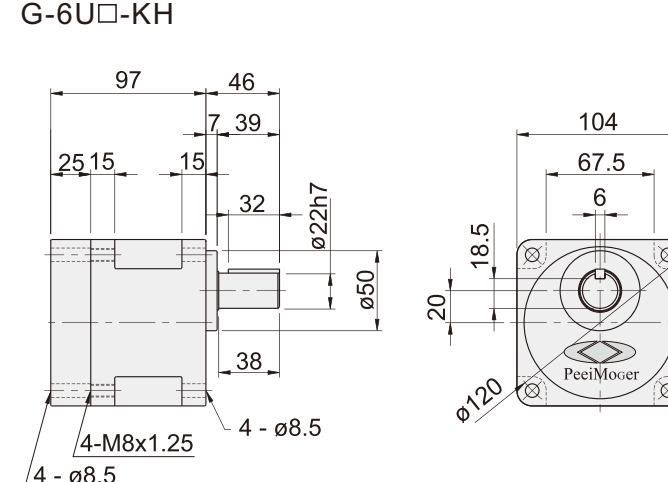


Specifications of Single-phase Induction Motors Continuous rating

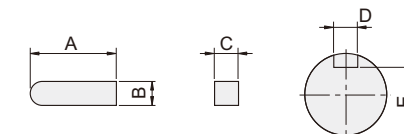
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-6IK200U-AFT M-6IK200A-AFT	200	1 ϕ 100	50	3.14	1300	14.98	5.60	8.80	42.0	-	G-6U□-KH	-
			60	3.19	1600	12.17	5.40	8.80	42.0			
	200	1 ϕ 110	50	3.18	1350	14.43	6.50	8.80	40.0			
			60	2.97	1650	11.80	6.10	8.80	40.0			
	200	1 ϕ 115	50	3.14	1375	14.16	6.70	8.80	40.0			
			60	3.06	1650	11.80	6.30	8.80	40.0			
M-6IK200U-CFT M-6IK200A-CFT	200	1 ϕ 120	50	2.86	1375	14.16	7.10	8.80	36.0			
			60	2.69	1675	11.63	6.80	8.80	36.0			
	200	1 ϕ 200	50	1.52	1350	14.43	3.60	8.80	12.0			
			60	1.68	1650	11.80	3.30	8.80	12.0			
	200	1 ϕ 220	50	1.41	1375	14.16	4.00	8.80	10.0			
			60	1.44	1675	11.63	3.70	8.80	10.0			
	200	1 ϕ 230	50	1.26	1400	13.91	4.10	8.80	10.0			
			60	1.45	1675	11.63	3.80	8.80	10.0			
	200	1 ϕ 240	50	1.26	1400	13.91	4.30	8.80	8.0			
			60	1.20	1700	11.46	4.00	8.80	8.0			

Gear Head

G-6U□-KH



Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-6U□-KH	32	$6^{+0.03}_0$	$6^{+0.03}_0$	$6^{+0.05}_0$	$18.5^{+0.15}_0$

Weight List of Gear Head

Model	Weight (kg)
G-6U3-KH~G-6U9-KH	2.35
G-6U12.5-KH~G-6U50-KH	2.50
G-6U60-KH~G-6U180-KH	2.63

Specifications of Three-phase Induction Motors Continuous rating

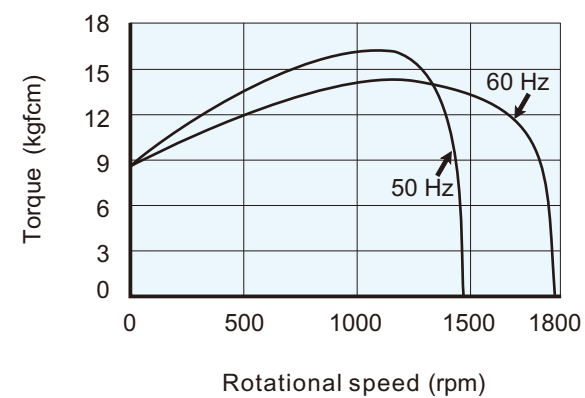
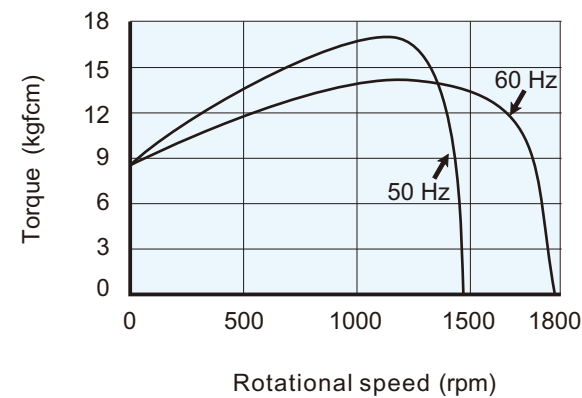
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-6IK200U-SFT M-6IK200A-SFT	200	3 ϕ 200	50	1.10	1350	14.43	4.20	25.00	-	-	G-6U□-KH	-
			60	1.02	1625	11.98	3.90	25.00	-			
	200	3 ϕ 220	50	1.16	1375	14.16	4.60	25.00	-			
			60	1.04	1650	11.80	4.40	25.00	-			
	200	3 ϕ 230	50	1.24	1375	14.16	4.80	25.00	-			
			60	1.00	1675	11.63	4.50	25.00	-			
	200	3 ϕ 380	50	0.66	1375	14.16	2.80	25.00	-			
			60	0.65	1400	13.91	3.00	25.00	-			
	200	3 ϕ 400	50	0.65	1400	13.91	3.00	25.00	-			
			60	0.57	1675	11.63	2.80	25.00	-			

Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Induction Motors

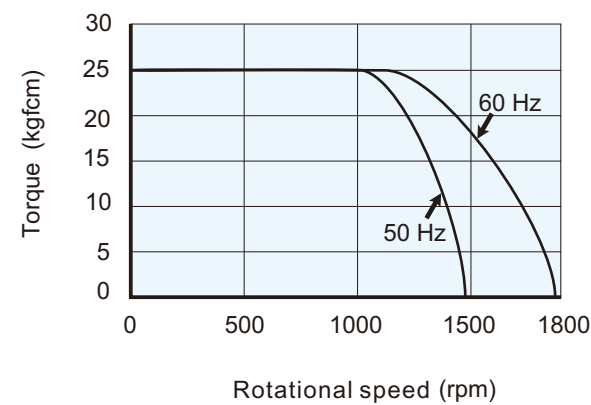
M-6IK200U-AFT / M-6IK200A-AFT

M-6IK200U-CFT / M-6IK200A-CFT



Characteristics of Three-phase Induction Motors

M-6IK200U-SFT / M-6IK200A-SFT



Permissible Torque of Gear Head

Model	Speed (rpm)		500	300	200	120	100	60	50	30	20	15	10
	Gear ratio	50Hz	3	5	7.5	12.5	15	25	30	50	75	100	150
		60Hz	3.6	6	9	15	18	30	36	60	90	120	180
G-6U□-KH	Max. allowable torque(kgfcm)		32	53	79	118	142	237	284	426	600	600	600

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

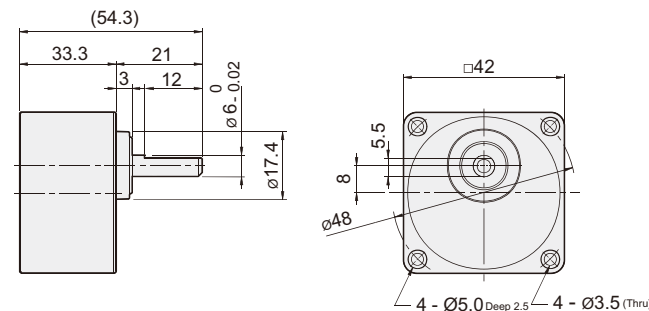
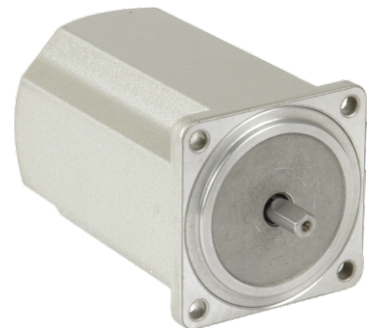


Reversible Motor 【Frame0】 【1W , 3W】

Single-phase Reversible Induction Motor ♦ Gear Head

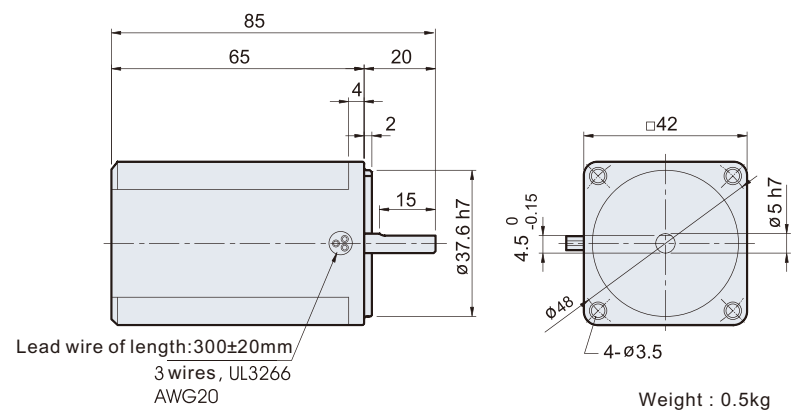
M-0RK1A-□ / M-0RK3A-□

G-0N□-L



Permissible Torque of Gear Head

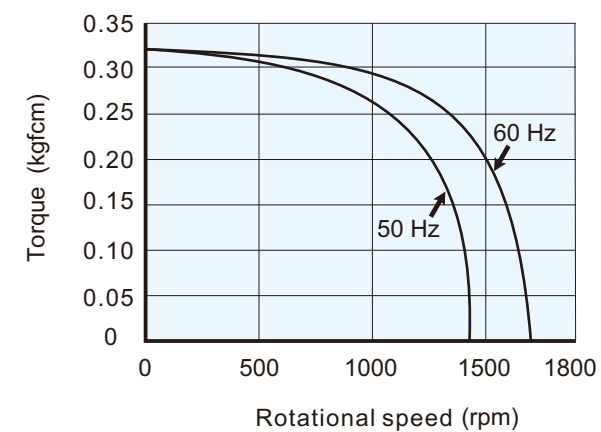
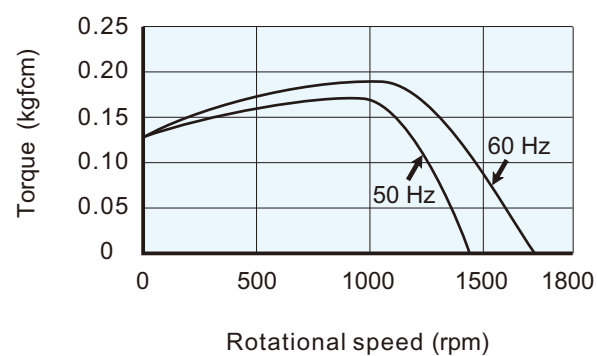
Model	Speed (rpm)		300	150	100	75	50	25	22.5	12.5
	Gear ratio	50Hz	5	10	15	20	30	-	-	120
		60Hz	-	-	-	-	-	60	80	-
G-0N□-L	Max. allowable torque(kgfc)		1	2	2	3	3	5	5	5



Characteristics of Single-phase Reversible Induction Motors

M-0RK1A-A

M-0RK3A-A



Specifications of Single-phase Reversible Induction Motors 10 min rating

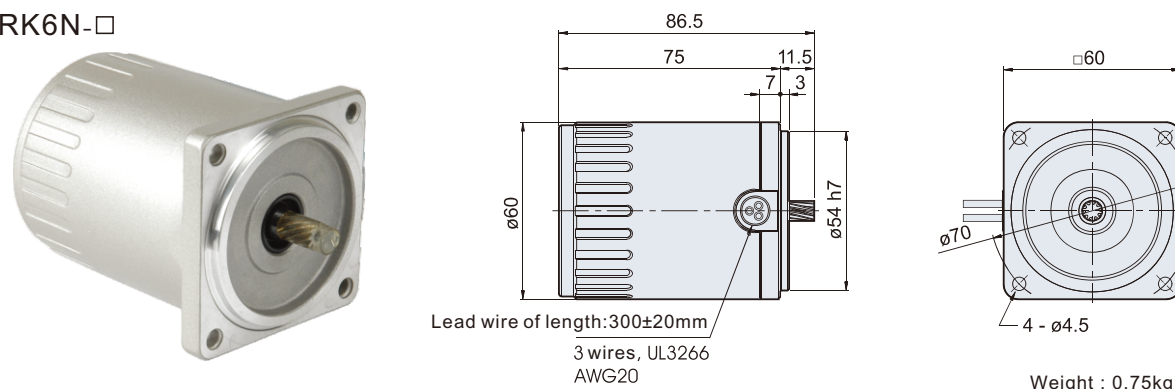
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-0RK1A-A	1	1ϕ110	50	0.16	1160	0.09	0.16	0.13	1.5	G-0N□-L	-	-
			60	0.15	1400	0.07	0.16	0.13				
M-0RK3A-A	3	1ϕ110	50	0.18	1100	0.21	0.19	0.28	2.5			
			60	0.19	1500	0.20	0.21	0.28				



Reversible Motor 【Frame2】 【6W】

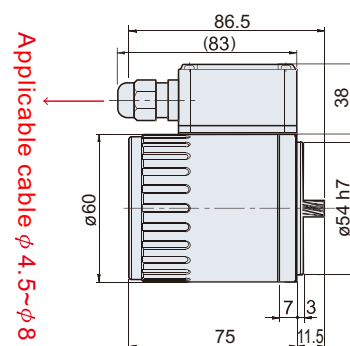
Single-phase Reversible Induction Motor

M-2RK6N-□

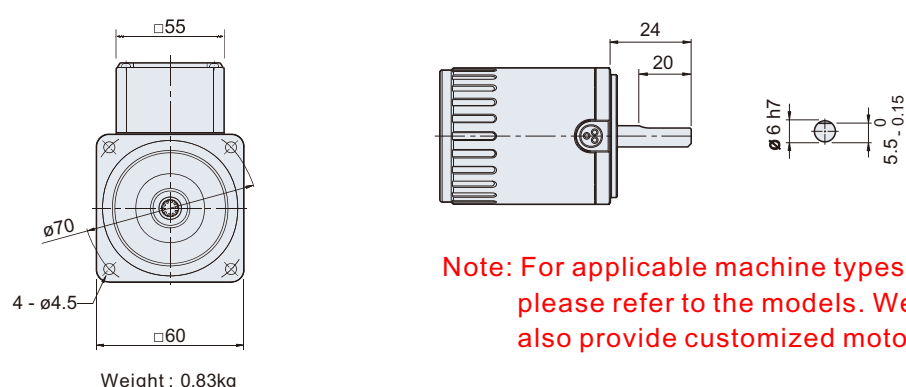


Single-phase Reversible Induction Motors with Terminal Box Type

M-2RK6N-□T



M-2RK6A-□□

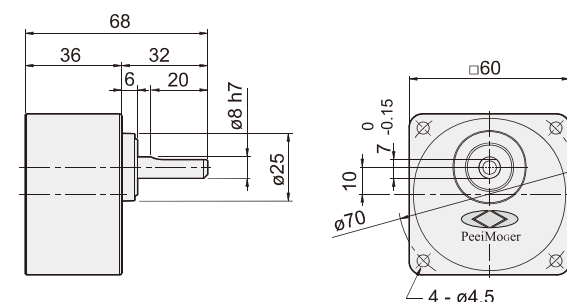


Specifications of Single-phase Reversible Induction Motors 30 min rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-2RK6N-A M-2RK6A-A	6	1φ100	50	0.19	1350	0.43	0.31	0.50	3.5	G-2N□-L	G-2N□-K	G-2N10X-K
			60	0.20	1650	0.36	0.31	0.50				
	6	1φ110	50	0.21	1300	0.45	0.33	0.50	3.0			
			60	0.20	1625	0.36	0.32	0.50				
	6	1φ115	50	0.22	1325	0.44	0.34	0.50	3.0			
			60	0.20	1625	0.36	0.33	0.50				
	6	1φ120	50	0.23	1300	0.45	0.35	0.50	2.5			
			60	0.19	1625	0.36	0.33	0.50				
M-2RK6N-C M-2RK6A-C	6	1φ200	50	0.11	1300	0.45	0.15	0.50	1.0			
			60	0.13	1575	0.37	0.16	0.50				
	6	1φ220	50	0.11	1300	0.45	0.15	0.50	0.8			
			60	0.11	1625	0.36	0.16	0.50				
	6	1φ230	50	0.11	1325	0.44	0.16	0.50	0.8			
			60	0.12	1625	0.36	0.17	0.50				
	6	1φ240	50	0.11	1300	0.45	0.16	0.50	0.6			
			60	0.10	1625	0.36	0.15	0.50				

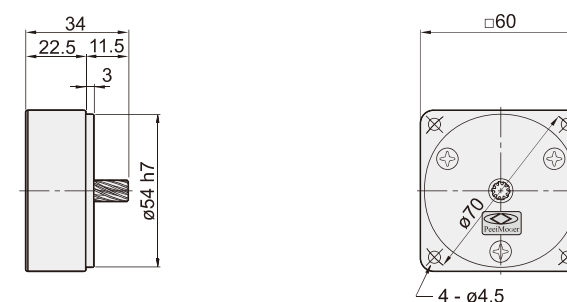
Gear Head

G-2N□-K



Decimal Gear Head

G-2N10X-K

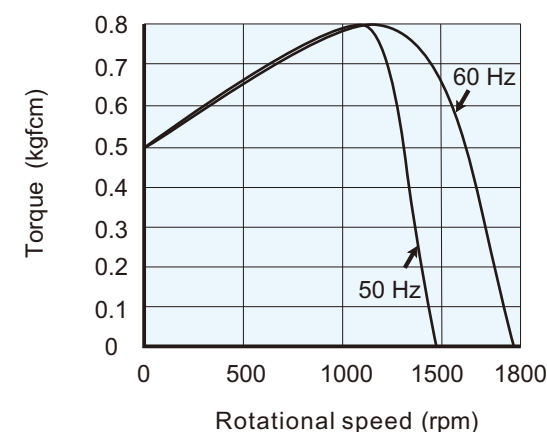


Weight List of Gear Head

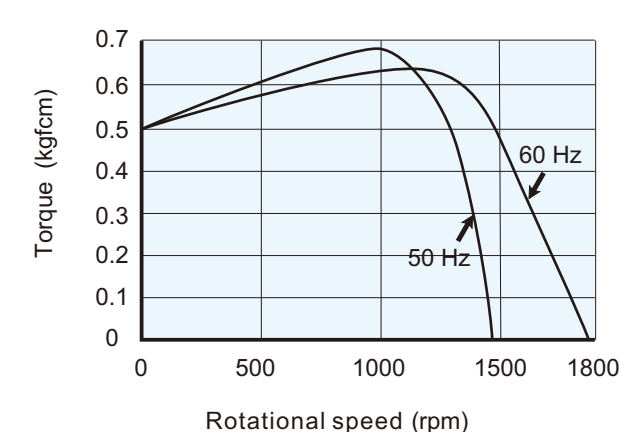
Model	Weight (kg)
G-2N3-K / L~G-2N18-K / L	0.30
G-2N20-K / L~G-2N60-K / L	0.31
G-2N75-K / L~G-2N180-K / L	0.33
G-2N10X-K	0.20

Characteristics of Single-phase Reversible Induction Motors

M-2RK6N-A / M-2RK6A-A



M-2RK6N-C / M-2RK6A-C



Permissible Torque of Gear Head

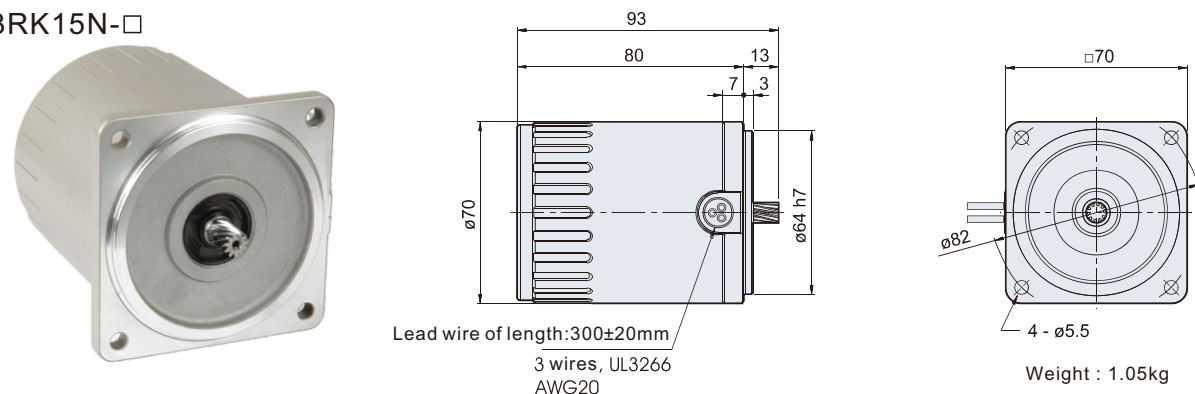
Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-2N□-K □-L	Max. allowable torque(kgfc ^m)		1.0	1.6	2.5	2.7	3.4	4.1	5.0	5.4	6.7	8.1	9.7	16	23	25	25	25	25	25	25	25	25	25	25

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Reversible Motor 【Frame3】 【15W】

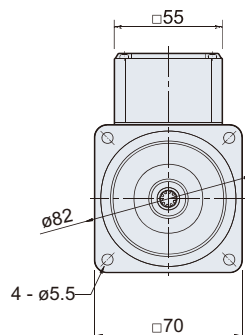
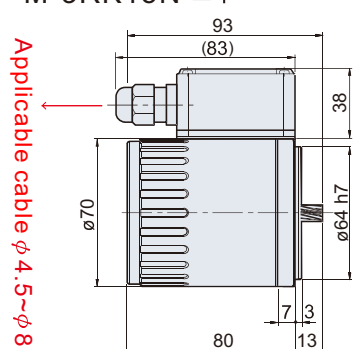
Single-phase Reversible Induction Motor

M-3RK15N-□



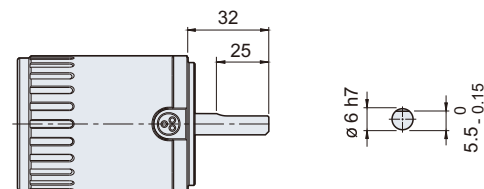
Single-phase Reversible Induction Motors with Terminal Box Type

M-3RK15N-□T



Weight : 1.2kg

M-3RK15A-□□



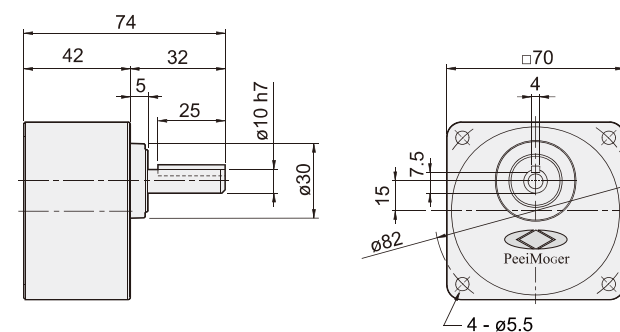
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Specifications of Single-phase Reversible Induction Motors 30 min rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-3RK15N-A M-3RK15A-A	15	1φ100	50	0.37	1225	1.19	0.52	0.90	6.0	G-3N□-L	G-3N□-K	G-3N10X-K
			60	0.40	1525	0.96	0.51	0.90				
	15	1φ110	50	0.34	1250	1.17	0.55	0.90	5.0			
			60	0.34	1575	0.93	0.52	0.90				
	15	1φ115	50	0.35	1275	1.15	0.58	0.90	5.0			
			60	0.34	1600	0.92	0.55	0.90				
	15	1φ120	50	0.38	1250	1.17	0.61	0.90	4.0			
			60	0.32	1600	0.92	0.57	0.90				
M-3RK15N-C M-3RK15A-C	15	1φ200	50	0.18	1275	1.15	0.27	0.90	1.6			
			60	0.20	1575	0.93	0.26	0.90				
	15	1φ220	50	0.17	1275	1.15	0.28	0.90	1.2			
			60	0.16	1600	0.92	0.26	0.90				
	15	1φ230	50	0.17	1300	1.13	0.30	0.90	1.2			
			60	0.16	1625	0.90	0.28	0.90				
	15	1φ240	50	0.19	1275	1.15	0.31	0.90	1.0			
			60	0.15	1600	0.92	0.28	0.90				

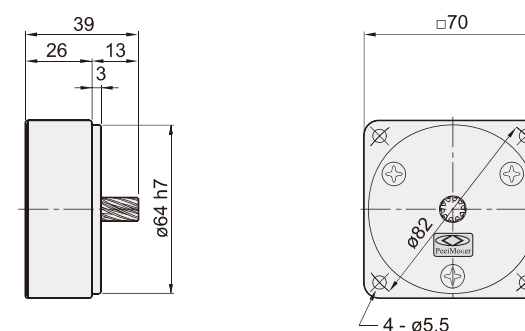
Gear Head

G-3N□-K

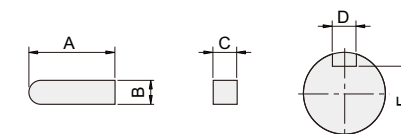


Decimal Gear Head

G-3N10X-K



Gear Head: Key and Key slot Dimension



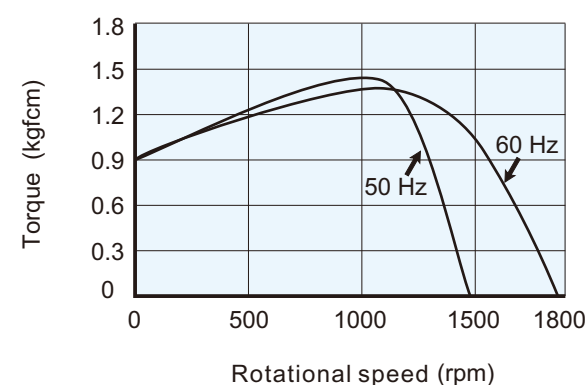
Model	A	B	C	D	E
G-3N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.15}

Weight List of Gear Head

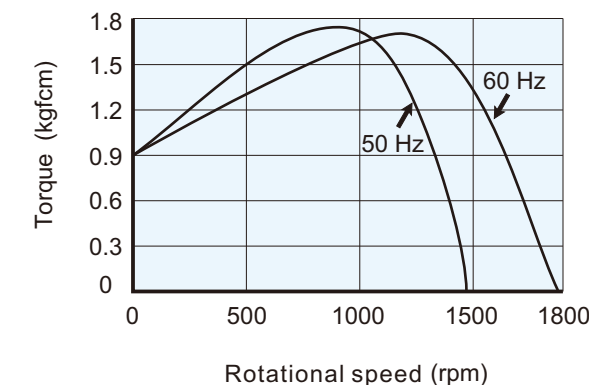
Model	Weight (kg)
G-3N3-K / L~G-3N18-K / L	0.44
G-3N20-K / L~G-3N60-K / L	0.48
G-3N75-K / L~G-3N180-K / L	0.53
G-3N10X-K	0.32

Characteristics of Single-phase Reversible Induction Motors

M-3RK15N-A / M-3RK15A-A



M-3RK15N-C / M-3RK15A-C



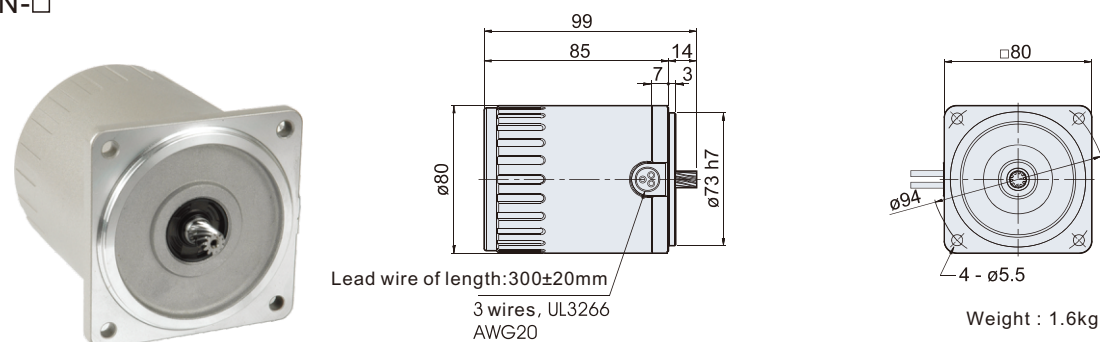
Permissible Torque of Gear Head

Coupled decimal gear head																	
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-3N□-K L	Max. allowable torque(kgfcm)		2.4	4.0	6.0	6.7	8.2	10	12	13	16	19	23	39	50	50	50

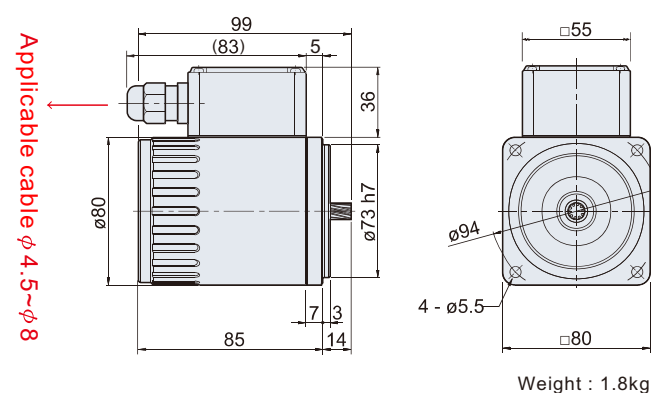
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Reversible Motor 【Frame4】 【25W】

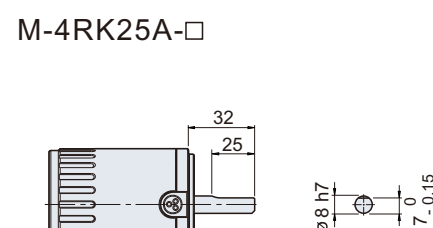
- Single-phase Reversible Induction Motor
M-4RK25N-□



- Single-phase Reversible Induction Motors
with Terminal Box Type
M-4RK25N-□T



- Round Shaft Specification
M-4RK25A-□

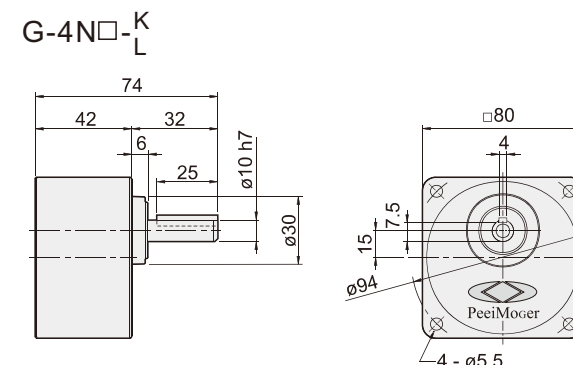


Note: For applicable machine types,
please refer to the models. We
also provide customized motors.

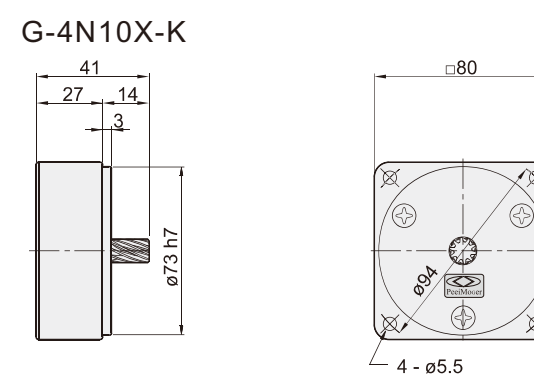
- Specifications of Single-phase Reversible Induction Motors 30 min rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μ F	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-4RK25N-A M-4RK25A-A	25	1 ϕ 100	50	0.60	1225	1.99	0.98	1.50	8.0	G-4N□-L	G-4N□-K	G-4N10X-K
			60	0.59	1525	1.60	0.89	1.50				
	25	1 ϕ 110	50	0.62	1225	1.99	1.03	1.50	7.0			
			60	0.60	1500	1.63	0.96	1.50				
	25	1 ϕ 115	50	0.57	1300	1.88	1.08	1.50	7.0			
			60	0.56	1575	1.55	1.00	1.50				
	25	1 ϕ 120	50	0.61	1275	1.91	1.11	1.50	6.0			
			60	0.63	1550	1.57	1.31	1.50				
M-4RK25N-C M-4RK25A-C	25	1 ϕ 200	50	0.31	1250	1.95	0.49	1.50	2.5			
			60	0.36	1500	1.63	0.48	1.50				
	25	1 ϕ 220	50	0.29	1275	1.91	0.53	1.50	2.0			
			60	0.29	1575	1.55	0.49	1.50				
	25	1 ϕ 230	50	0.28	1300	1.88	0.55	1.50	2.0			
			60	0.31	1550	1.57	0.51	1.50				
	25	1 ϕ 240	50	0.30	1275	1.91	0.56	1.50	1.5			
			60	0.25	1575	1.55	0.52	1.50				

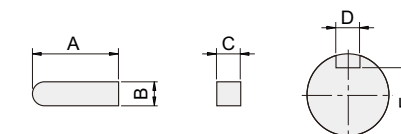
- Gear Head



- Decimal Gear Head



- Gear Head: Key and Key slot Dimension



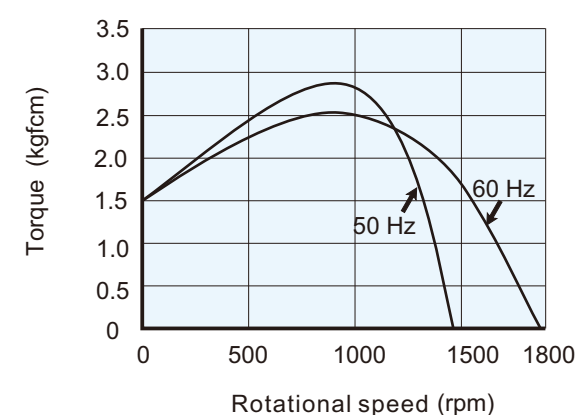
Model	A	B	C	D	E
G-4N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.15}

- Weight List of Gear Head

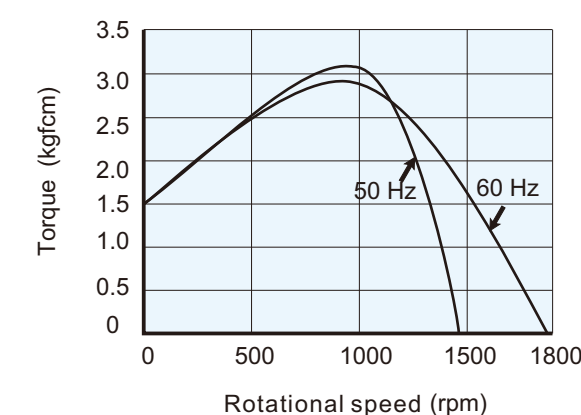
Model	Weight (kg)
G-4N3-K / L~G-4N18-K / L	0.60
G-4N20-K / L~G-4N60-K / L	0.65
G-4N75-K / L~G-4N180-K / L	0.71
G-4N10X-K	0.41

- Characteristics of Single-phase Reversible Induction Motors

M-4RK25N-A / M-4RK25A-A



M-4RK25N-C / M-4RK25A-C



- Permissible Torque of Gear Head

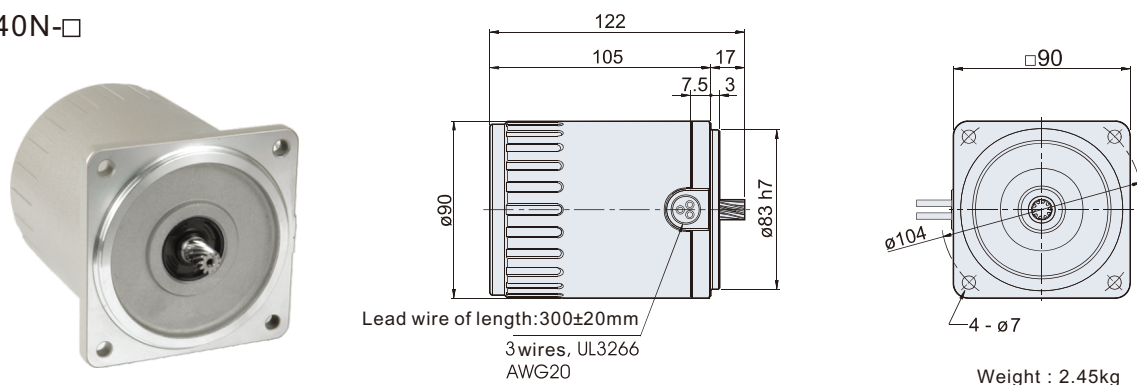
Model		Coupled decimal gear head																
		Speed (rpm)																
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz
G-4N□-K	Max. allowable torque(kgfcm)	3	3.6	5	6	7.5	9	10	11	12.5	15	18	20	21	26	32	39	40
		4.0	4.8	6.7	8.0	10	12	13	16	18	21	24	28	32	39	48	58	60

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Reversible Motor 【Frame5】 【40W】

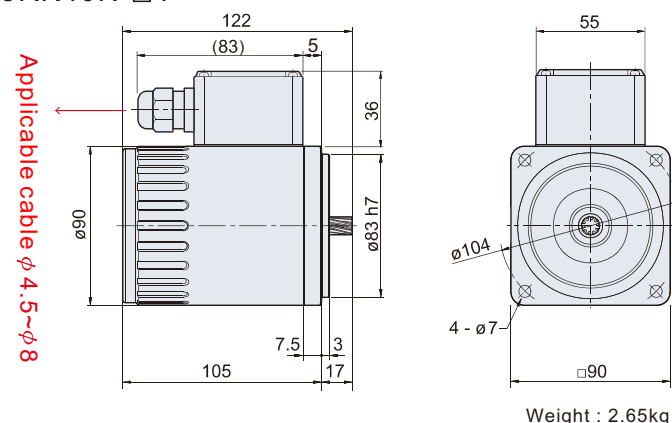
Single-phase Reversible Induction Motor

M-5RK40N-□



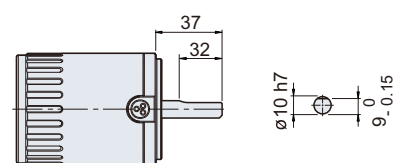
Single-phase Reversible Induction Motors with Terminal Box Type

M-5RK40N-□T



Round Shaft Specification

M-5RK40A-□



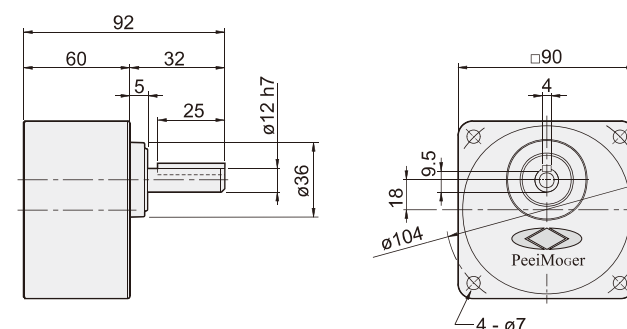
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Specifications of Single-phase Reversible Induction Motors 30 min rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK40N-A M-5RK40A-A	40	1φ100	50	0.84	1375	2.84	2.05	2.60	14.0	G-5N□-L	G-5N□-K	G-5N10X-K
			60	0.89	1650	2.36	1.85	2.60				
	40	1φ110	50	0.84	1375	2.84	2.19	2.60	12.0			
			60	0.83	1675	2.33	2.08	2.60				
	40	1φ115	50	0.91	1375	2.84	2.29	2.60	12.0			
			60	0.86	1675	2.33	2.17	2.60				
	40	1φ120	50	0.97	1375	2.84	2.25	2.60	10.0			
			60	0.75	1700	2.29	2.32	2.60				
M-5RK40N-C M-5RK40A-C	40	1φ200	50	0.36	1350	2.89	0.72	2.60	3.5			
			60	0.45	1625	2.40	0.67	2.60				
	40	1φ220	50	0.34	1375	2.84	0.80	2.60	3.0			
			60	0.38	1650	2.36	0.73	2.60				
	40	1φ230	50	0.37	1375	2.84	0.85	2.60	3.0			
			60	0.36	1675	2.33	0.75	2.60				
	40	1φ240	50	0.33	1375	2.84	0.87	2.60	2.5			
			60	0.32	1675	2.33	0.78	2.60				

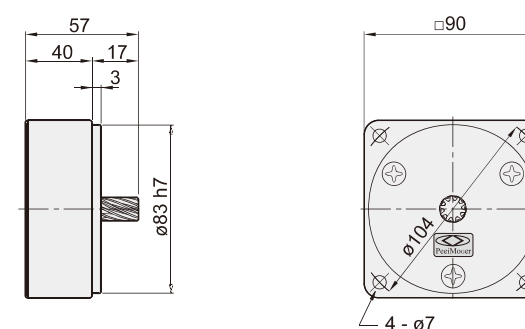
Gear Head

G-5N□-K

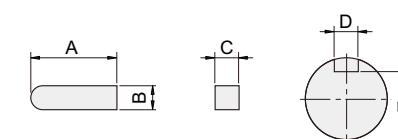


Decimal Gear Head

G-5N10X-K



Gear Head: Key and Key slot Dimension



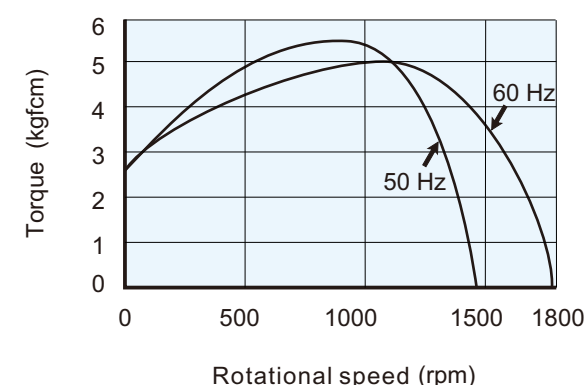
Model	A	B	C	D	E
G-5N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Weight List of Gear Head

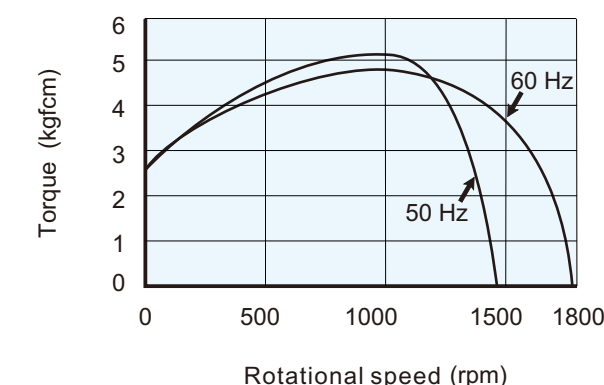
Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

Characteristics of Single-phase Reversible Induction Motors

M-5RK40N-A / M-5RK40A-A



M-5RK40N-C / M-5RK40A-C



Permissible Torque of Gear Head

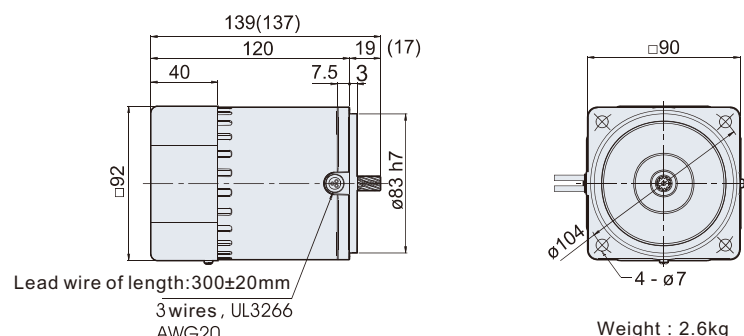
Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5N□-K□-L	Max. allowable torque(kgfc ^m)		6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100	100	100	100	100	100	100	100

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Reversible Motor 【Frame5】 【60W】

Single-phase Reversible Induction Motor

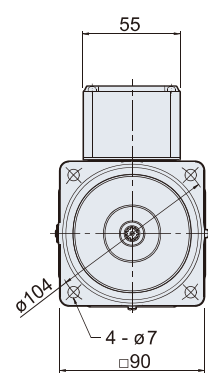
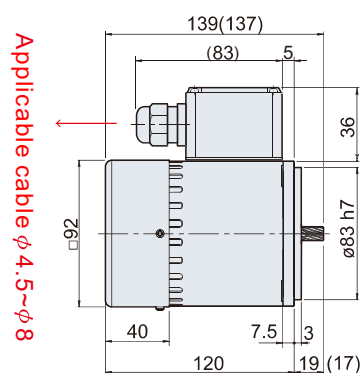
M-5RK60^N_U-□F



- The dimensions inside the brackets belong to N-type gear shafts, which are coupled to those of the gear head and the intermediate gear head, and should match with G-5N□-K_L

Single-phase Reversible Induction Motors with Terminal Box Type

M-5RK60^N_U-□FT

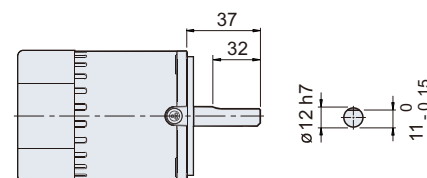


Weight : 2.8kg

- The dimensions inside the brackets belong to N-type gear shafts, which are coupled to those of the gear head and the intermediate gear head, and should match with G-5N□-K_L

Round Shaft Specification

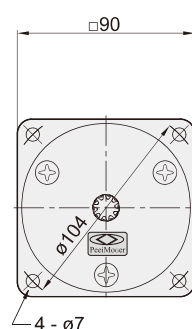
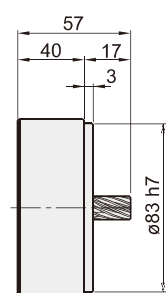
M-5RK60A-□F



Note: For applicable machine types, please refer to the models. We also provide customized motors.

Decimal Gear Head

G-5N10X-K

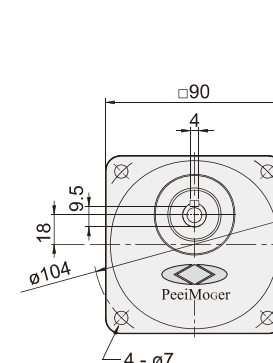
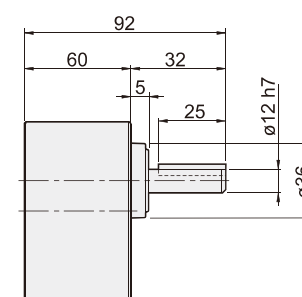


Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

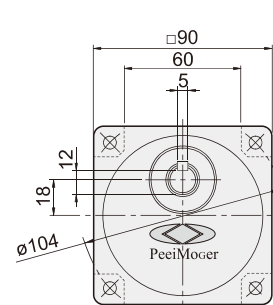
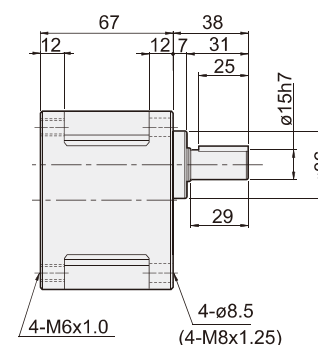
Gear Head

G-5N□-K_L



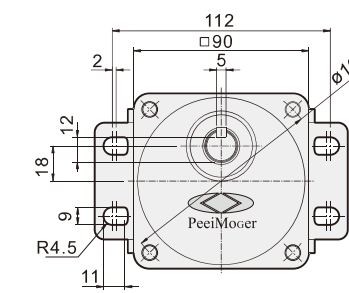
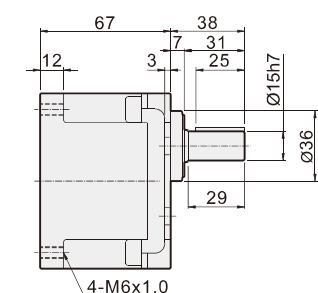
Gear Head

G-5U□-K



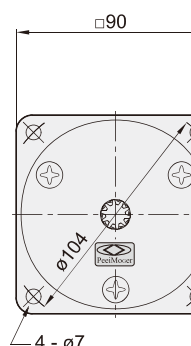
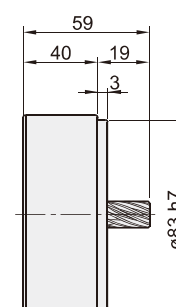
Gear Head with Mounting Brackets

G-5U□-KF

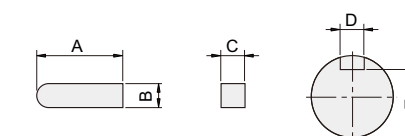


Decimal Gear Head

G-5U10X-K

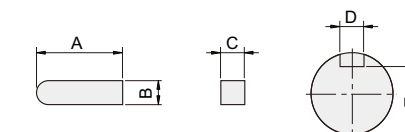


Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K _L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Weight List of Gear Head

Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73
G-5U10X-K	0.64

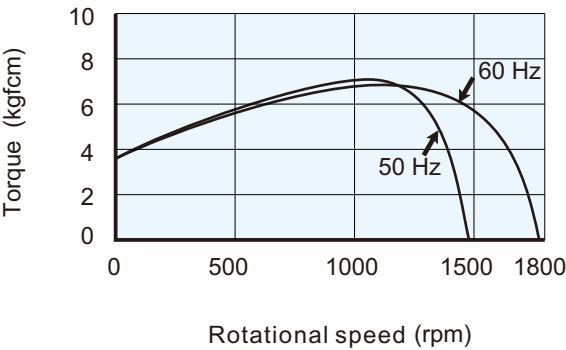
◆ Specifications of Single-phase Reversible Induction Motors 30 min rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK60 ^N _U -AF M-5RK60A-AF	60	1φ 100	50	1.12	1350	4.33	2.15	3.80	20.0	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
			60	1.24	1650	3.54	2.14	3.80				
	60	1φ 110	50	1.08	1375	4.25	2.58	3.80	18.0			
			60	1.10	1675	3.49	2.18	3.80				
	60	1φ 115	50	1.11	1375	4.25	2.41	3.80	18.0			
			60	1.15	1675	3.49	2.29	3.80				
M-5RK60 ^N _U -CF M-5RK60A-CF	60	1φ 120	50	1.15	1375	4.25	2.44	3.80	16.0			
			60	1.13	1675	3.49	2.39	3.80				
	60	1φ 200	50	0.56	1350	4.33	1.12	3.80	5.0			
			60	0.59	1650	3.54	1.02	3.80				
	60	1φ 220	50	0.57	1375	4.25	1.26	3.80	5.0			
			60	0.60	1675	3.49	1.14	3.80				
M-5RK60A-CF	60	1φ 230	50	0.54	1375	4.25	1.23	3.80	4.0			
			60	0.52	1675	3.49	1.19	3.80				
	60	1φ 240	50	0.56	1375	4.25	1.28	3.80	4.0			
			60	0.50	1675	3.49	1.20	3.80				

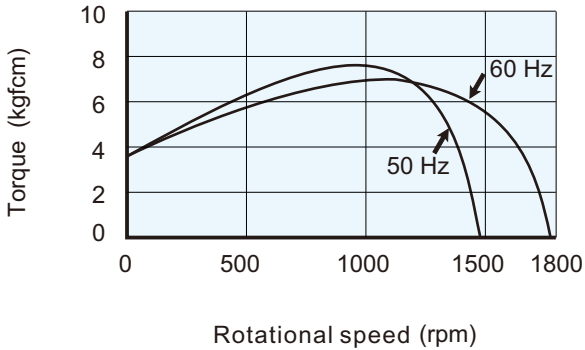


◆ Characteristics of Single-phase Reversible Induction Motors

M-5RK60^N_U-AF / M-5RK60A-AF



M-5RK60^N_U-CF / M-5RK60A-CF



◆ Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5N□-L	Max. allowable torque(kgfcm)	6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

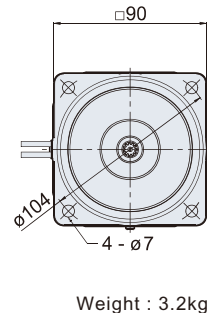
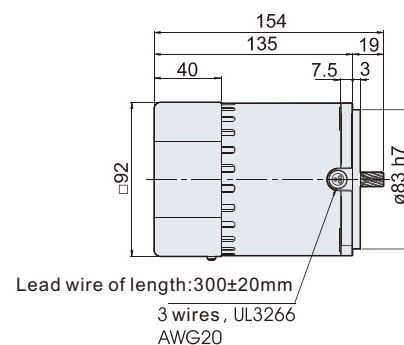
◆ Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5U□-K	Max. allowable torque(kgfcm)	10	16	24	27	32	40	48	54	64	77	93	155	200	200	200	200

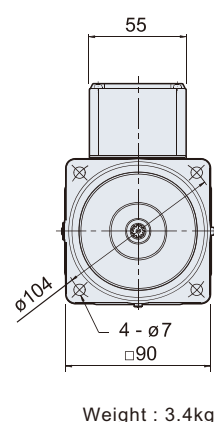
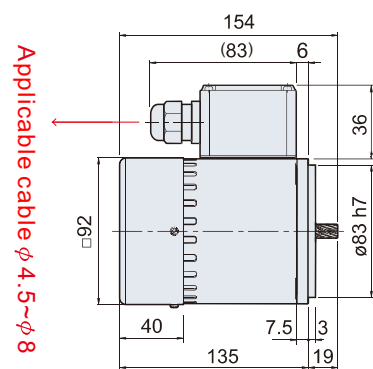
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Reversible Motor 【Frame5】 【90W】

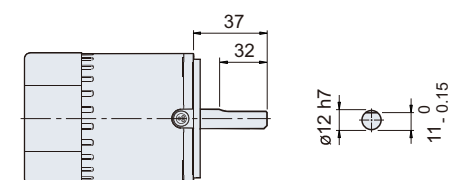
- Single-phase Reversible Induction Motor
M-5RK90U-□F



- Single-phase Reversible Induction Motors with Terminal Box Type
M-5RK90U-□FT

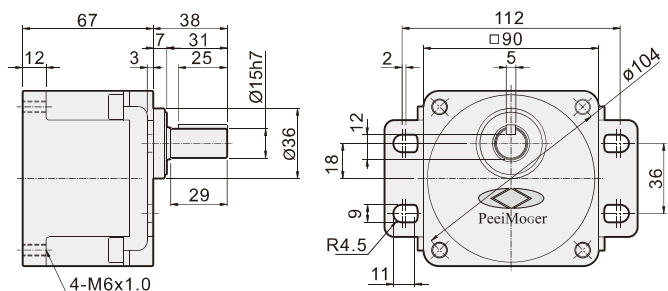


- Round Shaft Specification
M-5RK90A-□F



Note: For applicable machine types, please refer to the models. We also provide customized motors.

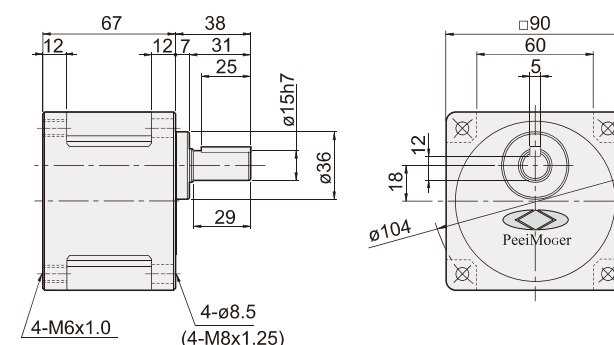
- Gear Head with Mounting Brackets
G-5U□-KF



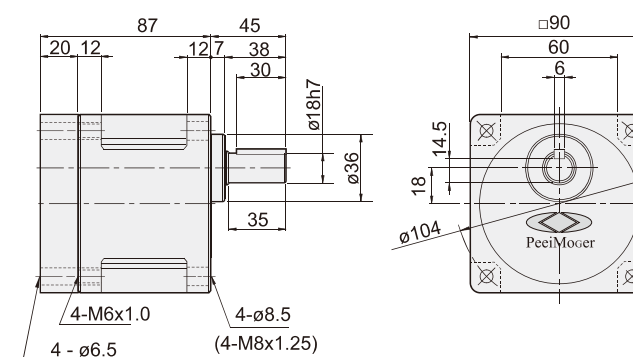
- Weight List of Gear Head

Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

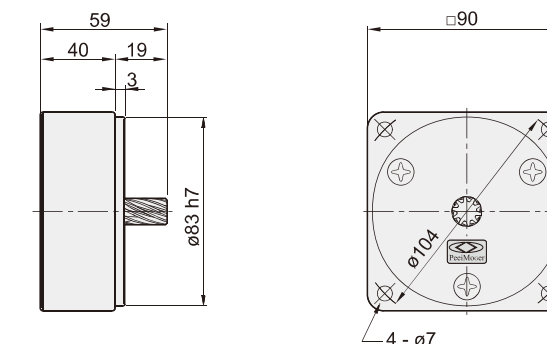
- Gear Head
G-5U□-K



- Gear Head
G-5U□-KH



- Decimal Gear Head
G-5U10X-K

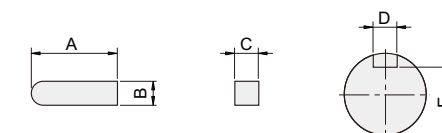


- Permissible Torque of Gear Head

Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10								
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	7.5	6	5	3	2	1.5	1
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□-K	Max. allowable torque(kgfm)		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200	200	200	200	200	200	200	200

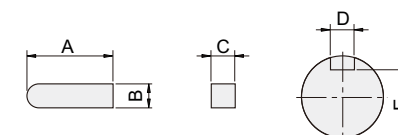
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

- Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

- Gear Head: Key and Key slot Dimension



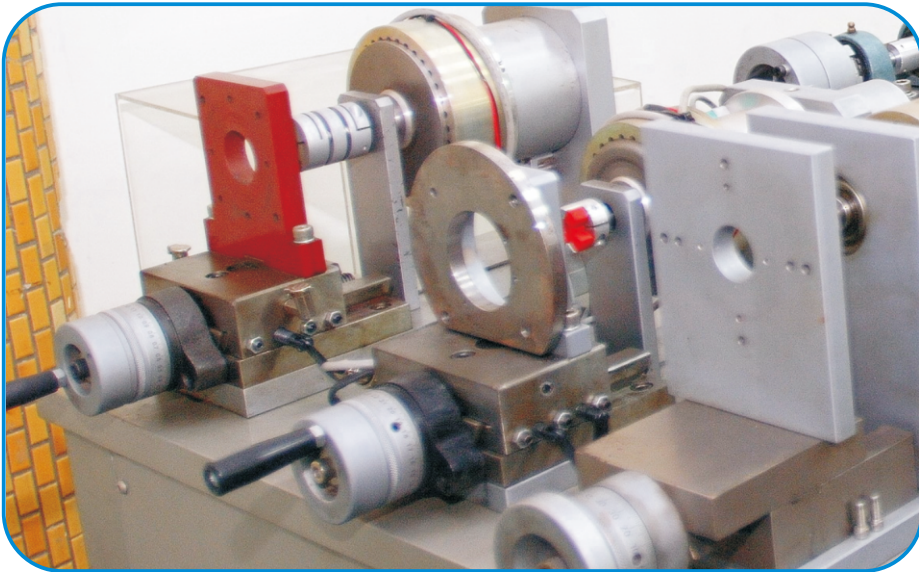
Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

- Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

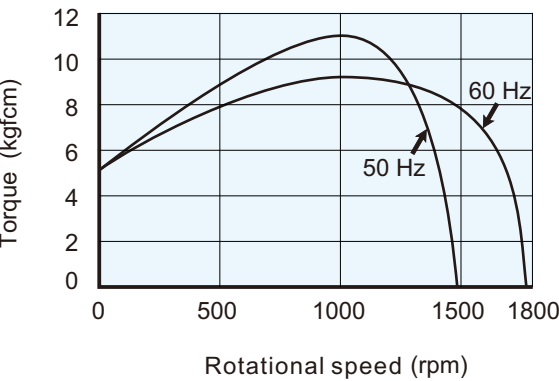
Specifications of Single-phase Reversible Induction Motors 30 min rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK90U-AF M-5RK90A-AF	90	1φ100	50	1.72	1350	6.49	3.86	5.20	28.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	1.70	1650	5.31	3.02	5.20				
	90	1φ110	50	1.43	1375	6.37	3.83	5.20	25.0			
			60	1.58	1675	5.23	3.51	5.20				
	90	1φ115	50	1.50	1375	6.37	3.94	5.20	25.0			
			60	1.63	1675	5.23	3.69	5.20				
	90	1φ120	50	1.66	1375	6.37	3.97	5.20	20.0			
			60	1.64	1675	5.23	4.59	5.20				
M-5RK90U-CF M-5RK90A-CF	90	1φ200	50	0.82	1350	6.49	1.83	5.20	7.0			
			60	0.87	1650	5.31	1.63	5.20				
	90	1φ220	50	0.68	1375	6.37	1.93	5.20	6.0			
			60	0.75	1675	5.23	1.79	5.20				
	90	1φ230	50	0.74	1375	6.37	2.06	5.20	6.0			
			60	0.80	1675	5.23	1.93	5.20				
	90	1φ240	50	0.81	1375	6.37	2.10	5.20	5.0			
			60	0.81	1675	5.23	2.31	5.20				

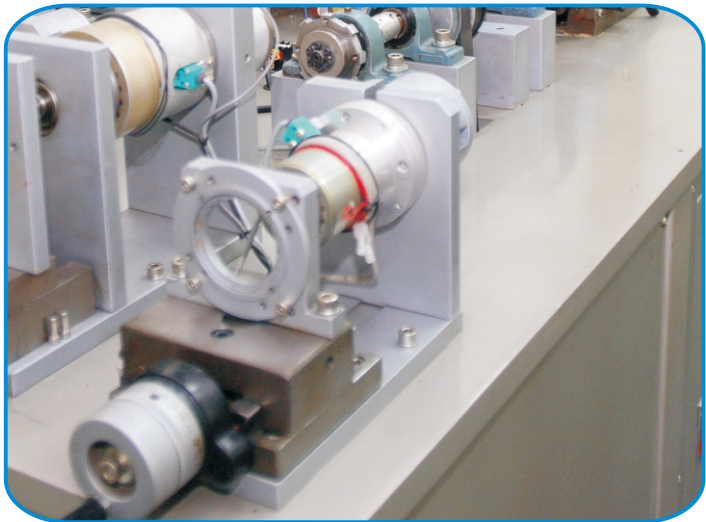
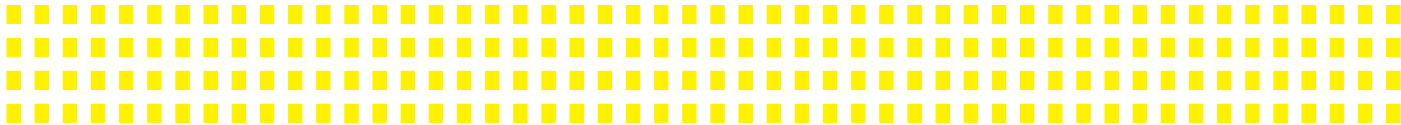
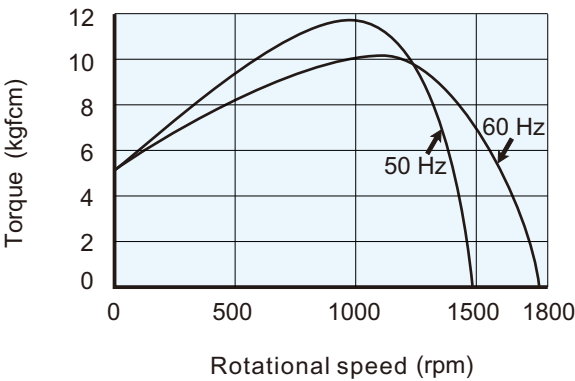


Characteristics of Single-phase Reversible Induction Motors

M-5RK90U-AF / M-5RK90A-AF



M-5RK90U-CF / M-5RK90A-CF



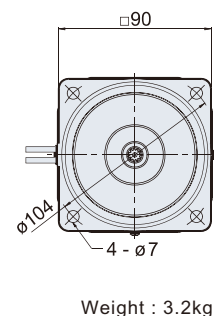
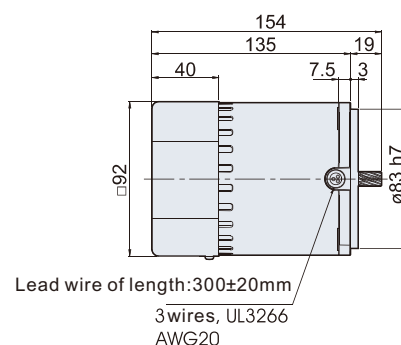
Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5U□-KH	Max. allowable torque(kgfcm)	-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	

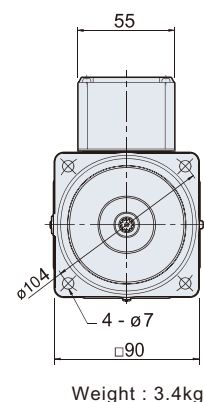
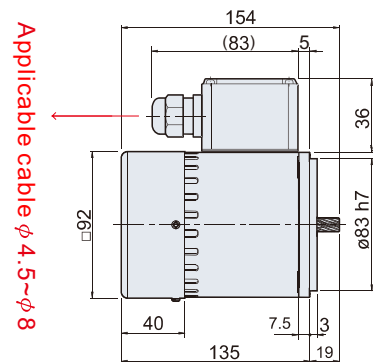
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Reversible Motor 【Frame5】 【120W】

- Single-phase Reversible Induction Motor
M-5RK120U-□F

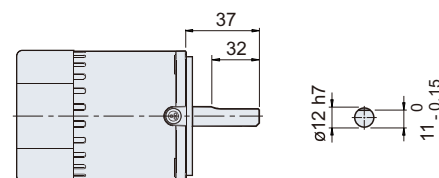


- Single-phase Reversible Induction Motors with Terminal Box Type
M-5RK120U-□FT



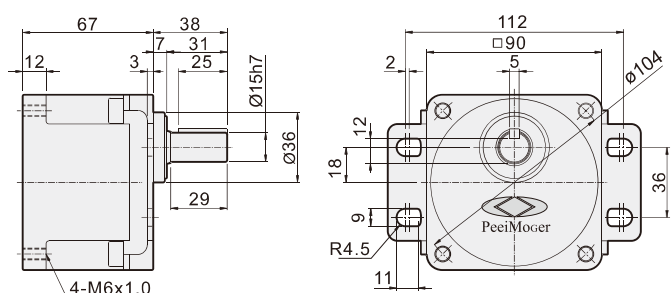
- Round Shaft Specification

M-5RK120A-□F



Note: For applicable machine types, please refer to the models. We also provide customized motors.

- Gear Head with Mounting Brackets
G-5U□-KF

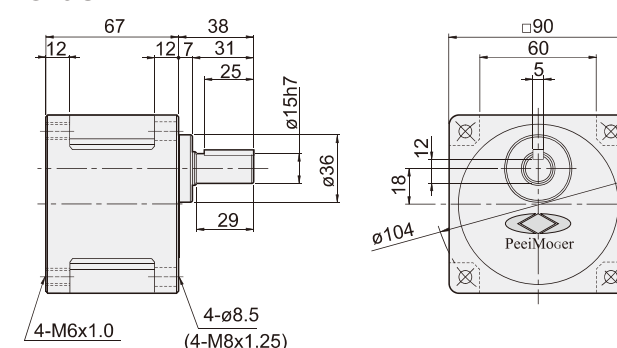


- Weight List of Gear Head

Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

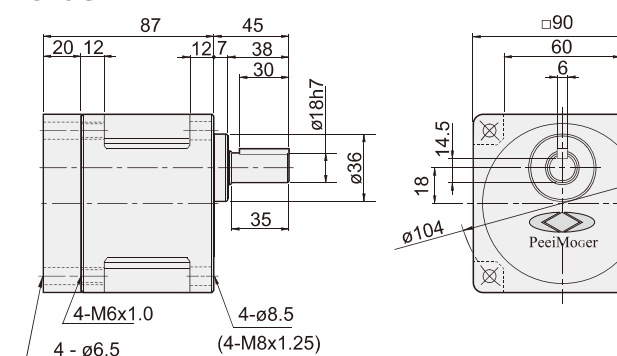
- Gear Head

G-5U□-K



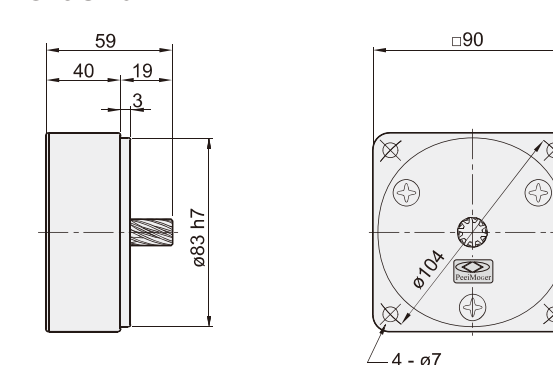
- Gear Head

G-5U□-KH



- Decimal Gear Head

G-5U10X-K

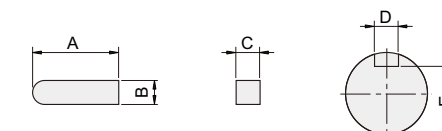


- Permissible Torque of Gear Head

Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
	Gear ratio	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
G-5U□-K	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
Max. allowable torque(kgfcM)		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200

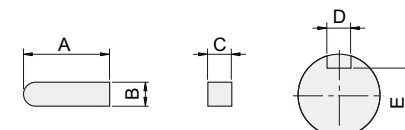
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

- Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

- Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

- Weight List of Gear Head

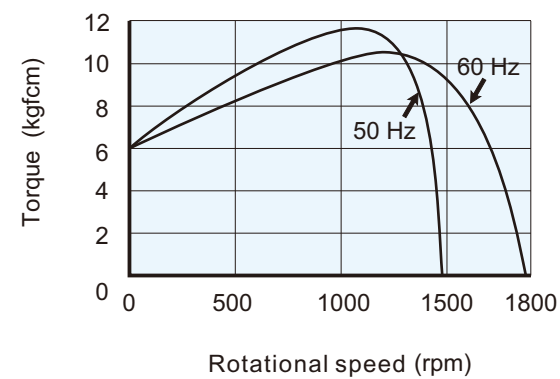
Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Reversible Induction Motors 30 min rating

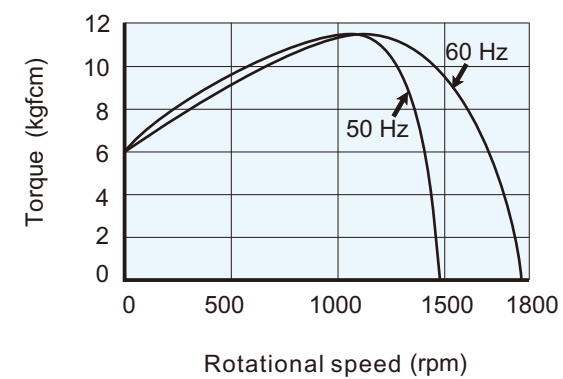
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μ F	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK120U-AF M-5RK120A-AF	120	1 ϕ 100	50	2.26	1300	8.99	4.07	6.00	30.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	2.00	1600	7.30	3.04	6.00				
	120	1 ϕ 110	50	1.82	1325	8.82	3.68	6.00	28.0			
			60	1.83	1650	7.08	3.41	6.00				
	120	1 ϕ 115	50	1.72	1350	8.66	3.89	6.00	28.0			
			60	1.88	1650	7.08	3.53	6.00				
	120	1 ϕ 120	50	1.70	1350	8.66	3.90	6.00	25.0			
			60	1.93	1650	7.08	4.12	6.00				
M-5RK120U-CF M-5RK120A-CF	120	1 ϕ 200	50	1.02	1300	8.99	1.80	6.00	8.0			
			60	1.09	1600	7.30	1.61	6.00				
	120	1 ϕ 220	50	0.89	1325	8.82	1.91	6.00	7.0			
			60	0.96	1625	7.19	1.76	6.00				
	120	1 ϕ 230	50	0.83	1350	8.66	2.04	6.00	7.0			
			60	0.93	1650	7.08	1.88	6.00				
	120	1 ϕ 240	50	0.83	1350	8.66	2.04	6.00	6.0			
			60	0.99	1650	7.08	2.36	6.00				

Characteristics of Single-phase Reversible Induction Motors

M-5RK120U-AF / M-5RK120A-AF

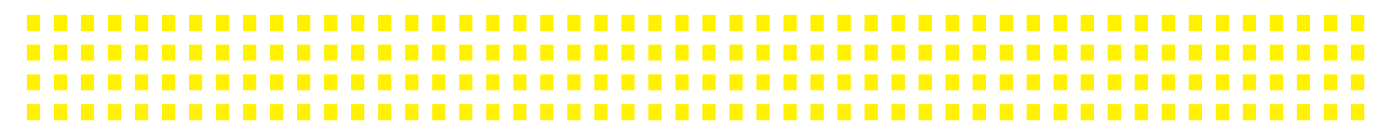


M-5RK120U-CF / M-5RK120A-CF

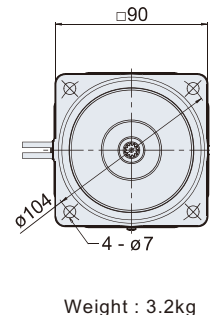
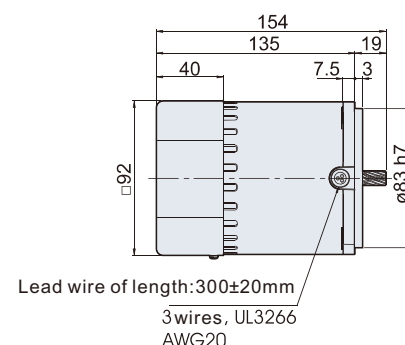


Permissible Torque of Gear Head

Coupled decimal gear head																									
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□-KH	Max. allowable torque(kgfc ^m)	-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300	300	-	-	300	300	300	300	

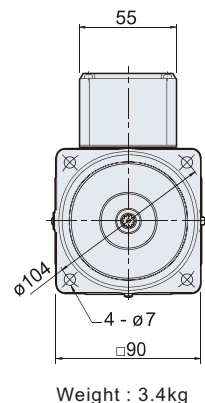


Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Applicable cable ϕ 4.5~ ϕ 8

Technical drawing of the cable gland (Accessories) showing dimensions in mm. The drawing includes a side view and a top view. Dimensions include: total length 154 mm, mounting bracket length 83 mm, bracket thickness 5 mm, mounting bracket height 36 mm, main body length 96 mm, main body diameter $\phi 63$ h7, main body width 40 mm, main body height 135 mm, main body flange thickness 7.5 mm, main body flange diameter $\phi 63$ h7, main body flange width 19 mm, and main body flange height 3 mm. A red arrow points to the cable gland with the text 'Applicable cable ϕ 4.5~ ϕ 8'.



Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

[illegible]

Model	Speed rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5U□-K	Max. allowable torque(kgfc·m)		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200

Model	A	B	C	D	E
G-5U□-K	25	$5 \begin{smallmatrix} 0 \\ -0.03 \end{smallmatrix}$	$5 \begin{smallmatrix} 0 \\ -0.03 \end{smallmatrix}$	$5 \begin{smallmatrix} +0.05 \\ 0 \end{smallmatrix}$	$12 \begin{smallmatrix} 0 \\ -0.1 \end{smallmatrix}$

Model	A	B	C	D	E
G-5U□- KH	30	$\delta_{-0,03}^0$	$\delta_{-0,03}^0$	$\delta_{0}^{+0,05}$	$14,5_{-0,1}^0$

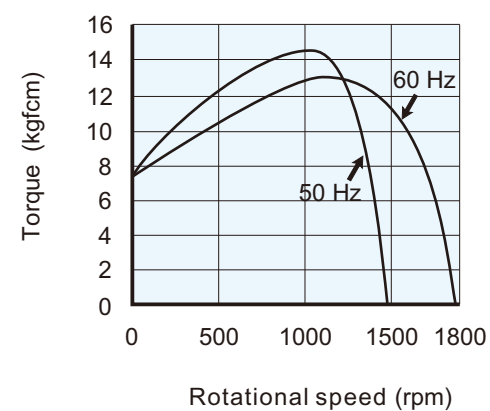
Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Reversible Induction Motors 30 min rating

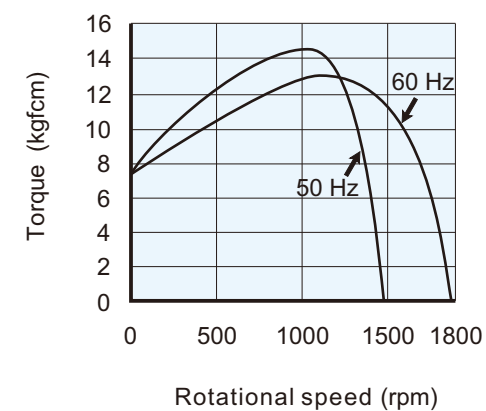
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μ F	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK150U-AF M-5RK150A-AF	150	1 ϕ 100	50	2.88	1250	11.68	4.64	7.50	36.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	2.56	1575	9.27	3.52	7.50				
	150	1 ϕ 110	50	2.32	1300	11.24	4.42	7.50	32.0			
			60	2.47	1600	9.13	3.80	7.50				
	150	1 ϕ 115	50	2.13	1325	11.02	4.44	7.50	32.0			
			60	2.34	1650	8.85	4.12	7.50				
	150	1 ϕ 120	50	2.11	1325	11.02	4.26	7.50	28.0			
			60	2.13	1650	8.85	4.31	7.50				
M-5RK150U-CF M-5RK150A-CF	150	1 ϕ 200	50	1.12	1300	11.24	2.38	7.50	9.0			
			60	1.23	1600	9.13	2.15	7.50				
	150	1 ϕ 220	50	1.08	1325	11.02	2.43	7.50	8.0			
			60	1.26	1625	8.99	2.69	7.50				
	150	1 ϕ 230	50	1.18	1325	11.02	2.32	7.50	7.0			
			60	1.23	1650	8.85	2.81	7.50				
	150	1 ϕ 240	50	1.36	1300	11.24	2.59	7.50	6.0			
			60	1.00	1625	8.99	2.54	7.50				

Characteristics of Single-phase Reversible Induction Motors

M-5RK150U-AF / M-5RK150A-AF



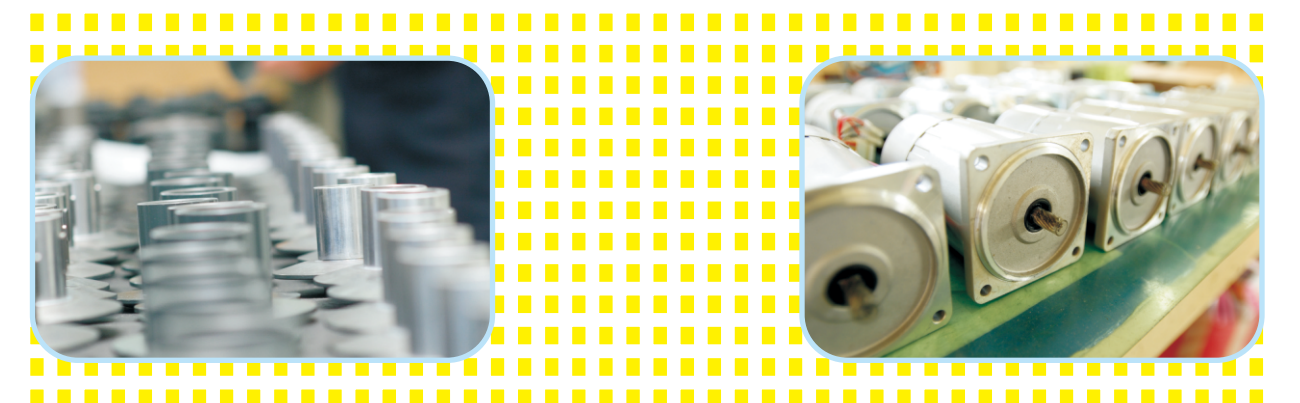
M-5RK150U-CF / M-5RK150A-CF



Permissible Torque of Gear Head

Model		Coupled decimal gear head															
		Speed (rpm)															
		50Hz	60Hz	3	5	7.5	10	12.5	15	20	25	30	50	75	100	150	180
G-5U□-KH	Max. allowable torque(kgfcm)	-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300
		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300

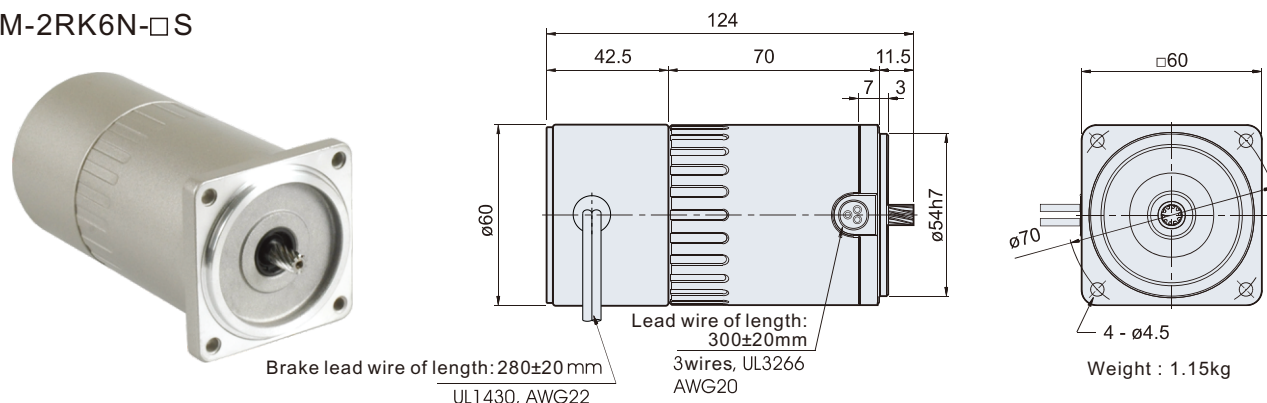
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Electromagnetic Brake Motor 【Frame2】 【6W】

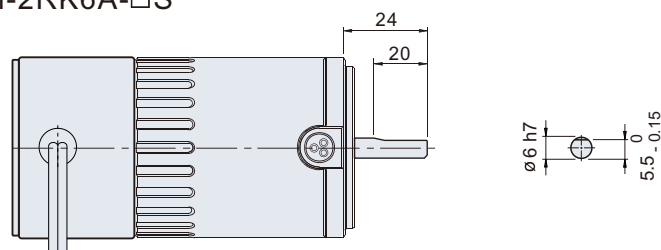
Single-phase electromagnetic brake motor

M-2RK6N-□S



Round Shaft Specification

M-2RK6A-□S



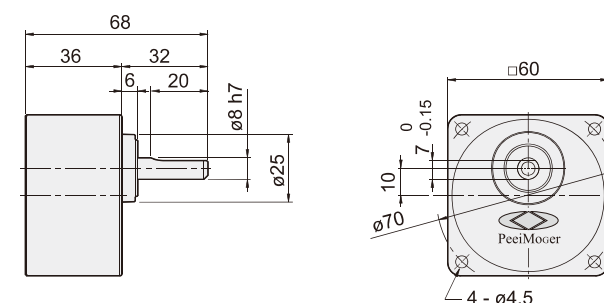
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Specifications of Single-phase Electromagnetic Brake Motors 30 min rating

Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-2RK6N-AS M-2RK6A-AS	1φ100	50	0.19	1350	0.43	4.00	0.04	1.00	0.31	0.50	3.5	G-2N□-L	G-2N□-K	G-2N10X-K
		60	0.20	1650	0.36	4.00	0.04	1.00	0.31	0.50				
	1φ110	50	0.21	1300	0.45	5.00	0.04	1.00	0.33	0.50	3.0			
		60	0.20	1625	0.36	5.00	0.04	1.00	0.32	0.50				
	1φ115	50	0.22	1325	0.44	5.00	0.04	1.00	0.34	0.50	3.0			
		60	0.20	1625	0.36	5.00	0.04	1.00	0.33	0.50				
	1φ120	50	0.23	1300	0.45	6.00	0.05	1.00	0.35	0.50	2.5			
		60	0.19	1625	0.36	6.00	0.05	1.00	0.33	0.50				
M-2RK6N-CS M-2RK6A-CS	1φ200	50	0.11	1300	0.45	5.00	0.02	1.00	0.15	0.50	1.0			
		60	0.13	1575	0.37	5.00	0.02	1.00	0.16	0.50				
	1φ220	50	0.11	1300	0.45	7.00	0.03	1.00	0.15	0.50	0.8			
		60	0.11	1625	0.36	7.00	0.03	1.00	0.16	0.50				
	1φ230	50	0.11	1325	0.44	8.00	0.03	1.00	0.16	0.50	0.8			
		60	0.12	1625	0.36	8.00	0.03	1.00	0.17	0.50				
	1φ240	50	0.11	1300	0.45	8.00	0.03	1.00	0.16	0.50	0.6			
		60	0.10	1625	0.36	8.00	0.03	1.00	0.15	0.50				

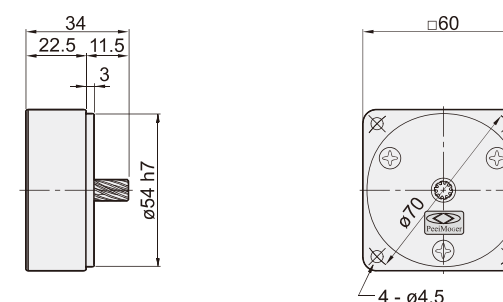
Gear Head

G-2N□-K



Decimal Gear Head

G-2N10X-K

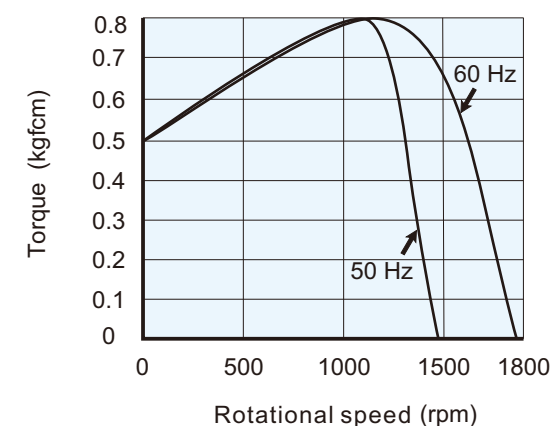


Weight List of Gear Head

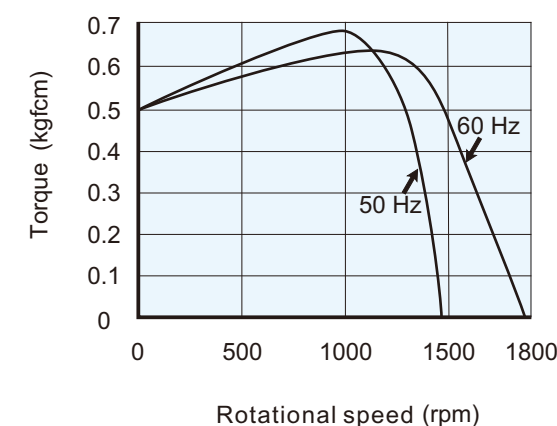
Model	Weight (kg)
G-2N3-K / L~G-2N18-K / L	0.30
G-2N20-K / L~G-2N60-K / L	0.31
G-2N75-K / L~G-2N180-K / L	0.33
G-2N10X-K	0.20

Characteristics of Single-phase Electromagnetic Brake Motors

M-2RK6N-AS / M-2RK6A-AS



M-2RK6N-CS / M-2RK6A-CS



Permissible Torque of Gear Head

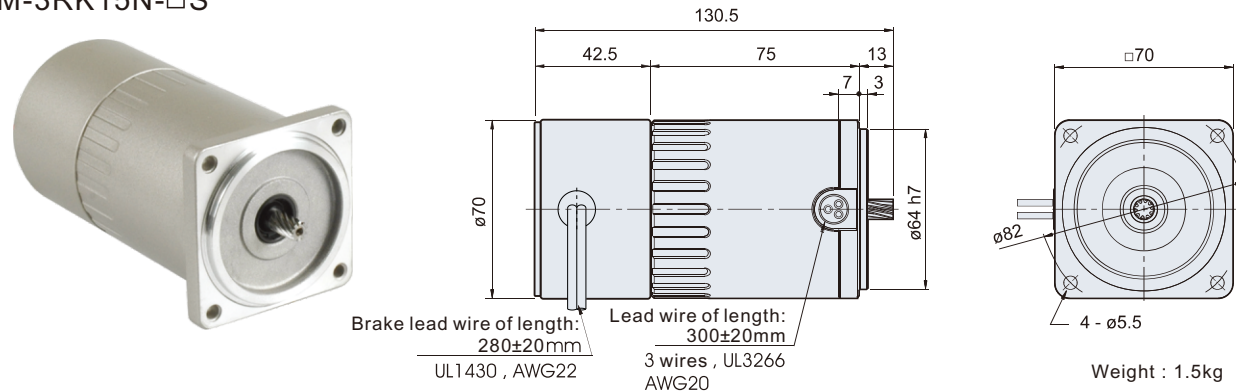
Permissible Torque per Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-2N□-K □L	Max. allowable torque(kgfc ^m)		1.0	1.6	2.5	2.7	3.4	4.1	5.0	5.4	6.7	8.1	9.7	16	23	25	25	25	25	25	25	25	25	25	25

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Electromagnetic Brake Motor 【Frame3】 【15W】

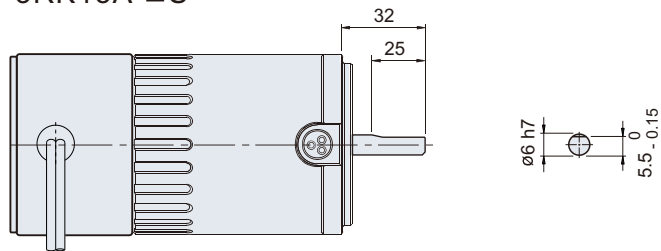
Single-phase electromagnetic brake motor

M-3RK15N-□S



Round Shaft Specification

M-3RK15A-□S



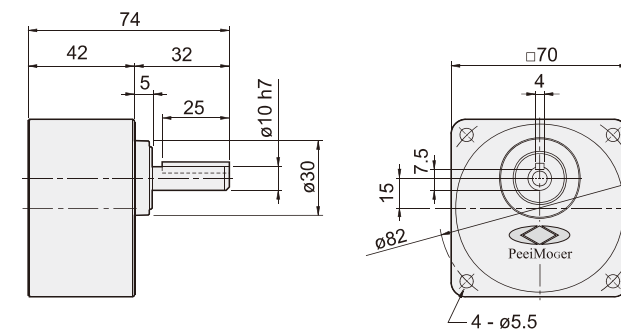
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Specifications of Single-phase Electromagnetic Brake Motors 30 min rating

Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting			Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm			Metal bearing	Ball bearing	Intermediate speed ratio
M-3RK15N-AS M-3RK15A-AS	1φ100	50	0.37	1225	1.19	4.00	0.04	1.00	0.52	0.90	6.0	G-3N□-L	G-3N□-K	G-3N10X-K	
		60	0.40	1525	0.96	4.00	0.04	1.00	0.51	0.90	5.0				
	1φ110	50	0.34	1250	1.17	5.00	0.04	1.00	0.55	0.90	5.0				
		60	0.34	1575	0.93	5.00	0.04	1.00	0.52	0.90	5.0				
	1φ115	50	0.35	1275	1.15	5.00	0.04	1.00	0.58	0.90	5.0				
		60	0.34	1600	0.92	5.00	0.04	1.00	0.55	0.90	5.0				
M-3RK15N-CS M-3RK15A-CS	1φ120	50	0.38	1250	1.17	6.00	0.05	1.00	0.61	0.90	4.0				
		60	0.32	1600	0.92	6.00	0.05	1.00	0.57	0.90	4.0				
	1φ200	50	0.18	1275	1.15	5.00	0.02	1.00	0.27	0.90	1.6				
		60	0.20	1575	0.93	5.00	0.02	1.00	0.26	0.90	1.6				
	1φ220	50	0.17	1275	1.15	7.00	0.03	1.00	0.28	0.90	1.2				
		60	0.16	1600	0.92	7.00	0.03	1.00	0.26	0.90	1.2				
	1φ230	50	0.17	1300	1.13	8.00	0.03	1.00	0.30	0.90	1.2				
		60	0.16	1625	0.90	8.00	0.03	1.00	0.28	0.90	1.2				
	1φ240	50	0.19	1275	1.15	8.00	0.03	1.00	0.31	0.90	1.0				
		60	0.15	1600	0.92	8.00	0.03	1.00	0.28	0.90	1.0				

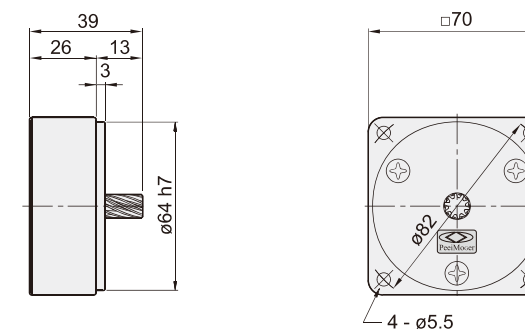
Gear Head

G-3N□-K
L

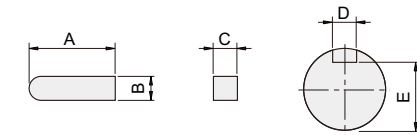


Decimal Gear Head

G-3N10X-K



Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-3N□-K L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.15}

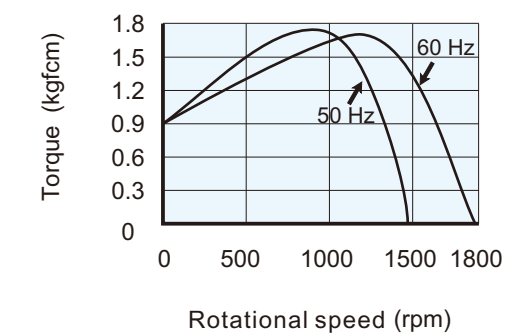
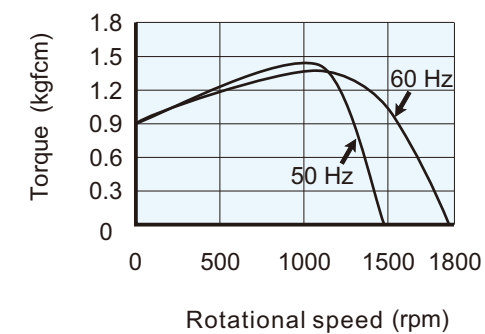
Weight List of Gear Head

Model	Weight (kg)
G-3N3-K / L~G-3N18-K / L	0.44
G-3N20-K / L~G-3N60-K / L	0.48
G-3N75-K / L~G-3N180-K / L	0.53
G-3N10X-K	0.32

Characteristics of Single-phase Electromagnetic Brake Motors

M-3RK15N-AS / M-3RK15A-AS

M-3RK15N-CS / M-3RK15A-CS



Permissible Torque of Gear Head

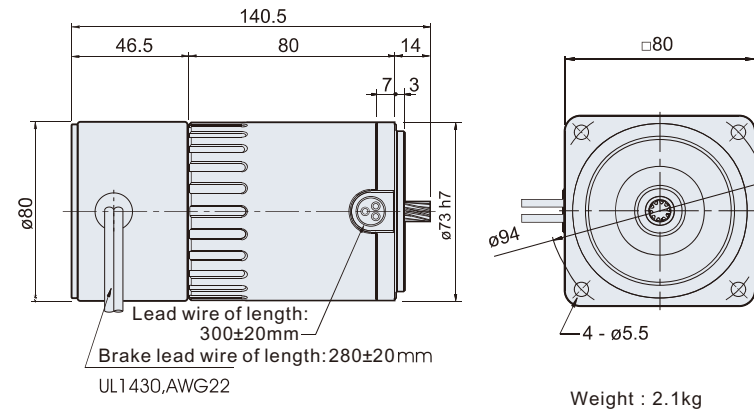
Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
		3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-
G-3N□-K L	Max. allowable torque(kgfcm)	2.4	4.0	6.0	6.7	8.2	10	12	13	16	19	23	39	50	50	50	50
		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions. The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Electromagnetic Brake Motor 【Frame4】 【25W】

Single-phase/Three-phase Electromagnetic Brake Motor

M-4RK25N-□S

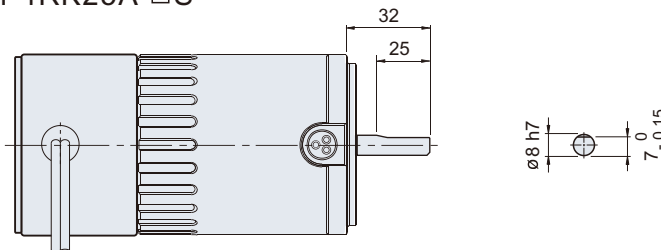


Single-phase: 3wires, UL 3266 AWG 20
Three-phase: 6wires, UL 3266 AWG 20

Weight : 2.1kg

Round Shaft Specification

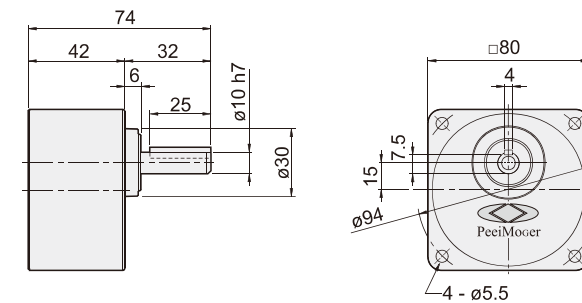
M-4RK25A-□S



Note: For applicable machine types, please refer to the models. We also provide customized motors.

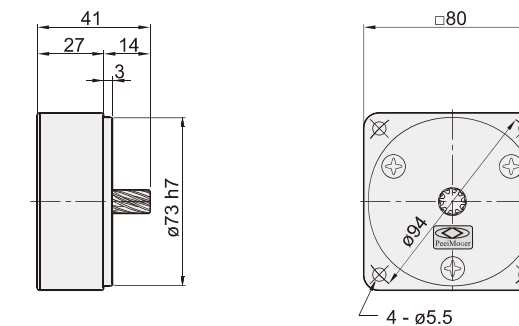
Gear Head

G-4N□-K

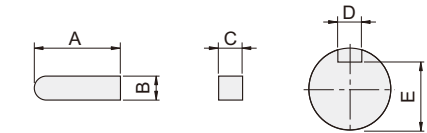


Decimal Gear Head

G-4N10X-K



Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-4N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.15}

Weight List of Gear Head

Model	Weight (kg)
G-4N3-K / L~G-4N18-K / L	0.60
G-4N20-K / L~G-4N60-K / L	0.65
G-4N75-K / L~G-4N180-K / L	0.71
G-4N10X-K	0.41

Specifications of Single-phase Electromagnetic Brake Motors 30 min rating

Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-4RK25N-AS M-4RK25A-AS	1φ100	50	0.60	1225	1.99	4.00	0.04	2.00	0.98	1.50	8.0	G-4N□-L	G-4N□-K	G-4N10X-K
		60	0.59	1525	1.60	4.00	0.04	2.00	0.89	1.50				
	1φ110	50	0.62	1225	1.99	5.00	0.04	2.00	1.03	1.50	7.0			
		60	0.60	1500	1.63	5.00	0.04	2.00	0.96	1.50				
	1φ115	50	0.57	1300	1.88	5.00	0.04	2.00	1.08	1.50	7.0			
		60	0.56	1575	1.55	5.00	0.04	2.00	1.00	1.50				
	1φ120	50	0.61	1275	1.91	6.00	0.05	2.00	1.11	1.50	6.0			
		60	0.63	1550	1.57	6.00	0.05	2.00	1.31	1.50				
M-4RK25N-CS M-4RK25A-CS	1φ200	50	0.31	1250	1.95	6.00	0.03	2.00	0.49	1.50	2.5			
		60	0.36	1500	1.63	6.00	0.03	2.00	0.48	1.50				
	1φ220	50	0.29	1275	1.91	7.00	0.03	2.00	0.53	1.50	2.0			
		60	0.29	1575	1.55	7.00	0.03	2.00	0.49	1.50				
	1φ230	50	0.28	1300	1.88	9.00	0.04	2.00	0.55	1.50	2.0			
		60	0.31	1550	1.57	9.00	0.04	2.00	0.51	1.50				
	1φ240	50	0.30	1275	1.91	9.00	0.04	2.00	0.56	1.50	1.5			
		60	0.25	1575	1.55	9.00	0.04	2.00	0.52	1.50				

Specifications of Three-phase Electromagnetic Brake Motors Continuous rating

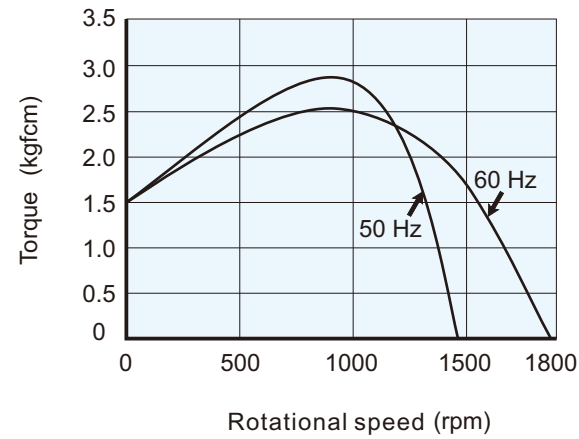
Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-4RK25N-SS M-4RK25A-SS	3φ200	50	0.26	1325	1.84	6.00	0.03	2.00	0.66	5.00	-	G-4N□-L	G-4N□-K	G-4N10X-K
		60	0.21	1575	1.55	6.00	0.03	2.00	0.61	5.00				
	3φ220	50	0.29	1350	1.81	7.00	0.03	2.00	0.72	5.00	-			
		60	0.23	1625	1.50	7.00	0.03	2.00	0.68	5.00				
	3φ230	50	0.31	1375	1.77	9.00	0.04	2.00	0.76	5.00	-			
		60	0.24	1625	1.50	9.00	0.04	2.00	0.71	5.00				
	3φ380	50	0.16	1350	1.81	7.00	0.03	2.00	0.41	5.00	-			
		3φ400	50	0.17	1375	1.77	7.00	0.03	2.00	0.43				
60	0.13		1625	1.50	7.00	0.03	2.00	0.40	5.00	-				
M-4RK25N-US M-4RK25A-US	3φ415	50	0.11	1325	1.84	7.00	0.03	2.00	0.31	5.00	-			
		60	0.10	1575	1.55	7.00	0.03	2.00	0.29	5.00				
	3φ440	50	0.12	1350	1.81	7.00	0.03	2.00	0.32	5.00	-			
		60	0.10	1625	1.50	7.00	0.03	2.00	0.30	5.00				
	3φ460	50	0.13	1375	1.77	7.00	0.03	2.00	0.34	5.00	-			
		60	0.10	1625	1.50	7.00	0.03	2.00	0.32	5.00				

The brake service voltage is AC 220V.

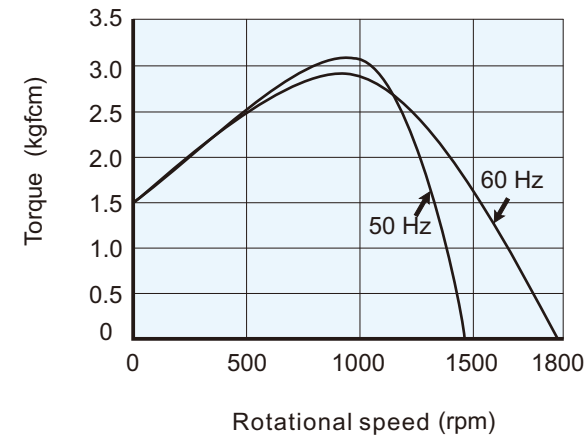
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Brake Motors

M-4RK25N-AS / M-4RK25A-AS

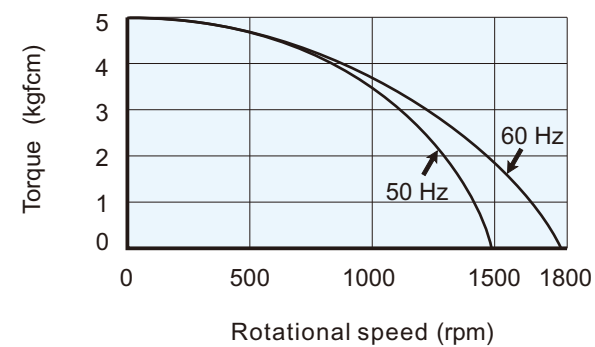


M-4RK25N-CS / M-4RK25A-CS

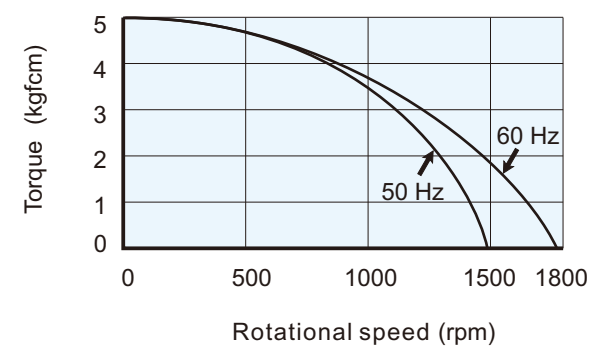


Characteristics of Three-phase Electromagnetic Brake

M-4RK25N-SS / M-4RK25A-SS



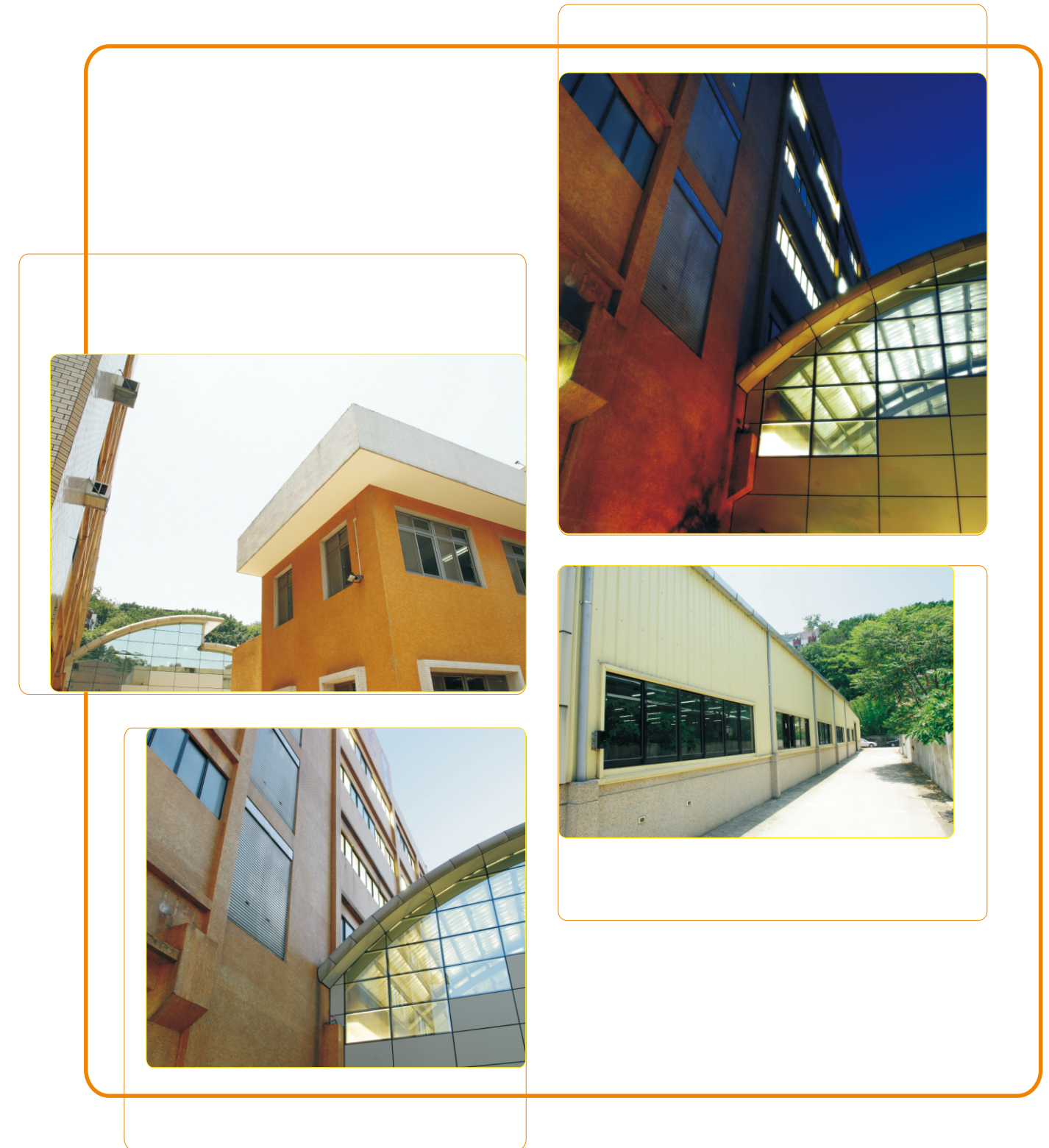
M-4RK25N-US / M-4RK25A-US



Permissible Torque of Gear Head

Model	Speed (rpm)		Coupled decimal gear head															
	Gear ratio	50Hz	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
			60Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
G-4N□-K L	Max. allowable torque(kgfcm)		3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
			4.0	6.7	10	11	13	16	20	21	26	32	39	65	80	80	80	80

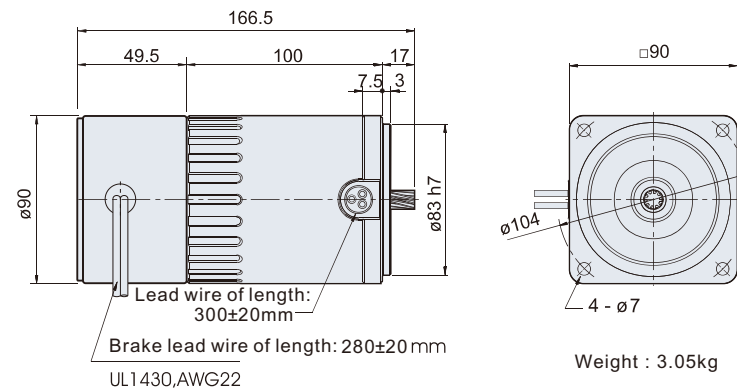
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Electromagnetic Brake Motor 【Frame5】 【40W】

Single-phase/Three-phase Electromagnetic Brake Motor

M-5RK40N-□S

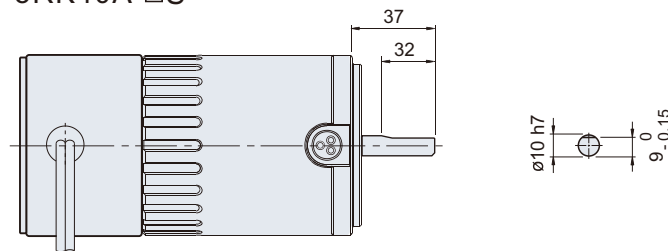


Single-phase: 3wires,UL 3266 AWG 20
Three-phase: 6wires,UL 3266 AWG 20

Weight : 3.05kg

Round Shaft Specification

M-5RK40A-□S



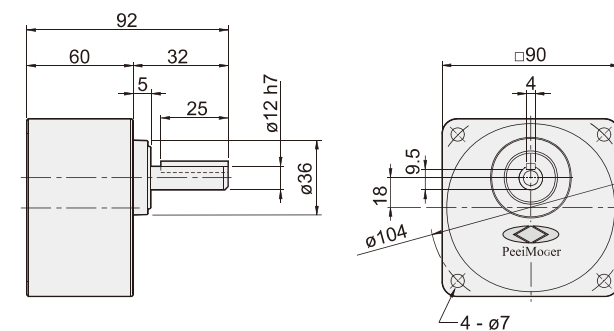
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Specifications of Single-phase Electromagnetic Brake Motors 30 min rating

Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK40N-AS M-5RK40A-AS	1φ100	50	0.84	1375	2.84	7.00	0.06	5.00	2.05	2.60	14.0	G-5N□-L	G-5N□-K	G-5N10X-K
		60	0.89	1650	2.36	7.00	0.06	5.00	1.85	2.60				
	1φ110	50	0.84	1375	2.84	8.00	0.07	5.00	2.19	2.60	12.0			
		60	0.83	1675	2.33	8.00	0.07	5.00	2.08	2.60				
	1φ115	50	0.91	1375	2.84	9.00	0.08	5.00	2.29	2.60	12.0			
		60	0.86	1675	2.33	9.00	0.08	5.00	2.17	2.60				
	1φ120	50	0.97	1375	2.84	9.00	0.08	5.00	2.25	2.60	10.0			
		60	0.75	1700	2.29	9.00	0.08	5.00	2.32	2.60				
M-5RK40N-CS M-5RK40A-CS	1φ200	50	0.36	1350	2.89	9.00	0.05	5.00	0.72	2.60	3.5			
		60	0.45	1625	2.40	9.00	0.05	5.00	0.67	2.60				
	1φ220	50	0.34	1375	2.84	11.00	0.06	5.00	0.80	2.60	3.0			
		60	0.38	1650	2.36	11.00	0.06	5.00	0.73	2.60				
	1φ230	50	0.37	1375	2.84	13.00	0.06	5.00	0.85	2.60	3.0			
		60	0.36	1675	2.33	13.00	0.06	5.00	0.75	2.60				
	1φ240	50	0.33	1375	2.84	14.00	0.06	5.00	0.87	2.60	2.5			
		60	0.32	1675	2.33	14.00	0.06	5.00	0.78	2.60				

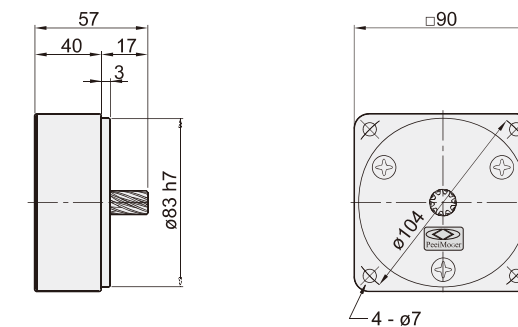
Gear Head

G-5N□-K
L

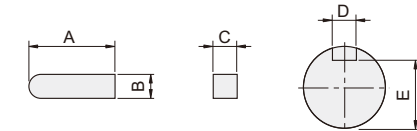


Decimal Gear Head

G-5N10X-K



Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

Specifications of Three-phase Electromagnetic Brake Motors Continuous rating

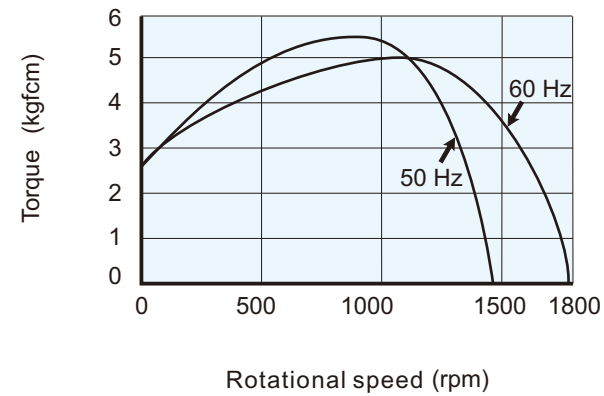
Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK40N-SS M-5RK40A-SS	3φ200	50	0.28	1350	2.89	9.00	0.05	5.00	0.86	7.00	-	G-5N□-L	G-5N□-K	G-5N10X-K
		60	0.26	1600	2.44	9.00	0.05	5.00	0.80	7.00				
	3φ220	50	0.30	1375	2.84	11.00	0.06	5.00	0.93	7.00	-			
		60	0.26	1650	2.36	11.00	0.06	5.00	0.67	7.00				
	3φ230	50	0.30	1375	2.84	13.00	0.06	5.00	0.93	7.00	-			
		60	0.26	1675	2.33	13.00	0.06	5.00	0.91	7.00				
	3φ380	50	0.17	1375	2.84	11.00	0.06	5.00	0.53	7.00	-			
		60	0.18	1375	2.84	11.00	0.06	5.00	0.57	7.00				
3φ400	60	0.16	1650	2.36	11.00	0.06	5.00	0.53	7.00	-				
M-5RK40N-US M-5RK40A-US	3φ415	50	0.16	1375	2.84	11.00	0.06	5.00	0.48	7.00	-			
		60	0.14	1650	2.36	11.00	0.06	5.00	0.45	7.00				
	3φ440	50	0.16	1400	2.78	11.00	0.06	5.00	0.51	7.00	-			
		60	0.14	1675	2.33	11.00	0.06	5.00	0.48	7.00				
	3φ460	50	0.17	1400	2.78	11.00	0.06	5.00	0.53	7.00	-			
		60	0.14	1675	2.33	11.00	0.06	5.00	0.50	7.00				

The brake service voltage is AC 220V.

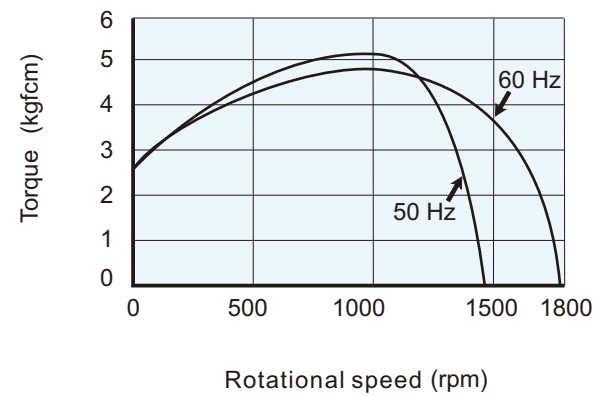
Note: If you use the inverter, Installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Brake Motors

M-5RK40N-AS / M-5RK40A-AS

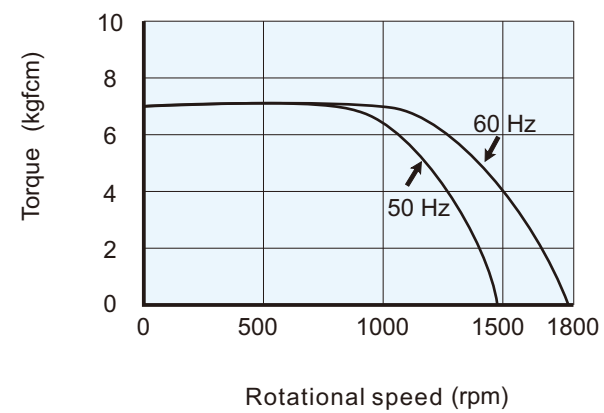


M-5RK40N-CS / M-5RK40A-CS

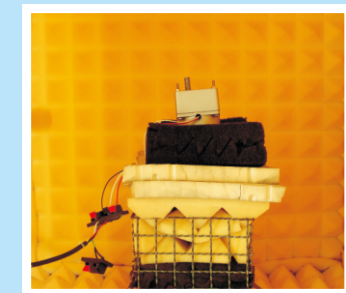
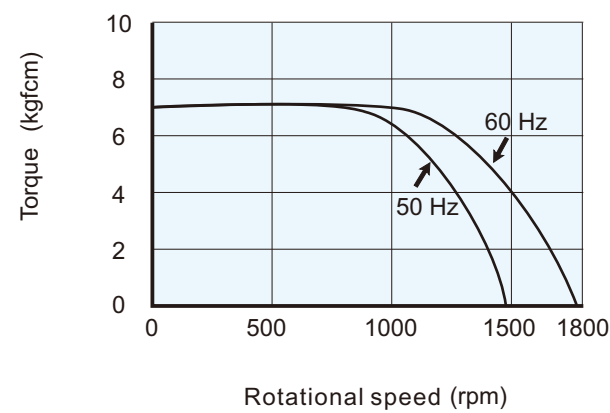


Characteristics of Three-phase Electromagnetic Brake

M-5RK40N-SS / M-5RK40A-SS

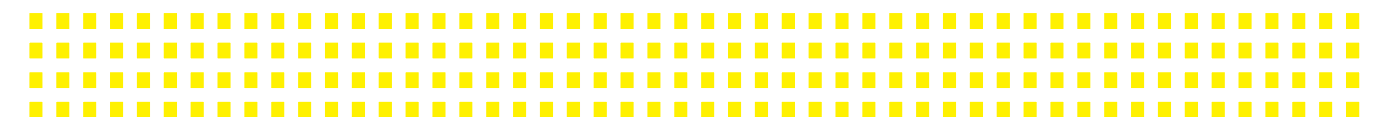


M-5RK40N-US / M-5RK40A-US



Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5N ^K _L	Max. allowable torque(kgfcm)	6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100

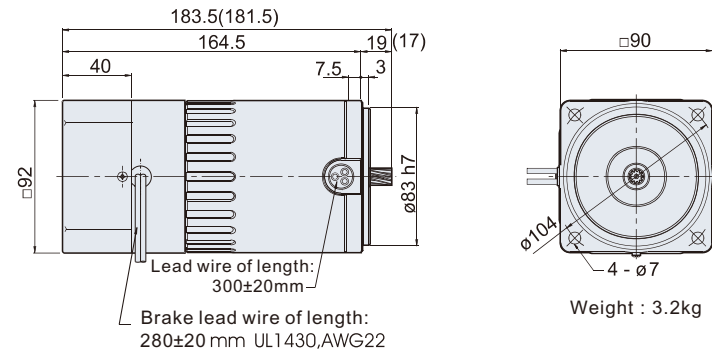


Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Electromagnetic Brake Motor 【Frame5】 【60W】

Single-phase/Three-phase Electromagnetic Brake Motor

M-5RK60^N_U-□FS

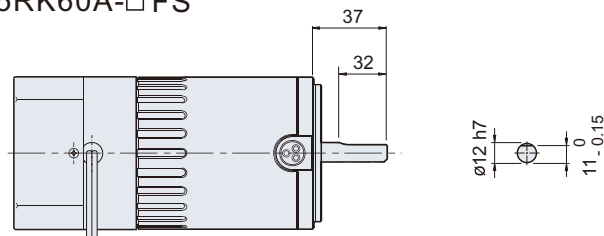


• The dimensions inside the brackets belong to N-type gear shafts, which are coupled to those of the gear head and the intermediate gear head, and should match with G-5N□-K_L

Single-phase: 3wires,UL 3266 AWG 20
 Three-phase: 6wires,UL 3266 AWG 20

Round Shaft Specification

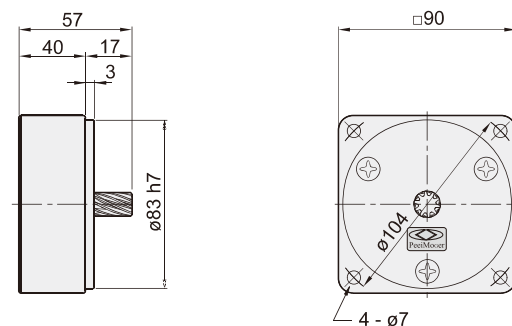
M-5RK60A-□FS



Note: For applicable machine types, please refer to the models. We also provide customized motors.

Decimal Gear Head

G-5N10X-K

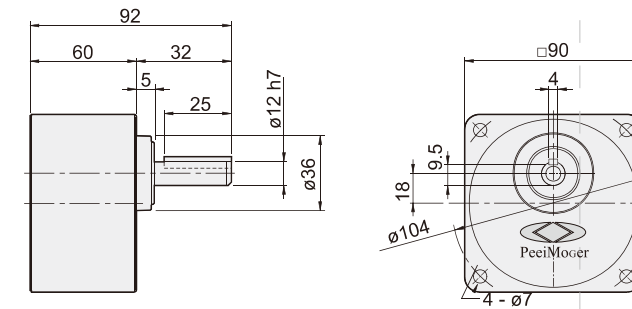


Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

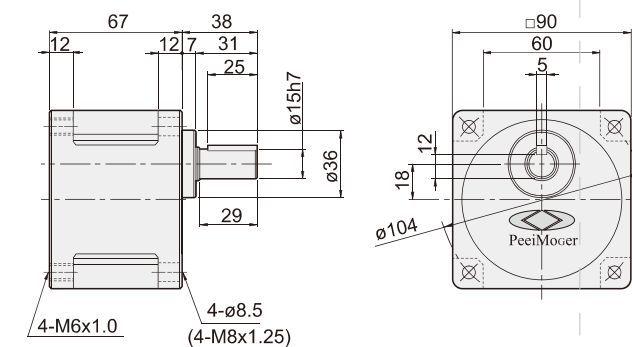
Gear Head

G-5N□-K_L



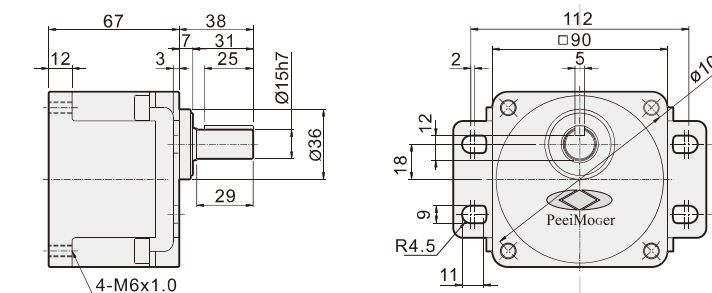
Gear Head

G-5U□-K



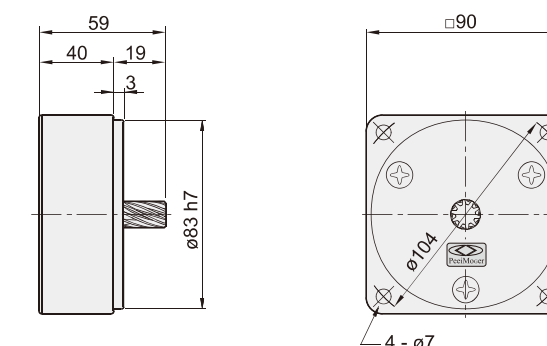
Gear Head with Mounting Brackets

G-5U□-KF

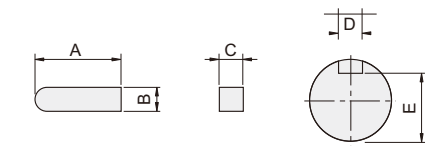


Decimal Gear Head

G-5U10X-K

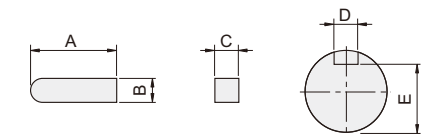


Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K _L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Weight List of Gear Head

Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73
G-5U10X-K	0.64

Specifications of Single-phase Electromagnetic Brake Motors 30 min rating

Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor μF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK60 ^N _U -AFS M-5RK60A-AFS	1φ100	50	1.12	1350	4.33	7.00	0.06	5.00	2.15	3.80	20.0	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
		60	1.24	1650	3.54	7.00	0.06	5.00	2.14	3.80				
	1φ110	50	1.08	1375	4.25	8.00	0.07	5.00	2.58	3.80	18.0			
		60	1.10	1675	3.49	8.00	0.07	5.00	2.18	3.80				
	1φ115	50	1.11	1375	4.25	9.00	0.08	5.00	2.41	3.80	18.0			
		60	1.15	1675	3.49	9.00	0.08	5.00	2.29	3.80				
	1φ120	50	1.15	1375	4.25	9.00	0.08	5.00	2.44	3.80	16.0			
		60	1.13	1675	3.49	9.00	0.08	5.00	2.39	3.80				
M-5RK60 ^N _U -CFS M-5RK60A-CFS	1φ200	50	0.56	1350	4.33	9.00	0.05	5.00	1.12	3.80	5.0			
		60	0.59	1650	3.54	9.00	0.05	5.00	1.02	3.80				
	1φ220	50	0.57	1375	4.25	11.00	0.06	5.00	1.26	3.80	5.0			
		60	0.60	1675	3.49	11.00	0.06	5.00	1.14	3.80				
	1φ230	50	0.54	1375	4.25	13.00	0.06	5.00	1.23	3.80	4.0			
		60	0.52	1675	3.49	13.00	0.06	5.00	1.19	3.80				
	1φ240	50	0.56	1375	4.25	14.00	0.06	5.00	1.28	3.80	4.0			
		60	0.50	1675	3.49	14.00	0.06	5.00	1.20	3.80				

Specifications of Three-phase Electromagnetic Brake Motors Continuous rating

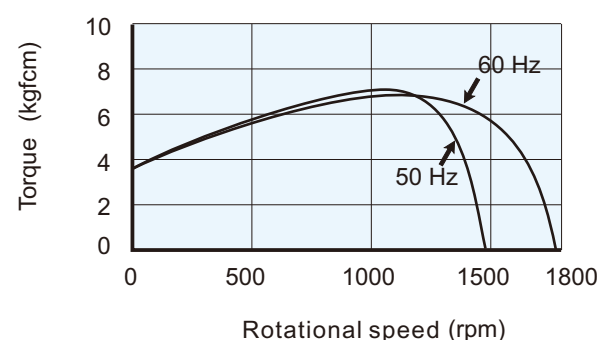
Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor μF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK60 _U ^N -SFS M-5RK60A-SFS	3φ200	50	0.45	1350	4.33	9.00	0.05	5.00	1.22	9.00	-	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
		60	0.36	1625	3.60	9.00	0.05	5.00	1.12	9.00				
	3φ220	50	0.49	1375	4.25	11.00	0.06	5.00	1.34	9.00	-			
		60	0.41	1650	3.54	11.00	0.06	5.00	1.27	9.00				
	3φ230	50	0.50	1400	4.18	13.00	0.06	5.00	1.28	9.00	-			
		60	0.41	1675	3.49	13.00	0.06	5.00	1.31	9.00				
	3φ380	50	0.27	1375	4.25	11.00	0.06	5.00	0.76	9.00	-			
		60	0.28	1400	4.18	11.00	0.06	5.00	0.72	9.00				
	3φ400	50	0.23	1675	3.49	11.00	0.06	5.00	0.75	9.00	-			
		60	0.23	1675	3.49	11.00	0.06	5.00	0.75	9.00				
M-5RK60 _U ^N -UFS M-5RK60A-UFS	3φ415	50	0.25	1400	4.18	11.00	0.06	5.00	0.70	9.00	-			
		60	0.20	1675	3.49	11.00	0.06	5.00	0.70	9.00				
	3φ440	50	0.28	1400	4.18	11.00	0.06	5.00	0.66	9.00	-			
		60	0.22	1675	3.49	11.00	0.06	5.00	0.76	9.00				
	3φ460	50	0.31	1400	4.18	11.00	0.06	5.00	0.63	9.00	-			
		60	0.23	1700	3.44	11.00	0.06	5.00	0.73	9.00				

The brake service voltage is AC 220V.

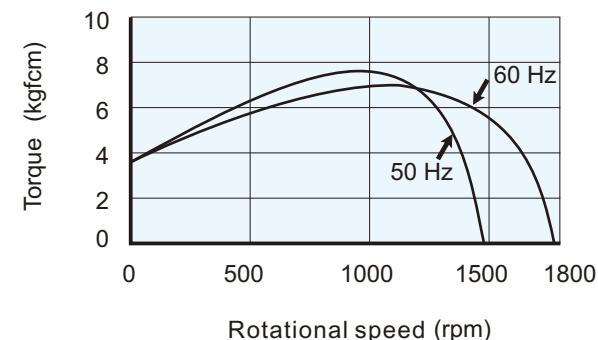
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Brake Motors

M-5RK60^N_U-AFS / M-5RK60A-AFS

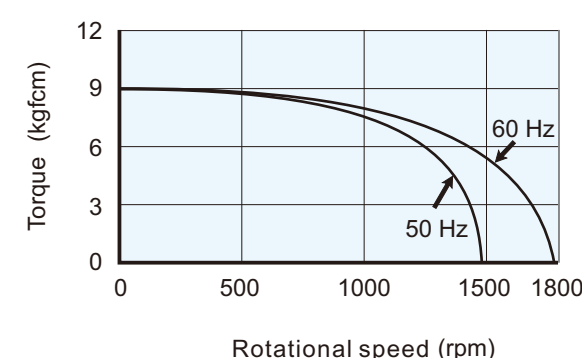


M-5RK60^N_U-CFS / M-5RK60A-CFS

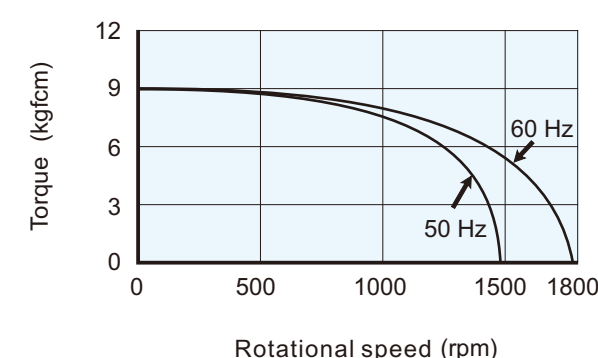


Characteristics of Three-phase Electromagnetic Brake

M-5RK60^N_U-SFS / M-5RK60A-SFS



M-5RK60^N_U-UFS / M-5RK60A-UFS



Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	50	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5N□-K	Max. allowable torque(kgfcm)	6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.

The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5U□-K	Max. allowable torque(kgfcm)	10	16	24	27	32	40	48	54	64	77	93	155	200	200	200	200

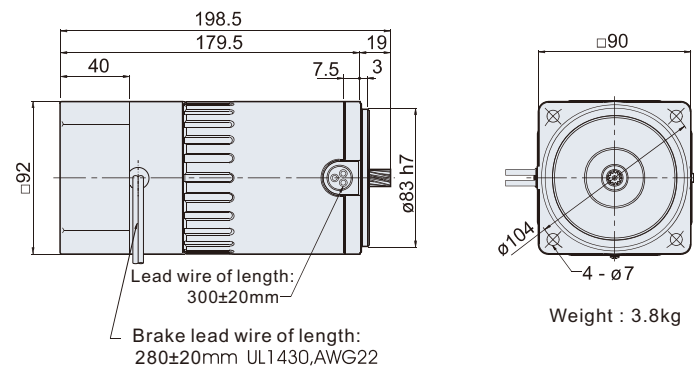
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.

The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Electromagnetic Brake Motor 【Frame5】 【90W】

Single-phase/Three-phase Electromagnetic Brake Motor

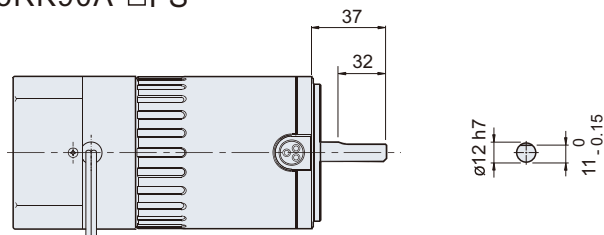
M-5RK90U-□FS



Single-phase: 3wires,UL 3266 AWG 20
Three-phase: 6wires,UL 3266 AWG 20

Round Shaft Specification

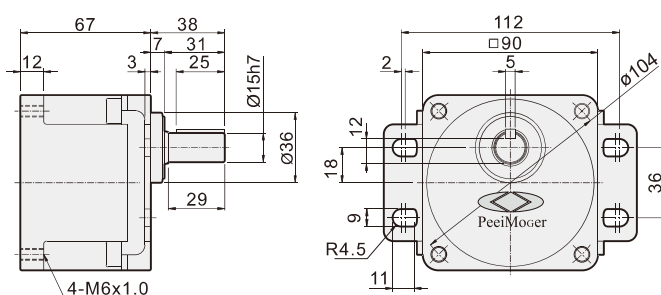
M-5RK90A-□FS



Note: For applicable machine types,
please refer to the models. We
also provide customized motors.

Gear Head with Mounting Brackets

G-5U□-KF

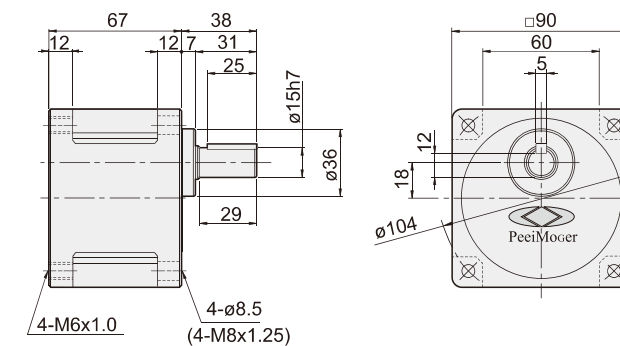


Weight List of Gear Head

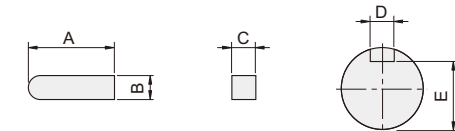
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-K



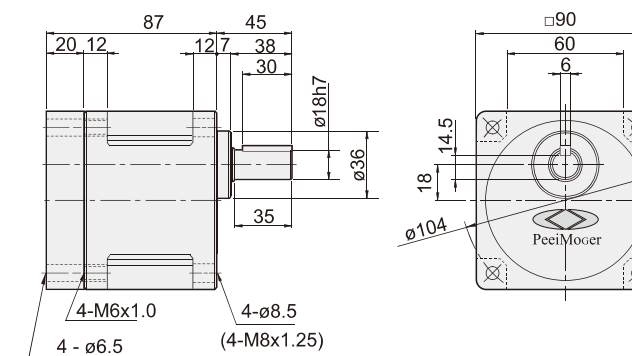
Gear Head: Key and Key slot Dimension



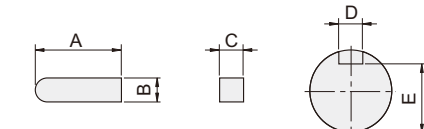
Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head

G-5U□-KH



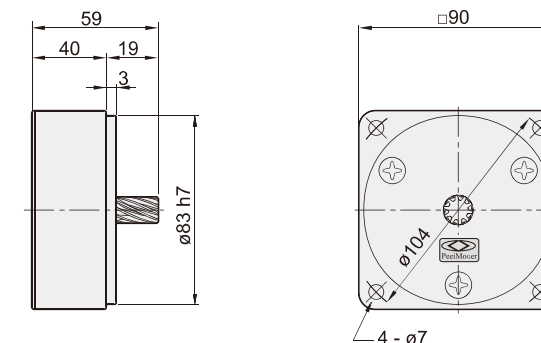
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Electromagnetic Brake Motors 30 min rating

Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor μF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK90U-AFS M-5RK90A-AFS	1φ100	50	1.72	1350	6.49	7.00	0.06	5.00	3.86	5.20	28.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
		60	1.70	1650	5.31	7.00	0.06	5.00	3.02	5.20				
	1φ110	50	1.43	1375	6.37	8.00	0.07	5.00	3.83	5.20	25.0			
		60	1.58	1675	5.23	8.00	0.07	5.00	3.51	5.20				
	1φ115	50	1.50	1375	6.37	9.00	0.08	5.00	3.94	5.20	25.0			
		60	1.63	1675	5.23	9.00	0.08	5.00	3.69	5.20				
	1φ120	50	1.66	1375	6.37	9.00	0.08	5.00	3.97	5.20	20.0			
		60	1.64	1675	5.23	9.00	0.08	5.00	4.59	5.20				
M-5RK90U-CFS M-5RK90A-CFS	1φ200	50	0.82	1350	6.49	9.00	0.05	5.00	1.83	5.20	7.0			
		60	0.87	1650	5.31	9.00	0.05	5.00	1.63	5.20				
	1φ220	50	0.68	1375	6.37	11.00	0.06	5.00	1.93	5.20	6.0			
		60	0.75	1675	5.23	11.00	0.06	5.00	1.79	5.20				
	1φ230	50	0.74	1375	6.37	13.00	0.06	5.00	2.06	5.20	6.0			
		60	0.80	1675	5.23	13.00	0.06	5.00	1.93	5.20				
	1φ240	50	0.81	1375	6.37	14.00	0.06	5.00	2.10	5.20	5.0			
		60	0.81	1675	5.23	14.00	0.06	5.00	2.31	5.20				

Specifications of Three-phase Electromagnetic Brake Motors Continuous rating

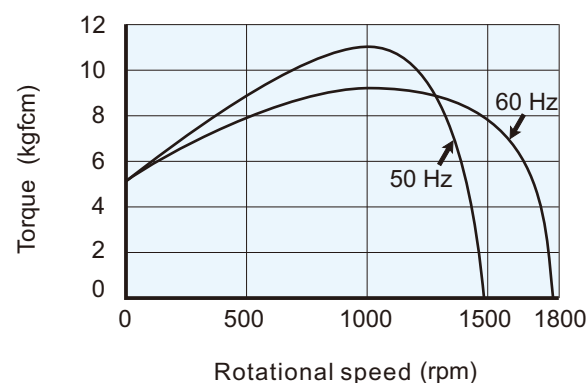
Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK90U-SFS M-5RK90A-SFS	3φ200	50	0.65	1375	6.37	9.00	0.05	5.00	2.59	15.00	-	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
		60	0.55	1650	5.31	9.00	0.05	5.00	2.07	15.00				
	3φ220	50	0.79	1375	6.37	11.00	0.06	5.00	2.35	15.00	-			
		60	0.58	1675	5.23	11.00	0.06	5.00	2.20	15.00				
	3φ230	50	0.84	1400	6.26	13.00	0.06	5.00	2.25	15.00	-			
		60	0.61	1675	5.23	13.00	0.06	5.00	2.11	15.00				
	3φ380	50	0.41	1400	6.26	11.00	0.06	5.00	1.36	15.00	-			
		60	0.46	1400	6.26	11.00	0.06	5.00	1.30	15.00				
	3φ400	50	0.35	1675	5.23	11.00	0.06	5.00	1.21	15.00	-			
		60	0.35	1675	5.23	11.00	0.06	5.00	1.21	15.00				
M-5RK90U-UFS M-5RK90A-UFS	3φ415	50	0.31	1375	6.37	11.00	0.06	5.00	1.22	15.00	-			
		60	0.25	1650	5.31	11.00	0.06	5.00	1.09	15.00				
	3φ440	50	0.34	1375	6.37	11.00	0.06	5.00	1.15	15.00	-			
		60	0.27	1650	5.31	11.00	0.06	5.00	1.03	15.00				
	3φ460	50	0.36	1400	6.26	11.00	0.06	5.00	1.10	15.00	-			
		60	0.27	1675	5.23	11.00	0.06	5.00	0.99	15.00				

The brake service voltage is AC 220V.

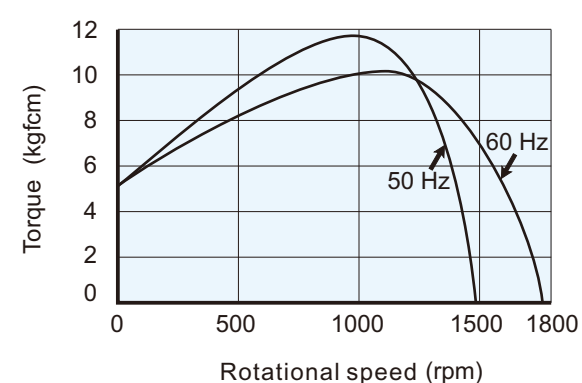
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Brake Motors

M-5RK90U-AFS / M-5RK90A-AFS

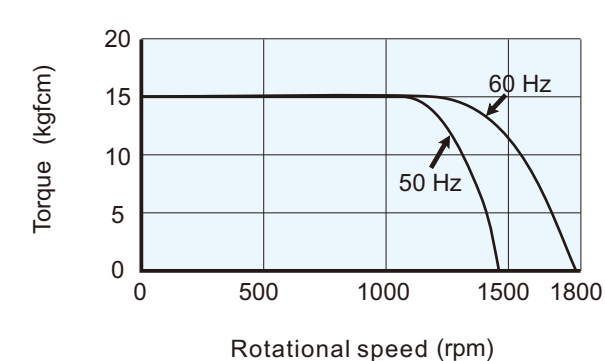


M-5RK90U-CFS / M-5RK90A-CFS

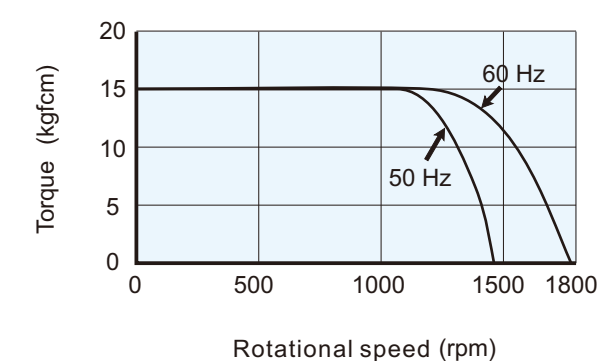


Characteristics of Three-phase Electromagnetic Brake

M-5RK90U-SFS / M-5RK90A-SFS



M-5RK90U-UFS / M-5RK90A-UFS



Permissible Torque of Gear Head

Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
		3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
G-5U□-K	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
	60Hz	3.6	6	9	10	-	15	18	-	30	36	60	90	120	180	200	200
G-5U□-KH	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200
	60Hz	3.6	6	9	10	-	15	18	-	30	36	60	90	120	180	200	200
Max. allowable torque(kgfcm)		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.

The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□-KH	Max. allowable torque(kgfc \cdot m)		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300	300	-	-	300	300	300	300

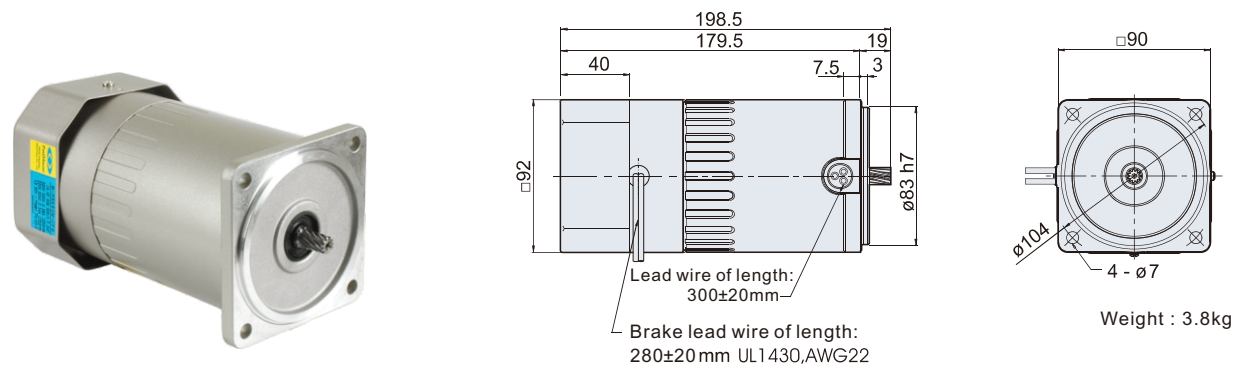
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.

The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Single-phase/Three-phase Electromagnetic Brake Motor 【Frame5】 【120W】

Single-phase/Three-phase Electromagnetic Brake Motor

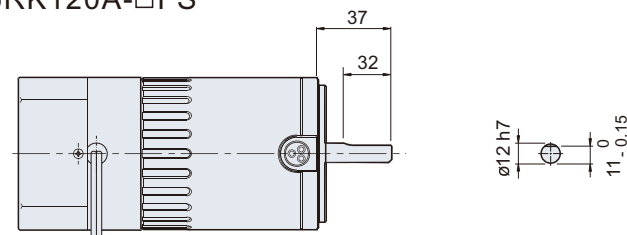
M-5RK120U -□FS



Single-phase: 3wires,UL 3266 AWG 20
Three-phase : 6wires,UL 3266 AWG 20

Round Shaft Specification

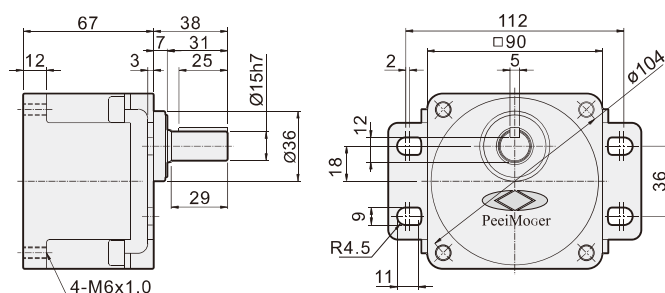
M-5RK120A-□FS



Note: For applicable machine types,
please refer to the models. We
also provide customized motors.

Gear Head with Mounting Brackets

G-5U□-KF

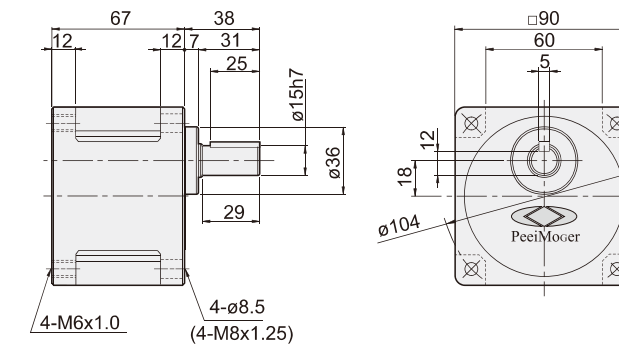


Weight List of Gear Head

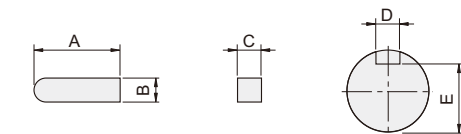
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-K



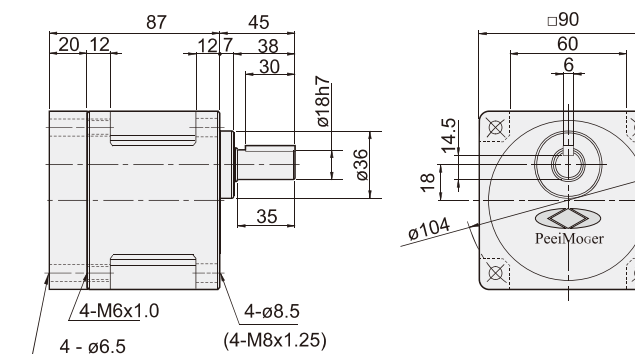
Gear Head: Key and Key slot Dimension



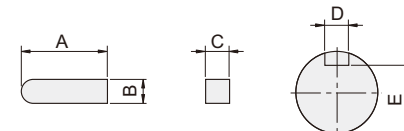
Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head

G-5U□-KH



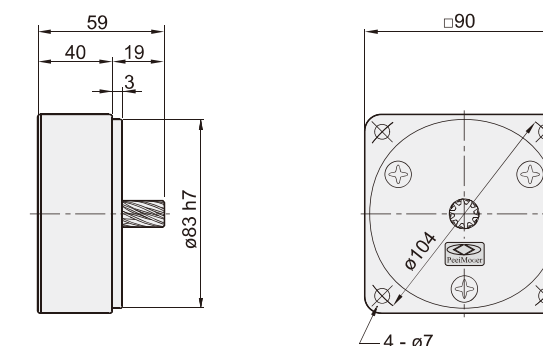
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Electromagnetic Brake Motors 30 min rating

Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor μF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK120U-AFS M-5RK120A-AFS	1φ100	50	2.26	1300	8.99	10.00	0.10	10.00	4.07	6.00	30.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
		60	2.00	1600	7.30	10.00	0.10	10.00	3.04	6.00				
	1φ110	50	1.82	1325	8.82	12.00	0.11	10.00	3.68	6.00	28.0			
		60	1.83	1650	7.08	12.00	0.11	10.00	3.41	6.00				
	1φ115	50	1.72	1350	8.66	14.00	0.12	10.00	3.89	6.00	28.0			
		60	1.88	1650	7.08	14.00	0.12	10.00	3.53	6.00				
	1φ120	50	1.70	1350	8.66	15.00	0.12	10.00	3.90	6.00	25.0			
		60	1.93	1650	7.08	15.00	0.12	10.00	4.12	6.00				
M-5RK120U-CFS M-5RK120A-CFS	1φ200	50	1.02	1300	8.99	15.00	0.08	10.00	1.80	6.00	8.0			
		60	1.09	1600	7.30	15.00	0.08	10.00	1.61	6.00				
	1φ220	50	0.89	1325	8.82	18.00	0.09	10.00	1.91	6.00	7.0			
		60	0.96	1625	7.19	18.00	0.09	10.00	1.76	6.00				
	1φ230	50	0.83	1350	8.66	21.00	0.10	10.00	2.04	6.00	7.0			
		60	0.93	1650	7.08	21.00	0.10	10.00	1.88	6.00				
	1φ240	50	0.83	1350	8.66	23.00	0.10	10.00	2.04	6.00	6.0			
		60	0.99	1650	7.08	23.00	0.10	10.00	2.36	6.00				

Specifications of Three-phase Electromagnetic Brake Motors Continuous rating

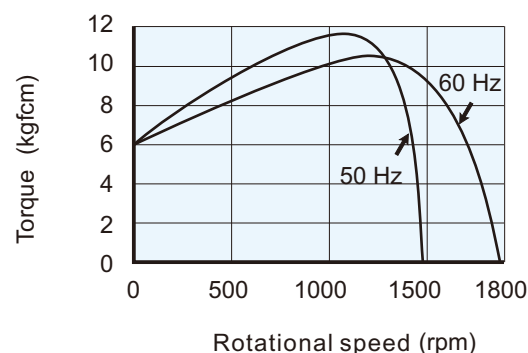
Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK120U-SFS M-5RK120A-SFS	3φ200	50	0.75	1300	8.99	15.00	0.08	10.00	2.59	18.00	-	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
		60	0.67	1575	7.42	15.00	0.08	10.00	2.07	18.00				
	3φ220	50	0.81	1350	8.66	18.00	0.09	10.00	2.35	18.00	-			
		60	0.68	1550	7.54	18.00	0.09	10.00	2.04	18.00				
	3φ230	50	0.89	1350	8.66	21.00	0.10	10.00	2.25	18.00	-			
		60	0.65	1650	7.08	21.00	0.10	10.00	1.95	18.00				
	3φ380	50	0.45	1350	8.66	18.00	0.09	10.00	1.36	18.00	-			
		60	0.48	1375	8.50	18.00	0.09	10.00	1.30	18.00				
	3φ400	50	0.37	1650	7.08	18.00	0.09	10.00	1.12	18.00	-			
		60	0.37	1650	7.08	18.00	0.09	10.00	1.12	18.00				
M-5RK120U-UFS M-5RK120A-UFS	3φ415	50	0.35	1300	8.99	18.00	0.09	10.00	1.22	18.00	-			
		60	0.31	1575	7.42	18.00	0.09	10.00	1.09	18.00				
	3φ440	50	0.38	1325	8.82	18.00	0.09	10.00	1.15	18.00	-			
		60	0.31	1600	7.30	18.00	0.09	10.00	1.03	18.00				
	3φ460	50	0.38	1350	8.66	18.00	0.09	10.00	1.10	18.00	-			
		60	0.31	1625	7.19	18.00	0.09	10.00	0.99	18.00				

The brake service voltage is AC 220V.

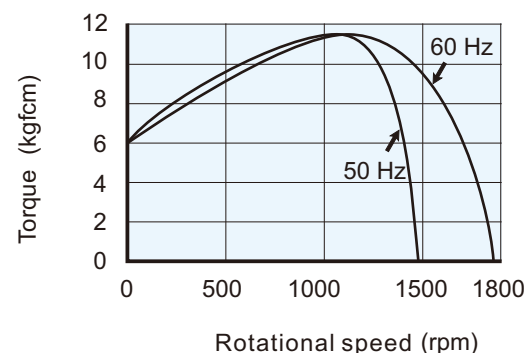
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Brake Motors

M-5RK120U-AFS / M-5RK120A-AFS

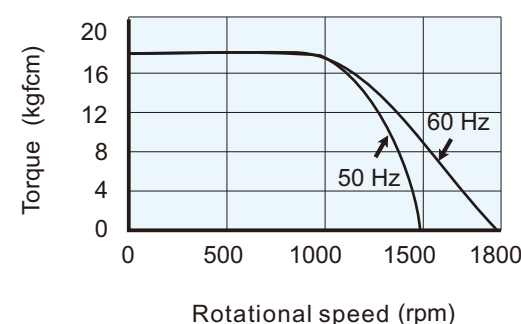


M-5RK120U-CFS / M-5RK120A-CFS

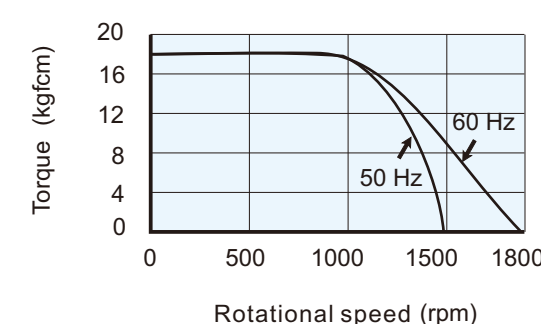


Characteristics of Three-phase Electromagnetic Brake

M-5RK120U-SFS / M-5RK120A-SFS



M-5RK120U-UFS / M-5RK120A-UFS



Permissible Torque of Gear Head

Model		Coupled decimal gear head															
		Speed (rpm)															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
G-5U□-K	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-
	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
Max. allowable torque(kgfcm)		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.

The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

Model		Coupled decimal gear head															
		Speed (rpm)															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
G-5U□-KH	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-
	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
Max. allowable torque(kgfcm)		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300

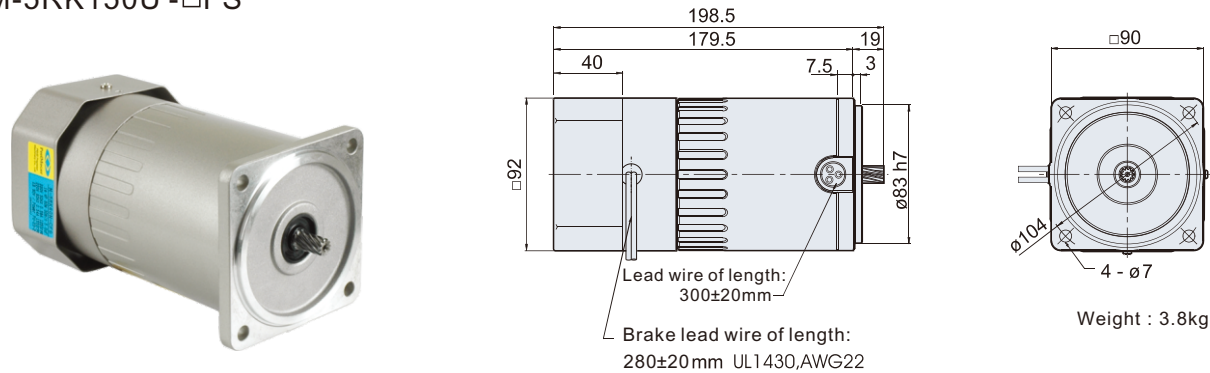
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.

The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Single-phase/Three-phase Electromagnetic Brake Motor 【Frame5】 【150W】

Single-phase/Three-phase Electromagnetic Brake Motor

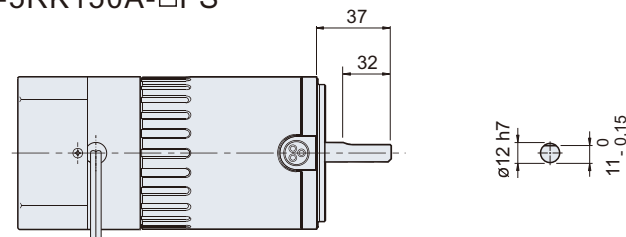
M-5RK150U -□FS



Single-phase: 3wires,UL 3266 AWG 20
 Three-phase: 6wires,UL 3266 AWG 20

Round Shaft Specification

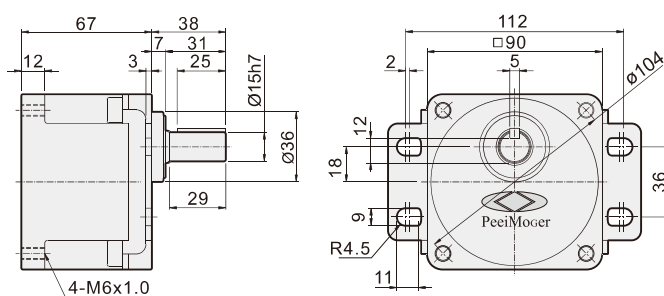
M-5RK150A-□FS



Note: For applicable machine types,
 please refer to the models. We
 also provide customized motors.

Gear Head with Mounting Brackets

G-5U□-KF

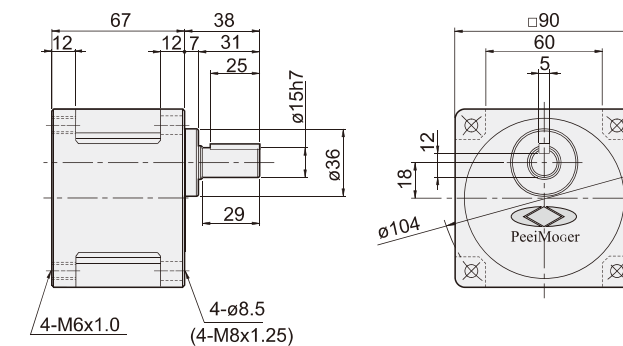


Weight List of Gear Head

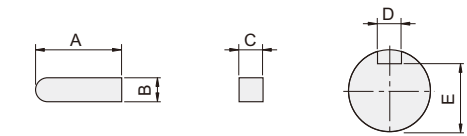
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-K



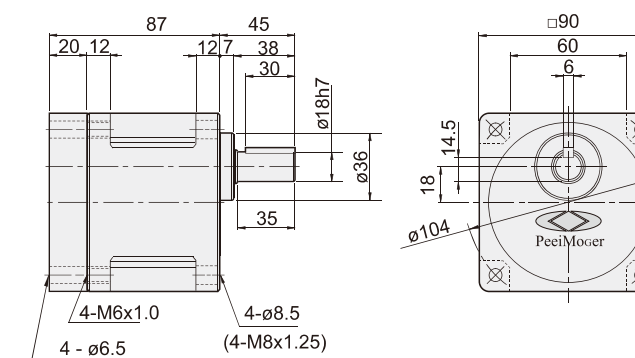
Gear Head: Key and Key slot Dimension



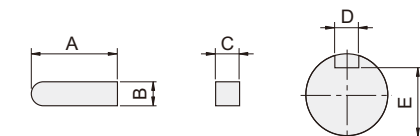
Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head

G-5U□-KH



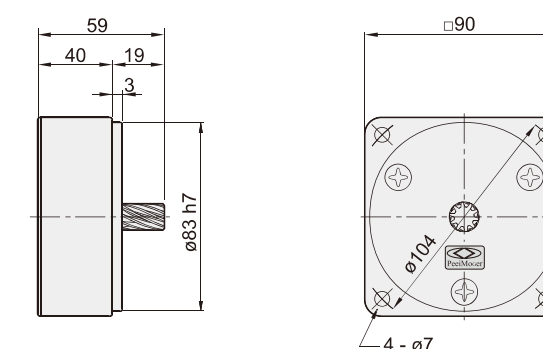
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Electromagnetic Brake Motors 30 min rating

Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK150U-AFS M-5RK150A-AFS	1φ100	50	2.88	1250	11.68	10.00	0.10	10.00	4.64	7.50	38.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
		60	2.56	1575	9.27	10.00	0.10	10.00	3.52	7.50				
	1φ110	50	2.32	1300	11.24	12.00	0.11	10.00	4.42	7.50	36.0			
		60	2.47	1600	9.13	12.00	0.11	10.00	3.80	7.50				
	1φ115	50	2.13	1325	11.02	14.00	0.12	10.00	4.44	7.50	36.0			
		60	2.34	1650	8.85	14.00	0.12	10.00	4.12	7.50				
	1φ120	50	2.11	1325	11.02	15.00	0.12	10.00	4.26	7.50	30.0			
		60	2.13	1650	8.85	15.00	0.12	10.00	4.31	7.50				
M-5RK150U-CFS M-5RK150A-CFS	1φ200	50	1.12	1300	11.24	15.00	0.08	10.00	2.38	7.50	9.0			
		60	1.23	1600	9.13	15.00	0.08	10.00	2.15	7.50				
	1φ220	50	1.08	1325	11.02	18.00	0.09	10.00	2.43	7.50	8.0			
		60	1.26	1625	8.99	18.00	0.09	10.00	2.69	7.50				
	1φ230	50	1.18	1325	11.02	21.00	0.10	10.00	2.32	7.50	7.0			
		60	1.23	1650	8.85	21.00	0.10	10.00	2.81	7.50				
	1φ240	50	1.36	1300	11.24	23.00	0.10	10.00	2.59	7.50	6.0			
		60	1.00	1625	8.99	23.00	0.10	10.00	2.54	7.50				

Specifications of Three-phase Electromagnetic Brake Motors Continuous rating

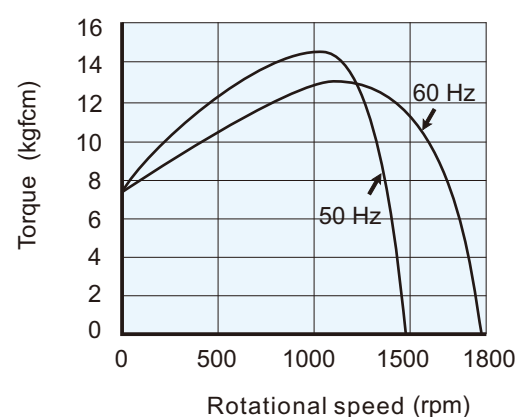
Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor uF	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5RK150U-SFS M-5RK150A-SFS	3φ200	50	0.96	1275	11.46	15.00	0.08	10.00	2.54	20.00	-	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
		60	0.86	1525	9.58	15.00	0.08	10.00	2.36	20.00				
	3φ220	50	1.08	1325	11.02	18.00	0.09	10.00	2.80	20.00	-			
		60	0.82	1600	9.13	18.00	0.09	10.00	2.60	20.00				
	3φ230	50	1.17	1350	10.82	21.00	0.10	10.00	2.88	20.00	-			
		60	0.83	1625	8.99	21.00	0.10	10.00	2.70	20.00				
	3φ380	50	0.60	1325	11.02	18.00	0.09	10.00	1.70	20.00	-			
		60	0.65	1350	10.82	18.00	0.09	10.00	1.79	20.00				
	3φ400	50	0.48	1625	8.99	18.00	0.09	10.00	1.65	20.00	-			
		60	0.48	1625	8.99	18.00	0.09	10.00	1.65	20.00				
M-5RK150U-UFS M-5RK150A-UFS	3φ415	50	0.41	1275	11.46	18.00	0.09	10.00	1.20	20.00	-			
		60	0.38	1525	9.58	18.00	0.09	10.00	1.12	20.00				
	3φ440	50	0.43	1300	11.24	18.00	0.09	10.00	1.23	20.00	-			
		60	0.37	1575	9.27	18.00	0.09	10.00	1.18	20.00				
	3φ460	50	0.45	1325	11.02	18.00	0.09	10.00	1.30	20.00	-			
		60	0.38	1575	9.27	18.00	0.09	10.00	1.25	20.00				

The brake service voltage is AC 220V.

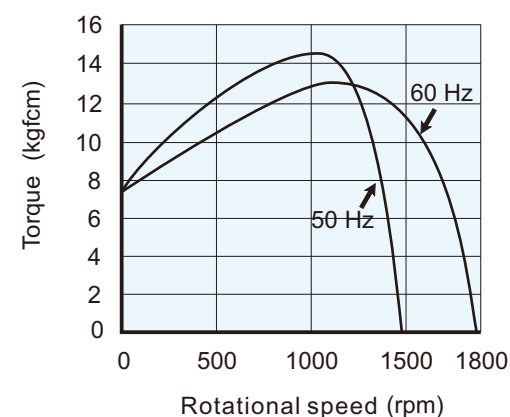
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Brake Motors

M-5RK150U-AFS / M-5RK150A-AFS

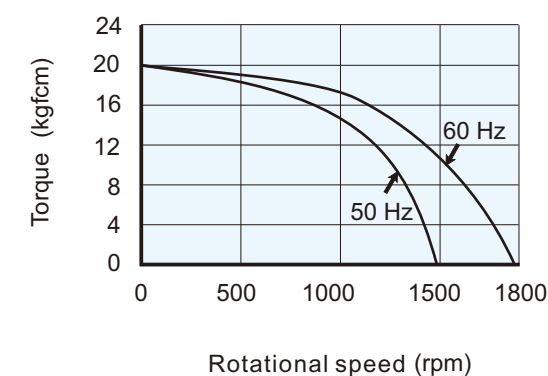


M-5RK150U-CFS / M-5RK150A-CFS

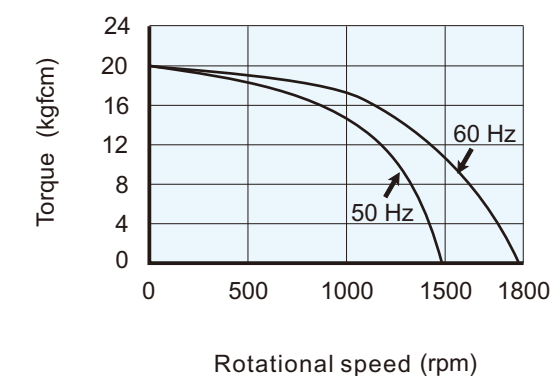


Characteristics of Three-phase Electromagnetic Brake Motors

M-5RK150U-SFS / M-5RK150A-SFS



M-5RK150U-UFS / M-5RK150A-UFS



Permissible Torque of Gear Head

Coupled decimal gear head																									
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□-K	Max. allowable torque(kgfc ^m)		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200	200	200	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.

The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□KH	Max. allowable torque(kgfc ^m)		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300	300	-	-	300	300	300	300

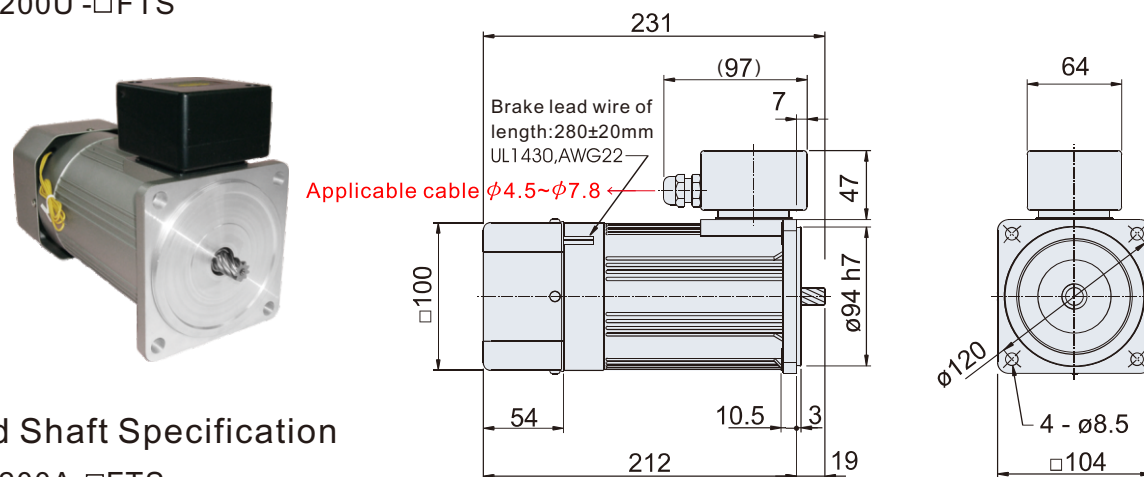
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.

The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Single-phase/Three-phase Electromagnetic Brake Motor 【Frame6】 【200W】

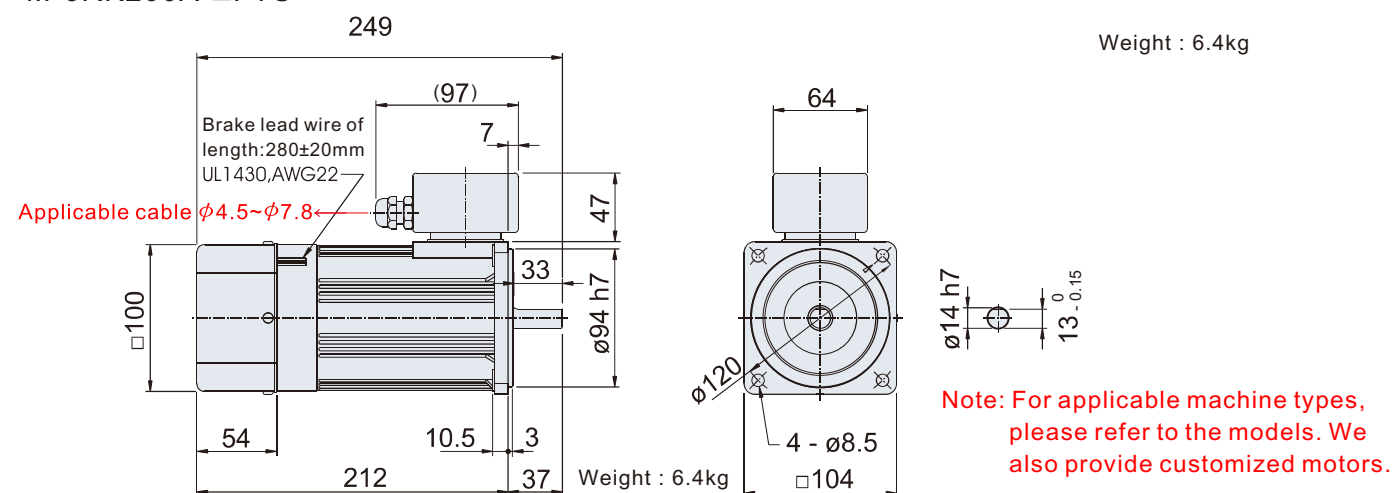
Terminal Box Type for Single-phase/Three-phase Electromagnetic Brake Motors

M-6RK200U-□FTS



Round Shaft Specification

M-6RK200A-□FTS

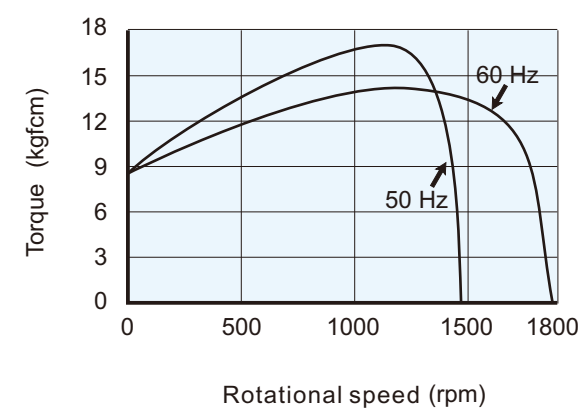


Specifications of Single-phase Electromagnetic Brake Motors 30 min rating

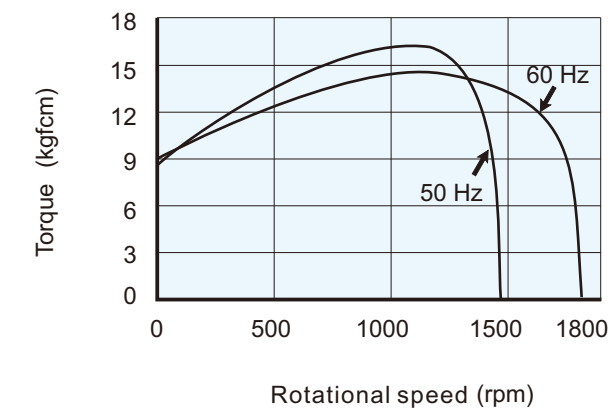
Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting		Capacitor μ F	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-6RK200U-AFTS M-6RK200A-AFTS	1 ϕ 100	50	3.14	1300	14.98	13.00	0.13	20.00	5.60	8.80	42.0	-	-	-
		60	3.19	1600	12.17	13.00	0.13	20.00	5.40	8.80				
	1 ϕ 110	50	3.18	1350	14.43	16.00	0.14	20.00	6.50	8.80	40.0			
		60	2.97	1650	11.80	16.00	0.14	20.00	6.10	8.80				
	1 ϕ 115	50	3.14	1375	14.16	17.00	0.15	20.00	6.70	8.80	40.0			
		60	3.06	1650	11.80	17.00	0.15	20.00	6.30	8.80				
	1 ϕ 120	50	2.86	1375	14.16	18.00	0.15	20.00	7.10	8.80	36.0			
		60	2.69	1675	11.63	18.00	0.15	20.00	6.80	8.80				
M-6RK200U-CFTS M-6RK200A-CFTS	1 ϕ 200	50	1.52	1350	14.43	19.00	0.10	20.00	3.60	8.80	12.0			
		60	1.68	1650	11.80	19.00	0.10	20.00	3.30	8.80				
	1 ϕ 220	50	1.41	1375	14.16	23.00	0.10	20.00	4.00	8.80	10.0			
		60	1.44	1675	11.63	23.00	0.10	20.00	3.70	8.80				
	1 ϕ 230	50	1.26	1400	13.91	25.00	0.12	20.00	4.10	8.80	10.0			
		60	1.45	1675	11.63	25.00	0.12	20.00	3.80	8.80				
	1 ϕ 240	50	1.26	1400	13.91	28.00	0.13	20.00	4.30	8.80	8.0			
		60	1.20	1700	11.46	28.00	0.13	20.00	4.00	8.80				

Characteristics of Single-phase Electromagnetic Brake Motors

M-6RK200U-AFTS / M-6RK200A-AFTS

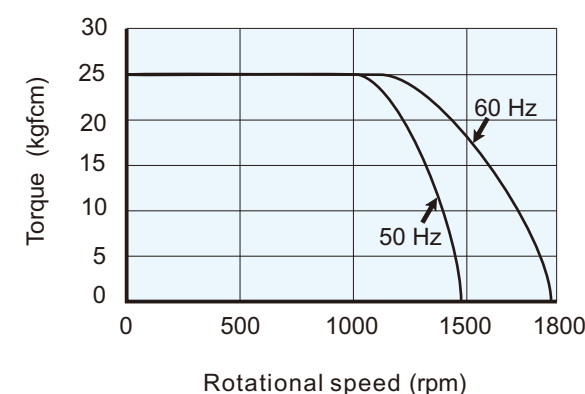


M-6RK200U-CFTS / M-6RK200A-CFTS



Characteristics of Three-phase Electromagnetic Brake

M-6RK200U-SFTS / M-6RK200A-SFTS



Specifications of Three-phase Electromagnetic Brake Motors Continuous rating

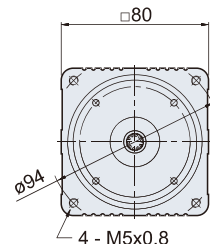
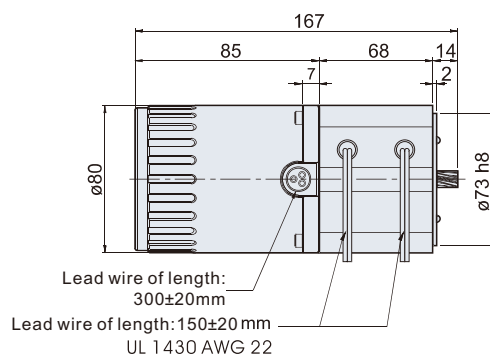
Motor model	Voltage V	Frequency Hz	Rating			Braking			Starting			Capacitor μ F	Coupled gear head model		
			Current A	Speed rpm	Torque kgfcm	Input W	Current A	Torque kgfcm	Current A	Torque kgfcm			Metal bearing	Ball bearing	Intermediate speed ratio
M-6RK200U-SFTS M-6RK200A-SFTS	3 ϕ 200	50	1.10	1350	14.43	19.00	0.10	20.00	4.20	25.00		-			
		60	1.02	1625	11.98	19.00	0.10	20.00	3.90	25.00					
	3 ϕ 220	50	1.16	1375	14.16	23.00	0.10	20.00	4.60	25.00					
		60	1.04	1650	11.80	23.00	0.10	20.00	4.40	25.00					
	3 ϕ 230	50	1.24	1375	14.16	25.00	0.12	20.00	4.80	25.00					
		60	1.00	1675	11.63	25.00	0.12	20.00	4.50	25.00					
	3 ϕ 380	50	0.66	1375	14.16	23.00	0.10	20.00	2.80	25.00					
		60	0.65	1400	13.91	23.00	0.10	20.00	3.00	25.00					
	3 ϕ 400	50	0.65	1400	13.91	23.00	0.10	20.00	3.00	25.00					
		60	0.57	1675	11.63	23.00	0.10	20.00	2.80	25.00					

The brake service voltage is AC 220V.

Note: If you use the inverter, installing the sine wave filter on the inverter output side

- ◆ Single-phase/Three-phase Speed Adjusting Electromagnetic Clutch Brake Motor

M-4IK25N-□C/S-S24-A26-2



Weight : 2.8kg

Single-phase : 3 wires,UL 3266 AWG 20
Three-phase : 6 wires,UL 3266 AWG 20
Speed adjusting : 3 wires,UL 3266 AWG 20

- ### ◆ Specifications of Clutches and Brakes

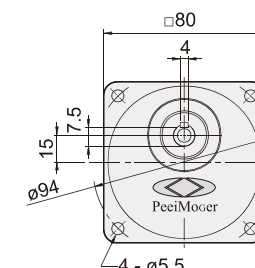
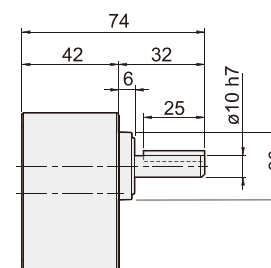
Specification	Clutch	Brake	Specification	Clutch	Brake
Output power of motors (W)	25		Attracting time(msec)	15	15
DC rated voltage (V)	24		Torque set-up time (msec)	20	20
Friction torque (kgfcm)	17	17	Release time(msec)	25	25
Dynamical friction torque (kgfcm)	17	17	Motion frequency (cycle per second)	100	100
Power (W)	10	10	Lead wire (UL 1430, AWG22, L=150)	Blue	Black
Level of insulation	E	E	Brake pad	Non-asbestos semimetal	

- ### ◆ Specifications of Single-phase Electromagnetic Clutch Brakes Continuous rating

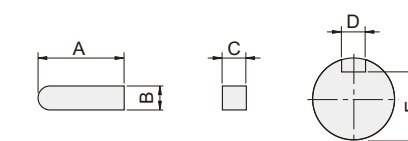
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-4IK25N-AC / S-S24-A26-2	25	1φ100	50	0.51	1275	1.91	0.96	1.20	7.0	G-4N□-L	G-4N□-K	G-4N10X-K
			60	0.50	1525	1.60	0.88	1.20				
	25	1φ110	50	0.53	1300	1.88	1.05	1.20	6.0			
			60	0.43	1625	1.50	0.97	1.20				
	25	1φ115	50	0.53	1325	1.84	1.10	1.20	6.0			
			60	0.44	1625	1.50	1.01	1.20				
	25	1φ120	50	0.55	1325	1.84	1.14	1.20	5.0			
			60	0.46	1625	1.50	1.07	1.20				
M-4IK25N-CC / S-S24-A26-2	25	1φ200	50	0.25	1275	1.91	0.47	1.20	2.0			
			60	0.27	1525	1.60	0.44	1.20				
	25	1φ220	50	0.25	1300	1.88	0.51	1.20	1.5			
			60	0.23	1575	1.55	0.48	1.20				
	25	1φ230	50	0.25	1325	1.84	0.54	1.20	1.5			
			60	0.23	1625	1.50	0.50	1.20				
	25	1φ240	50	0.29	1300	1.88	0.56	1.20	1.2			
			60	0.24	1600	1.53	0.52	1.20				

- ◆ Gear Head

G-4N□- $\frac{K}{1}$



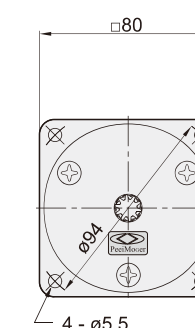
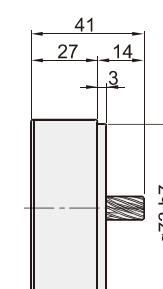
- ◆ Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-4N□-K _L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.1}

- ◆ Decimal Gear Head

G-4N10X-K



- ◆ Weight List of Gear Head

Model	Weight (kg)
G-4N3-K / L~G-4N18-K / L	0.60
G-4N20-K / L~G-4N60-K / L	0.65
G-4N75-K / L~G-4N180-K / L	0.71
G-4N10X-K	0.41

- ### ◆ Specifications of Three-phase Electromagnetic Clutch Brakes Continuous rating

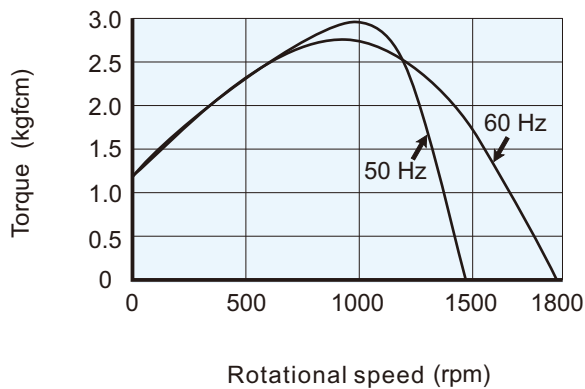
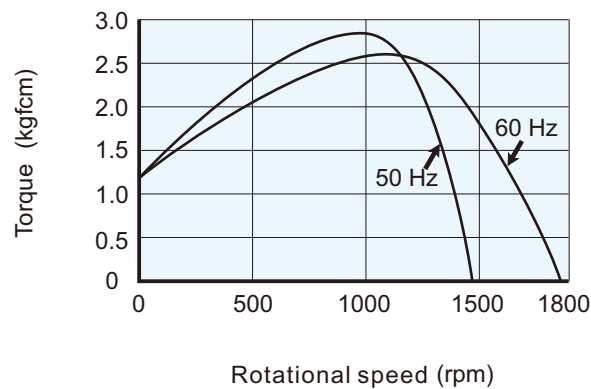
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μ F	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-4IK25N-SC / S-S24-A26-2	25	3 ϕ 200	50	0.26	1325	1.84	0.66	5.00	-	G-4N□-L	G-4N□-K	G-4N10X-1
			60	0.21	1575	1.55	0.61	5.00				
	25	3 ϕ 220	50	0.29	1350	1.81	0.72	5.00	-			
			60	0.23	1625	1.50	0.68	5.00				
	25	3 ϕ 230	50	0.31	1375	1.77	0.76	5.00	-			
			60	0.24	1625	1.50	0.71	5.00				
	25	3 ϕ 380	50	0.16	1350	1.81	0.41	5.00	-			
			60	0.17	1375	1.77	0.43	5.00				
25	3 ϕ 400	50	0.13	1625	1.50	0.40	5.00	-				
		60	0.13	1625	1.50	0.40	5.00					
M-4IK25N-UC / S-S24-A26-2	25	3 ϕ 415	50	0.11	1325	1.84	0.31	5.00	-			
			60	0.10	1575	1.55	0.29	5.00				
	25	3 ϕ 440	50	0.12	1350	1.81	0.32	5.00	-			
			60	0.10	1625	1.50	0.30	5.00				
	25	3 ϕ 460	50	0.13	1375	1.77	0.34	5.00	-			
			60	0.10	1625	1.50	0.32	5.00				

Note: If you use the inverter, Installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Clutch Brake Motors

M-4IK25N-AC/S-S24-A26-2

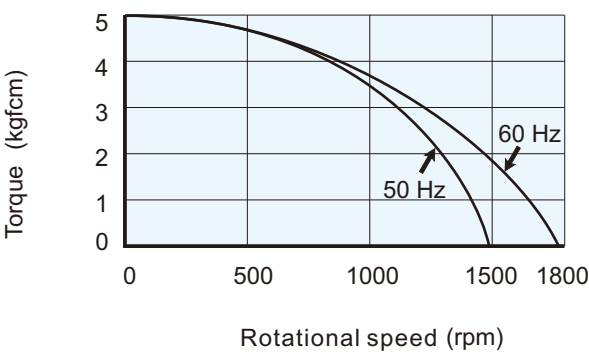
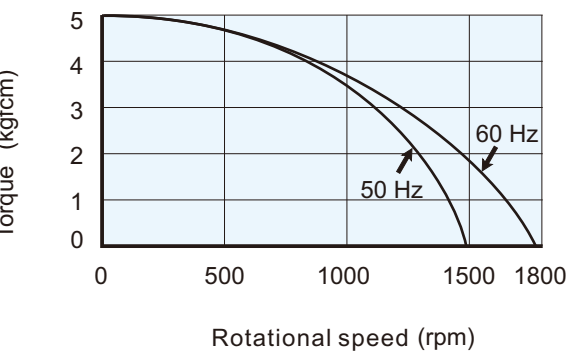
M-4IK25N-CC/S-S24-A26-2



Characteristics of Three-phase Electromagnetic Clutch Brake Motors

M-4IK25N-SC/S-S24-A26-2

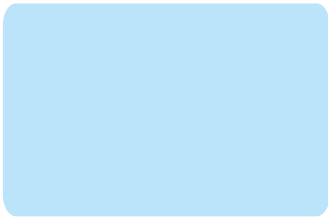
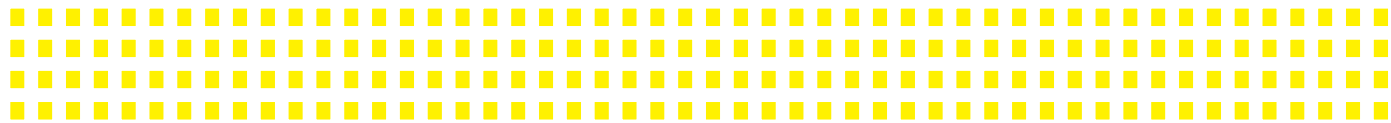
M-4IK25N-UC/S-S24-A26-2



Permissible Torque of Gear Head

		Coupled decimal gear head																
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
G-4N□-K□-L	Max. allowable torque(kgfcm)	4.0	6.7	10	11	13	16	20	21	26	32	39	65	80	80	80	80	80

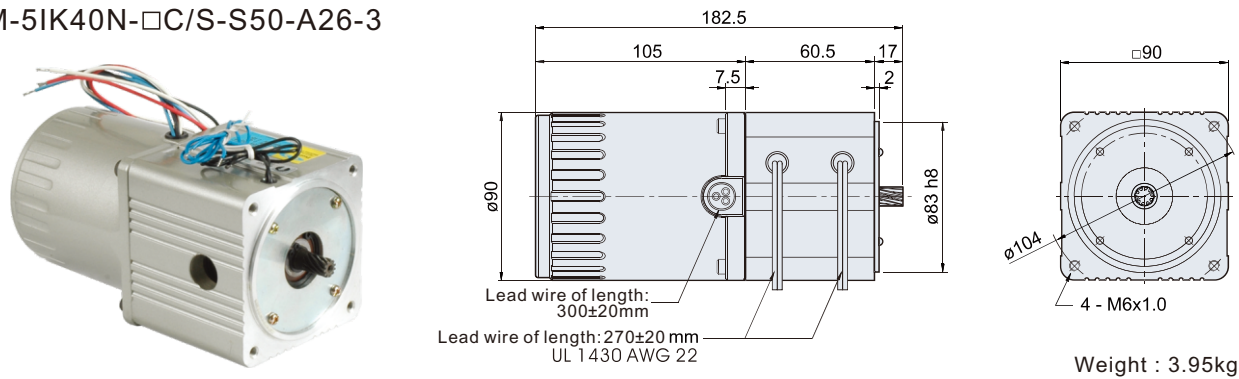
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Electromagnetic Clutch Brake Motor 【Frame5】 【40W】

- Single-phase/Three-phase Speed Adjusting Electromagnetic Clutch Brake Motor

M-5IK40N-□C/S-S50-A26-3



Single-phase : 3 wires, UL 3266 AWG 20
Three-phase : 6 wires, UL 3266 AWG 20
Speed adjusting : 3 wires, UL 3266 AWG 20

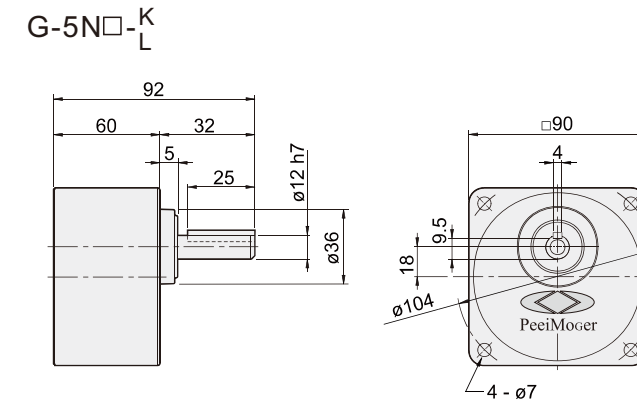
- Specifications of Clutches and Brakes

Specification	Clutch	Brake	Specification	Clutch	Brake
Output power of motors (W)	40		Attracting time (msec)	15	15
DC rated voltage (V)	24		Torque set-up time (msec)	20	20
Friction torque (kgfcm)	38	38	Release time (msec)	25	25
Dynamical friction torque (kgfcm)	35	35	Motion frequency (cycle per second)	100	100
Power (W)	11	11	Lead wire (UL 1430, AWG22, L=270)	Blue	Black
Level of insulation	E	E	Brake pad	Non-asbestos semimetal	

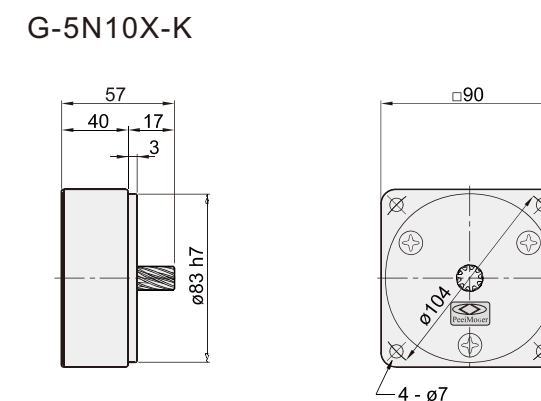
- Specifications of Single-phase Electromagnetic Clutch Brakes Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK40N-AC / S-S50-A26-3	40	1φ100	50	0.78	1375	2.84	2.21	2.00	12.0	G-5N□-L	G-5N□-K	G-5N10X-K
			60	0.77	1675	2.33	2.03	2.00				
	40	1φ110	50	0.81	1375	2.84	2.24	2.00	10.0			
			60	0.77	1675	2.33	2.18	2.00				
	40	1φ115	50	0.78	1400	2.79	2.30	2.00	10.0			
			60	0.71	1700	2.29	2.26	2.00				
	40	1φ120	50	0.88	1400	2.79	2.42	2.00	8.0			
			60	0.66	1700	2.29	2.34	2.00				
M-5IK40N-CC / S-S50-A26-3	40	1φ200	50	0.31	1350	2.89	0.70	2.00	2.5			
			60	0.33	1650	2.36	0.64	2.00				
	40	1φ220	50	0.30	1375	2.84	0.77	2.00	2.3			
			60	0.29	1675	2.33	0.70	2.00				
	40	1φ230	50	0.32	1375	2.84	0.82	2.00	2.3			
			60	0.31	1675	2.33	0.74	2.00				
	40	1φ240	50	0.29	1400	2.79	0.85	2.00	2.0			
			60	0.28	1675	2.33	0.78	2.00				

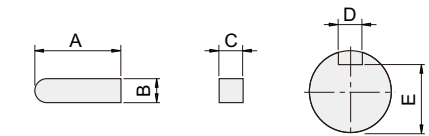
- Gear Head



- Decimal Gear Head



- Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

- Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

- Specifications of Three-phase Electromagnetic Clutch Brakes Continuous rating

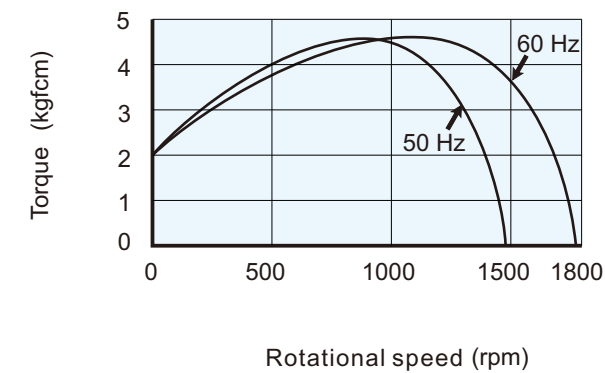
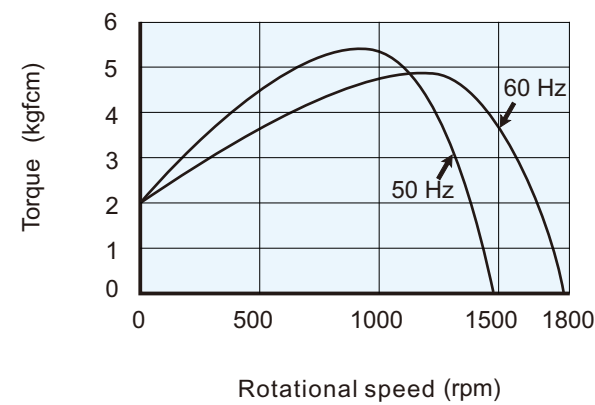
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK40N-SC / S-S50-A26-3	40	3φ200	50	0.28	1350	2.89	0.86	7.00	-	G-5N□-L	G-5N□-K	G-5N10X-K
			60	0.26	1600	2.44	0.80	7.00				
	40	3φ220	50	0.30	1375	2.84	0.93	7.00	-			
			60	0.26	1650	2.36	0.67	7.00				
	40	3φ230	50	0.30	1375	2.84	0.93	7.00	-			
			60	0.26	1675	2.33	0.91	7.00				
	40	3φ380	50	0.17	1375	2.84	0.53	7.00	-			
			60	0.18	1375	2.84	0.57	7.00				
M-5IK40N-UC / S-S50-A26-3	40	3φ400	50	0.16	1650	2.36	0.53	7.00	-			
			60	0.16	1650	2.36	0.53	7.00				
	40	3φ415	50	0.16	1375	2.84	0.48	7.00	-			
			60	0.14	1650	2.36	0.45	7.00				
	40	3φ440	50	0.16	1400	2.78	0.51	7.00	-			
			60	0.14	1675	2.33	0.48	7.00				
40	3φ460	50	0.17	1400	2.78	0.53	7.00	-				
		60	0.14	1675	2.33	0.50	7.00					

Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Clutch Brake Motors

M-5IK40N-AC/S-S50-A26-3

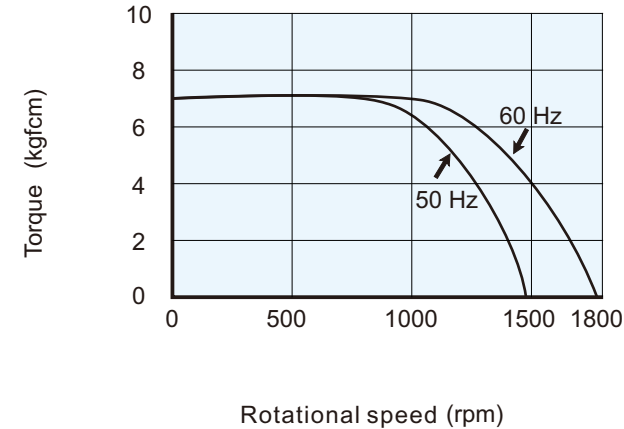
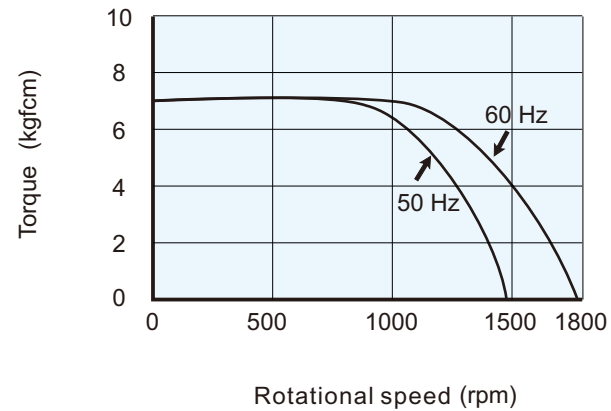
M-5IK40N-CC/S-S50-A26-3



Characteristics of Three-phase Electromagnetic Clutch Brake Motors

M-5IK40N-SC/S-S50-A26-3

M-5IK40N-UC/S-S50-A26-3



Permissible Torque of Gear Head

Inmissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5N□ _L -K	Max. allowable torque(kgfc _m)		6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100	100	100	100	100	100	100	100

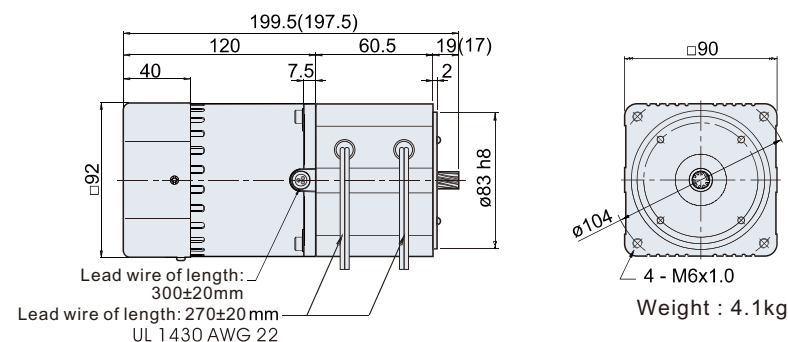
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Electromagnetic Clutch Brake Motor 【Frame5】 【60W】

Single-phase/Three-phase Speed Adjusting Electromagnetic Clutch Brake Motor

M-5IK60N-□FC/S-S50-A26-3

M-5IK60U-□FC/S-S50-A26-4



•The dimensions inside the brackets belong to N-type gear shafts, which are coupled to those of the gear head and the intermediate gear head, and should match with G-5N□-K/L

Single-phase : 3 wires ,UL 3266 AWG 20

Three-phase : 6 wires ,UL 3266 AWG 20

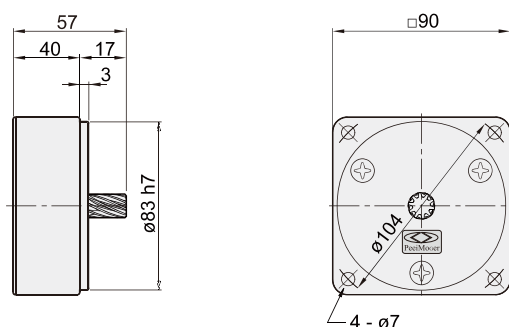
Speed adjusting : 3 wires ,UL 3266 AWG 20

Specifications of Clutches and Brakes

Specification	Clutch	Brake	Specification	Clutch	Brake
Output power of motors (W)	60		Attracting time (msec)	15	15
DC rated voltage (V)	24		Torque set-up time (msec)	20	20
Friction torque (kgfcm)	38	38	Release time (msec)	25	25
Dynamical friction torque (kgfcm)	35	35	Motion frequency (cycle per second)	100	100
Power (W)	11	11	Lead wire (UL 1430, AWG22, L=270)	Blue	Black
Level of insulation	E	E	Brake pad	Non-asbestos semimetal	

Decimal Gear Head

G-5N10X-K

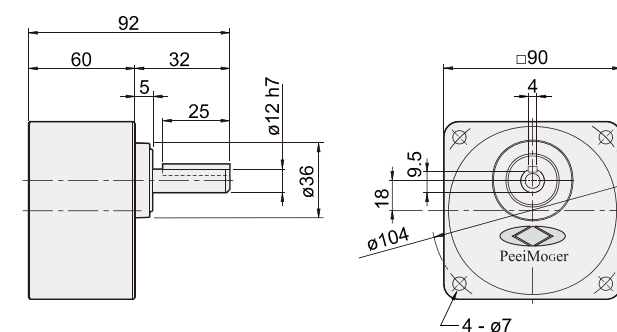


Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

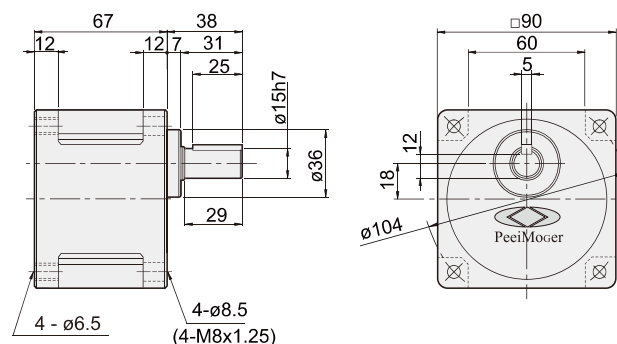
Gear Head

G-5N□-K/L



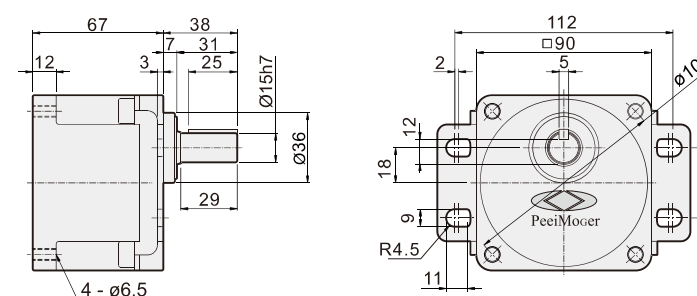
Gear Head

G-5U□-K



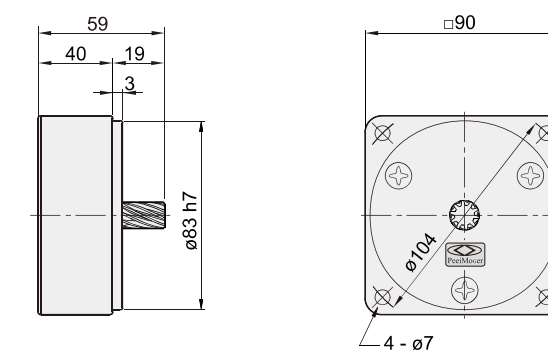
Gear Head with Mounting Brackets

G-5U□-KF

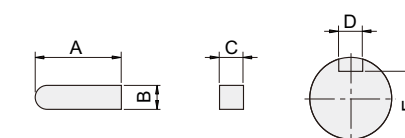


Decimal Gear Head

G-5U10X-K

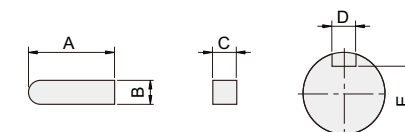


Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K/L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Weight List of Gear Head

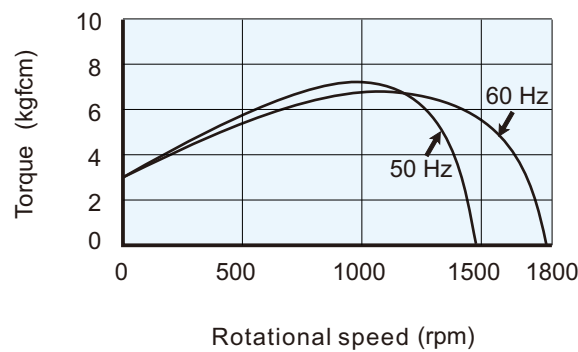
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73
G-5U10X-K	0.64

Specifications of Single-phase Electromagnetic Clutch Brakes Continuous rating

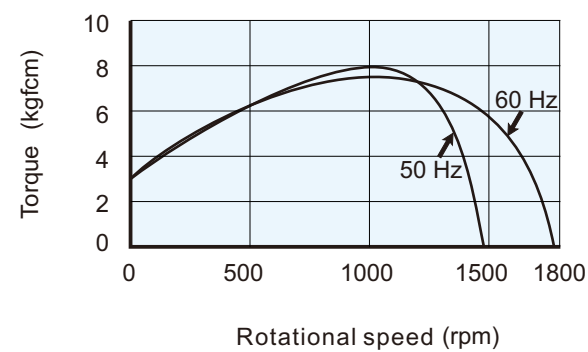
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK60N-AFC / S-S50-A26-3 M-5IK60U-AFC / S-S50-A26-4	60	1ϕ100	50	1.08	1350	4.33	2.32	3.00	18.0	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
			60	1.12	1650	3.54	2.15	3.00				
	60	1ϕ110	50	1.04	1375	4.25	2.50	3.00	16.0			
			60	1.07	1675	3.49	2.38	3.00				
	60	1ϕ115	50	1.08	1375	4.25	2.54	3.00	16.0			
			60	1.12	1675	3.49	2.52	3.00				
	60	1ϕ120	50	1.18	1375	4.25	2.74	3.00	14.0			
			60	0.97	1700	3.44	2.65	3.00				
M-5IK60N-CFC / S-S50-A26-3 M-5IK60U-CFC / S-S50-A26-4	60	1ϕ200	50	0.52	1375	4.25	1.12	3.00	5.0			
			60	0.57	1675	3.49	1.03	3.00				
	60	1ϕ220	50	0.51	1375	4.25	1.22	3.00	4.0			
			60	0.49	1675	3.49	1.13	3.00				
	60	1ϕ230	50	0.51	1400	4.18	1.24	3.00	4.0			
			60	0.49	1700	3.44	1.20	3.00				
	60	1ϕ240	50	0.60	1375	4.25	1.30	3.00	3.0			
			60	0.45	1675	3.49	1.19	3.00				

Characteristics of Single-phase Electromagnetic Clutch Brake Motors

M-5IK60N-AFC/S-S50-A26-3
M-5IK60U-AFC/S-S50-A26-4



M-5IK60N-CFC/S-S50-A26-3
M-5IK60U-CFC/S-S50-A26-4



Permissible Torque of Gear Head

Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
		50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
G-5N□-K L	Max. allowable torque(kgfcm)	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
			6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

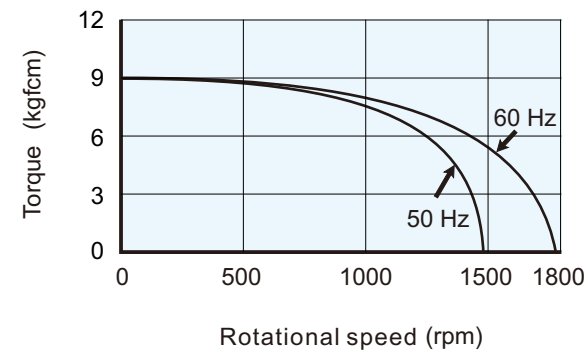
Specifications of Three-phase Electromagnetic Clutch Brakes Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor μ F	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK60N-SFC / S-S50-A26-3 M-5IK60U-SFC / S-S50-A26-4	60	3 ϕ 200	50	0.45	1350	4.33	1.22	9.00	-	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
			60	0.36	1625	3.60	1.12	9.00				
	60	3 ϕ 220	50	0.49	1375	4.25	1.34	9.00	-			
			60	0.41	1650	3.54	1.27	9.00				
	60	3 ϕ 230	50	0.50	1400	4.18	1.28	9.00	-			
			60	0.41	1675	3.49	1.31	9.00				
	60	3 ϕ 380	50	0.27	1375	4.25	0.76	9.00	-			
			60	0.28	1400	4.18	0.72	9.00				
M-5IK60N-UFC / S-S50-A26-3 M-5IK60U-UFC / S-S50-A26-4	60	3 ϕ 415	50	0.25	1400	4.18	0.70	9.00	-			
			60	0.20	1675	3.49	0.70	9.00				
	60	3 ϕ 440	50	0.28	1400	4.18	0.66	9.00	-			
			60	0.22	1675	3.49	0.76	9.00				
	60	3 ϕ 460	50	0.31	1400	4.18	0.63	9.00	-			
			60	0.23	1700	3.44	0.73	9.00				

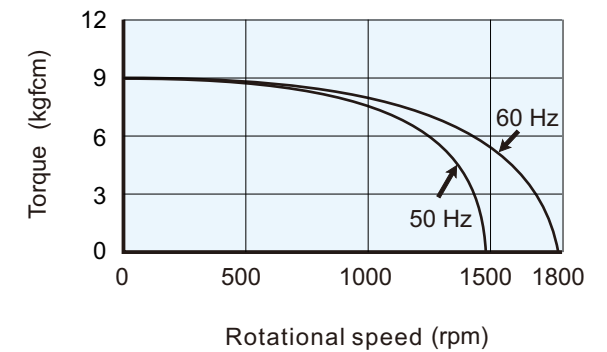
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Three-phase Electromagnetic Clutch Brake Motors

M-5IK60N-SFC/S-S50-A26-3
M-5IK60U-SFC/S-S50-A26-4



M-5IK60N-UFC/S-S50-A26-3
M-5IK60U-UFC/S-S50-A26-4



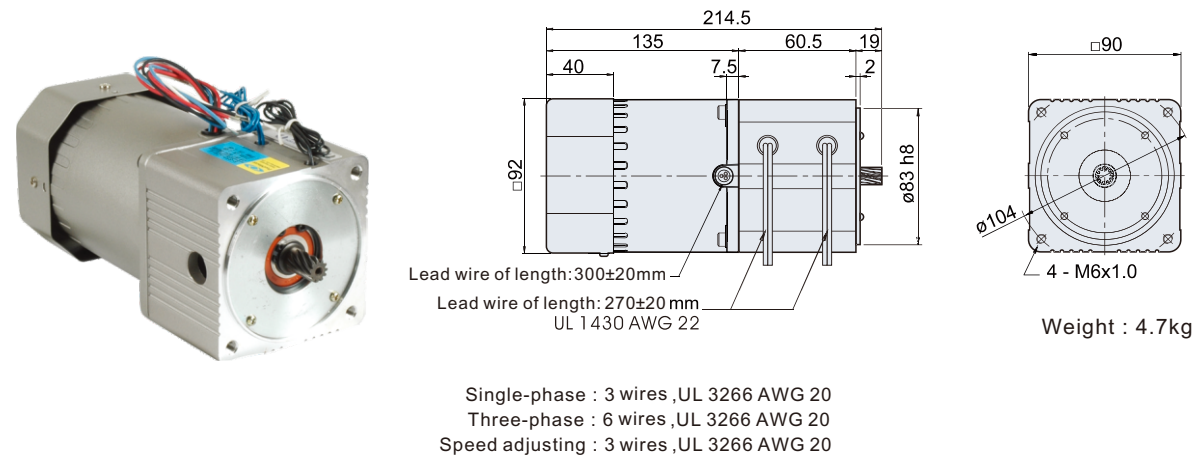
Permissible Torque of Gear Head

Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
		50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
G-5U□-K	Max. allowable torque(kgfcm)	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
			10	16	24	27	32	40	48	54	64	77	93	155	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Electromagnetic Clutch Brake Motor 【Frame5】 【90W】

- Single-phase/Three-phase Speed Adjusting Electromagnetic Clutch Brake Motor
M-5IK90U-□FC/S-S50-A26-4

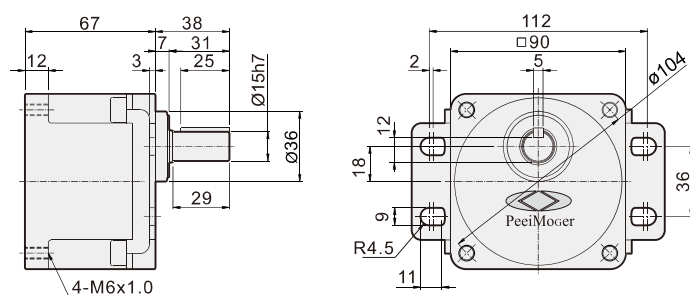


Specifications of Clutches and Brakes

Specification	Clutch	Brake	Specification	Clutch	Brake
Output power of motors (W)	90		Attracting time (msec)	15	15
DC rated voltage (V)	24		Torque set-up time (msec)	20	20
Friction torque (kgfcm)	38	38	Release time (msec)	25	25
Dynamical friction torque (kgfcm)	35	35	Motion frequency (cycle per second)	100	100
Power (W)	11	11	Lead wire (UL 1430, AWG22, L=270)	Blue	Black
Level of insulation	E	E	Brake pad	Non-asbestos semimetal	

Gear Head with Mounting Brackets

G-5U□-KF

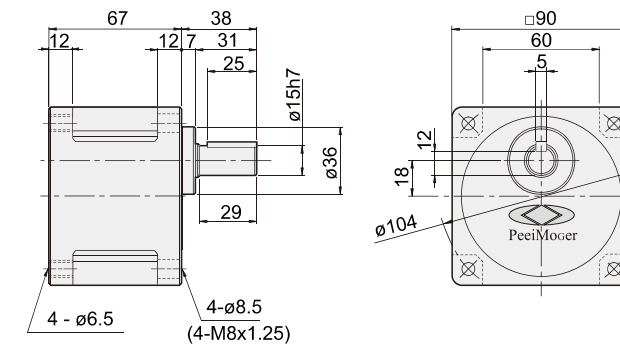


Weight List of Gear Head

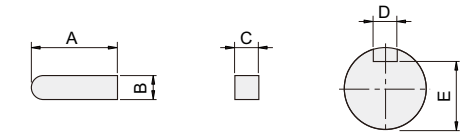
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-K



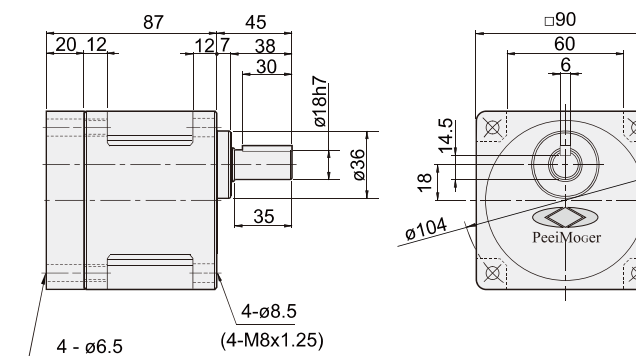
Gear Head: Key and Key slot Dimension



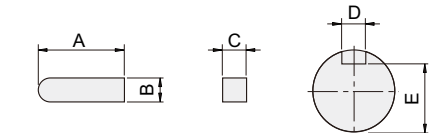
Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head

G-5U□-KH



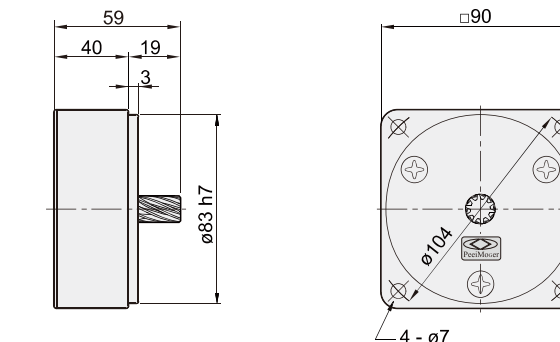
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Electromagnetic Clutch Brakes Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK90U-AFC / S-S50-A26-4	90	1φ100	50	1.40	1350	6.49	3.24	4.50	25.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	1.54	1650	5.31	3.00	4.50				
	90	1φ110	50	1.40	1375	6.37	3.63	4.50	20.0			
			60	1.37	1675	5.23	3.49	4.50				
	90	1φ115	50	1.51	1375	6.37	3.79	4.50	20.0			
			60	1.29	1675	5.23	3.47	4.50				
	90	1φ120	50	1.66	1375	6.37	3.88	4.50	18.0			
			60	1.41	1675	5.23	4.16	4.50				
M-5IK90U-CFC / S-S50-A26-4	90	1φ200	50	0.71	1350	6.49	1.75	4.50	6.0			
			60	0.75	1650	5.31	1.57	4.50				
	90	1φ220	50	0.68	1375	6.37	1.91	4.50	5.0			
			60	0.69	1675	5.23	1.81	4.50				
	90	1φ230	50	0.72	1375	6.37	1.94	4.50	5.0			
			60	0.71	1675	5.23	1.90	4.50				
	90	1φ240	50	0.85	1375	6.37	2.11	4.50	4.0			
			60	0.60	1675	5.23	1.95	4.50				

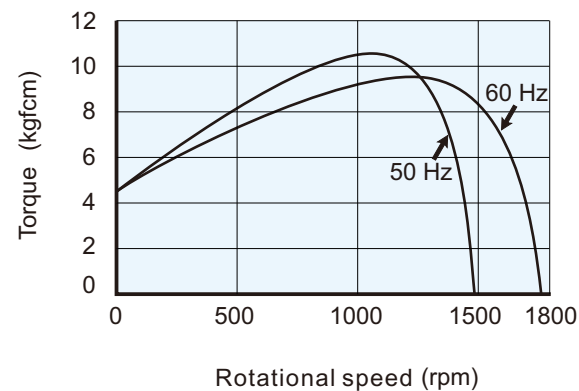
Specifications of Three-phase Electromagnetic Clutch Brakes Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK90U-SFC / S-S50-A26-4	90	3φ200	50	0.65	1375	6.37	2.59	15.00	-	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	0.55	1650	5.31	2.07	15.00				
	90	3φ220	50	0.79	1375	6.37	2.35	15.00	-			
			60	0.58	1675	5.23	2.20	15.00				
	90	3φ230	50	0.84	1400	6.26	2.25	15.00	-			
			60	0.61	1675	5.23	2.11	15.00				
	90	3φ380	50	0.41	1400	6.26	1.36	15.00	-			
			60	0.46	1400	6.26	1.30	15.00				
90	3φ400	50	0.35	1675	5.23	1.21	15.00	-				
		60	0.35	1675	5.23	1.21	15.00					
M-5IK90U-UFC / S-S50-A26-4	90	3φ415	50	0.31	1375	6.37	1.22	15.00	-			
			60	0.25	1650	5.31	1.09	15.00				
	90	3φ440	50	0.34	1375	6.37	1.15	15.00	-			
			60	0.27	1650	5.31	1.03	15.00				
	90	3φ460	50	0.36	1400	6.26	1.10	15.00	-			
			60	0.27	1675	5.23	0.99	15.00				

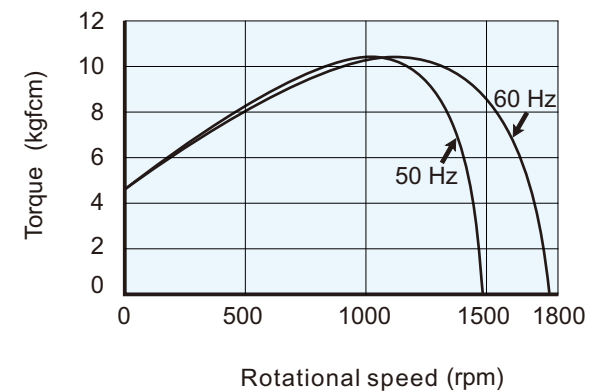
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Clutch Brake Motors

M-5IK90U-AFC/S-S50-A26-4

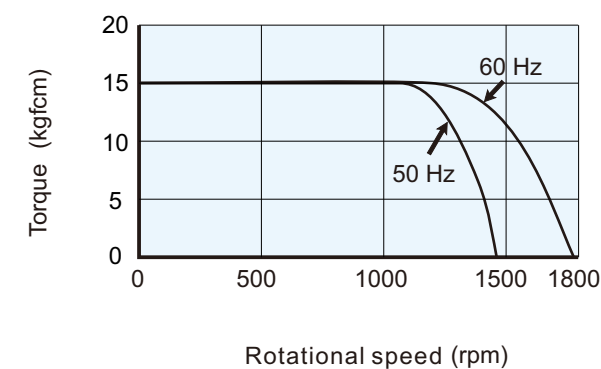


M-5IK90U-CFC/S-S50-A26-4

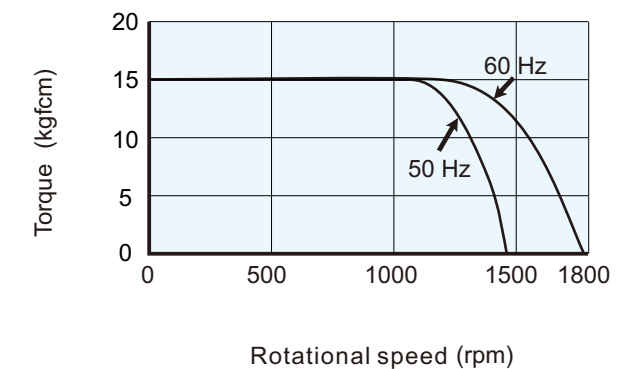


Characteristics of Three-phase Electromagnetic Clutch Brake Motors

M-5IK90U-SFC/S-S50-A26-4



M-5IK90U-UFC/S-S50-A26-4



Permissible Torque of Gear Head

Coupled decimal gear head																									
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□-K	Max. allowable torque(kgfc	14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200	200	200	200	200	200	200	200	

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

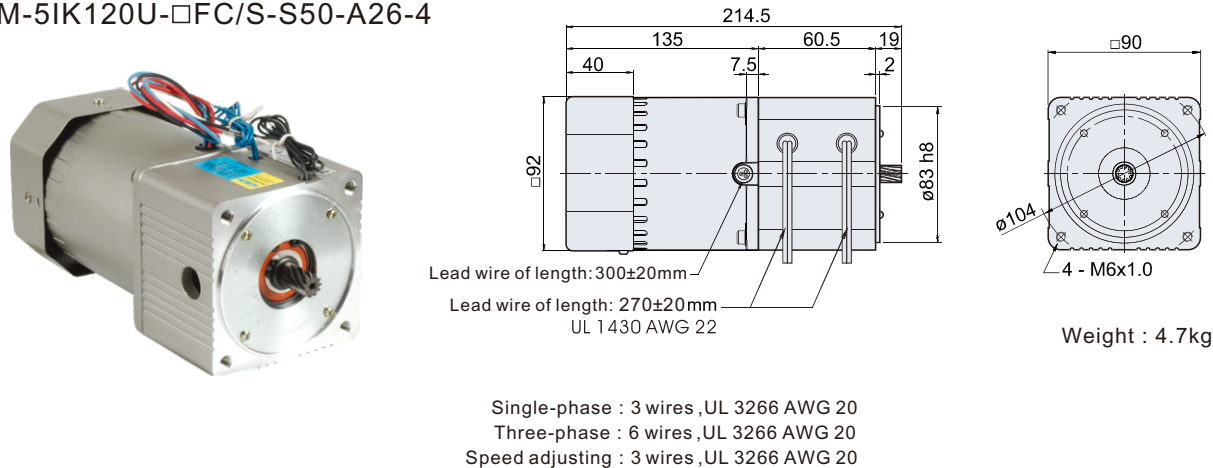
Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□KH	Max. allowable torque(kgfc ^m)		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300	300	-	-	300	300	300	300

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Electromagnetic Clutch Brake Motor 【Frame5】 【120W】

Single-phase/Three-phase Speed Adjusting Electromagnetic Clutch Brake Motor

M-5IK120U-□FC/S-S50-A26-4

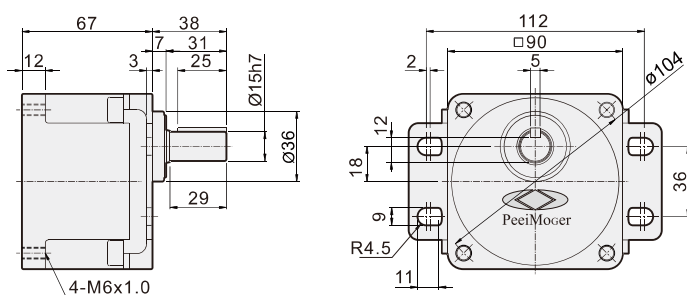


Specifications of Clutches and Brakes

Specification	Clutch	Brake	Specification	Clutch	Brake
Output power of motors (W)	120		Attracting time (msec)	15	15
DC rated voltage (V)	24		Torque set-up time (msec)	20	20
Friction torque (kgfcm)	38	38	Release time (msec)	25	25
Dynamical friction torque (kgfcm)	35	35	Motion frequency (cycle per second)	100	100
Power (W)	11	11	Lead wire (UL 1430, AWG22, L=270)	Blue	Black
Level of insulation	E	E	Brake pad	Non-asbestos semimetal	

Gear Head with Mounting Brackets

G-5U□-KF

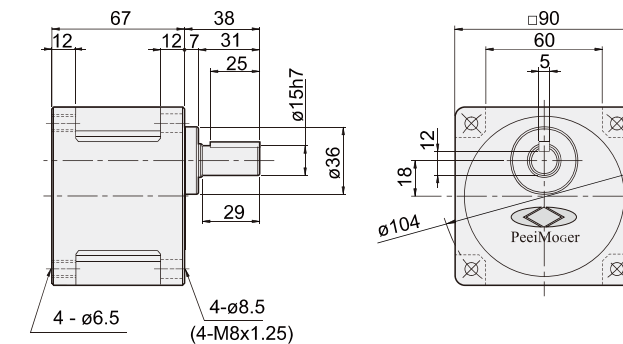


Weight List of Gear Head

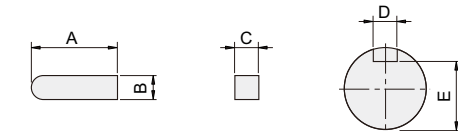
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-K



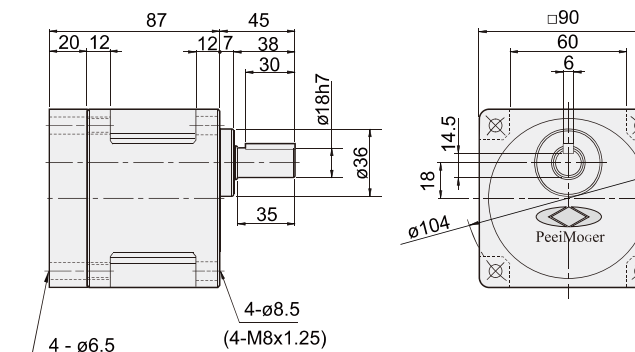
Gear Head: Key and Key slot Dimension



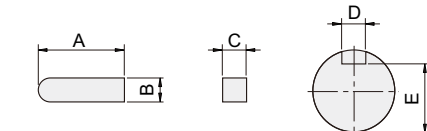
Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head

G-5U□-KH



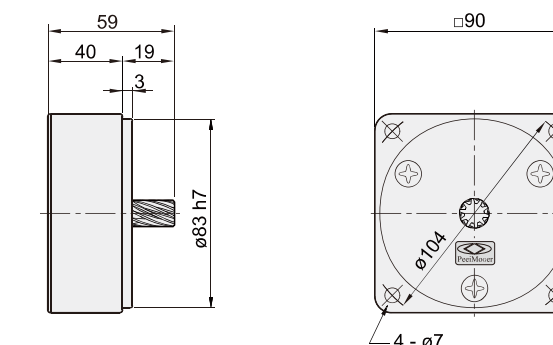
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

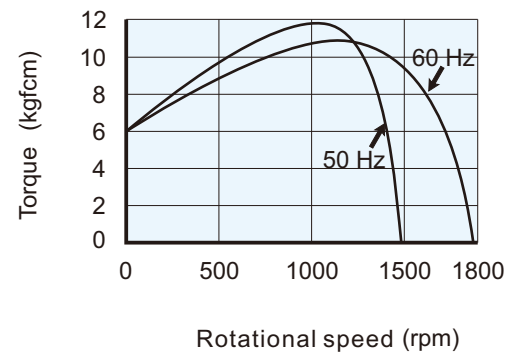
Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Electromagnetic Clutch Brakes Continuous rating

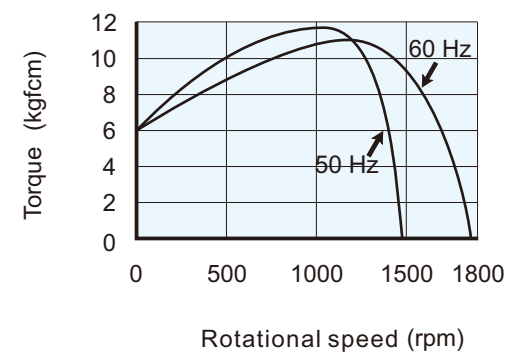
Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK120U-AFC / S-S50-A26-4	120	1φ100	50	2.24	1300	8.99	4.01	6.00	30.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	1.98	1600	7.30	2.97	6.00				
	120	1φ110	50	1.77	1325	8.82	3.51	6.00	28.0			
			60	1.78	1650	7.08	3.24	6.00				
	120	1φ115	50	1.71	1350	8.66	3.77	6.00	28.0			
			60	1.74	1675	6.98	3.34	6.00				
120	1φ120	50	1.72	1350	8.66	3.85	6.00	25.0				
		60	1.66	1675	6.98	3.70	6.00					
M-5IK120U-CFC / S-S50-A26-4	120	1φ200	50	0.98	1275	9.17	1.73	6.00	7.0			
			60	0.94	1600	7.30	1.57	6.00				
	120	1φ220	50	0.80	1325	8.82	1.85	6.00	6.0			
			60	0.89	1625	7.19	1.75	6.00				
	120	1φ230	50	0.84	1325	8.82	1.90	6.00	6.0			
			60	0.91	1625	7.19	1.80	6.00				
	120	1φ240	50	0.87	1325	8.82	2.00	6.00	5.0			
			60	0.79	1650	7.08	1.96	6.00				

Characteristics of Single-phase Electromagnetic Clutch Brake Motors

M-5IK120U-AFC/S-S50-A26-4



M-5IK120U-CFC/S-S50-A26-4



Permissible Torque of Gear Head

Model	Speed (rpm)	Coupled decimal gear head																			
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3
		50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
G-5U□-K	Max. allowable torque(kgfcm)	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500
		3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600
G-5U□-KH	Max. allowable torque(kgfcm)	14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200	200	200	200	200
		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

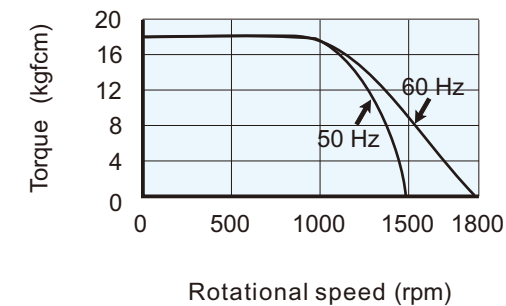
Specifications of Three-phase Electromagnetic Clutch Brakes Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK120U-SFC / S-S50-A26-4	120	3φ200	50	0.75	1300	8.99	2.59	18.00	-	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	0.67	1575	7.42	2.07	18.00				
	120	3φ220	50	0.81	1350	8.66	2.35	18.00	-			
			60	0.68	1550	7.54	2.04	18.00				
	120	3φ230	50	0.89	1350	8.66	2.25	18.00	-			
			60	0.65	1650	7.08	1.95	18.00				
	120	3φ380	50	0.45	1350	8.66	1.36	18.00	-			
			60	0.48	1375	8.50	1.30	18.00				
M-5IK120U-UFC / S-S50-A26-4	120	3φ400	50	0.37	1650	7.08	1.12	18.00	-			
			60	0.37	1650	7.08	1.12	18.00				
	120	3φ415	50	0.35	1300	8.99	1.22	18.00	-			
			60	0.31	1575	7.42	1.09	18.00				
	120	3φ440	50	0.38	1325	8.82	1.15	18.00	-			
			60	0.31	1600	7.30	1.03	18.00				
	120	3φ460	50	0.38	1350	8.66	1.10	18.00	-			
			60	0.31	1625	7.19	0.99	18.00				

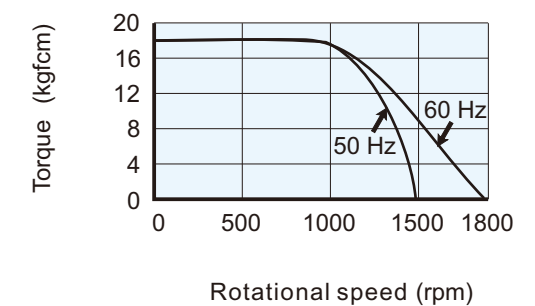
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Three-phase Electromagnetic Clutch Brake Motors

M-5IK120U-SFC/S-S50-A26-4



M-5IK120U-UFC/S-S50-A26-4



Permissible Torque of Gear Head

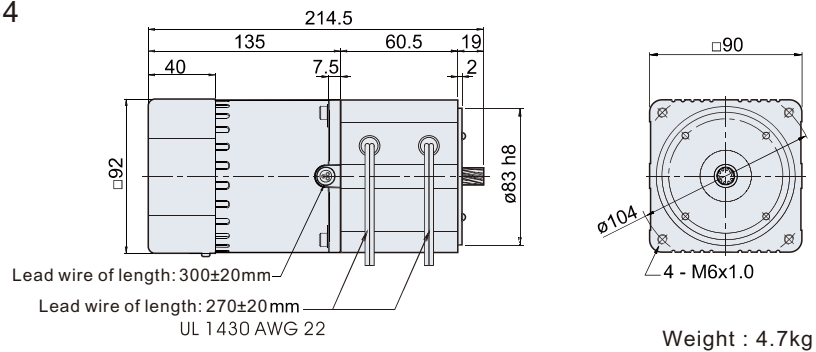
Model	Speed (rpm)	Coupled decimal gear head																			
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3
		50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
G-5U□-KH	Max. allowable torque(kgfcm)	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500
		3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600
G-5U□-KH	Max. allowable torque(kgfcm)	14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200	200	200	200	200
		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Electromagnetic Clutch Brake Motor 【Frame5】 【150W】

Single-phase/Three-phase Speed Adjusting Electromagnetic Clutch Brake Motor

M-5IK150U-□FC/S-S50-A26-4



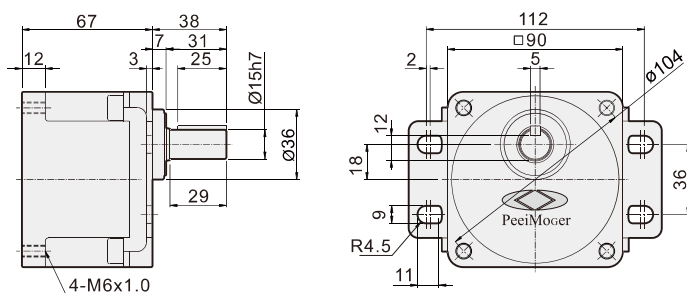
Single-phase : 3 wires ,UL 3266 AWG 20
Three-phase : 6 wires ,UL 3266 AWG 20
Speed adjusting : 3 wires ,UL 3266 AWG 20

Specifications of Clutches and Brakes

Specification	Clutch	Brake	Specification	Clutch	Brake
Output power of motors (W)	150		Attracting time (msec)	15	15
DC rated voltage (V)	24		Torque set-up time (msec)	20	20
Friction torque (kgfcm)	38	38	Release time (msec)	25	25
Dynamical friction torque (kgfcm)	35	35	Motion frequency (cycle per second)	100	100
Power (W)	11	11	Lead wire (UL 1430, AWG22, L=270)	Blue	Black
Level of insulation	E	E	Brake pad	Non-asbestos semimetal	

Gear Head with Mounting Brackets

G-5U□-KF

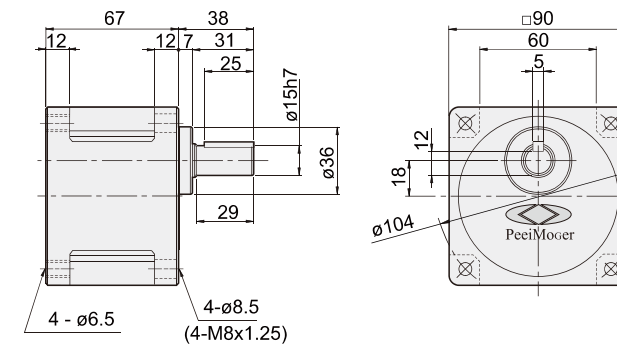


Weight List of Gear Head

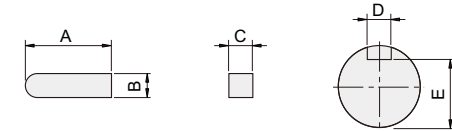
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-K



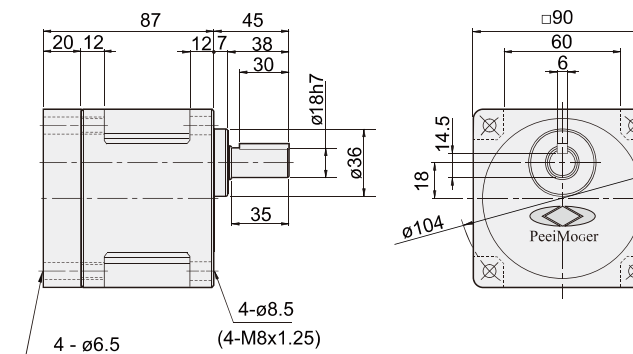
Gear Head: Key and Key slot Dimension



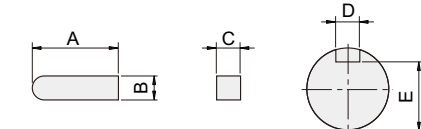
Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head

G-5U□-KH



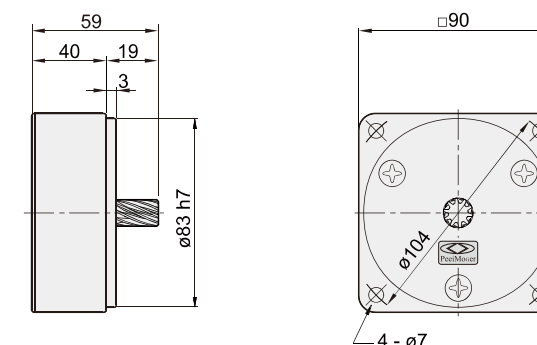
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Electromagnetic Clutch Brakes Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model			
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio	
M-5IK150U-AFC / S-S50-A26-4	150	1φ100	50	2.62	1275	11.46	4.51	7.50	36.0	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K	
			60	2.45	1575	9.27	3.47	7.50					
	150	1φ110	50	2.11	1300	11.24	4.26	7.50	32.0				
			60	2.14	1625	8.99	3.81	7.50					
	150	1φ115	50	2.00	1325	11.02	4.46	7.50	32.0				
			60	2.25	1625	8.99	4.13	7.50					
	150	1φ120	50	2.05	1325	11.02	4.27	7.50	28.0				
			60	2.28	1650	8.85	5.03	7.50					
	M-5IK150U-CFC / S-S50-A26-4	150	1φ200	50	1.11	1300	11.24	2.35	7.50				9.0
				60	1.18	1625	8.99	2.17	7.50				
150		1φ220	50	1.07	1325	11.02	2.42	7.50	7.0				
			60	1.31	1625	8.99	2.77	7.50					
150		1φ230	50	1.21	1325	11.02	2.59	7.50	7.0				
			60	1.09	1650	8.85	2.82	7.50					
150		1φ240	50	1.33	1325	11.02	2.59	7.50	6.0				
			60	0.94	1650	8.85	2.68	7.50					

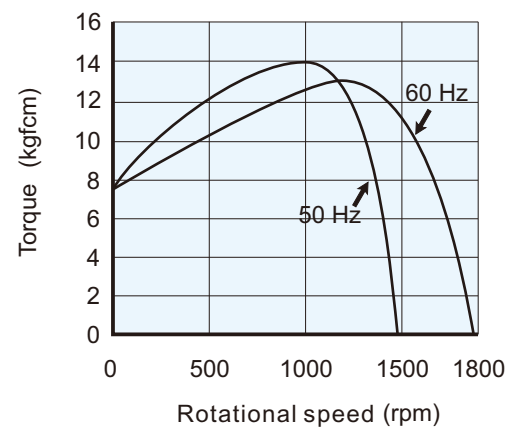
Specifications of Three-phase Electromagnetic Clutch Brakes Continuous rating

Motor model	Output power W	Voltage V	Frequency Hz	Rating			Starting		Capacitor uF	Coupled gear head model		
				Current A	Speed rpm	Torque kgfcm	Current A	Torque kgfcm		Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK150U-SFC / S-S50-A26-4	150	3φ200	50	0.96	1275	11.46	2.54	20.00	-	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	0.86	1525	9.58	2.36	20.00				
	150	3φ220	50	1.08	1325	11.02	2.80	20.00	-			
			60	0.82	1600	9.13	2.60	20.00				
	150	3φ230	50	1.17	1350	10.82	2.88	20.00	-			
			60	0.83	1625	8.99	2.70	20.00				
	150	3φ380	50	0.60	1325	11.02	1.70	20.00	-			
			60	0.65	1350	10.82	1.79	20.00				
	150	3φ400	50	0.48	1625	8.99	1.65	20.00	-			
			60	0.48	1625	8.99	1.65	20.00				
M-5IK150U-UFC / S-S50-A26-4	150	3φ415	50	0.41	1275	11.46	1.20	20.00	-			
			60	0.38	1525	9.58	1.12	20.00				
	150	3φ440	50	0.43	1300	11.24	1.23	20.00	-			
			60	0.37	1575	9.27	1.18	20.00				
	150	3φ460	50	0.45	1325	11.02	1.30	20.00	-			
			60	0.38	1575	9.27	1.25	20.00				

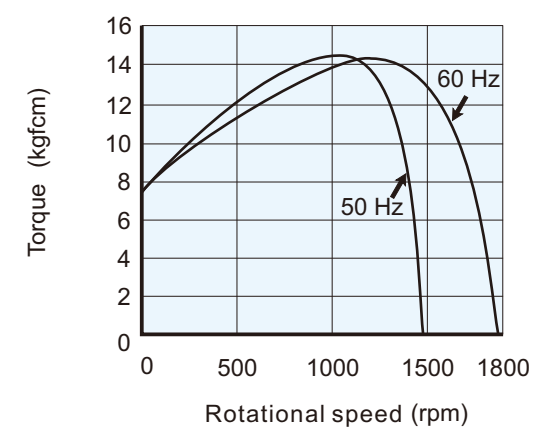
Note: If you use the inverter, installing the sine wave filter on the inverter output side

Characteristics of Single-phase Electromagnetic Clutch Brake Motors

M-5IK150U-AFC/S-S50-A26-4

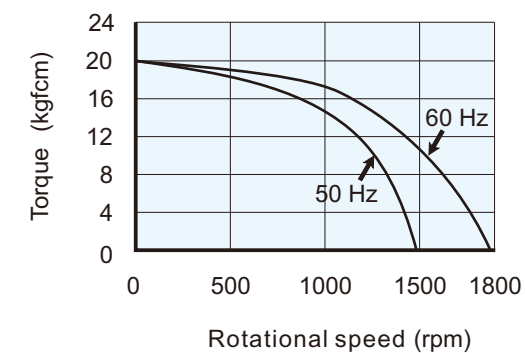


M-5IK150U-CFC/S-S50-A26-4

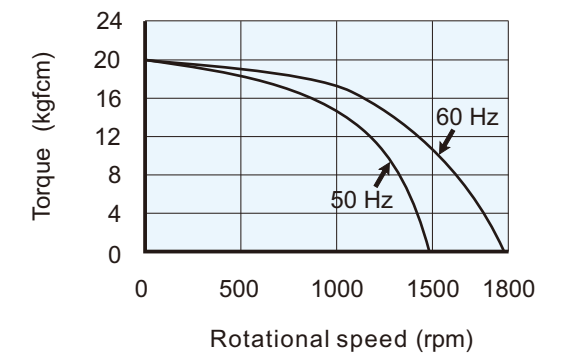


Characteristics of Three-phase Electromagnetic Clutch Brake Motors

M-5IK150U-SFC/S-S50-A26-4



M-5IK150U-UFC/S-S50-A26-4



Permissible Torque of Gear Head

Model		Coupled decimal gear head															
		Speed (rpm)															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
G-5U□-K	Max. allowable torque(kgfcm)	14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200
		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

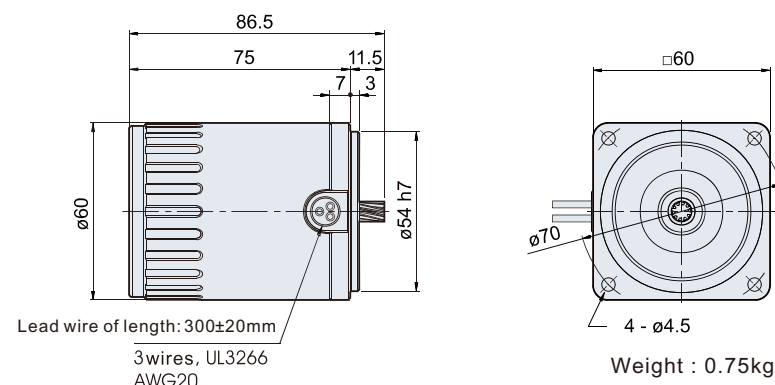
Model		Coupled decimal gear head															
		Speed (rpm)															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
G-5U□-KH	Max. allowable torque(kgfcm)	-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300
		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Single-phase Torque Induction Motor 【Frame2】 【3W】

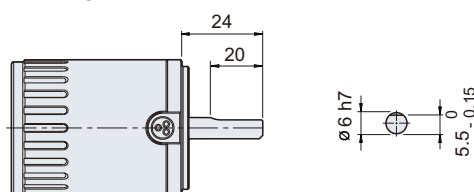
Single-phase Torque Induction Motor

M-2TK3N-□



Round Shaft Specification

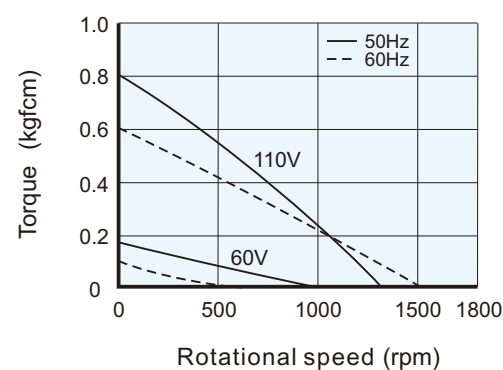
M-2TK3A-□



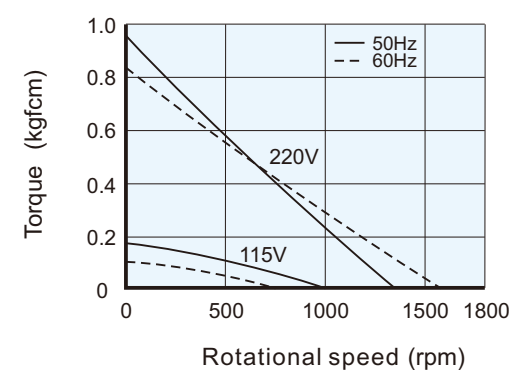
Note: For applicable machine types,
please refer to the models. We
also provide customized motors.

Characteristics of Single-phase Torque Induction Motors

M-2TK3N-A / M-2TK3A-A



M-2TK3N-C / M-2TK3A-C

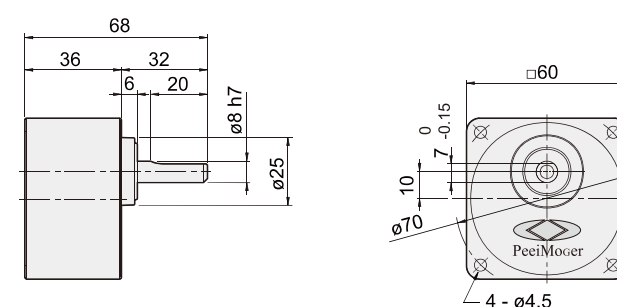


Specifications of Single-phase Torque Induction Motors

Motor model	Rated time	Voltage V	Frequency Hz	Starting torque kgfcm	Output power W	At max. output power				Capacitor uF	Coupled gear head model		
						Rotational speed rpm	Torque kgfcm	Current A	Input W		Metal bearing	Ball bearing	Intermediate speed ratio
M-2TK3N-A M-2TK3A-A	5min	110	50	0.80	3.1	750	0.41	0.38	44.4	6.0	G-2N□-L	G-2N□-L	G-2N10X-K
			60	0.60	2.4	900	0.26	0.48	56.2				
	CONT.	60	50	0.17	-	-	0.17	0.23	14.5	6.0			
			60	0.10	-	-	0.10	0.22	12.9				
M-2TK3N-C M-2TK3A-C	5min	220	50	0.95	3	750	0.39	0.18	45.0	1.5	G-2N□-L	G-2N□-L	G-2N10X-K
			60	0.83	3	900	0.33	0.25	55.0				
	CONT.	115	50	0.17	-	-	0.17	0.10	12.7	1.5			
			60	0.10	-	-	0.10	0.11	12.7				

Gear Head

G-2N□-K
L

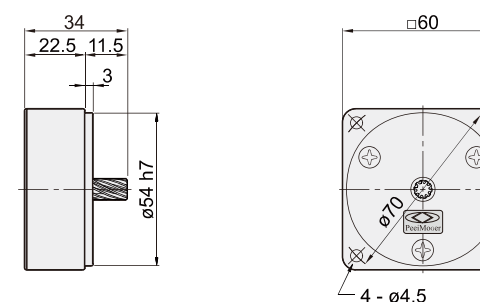


Weight List of Gear Head

Model	Weight (kg)
G-2N3-K / L~G-2N18-K / L	0.30
G-2N20-K / L~G-2N60-K / L	0.31
G-2N75-K / L~G-2N180-K / L	0.33
G-2N10X-K	0.20

Decimal Gear Head

G-2N10X-K



Permissible Torque of Gear Head

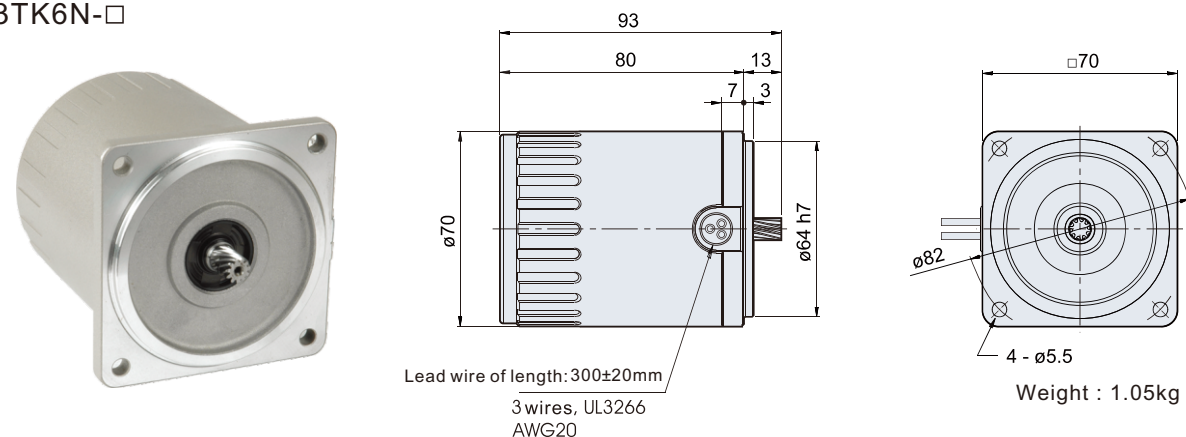
		Coupled decimal gear head																	
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6
		3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250
G-2N□-K L	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	200	250	300
	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	300	360
Max. allowable torque(kgfcm)		1.0	1.6	2.5	2.7	3.4	4.1	5.0	5.4	6.7	8.1	9.7	16	23	25	25	25	25	25

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Torque Motors 【Frame3】 【6W】

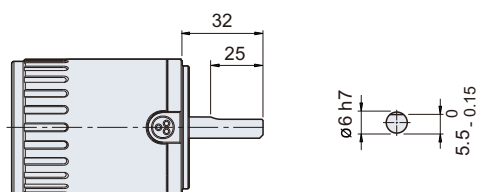
Single-phase Torque Induction Motor

M-3TK6N-□



Round Shaft Specification

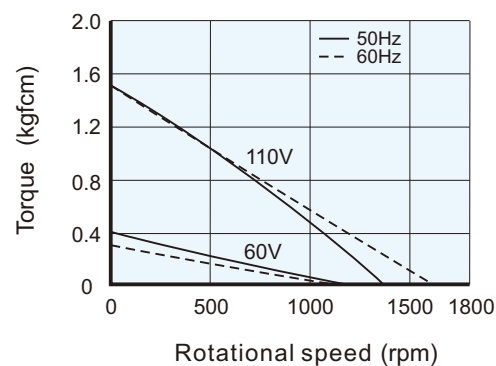
M-3TK6A-□



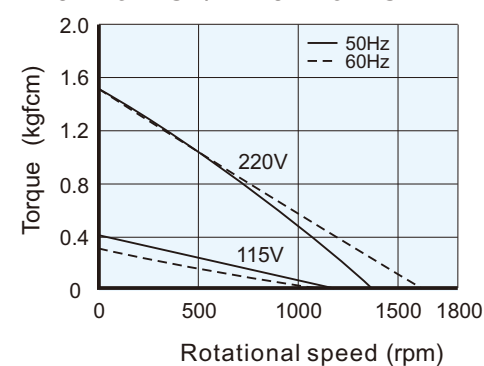
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Characteristics of Single-phase Torque Induction Motors

M-3TK6N-A / M-3TK6A-A



M-3TK6N-C / M-3TK6A-C

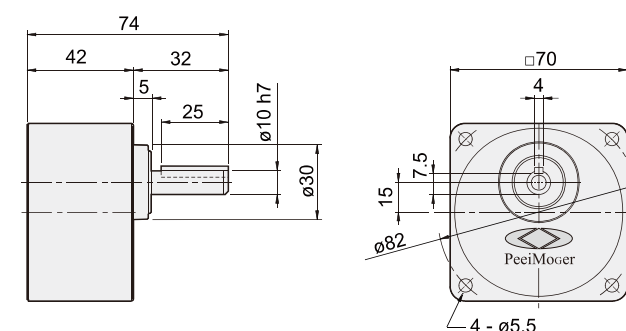


Specifications of Single-phase Torque Induction Motors

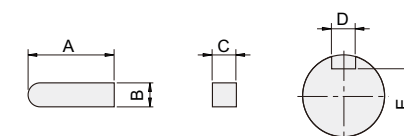
Motor model	Rated time	Voltage V	Frequency Hz	Starting torque kgfcm	Output power W	At max. output power				Capacitor uF	Coupled gear head model		
						Rotational speed rpm	Torque kgfcm	Current A	Input W		Metal bearing	Ball bearing	Intermediate speed ratio
M-3TK6N-A M-3TK6A-A	5min	110	50	1.50	6	750	0.78	0.48	54.5	8.0	G-3N□-L	G-3N□-L	G-3N10X-K
			60	1.50	6	900	0.65	0.65	73.9				
	CONT.	60	50	0.40	-	-	0.40	0.29	19.3	8.0			
			60	0.30	-	-	0.30	0.34	21.4				
M-3TK6N-C M-3TK6A-C	5min	220	50	1.50	6	750	0.78	0.22	54.0	2.0	G-3N□-L	G-3N□-L	G-3N10X-K
			60	1.50	6	900	0.65	0.31	72.0				
	CONT.	115	50	0.40	-	-	0.40	0.14	18.1	2.0			
			60	0.30	-	-	0.30	0.16	20.3				

Gear Head

G-3N□-K



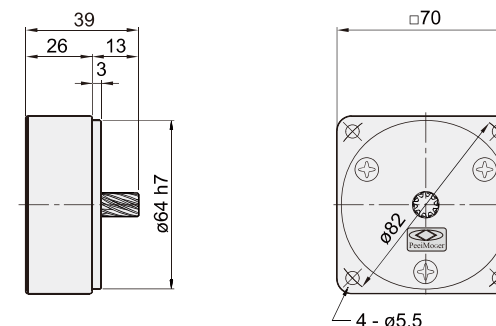
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-3N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.15}

Decimal Gear Head

G-3N10X-K



Weight List of Gear Head

Model	Weight (kg)
G-3N3-K / L~G-3N18-K / L	0.44
G-3N20-K / L~G-3N60-K / L	0.48
G-3N75-K / L~G-3N180-K / L	0.53
G-3N10X-K	0.32

Permissible Torque of Gear Head

Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-3N□-K L	Max. allowable torque(kgfc ^m)		2.4	4.0	6.0	6.7	8.2	10	12	13	16	19	23	39	50	50	50	50	50	50	50	50	50	50	50

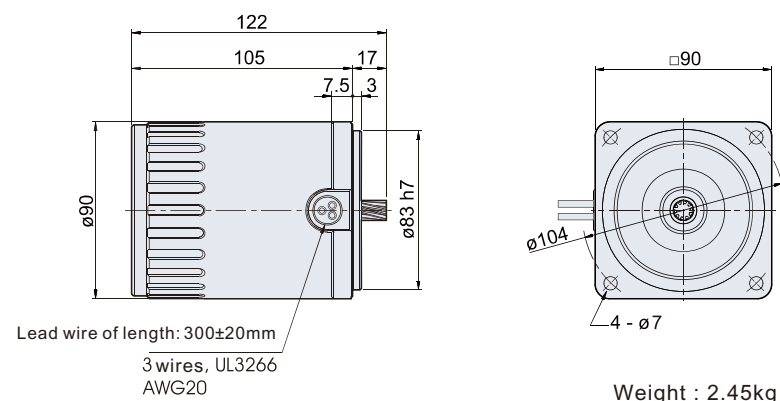
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions. The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

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Torque Motors 【Frame5】 【20W】

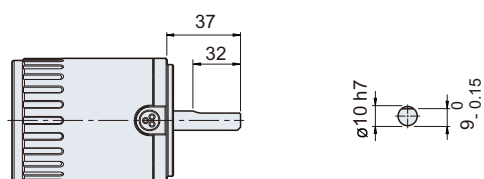
Single-phase Torque Induction Motor

M-5TK20N-□



Round Shaft Specification

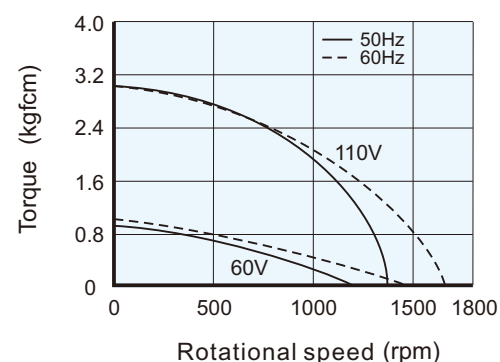
M-5TK20A-□



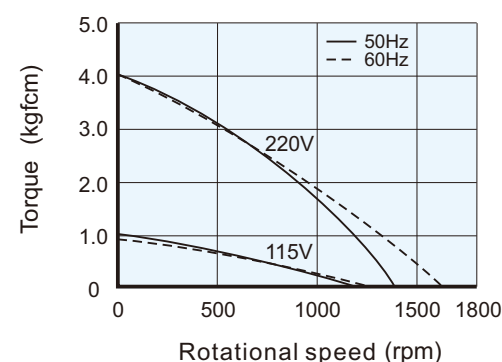
Note: For applicable machine types,
please refer to the models. We
also provide customized motors.

Characteristics of Single-phase Torque Induction Motors

M-5TK20N-A / M-5TK20A-A



M-5TK20N-C / M-5TK20A-C

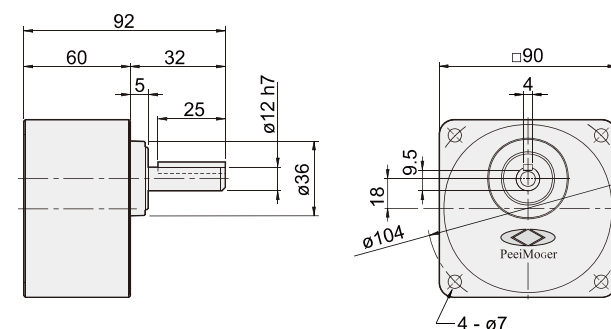


Specifications of Single-phase Torque Induction Motors

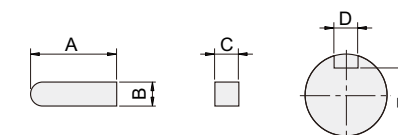
Motor model	Rated time	Voltage V	Frequency Hz	Starting torque kgfcm	Output power W	At max. output power				Capacitor uF	Coupled gear head model		
						Rotational speed rpm	Torque kgfcm	Current A	Input W		Metal bearing	Ball bearing	Intermediate speed ratio
M-5TK20N-A M-5TK20A-A	5min	110	50	3.00	20	750	2.60	0.90	92.4	14.0	G-5N□-L	G-5N□-L	G-5N10X-K
			60	3.00	20	900	2.20	0.91	101.4				
	CONT.	60	50	0.90	-	-	0.90	0.48	29.5	14.0			
			60	1.00	-	-	1.00	0.57	35.5				
M-5TK20N-C M-5TK20A-C	5min	220	50	4.00	20	750	2.60	0.43	97.0	4.0	G-5N□-L	G-5N□-L	G-5N10X-K
			60	4.00	20	900	2.20	0.58	126.1				
	CONT.	115	50	1.00	-	-	1.00	0.24	30.3	4.0			
			60	0.90	-	-	0.90	0.30	35.8				

Gear Head

G-5N□-K



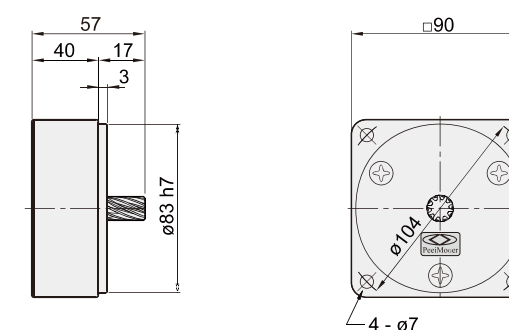
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Decimal Gear Head

G-5N10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

Permissible Torque of Gear Head

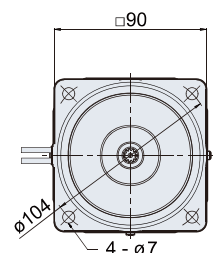
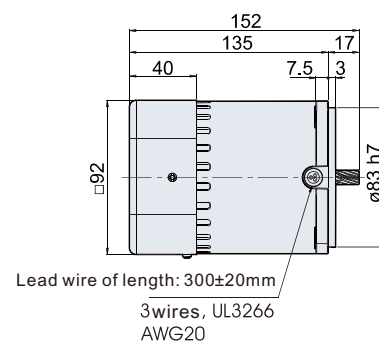
Model	Speed (rpm)	Coupled decimal gear head																
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5
		50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
G-5N□-K	Max. allowable torque(kgfcm)	6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100	100
		6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100	100

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Torque Motors 【Frame5】 【40W】

Single-phase Torque Induction Motor

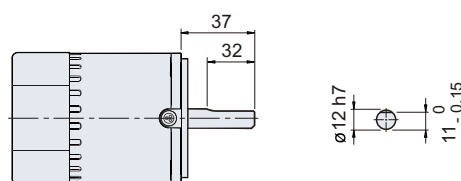
M-5TK40N-□F



Weight : 3.2kg

Round Shaft Specification

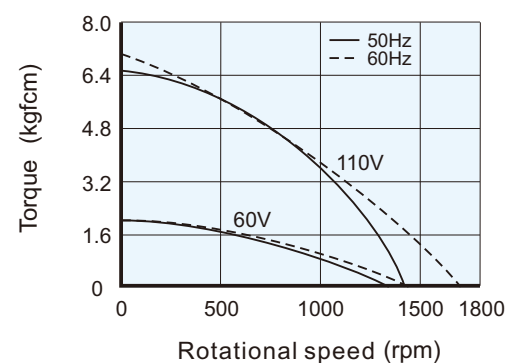
M-5TK40A-□F



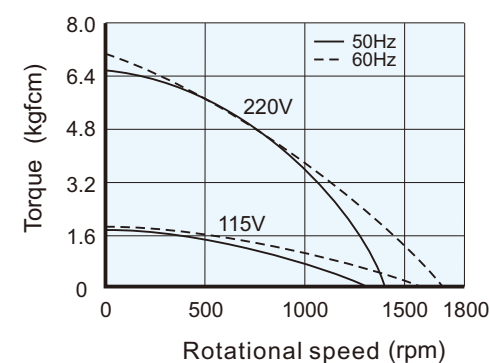
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Characteristics of Single-phase Torque Induction Motors

M-5TK40N-AF / M-5TK40A-AF



M-5TK40N-CF / M-5TK40A-CF

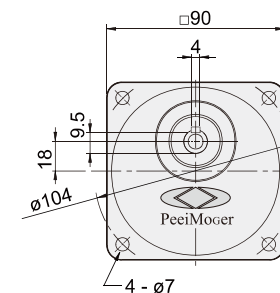
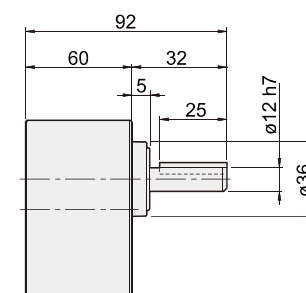


Specifications of Single-phase Torque Induction Motors

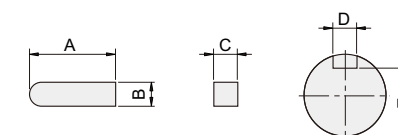
Motor model	Rated time	Voltage V	Frequency Hz	Starting torque kgfcm	Output power W	At max. output power				Capacitor uF	Coupled gear head model		
						Rotational speed rpm	Torque kgfcm	Current A	Input W		Metal bearing	Ball bearing	Intermediate speed ratio
M-5TK40N-AF M-5TK40A-AF	5min	110	50	6.50	40	750	5.20	1.90	191.3	25.0	G-5N□-L	G-5N□-L	G-5N10X-K
			60	7.00	40	900	4.40	1.85	204.0				
	CONT.	60	50	2.00	-	-	2.00	0.91	56.6	25.0			
			60	2.00	-	-	2.00	1.10	67.2				
M-5TK40N-CF M-5TK40A-CF	5min	220	50	6.50	40	750	5.20	0.86	177.1	6.0	G-5N□-L	G-5N□-L	G-5N10X-K
			60	7.00	40	900	4.40	0.88	196.7				
	CONT.	115	50	1.70	-	-	1.70	0.40	49.8	6.0			
			60	1.80	-	-	1.80	0.48	59.0				

Gear Head

G-5N□-K
L



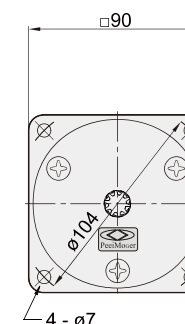
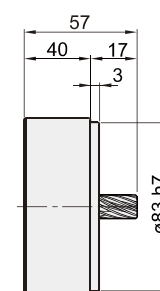
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Decimal Gear Head

G-5N10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

Permissible Torque of Gear Head

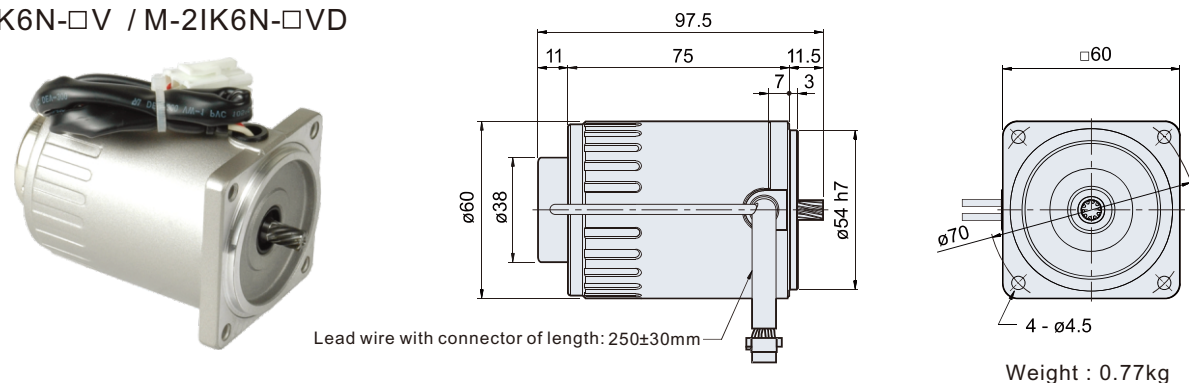
																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5N□-K□-L	Max. allowable torque(kgfcml)		6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100	100	100	100	100	100	100	100

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions. The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Speed Control Motors 【Frame2】 【6W】

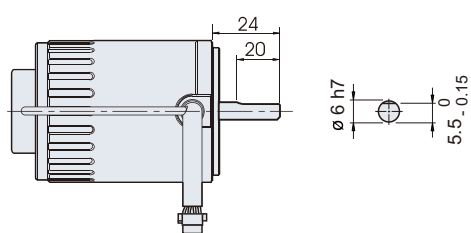
Single-phase Speed Control Motor

M-2IK6N-□V / M-2IK6N-□VD



Round Shaft Specification

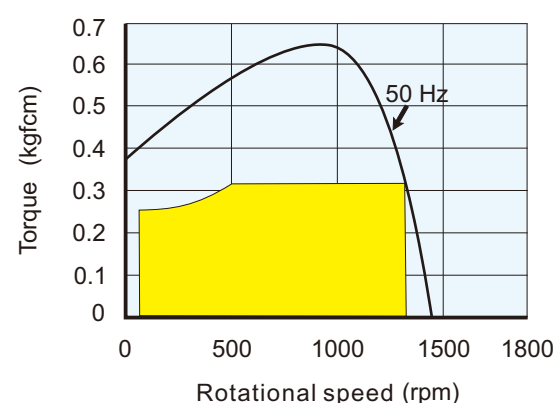
M-2IK6A-□V / M-2IK6A-□VD



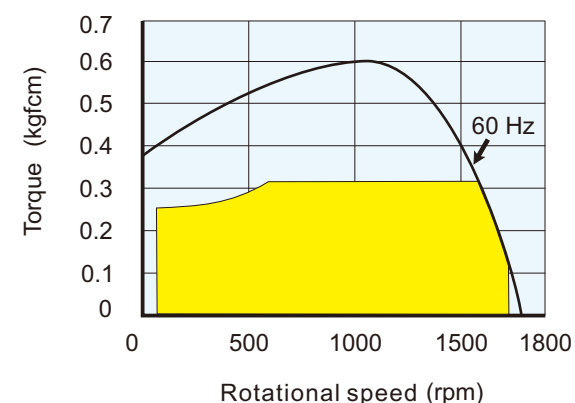
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Characteristics of Speed Control Motors

M-2IK6N-AV / M-2IK6N-AVD
M-2IK6A-AV / M-2IK6A-AVD



M-2IK6N-AV / M-2IK6N-AVD
M-2IK6A-AV / M-2IK6A-AVD

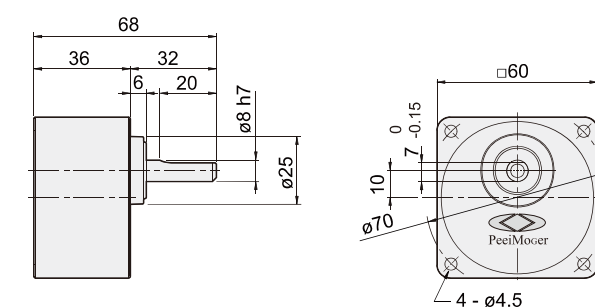


Specifications of Single-phase Speed Control Motors

Motor model	Pole	Output power (W)	Voltage (V)	Frequency (Hz)	Rated time	Variable range (rpm)	Allowable torque(kgfc)		Starting current (A)	Starting torque (kgfc)	Capacitor uF (V)	Speed controller	Coupled gear head model		
							1200	90					Metal bearing	Ball bearing	Intermediate speed ratio
M-2IK6N-AV M-2IK6N-AVD M-2IK6A-AV M-2IK6A-AVD	4	6	100~120	50	CONT.	90~1350	0.32	0.25	0.25	0.38	3.5	US-216A-A S□-216A-A□	G-2N□-L	G-2N□-K	G-2N10X-K
				60		90~1650	0.32	0.25	0.25	0.38					
M-2IK6N-CV M-2IK6N-CVD M-2IK6A-CV M-2IK6A-CVD	4	6	200~240	50	CONT.	90~1350	0.32	0.25	0.13	0.38	1.0	US-216A-C S□-216A-C□	G-2N□-L	G-2N□-K	G-2N10X-K
				60		90~1650	0.32	0.25	0.13	0.38					

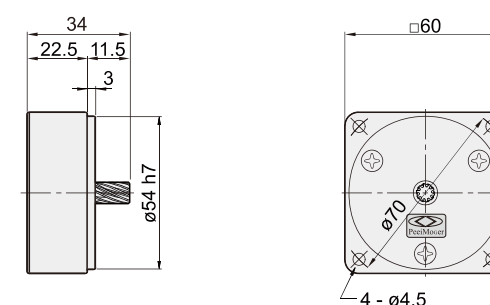
Gear Head

G-2N□-K
L



Decimal Gear Head

G-2N10X-K

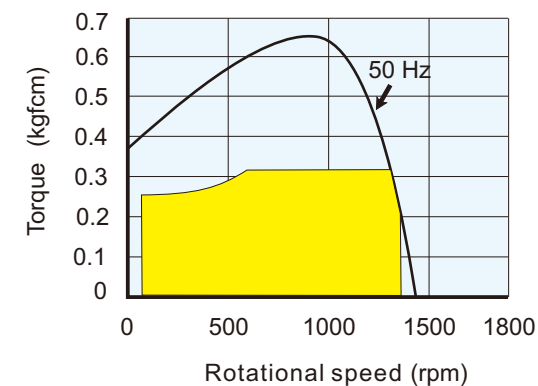


Weight List of Gear Head

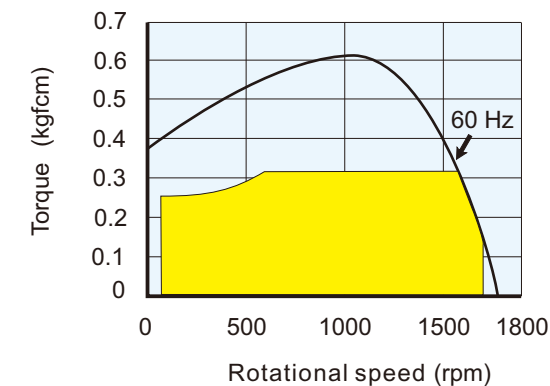
Model	Weight (kg)
G-2N3-K / L~G-2N18-K / L	0.30
G-2N20-K / L~G-2N60-K / L	0.31
G-2N75-K / L~G-2N180-K / L	0.33
G-2N10X-K	0.20

Characteristics of Speed Control Motors

M-2IK6N-CV / M-2IK6N-CVD
M-2IK6A-CV / M-2IK6A-CVD



M-2IK6N-CV / M-2IK6N-CVD
M-2IK6A-CV / M-2IK6A-CVD



Permissible Torque of Gear Head

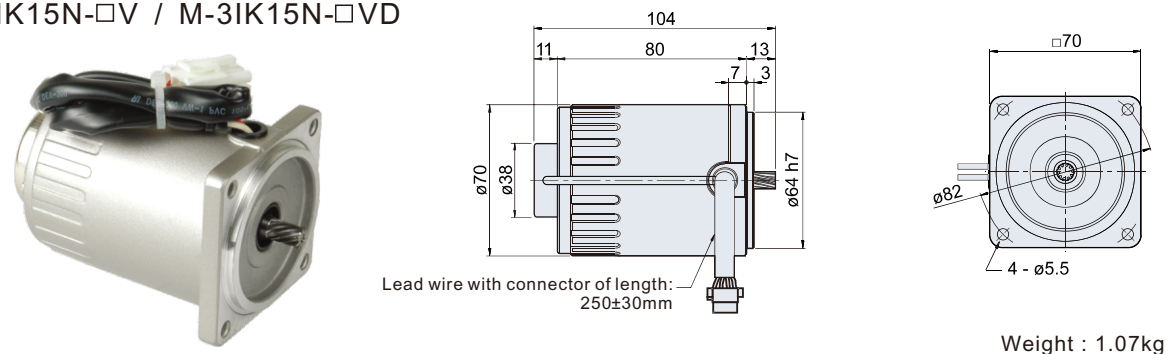
Model	Speed (rpm)	Coupled decimal gear head																			
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3
		3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500
G-2N□-K L	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500
	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600
G-2N□-K L	Max. allowable torque(kgfc)	1.0	1.6	2.5	2.7	3.4	4.1	5.0	5.4	6.7	8.1	9.7	16	23	25	25	25	25	25	25	25

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions. The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Speed Control Motors 【Frame3】 【15W】

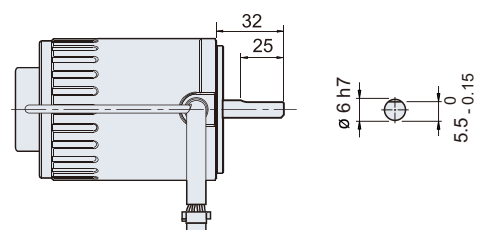
Single-phase Speed Control Motor

M-3IK15N-□V / M-3IK15N-□VD



Round Shaft Specification

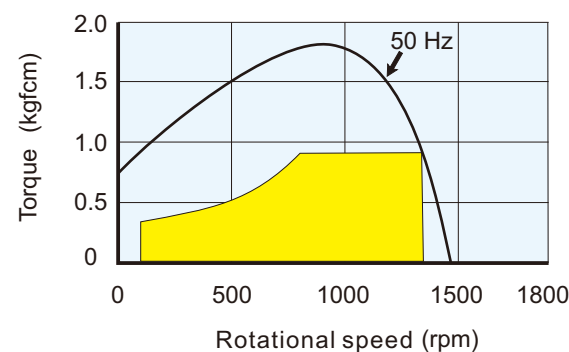
M-3IK15A-□V / M-3IK15A-□VD



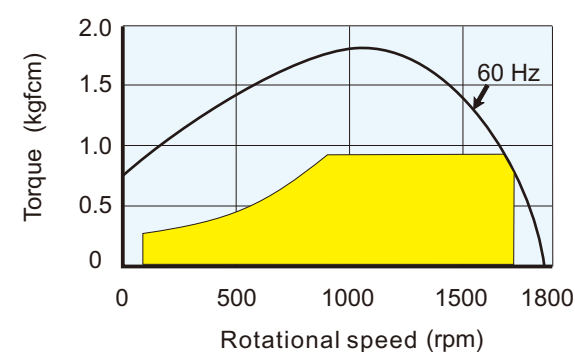
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Characteristics of Speed Control Motors

M-3IK15N-AV / M-3IK15N-AVD
M-3IK15A-AV / M-3IK15A-AVD



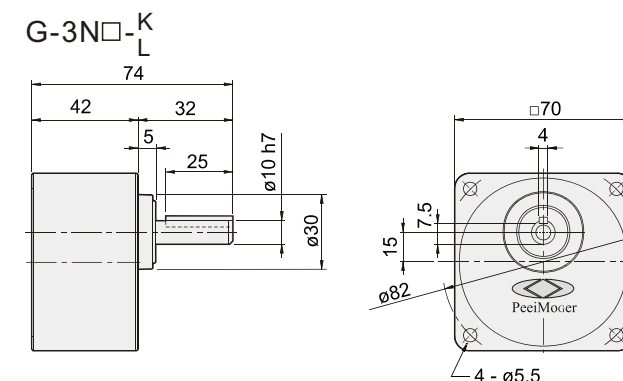
M-3IK15N-AV / M-3IK15N-AVD
M-3IK15A-AV / M-3IK15A-AVD



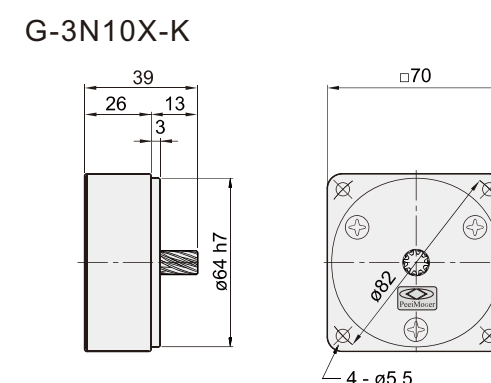
Specifications of Single-phase Speed Control Motors

Motor model	Pole	Output power (W)	Voltage (V)	Frequency (Hz)	Rated time	Variable range (rpm)	Allowable torque(kgfc)		Starting current (A)	Starting torque (kgfc)	Capacitor uF (V)	Speed controller	Coupled gear head model		
							1200	90					Metal bearing	Ball bearing	Intermediate speed ratio
M-3IK15N-AV M-3IK15N-AVD M-3IK15A-AV M-3IK15A-AVD	4	15	100~120	50	CONT.	90~1350	0.90	0.29	0.60	0.75	6.0	US-3I15A-A S□-2I6A-A□	G-3N□-L	G-3N□-K	G-3N10X-K
				60		90~1650	0.90	0.29	0.57	0.75					
M-3IK15N-CV M-3IK15N-CVD M-3IK15A-CV M-3IK15A-CVD	4	15	200~240	50	CONT.	90~1350	0.90	0.29	0.30	0.75	1.6	US-3I15A-C S□-2I6A-C□	G-3N□-L	G-3N□-K	G-3N10X-K
				60		90~1650	0.90	0.29	0.28	0.75					

Gear Head

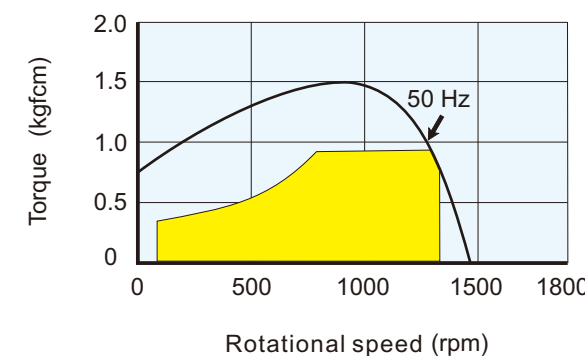


Decimal Gear Head

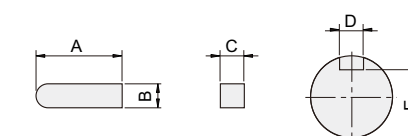


Characteristics of Speed Control Motors

M-3IK15N-CV / M-3IK15N-CVD
M-3IK15A-CV / M-3IK15A-CVD



Gear Head: Key and Key slot Dimension

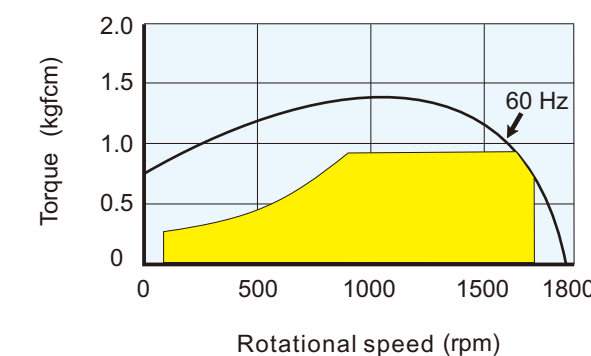


Model	A	B	C	D	E
G-3N□-K L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.15}

Weight List of Gear Head

Model	Weight (kg)
G-3N3-K / L~G-3N18-K / L	0.44
G-3N20-K / L~G-3N60-K / L	0.48
G-3N75-K / L~G-3N180-K / L	0.53
G-3N10X-K	0.32

M-3IK15N-CV / M-3IK15N-CVD
M-3IK15A-CV / M-3IK15A-CVD



Permissible Torque of Gear Head

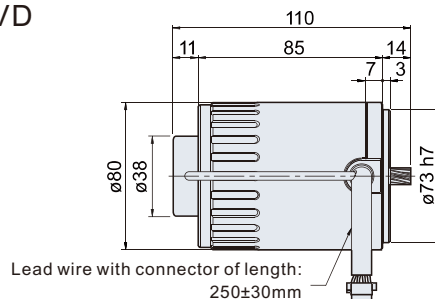
Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-3N□-K L	Max. allowable torque(kgfc _m)		2.4	4.0	6.0	6.7	8.2	10	12	13	16	19	23	39	50	50	50	50	50	50	50	50	50	50	50

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

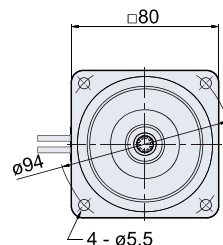
Speed Control Motors 【Frame4】 【25W】

Single-phase Speed Control Motor

M-4IK25N-□V / M-4IK25N-□VD



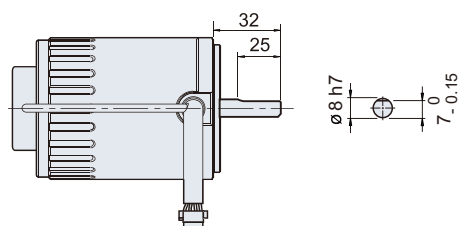
Lead wire with connector of length:
250±30mm



Weight : 1.62kg

Round Shaft Specification

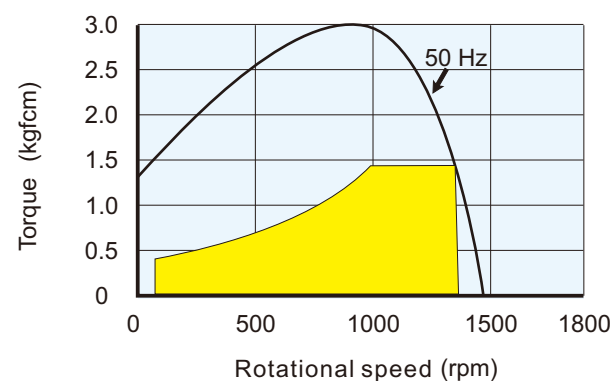
M-4IK25A-□V / M-4IK25A-□VD



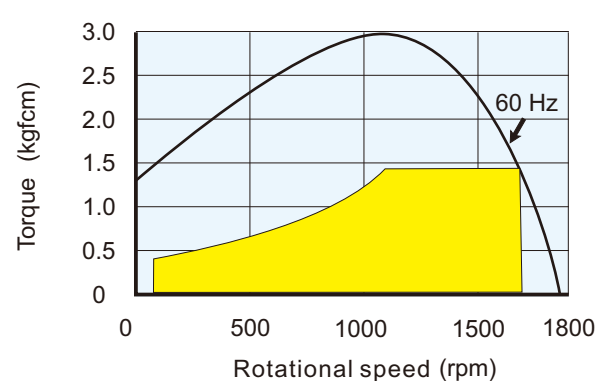
Note: For applicable machine types,
please refer to the models. We
also provide customized motors.

Characteristics of Speed Control Motors

M-4IK25N-AV / M-4IK25N-AVD
M-4IK25A-AV / M-4IK25A-AVD



M-4IK25N-AV / M-4IK25N-AVD
M-4IK25A-AV / M-4IK25A-AVD

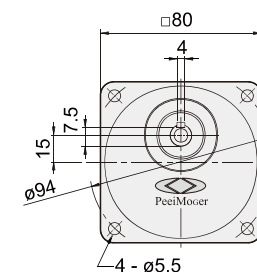
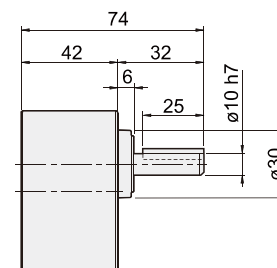


Specifications of Single-phase Speed Control Motors

Motor model	Pole	Output power (W)	Voltage (V)	Frequency (Hz)	Rated time	Variable range (rpm)	Allowable torque(kgfc)		Starting current (A)	Starting torque (kgfc)	Capacitor uF (V)	Speed controller	Coupled gear head model		
							1200	90					Metal bearing	Ball bearing	Intermediate speed ratio
M-4IK25N-AV M-4IK25N-AVD M-4IK25A-AV M-4IK25A-AVD	4	25	100~120	50	CONT.	90~1350	1.40	0.42	1.10	1.30	8.0	US-4I25A-A S□-2I6A-A□	G-4N□-L	G-4N□-K	G-4N10X-K
				60		90~1650	1.40	0.42	1.10	1.30					
M-4IK25N-CV M-4IK25N-CVD M-4IK25A-CV M-4IK25A-CVD	4	25	200~240	50	CONT.	90~1350	1.40	0.42	0.55	1.30	2.5	US-4I25A-C S□-2I6A-C□	G-4N□-L	G-4N□-K	G-4N10X-K
				60		90~1650	1.40	0.42	0.55	1.30					

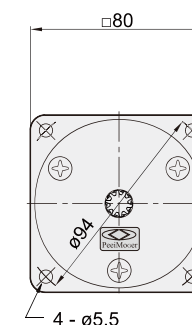
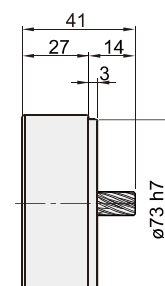
Gear Head

G-4N□-K



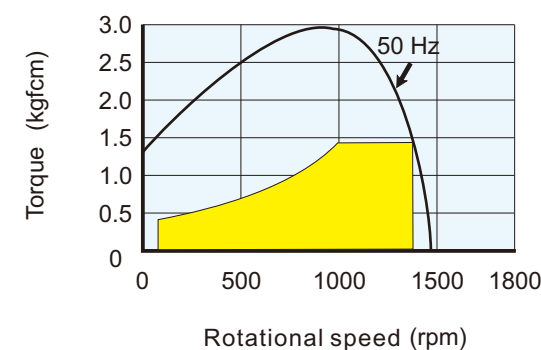
Decimal Gear Head

G-4N10X-K

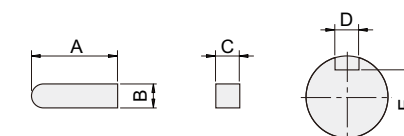


Characteristics of Speed Control Motors

M-4IK25N-CV / M-4IK25N-CVD
M-4IK25A-CV / M-4IK25A-CVD



Gear Head: Key and Key slot Dimension

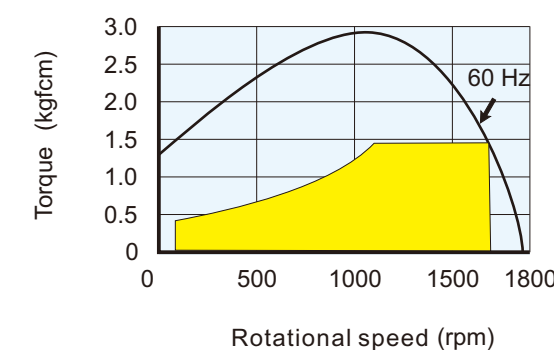


Model	A	B	C	D	E
G-4N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.15}

Weight List of Gear Head

Model	Weight (kg)
G-4N3-K / L~G-4N18-K / L	0.60
G-4N20-K / L~G-4N60-K / L	0.65
G-4N75-K / L~G-4N180-K / L	0.71
G-4N10X-K	0.41

M-4IK25N-CV / M-4IK25N-CVD
M-4IK25A-CV / M-4IK25A-CVD



Permissible Torque of Gear Head

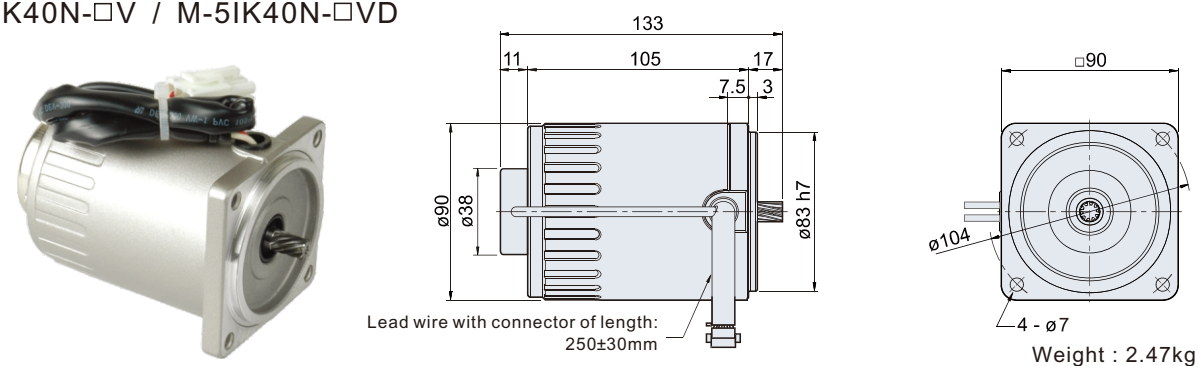
Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
G-4N□-K	Max. allowable torque(kgfc)	4.0	6.7	10	11	13	16	20	21	26	32	39	65	80	80	80	80
	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-
	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Speed Control Motors 【Frame5】 【40W】

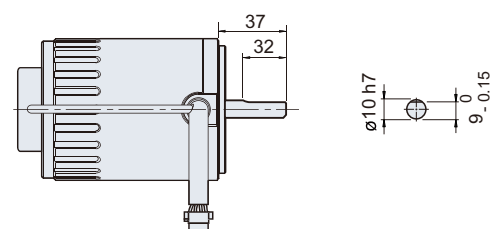
Single-phase Speed Control Motor

M-5IK40N-□V / M-5IK40N-□VD



Round Shaft Specification

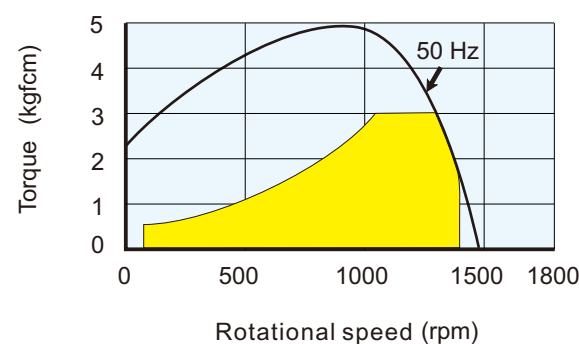
M-5IK40A-□V / M-5IK40A-□VD



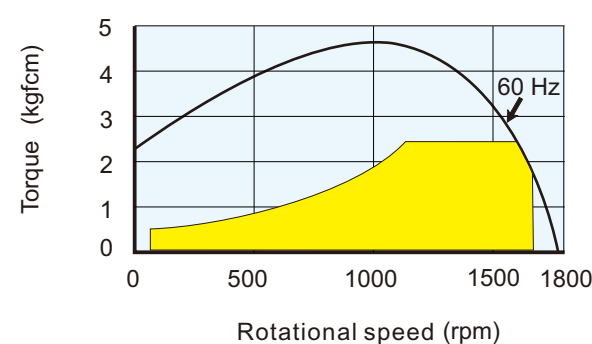
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Characteristics of Speed Control Motors

M-5IK40N-AV / M-5IK40N-AVD
M-5IK40A-AV / M-5IK40A-AVD



M-5IK40N-AV / M-5IK40N-AVD
M-5IK40A-AV / M-5IK40A-AVD

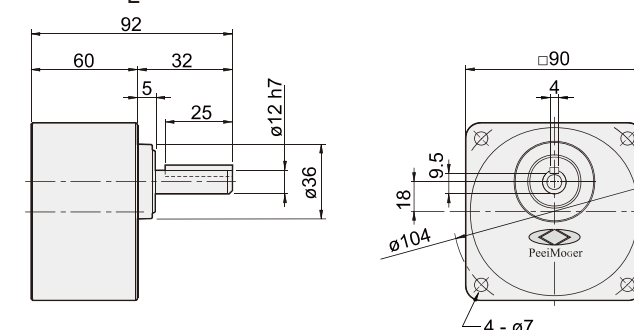


Specifications of Single-phase Speed Control Motors

Motor model	Pole	Output power (W)	Voltage (V)	Frequency (Hz)	Rated time	Variable range (rpm)	Allowable torque(kgfc)		Starting current (A)	Starting torque kgfc	Capacitor uF (V)	Speed controller	Coupled gear head model		
							1200	90					Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK40N-AV M-5IK40N-AVD M-5IK40A-AV M-5IK40A-AVD	4	40	100~120	50	CONT.	90~1350	3.00	0.50	1.60	2.30	14.0	US-5140A-A S□-216A-A□	G-5N□-L	G-5N□-K	G-5N10X-K
				60		90~1650	2.40	0.50	1.60	2.30					
M-5IK40N-CV M-5IK40N-CVD M-5IK40A-CV M-5IK40A-CVD	4	40	200~240	50	CONT.	90~1350	3.00	0.50	0.80	2.30	3.5	US-5140A-C S□-216A-C□	G-5N□-L	G-5N□-K	G-5N10X-K
				60		90~1650	2.40	0.50	0.80	2.30					

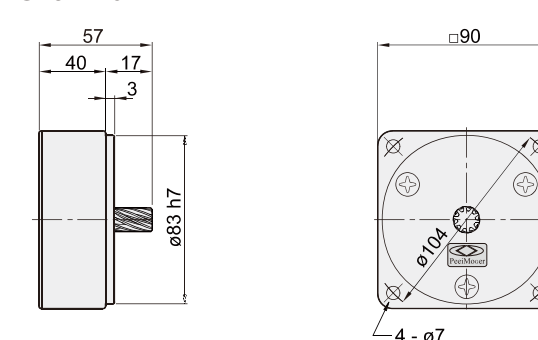
Gear Head

G-5N□-K
L

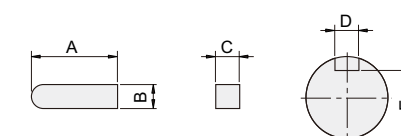


Decimal Gear Head

G-5N10X-K



Gear Head: Key and Key slot Dimension



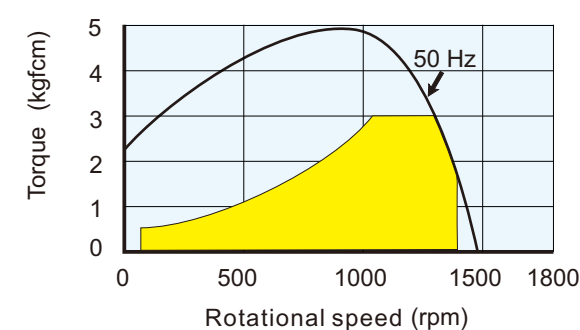
Model	A	B	C	D	E
G-5N□-K L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Weight List of Gear Head

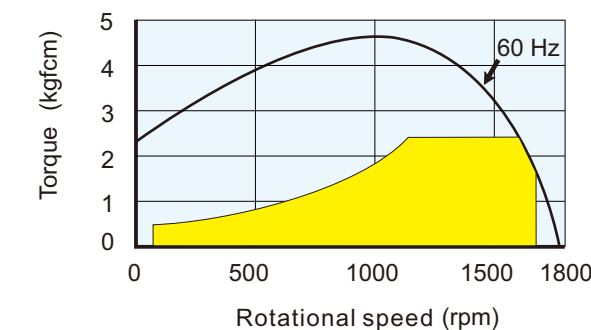
Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

Characteristics of Speed Control Motors

M-5IK40N-CV / M-5IK40N-CVD
M-5IK40A-CV / M-5IK40A-CVD



M-5IK40N-CV / M-5IK40N-CVD
M-5IK40A-CV / M-5IK40A-CVD



Permissible Torque of Gear Head

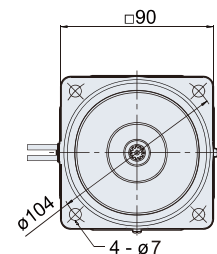
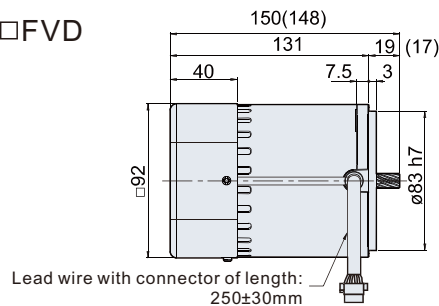
Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
G-5N□-K L	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-
	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
Max. allowable torque(kgfc)		6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Speed Control Motors 【Frame5】 【60W】

Single-phase Speed Control Motor

M-5IK60^N_U-□FV / M-5IK60^N_U-□FVD

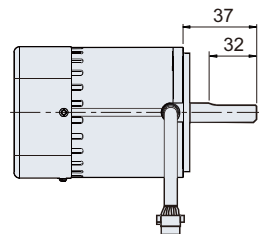


Weight : 2.62kg

- The dimensions inside the brackets belong to N-type gear shafts, which are coupled to those of the gear head and the intermediate gear head, and should match with G-5N□-K.
- When forced cooling fan is used, total length increased by 20mm

Round Shaft Specification

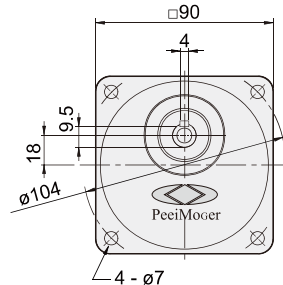
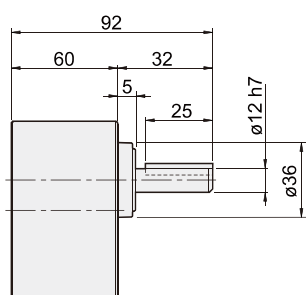
M-5IK60A-□FV / M-5IK60A-□FVD



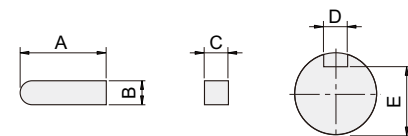
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Gear Head

G-5N□-K_L



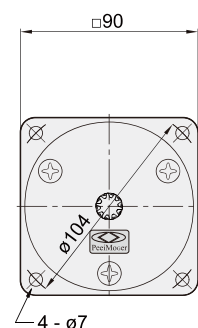
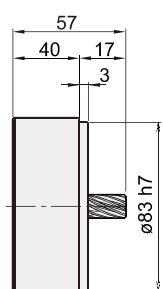
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K _L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Decimal Gear Head

G-5N10X-K

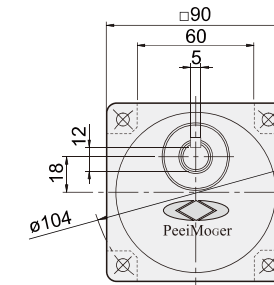
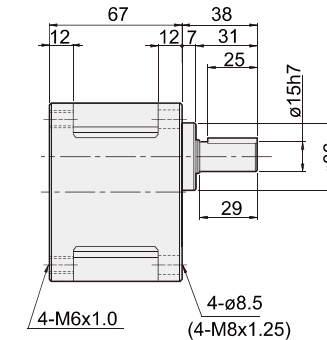


Weight List of Gear Head

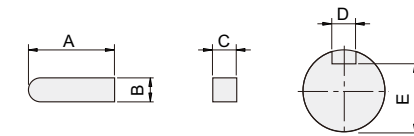
Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

Gear Head

G-5U□-K



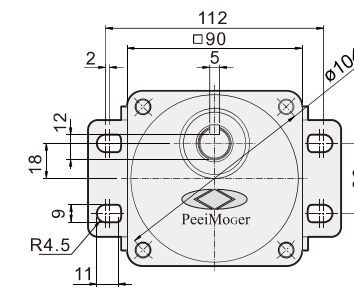
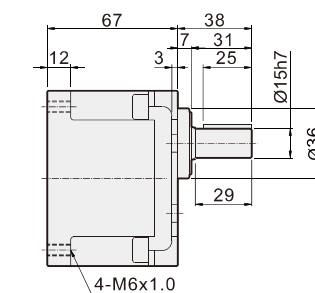
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

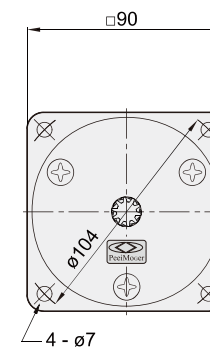
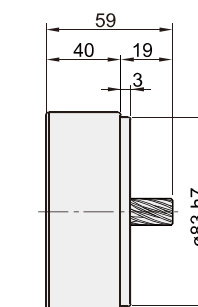
Gear Head with Mounting Brackets

G-5U□-KF



Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

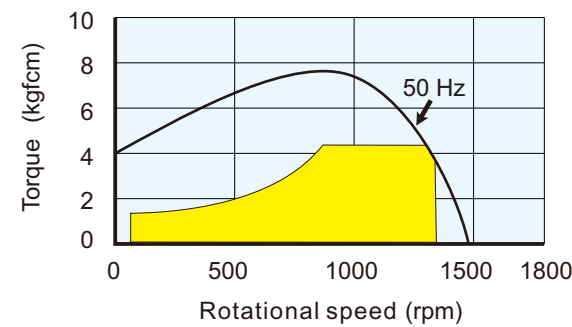
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73
G-5U10X-K	0.64

Specifications of Motors

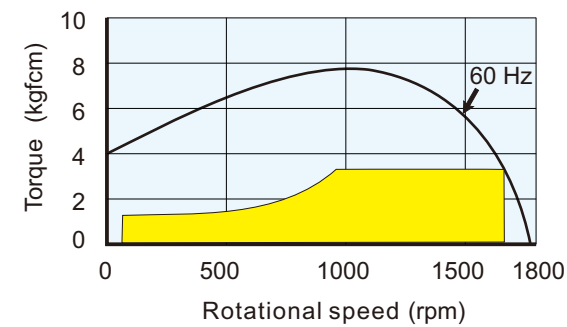
Motor model	Pole	Output power W	Voltage V	Frequency Hz	Rated time	Variable range rpm	Allowable torque(kgfc)		Starting current A	Starting torque kgfc	Capacitor uF V	Speed controller	Coupled gear head model		
							1200	90					Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK60 ^N _U -AFV M-5IK60 ^N _U -AFVD M-5IK60A-AFV M-5IK60A-AFVD	4	60	100~120	50 60	CONT.	90~1350 90~1650	4.30 3.60	1.20 1.20	2.60 2.50	4.00 4.00	20.0	US-5160A-A S□-216A-A□	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
M-5IK60 ^N _U -CFV M-5IK60 ^N _U -CFVD M-5IK60A-CFV M-5IK60A-CFVD	4	60	200~240	50 60	CONT.	90~1350 90~1650	4.30 3.60	1.20 1.20	1.30 1.20	4.00 4.00	5.0	US-5160A-C S□-216A-C□			

Characteristics of Speed Control Motors

M-5IK60^N-AFV / M-5IK60^N-AFVD
M-5IK60A-AFV / M-5IK60A-AFVD

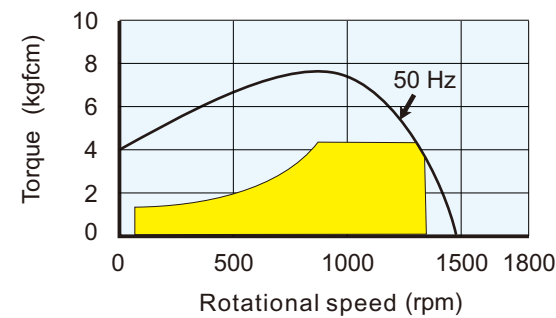


M-5IK60^N-AFV / M-5IK60^N-AFVD
M-5IK60A-AFV / M-5IK60A-AFVD

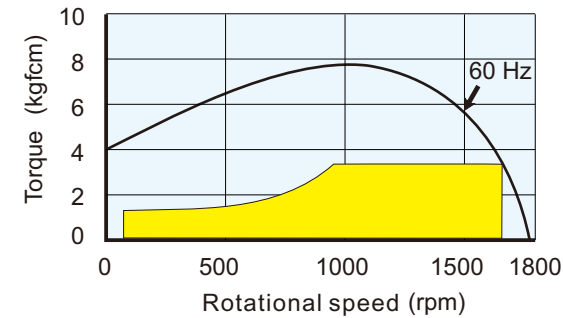


Characteristics of Speed Control Motors

M-5IK60^N-CFV / M-5IK60^N-CFVD
M-5IK60A-CFV / M-5IK60A-CFVD



M-5IK60^N-CFV / M-5IK60^N-CFVD
M-5IK60A-CFV / M-5IK60A-CFVD



Permissible Torque of Gear Head

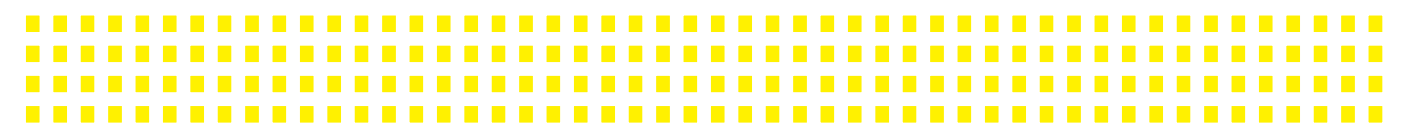
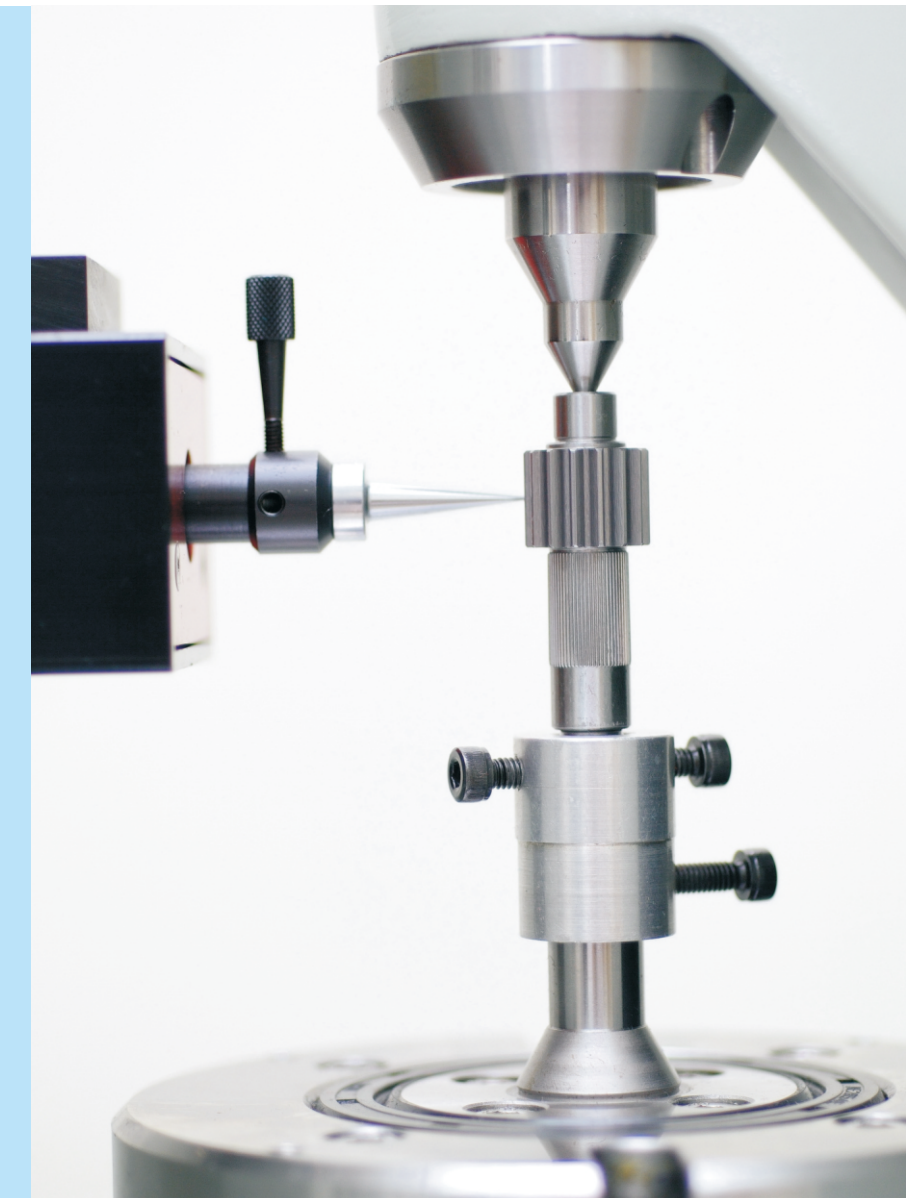
		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5N□-K	Max. allowable torque(kgfcm)	6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5U□-K	Max. allowable torque(kgfcm)	10	16	24	27	32	40	48	54	64	77	93	155	200	200	200	200

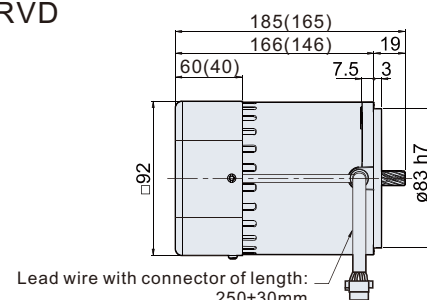
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



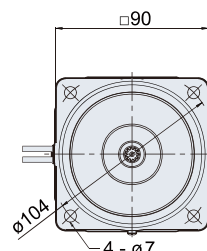
Speed Control Motors 【Frame5】 【90W】

Single-phase Speed Control Motor

M-5IK90U-□RV / M-5IK90U-□RVD



Lead wire with connector of length: 250±30mm

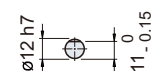
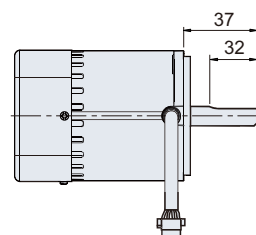


Weight : 3.22kg

The size inside brackets is for general fan, non-standard product

Round Shaft Specification

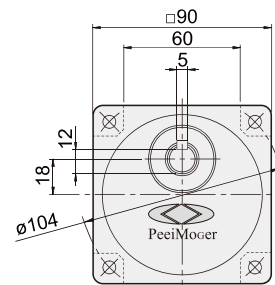
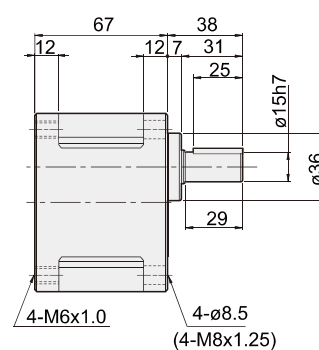
M-5IK90A-□RV / M-5IK90A-□RVD



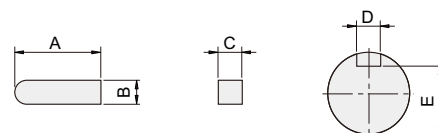
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Gear Head

G-5U□-K



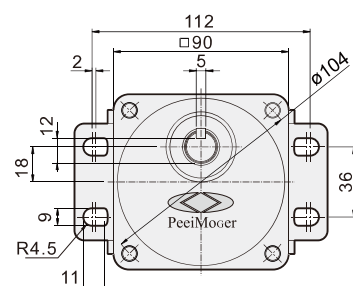
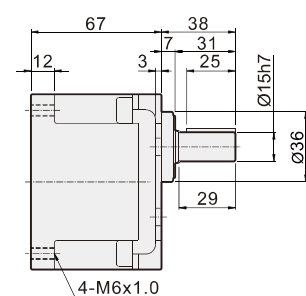
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head with Mounting Brackets

G-5U□-KF

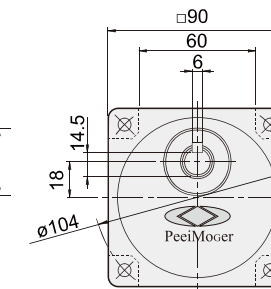
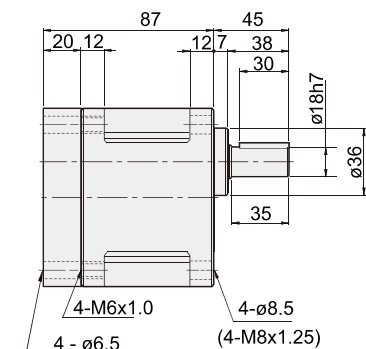


Weight List of Gear Head

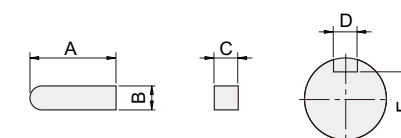
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-KH



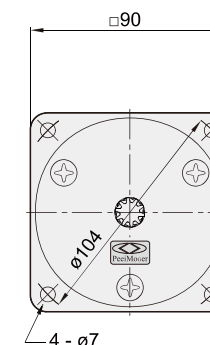
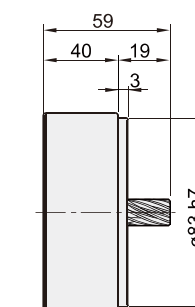
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

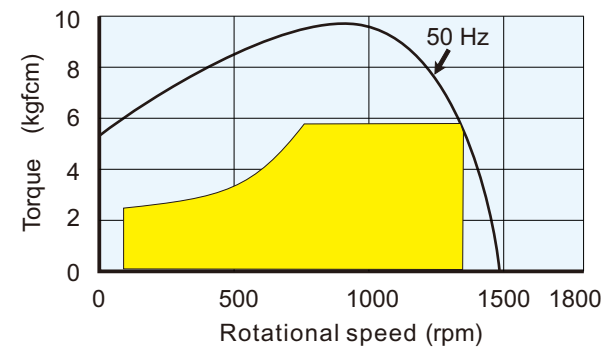
Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Speed Control Motors

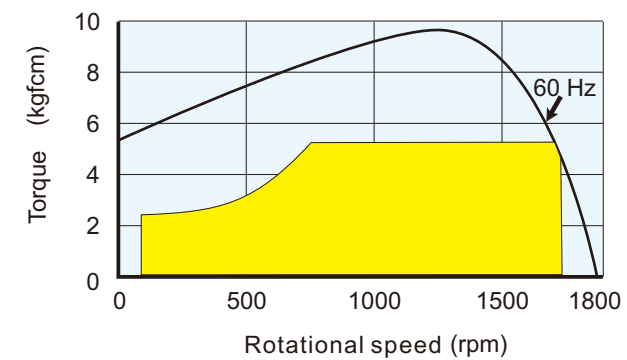
Motor model	Pole	Output power (W)	Voltage (V)	Frequency (Hz)	Rated time	Variable range (rpm)	Allowable torque(kgfc)		Starting current (A)	Starting torque (kgfc)	Capacitor uF (V)	Speed controller	Coupled gear head model		
							1200	90					Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK90U-ARV M-5IK90U-ARVD M-5IK90A-ARV M-5IK90A-ARVD	4	90	100~120	50	CONT.	90~1350	5.80	2.40	3.00	5.30	28.0	US-5I90A-A S□-2I6A-A□	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
M-5IK90U-CRV M-5IK90U-CRVD M-5IK90A-CRV M-5IK90A-CRVD	4	90	200~240	50	CONT.	90~1350	5.80	2.40	1.50	5.30	7.0	US-5I90A-C S□-2I6A-C□			

Characteristics of Speed Control Motors

M-5IK90U-ARV / M-5IK90U-ARVD
M-5IK90A-ARV / M-5IK90A-ARVD

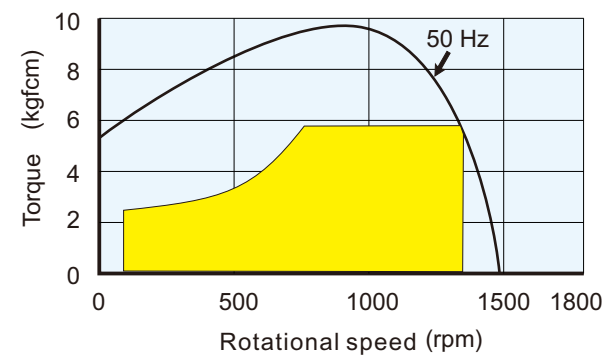


M-5IK90U-ARV / M-5IK90U-ARVD
M-5IK90A-ARV / M-5IK90A-ARVD

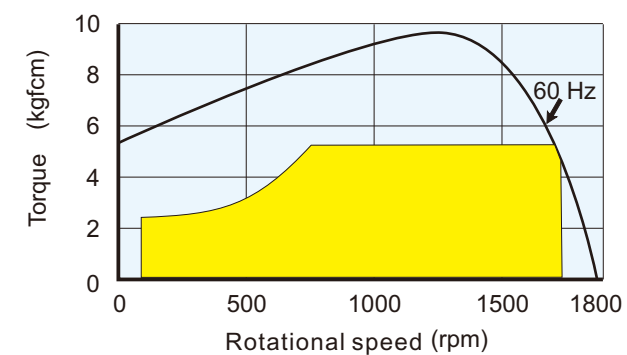


Characteristics of Speed Control Motors

M-5IK90U-CRV / M-5IK90U-CRVD
M-5IK90A-CRV / M-5IK90A-CRVD

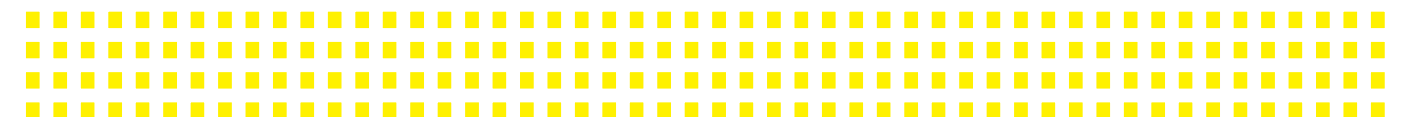


M-5IK90U-CRV / M-5IK90U-CRVD
M-5IK90A-CRV / M-5IK90A-CRVD



Permissible Torque of Gear Head

Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□-K	Max. allowable torque(kgfc)	14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200	200	200	200	200	200	200	200	



Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

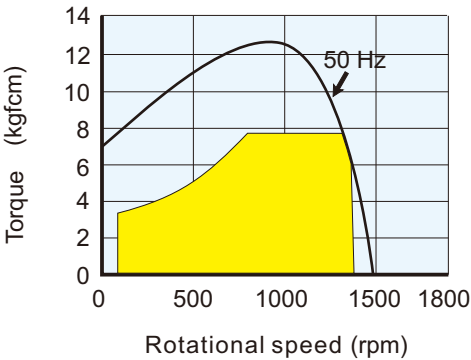
Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□-KH	Max. allowable torque (kgfcm)		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300	300	-	-	300	300	300	300

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

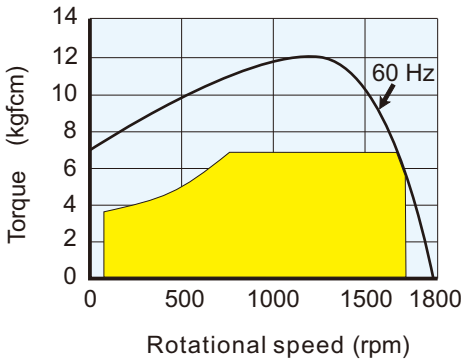
Motor model	Pole	Output power (W)	Voltage (V)	Frequency (Hz)	Rated time	Variable range (rpm)	Allowable torque(kgfc·m)		Starting current (A)	Starting torque (kgfc·m)	Capacitor μF (V)	Speed controller	Coupled gear head model		
							1200	90					Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK120U-ARV M-5IK120U-ARVD M-5IK120A-ARV M-5IK120A-ARVD	4	120	100~120	50	CONT.	90~1350	7.70	3.20	4.00	7.00	30.0	US-5H120A-A S□-2I6A-A□	—	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
			60	90~1650		7.30	3.20	4.00	7.00						
M-5IK120U-CRV M-5IK120U-CRVD M-5IK120A-CRV M-5IK120A-CRVD	4	120	200~240	50	CONT.	90~1350	7.70	3.30	2.00	7.00	8.0	US-5H120A-C S□-2I6A-C□			
			60	90~1650		7.30	3.20	2.00	7.00						

Characteristics of Speed Control Motors

M-5IK120U-ARV / M-5IK120U-ARVD
M-5IK120A-ARV / M-5IK120A-ARVD

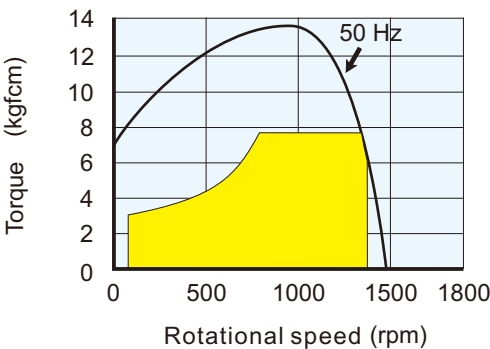


M-5IK120U-ARV / M-5IK120U-ARVD
M-5IK120A-ARV / M-5IK120A-ARVD

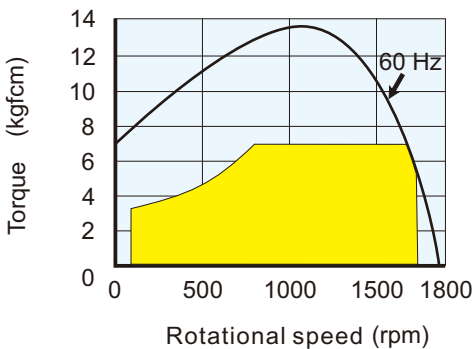


Characteristics of Speed Control Motors

M-5IK120U-CRV / M-5IK120U-CRVD
M-5IK120A-CRV / M-5IK120A-CRVD



M-5IK120U-CRV / M-5IK120U-CRVD
M-5IK120A-CRV / M-5IK120A-CRVD



Permissible Torque of Gear Head

Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□-K	Max. allowable torque(kgfc ^m)		14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200	200	200	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□-KH	Max. allowable torque(kgfcm)		-	-	-	-	-	-	-	-	-	-	216	300	300	300	300	300	300	-	-	300	300	300	300

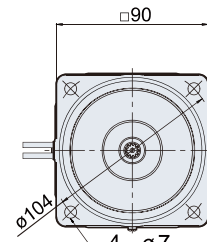
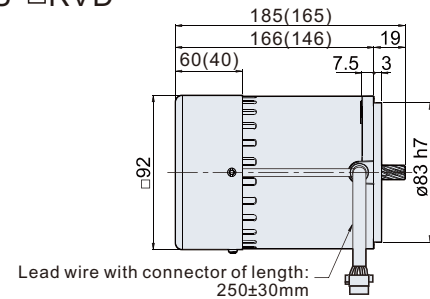
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Speed Control Motors 【Frame5】 【150W】

Single-phase Speed Control Motor

M-5IK150U-□RV / M-5IK150U-□RVD

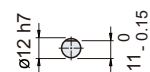
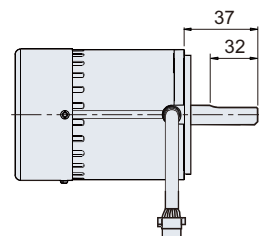


Weight : 3.22kg

· The size inside brackets is for general fan, non-standard product

Round Shaft Specification

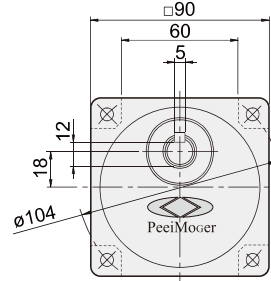
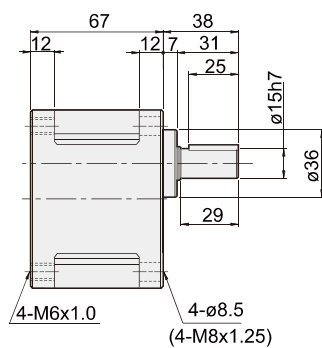
M-5IK150A-□RV / M-5IK150A-□RVD



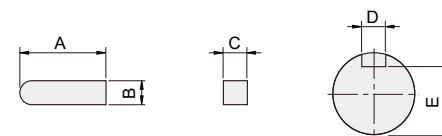
Note: For applicable machine types, please refer to the models. We also provide customized motors.

Gear Head

G-5U□-K



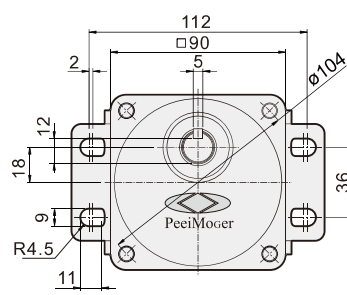
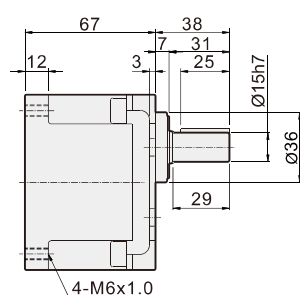
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head with Mounting Brackets

G-5U□-KF

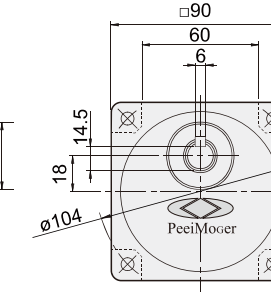
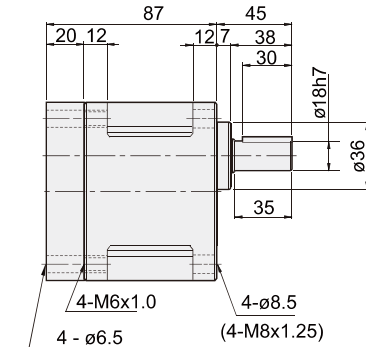


Weight List of Gear Head

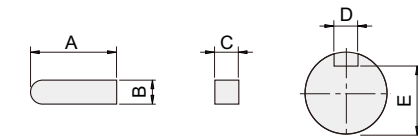
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-KH



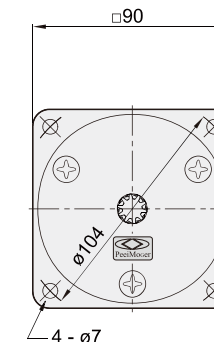
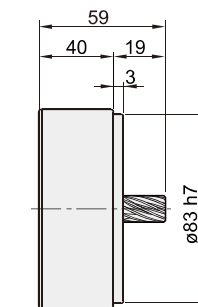
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

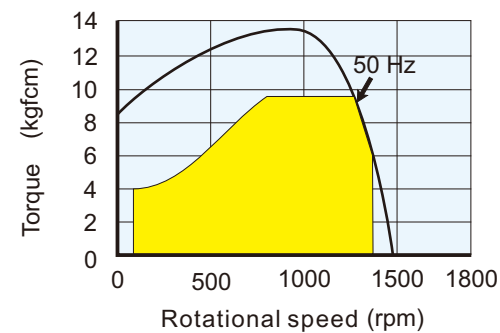
Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

Specifications of Single-phase Speed Control Motors

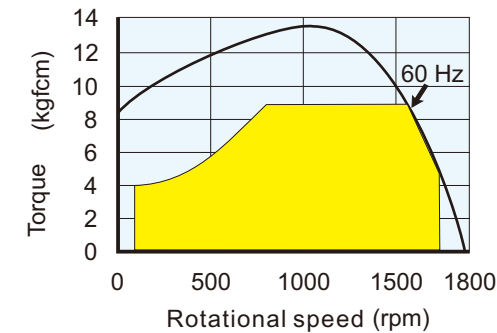
Motor model	Pole	Output power (W)	Voltage (V)	Frequency (Hz)	Rated time	Variable range (rpm)	Allowable torque(kgfc)		Starting current (A)	Starting torque (kgfc)	Capacitor uF (V)	Speed controller	Coupled gear head model		
							1200	90					Metal bearing	Ball bearing	Intermediate speed ratio
M-5IK150U-ARV M-5IK150U-ARVD M-5IK150A-ARV M-5IK150A-ARVD	4	150	100~120	50	CONT.	90~1350	9.50	4.00	5.00	8.50	38.0	US-51150A-A S□-216A-A□	—	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
M-5IK150U-CRV M-5IK150U-CRVD M-5IK150A-CRV M-5IK150A-CRVD	4	150	200~240	50	CONT.	90~1350	9.50	4.00	2.50	8.50	9.0	US-51150A-C S□-216A-C□			

Characteristics of Speed Control Motors

M-5IK150U-ARV / M-5IK150U-ARVD
M-5IK150A-ARV / M-5IK150A-ARVD

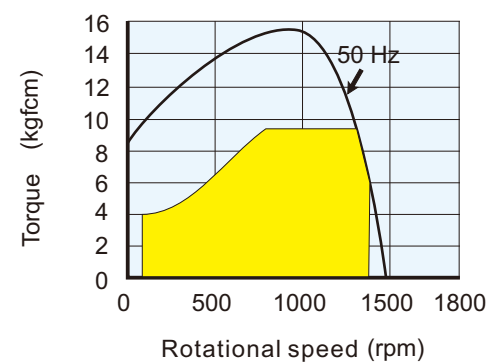


M-5IK150U-ARV / M-5IK150U-ARVD
M-5IK150A-ARV / M-5IK150A-ARVD

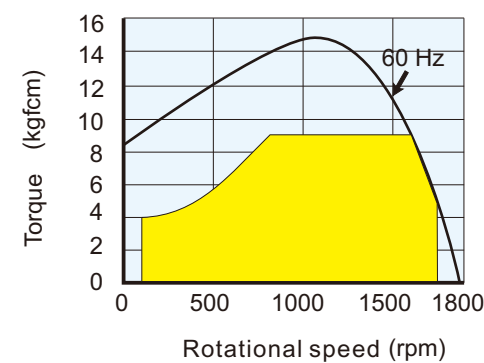


Characteristics of Speed Control Motors

M-5IK150U-CRV / M-5IK150U-CRVD
M-5IK150A-CRV / M-5IK150A-CRVD



M-5IK150U-CRV / M-5IK150U-CRVD
M-5IK150A-CRV / M-5IK150A-CRVD



Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
G-5U□-K	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
	Max. allowable torque(kgfcm)	14	23	35	38	46	58	69	77	92	111	133	200	200	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Permissible Torque of Gear Head

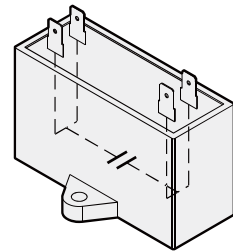
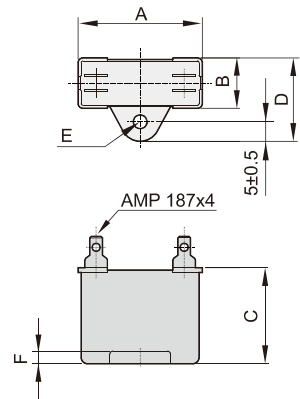
		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
G-5U□-KH	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200
	Max. allowable torque(kgfcm)	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300	300

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

General Motor Connection Diagram

Specification	Connection Diagram
Single-phase induction motor Single-phase torque induction motor Single-phase reversible induction motor	
Three-phase induction motor	
Electromagnetic brake motor (single-phase/three-phase)	
Electromagnetic clutch brake motor	
Speed control motor	For the electrical chart of speed control motors, please refer to page 172
Induction motors with Terminal Box Type	Motors with Terminal Box Type include the above types.

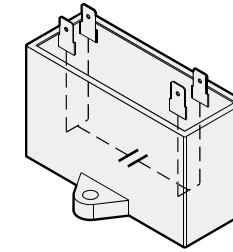
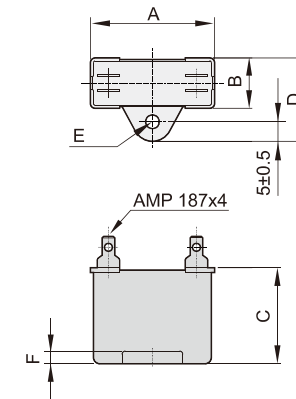
Dimension Table of Capacitors



Internal connection diagram of capacitors with 4 terminals
The connection mode inside the capacitor terminal is as shown.
Connect the lead wire to the terminal by one-to-one.

Unit : mm

Number uF (V)	Standard Specifications					
	Length A	Width B	Height C	Total width D	Aperture E	Thickness F
2.5(250V)	37	14	23	24	4.4	4
3(250V)	37	12.5	22	22.5	4.2	5
3.5(250V)	37	14	23	24	4.4	4
4(250V)	37	13	24	23	4.2	5
5(250V)	38	17	26	27	4.2	5
6(250V)	38	17	26	27	4.2	5
7(250V)	38	20	29	30	4.2	5
8(250V)	38	20	29	30	4.2	5
10(250V)	38	20	29	30	4.2	5
12(250V)	48	19	29	29	4.4	5
14(250V)	49	21	31.5	31	4.4	5
16(250V)	50	22	35	32	4.4	4.5
18(250V)	50	22	35	32	4.4	4.5
20(250V)	59	23	35	33	4.4	4.2
25(250V)	59	23	35	33	4.4	4.2
28(250V)	57.5	25	39	35	4.5	4.2
30(250V)	59	30	40	40	4.5	5
32(250V)	59	40	40	50	4.5	5
36(250V)	59	30	40	40	4.5	5
38(250V)	59	40	40	50	4.6	4.1
40(250V)	59	40	40	50	4.6	4.1
42(250V)	59	38	52	48	4.5	5



Internal connection diagram of capacitors with 4 terminals
The connection mode inside the capacitor terminal is as shown.
Connect the lead wire to the terminal by one-to-one.

Unit : mm

Number uF (V)	Standard Specifications					
	Length A	Width B	Height C	Total width D	Aperture E	Thickness F
0.6(450V)	37	14	23	24	4.4	4
0.8(450V)	37	12.5	22	22.5	4.2	5
1(450V)	37	12.5	22	22.5	4.2	5
1.2(450V)	37	14	23	24	4.4	4
1.5(450V)	37	14	23	24	4.4	4
1.6(450V)	37	15	24	25	4.2	4.5
2(450V)	38	17	26	27	4.2	5
2.3(450V)	38	20	29	30	4.2	5
2.5(450V)	38	20	29	30	4.2	5
3(450V)	38	20	29	30	4.2	5
3.5(450V)	48	17	27	27	4.4	5
4(450V)	48	19	29	29	4.4	5
5(450V)	49	21	31.5	31	4.4	5
6(450V)	50	22	35	32	4.4	4.5
7(450V)	59	23	35	33	4.4	4.2
8(450V)	59	23	35	33	4.4	4.2
9(450V)	57.5	25	39	35	4.5	4.2
10(450V)	59	30	40	40	4.5	5
12(450V)	60	33	43	43	4.5	5



Specifications of Inverter

HMD - 250 C

Vector inverter

Can be kept to 250W

C: 1 ϕ 200V—230V(50/60Hz)
3 ϕ 200V—230V(50/60Hz)

Note : can only be used with three-phase inverter motors of 200V-230V

產品特點

Product Feature

• 優越的性能

- 1) 低轉速高扭力
- 2) 數位轉速
- 3) 數位轉矩
- 4) 可與電腦連線控制
- 5) 可使用單相電源輸入

• 向量變頻器功能介紹

- 1) 觸控式面板-打破傳統機械按鈕且可飛梭調整。
- 2) 數位轉速控制功能-可依需要的馬達轉速直接設定RPM，傳統變頻器只能用頻率控制。
- 3) 轉矩可調整-轉矩可依實際所需扭力調整，可外接VR控制。
- 4) 剎車停止時間可調整-馬達停止時間可由驅動器做變化（急停、緩衝停止、剎車停止時間可調整）。
- 5) 可多段速度設定-內建八個接點做速度控制。

• Performance

- 1) Low speed high torque
- 2) CNC Speed
- 3) CNC Torque
- 4) Can be connected with computer control
- 5) Can use the single-phase power input

• Customer Satisfaction

- 1) Touch Panel - to break the traditional mechanical buttons and can be adjusted Shuttle
- 2) Digital speed control function - Ke Yi need to set the motor speed directly to PRM, the traditional inverter frequency control can only be used
- 3) Torque adjustable - torque Ke Yi actual torque required to adjust to external VR Control
- 4) Brake Stop Time adjustable - motor stop time can change the drive to do
- 5) Can be multi-stage speed setting - Built-in 8-contact speed control to do

Specifications of Inverter Motor Models

MI - 6 200 U-2 R □

Machine Type

Frame No.

Output power

Shaft

Voltage

Fan

Accessory

Inverter Motor

4 : Frame 4
5 : Frame 5
6 : Frame 6

025 : 25W
040 : 40W
060 : 60W
090 : 90W
120 : 120W
150 : 150W
200 : 200W

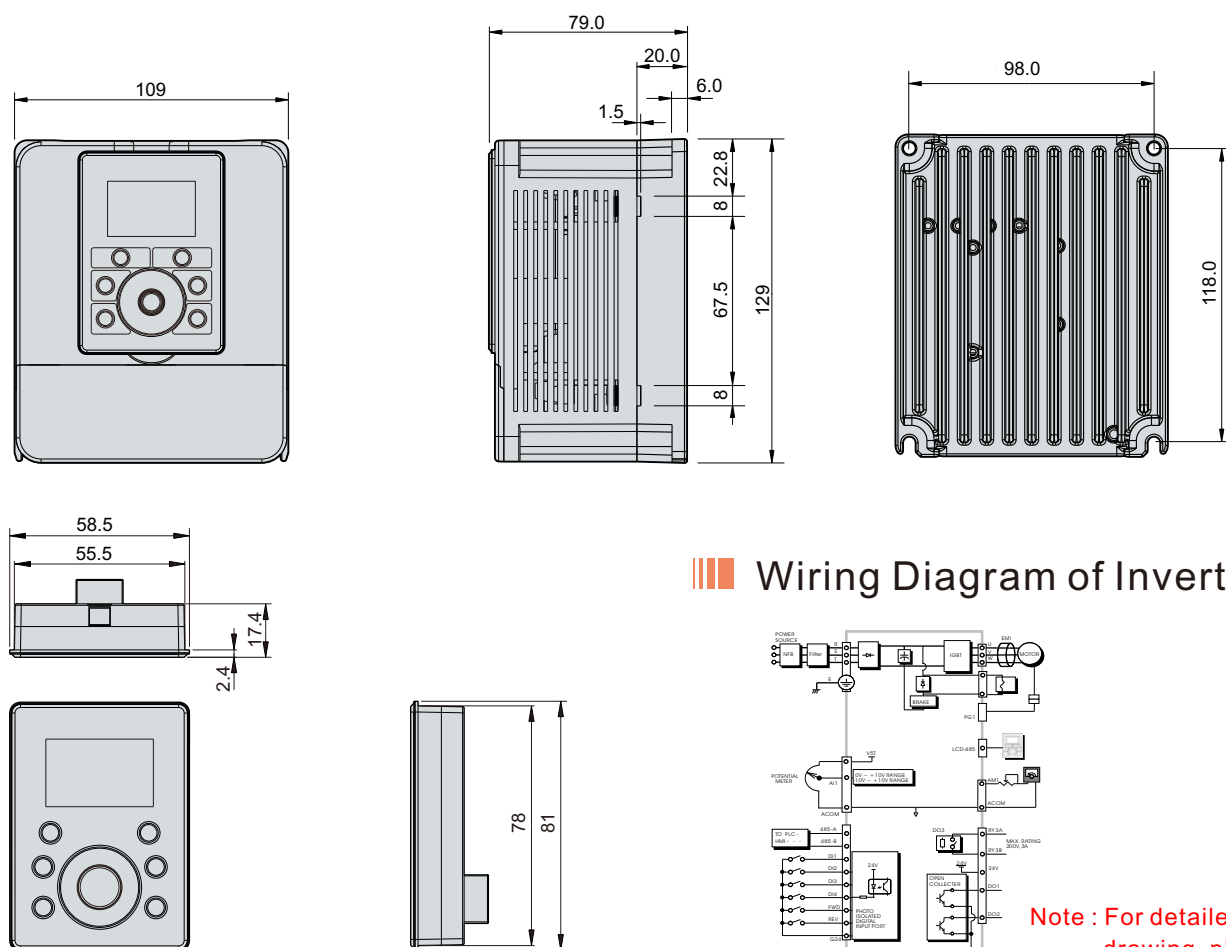
2 : 3 ϕ 200V~230V
3 : 3 ϕ 340V~400V
4 : 3 ϕ 415V~460V

Forced cooling fan

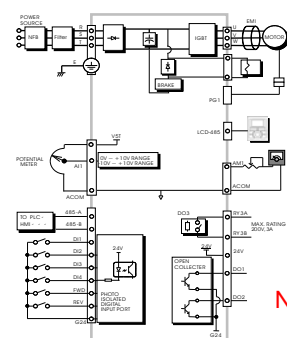
N : General helical gear
U : Strengthened helical gear
A : Round shaft

T : Terminal box
W : Worm reducer
P : Temperature switch

Dimensions of Inverter (HMD-250C)



Wiring Diagram of Inverter



Note : For detailed enlarged drawing, please refer to page 249.

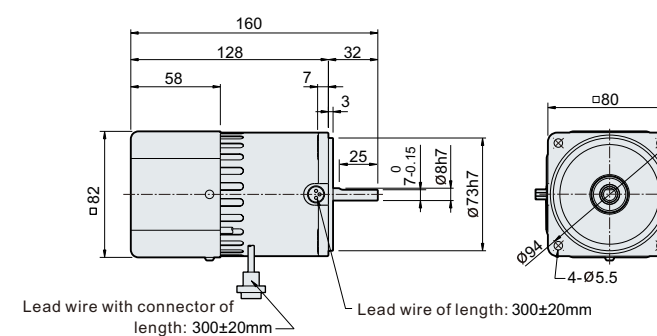
Characteristics of Inverter Motors

Frame No.	4	5	5	5	5	5	6
Rated output (W)	25	40	60	90	120	150	200
Starting torque (KgfcM)	2.30	3.70	5.6	8.4	11.0	14.0	18.0
Starting current A (single-phase)	0.10	0.18	0.26	0.40	0.55	0.65	0.88
Starting current A (tri-phase)	0.07	0.12	0.15	0.22	0.30	0.35	0.50
Maximum instant torque (kgfcM)	5.80	9.00	14.0	21.0	28.0	35.0	45.0
Maximum instant current A (single-phase)	0.80	1.20	1.80	2.70	3.60	4.50	5.80
Maximum instant current A (three-phase)	0.35	0.50	0.85	1.25	1.68	2.10	2.80
Protection mode	Full cut-off, enforced cooling IP22						
Applicable humidity	20-90% RH (no condensation)						
Class of insulation	B 130°C						
Heat protection	Thermal protector (optional)						
Speed range (rpm)	0-3600						
Cooling method	Forced cooling fan						
Weight (kg)	1.8	2.9	2.9	3.5	3.5	3.5	5.3

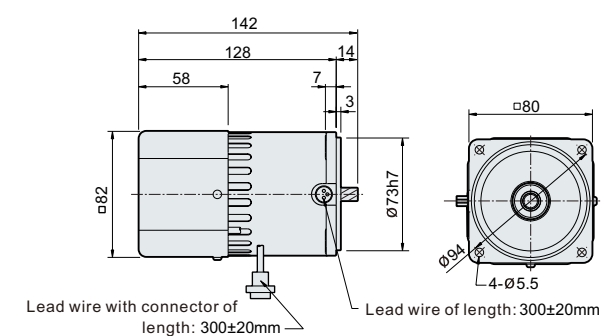
Dimensions of Inverter Motors

- ◆ Inverter Motor Frame 4 25W

MI-4025A-□R□

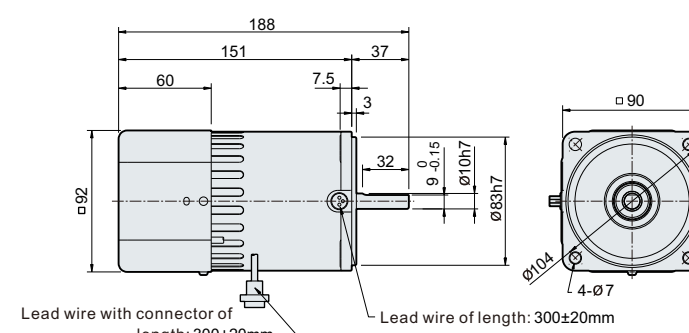


MI-4025N-□R□

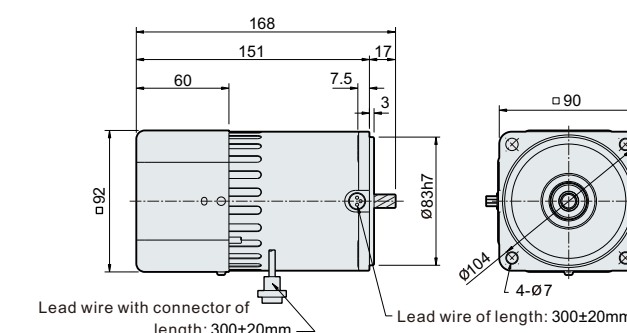


- ◆ Inverter Motor Frame 5 40W

MI-5040A-□R□

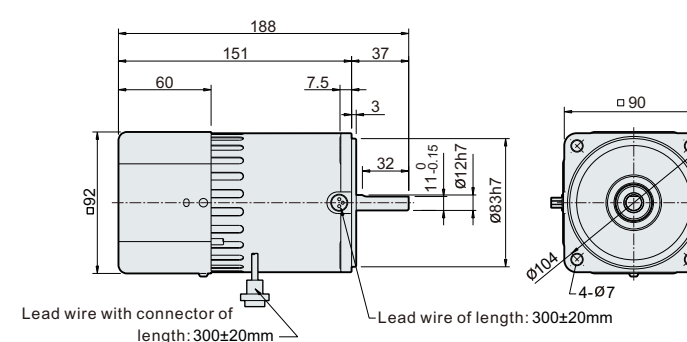
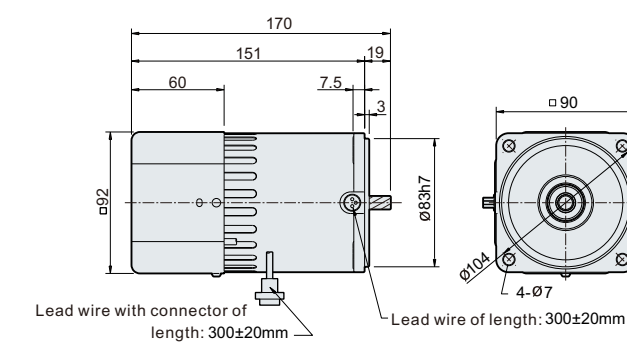


MI-5040N-□R□



- ◆ Inverter Motor Frame 5 60W

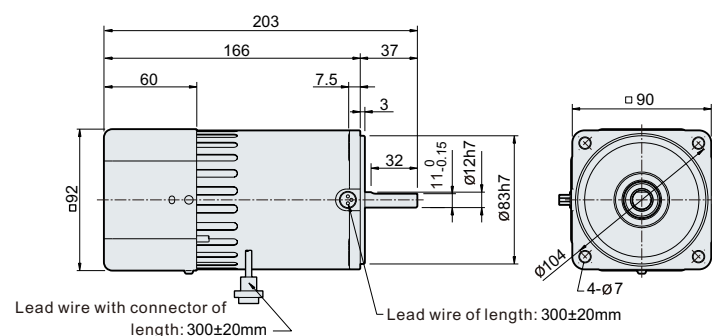
MI-5060A-□R□

MI-5060_U^N-□R□

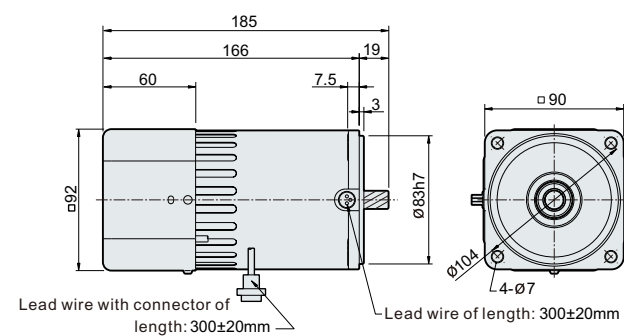
Note: If you use the inverter, Installing the sine wave filter on the inverter output side

◆ Inverter Motor Frame 5 90W~150W

MI-5090A-□R□~MI-5150A-□R□

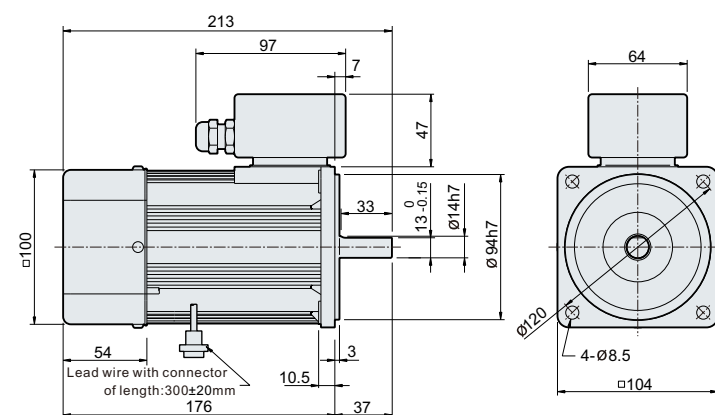


MI-5090U-□R□~MI-5150U-□R□

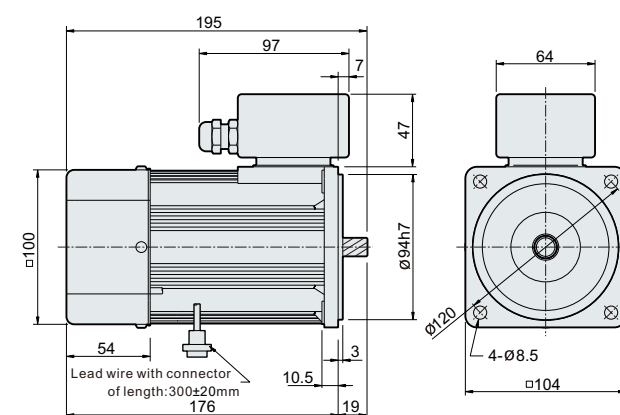


◆ Inverter Motor Frame 6 200W

MI-6200A-□R□



MI-6200U-□R□



Note: If you use the inverter, installing the sine wave filter on the inverter output side

List of Inverter Motors/Gear Head with Inverter (HMD-250C)

Outer Frame Size	Phase	Voltage	Output power	Gear Head		
				Metal bearing	Ball bearing	Intermediate speed ratio
Frame4,80mm	Tri-phase	200V~230V	25W	G-4N□-L	G-4N□-K	G-4N10X-K
Frame5,90mm	Tri-phase	200V~230V	40W	G-5N□-L	G-5N□-K	G-5N10X-K
Frame5,90mm	Tri-phase	200V~230V	60W	G-5N□-L	G-5N□-K	G-5N10X-K
					G-5U□-K	G-5U10X-K
					G-5U□-KF	G-5U10X-K
Frame5,90mm	Tri-phase	200V~230V	90W		G-5U□-K	G-5U10X-K
					G-5U□-KF	
					G-5U□-KH	
Frame5,90mm	Tri-phase	200V~230V	120W		G-5U□-K	G-5U10X-K
					G-5U□-KF	
					G-5U□-KH	
Frame5,90mm	Tri-phase	200V~230V	150W		G-5U□-K	G-5U10X-K
					G-5U□-KF	
					G-5U□-KH	
Frame6,104mm	Tri-phase	200V~230V	200W		G-6U□-KH	

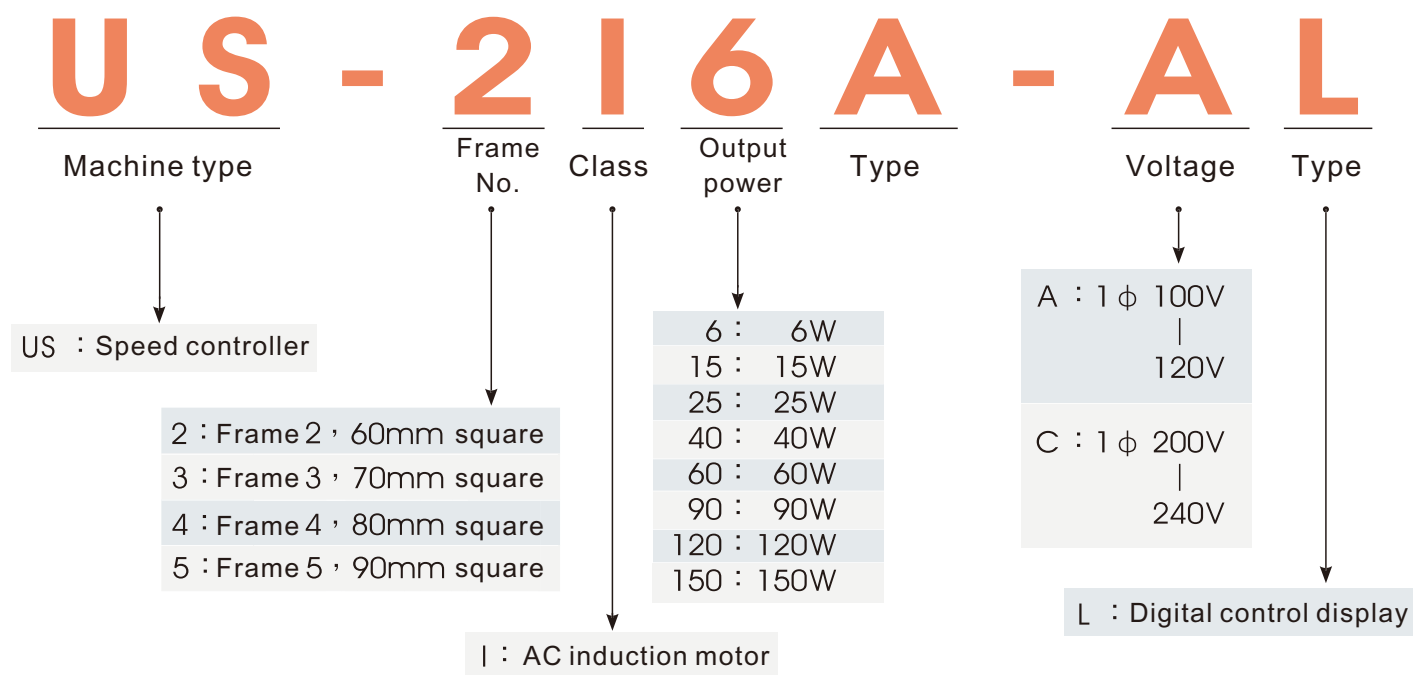
Specifications of Vector Inverter

Item	Specifications	
Power source	Input voltage	Single-phase power source: 200V-230V 50/60Hz Three-phase power source: 200V-230V 50/60Hz
	Allowable voltage fluctuation	±5%
	Allowable frequency fluctuation	±5%
Output	Maximum output frequency	400Hz(based on motor characteristics)
	Rated output current	5.0(Amp) maximum
Displayer	Operation panel	User-friendly design with colored backlight controller
Control features	Control modes	a. Closed loop magnetic feedback detector b. Closed loop U, V, W phase change signal c. Open loop sensorless
	Frequency range	0.01~400Hz
	Frequency accuracy (temperature fluctuation)	Within ±0.025% of the maximum output frequency (25°C±10°C)
	Frequency setting resolution	Digital input : 0.01Hz Simulated input: 1/4000 of the maximum output frequency (12bit)
	Starting torque	Coupled with electromagnetic angle feedback detector 200% Hold Torque
Control features	Speed control range	Coupled with magnetic angle feedback detector 1:3000
	Speed control accuracy	0.1% (no PG vector control)
	Torque limit	Coupled with magnetic angle feedback detector (parameter setting)
	Acceleration/deceleration time	0.00-6000.0 sec (acceleration and deceleration are set separately)
	Brake loop	Including brake crystal (optional brake resistance)
	Main control functions	Instant restarting after power-cut, speed search, over-torque detection, torque restriction, 17-speed operation, acceleration /deceleration setting (4-speed switch), individual setting for S-curve 4 turning points, 2/3 wire sequence control, auto tuning , Stall/Dwell function selection, two sets of RS-485 (MOD-BUS communication format), failure retry function selection, AVR, PID control
	Instant over-current protection	200% of the rated output current, 1 sec
Protection functions	Overload protection	150% of the rated output current, 60 sec, including electronic thermal resistance
	Over-voltage protection	Can be adjusted according to customer requirements (parameter adjustment)
	Under-voltage protection	Can be adjusted according to customer requirements (parameter adjustment)





Combined Speed Controller Models



Note : 1. Capacitors of 90W or above, and with digital control display, are external-connection type.
2. Settings and adjustments are required for 50Hz and 60Hz types, so specifications are needed.

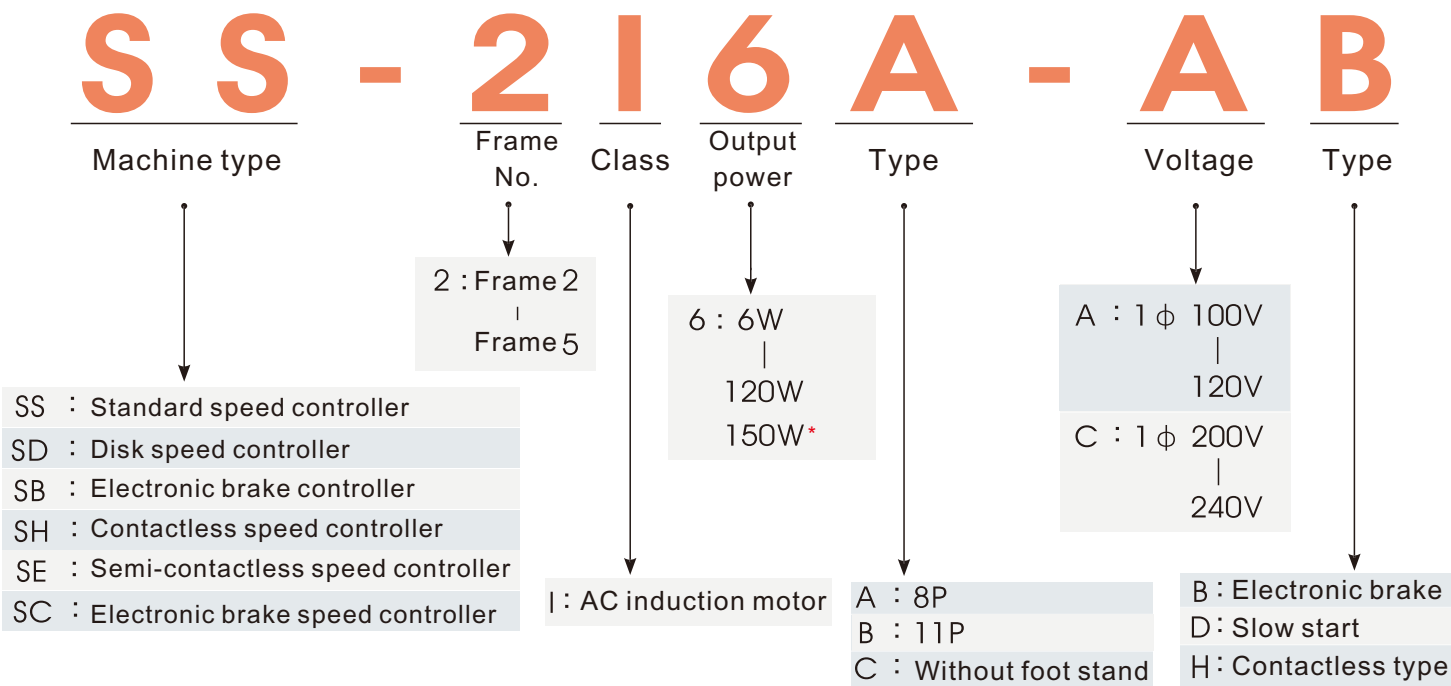
產品特點

Product Feature

- 優越的性能
 - 1) 馬達速度控制穩定性高
 - 2) 無段變速電子式剎車
 - 3) 依傳動特性不同有多元化型式選擇
 - 4) SS型 PLC可程式控制調整轉速 (0~3V)
 - 5) SS型 電源入力內建濾波，可在高雜訊環境下使用不受干擾。如：變頻器，伺服馬達，震動馬達等環境。
- 產品應用範圍
 - 適用於AC感應馬達各種傳動速度的要求
 - 有組合式與分離式的選擇
 - 組合式：單方面的速度控制
 - 分離式：可用於速度、時間...等多方面的控制應用

- Performance
 - 1) Motor speed control, high stability
 - 2) Stepless speed
 - 3) Transmission characteristics according to a range of different forms of choice
 - 4) Programmable logic controller Revolution Per Minute
 - 5) Electronic filters Inside the Standard speed controller, In high-noise environments undisturbed use, Such as inverters、servo motors and vibration motors environment
- Structure
 - AC induction motor is suitable for a variety of transmission speeds requires modular and discrete choice
 - Combined: unilateral speed control
 - Separation formula: can be used for speed, time, and other aspects of the control application

Split-type Speed Controller Model



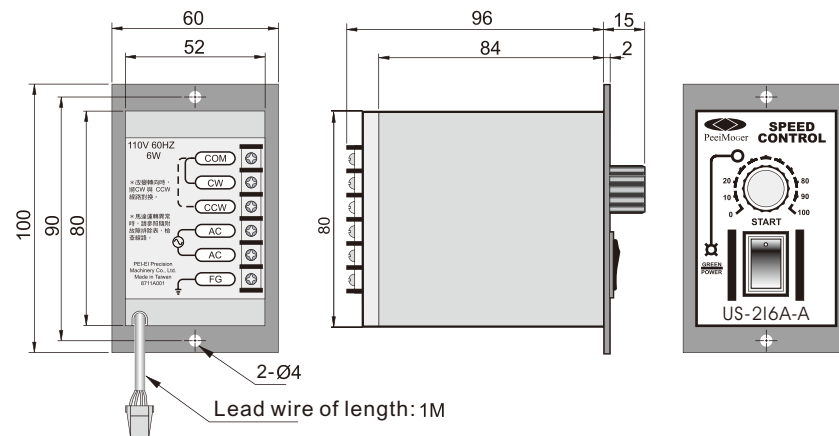
* Forward rotation to reverse rotation or reverse rotation to forward rotation, the motor stopped for 2 seconds.

Combined Speed Controller

Split-type Speed Controller



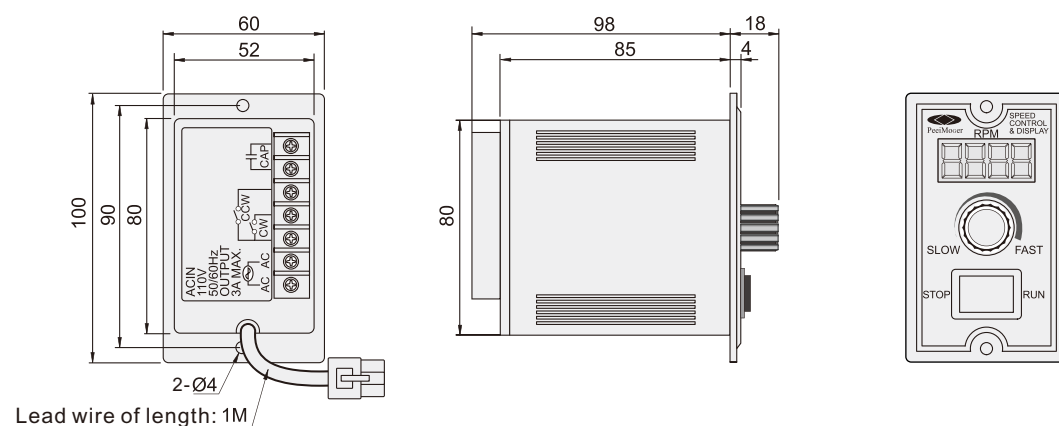
US-2I6A-A(C)~US-5I150A-A(C)



Specifications of extension wires

Extension wire specifications	
EC-US005	0.5 M
EC-US010	1 M
EC-US020	2 M
EC-US030	3 M

US-2I6A-A(C)L~US-5I150A-A(C)L

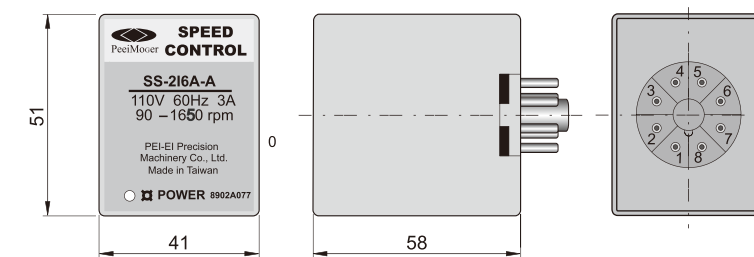


When the product malfunctions, please follow the troubleshooting steps below to eliminate the errors:

Error Code	Failure	Cause	Solution
1	Motors all operate at full speed, which cannot be adjusted	Abnormal wiring in the speed feedback of the motor speed generator	Check whether the wire connecting the speed generator and the speed controller has fallen off.
2	Motors do not start	Abnormal wiring	Check whether the wire connecting the motor and the speed controller has fallen off or has poor contact.
3	Overload	Motor is overloaded or stuck	1.Check whether something got stuck inside. 2.Check whether the capacity of the motor is too small.

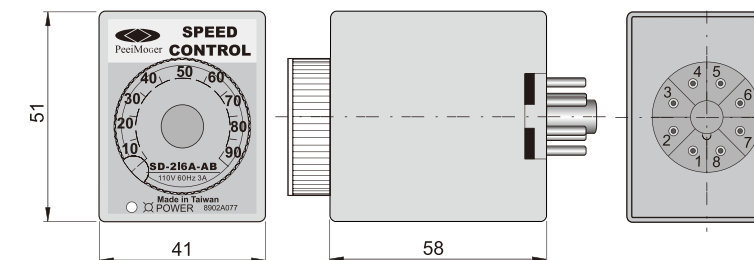
SS-type Specifications

SS-2I6A-A(C)
SS-2I6A-A(C)B



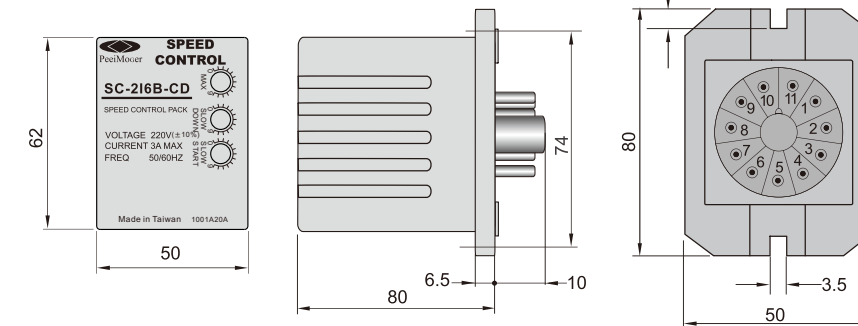
SD-type Specifications

SD-2I6A-A(C)
SD-2I6A-A(C)B

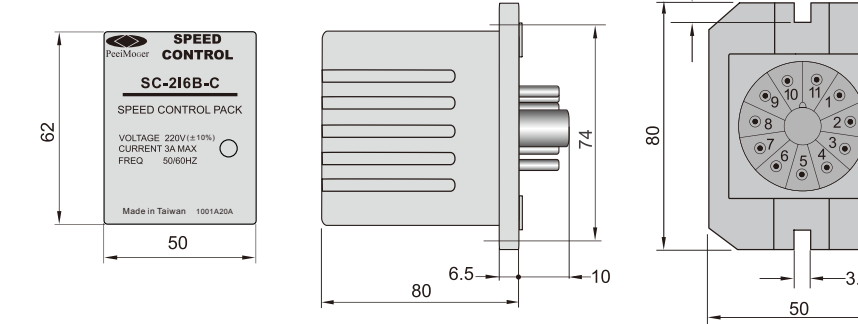


SC-type Specifications

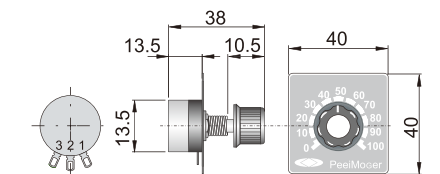
SC-2I6B-AD
SC-2I6B-CD



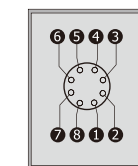
SC-2I6B-A
SC-2I6B-C



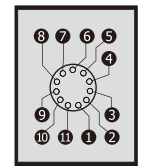
Speed-adjusting Variable Resistance Specifications



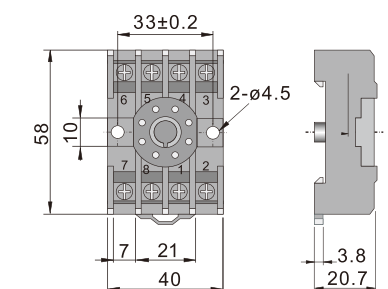
8P Foot Stand



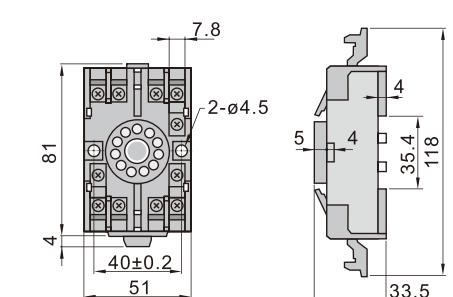
11P Foot Stand



Terminal Block Specifications, 8P

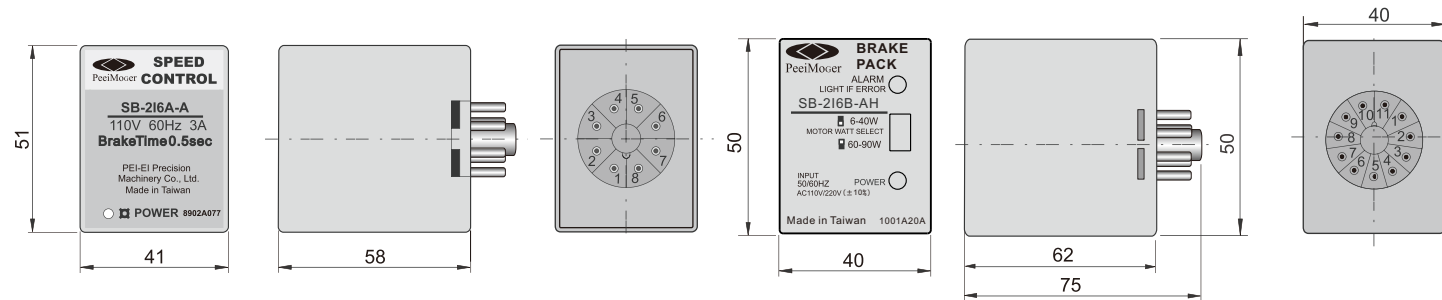


Terminal Block Specifications, 11P



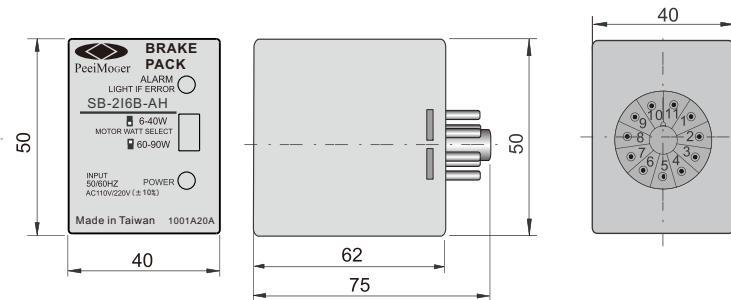
SB-type Specifications

SB-2I6A-A
SB-2I6A-C



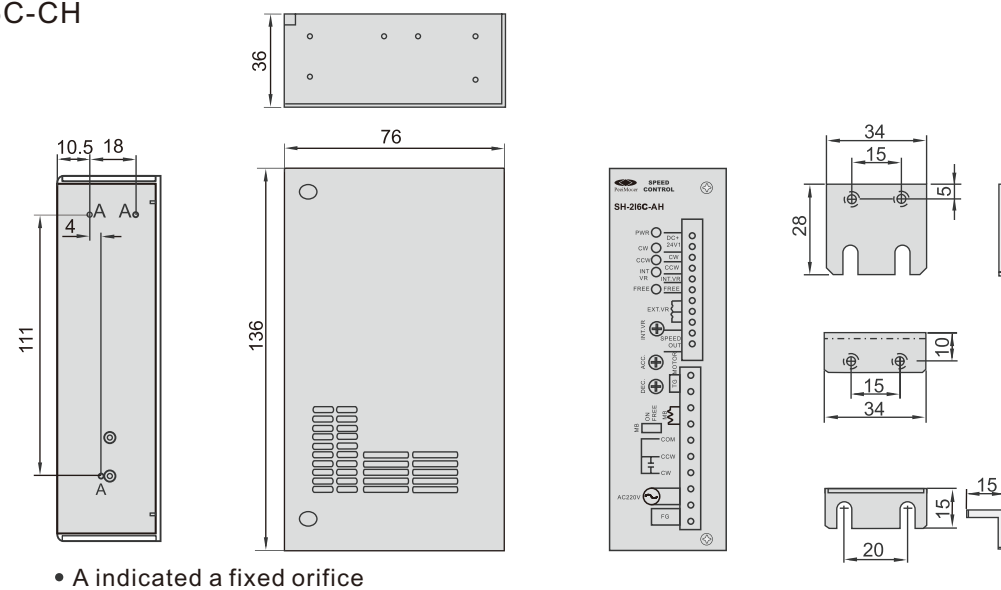
SB-H-type Specifications

SB-2I6B-AH
SB-2I6B-CH



SH-type Specifications

SH-2I6C-AH
SH-2I6C-CH

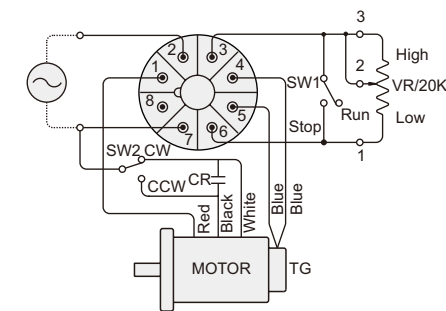


When the product malfunctions, please following the troubleshooting steps below to eliminate the errors:

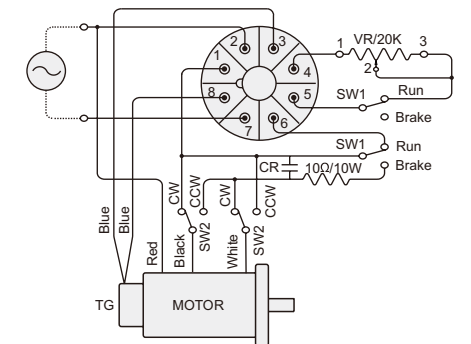
Error Code	Failure	Cause	Solution
1	Motors all operate at full speed, which cannot be adjusted	Abnormal wiring in the speed feedback of the motor speed generator	Check whether the wire connecting the speed generator and the speed controller has fallen off.
2	Motors do not start	Abnormal wiring	Check whether the wire connecting the motor and the speed controller has fallen off or has poor contact.
3	Motor is overheating	Electric capacity does not match or has connection error	1.Check if the wiring colors match that in the wiring diagram. 2.Install the correct electric capacity according to the motor specification label.
4	Overload	Motor is overloaded or stuck	3.Check whether something got stuck inside. 4.Check whether the capacity of the motor is too small.

Note : This table is applicable for eliminating the errors of split-type speed controller.

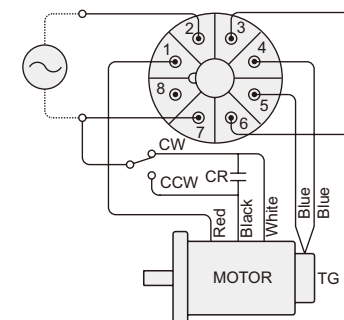
SS-2I6A-A(C)



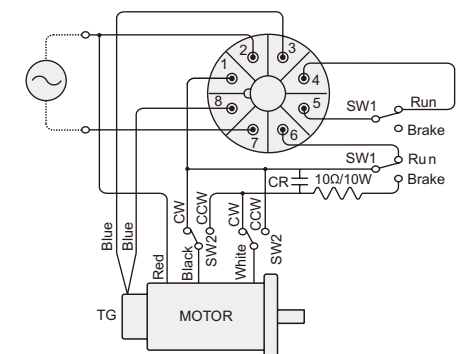
SS-2I6A-A(C)B



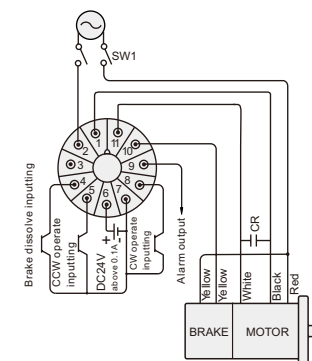
SD-2I6A-A(C)



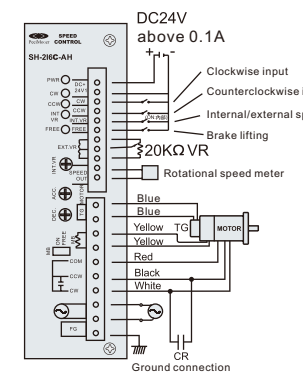
SD-2I6A-A(C)B



SB-2I6B-A(C)H

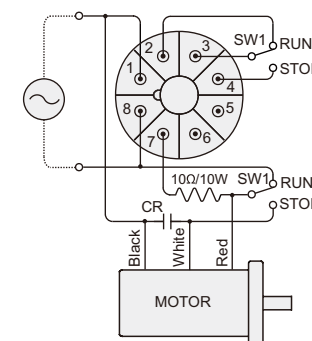


SH-2I6C-A(C)H

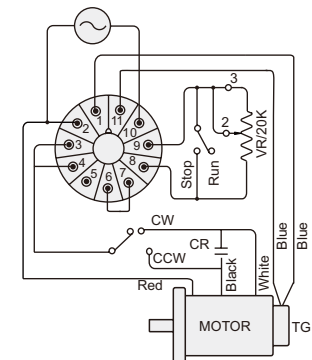


For detailed enlarged drawing, please refer to Page 249.

SB-2I6A-A(C)



SC-2I6B-A(C)D



Notes :

1. Confirm whether the controller conforms to the output specifications of motors before wiring.
2. The outgoing line of the overheating protection switch and the motor control circuit should be connected in series.
3. To install forced cooling fan into speed adjusting motors, the former should be connected to the input power supply.
4. To install safety brake into speed adjusting motors, the input side of the power supplier of the former should be connected to the starting power source of the latter. Thus, the former can come off when motors are started.

5. For speed-adjusting motors with electronic brake, clock/counterclockwise rotation is disabled within 0.5 second after using the electronic brake to stop the motor.
6. The capacity of the switch contact should be above AC 125V 5A or AC 250V 5A.
7. The electronic brake is used for operation within 0.5 seconds and stops within 0.5 seconds. The temperature of the motors will rise, so please use them under operating temperature below 90°C.



產品特點

- 優越的性能
 - 1) 優越的啟動性能
 - 2) 結構簡單
 - 3) 高效率
 - 4) 散熱良好
 - 5) 傳動功率大
- 產品應用範圍

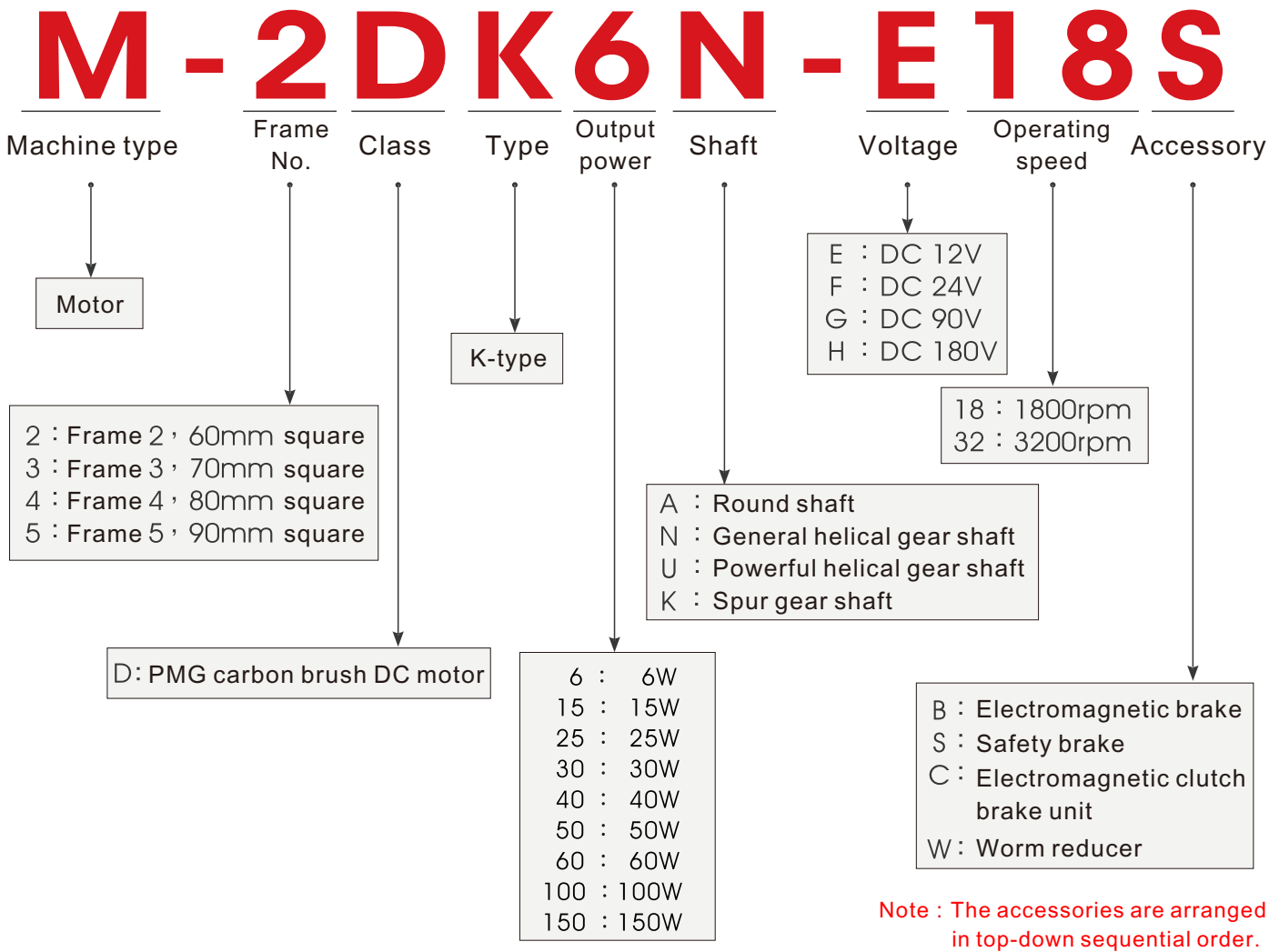
主要用於小型的傳動機械設備上面
如：各類工作母機、輸送機械、
包裝機械、食品機械、紡織機械、
印刷機械、電子儀器、運動器材等

Product Feature

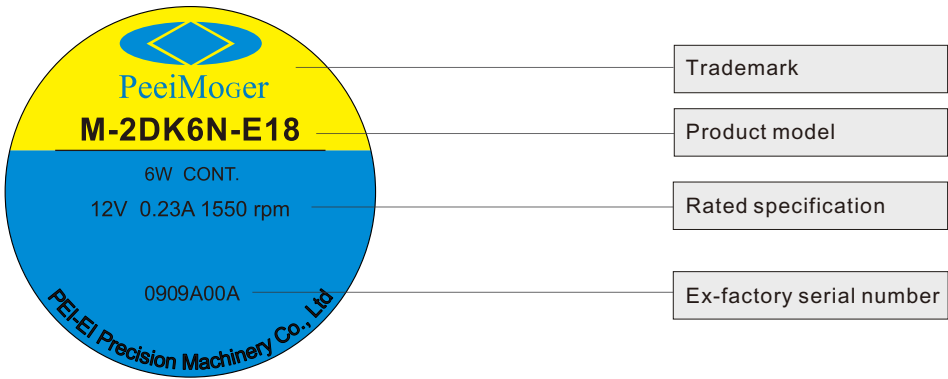
- Performance
 - 1) Excellent start-up performance
 - 2) Simple
 - 3) Higher Efficiency
 - 4) Good heat dissipation
 - 5) Big power in send
- Structure

The motor is mainly used for small-scale machinery and equipment above the transmission. Such as: Machine tools. Transportation machinery. Packaging machinery. Food machinery. Textile machinery. Printing machinery, etc.

PMG DC Motors Models

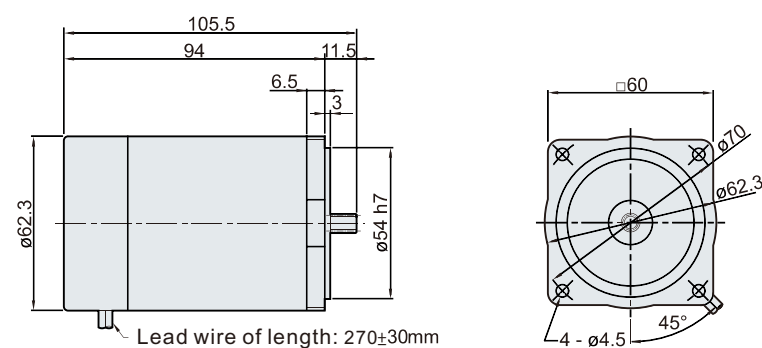


PMG DC Motor Label



Dimension Drawing of PMG DC Motor

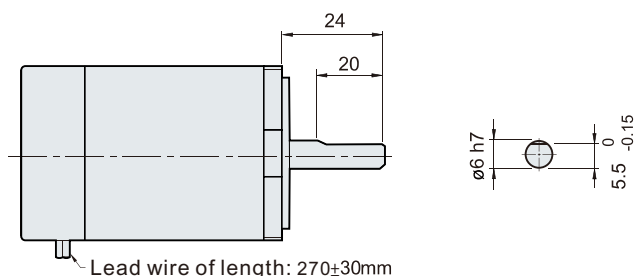
M-2DK6N-□18 / M-2DK15N-□32



Weight : 0.8kg

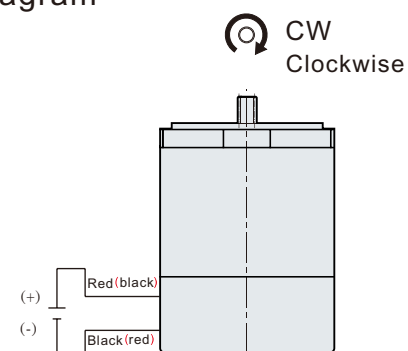
Specifications of Round Shaft

M-2DK6A-□18 / M-2DK15A-□32



Weight : 0.8kg

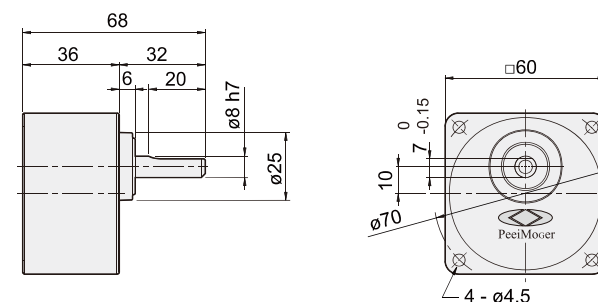
PMG DC Motor, Frame 2 Wiring Diagram



• When the rotation direction changes, use the wiring color indicated in the brackets.

Gear Head

G-2N□-K

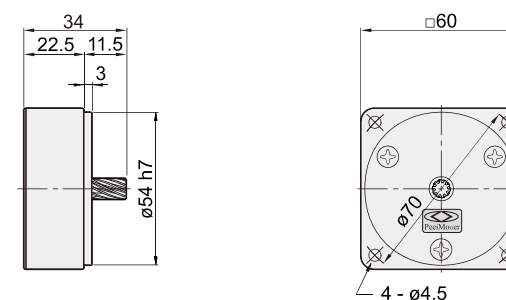


Weight List of Gear Head

Model	Weight (kg)
G-2N3-K / L~G-2N18-K / L	0.30
G-2N20-K / L~G-2N60-K / L	0.31
G-2N75-K / L~G-2N180-K / L	0.33
G-2N10X-K	0.20

Decimal Gear Head

G-2N10X-K



6W ▪ Specifications of PMG DC Motors

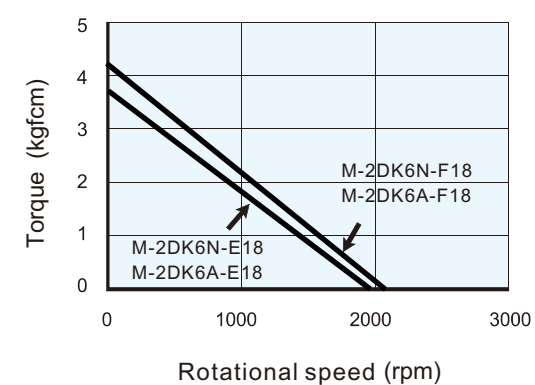
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-2DK6N-E18 M-2DK6A-E18	6	12	CONT.	1980	0.38	3.7	0.95	1790	0.34	G-2N□-L	G-2N□-K	G-2N10X-K
M-2DK6N-F18 M-2DK6A-F18	6	24	CONT.	2030	0.23	4.1	0.49	1890	0.31			
M-2DK6N-G18 M-2DK6A-G18	6	90	CONT.	2020	0.08	4.3	0.15	1860	0.32			
M-2DK6N-H18 M-2DK6A-H18	6	180	CONT.	2050	0.04	4.2	0.08	1830	0.33			

15W ▪ Specifications of PMG DC Motors

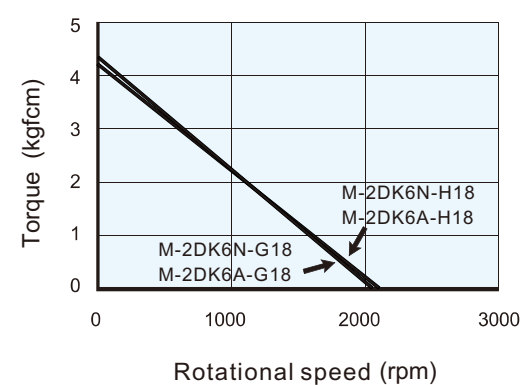
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-2DK15N-E32 M-2DK15A-E32	15	12	30min	3110	0.77	4.2	2.39	2570	0.58	G-2N□-L	G-2N□-K	G-2N10X-K
M-2DK15N-F32 M-2DK15A-F32	15	24	30min	3110	0.36	6.0	1.10	2780	0.55			
M-2DK15N-G32 M-2DK15A-G32	15	90	30min	3220	0.12	6.3	0.30	2950	0.50			
M-2DK15N-H32 M-2DK15A-H32	15	180	30min	3190	0.06	6.4	0.15	2820	0.52			

6W · Characteristics of PMG DC Motors

M-2DK6N-E18 / M-2DK6N-F18
M-2DK6A-E18 / M-2DK6A-F18

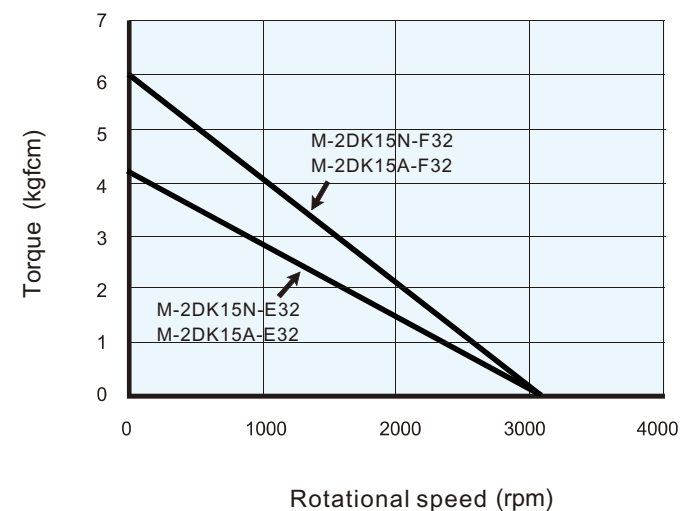


M-2DK6N-G18 / M-2DK6N-H18
M-2DK6A-G18 / M-2DK6A-H18

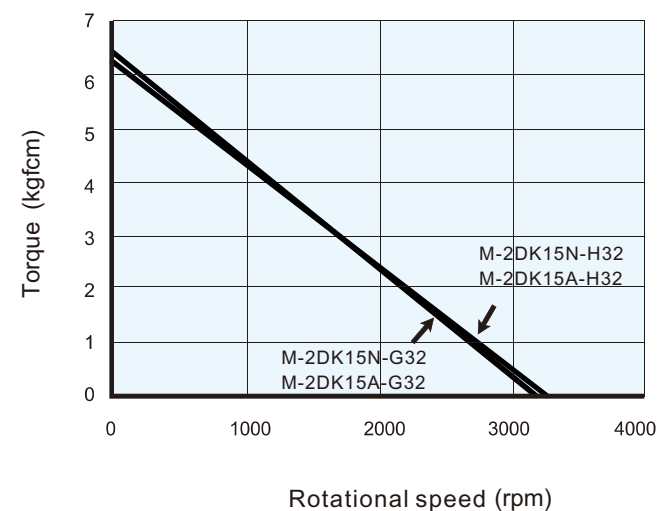


15W · Characteristics of PMG DC Motors

M-2DK15N-E32 / M-2DK15N-F32
M-2DK15A-E32 / M-2DK15A-F32



M-2DK15N-G32 / M-2DK15N-H32
M-2DK15A-G32 / M-2DK15A-H32



Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-2N□-K L	Max. allowable torque(kgfcm)		1.0	1.6	2.5	2.7	3.4	4.1	5.0	5.4	6.7	8.1	9.7	16	23	25	25

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Curtain Wall of the Factory



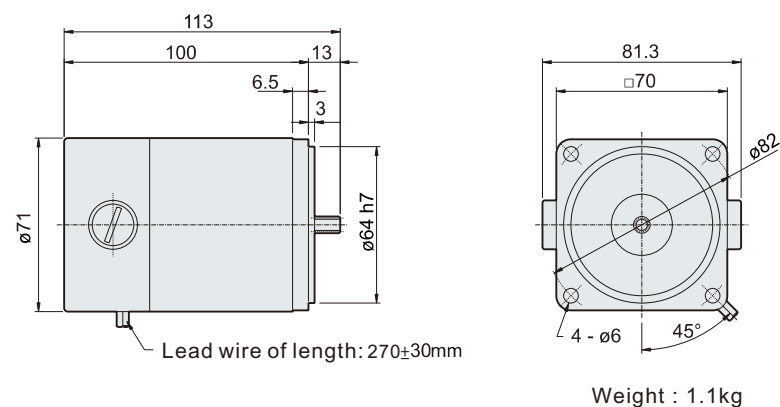
Finished Product Warehouse



Marketing Department

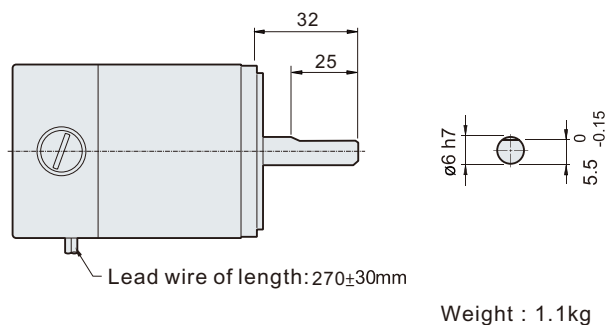
Dimension Drawing of PMG DC Motors

M-3DK15N-□18 / M-3DK25N-□32

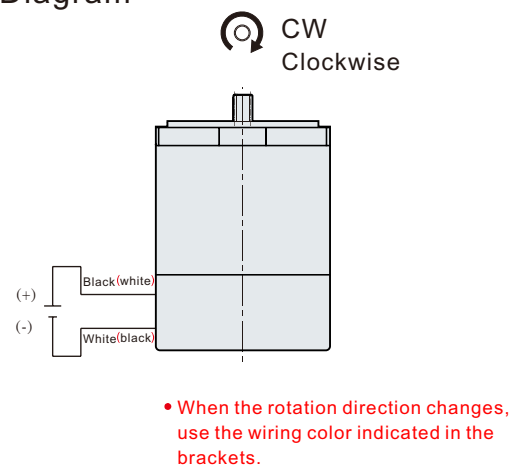


Specifications of Round Shaft

M-3DK15A-□18 / M-3DK25A-□32



PMG DC Motor, Frame 3 Wiring Diagram

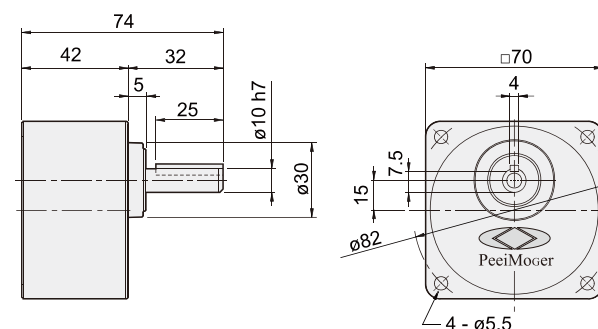


15W ■ Specifications of PMG DC Motors

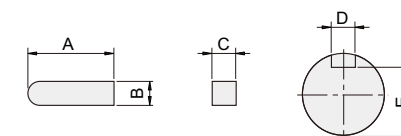
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-3DK15N-E18 M-3DK15A-E18	15	12	CONT.	2080	0.65	5.5	1.91	1850	0.82	G-3N□-L	G-3N□-K	G-3N10X-K
M-3DK15N-F18 M-3DK15A-F18	15	24	CONT.	1870	0.30	6.5	1.00	1600	0.93			
M-3DK15N-G18 M-3DK15A-G18	15	90	CONT.	2180	0.08	7.3	0.23	1980	0.74			
M-3DK15N-H18 M-3DK15A-H18	15	180	CONT.	2064	0.04	7.3	0.12	1860	0.79			

Gear Head

G-3N□-K
L



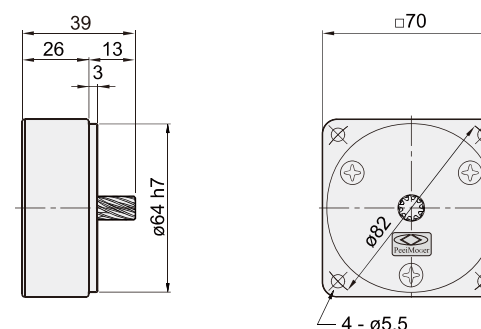
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-3N□-K L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	7.5 ⁰ _{-0.15}

Decimal Gear Head

G-3N10X-K



Weight List of Gear Head

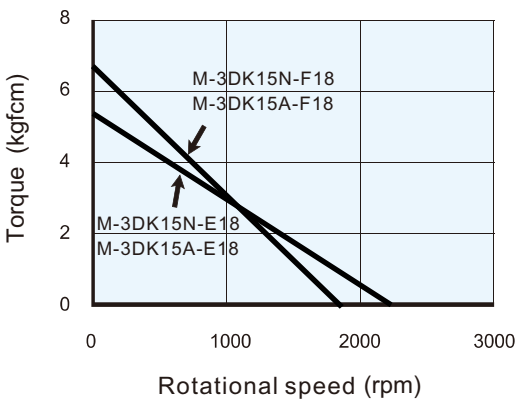
Model	Weight (kg)
G-3N3-K / L~G-3N18-K / L	0.44
G-3N20-K / L~G-3N60-K / L	0.48
G-3N75-K / L~G-3N180-K / L	0.53
G-3N10X-K	0.32

25W ■ Specifications of PMG DC Motors

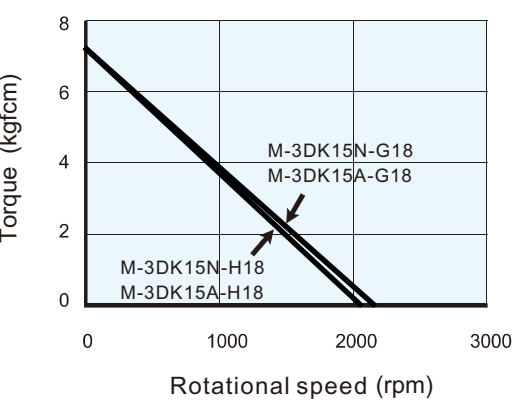
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-3DK25N-E32 M-3DK25A-E32	25	12	30min	3370	1.10	8.8	3.37	3020	0.82	G-3N□-L	G-3N□-K	G-3N10X-K
M-3DK25N-F32 M-3DK25A-F32	25	24	30min	3340	0.50	11.1	1.56	3110	0.86			
M-3DK25N-G32 M-3DK25A-G32	25	90	30min	3250	0.10	12.7	0.38	3040	0.84			
M-3DK25N-H32 M-3DK25A-H32	25	180	30min	3208	0.05	12.4	0.19	3020	0.86			

15W · Characteristics of PMG DC Motors

M-3DK15N-E18 / M-3DK15N-F18
M-3DK15A-E18 / M-3DK15A-F18

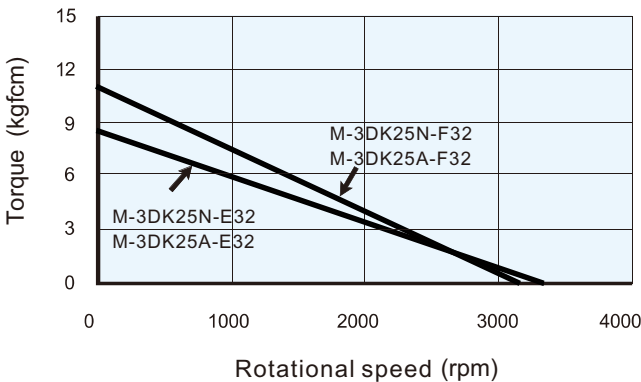


M-3DK15N-G18 / M-3DK15N-H18
M-3DK15A-G18 / M-3DK15A-H18

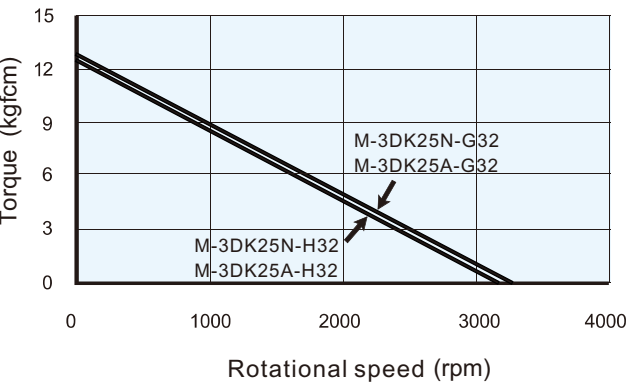


25W · Characteristics of PMG DC Motors

M-3DK25N-E32 / M-3DK25N-F32
M-3DK25A-E32 / M-3DK25A-F32



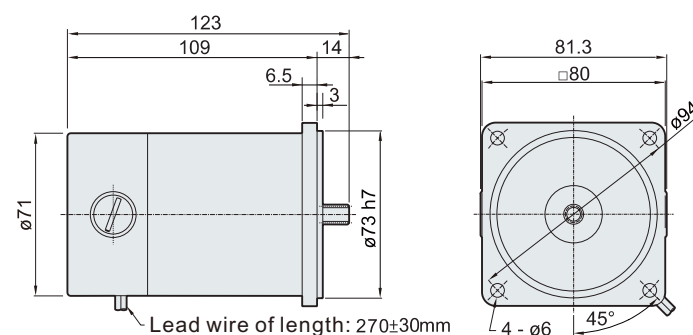
M-3DK25N-G32 / M-3DK25N-H32
M-3DK25A-G32 / M-3DK25A-H32



Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-3N□-K□-L	Max. allowable torque(kgfcm)		2.4	4.0	6.0	6.7	8.2	10	12	13	16	19	23	39	50	50	50

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Technical drawing of the probe head showing side and end views with dimensions:

- Side view dimensions:
 - Overall length: 32
 - Distance from tip to center of rotation: 25
- End view dimensions:
 - Outer diameter: $\varnothing 8 \text{ h7}$
 - Tip radius: 0
 - Inner diameter: $7_{-0.15}$

Lead wire of length: $270 \pm 30 \text{ mm}$

Weight : 1.25kg

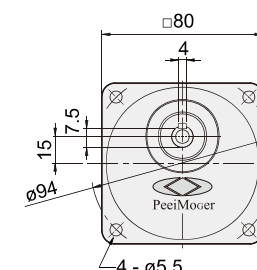
CW
Clockwise

(+) Black(white)

(-) White(black)

Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-4DK25N-E18 M-4DK25A-E18	25	12	CONT.	1970	0.61	8.6	3.36	1570	1.60	G-4N□-L	G-4N□-K	G-4N10X-K
M-4DK25N-F18 M-4DK25A-F18	25	24	CONT.	1950	0.40	9.7	1.84	1630	1.50			
M-4DK25N-G18 M-4DK25A-G18	25	90	CONT.	1900	0.08	10.3	0.43	1624	1.54			
M-4DK25N-H18 M-4DK25A-H18	25	180	CONT.	1980	0.04	10.3	0.21	1840	1.55			

Technical drawing of a shaft-hub assembly. The shaft has a diameter of $\phi 10\text{ h7}$ and a length of 74. The hub has an inner diameter of $\phi 10\text{ h7}$ and a length of 32. The shaft has a keyway with a width of 6 and a depth of 2.5. The hub has a keyway with a width of 6 and a depth of 2.5. The shaft is shown in a cross-section view, and the hub is shown in a side view.

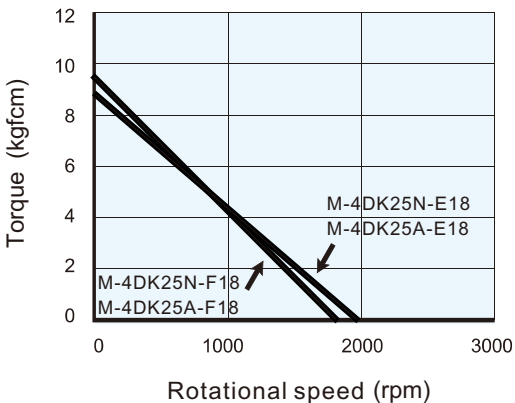


Model	Weight (kg)
G-4N3-K / L~G-4N18-K / L	0.60
G-4N20-K / L~G-4N60-K / L	0.65
G-4N75-K / L~G-4N180-K / L	0.71
G-4N10X-K	0.41

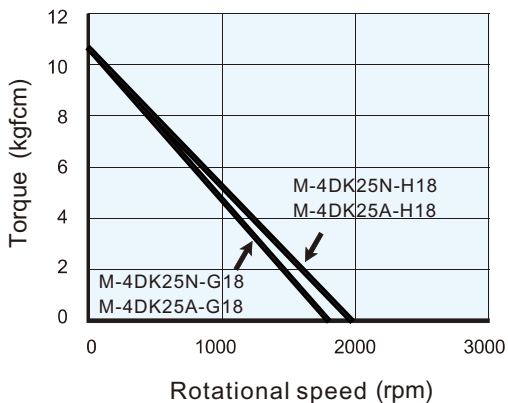
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-4DK40N-E32 M-4DK40A-E32	40	12	30min	3370	1.20	10.7	5.10	2870	1.40	G-4N□-L	G-4N□-K	G-4N10X-K
M-4DK40N-F32 M-4DK40A-F32	40	24	30min	3310	0.60	10.9	2.15	2830	1.38			
M-4DK40N-G32 M-4DK40A-G32	40	90	30min	3200	0.12	14.5	0.56	2940	1.36			
M-4DK40N-H32 M-4DK40A-H32	40	180	30min	3210	0.06	14.5	0.28	2840	1.38			

25W · Characteristics of PMG DC Motors

M-4DK25N-E18 / M-4DK25N-F18
M-4DK25A-E18 / M-4DK25A-F18

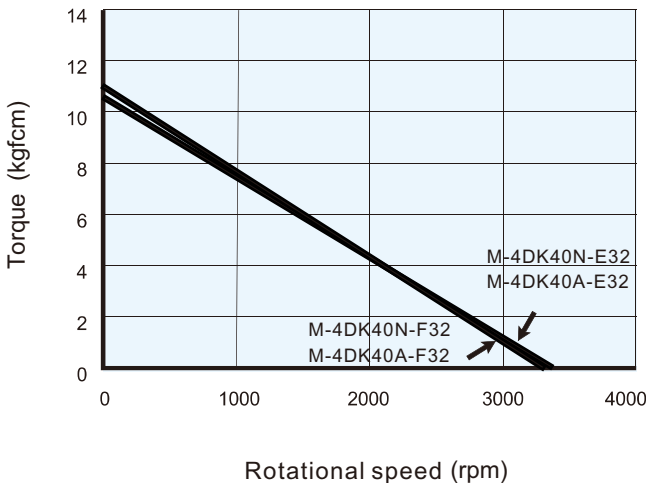


M-4DK25N-G18 / M-4DK25N-H18
M-4DK25A-G18 / M-4DK25A-H18

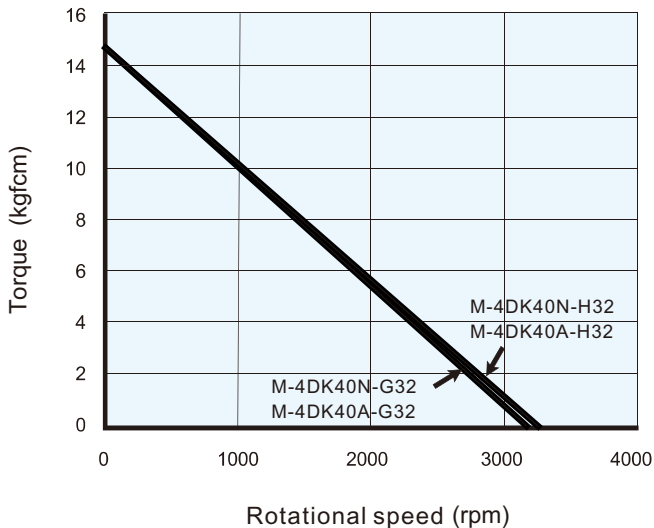


40W · Characteristics of PMG DC Motors

M-4DK40N-E32 / M-4DK40N-F32
M-4DK40A-E32 / M-4DK40A-F32



M-4DK40N-G32 / M-4DK40N-H32
M-4DK40A-G32 / M-4DK40A-H32



Permissible Torque of Gear Head

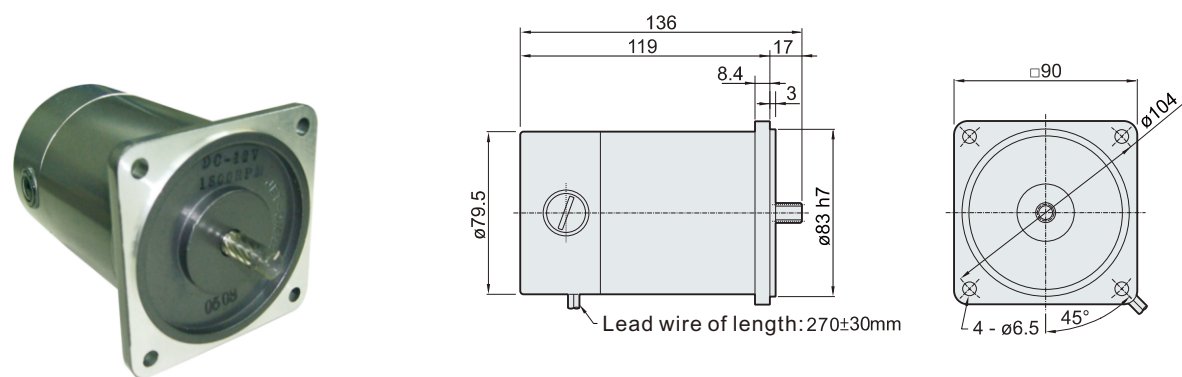
		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-4N□-K L	Max. allowable torque(kgfcm)	4.0	6.7	10	11	13	16	20	21	26	32	39	65	80	80	80	

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Dimension Drawing of PMG DC Motors

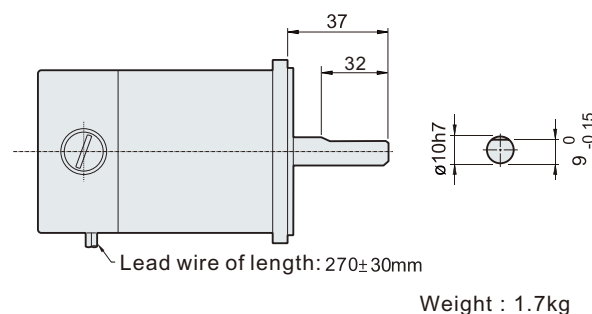
M-5DK30N-□18 / M-5DK50N-□32



Weight : 1.7kg

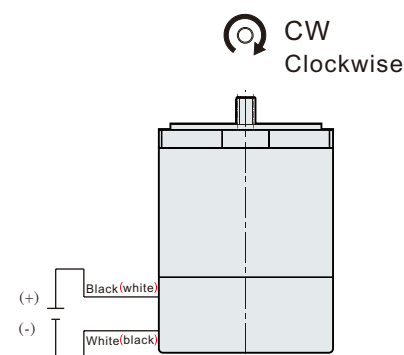
Specifications of Round Shaft

M-5DK30A-□18 / M-5DK50A-□32



Weight : 1.7kg

PMG DC Motor, Frame 5 Wiring Diagram



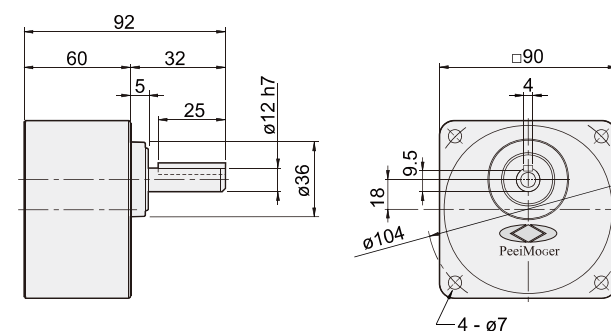
• When the rotation direction changes, use the wiring color indicated in the brackets.

30W ■ Specifications of PMG DC Motors

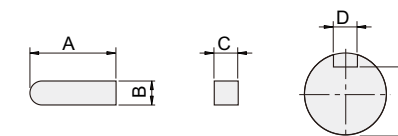
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-5DK30N-E18 M-5DK30A-E18	30	12	CONT.	2070	0.93	12.3	3.60	1790	1.64	G-5N□-L	G-5N□-K	G-5N10X-K
M-5DK30N-F18 M-5DK30A-F18	30	24	CONT.	1930	0.35	13.2	1.70	1680	1.78			
M-5DK30N-G18 M-5DK30A-G18	30	90	CONT.	2020	0.08	13.6	0.45	1790	1.66			
M-5DK30N-H18 M-5DK30A-H18	30	180	CONT.	2030	0.04	13.8	0.23	1720	1.71			

Gear Head

G-5N□-K



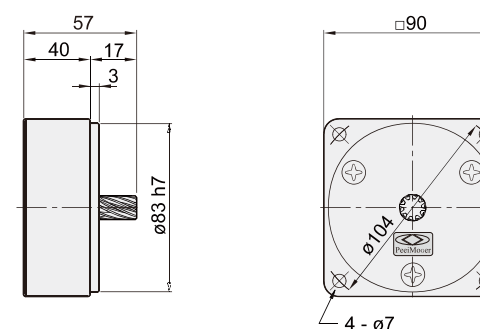
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Decimal Gear Head

G-5N10X-K



Weight List of Gear Head

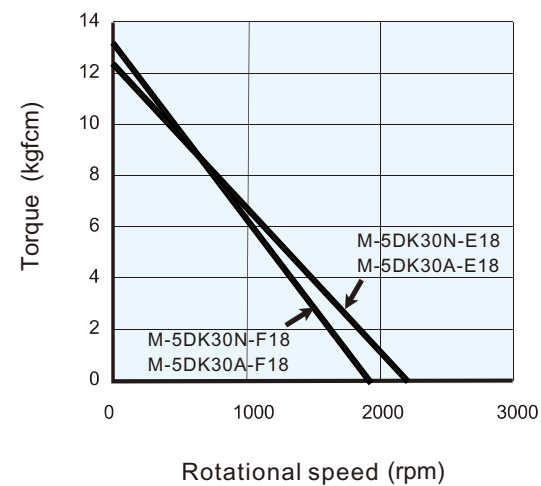
Model	Weight (kg)
G-5N3-K / L ~ G-5N18-K / L	1.02
G-5N20-K / L ~ G-5N60-K / L	1.11
G-5N75-K / L ~ G-5N180-K / L	1.22
G-5N10X-K	0.65

50W ■ Specifications of PMG DC Motors

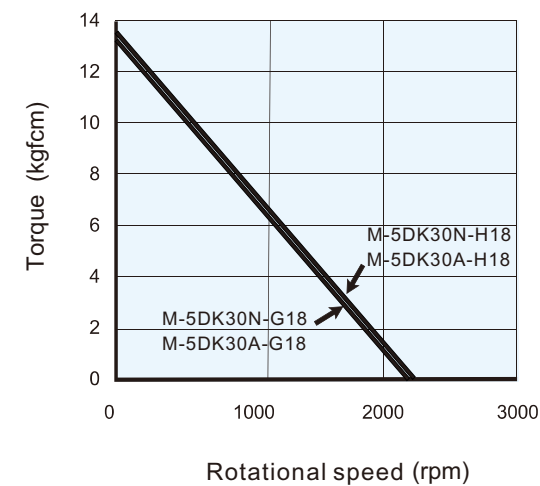
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-5DK50N-E32 M-5DK50A-E32	50	12	30min	3240	2.00	14.7	7.37	2870	2.00	G-5N□-L	G-5N□-K	G-5N10X-K
M-5DK50N-F32 M-5DK50A-F32	50	24	30min	3270	0.75	15.4	3.40	2830	1.87			
M-5DK50N-G32 M-5DK50A-G32	50	90	30min	3190	0.16	16.7	0.90	2900	1.83			
M-5DK50N-H32 M-5DK50A-H32	50	180	30min	3200	0.08	16.7	0.45	2920	1.85			

30W · Characteristics of PMG DC Motors

M-5DK30N-E18 / M-5DK30N-F18
M-5DK30A-E18 / M-5DK30A-F18

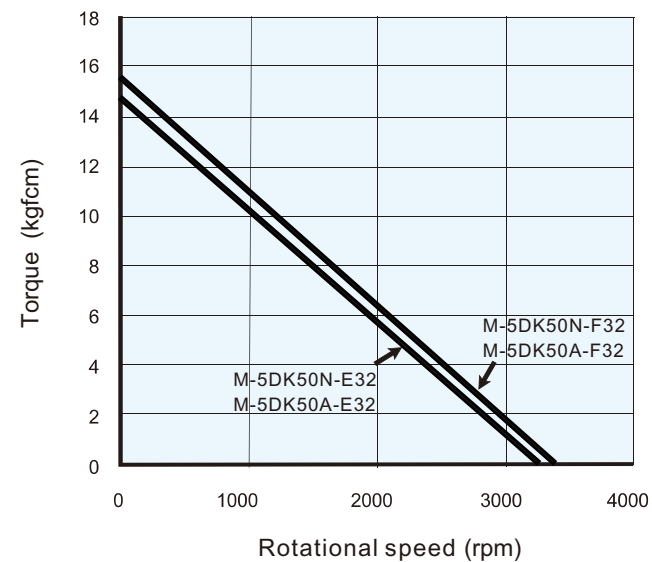


M-5DK30N-G18 / M-5DK30N-H18
M-5DK30A-G18 / M-5DK30A-H18

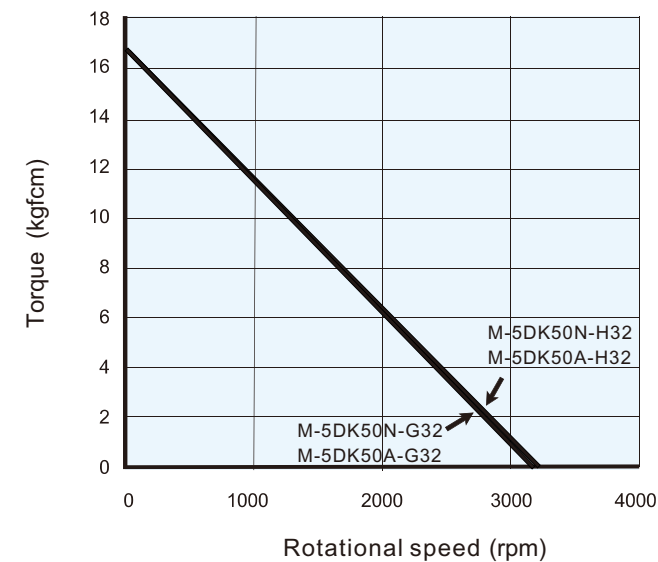


50W · Characteristics of PMG DC Motors

M-5DK50N-E32 / M-5DK50N-F32
M-5DK50A-E32 / M-5DK50A-F32



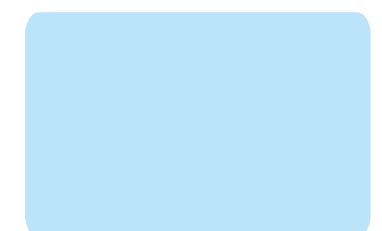
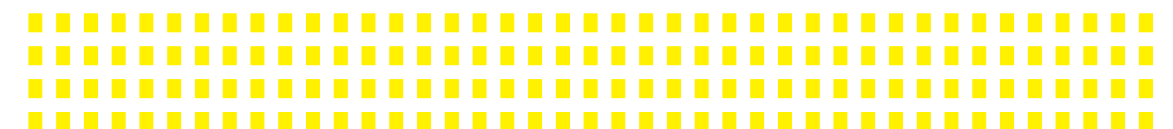
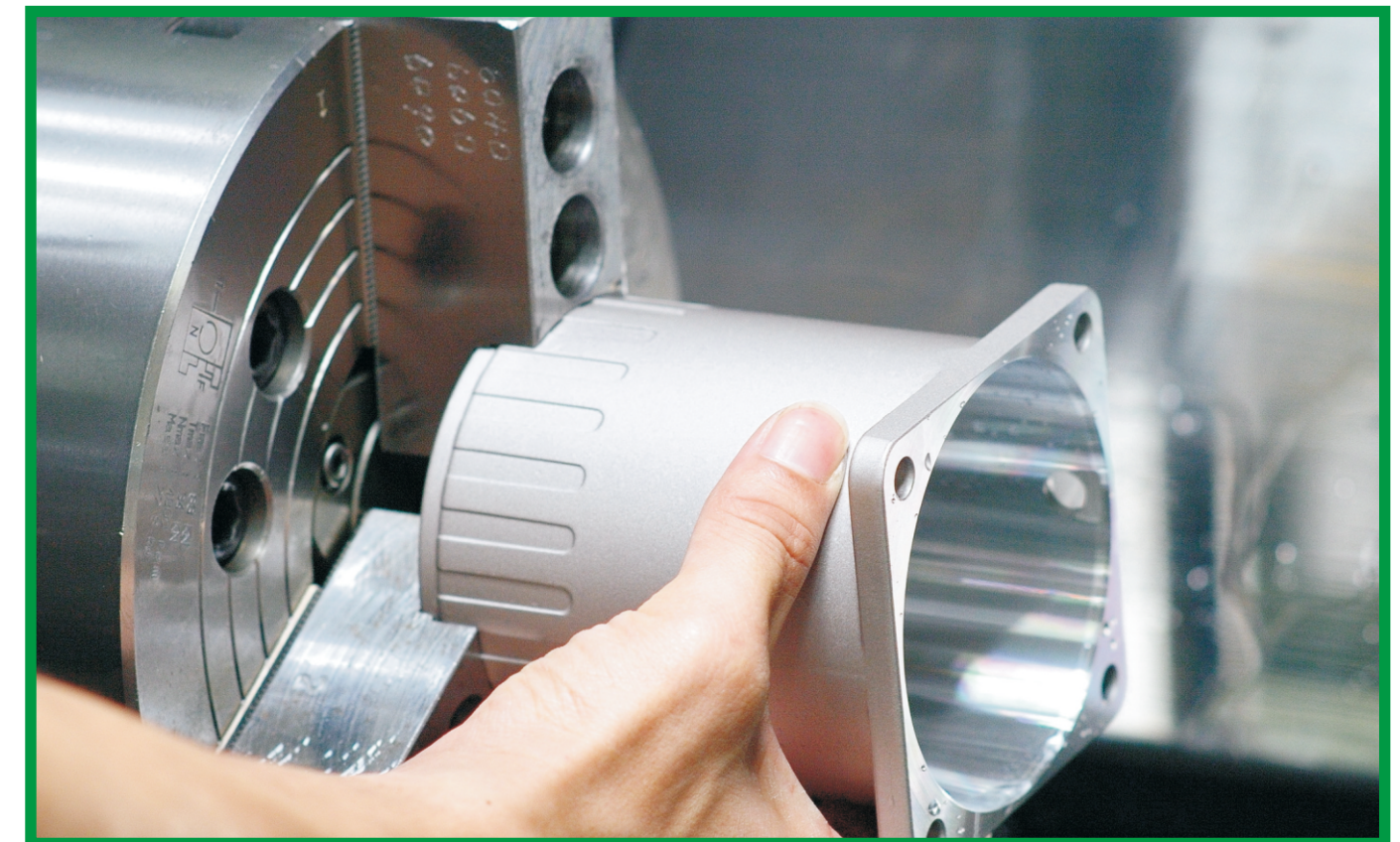
M-5DK50N-G32 / M-5DK50N-H32
M-5DK50A-G32 / M-5DK50A-H32



Permissible Torque of Gear Head

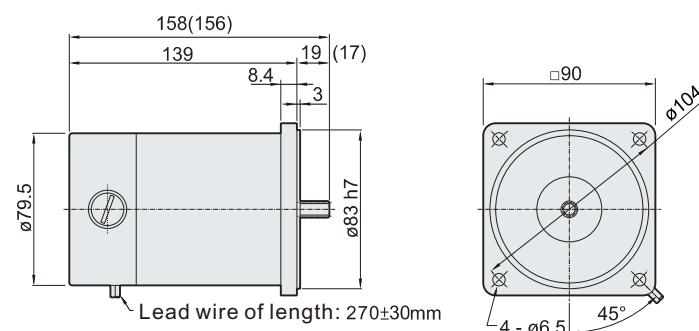
		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5N ^K _L	Max. allowable torque(kgfcm)	6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100	100

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



Dimension Drawing of PMG DC Motors

M-5DK60N-□18 / M-5DK100N-□32

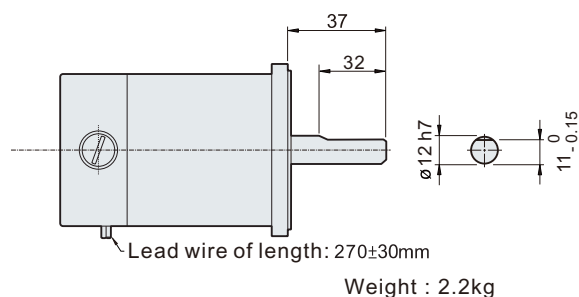


• The dimensions inside the brackets belong to N-type gear shafts, which are coupled to those of the gear head and the intermediate gear head, and should match with G-5N□-K/L

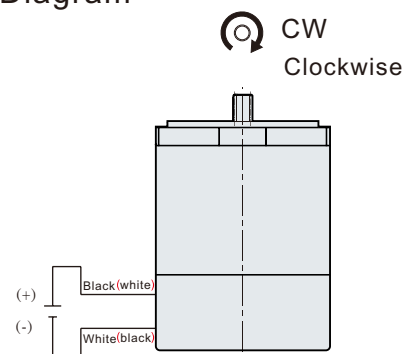
Weight : 2.2kg

Specifications of Round Shaft

M-5DK60A-□18 / M-5DK100A-□32



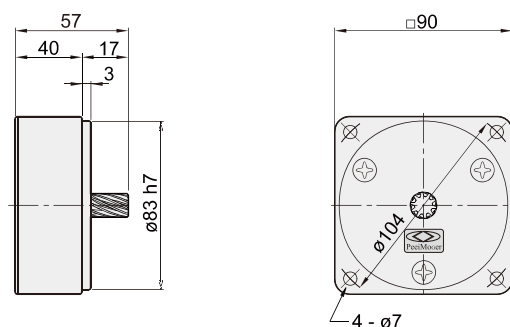
PMG DC Motor, Frame 5 Wiring Diagram



• When the rotation direction changes, use the wiring color indicated in the brackets.

Decimal Gear Head

G-5N10X-K

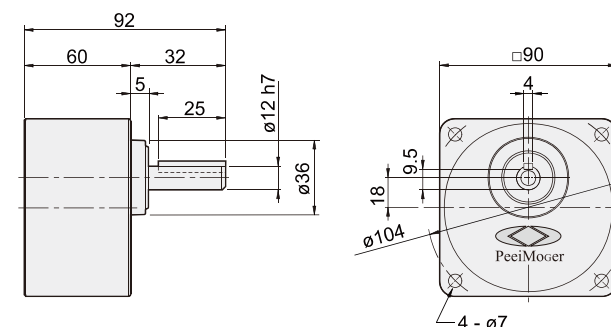


Weight List of Gear Head

Model	Weight (kg)
G-5N3-K / L~G-5N18-K / L	1.02
G-5N20-K / L~G-5N60-K / L	1.11
G-5N75-K / L~G-5N180-K / L	1.22
G-5N10X-K	0.65

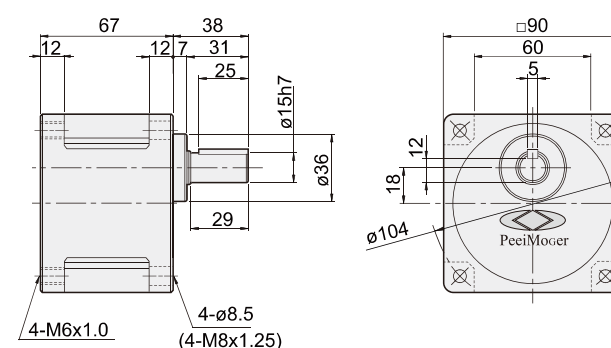
Gear Head

G-5N□-K/L



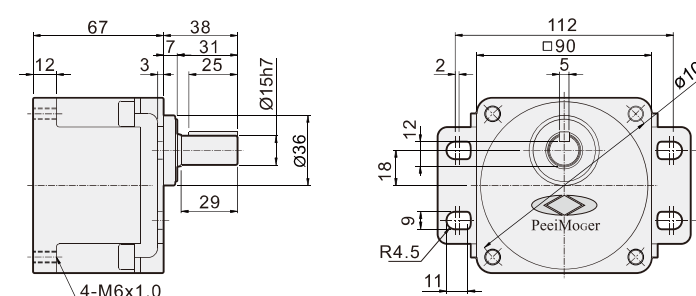
Gear Head

G-5U□-K



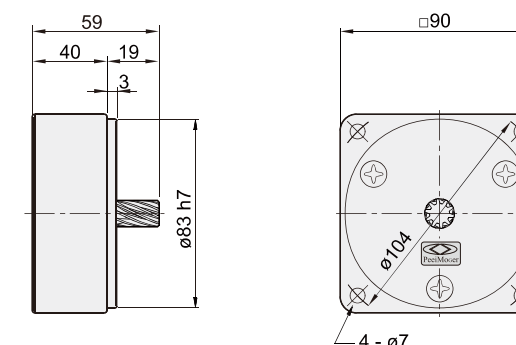
Gear Head with Mounting Brackets

G-5U□-KF

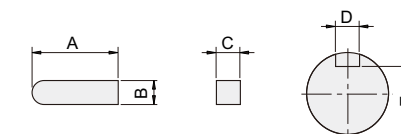


Decimal Gear Head

G-5U10X-K

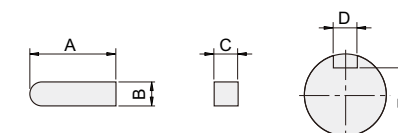


Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5N□-K/L	25	4 ⁰ _{-0.03}	4 ⁰ _{-0.03}	4 ^{+0.06} _{+0.01}	9.5 ⁰ _{-0.15}

Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Weight List of Gear Head

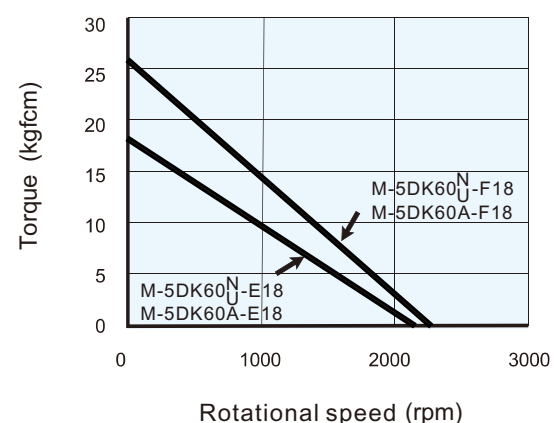
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73
G-5U10X-K	0.64

60W · Specifications of PMG DC Motors

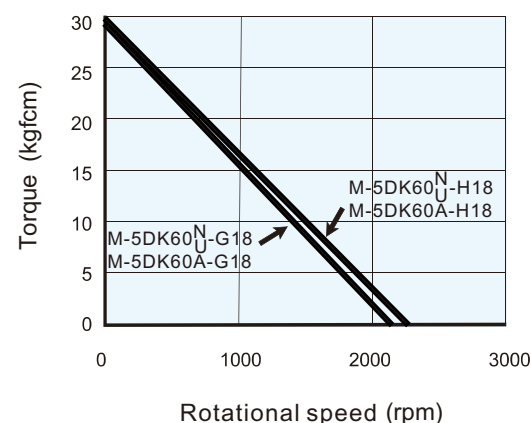
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-5DK60 ^N _U -E18 M-5DK60A-E18	60	12	CONT.	2020	1.18	18.8	6.90	1650	3.60	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
M-5DK60 ^N _U -F18 M-5DK60A-F18	60	24	CONT.	2060	0.65	25.7	3.50	1800	3.42			
M-5DK60 ^N _U -G18 M-5DK60A-G18	60	90	CONT.	2030	0.11	29.6	0.87	1780	3.29			
M-5DK60 ^N _U -H18 M-5DK60A-H18	60	180	CONT.	2050	0.05	29.8	0.51	1760	3.41			

60W · Characteristics of PMG DC Motors

M-5DK60^N_U-E18 / M-5DK60^N_U-F18
M-5DK60A-E18 / M-5DK60A-F18



M-5DK60^N_U-G18 / M-5DK60^N_U-H18
M-5DK60A-G18 / M-5DK60A-H18



Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5N□-K	Max. allowable torque(kgfcm)		6.7	11	16	18	23	28	33	36	45	54	65	100	100	100	100

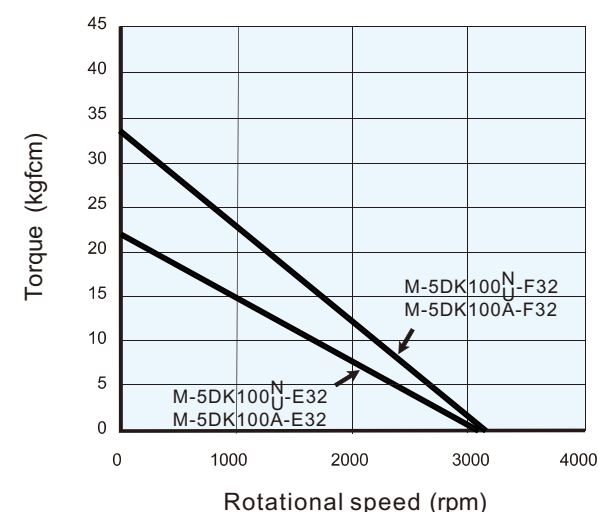
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

100W · Specifications of PMG DC Motors

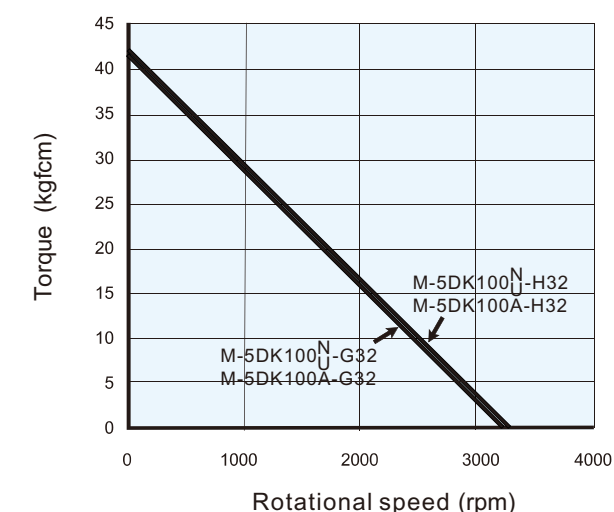
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-5DK100 ^N _U -E32 M-5DK100A-E32	100	12	30min	3030	1.90	21.7	10.10	2540	3.87	G-5N□-L -	G-5N□-K G-5U□-K	G-5N10X-K G-5U10X-K
M-5DK100 ^N _U -F32 M-5DK100A-F32	100	24	30min	3130	0.75	33.5	5.14	2830	3.62			
M-5DK100 ^N _U -G32 M-5DK100A-G32	100	90	30min	3200	0.18	41.9	1.25	2930	3.34			
M-5DK100 ^N _U -H32 M-5DK100A-H32	100	180	30min	3220	0.09	42.3	0.63	2870	3.42			

100W · Characteristics of PMG DC Motors

M-5DK100^N_U-E32 / M-5DK100^N_U-F32
M-5DK100A-E32 / M-5DK100A-F32



M-5DK100^N_U-G32 / M-5DK100^N_U-H32
M-5DK100A-G32 / M-5DK100A-H32



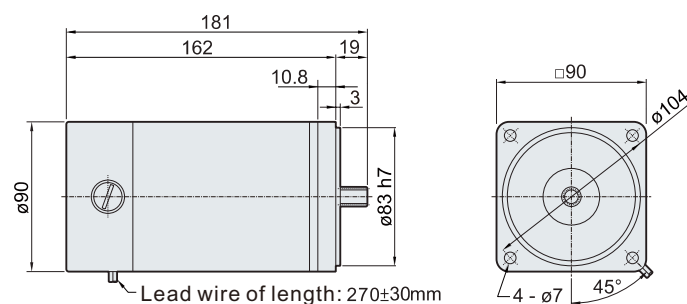
Permissible Torque of Gear Head

		Coupled decimal gear head															
Model	Speed (rpm)	500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
G-5U□-K	Max. allowable torque(kgfcm)		10	16	24	27	32	40	48	54	64	77	93	155	200	200	200

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Dimension Drawing of PMG DC Motors

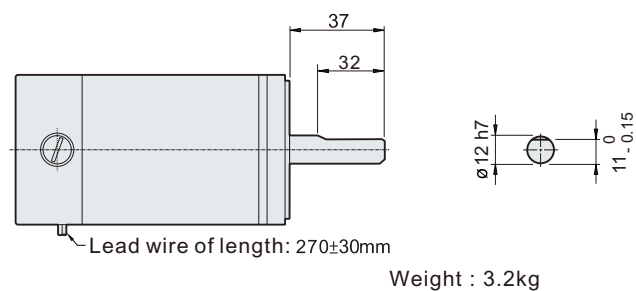
M-5DK100U-□18 / M-5DK150U-□32



Weight : 3.2kg

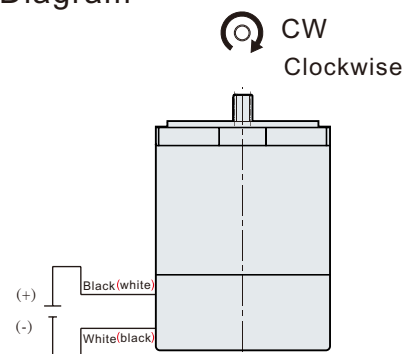
Specifications of Round Shaft

M-5DK100A-□18 / M-5DK150A-□32



Weight : 3.2kg

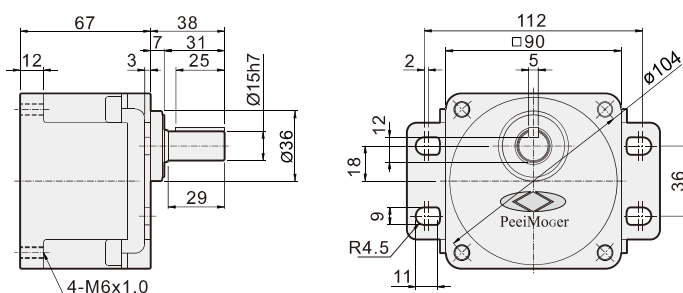
PMG DC Motor, Frame 5 Wiring Diagram



• When the rotation direction changes, use the wiring color indicated in the brackets.

Gear Head with Mounting Brackets

G-5U□-KF

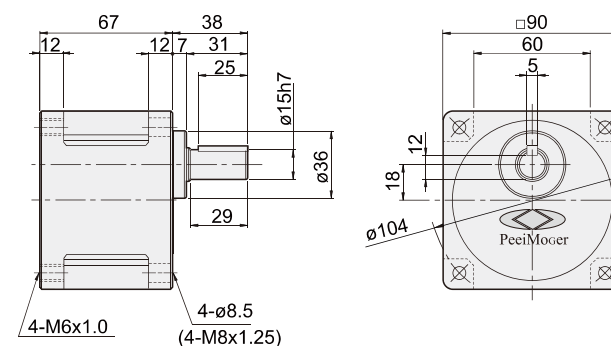


Weight List of Gear Head

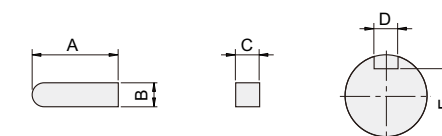
Model	Weight (kg)
G-5U3-K~G-5U9-K	1.23
G-5U10-K~G-5U18-K	1.31
G-5U20-K~G-5U60-K	1.41
G-5U75-K~G-5U180-K	1.46
G-5U3-KF~G-5U9-KF	1.44
G-5U10-KF~G-5U18-KF	1.55
G-5U20-KF~G-5U60-KF	1.67
G-5U75-KF~G-5U180-KF	1.73

Gear Head

G-5U□-K



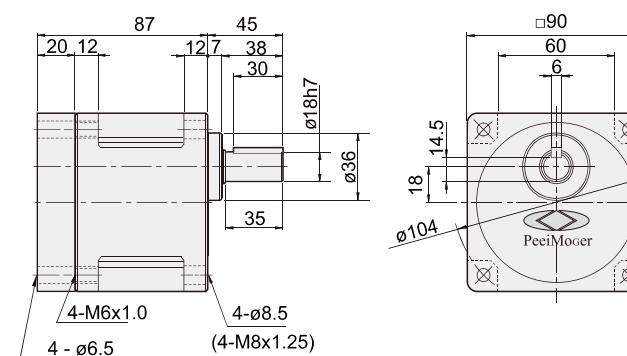
Gear Head: Key and Key slot Dimension



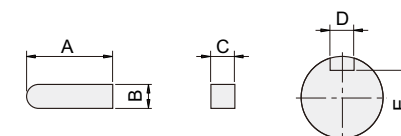
Model	A	B	C	D	E
G-5U□-K	25	5 ⁰ _{-0.03}	5 ⁰ _{-0.03}	5 ^{+0.05} ₀	12 ⁰ _{-0.15}

Gear Head

G-5U□-KH



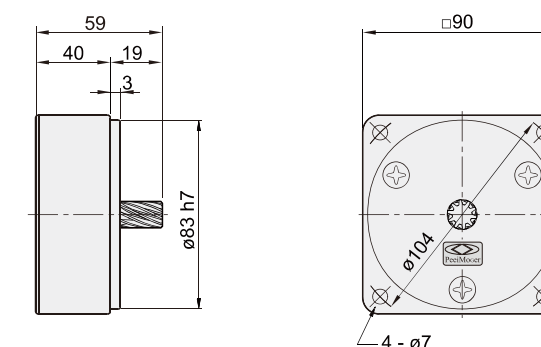
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

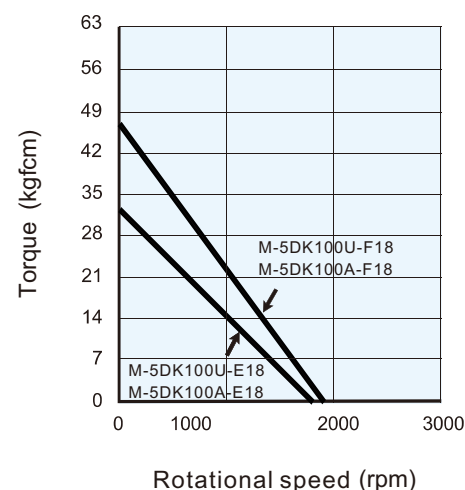
Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

100W · Specifications of PMG DC Motors

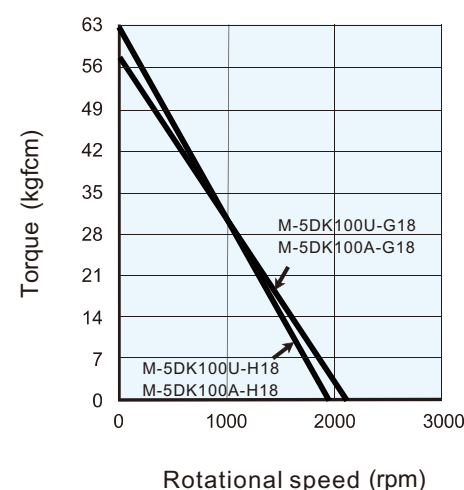
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-5DK100U-E18 M-5DK100A-E18	100	12	CONT.	1850	1.20	33.3	12.70	1740	7.36	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
M-5DK100U-F18 M-5DK100A-F18	100	24	CONT.	1930	1.01	47.4	5.64	1710	5.88			
M-5DK100U-G18 M-5DK100A-G18	100	90	CONT.	2150	0.24	58.1	1.43	1940	5.08			
M-5DK100U-H18 M-5DK100A-H18	100	180	CONT.	1940	0.10	62.3	0.70	1760	5.68			

100W · Characteristics of PMG DC Motors

M-5DK100U-E18 / M-5DK100U-F18
M-5DK100A-E18 / M-5DK100A-F18



M-5DK100U-G18 / M-5DK100U-H18
M-5DK100A-G18 / M-5DK100A-H18



Permissible Torque of Gear Head

Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
		50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
G-5U□-K	Max. allowable torque(kgfcm)	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
			14	23	35	38	46	58	69	77	92	111	133	200	200	200	200

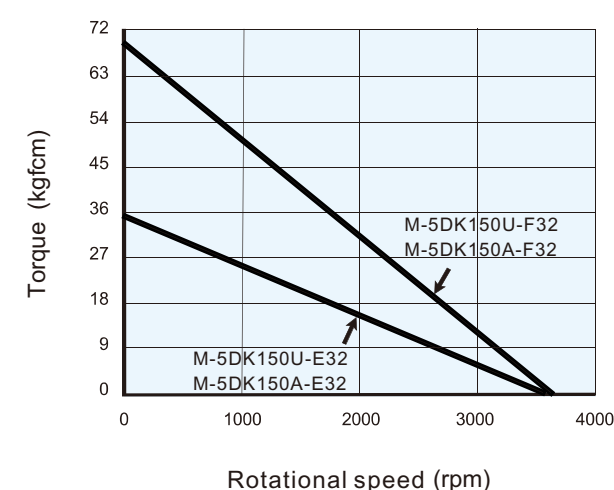
Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

150W · Specifications of PMG DC Motors

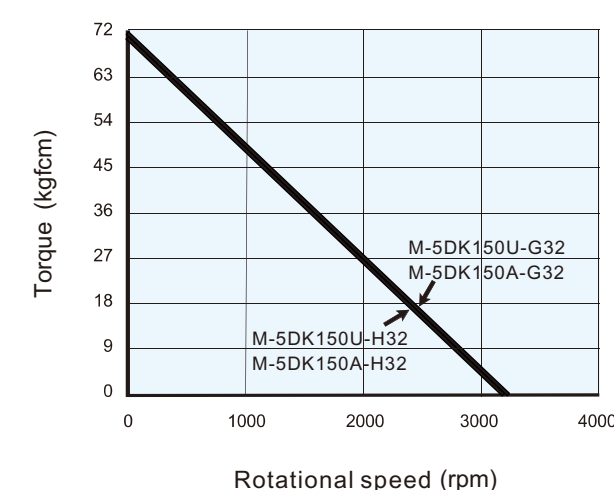
Motor model	Output power W	Voltage V	Rated time	No-load revolution rpm	Current A	Starting torque kgfcm	Rating			Coupled gear head model		
							Current A	Revolution rpm	Torque kgfcm	Metal bearing	Ball bearing	Intermediate speed ratio
M-5DK150U-E32 M-5DK150A-E32	150	12	30min	3790	2.40	35.7	17.45	2850	3.87	-	G-5U□-K G-5U□-KH	G-5U10X-K G-5U10X-K
M-5DK150U-F32 M-5DK150A-F32	150	24	30min	3680	1.85	67.9	8.00	3450	4.26			
M-5DK150U-G32 M-5DK150A-G32	150	90	30min	3200	0.18	71.2	2.20	2820	5.20			
M-5DK150U-H32 M-5DK150A-H32	150	180	30min	3190	0.09	71.0	1.10	2850	5.30			

150W · Characteristics of PMG DC Motors

M-5DK150U-E32 / M-5DK150U-F32
M-5DK150A-E32 / M-5DK150A-F32



M-5DK150U-G32 / M-5DK150U-H32
M-5DK150A-G32 / M-5DK150A-H32



Permissible Torque of Gear Head

Model	Speed (rpm)	Coupled decimal gear head															
		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9
		50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150
G-5U□-KH	Max. allowable torque(kgfcm)	60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180
			-	-	-	-	-	-	-	-	-	-	216	300	300	300	300

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.



產品特點

- 優越的性能
 - 1) 高扭力
 - 2) 低噪音
 - 3) 體積小
 - 4) 壽命長
 - 5) 可用於低轉速高扭矩
- 產品應用範圍

主要用於小型的傳動機械設備上面
如：各類工作母機、輸送機械、
包裝機械、食品機械、紡織機械、
印刷機械、電子儀器、運動器材等
- 滿足客戶的實際需求

依所需速度可搭配多種比數減速機

Product Feature

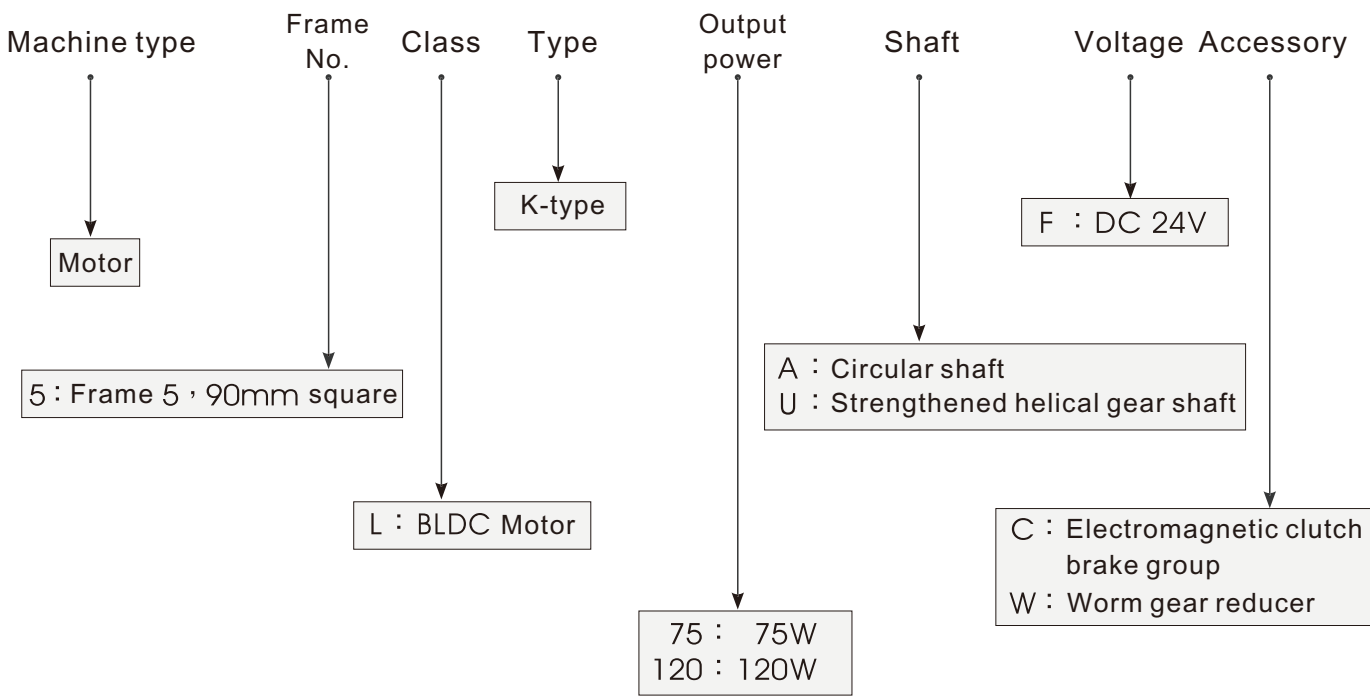
- Performance
 - 1) High Torque
 - 2) Low Noise
 - 3) Small
 - 4) Long life
 - 5) Low speed high torque
- Structure

The motor is mainly used for small-scale machinery and equipment above the transmission. Such as: Machine tools. Transportation machinery. Packaging machinery. Food machinery. Textile machinery. Printing machinery, etc.
- Customer Satisfaction

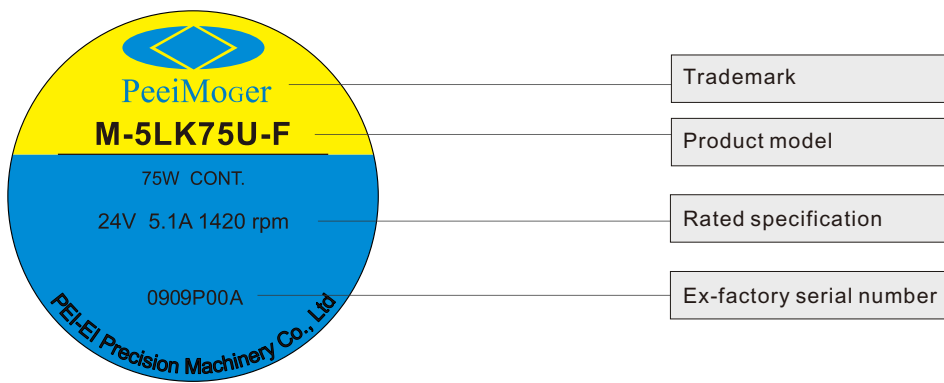
In accordance with the required speed can be used with a variety of gear

BLDC Motor Models

M - 5 L K 7 5 U - F W

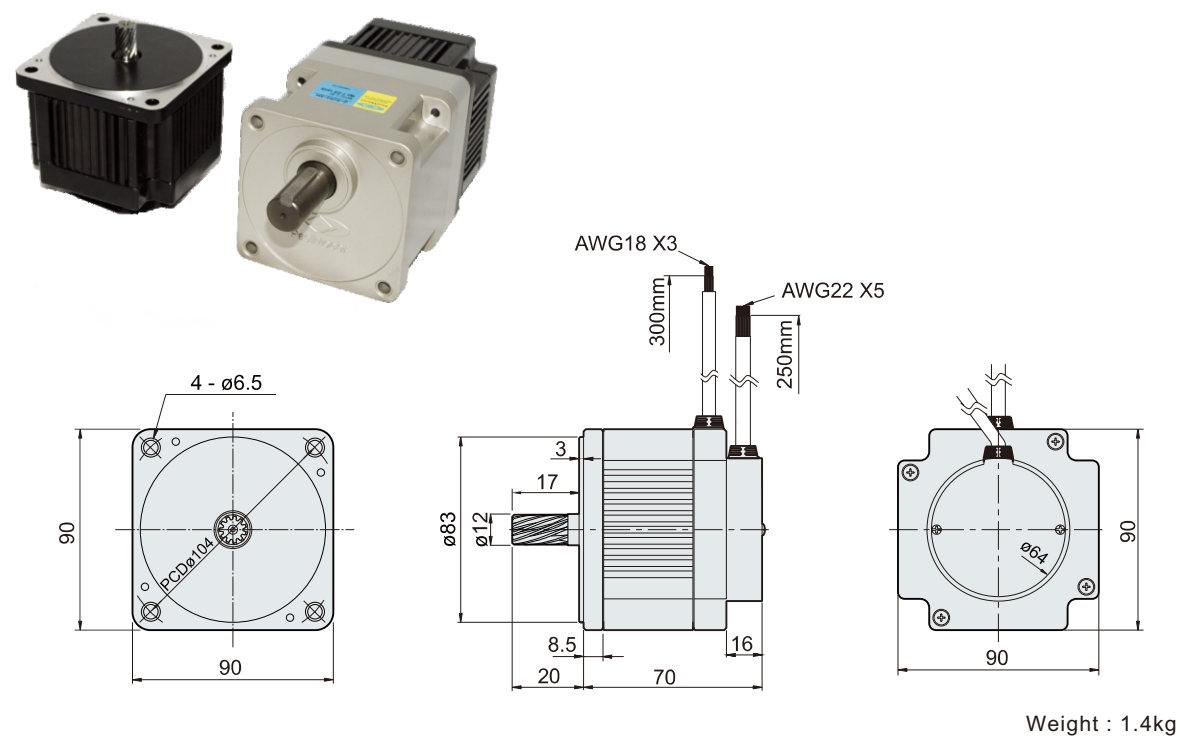


BLDC Motor Label



75W ■ Dimension Drawing of BLDC Motors

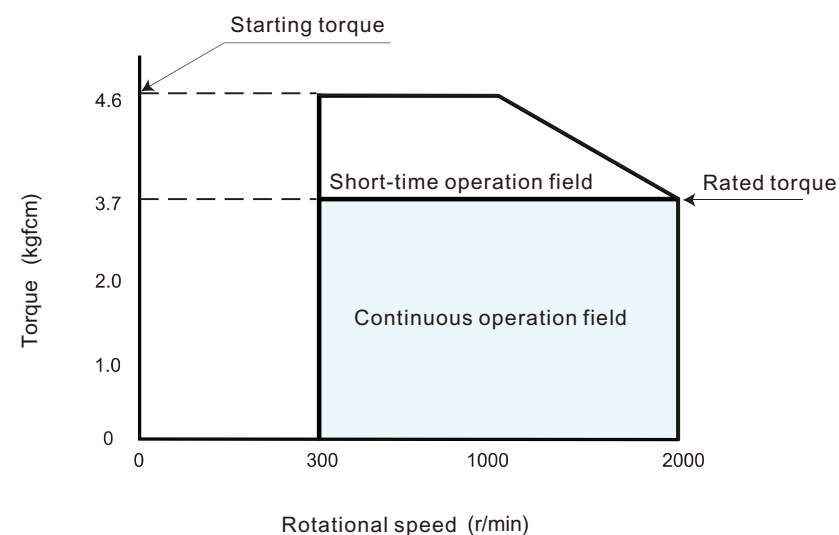
M-5LK75U-□□



Specifications of 75W Motors

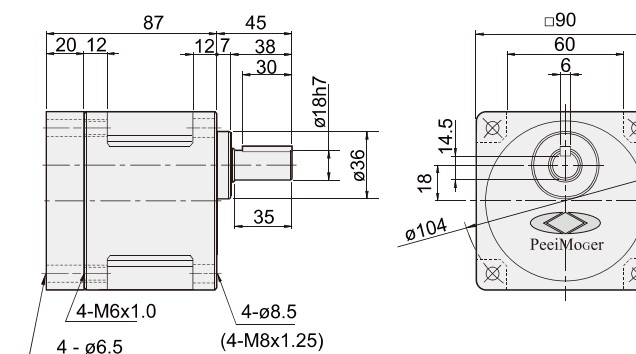
Type	Model	Output power W	Voltage V	Rated time	Rated output		Max Current A	Starting Torque kgfcm	Coupled bearing		
					Current A	Torque kgfcm			Metal bearing	Ball bearing	Intermediate speed ratio
BLDC Motor	M-5LK75U-F	75	DC24V	CONT.	6	3.7	9	4.6	-	G-5U□-KH	G-5U10X-K

Characteristics of 75W ■ BLDC Motors

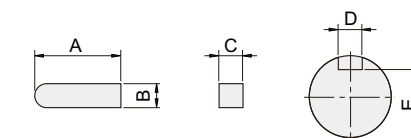


Gear Head

G-5U□-KH



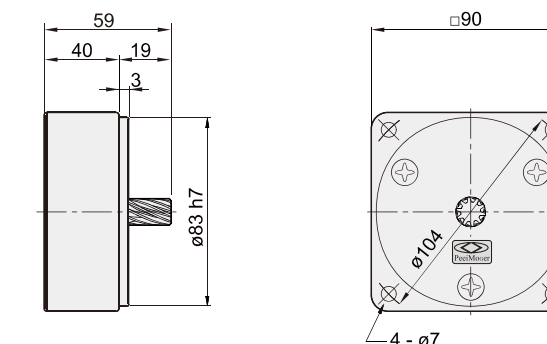
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

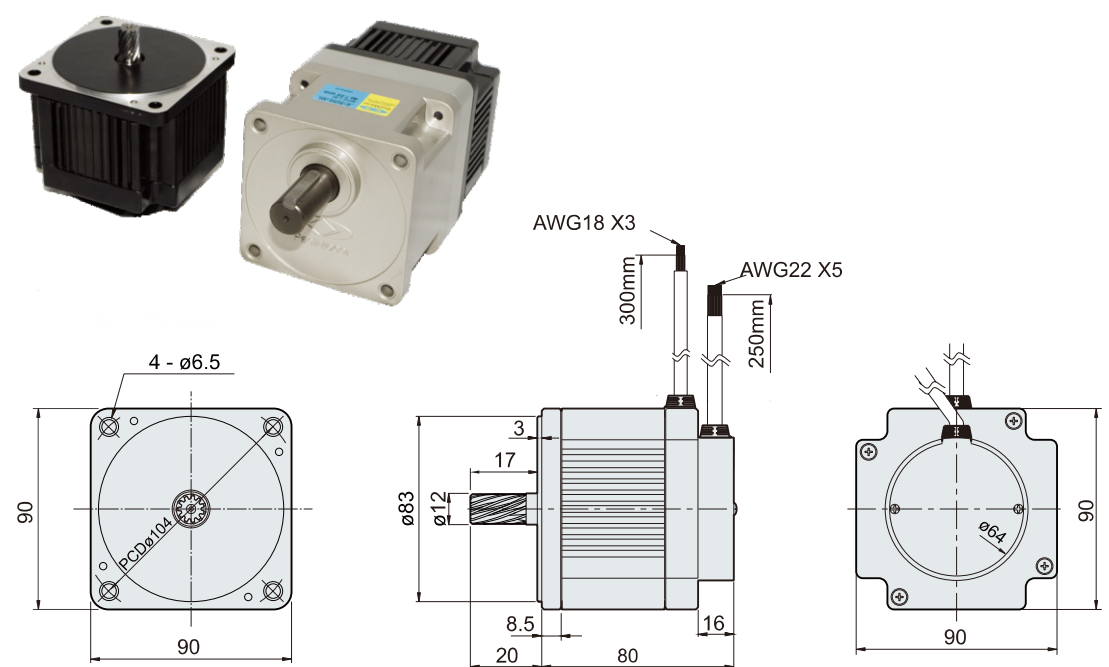
Permissible Torque of Gear Head

Model		Coupled decimal gear head																
		Speed (rpm)																
Model	Gear ratio	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz
		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	45	54	60
G-5U□KH	Max. allowable torque(kgfcm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

120W ■ Dimension Drawing of BLDC Motors

M-5LK120U-□□

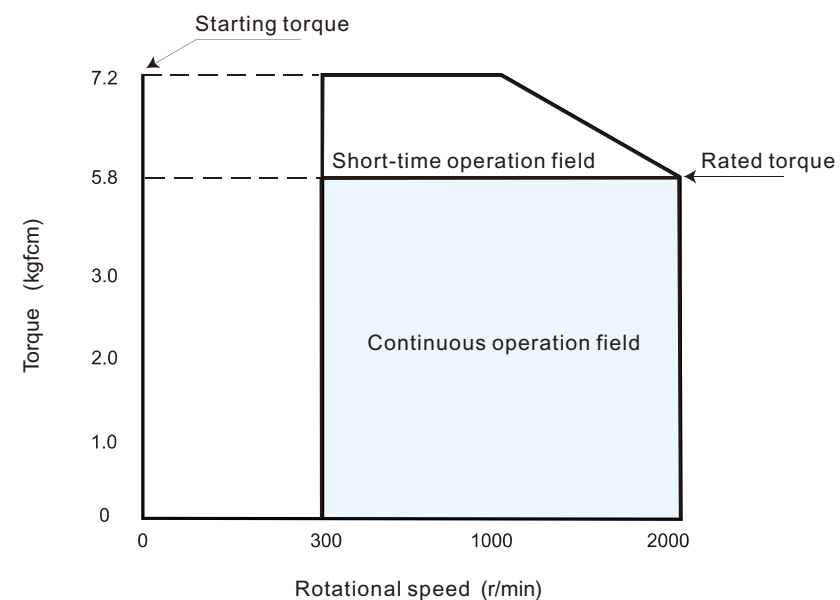


Weight : 1.7kg

Specifications of 120W Motors

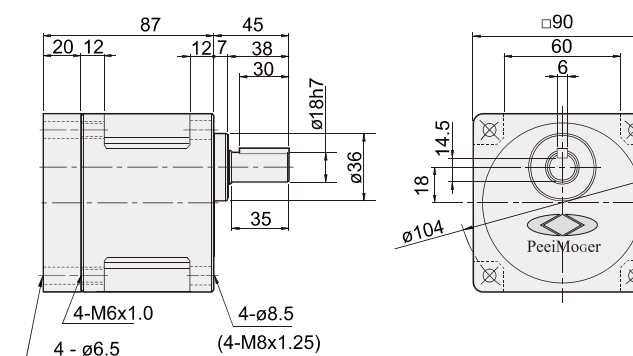
Type	Model	Output power W	Voltage V	Rated time	Rated output		Max Current A	Starting Torque kgfcm	Coupled bearing		
					Current A	Torque kgfcm			Metal bearing	Ball bearing	Intermediate speed ratio
BLDC Motor	M-5LK120U-F	120	DC24V	CONT.	9	5.8	14	7.2	-	G-5U□-KH	G-5U10X-K

Characteristics of 120W ■ BLDC Motors

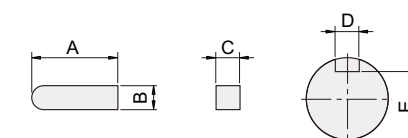


Gear Head

G-5U□-KH



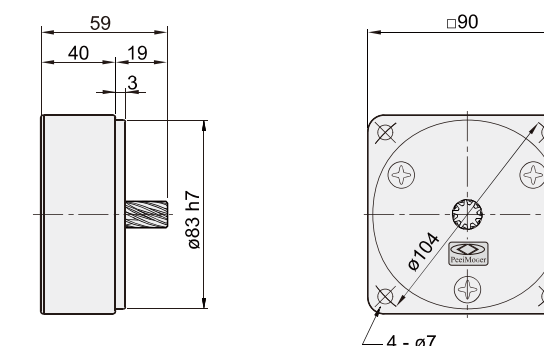
Gear Head: Key and Key slot Dimension



Model	A	B	C	D	E
G-5U□-KH	30	6 ⁰ _{-0.03}	6 ⁰ _{-0.03}	6 ^{+0.05} ₀	14.5 ⁰ _{-0.15}

Decimal Gear Head

G-5U10X-K



Weight List of Gear Head

Model	Weight (kg)
G-5U50-KH~G-5U60-KH	1.85
G-5U75-KH~G-5U180-KH	2.00
G-5U10X-K	0.64

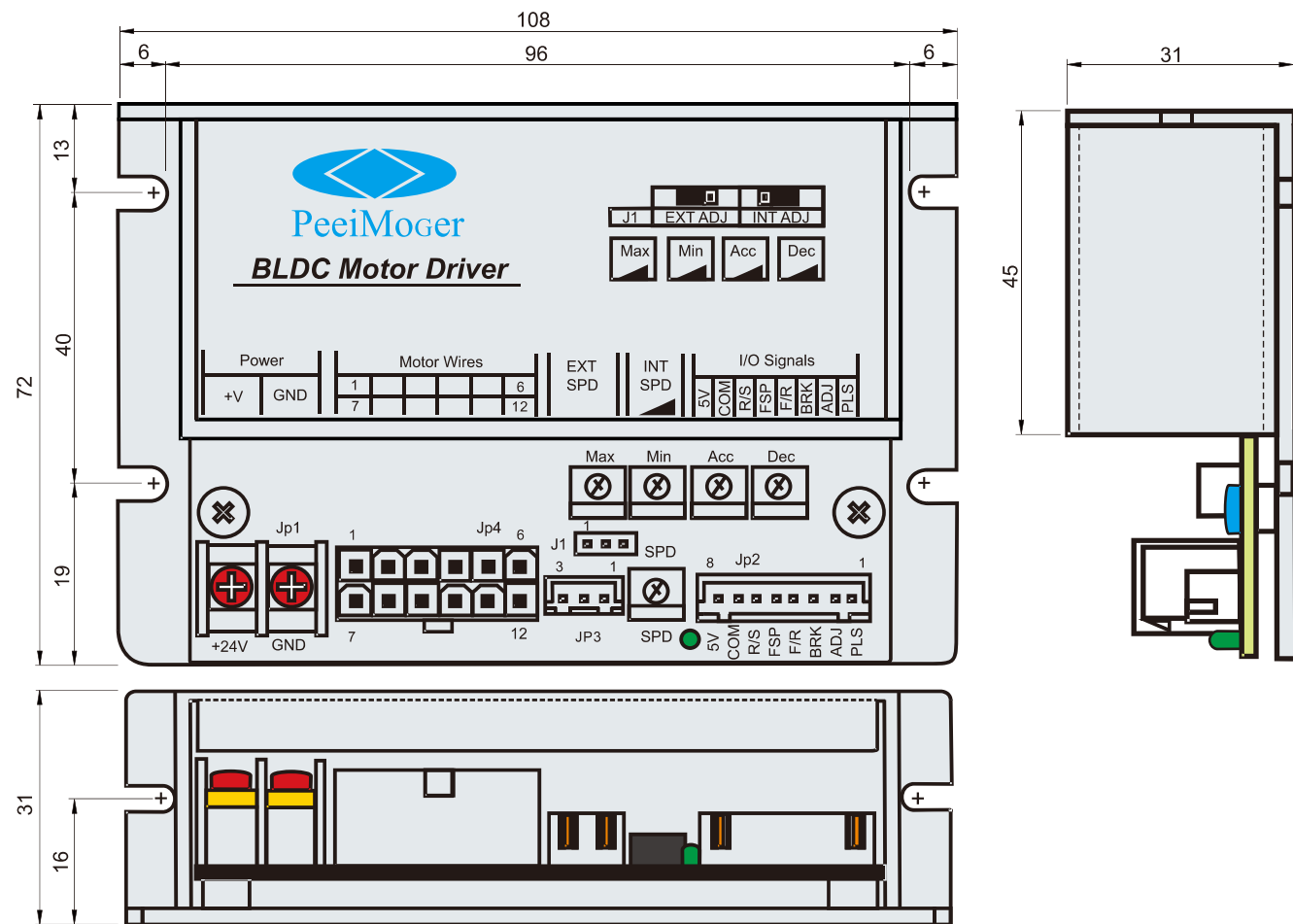
Permissible Torque of Gear Head

Permissible Torque of Gear Head																	Coupled decimal gear head								
Model	Speed (rpm)		500	300	200	180	150	120	100	90	75	60	50	30	20	15	10	9	7.5	6	5	3	2	1.5	1
	Gear ratio	50Hz	3	5	7.5	-	10	12.5	15	-	20	25	30	50	75	100	150	-	200	250	300	500	750	1000	1500
		60Hz	3.6	6	9	10	-	15	18	20	-	30	36	60	90	120	180	200	-	300	360	600	900	1200	1800
G-5U□KH	Max. allowable torque(kgfc ^m)		-	-	-	-	-	-	-	-	-	-	-	216	300	300	300	300	300	-	-	300	300	300	300

Note: In the above table, the deep-color fields indicate that the output shaft of the gear head and the motor shaft are in the same direction; the light-color fields indicate that they are in opposite directions.
The speed is calculated by dividing the motor's synchronous speed by the gear ratio.

Dimension Drawing of the Driver

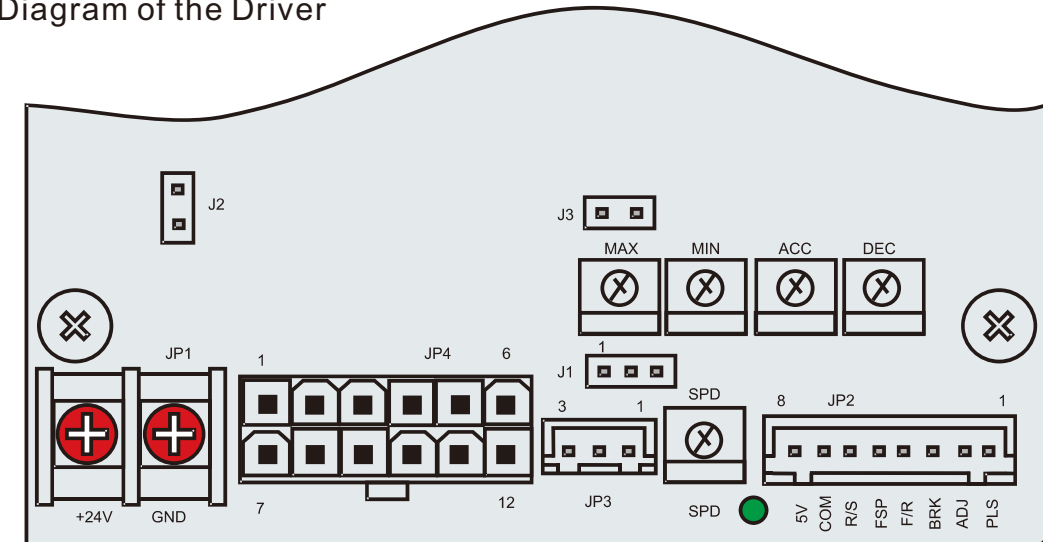
DL-E10



Specifications of the Driver

Name/Model	BLDC Motor Driver
Applicable Voltage	DC 24V
Output current	10A (continuous), 20A (instant)
Applicable motor power	<300W
Speed control range	40:1
Operating functions	Motor instant clock/counterclockwise rotation, internal/external speed selection, slow acceleration/deceleration, brake/emergency stop selection
Rotational speed setting	Internal rotational speed control External rotational speed control (VR or 0~5V speed adjustment)
Output/input signal	Clock/counterclockwise rotation, operating/stop, full speed, pulse output, speed adjustment by voltage
Environmental temperature / humidity	0~+60°C / 85%RH
Dimension/weight	72 (L) × 108 (W) × 31 (H) + 0.5mm / 230g

Wiring Diagram of the Driver



Speed Adjusting Knobs (parameter settings , 5items)

Label	Name	Description
SPD	Internal speed	Adjusting knob for setting the internal speed (clockwise: higher speed; counterclockwise: lower speed)
MAX	Maximum speed	Defines the upper limit of the adjustable rotational speed (clockwise: higher speed; counterclockwise: lower speed)
MIN	Minimum speed	Defines the lower limit of the adjustable rotational speed (clockwise: higher speed; counterclockwise: lower speed)
ACC	Slow acceleration	Defines the acceleration time, 0.5~10 sec (clockwise: higher speed; counterclockwise: lower speed)
DEC	Slow deceleration	Defines the deceleration time, 0.5~10 sec (clockwise: higher speed; counterclockwise: lower speed)

J1 Contact (internal/external speed selection setting , 3Pin)

Setting	Name	Description
<input type="checkbox"/>	EXT	To adjust the rotational speed of motors via external VR or voltage
<input type="checkbox"/>	INT	To adjust the rotational speed of motors via internal VR

J2 Contact (12V/24Vselection setting , 3Pin)

Setting	Name	Description
Short	12V	Sets the power source of motors/drivers to DC 12V
Open	24V	Sets the power source of motors/drivers to DC 24V

Jp1 Contact (input end of the power source , 2Pin)

Marking	Description
+ 24V	Power DC 24V+(linked with JP4 Pin2)
GND	Power GND (linked with JP4 Pin3)

Jp2 Contact (terminals controlling signals , 8Pin)

Pin-out	Name	Description	Color
1	PLS	12 pulse signals are sent when the motor rotates once Specification: 5V, 100uS (Fixture)	Yellow
2	ADJ	Positive adjustment input signals during speed adjustment by voltage (0-5V)	Green
3	BRK	Controls the instant stoppage of the motor; the motor will stop suddenly when this terminal short circuit with COM. For an open circuit, the motor stops slowly under the control of the deceleration knob.	Gray
4	F/R	Controls the motor rotation direction: controls the rotation direction of the motor via this terminal and COM short circuit or open circuit.	Blue
5	FSP	Controls motors to run at full speed via this terminal and COM short circuit; this is not controlled by the maximum speed and internal/external speed adjusting knobs. For open circuit, motors operate under general control.	Orange
6	R/S	Controls the start and stop of motors: motors starts via this terminal and COM short circuit, and close in open circuit.	White
7	COM	Common terminal of input/output signals (0V)	Black
8	5V	DC 5V/0.1A output for the use of external components	Red

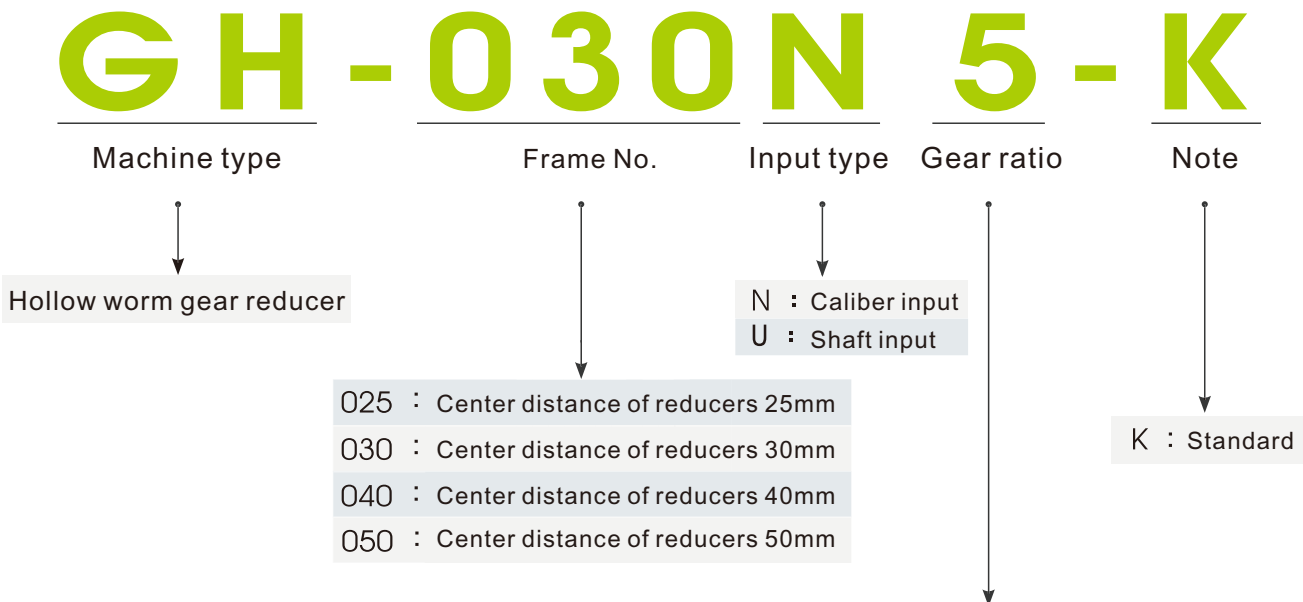
Jp3 Contact (input end controlling external rotational speed , 3Pin)

Pin-out	Name	Description	Color
1	LV	Knob contact for external speed adjusting (MIN Speed)	Black
2	Wiper	Knob contact for external speed adjusting (adjusting point)	Green
3	HV	Knob contact for external speed adjusting (MAX Speed)	Red

Note: When using the variable resistance to adjust speed, please adopt 5Ω to 20Ω.



Hollow Worm Gear Reducer Models



Frame No.	Gear ratio											
025	5	7.5	10	15	20	30	40	50	60			
030	5	7.5	10	15	20	25	30	40	50	60	80	
040	5	7.5	10	15	20	25	30	40	50	60	80	100
050	5	7.5	10	15	20	25	30	40	50	60	80	100

產品特點

• 優越的性能

- 1) 結構小型輕量化
- 2) 優越的保護等級
- 3) 安全性確保
- 4) 安裝方式選擇多元化

• 產品應用範圍

主要用於小型的傳動機械設備上面
如：各類工作母機、輸送機械、
包裝機械、食品機械、紡織機械、
印刷機械、電子儀器、運動器材等

• 滿足客戶的實際需求

包括結構，電氣性能及其他特殊需求

Product Feature

• Performance

- 1) Structure of small lightweight
- 2) The superior level of protection
- 3) Superior safety performance
- 4) Installation options diversified

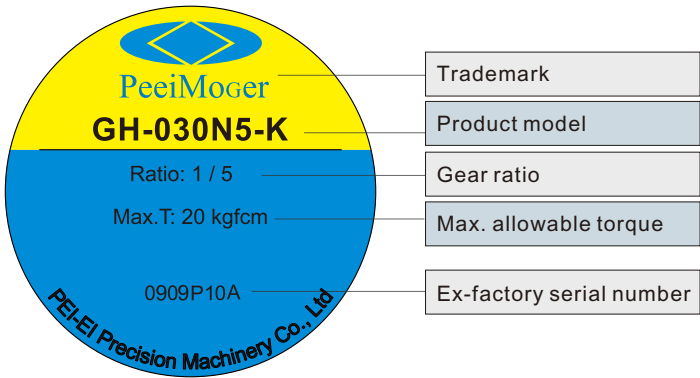
• Structure

The motor is mainly used for small-scale machinery and equipment above the transmission. Such as: Machine tools. Transportation machinery. Packaging machinery. Food machinery. Textile machinery. Printing machinery, etc.

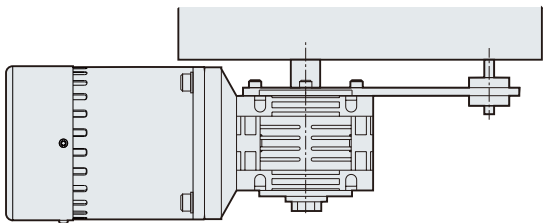
• Customer Satisfaction

Including structural, electrical properties and other special needs

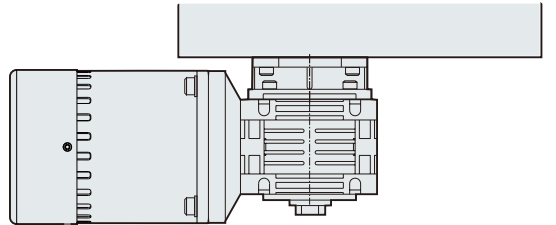
Hollow Worm Gear Reducer Label



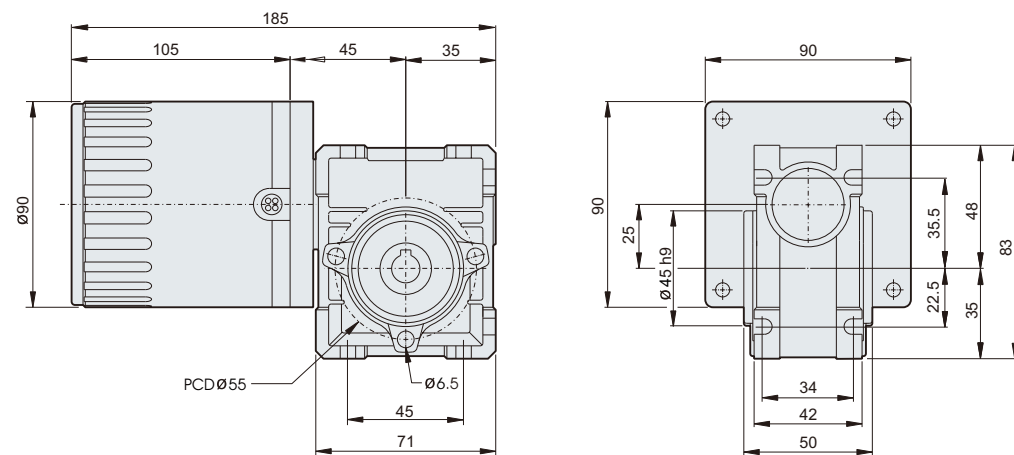
Example of fixed mount installation



Example of output flange installation



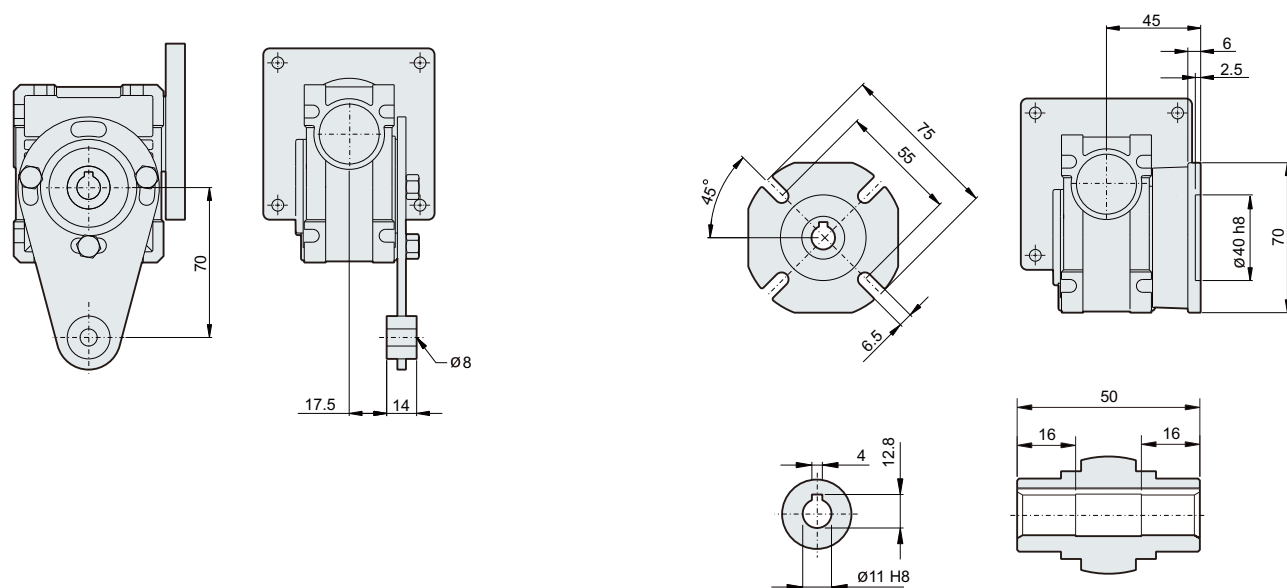
40W ■ Single/Three-phase Induction Motor with Hollow Worm Gear Reducer GH-025N□-K



Weight: 0.7kg without the motor, 3.15kg with the motor

Example of Toggle Installation

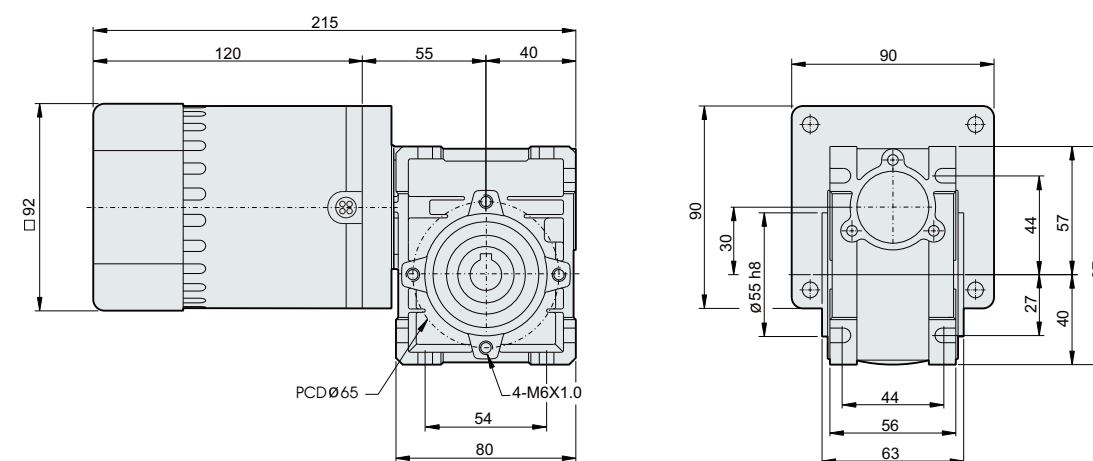
Dimension of the Output Flange and the Hollow Shaft Key slot



Specifications of Hollow Worm Gear Reducer

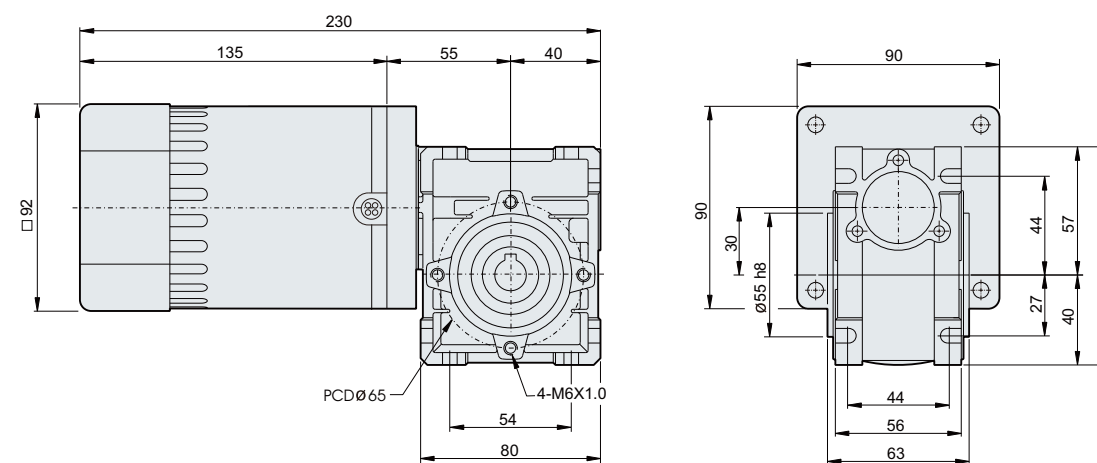
Hollow worm gear reducer	Frequency Hz	Motor torsion	Gear ratio & max. output torque (50Hz/60Hz kgfcm)												Coupled motor
			5	7.5	10	15	20	25	30	40	50	60	80	100	
GH-025N□-K	50	3.1	13.3	19.5	25.4	36.3	45.9	-	61.4	75.6	88.4	100.4	-	-	40W Induction Motor
	60	2.4	10.3	15.1	19.7	28.1	35.5	-	47.5	58.6	68.4	77.8	-	-	

60W ■ Single/Three-phase Induction Motor with Hollow Worm Gear Reducer GH-030N□-K



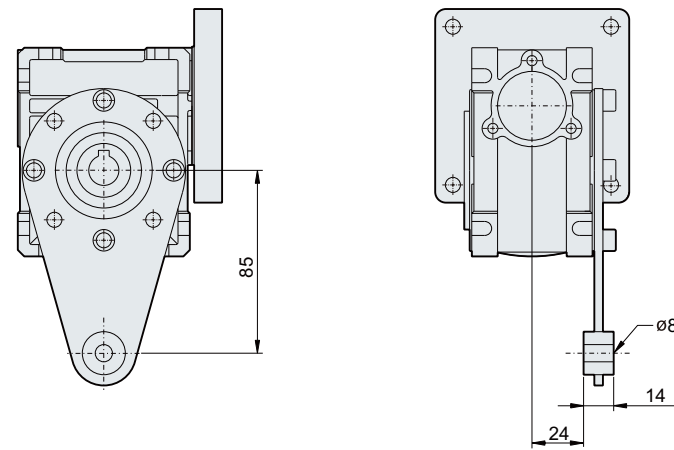
Weight: 1.2kg without the motor, 3.8kg with the motor

90W ■ Single/Three-phase Induction Motor with Hollow Worm Gear Reducer GH-030N□-K

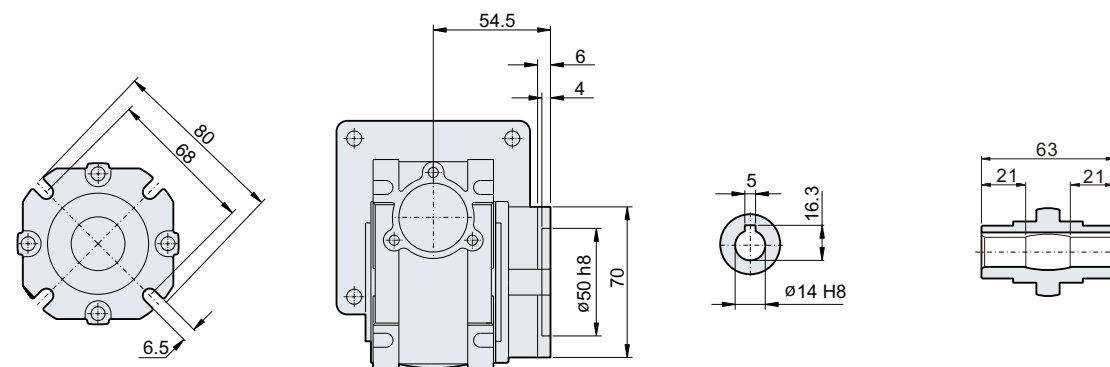


Weight: 1.2kg without the motor, 4.4kg with the motor

■■■ Example of Toggle Installation



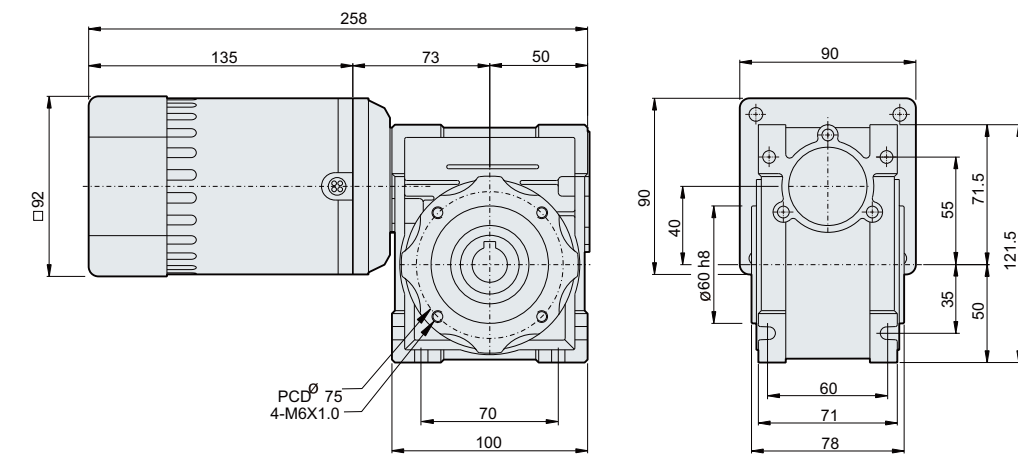
■■■ Dimension of the Output Flange and the Hollow Shaft Key slot



■■■ Specifications of Hollw Worm Gear Reducer

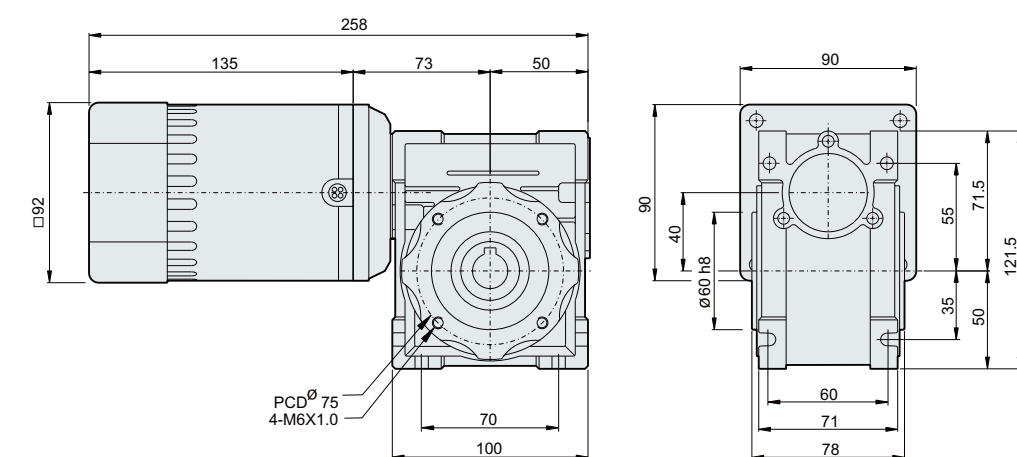
Hollow worm gear reducer	Frequency Hz	Motor torsion	Gear ratio & max. output torque (50Hz/60Hz kgfcm)												Coupled motor
			5	7.5	10	15	20	25	30	40	50	60	80	100	
GH-030N□-K	50	4.6	19.8	29.0	37.3	52.4	66.2	77.1	88.3	106.7	124.2	138.0	161.9	-	60W Induction Motor
	60	3.5	15.1	22.1	28.4	39.9	50.4	58.6	67.2	81.2	94.5	105.0	123.2	-	
	50	6.9	29.7	43.5	55.9	78.7	99.4	115.6	132.5	160.1	186.3	207.0	242.9	-	90W Induction Motor
	60	5.3	22.8	33.4	42.9	60.4	76.3	88.8	101.8	123.0	143.1	159.0	186.6	-	

■■■ 120W ■ Single/Three-phase Induction Motor with Hollow Worm Gear Reducer GH-040N□-K



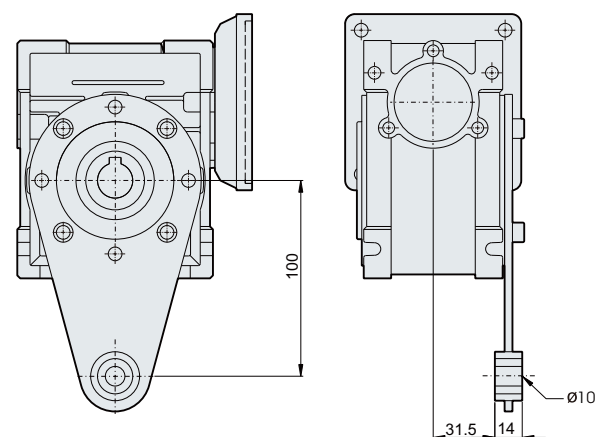
Weight: 2.3kg without the motor, 5.5kg with the motor

■■■ 150W ■ Single/Three-phase Induction Motor with Hollow Worm Gear Reducer GH-040N□-K

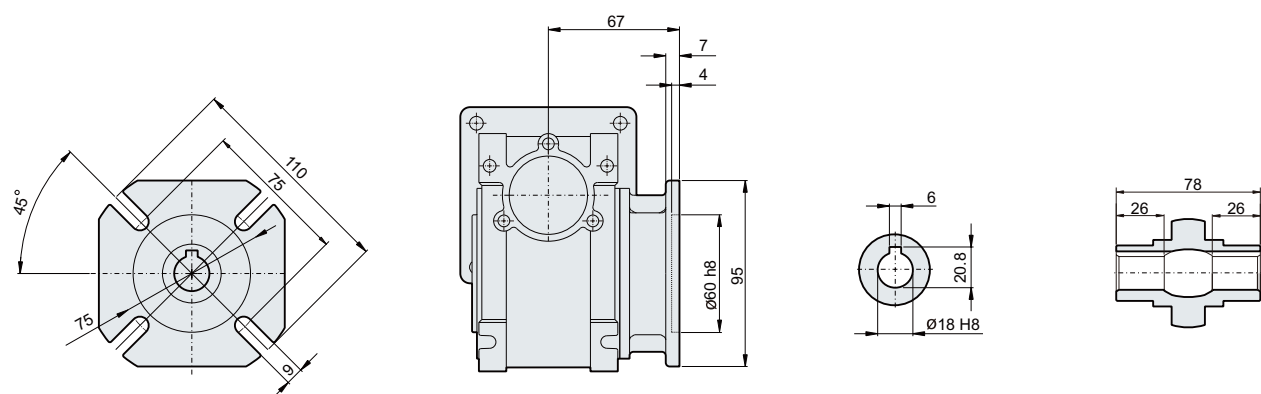


Weight: 2.3kg without the motor, 5.5kg with the motor

Example of Toggle Installation



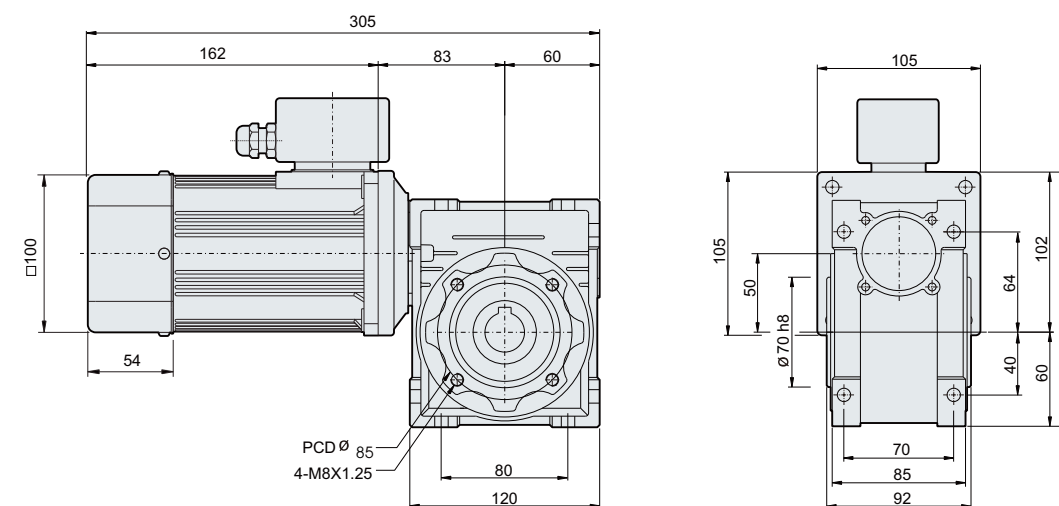
Dimension of the Output Flange and the Hollow Shaft Key slot



Specifications of Hollow Worm Gear Reducer

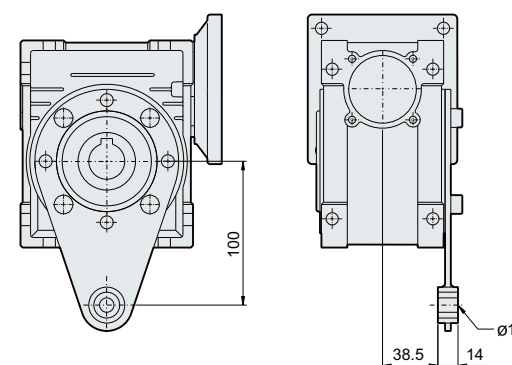
Hollow worm gear reducer	Frequency Hz	Motor torsion	Gear ratio & max. output torque (50Hz/60Hz kgfcm)												Coupled motor
			5	7.5	10	15	20	25	30	40	50	60	80	100	
GH-040N□-K	50	8.7	38.3	56.1	74.0	105.7	134.0	161.0	180.1	222.7	265.4	297.5	355.0	408.9	120W Induction Motor
	60	7.1	31.2	45.8	60.4	86.3	109.3	131.4	147.0	181.8	216.6	242.8	289.7	333.7	
	50	10.8	47.5	69.7	91.8	131.2	166.3	199.8	223.6	276.5	329.4	369.4	440.6	507.6	150W Induction Motor
	60	8.7	40.9	60.0	79.1	113.0	143.2	172.1	192.5	238.1	283.7	318.1	379.4	437.1	

200W ■ Single/Three-phase Induction Motor with Hollow Worm Gear Reducer GH-050N□-K

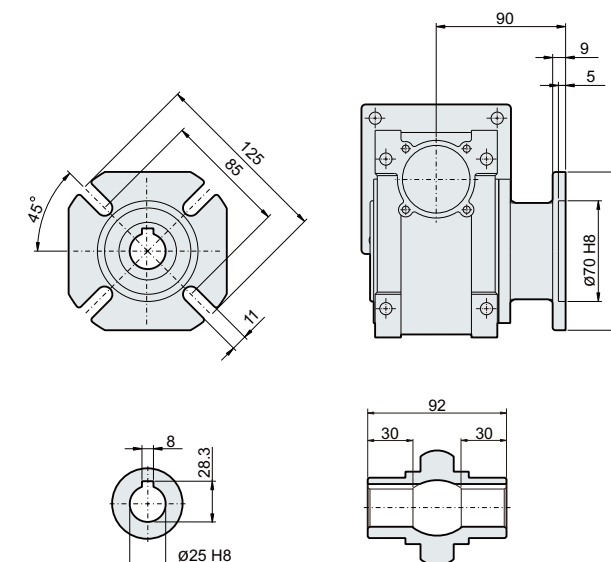


Weight: 3.5kg without the motor, 8.4kg with the motor

Example of Toggle Installation



Dimension of the Output Flange and the Hollow Shaft Key slot



Specifications of Hollow Worm Gear Reducer

Hollow worm gear reducer	Frequency Hz	Motor torsion	Gear ratio & max. output torque (50Hz/60Hz kgfcm)												Coupled motor
			5	7.5	10	15	20	25	30	40	50	60	80	100	
GH-050N□-K	50	16.3	70.9	105.1	136.9	195.6	251.0	301.5	342.3	423.8	497.1	557.4	665.0	798.7	200W Induction Motor
	60	12.2	53.0	78.6	102.4	146.4	187.8	225.7	256.2	317.2	372.1	417.2	497.7	597.8	



產品特點

Product Feature

• 優越的性能

- 1) 傳動效率高
- 2) 低噪音
- 3) 結構美觀
- 4) 可垂直及左右移動

• 產品應用範圍

主要用於小型的傳動機械設備上面
如：各類工作母機、輸送機械、
包裝機械、食品機械、紡織機械、
印刷機械、電子儀器、運動器材等

• 滿足客戶的實際需求

可依客戶速度行程需求配置

• Performance

- 1) Transmission efficiency
- 2) Low Noise
- 3) Structural appearance
- 4) Vertically and move around

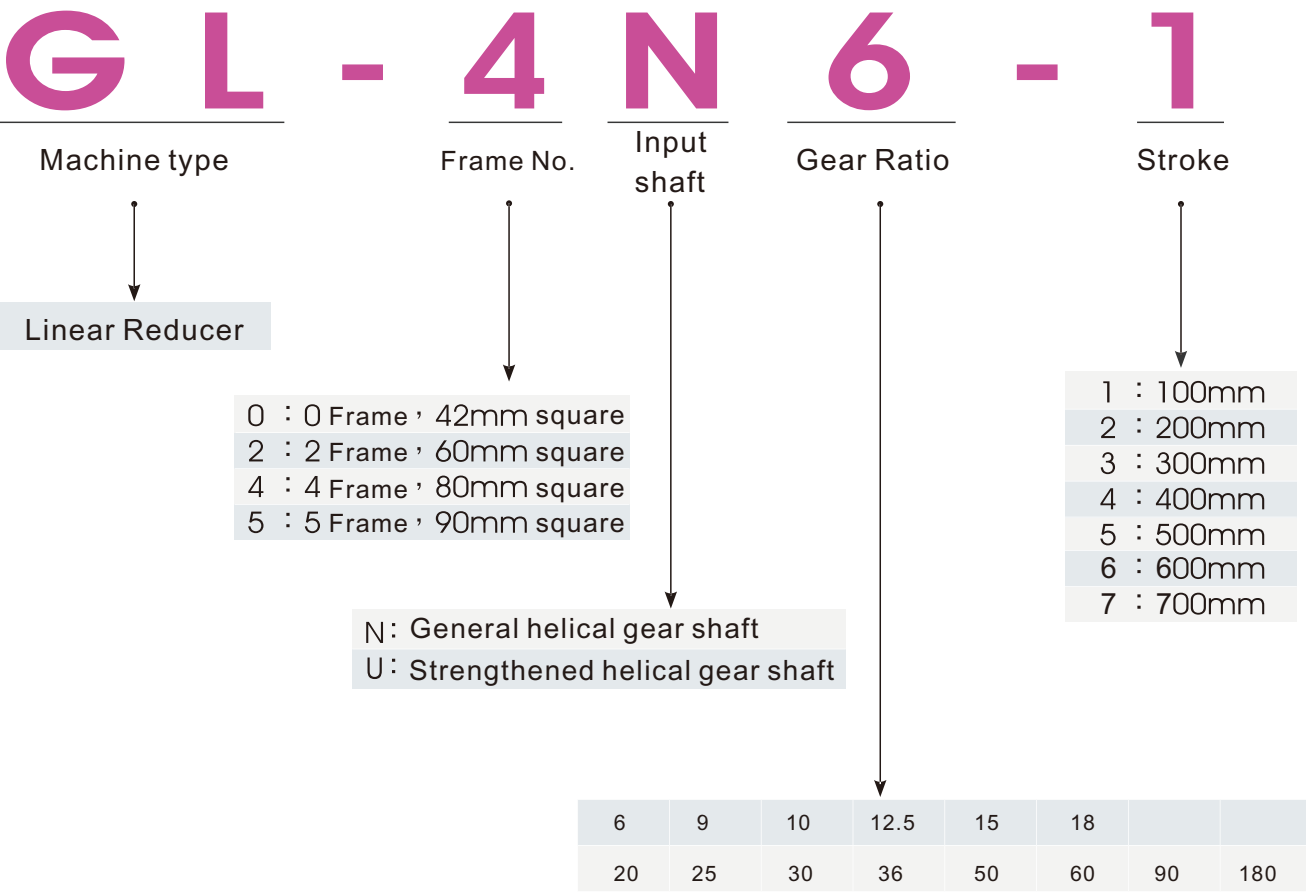
• Structure

The motor is mainly used for small-scale machinery and equipment above the transmission. Such as:
Machine tools. Transportation machinery.
Packaging machinery. Food machinery.
Textile machinery. Printing machinery, etc.

• Customer Satisfaction

Per customer's speed of travel configuration

Linear Reducer Models

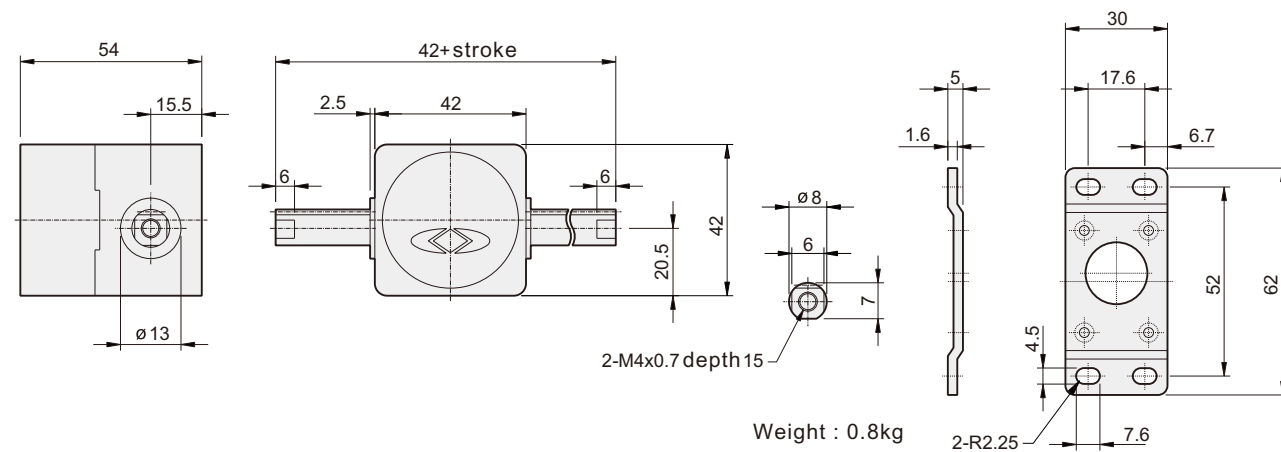


Linear Reducer Label



Linear Reducer · Outline Dimension Drawing of Frame 0 (under development)

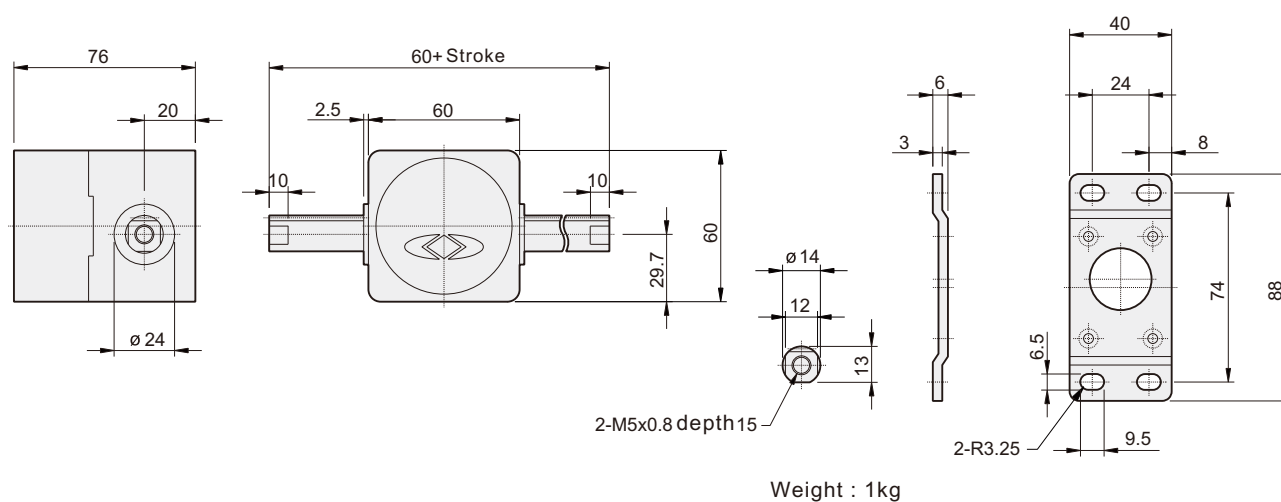
GL-0N□-□



Gear ratio		6	9	12.5	15	18	25	30	36	50	60	90
Moving speed mm/s	220V 50Hz	104.5	70	50	42	35	25	21	17.5	12.5	10.5	7
	220V 60Hz	131	87	63	52.5	43.5	31.5	26	22	15.5	13	9
Max. moveable weight (kg)		0.7	1	1.5	1.8	1.8	3.2	5.6	5.6	7.6	7.6	9

Linear Reducer · Outline Dimension Drawing of Frame 2 (under development)

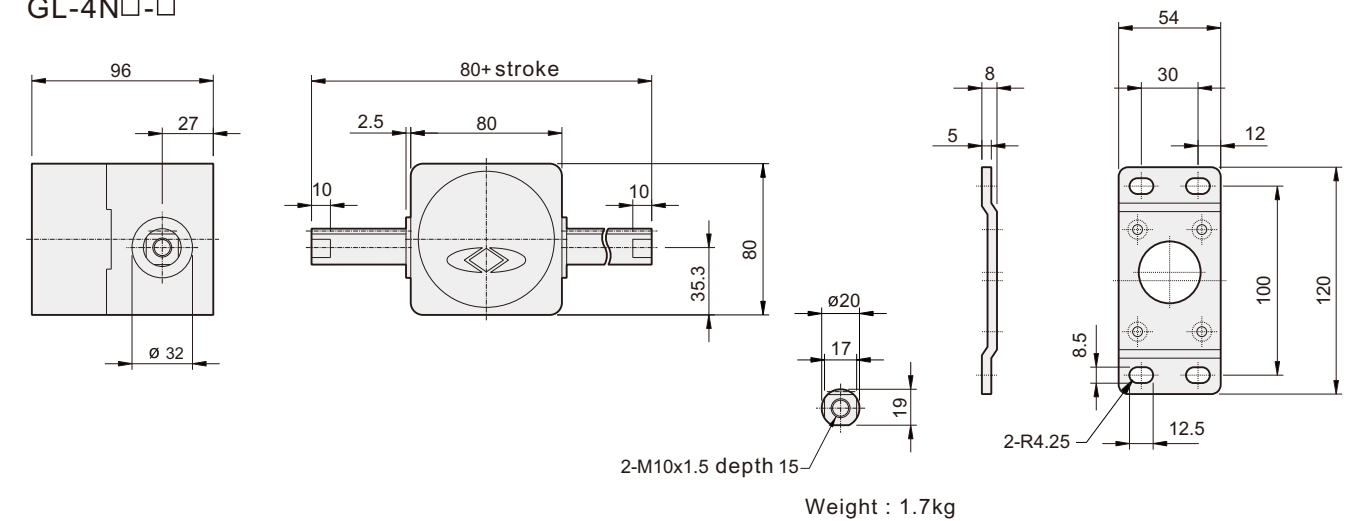
GL-2N□-□



Gear ratio		6	9	10	12.5	15	18	20	25	30	36	50	60	90	180
Moving speed mm/s	220V 50Hz	84	56	50	40	33.5	28	25	20	16.5	14	10	8.7	5.5	3
	220V 60Hz	105	70	63	50	42	35	31.5	25	21	17.5	12.5	10.5	7	3.5
Max. moveable weight (kg)		3.5	5.4	7.4	8.9	10.8	10.8	14.5	17.5	21	21	34.7	34.7	50	54

Linear Reducer · Outline Dimension Drawing of Frame 4

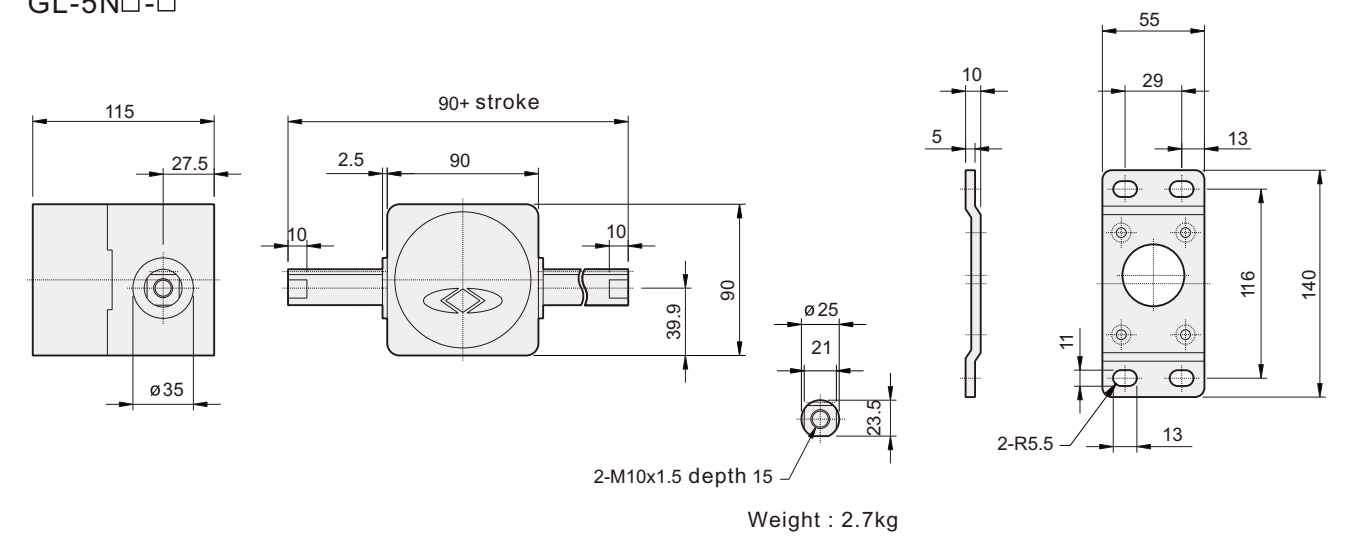
GL-4N□-□



Gear ratio		6	9	10	12.5	15	18	20	25	30	36	50	60	90	180
Moving speed mm/s	220V 50Hz	222	148	133	107	89	74	67	53.5	44.5	37	26.5	22	15	7.5
	220V 60Hz	278	185	167	133	111	93.5	83.5	66.5	55.5	46	33.5	28	18.5	9
Max. moveable weight (kg)		5.6	8.4	10.8	13.4	16.7	16.9	21.7	26.7	32.5	32.5	54	54	66.8	66.8

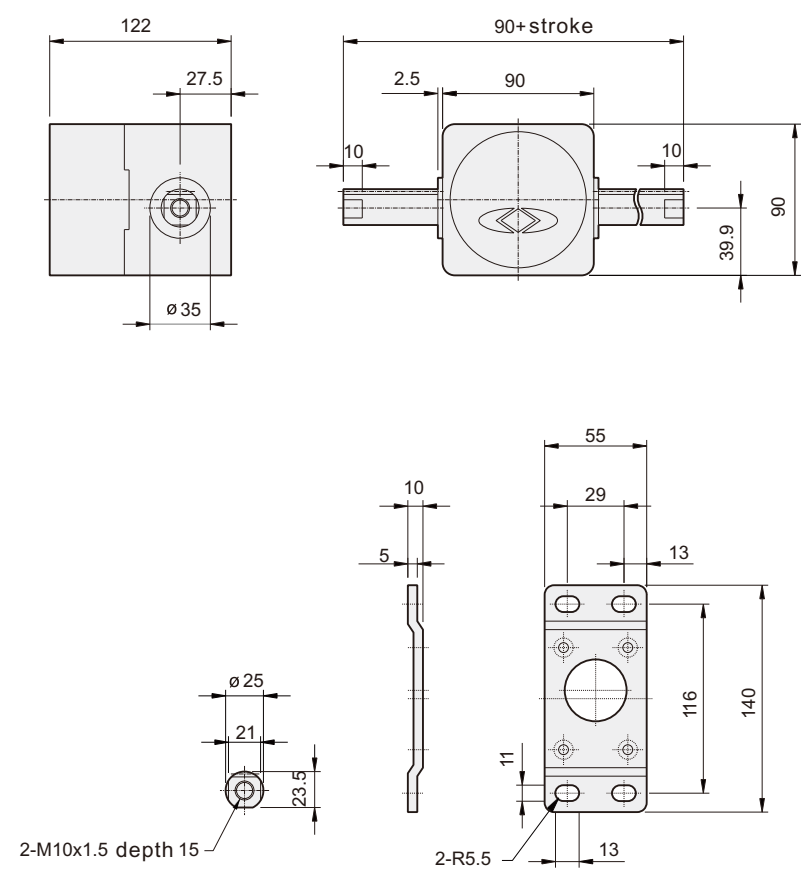
Linear Reducer · Outline Dimension Drawing of Frame 5

GL-5N□-□



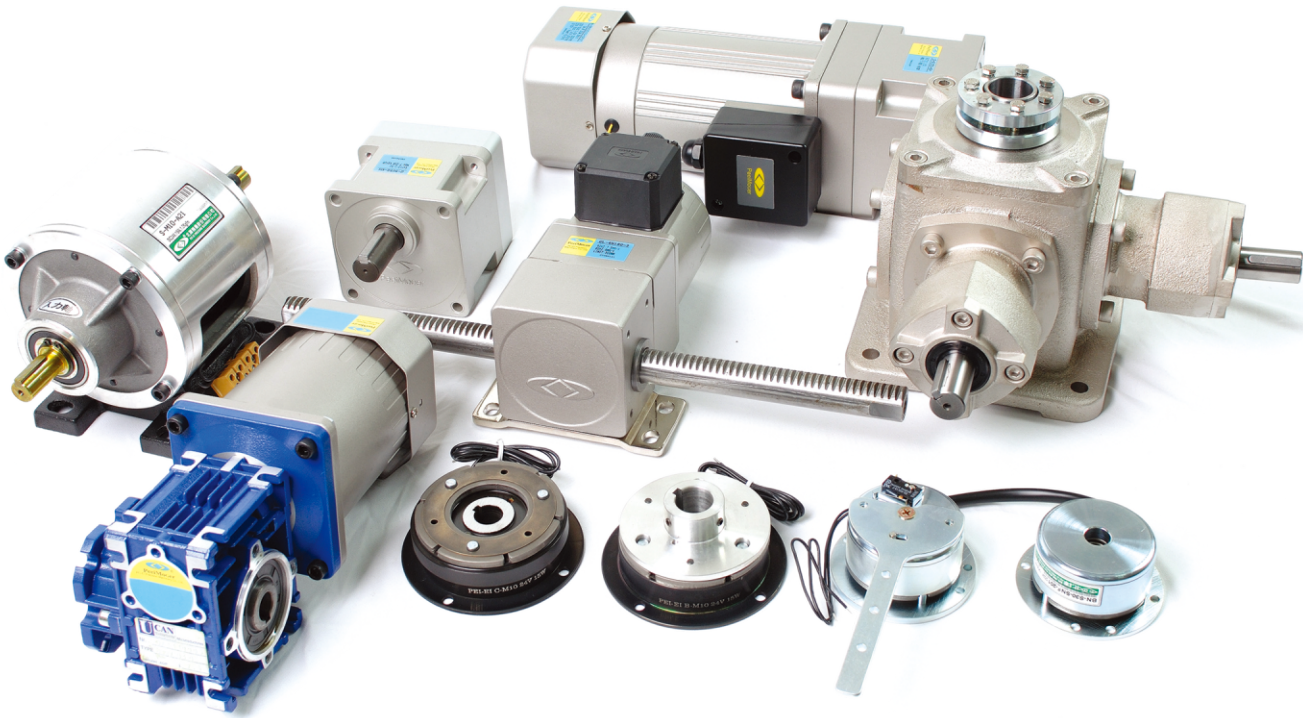
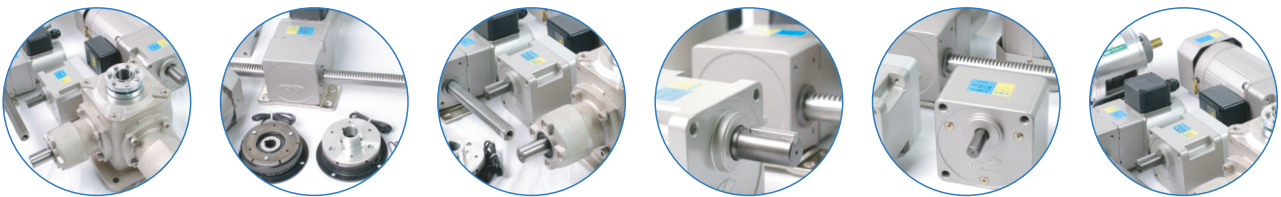
Gear ratio		6	9	10	12.5	15	18	20	25	30	36	50	60	90	180
Moving speed mm/s	220V 50Hz	251.5	167.5	151	120.5	100.5	84	75.5	60.5	50	42	30	25	16.5	8.5
	220V 60Hz	314	209.5	188.5	151	125.5	104.5	94	75.5	63	52.5	37.5	31.5	21	10.5
Max. moveable weight (kg)		8.21	11.9	17.1	20.9	24.6	24.6	33.6	40.3	48.5	48.5	74.6	74.6	74.6	74.6

Linear Reducer - Outline Dimension Drawing of Frame 5
GL-5U□-□



Weight : 3kg

Gear ratio		6	9	10	12.5	15	18	20	25	30	36	50	60	90	180
Moving speed mm/s	220V 50Hz	251.5	167.5	151	120.5	100.5	84	75.5	60.5	50	42	30	25	16.5	8.5
	220V 60Hz	314	209.5	188.5	151	125.5	104.5	94	75.5	63	52.5	37.5	31.5	21	10.5
Max. moveable weight (kg)		11.9	17.9	23.9	29.8	35.8	35.8	57.5	57.5	69.4	69.4	115.7	115.7	115.7	115.7



Appearance



Technical Data

How to Select an AC Induction Motor

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Motor Selection

Selecting a fully functional motor of required specifications is a key factor for increasing the durability and economic benefit of the equipment.

The following introduces the selecting steps, examples, calculation formulas and key points related to PeeiMoGer Compact Gear Motor.

Steps:

- 1 After the structure and rough dimension of the driver are determined, define the weight and the moving speed of the objects to be conveyed.
- 2 Calculate the rotational speed and the load: work out the load torque, load inertial torque, rotational speed, etc, on the drive shaft of the motor.

- 3 Define the required specifications: define the specifications of the driving part and the machine, stop accuracy, position fixation, speed range, environmental resistance, etc.
- 4 Select motor: select the most applicable one according to the required specifications.
- 5 Decide on the motor and the gear head: based on the rotational speed, load torque and load inertial torque of the selected motor to decide on the motor and gear head.
- 6 Confirm the selected motor: based on the mechanical strength or the acceleration time, confirm whether the specifications of the motor and the gear head are up to the requirements for final confirmation and selection.

Machine selection list

Motor Type	Induction motor M-□IK□□-A□ (AF□) M-□IK□□-C□ (CF□) M-□IK□□-S□ (SF□) M-□IK□□-ST (SFT) M-□IK□□-U□ (UF□) M-□IK□□-UT (UFT)	Reversible induction motor M-□RK□□-A□ (AF□) M-□RK□□-C□ (CF□)	Single-phase electromagnetic brake motor M-□RK□□-AS (AFS) M-□RK□□-CS (CFS)	Three-phase electromagnetic brake motor M-□RK□□-SS (SFS) M-□RK□□-US (UFS)	Electromagnetic clutch brake induction motor M-□IK□□-AC (AFC) M-□IK□□-CC (CFC) M-□IK□□-SC (SFC) M-□IK□□-UC (UFC)	Single-phase torque motor M-□TK□□-AT		Speed control motor M-□IK□□-AV (AVD) M-□IK□□-CV (CVD)
Strength	Applicable to single-phase motors of continuous operation	Motors capable of instant clock/ counterclockwise rotation	Motors capable of instant clock/ counterclockwise rotation	Motors which can keep high brake and load duration , with built-in safety brake	Type with direct single-/three- phase induction motors and DC (24V) clutch brakes combined type	There is a near linear proportion by inversion between the torque and the rotational speed, so this is especially applicable to fixed tension batching		Motors which can be coupled with speed controllers and are capable of CVT
Voltage	Single-phase: 100V~120V 200V~240V Tri-phase: 200V~230V 380V~400V 415V~460V	Single-phase: 100V~120V 200V~240V	Single-phase: 100V~120V 200V~240V	Three-phase: 200V~230V 380V~400V 415V~460V	Single-phase: 100V~120V 200V~240V Three-phase: 200V~230V 380V~400V 415V~460V	Single- phase: 60V 115V	Single- phase: 110V 220V	Single-phase: 100V~120V 200V~240V
Continuous operation	○	×	×	○	○	○	×	○
Instant clock/ counterclockwise rotation	×	○	○	○	×	×		×
Variable speed	×	×	×	×	×	○		○
Load duration	×	○	○	○	○	×		×

Examples of AC Motor Selection

Usage: to drive the conveyor

Operation condition: continuous

Voltage: 110V

Frequency: 60Hz

Rotational speed: 26r/min

For calculation, refer to the conveyor driving machine on page 229.

- 1 Select the motor:
Select a single-phase induction motor according to the above table by usage, operation condition, operating environment, and voltage. (M-□IK□N-A) 。

- 2 Decide on the gear ratio of the gear head:
Based on the example, it is known that when the speed of the conveyor is 140mm per sec, the output rotational speed is 26.7rpm. Supposing the rated output rotational speed corresponding to 60Hz is 1550 rpm before the motors are decided, the gear ratio is 1550rpm÷26rpm, which equals 60.
(The rated output rotational speed of the induction motors is generally 1550±100rpm)

- 3 Calculate the required torque:
Based on the examples from clients, it is calculated that the necessary torque is 3.27 N·m, which belongs to the output shaft of the gear head. Please refer to the allowable torque with a gear ratio of 60 (the maximum allowable torque of the gear head). Select motors (M-5IK40N-A) with an output power of 40W in consideration of double security coefficient, and gear head (G-5N60-K) with a gear ratio of 60.

- 4 Confirm the capacity of motors according to the actual test:
The maximum torque of the conveyor occurs when it is started. Therefore, measure the lowest starting voltage corresponding to the torque on startup and the current to confirm the following items.
a.The starting torque of the motors > the necessary torque on startup
(= the minimum starting torque)
b. Actual rotational speed > rated rotational speed

Torque :

Measure with the ampere-meter, only to find that the starting current < the rated output current
For example: the rated output current of M-5IK40N-A is 0.55A corresponding to 110V and 60Hz.

Rotational speed :

Use the revolution meter or the measuring machine to calculate the rotational speed of motors, the actual value > the rated output rotational speed (r/min).



Thus, it can be concluded that there is nothing wrong with the torque, the rotating speed, motor M-5IK40N-A and gear head G-5N60-K.

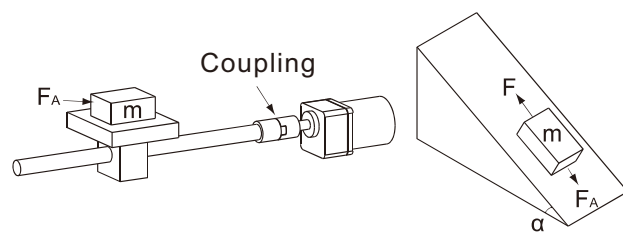
Calculation formula of the load torque :

Calculate the friction torque of different drivers

Ball screw drive

$$T_L = \left(\frac{F_{PB}}{2\pi\eta} + \frac{\mu_0 F_0 P_B}{2\pi} \right) \times \frac{1}{i} \quad [N \cdot m]$$

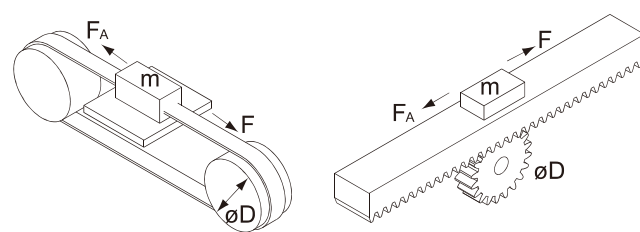
$$F = F_A + mg(\sin \alpha + \mu \cos \alpha) [N]$$



Line/pulley drive/rack/gear drive/

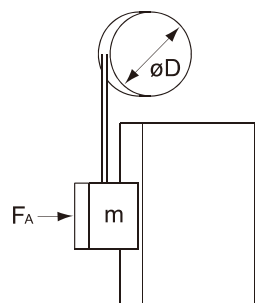
$$T_L = \frac{F}{2\pi\eta} \cdot \frac{\pi D}{i} = \frac{FD}{2i\eta} \quad [N \cdot m]$$

$$F = F_A + mg(\sin \alpha + \mu \cos \alpha) [N]$$



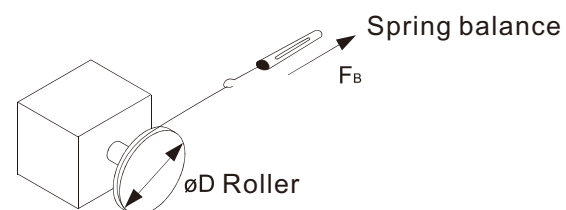
Roller driver

$$T_L = \frac{\mu F_A + mg}{2\pi} \cdot \frac{\pi D}{i} = \frac{(\mu F_A + mg)D}{2i} \quad [N \cdot m]$$



Actual measurement calculation

$$T_L = \frac{F_B D}{2} \quad [N \cdot m]$$

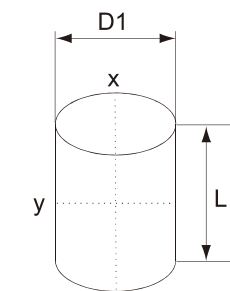


Calculation Formula of the Inertia :

Inertia of the cylinder

$$J_x = \frac{1}{8} m D^2 = \frac{\pi}{32} \rho L D^4 \quad [kg \cdot m^2]$$

$$J_y = \frac{1}{4} m \left(\frac{D^2}{4} + \frac{L^2}{3} \right) [kg \cdot m^2]$$



F = load in the shaft direction [N]

F0 = preloading load [N] ($\approx 1/3 F$)

μ_0 = internal friction coefficient of the preloading nut
(0.1 ~ 0.3)

η = efficiency (0.85 ~ 0.95)

i = gear ratio

(This is the gear ratio of the machine, not that of the reducer of the Company)

PB = ball screw pitch [m / rev]

FA = external force [N]

FB = force when the main shaft begins to rotate [N]

($F_b = [\text{the value of the spring balance}] (\text{kg}) \times g$
(m / s^2))

m = the total weight of the working substance and the workbench [kg]

μ = the friction coefficient of the sliding surface [0.05]

α = inclination angel [°]

D = roller diameter at the final section [m]

g = acceleration of gravity [m / S²] (9.807)

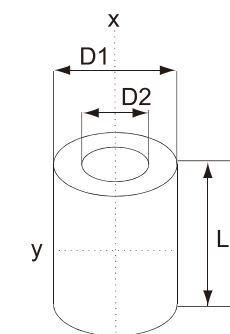
Unit conversion: take 40W M-5IK40A-A for example:

	kgfcm	N·m	mN·m	gfcm
Starting torque	1.9	0.19	190	1900
Rated torque	2.3	0.23	230	2300
Force	kg	N	N	g

Inertia of the hollow cylinder

$$J_x = \frac{1}{8} m (D_1^2 + D_2^2) = \frac{\pi}{32} \rho L (D_1^4 - D_2^4) [kg \cdot m^2]$$

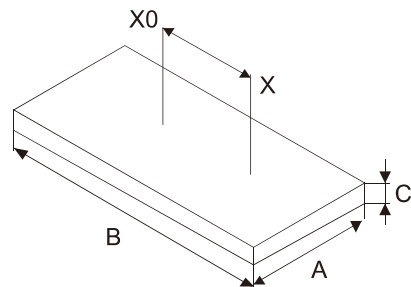
$$J_y = \frac{1}{4} m \left(\frac{D_1^2 + D_2^2}{4} + \frac{L^2}{3} \right) [kg \cdot m^2]$$



Inertia when the center of gravity is not at the center

$$J_x = J_{x0} + m\ell^2 = \frac{1}{12} m(A^2 + B^2 + 12\ell^2) [\text{kg} \cdot \text{m}^2]$$

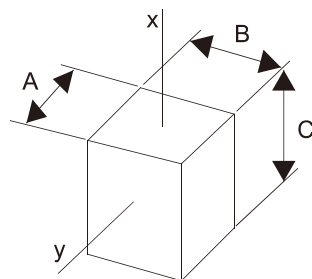
ℓ = distance from X axis to X0 axis [m]



Inertia of the cube

$$J_x = \frac{1}{12} m(A^2 + B^2) = \frac{1}{12} \rho ABC(A^2 + B^2) [\text{kg} \cdot \text{m}^2]$$

$$J_y = \frac{1}{12} m(B^2 + C^2) = \frac{1}{12} \rho ABC(B^2 + C^2) [\text{kg} \cdot \text{m}^2]$$



Inertia of objects in linear motion

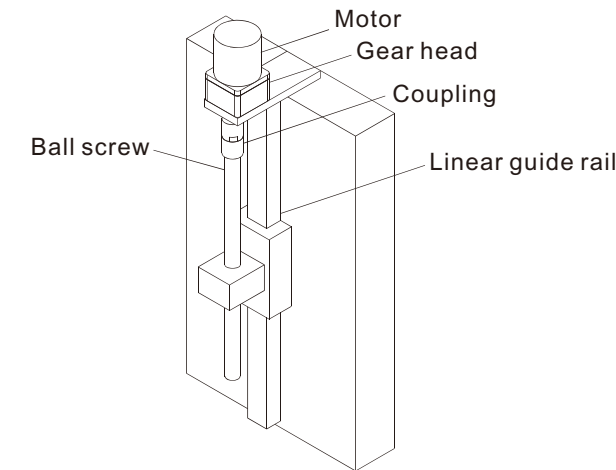
$$J = m \left(\frac{A}{2\pi} \right)^2 [\text{kg} \cdot \text{m}^2]$$

A = unit displacement [m/rev]

Iron $\rho = 7.9 \times 10^3 [\text{kg} / \text{m}^3]$
 Aluminum $\rho = 2.8 \times 10^3 [\text{kg} / \text{m}^3]$
 Yellow brass $\rho = 8.5 \times 10^3 [\text{kg} / \text{m}^3]$
 Nylon $\rho = 1.1 \times 10^3 [\text{kg} / \text{m}^3]$
 J_x = inertia of X axis [$\text{kg} \cdot \text{m}^2$]
 J_y = inertia of Y axis [$\text{kg} \cdot \text{m}^2$]
 J_0 = inertia of X0 axis (via the center of gravity) [$\text{kg} \cdot \text{m}^2$]
 m = weight [kg]
 D_1 = outer diameter [m]
 D_2 = inner diameter [m]
 ρ = density [kg / m^3]
 L = length [m]

Examples of Calculation Related to AC Motors

The following is an example of using electromagnetic brake motors on the workbench of ball screw facility and the motors must be selected according to the following specifications.



Required Specifications and Machine Specifications

Total weight of the workbench and the working substance

$m = 30 [\text{kg}]$

Moving speed of the workbench $v = 15 \pm 2 [\text{mm} / \text{s}]$

External force $F_A = 0 [\text{N}]$

Inclination angle of the ball screw $\alpha = 90 [\text{degree}]$

Length of the ball screw $L_B = 800 [\text{mm}]$

Shaft diameter of the ball screw $D_B = 20 [\text{mm}]$

Ball screw pitch $P_B = 5 [\text{mm}]$

Displacement of the ball screw for each rotation $A = 5 [\text{mm}]$

Efficiency of the ball screw $\eta = 0.9$

Material of the ball screw: iron (density $\rho = 7.9 \times 10^3 [\text{kg} / \text{m}^3]$)

Internal friction coefficient of preloading nuts $\mu_0 = 0.3$

Friction coefficient of the sliding surface $\mu_0 = 0.05$

Motor power source: single-phase 110V60Hz

Working time: un-continuous operation for five hours a day

Repeated start-stop

Load duration is necessary.

Define the gear ratio of the gear head

Rotational speed of the output shaft of the gear head :

$$N_G = \frac{V_{60}}{P_B} = \frac{(15 \pm 2) \times 60}{5} = 180 \pm 24 [\text{r/min}]$$

Generally, the rated rotational speed of motors is 1550 r/min , corresponding to 60Hz 4-pole, so the gear ratio should be within this range ($i=9$).

Gear ratio of the gear head

$$i = \frac{1550}{N_G} = \frac{1550}{180 \pm 24} = 7.6 \sim 9.9$$

Calculate the necessary torque

Load of the ball screw:

$$F = F_A + mg(\sin \alpha + \mu \cos \alpha) = 0 + 30 \times 9.807(\sin 90^\circ + 0.05 \cos 90^\circ) = 294 [\text{N}]$$

Preloading load of the ball screw:

$$F_0 = \frac{F}{3} = 98 [\text{N}]$$

$$\begin{aligned} \text{Load torque : } T_L &= \frac{F \times P_B}{2\pi\eta} + \frac{\mu_0 \times F_0 \times P_B}{2\pi} \\ &= \frac{294 \times 5 \times 10^{-3}}{2\pi \times 0.9} + \frac{0.3 \times 98 \times 5 \times 10^{-3}}{2\pi} \\ &= 0.283 [\text{N} \cdot \text{m}] \end{aligned}$$

This load torque belongs to the output shaft of the gear head, so it has to be adapted to the output shaft of the motors.

Necessary torque T_m of the output shaft of the motors

$$T_m = \frac{T_L}{i \cdot \eta_G} = \frac{0.283}{9 \times 0.81} = 0.0388 [\text{N} \cdot \text{m}] = 38.8 [\text{mN} \cdot \text{m}]$$

(Transmitting efficiency of the gear head $\eta_G = 0.81$)

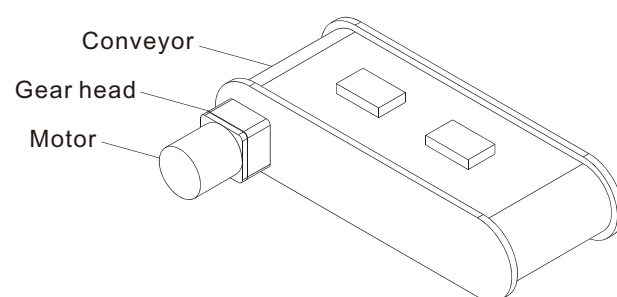
Security factor is set as 2 times.

$$38.8 \times 2 = 77.6 [\text{mN} \cdot \text{m}]$$

For motors with a starting torque over 77.6mN•m (0.776kgfcm), select according to the specification table of AC induction motors.

Select M-3RK15N-AS motors (0.90kgfcm) with electromagnetic brake for load duration and coupled G-3N9-K gear head with a gear ratio of 9.

The following is an example of using induction motors in conveyor driving facility, which must conform to the required specifications.



Total weight of the conveyor and the working

substance m1 = 20kg

Friction coefficient of the sliding surface $\mu = 0.3$

Diameter of the roller D = 100mm

Weight of the roller m2 = 1kg

Efficiency of the conveyor and the roller $\eta = 0.9$

Speed of the conveyor V = 140mm / s $\pm 10\%$

Motor power source: single-phase 110V 60Hz

Working time: 16 hours per day

Define the gear ratio of the gear head

Rotational speed of the output shaft of the gear head :

$$N_g = \frac{V60}{\pi \cdot D} = \frac{(140 \pm 14) \times 60}{\pi \cdot 100} = 26.7 \pm 2.7 [r/min]$$

Since the rated rotational speed of the motors is 1550 rpm , corresponding to 60Hz, the corresponding gear ratio should be $i=60$.

The gear ratio of the gear head is as follows:

$$i = \frac{1550}{N_g} = \frac{1550}{26.7 \pm 2.7} = 52.7 \sim 64.5$$

Calculate the necessary torque

The torque reaches the highest when the conveyor is started, which has to be calculated first.

Frictional force of the sliding part is F.

$$F = \mu mg = 0.3 \times 20 \times 9.807 = 58.8 [N]$$

$$\text{Load torque } T_L = \frac{F \cdot D}{2 \cdot \eta} = \frac{58.8 \times 100 \times 10^{-3}}{2 \times 0.9} = 3.27 [N \cdot m]$$

This load torque belongs to the output shaft of the gear head, so it has to be adapted to the output shaft of the motors.

Necessary torque of the output shaft of motors: T_M .

$$T_M = \frac{T_L}{i \cdot \eta_G} = \frac{3.27}{60 \times 0.75} = 0.0726 [N \cdot m] = 72.6 [mN \cdot m]$$

(transmitting efficiency of gear head $\eta_G = 0.75$)

Given the variation of voltage for commercial use

(110 $\pm 10\%$) the security factor should be doubled.

$$72.6 \times 2 = 145.2 [mN \cdot m] \approx 1.45 (kgfcm)$$

For selection of motors with a starting torque over 1.45

(kgfcm) refer to the specification table of AC induction motors.

Select M-5IK40N-A motors (1.9kgfcm) and coupled

M-5IK40N-A gear head with a gear ratio of 60.

Types and Characteristics of Motors

	Characteristic	Type	Retention	Over-rotation amount	Frequency
	Applicable single-phase motors of continuous operation	Single-phase induction motor			
Induction motor	Applicable to single-phase motors of continuous operation	Three-phase induction motor			
	Motors capable of instant clock/counterclockwise rotation	Reversible motor	Simple brake 70-500gcm	4-6 turns	
Electromagnetic brake	Retentive Safety brake Suitable for emergency (safety brake)	Single-phase electromagnetic brake motor	Safety brake 1-10kgcm	2-3 turns	The safety brake motors can stop six times per minute (the stop time must be over 3 sec) To stop 7~20 times per minute, use electromagnetic brake motors. To stop 20~100 times per minute, use electromagnetic clutch brake motors
		Three-phase electromagnetic brake motor	Safety brake 1-10kgcm	2-3 turns	
		Electromagnetic clutch brake induction motor	24 and 50kgcm	1 turn	
	For motor brakes, select DC 24V MM brake (optional)	Motors with electromagnetic brake	Electromagnetic 24 and 50kgcm	2-3 turns	
		Single-phase torque motor	Single-phase: 110V 60V 220V 115V		There is an almost linear proportion by inversion between the torque and the rotational speed, so they are especially applicable to fixed tension batching.
		Speed control motor			
		PMG DC motor			
Electric brake	Irretentive It can move freely after stop	Electronic brake		0.5-1 turn	To realize un-continuous operation through electronic brakes, it is necessary to ensure the surface temperature of the motors are below 90 degrees
Used together	Mechanical and electric brake		Same as electromagnetic brake	0.5-1 turn	Refer to the information on electromagnetic brake

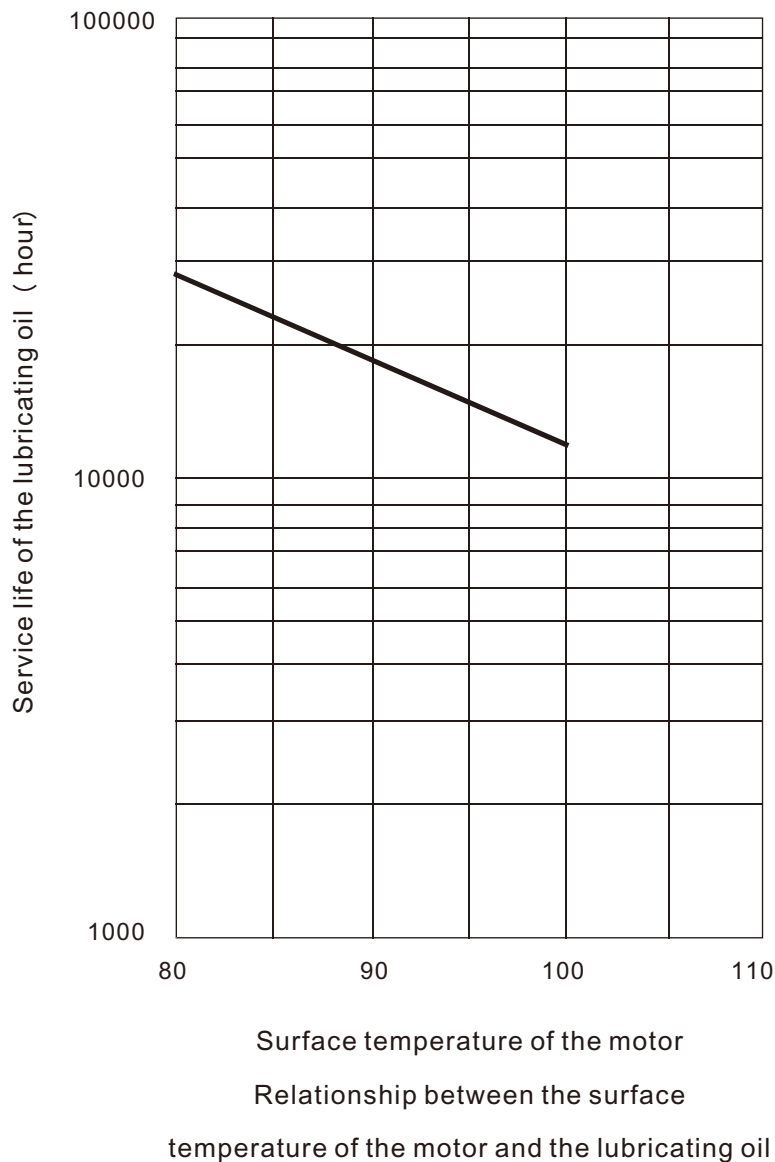
Service Life of Motors

The service life of motors relies on the bearing quality, the abrasion of the transmission facility, the dysfunction resulting from the maintenance by customers, and the inspection time. The service life provided by the Company is not a guaranteed value, but to be used for reference only. Also, the service life depends to a great extent on the bearing condition.

The service life of the bearing depends on two factors:

Service life of the lubricating oil: the oil can degrade due to temperature rise. Service life of the facility: continuous fatigue.

The influence of heat from motors on the service life of the lubricating oil is greater than that of the load the bearing bears on the service life of the facility. Therefore, the service life of motors can be worked out according to that of the lubricating oil.



AC small standard motor, DC motor

Make sure the surface temperature of the AC motor is below 90 degrees during use, DC motor is below 60 degrees during use. As a result from the operating environment or the operating efficiency, the lower the surface temperature is, the longer the service life is. In addition, if over-loaded, the service life of the bearing may be shorter than that of the lubricating oil.

The guaranteed service life of the motor is as follows:

Motor type	Guaranteed service life
AC motor	5000 hours
DC motor	3000 hours

The actual service life is affected by the load, the way to apply load and the rotational speed, which can be calculated through the following formula.

$$L(\text{service life}) = L1 / f$$

L1 : guaranteed service life
f : coefficient of the service factor

Coefficient table of the service factor

Load type	5hr/day	8hr/day	24hr/day
Fixed	1.0	1.0	1.5
Variable: light	1.25	1.5	2.25
Variable: middl	1.75	2.0	3.0
Variable: heavy	2.25	3.0	4.5

Service Life of the Gear Head (Reducer)

The actual service life is affected by the load, the load applying method, and the rotational speed. To calculate this, please refer to the relationship between the rated service life and the actual service life.

The condition for the guaranteed service life of the gear head defined by PeeiMoGer is as follows:
Torque: allowable torque
Load type: fixed-8 hours per day
Input rotational speed: standard input rotational speed
Thrust load: allowable shaft-direction thrust and load.

Guaranteed service life of all gear head

Motor type	Gear head type	Standard input rotational speed	Guaranteed service life
AC induction motor DC motor	Ball bearing	1500r/min	5000 hours
	Oil bearing		2000 hours

The actual service life is affected by the load, the load applying method, and the rotational speed, which can be calculated using the following formula.

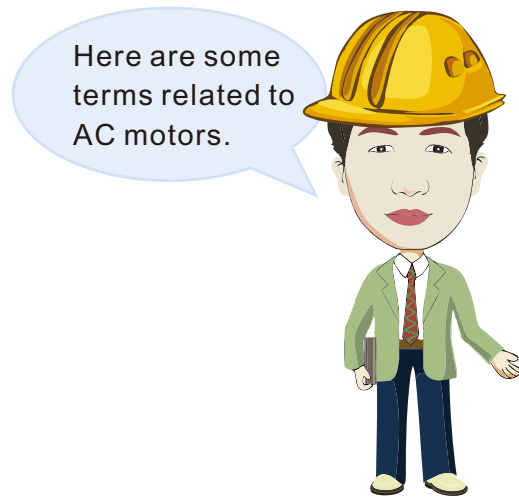
$$L(\text{service life}) = (L1 \times K1) / [(K2)^3 \times f(h)]$$

L1 : guaranteed service life L1
K1 : coefficient of the rotational speed = standard input rotational speed / actual input rotational speed
K2 : load factor = actual torque / allowable torque
(Referring to the specification value recorded in the catalog)
f : Coefficient table of the service factor

Notes

When gear motors are driven out of the specified specification, or are experiencing random failure, unexpected failure, or irresistible external force during the service life, which may be hard to resolve via technological resolutions, it is then necessary to take preventive measures.

Definitions and Characteristics



A-Rating

Rated output

It refers to the output power of motors under basic setting. For example: the rotational speed, current and torque of standard 25W motors are their rated output data, data with full-load.

Rated time

It refers to the time motors can operate with normal load. Generally, if the operating time exceeds the rated time, motors will get over-heated.

Continuous rating and short-time rating

Under rated output, the normal continuous operating time is the rated time, and the continuous service life is the continuous rating, and specified operating time is called short-time rating.

B - Output

The relationship between the output rotational speed, torque and the output power is as follows:

$$T(\text{N.m}) = 9540 \times \frac{P}{N}$$

$$T(\text{kgfm}) = 973.5 \times \frac{P}{N}$$

$$T(\text{kgfcm}) = 97.35 \times \frac{W}{N}$$

Formula :

T : torque

P : output power (kW) { W = Watts }

N : revolution times (r / min)

9540 (973.5) (97.35) : constant
(1HP = 746Watts)

Use upsine equation by rate rotate、 rate output-powers can get,full load torque,for example 25W motor, M-4IK25N-C use rate rotate1625 rpm (60Hz) substituted into the calculation,can get $T(\text{kgfcm}) = 97.35 \times 25W / 1625(\text{rpm}) = 1.5(\text{kgfcm})$ output.

C - Torque

Starting torque

It is the torque instantaneously produced when the motor is started. The starting torque for three-phase motors generally refers to the pull-out torque.

Stopping torque (pull-out torque)

It is the maximum torque the motor can output under certain voltage and frequency. Once the load exceeds the torque range, the motor will stop. Stopping torque is also called maximum torque or pull-out torque.

Rated torque

It is the torque when the motor produces rated output under rated voltage and frequency, namely , the torque at rated revolving speed.

Static friction torque

It is the torque outputted for maintaining load when the electromagnetic brake or electromagnetic clutch brake is applied.

Allowable torque

It is the maximum torque allowable during motor operation, and is limited by the rated torque, temperature rise and integrated reducer strength of the motor.

D - Revolving Speed

Synchronous revolving speed

It is the revolving speed of the motor's stator magnetic field, determined by the motor pole and power frequency.

The formula is as follows: $N_s = \frac{120f}{P} (\text{r/min})$

Formula

N_s :synchronous revolving speed (r/min)

P: motor pole

f: frequency (Hz)

120:constant

No load speed

No load speed is 20~50rpm behind the synchronous revolving speed, because the armature of the motor cannot rotate until it is inducted in the stator magnetic field and has built up a magnetic field. For example: for 4-pole, 60Hz, 1800rpm, the no load speed is 1750~1780rpm.

Rated revolving speed

It is the revolving speed corresponding to the motor's rated output, the speed under full load.

Slippage (%)

One of the expressions of the motor's revolving speed. The formula is as follows:

$$S(\%) = \frac{N_s - N}{N_s}$$

N_s : synchronous revolving speed (r/min)

N : revolving speed under arbitrary load

Over-rotation amount

It refers to the excess rotation from the moment the power is cut off to when the motor has stopped, expressed by angles (rpm).

Terms related to the gear head (reducer)

Gear ratio

It refers to the proportion between the rotational speed after deceleration and the original speed. The rotational speed of the output shaft of the gear head (reducer) equals to the quotient between the synchronous rotational speed of motors (50Hz : 1500r/min, 60Hz : 1800r/min) and the gear ratio. The actual rotational speed is 2-20% smaller due to the influence of the load.

For example:

For Model G-5N3-K

50Hz : 1500r/min, gear ratio:

$1/3$ The rotational speed of the output shaft of the gear head

$1500\text{r/min} \times (1/3) = 500\text{rpm}$.

60Hz : 1800 r / min ,

the rotational speed of the output shaft of the gear head = $1800\text{r/min} \times (1/3) = 600\text{rpm}$.

Permissible Torque of Gear Head

It refers to the maximum load torque gear head can bear, depending on the gear of the gear head, bearing quality and size, and other mechanical characteristics and strength. This is different for different gear head and gear ratio.

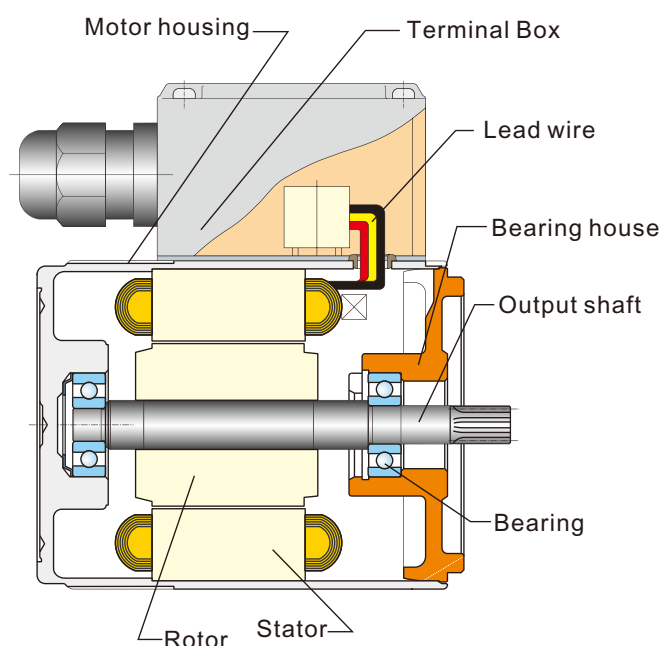
CW, CCW

It refers to the operation direction of motors. CW means clockwise from the direction of the output shaft, and CCW means counterclockwise.

Structure and usage of AC motors

The basic structure of AC small motors is as follows:

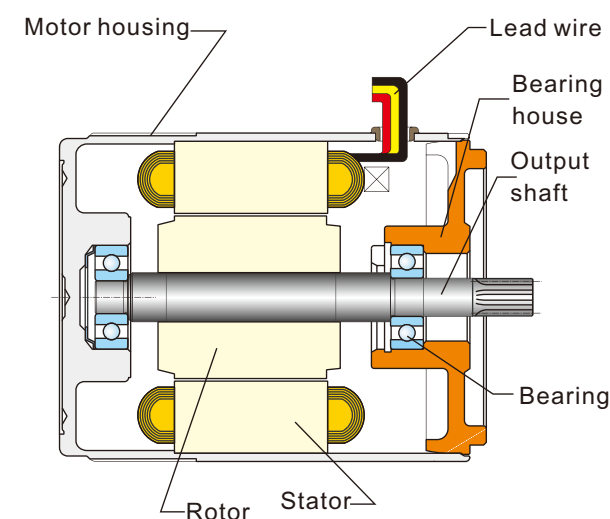
- 1 Motor housing: machining with aluminum die-casting materials.
- 2 Stator: composed of a cascaded silicon steel core twined with copper varnished wires and insulating thin film.
- 3 Rotor: composed of silicon steel cascade and conductors of aluminum die-casting
- 4 Output shaft: circular shaft or gear shaft, material S45C.
- 5 Bearing: ball bearing.
- 6 Bearing house: machining with aluminum die-casting materials.
- 7 Lead: high quality heat-resistance lead.



Structure of a standard motor

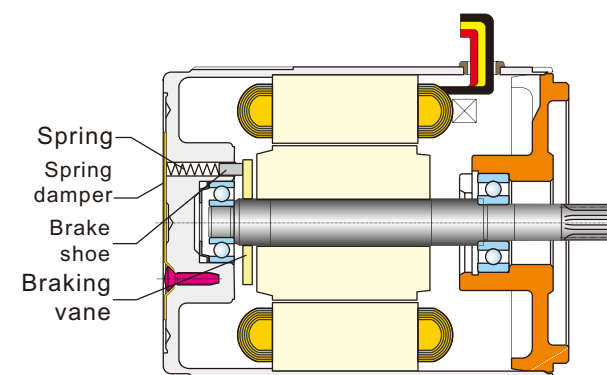
The structure of a standard motor (IK type) is as follows.

For general continuous operation.



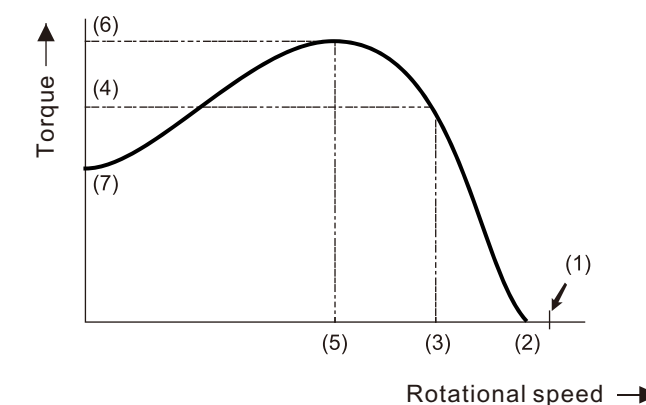
Structure of a reversible motor

The structure of a reversible motor (RK type) is as follows.



It is used when rapid reversal rotation is necessary after clockwise rotation. When the motor operates for 30 minutes (rated time), its surface temperature approaches 90°C, so it has to be stopped to prevent overheating. PeeiMoGer has set the torque for simple brake to approx. 10% of the output torque.

Relationship between the rotational speed and the torque of induction motors



(1) : synchronous rotational speed

(2) : no-load rotational speed

(3) : rated rotational speed

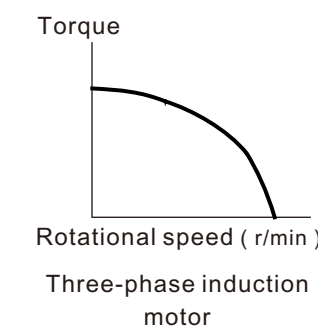
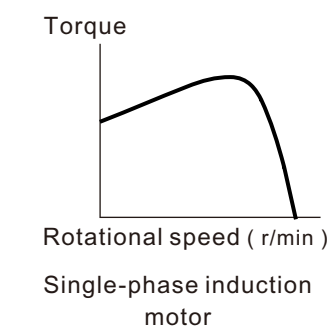
(4) : rated torque

(5) : pull-out rotational speed

(6) : pull-out torque

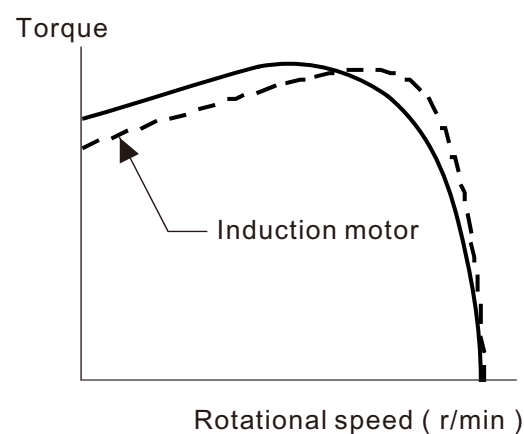
(7) : starting torque

Induction motors include capacitor single-phase induction motors and tri-phase induction motors. For single-phase motors, the starting torque is usually smaller than the operating torque, while for three-phase motors, the starting torque is usually equal to the pull-out torque (maximum torque).



Relationship between the rotational speed and the torque of reversible motors

Both reversible motors and single-phase induction motors are capacitor induction motors, with the relationship between the rotational speed and the torque being the same. However, the starting torque of reversible motors is bigger in order to increase the instant reversibility.

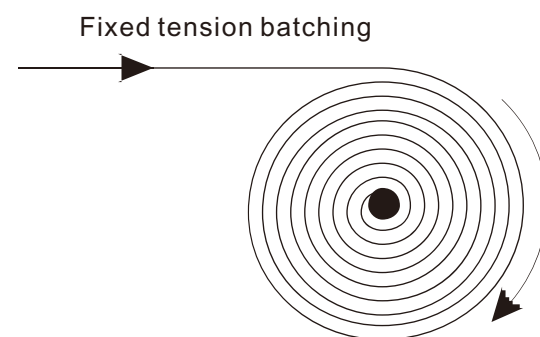


The continuous rating time of torque motors is 5 minutes corresponding to 110V, and continuous operation can be realized with 60V or below.

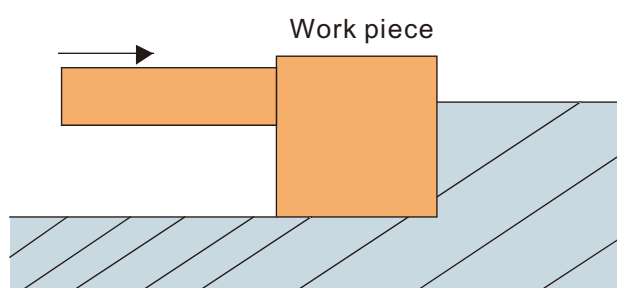
Relationship between the rotational speed and the torque of torque motors

Torque motor

Its structure is similar to that of standard motors, with such main features: there is an almost linear proportion by inversion between the torque and the rotational speed, thus they are especially applicable to fixed tension batching. To batch objects operating at fixed speed continuously with fixed tension, if the batching diameter is doubled, the output torque of the motors is also doubled, but the rotational speed is reduced by half. Therefore, it is necessary to maintain certain proportion during operation.



Under locked state, torque motors can still operate and will not get over-heated, especially applicable to work-piece positioning and holding. In addition, the torque is the square of the voltage, the locking output torque of the motors can be adjusted through voltage (do not exceed the allowable torque of the gear head when they are used together)



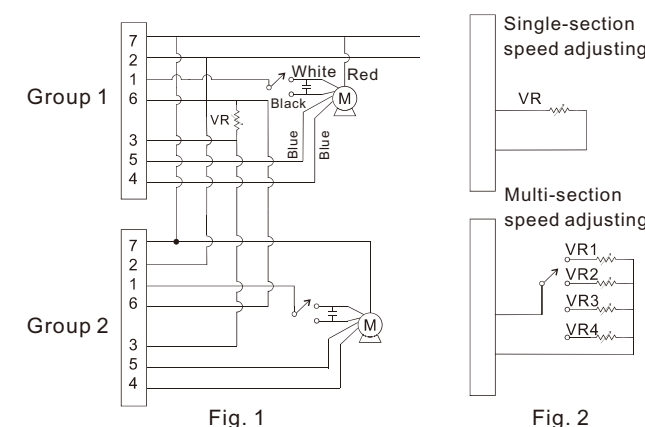
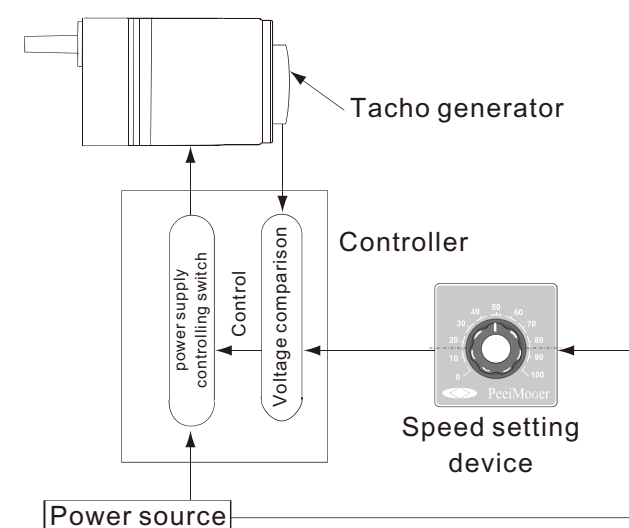
Speed controlling method of the speed control motors

The basic steps are as follows.

The AC speed control motors adopt closed loop speed control method.

AC speed control motor (control method)

- 1 The speed setting device provides the velocity voltage for setting.
- 2 Tacho generator provides the voltage corresponding to the rotational speed.
- 3 Compare the above two voltages of difference.
- 4 In order to reach the setting speed, you can base on a sliding scale to supply power to motors.

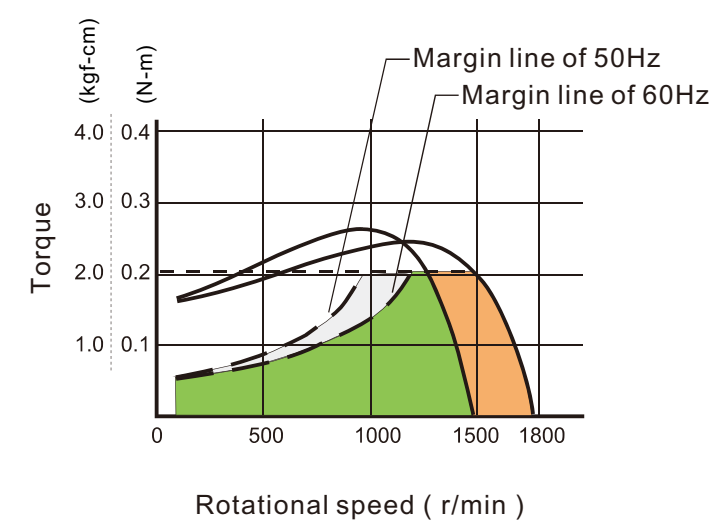


- 1 The maximum variable resistance coupled with the speed setting device of the Company is 20Ω.
- 2 When the resistance reaches the maximum (20Ω), the rotational speed is 1650 rpm for 60Hz and 1350 rpm for 50Hz.
- 3 The rotational speed is proportional to the resistance. When the resistance is zero, motors stop.
- 4 In order to reach synchronous speed adjusting in the two groups, the variable resistance in the wiring diagram, as is shown in Fig. 1, is 10KΩ.
- 5 For multi-section variable speed application, refer to Fig. 2. Speed can be changed rapidly by changing the variable resistance.

Relationship between the rotational speed and the torque of speed control motors controlling method of the speed control motors

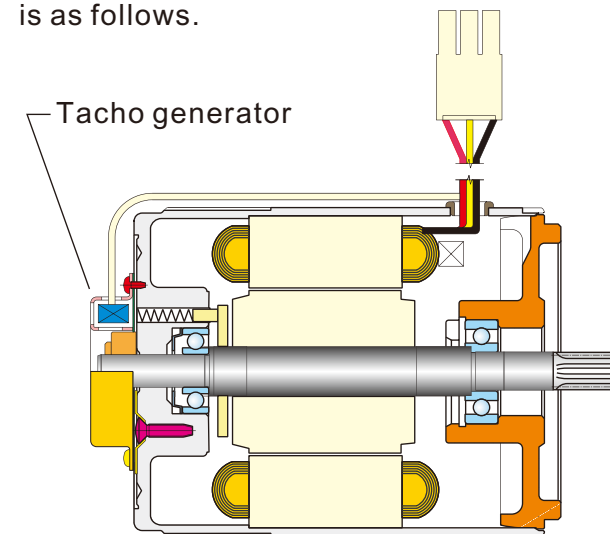
The relationship between the rotational speed and the torque of speed control motors is as follows.

Rotational Speed vs. Torque M-4IK25N-AV



■ Structure of speed control motors

The structure of AC speed control motors is as follows.



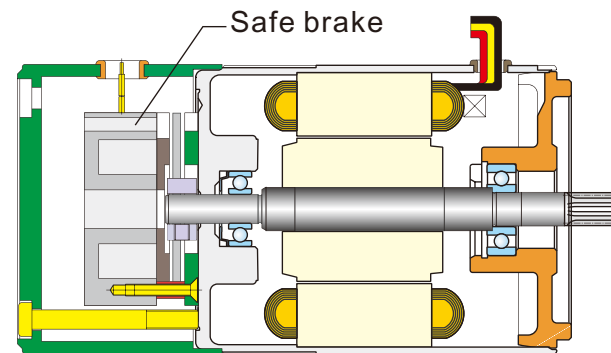
They are mainly used on the occasion when speed needs to be adjusted. It is also necessary to note that the load that speed adjusting motors can bear varies with the rotational speed, with a general adjustment range of 10% to 50%, and increases with the increase of the rotational speed. Within 50%~100%, motors can bear full-load torque (rated load) together with the compensation of the torque of the speed controllers. Generally, speed adjusting motors cannot bear full-load torque with a 50% rotational speed.

✕ Speed adjusting principle: please refer to the method to control the rotational speed.

■ Structure of electromagnetic brakes

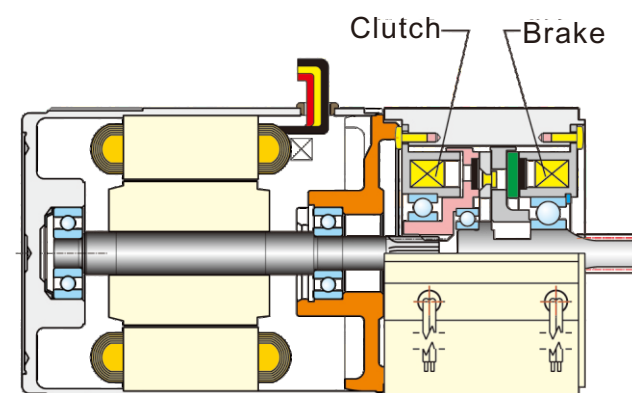
Such motors adopt safety brakes.

The construction is as follows. When there is voltage on magnetic coils, the armature is attracted and presses the spring to lift the brake, and the output shaft of motors can rotate freely. On the contrary, without voltage, electrode is pressed onto the brake pad and the fixed plate by the spring, with such results: the output shaft is fixed and it's a state of brake movement.



■ Structure of electromagnetic clutch brake motors

Such motors use DC 24V electromagnetic clutch brake, with the structure as follows. Generally, motors operate continuously (normal load within 8 hours), and clutches work when brakes are lifted. Motors drive the output shaft to operate, and brakes work when clutches are lifted. Clutches and brakes cycle, with an action frequency of 100 per min.



■ Others

● Temperature rise of AC small standard motors
During operation, all kinds of losses (copper loss, core loss and mechanical loss) inside the motors turn into heat, so the temperature will get higher. 2-3 hours after induction motors begin to operate (continuous operation); the temperature reaches saturation, and will not change for a while. 30 minutes after reversible motors begin to operate (30 min rating); the temperature reaches the specified value, and will continue to increase when it keep going to operate.

● Ways to measure temperature rise

A. thermometer

Fix the thermometer in the center of the motor shell to measure the temperature, and take difference between the measured value and the environmental temperature as the temperature rise.

B. resistance

The coil temperature varies with different resistances. Measure it with insulation resistance meter and thermometers to calculate the temperature rise of the coil

● Temperature protection switch (optional)

Over-heating protection device uses bimetallic strips and silver contacts, since the resistance of silver is the lowest and its heat transmission is second to that of copper.

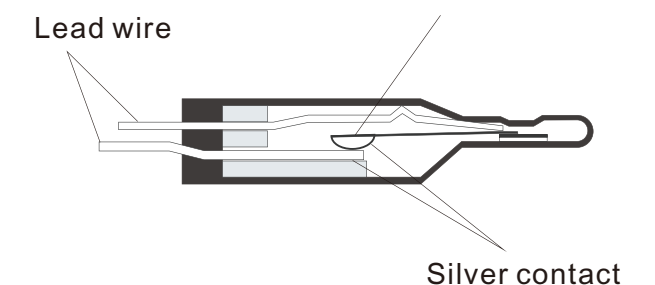
Operating temperature of the temperature protection switch

Open-125°C±5°C

(There are also machines with different operating temperatures, please consult for relevant information)

Close-75°C(reference value)

(There are also machines with different operating temperatures, please consult for relevant information) Bimetallic strip



■ Capacitor

The AC motors of single-phase power source are capacitor motors. Capacitors are connected in series to the auxiliary coils to promote the current phase of the latter to outstrip.

The main coils and the auxiliary coils produce different helical magnetic fields to make motors operate. Generally, if capacitors are damaged or connected appropriately, motors cannot start automatically, resulting in the so-called "open phase".

- Capacity and rated voltage

Wrong capacity of capacitors may cause motors to vibrate and get heated, or result in torque decrease, which will make operation unstable. The unit of capacity is uF. Wrong rated voltage may cause capacitors to discharge smoke or sparks. The unit of the rated voltage of capacitors is V, marked on the surface of the capacitor and different from the rated voltage of motors. Do use capacitors matched with motors.

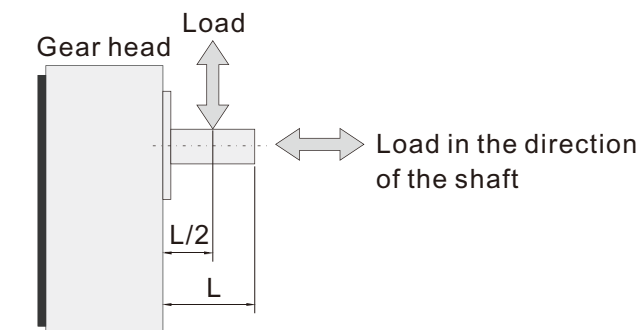
- Rated electrified time

It refers to the service life corresponding to the rated load, rated voltage, rated temperature and rated power of capacitors, with 25000 hours as the standard. Capacitor damage can result in smoke or sparks.

- Gear head

- Load

It refers to the load borne in the vertical direction of the output shaft of gear head. The maximum load that gear head bear is the allowable load, variable with different gear head and different distances from the front end of the output shaft. The tension under belt drive belongs to such kind of load.



- Thrust load

It refers to the load borne in the direction of the output shaft of gear head. The maximum thrust load gear head bear is the allowable thrust load, variable with different gear head.

- Transmission efficiency

It refers to the efficiency of torque increase through combining motors with gear head, expressed in percentage (%), and decided by the bearing of gear box, friction of gear head and the impedance of the lubricating oil.

Gear head	Load (kg)	Load in the direction of the shaft
G-2N□-L G-2N□-K	5 10	3
G-3N□-L G-3N□-K	10 20	4
G-4N□-L G-4N□-K	20 30	5
G-5N□-L G-5N□-K	30 40	10
G-5U□-KF G-5U□-KH	60 70	15
G-6U□-KH	80	20

Transmission efficiency of gear head

Bearing	Gearhead / Ratio (i)	3~9	10~18	20~60	75~180	Intermediate gear10X
Ball	G-2N□-K G-3N□-K G-4N□-K G-5N□-K	81%		75%	70%	56%
	G-5U□-K	81%	75%	70%	65%	58%
	G-5U□-K G-6U□-KH	—		70%	65%	58%
Metal	G-2N□-L G-3N□-L G-4N□-L G-5N□-L	68%		63%	58%	46%



Class of insulation and temperature rise

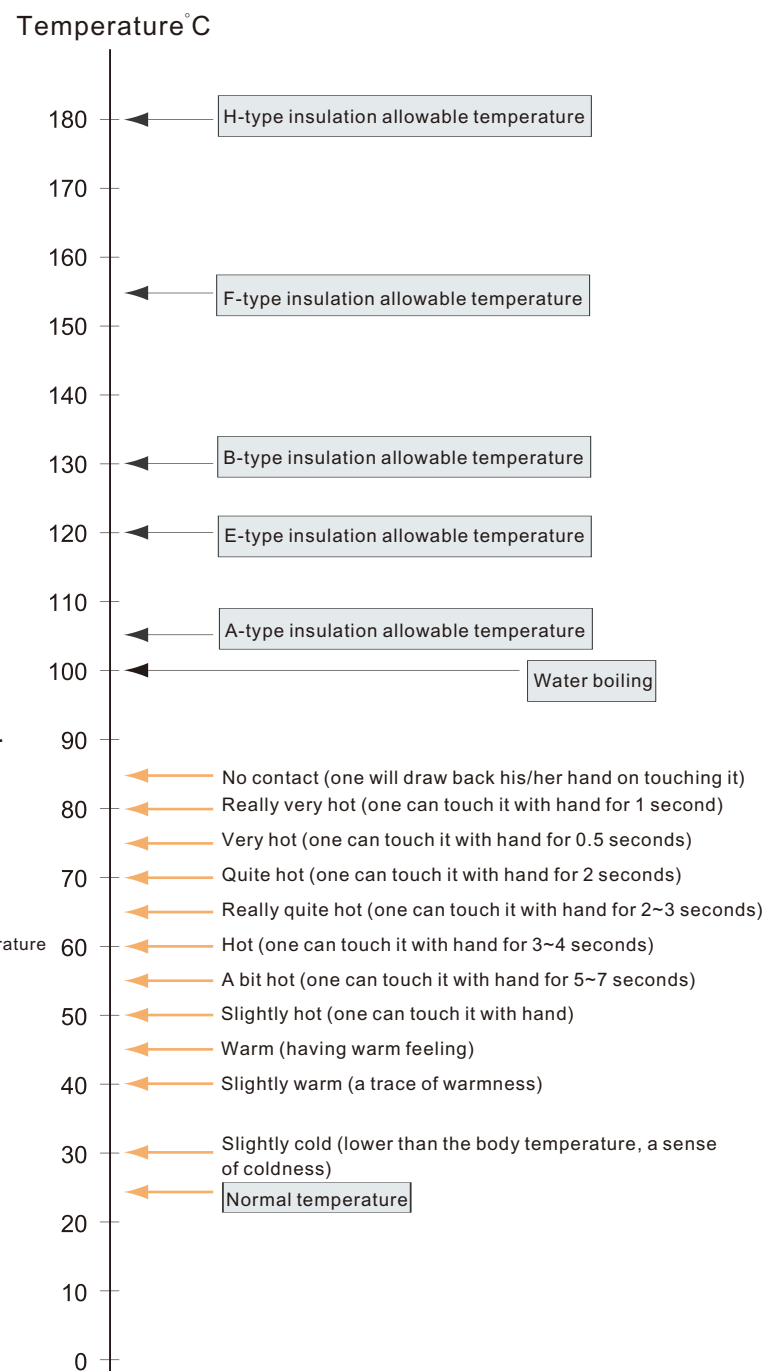
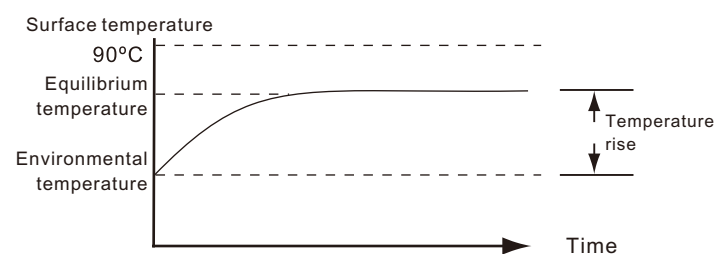
Insulation class:

According to the following chart, the insulation class of the induction motors in the Company is B.

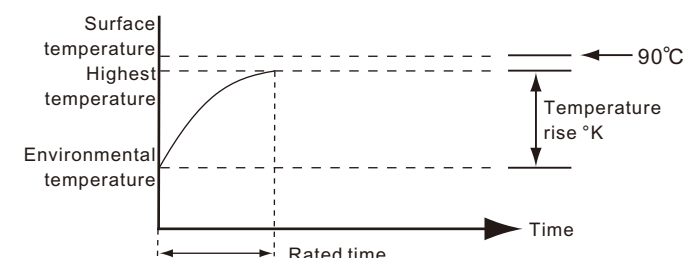
Class of insulation	Max. allowable temp.
A	105°C
E	120°C
B	130°C
F	155°C
H	180°C

Motor temperature rises (standard environment temp. is -10°C~40°C)

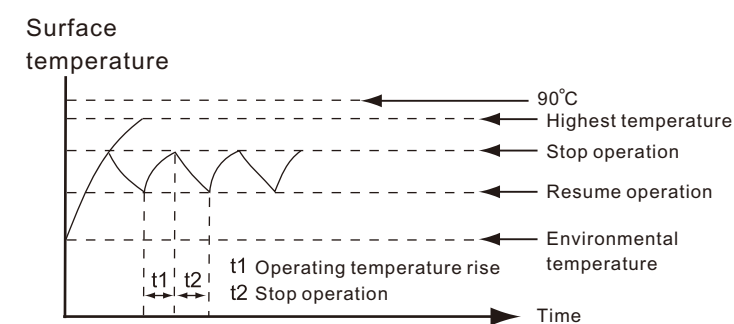
See the figure below for continuous rated motors.



Short-time rated motor

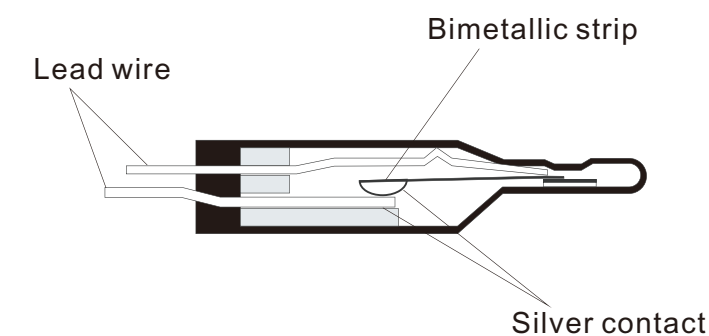
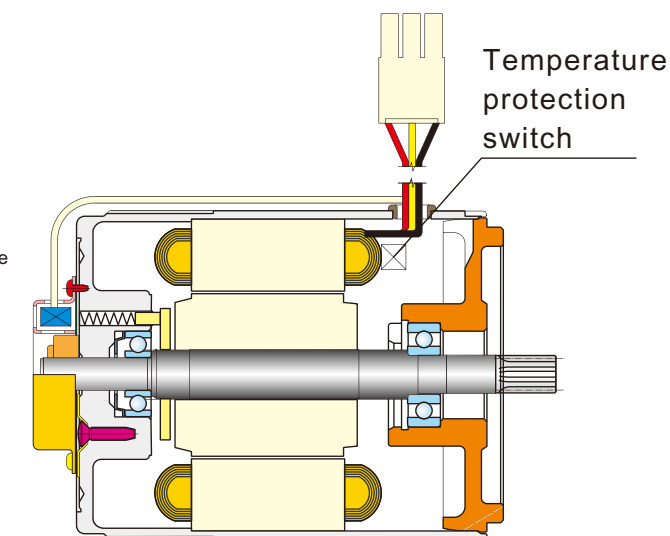


RK motors can reach long-time operation through un-continuous operation or forced cooling. The following figure shows how to operate un-continuously with the temperature switch.



Short-time rated motors are easy to get heated, so the temperature when long-time un-continuous operation stops should be lower than the highest temperature to ensure the coil insulation does not deteriorate untimely and prevent the bearing from lacking oil and stuck prematurely.

When the temperature of the motors get too high (exceeding 90°C), the coil insulation will deteriorate and the bearing will lack oil and get stuck.



Troubleshooting



When there is something wrong with motors, adopt the following three measures:

1 Motors do not operate

- First, confirm whether there is something wrong with the main and auxiliary coils, and measure their resistance value. If they are of three colors, the red-white line is the main coil, while the red-black is auxiliary. When the resistance of the main coil is close to that of the auxiliary coil (both resistances exist), it means the coils are normal. (The difference between the resistance value of the main coil and that of the auxiliary coil is less than 14%)
- If motors still do not operate even if the power is on, but begin to operate when rotated with hand and stop when the output shaft is held by hand, it means the capacitor does not work, perhaps due to wrong wiring or capacitor damage (such probability is quite low).

2 Motors rotate too slowly or get over-loaded

- Confirm the operating current of motors with the amperemeter. If it exceeds the rated current, it means over-load (when the coils of motors are normal). When motors are over-loaded,
- The rotational speed is lower than the rated speed.
 - The current exceeds the rated current.
 - The surface temperature of motors exceed 90°C (the room temperature is below 40°C)

3 Leakage of electricity

Adjust the avometer to AC voltage gear, with one end connected to the motor, and the other end connected to the ground (ensure the motor is connected to the ground). If the ammeter still displays voltage, it means there is leakage of electricity. When the motor is not connected to the ground, measure the 220V AC motors operating with the power on, and the voltage of 80V AC will be measured out

Notes: ground connection method: pressing the grounding lines in ring form and pressure-welding terminals, and then fixing them to one of the four screw holes on the frame of the motors with bolts. Before fixation, scraping the stoving varnish around the screw holes to ensure the motors and the grounding lines are conductive.

IP Code

Protection grade and testing conditions of electrical equipment shields

The first figure in the IP code represents the protection grade for solid foreign matters

The first figure	Protection grade	
	Summary	Definition
0	No protection	No protection
1	Protect solid foreign matters with a diameter greater than or equal to 50mm	Spheroidal detectors with a diameter of 50mm cannot be passed through completely
2	Protect solid foreign matters with a diameter greater than or equal to 12.5mm	Spheroidal detectors with a diameter of 12.5mm cannot be passed through completely
3	Protect solid foreign matters with a diameter greater than or equal to 2.5mm	Spheroidal detectors with a diameter of 2.5mm cannot be passed through completely
4	Protect solid foreign matters with a diameter greater than or equal to 1.0mm	Spheroidal detectors with a diameter of 1.0mm cannot be passed through completely
5	Dustproof	Dust is not complete isolate, but the total amount of the dust passing through cannot affect the normal operation of electrical machines or ruin the safety.
6	Airtight dustproof	Complete dustproof

The second figure in the IP code represents the protection grade against water

The second figure	Protection grade	
	Summary	Definition
0	No protection	No protection
1	Protect against water dropping vertically	To ensure water dropping vertically will not cause damage
2	Protect against water dropping vertically when the shield inclines 15 degrees	To ensure water dropping vertically from any angle will not cause damage as long as the inclination angle of the shield does not exceed 15 degrees
3	Protect against leaked water	To ensure leaked water will not cause damage
4	Protect against sprayed water	To ensure water sprayed from any direction will not cause damage
5	Protect against injected water	To ensure water injected from any direction will not cause damage
6	Protect against water column of crush injection	To ensure water column of crush injection will not cause damage
7	Protect against short-time soaking	Within normative pressure and time, the water infiltrating during short-time soaking (30 min) will not cause damage
8	Protect against continuous soaking	With the approval of the manufacturer and the user, under stricter conditions than the seventh, ensure the water infiltrating during continuous soaking will not cause damage

Safety specifications



Applicable specifications of PeeiMoger Compact AC Gear Motor:UL, CE, 3C safety specification certifications



Based on the LVD in EU, besides insulation and flame resistance, it is required that the coils will not get over-heated and burned up when there is something wrong with motors. The main exceptions include:

4.2.1 Motor locking

4.2.2 Short-circuit and open-circuit of capacitors

4.2.3 Under-phase of three-phase motors

In order to meet the above requirements, temperature protection switch is indispensable to motors of other specifications other than 6W 220V, which has impedance protection. CE products are declared to conform to CE requirements when exiting the factory, as is shown in the above figure.



To realize insulation and flame resistance, motors of UL and UL 1004-1 standard should meet the following requirements.

4.1.1 The flame resistance and insulation property of motors should conform to UL 1004-1 requirements and certified by UL.

4.1.2 The voltage resistance, insulating ability, construction and dimension should meet UL 1004-1 requirements.

4.1.3 UL construction is shown in the above figure.

4.1.4 The product model on the label of motors of UL specification is composed of the construction number of motors (refer to page 11). If the label includes other numbers (such as serial code), it means the motors are not of UL specification.



The manufacturing process, components (coils, insulating materials, insulating varnish, outgoing lines etc) are required to conform to CQCCNCA-01-013 specification. Certified motors should be equipped with ground screws and be labeled with 3C certification, which is shown in the above figure.

Preparation before assembly

- 1.Take down the sealed cap of the gear head and erase the oil content on the end face (refer to Fig. 1)
- 2.Take down the O-ring on the sealed cap and flatten it to the motor flange, without any floating (refer to Fig. 2).
- 3.Place the motor upward and take down the protection sleeve of the gear shaft (refer to Fig. 2)
- 4.The motor and the gear head should be vertical to each other, and prevent left and right rotation to avoid damage to the gear shaft and the gear set (refer to Fig. 3).
- 5.After assembling the motor and the gear head together, lock them with specialized bolts.

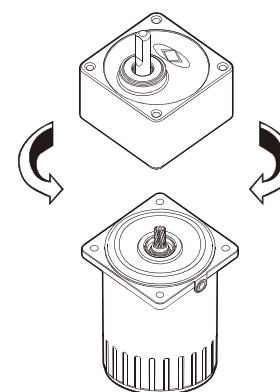
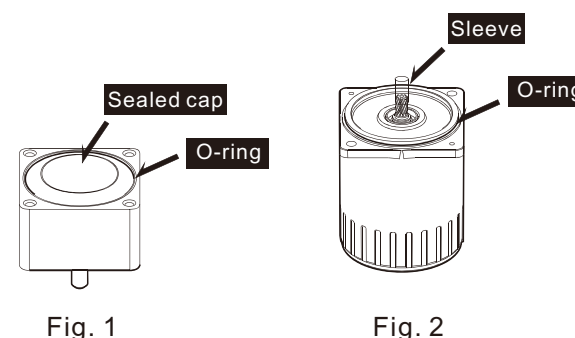


Fig. 3

Notes:

1. When the gear head falls flat for a long time or the output shaft is placed upward, some oil content will leak out (please refer to Fig. 4).
2. When the gear head is not in use, the O-ring should be nested in the sealed cap, which then covers the mating face of the gear head. The output shaft of the gear head should be placed downward to avoid oil leakage (refer to Fig. 4).
3. Incorrect assembly of the motor and the gear head will damage the gear shaft and the gear group, resulting in abnormal noisy and shorter service life.
4. To assemble the motor and the gear head together, the bolts should be crossed and fixed (refer to Fig. 5)

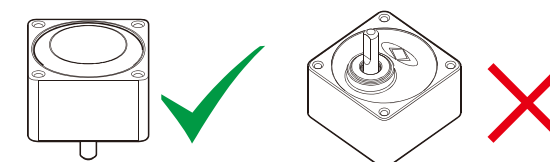


Fig. 4

The correct way to fix bolts The wrong way to fix bolts

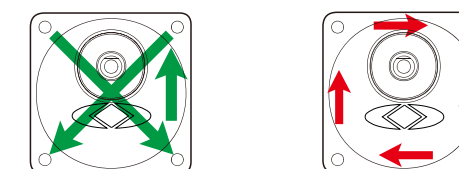
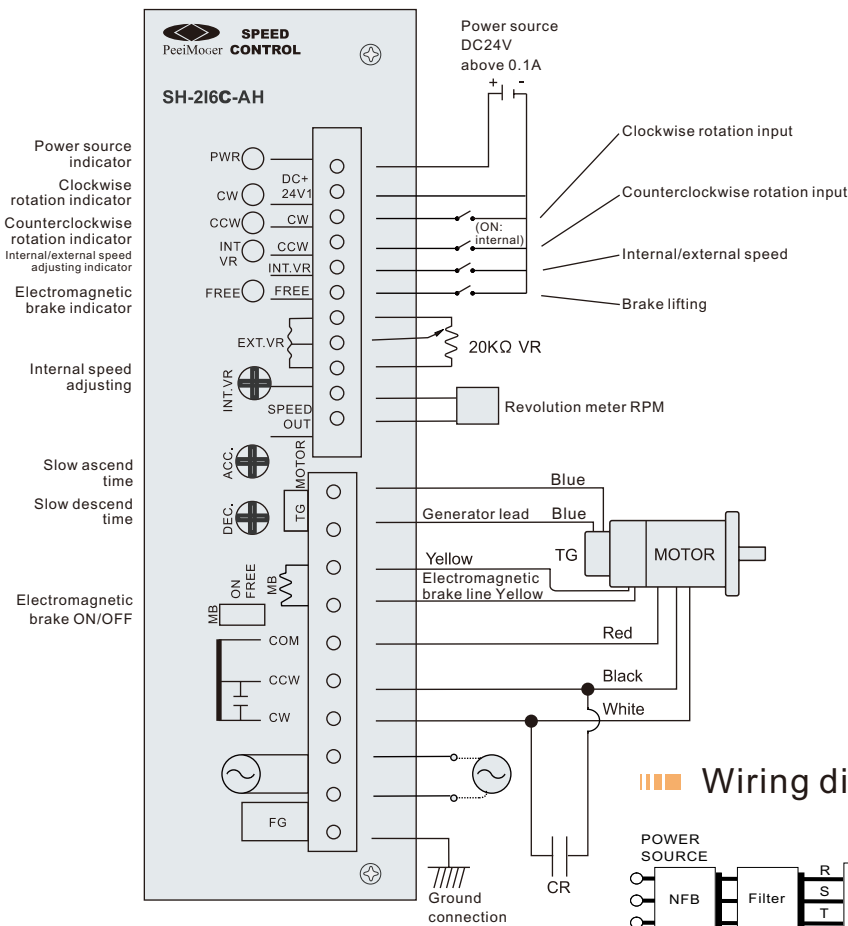


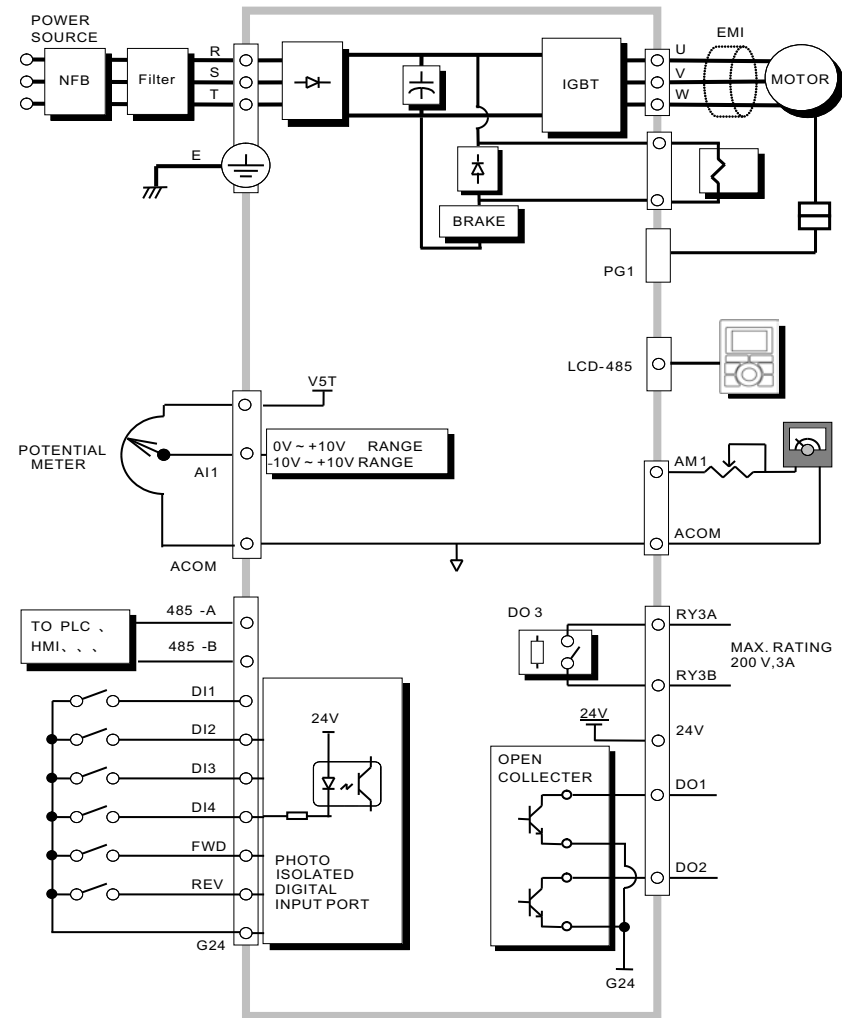
Fig. 5

Frame dimension of the gear head	Bolt specification	Lock torque
60mmsq	M4	20kg.cm
70mmsq	M5	25kg.cm
80mmsq	M5	25kg.cm
90mmsq	M6	30kg.cm
104mmsq	M8	40kg.cm

SH-216C-A (H) wiring diagram



Wiring diagram of Inverter



Introduction of electromagnetic clutch brake motors and gear head

Table of comparison between the output shaft of the clutch brake and the gear head

S24

Output shaft	No. of teeth	Tooth type	Product model	Coupled gear head
5S24-81119-2	11	helical N type	S-S24-A26-2	Peei 4 N gear head

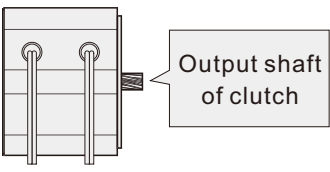
S50

Output shaft	No. of teeth	Tooth type	Product model	Coupled gear head
5S50-81119-2	11	helical N type	S-S50-A26-3	Peei 5 N gear head
5S50-81119-3	11	helical U type	S-S50-A26-4	Peei 5 U gear head

Motor

Output shaft of motors		
Type	Modulus	No. of teeth
4N	0.6	10T
5N	0.8	12T
5U		

Clutch brake



Gear head

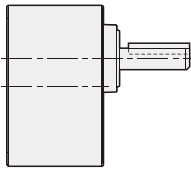
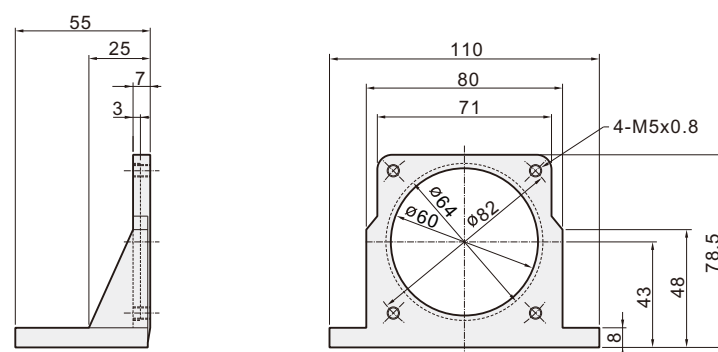


Table of comparison between the motor and the gear head

Frame No.	Output power	Type	Coupled gear head
4	25W	M-4IK25N-□□	Peei 4 N gear head
5	40W	M-5IK40N-□□	Peei 5 N gear head
	60W	M-5IK60N-□□	
	90W	M-5IK90U-□□	Peei 5 U gear head
	120W	M-5IK120U-□□	
	150W	M-5IK150U-□□	

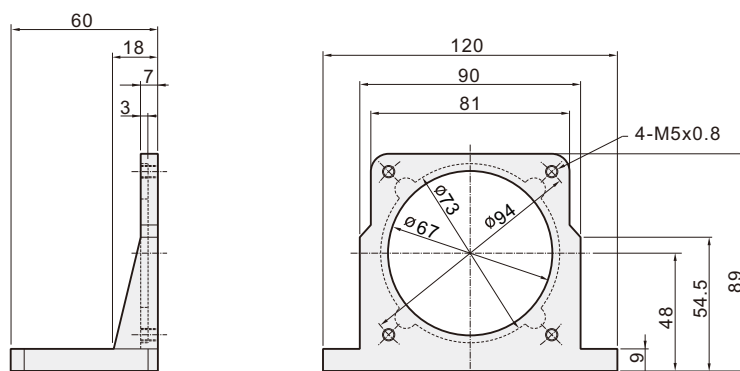
Dimension drawing of motor Mounting Brackets

Frame 3 15W 6015-91119



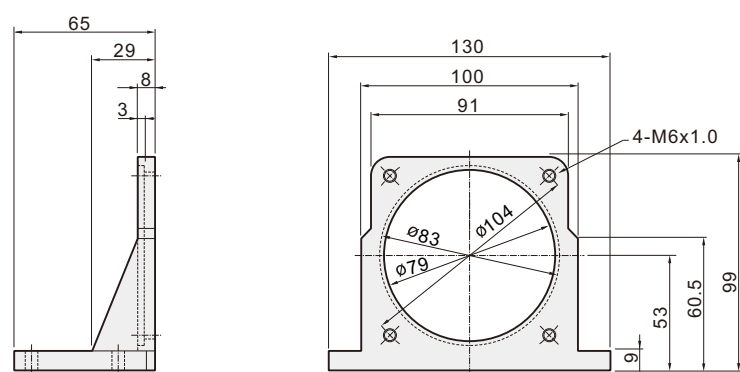
Weight:0.11kg

Frame 4 25W 6025-91119



Weight:0.14kg

Frame 5 40W~150W 6040-91119



Weight:0.18kg

Specification discussion

For AC, DC small motors, gear head, customized products, OEM, please exchange views with customers for necessary items and fill in the following table.

Customer name		Date: year/ month/ day	
Contacting person			
Customer address		Department:	
Tel:		Filled in by:	
FAX:		Department:	
Motor			
General specification and appearance			
Motor specification and type	Output : () W	<input type="checkbox"/> AC <input type="checkbox"/> DC	Voltage : () phase () V
	<input type="checkbox"/> induction motor	<input type="checkbox"/> reversible motor	<input type="checkbox"/> electromagnetic brake motor
	<input type="checkbox"/> PMG DC motor	<input type="checkbox"/> squirrel-cage motor	<input type="checkbox"/> torque motor
Rotational speed: () rpm	Number of poles: () P		<input type="checkbox"/> speed control motor
Start/stop: () times / min			
IP code	<input type="checkbox"/> IP 20 (lead type) <input type="checkbox"/> IP 54 (terminal box type) <input type="checkbox"/> IP 67 (waterproof and dustproof)		Environmental temperature : () °C
Temperature switch	<input type="checkbox"/> necessary <input type="checkbox"/> unnecessary (the skipping temperature of TP is 135°C) (optional)		Motor temperature: () °C
Safety specification	<input type="checkbox"/> necessary <input type="checkbox"/> unnecessary (<input type="checkbox"/> 3C <input type="checkbox"/> CE <input type="checkbox"/> UL)		Motor noise: () dB
RoHs requirement	<input type="checkbox"/> necessary <input type="checkbox"/> unnecessary		Motor vibration: () m / s ²
Surface treatment	<input type="checkbox"/> stoving varnish (standard) <input type="checkbox"/> others () <input type="checkbox"/> epithelium after abrasive blasting		Operating time: () h / day
Expected budget	Mode of packing: ()		Date required: year month day
Gear head			
General specification and appearance			
Frame number	<input type="checkbox"/> Frame 2	<input type="checkbox"/> Frame 3	<input type="checkbox"/> Frame 4
Gear ratio	Bearing: <input type="checkbox"/> ball bearing <input type="checkbox"/> metal bearing		RoHs requirement <input type="checkbox"/> necessary <input type="checkbox"/> unnecessary
Output end	Output shaft diameter: () mm torque requirement: () kgfcm		
Input end	Input tooth: <input type="checkbox"/> N shaft <input type="checkbox"/> U shaft <input type="checkbox"/> other types		Input rotational speed () rpm
Environmental temperature	<input type="checkbox"/> normal temperature and humidity (with the temperature between -10 °C to 40 °C, and the humidity below RH 85% (no condensation)) <input type="checkbox"/> operating temperature and humidity (with the temperature between () °C to () °C, and the humidity <input type="checkbox"/> below or <input type="checkbox"/> above RH 85%)		
Technical information	Modulus	No. of teeth	Pressure angle
	Shift coefficient	Spanned tooth count	Spanned tooth thickness
Remarks	Helical angle	Heat treatment	Direction of rotation
	Accuracy	Other requirements	

Specification discussion

For AC, DC small motors, gear head, customized products, OEM, please exchange views with customers for necessary items and fill in the following table.

Customer name			Date: year/ month/ day			
Contacting person						
Customer address			Department:			
Tel:		FAX:		Filled in by:		
				Department:		
Motor						
General specification and appearance						
Motor specification and type	Output : () W	<input type="checkbox"/> AC <input type="checkbox"/> DC	Voltage : () phase () V	<input type="checkbox"/> brush <input type="checkbox"/> brushless	Rotational speed: () rpm	
	<input type="checkbox"/> induction motor	<input type="checkbox"/> reversible motor	<input type="checkbox"/> electromagnetic brake motor	<input type="checkbox"/> torque motor	<input type="checkbox"/> speed control motor	
	<input type="checkbox"/> PMG DC motor		<input type="checkbox"/> Squirrel-cage motor		Start/stop: (times) / min	
IP code	<input type="checkbox"/> IP 20 (lead type) <input type="checkbox"/> IP 54 (terminal box type) <input type="checkbox"/> IP 67 (waterproof and dustproof)			Environmental temperature : () °C		
	PMG DC motor : <input type="checkbox"/> B <input type="checkbox"/> F					
Temperature switch	<input type="checkbox"/> necessary <input type="checkbox"/> unnecessary (the skipping temperature of TP is 135°C) (optional)			Motor temperature: () °C		
Safety specification	<input type="checkbox"/> necessary <input type="checkbox"/> unnecessary (<input type="checkbox"/> 3C <input type="checkbox"/> CE <input type="checkbox"/> UL)			Motor noise: () dB		
RoHs requirement	<input type="checkbox"/> necessary <input type="checkbox"/> unnecessary			Motor vibration: () m / s ²		
Surface treatment	<input type="checkbox"/> stoving varnish (standard) <input type="checkbox"/> others () <input type="checkbox"/> epithelium after abrasive blasting			Operating time: () h / day		
Expected budget		Mode of packing: ()		Date required: year month day		
Gear head						
General specification and appearance						
Frame number	<input type="checkbox"/> Frame 2	<input type="checkbox"/> Frame 3	<input type="checkbox"/> Frame 4	<input type="checkbox"/> Frame 5	<input type="checkbox"/> Frame 6 <input type="checkbox"/> others	
Gear ratio		Bearing: <input type="checkbox"/> ball bearing <input type="checkbox"/> metal bearing		RoHs requirement	<input type="checkbox"/> necessary <input type="checkbox"/> unnecessary	
Output end	Output shaft diameter: () mm torque requirement: () kgfcm					
Input end	Input tooth: <input type="checkbox"/> N shaft <input type="checkbox"/> U shaft <input type="checkbox"/> other types			Input rotational speed	() rpm	
Environmental temperature	<input type="checkbox"/> normal temperature and humidity (with the temperature between -10 °C to 40 °C, and the humidity below RH 85% (no condensation)) <input type="checkbox"/> operating temperature and humidity (with the temperature between () °C to () °C, and the humidity <input type="checkbox"/> below or <input type="checkbox"/> above RH 85%)					
Technical information	Modulus ____	No. of teeth ____	Pressure angle ____	Helical angle ____	Direction of rotation ____	Other requirements ____
	Shift coefficient ____	Spanned tooth count ____	Spanned tooth thickness ____	Heat treatment ____	Accuracy ____	
Remarks						

Memorandum

Memorandum

Memorandum