SESAME

MOTOR AND SPEED REDUCER

100%

Made in Taiwan

www.sesamemotor.com

ISO 9001 ISO 14001

Registration Number : 8580921716   Registration Number : 39E08590

Applications

Applications of Planetary Gearhead

Machine Tools
Metal Cutting Machines, Machining Centers, CNC Drilling Machines, Lathes and Turning Machines, Milling and Boring Machines, Grinding Machines, Drilling Machines, Planning Machines, Metal Forming Machine Tools, Presses, Tube and Wire Processing Machines.

Industry Machinery
Packaging Machinery, Food and Beverage Processing Machinery, Bakery Equipment, Agricultural Machinery, Textile Machinery,, Shoemaking Machinery, Wood Working Machinery, Printing Machinery, Plastic processing Machinery, Laser Cutting and Welding Machines.

Automation Equipment
Industrial Robots, Semiconductor Devices, Automatic Storage System, Surface Treatment Equipments.

Aerospace Industry
Medical and Rehabilitation Equipment
Electric Scooter
Green Energy-Related Industries
Testing Devices
Automation and Precise Positioning Equipment with Servo Motors

Motor and Reducer

· Machine Tool Accessories · Cutting Equipment · Bar Feeder
· Gilding Machine · Conveyor Equipment · Food Machine
· Screen Printing · Agricultural Machinery · Medical Equipment

Gear Motor and Reducer

· Machine Tool Accessories · Cuttig Equipment · Bar Feeder
· Gilding Machine · Conveyor Equipment · Food Machine
· Screen Printing · Agricultural Machinery · Medical Equipment

MOTOR TERM BRIEF INTRODUCTION

■ Motor Ingress Protection Rating

Model	Rating	Explanation
Wire Type	IP22	Prevent against object diameter＞12mm such as fingers Prevent against dripping water when tilted up to 15°
Terminal Box Type	IP54	Prevent against dust and it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment. Water splashing against the enclosure from any direction.

■ Rating

Motor rating is the maximum allowance based on its temperature rising and loading. The Rating is including output, voltage, frequency, current, torque, speed and other related value. It can be classified continuously and short-time rating according to temperature limitation.

■ Speed vs. Torque Graph

1. Starting Torque   3. Rated Torque   5. Rated Speed
2. Max. Torque   4. Synchronous Speed   6. No-load Speed

■ Continuously & Short-time Rating

Time rating is defined via the motor works continuously with certain loading in ambient temperature 40°C and the motor temperature itself does not exceed the safe limit. Continuously rating means the motor can be operated continuously. Short-time rating means the motor can be operated within specified time interval only. Short-time rating motor with interval operation runs longer because of the thermal diffusion effects.

■ Synchronous Speed (see graph)

Motor pole and power frequency will determine the speed. In general the unit is revolutions per minute (rpm). The calculation formula is:

$$Ns = \frac{120 \cdot f}{P}$$

Ns ： Synchronous Speed
120 ： Constant
f ： Hertz (Hz)
P ： Motor Pole

Example: A 4-pole motor at 60 Hz, its synchronous speed is 1800 rpm.

■ Rated Output

Rated output means the motor works in a defined period of time with maximum loading and the motor temperature itself does not exceed the safe limit.
For example, a 10HP continuous rating motor can be used as a 12HP or 13HP motor via the short-time rating usage. Thus it is marked rated output only.
The RPM and torque under rated output formulation are justified as rated RPM and rated torque. The most suitable performance of motor is available only when the motor works in rated condition.
Output = 1.027 · N · T
1HP = 746 Watt
1.027: Constant
N: Speed (RPM)
T: Torque (Kg · m)

■ No-load Speed (see graph)

Motor speed under zero load is called no-load speed. Because of slip ratio, the speed of induction motor and reversible motor will be less than their synchronous speed (approx. 20 ～ 60 rpm less).

■ Slip Ratio

An indication of motor speed.

$$S = \frac{Ns-N}{Ns}$$

S ：Slip Ratio
Ns ： Synchronous Speed (rpm)
N ：Designated Load Speed (rpm)

Example: If a 4-pole motor at 50 Hz pulling an object, its slip ratio is 0.1, then the motor speed is 1350 rpm.

$$N = \frac{120 \times 50}{4} (1-0.1) =1500 \times 0.9 =1350rpm$$

■ Starting Torque (see graph)

The torque produced by the motor when starting is called starting torque.
The motor does not work if loading is larger than the starting torque.

■ Maximum Torque (see graph)

The maximum torque is the most torque output of the motor under specified voltage and frequency. If the additional loading is larger than the maximum torque when the motor is running, the motor will stop immediately.

■ Overrun

Overrun is the additional rotation after the power is turned off. It is indicated by turns or degree.

■ Rated Torque (see graph)

The torque produced by the motor at rated output under specified voltage and frequency is rated torque. It is also the torque at rated speed.
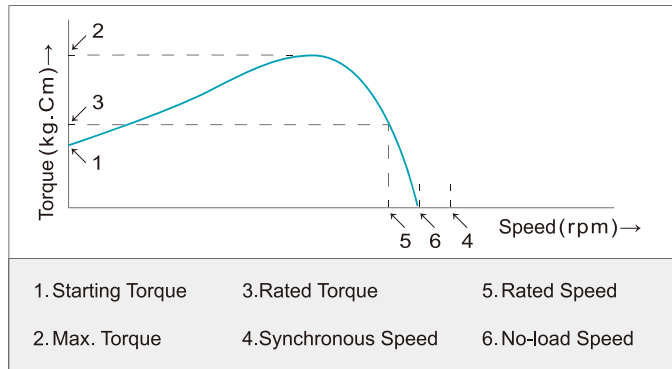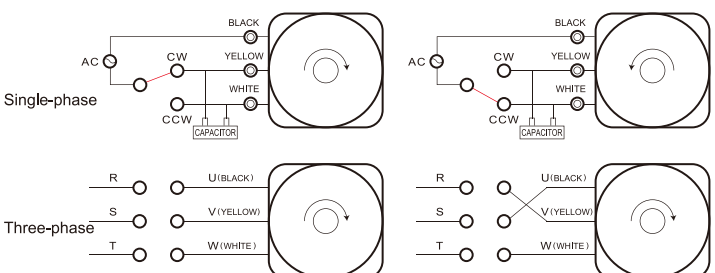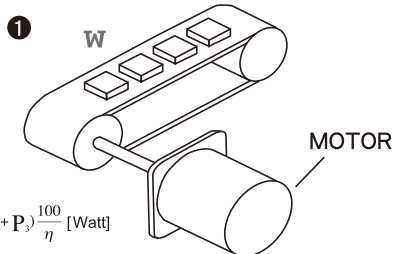
■ Wiring Diagram

Single-phase

Three-phase

■ Rated Speed (see graph)

The measured speed of the motor at rated output.

POWER OUTPUT CALCULATION

Belt Conveyor

❶

MOTOR

$$P_g = (P_1 + P_2 + P_3)\frac{100}{\eta} \text{ [Watt]}$$
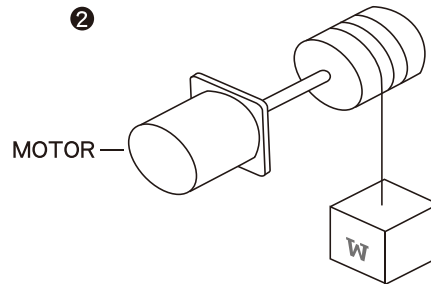
No-load：
$$P_1 = 9.8\mu \, wvL \text{ [Watt]}$$

Horizontal：
$$P_2 = \frac{\mu QL}{367} \text{ [Watt]}$$

Vertical：
$$P_3 = \pm \frac{QH}{367} \text{ [Watt]}$$

L ： Length of conveyor(m)
W ： Weight of belt in unit length(kgf/m)
μ ： Friction coefficient
V ： Belt speed(m/sec)
Q ： Quantity(kgf/h)
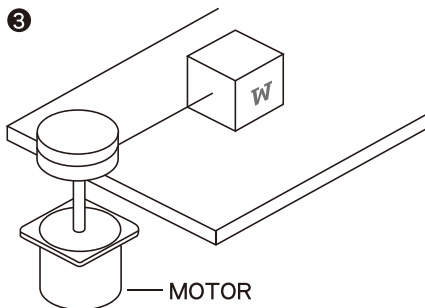η ： Efficiency(%)
H ： Height difference between two ends of belt(m)

Winding Up a Load

❷

MOTOR

$$P_g = \frac{wv}{6.12} \cdot \frac{100}{\eta} \text{ [Watt]}$$

W ： Weight of belt in unit length(kgf/m)
V ： Belt speed(m/sec)
η ： Efficiency(%)

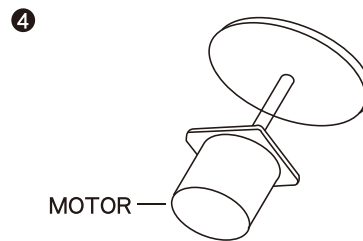### Horizontal Movement

❸

MOTOR

$$P_g = \frac{\mu wv}{6.12} \text{ [Watt]}$$

W ： Weight of belt in unit length(kgf/m)
μ ： Friction coefficient
V ： Belt speed(m/sec)

Driving of an Inertia Object

❹

MOTOR

$$P_g = 1.027 NT \text{ [Watt]}$$

$$T \fallingdotseq \frac{GD^2}{375} \cdot \frac{N}{t} \quad [\text{kgf-m}]$$

N ： Revolutions per minute (rpm)
T ： Torque(kgf . m)
GD² ： Flywheel effect with rotor(kgf . m²)
t ： Starting time(sec)

General Spec of Motor

Insulation Resistance	Test value above 100MΩ by DC500V hi-resistance meter at coil and housing after rated running at constant temperature and humidity.
Insulation Endurance	Hi-pot test by 60Hz 1.8KV for one minuate at coil and housing without damage after rated running at constant temperature and humidity.
Temperature Rise	Temperature rise below 75˚C after rated running.
Ambient Temperature Range	-10˚C～+50˚C (motor with capacitor -10˚C～+40˚C)
Insulation Class	E Class (120˚C)

CHOOSING A SUITABLE MOTOR

AC MOTOR				
VARIABLE SPEED	**MODEL**	Variable Speed Brake Motor	Reversible Variable Speed Motor	Variable Speed Induction Motor
	TURNING DIRECTION	Forward or Reverse	Frequent Forward/ Reverse	Single Direction
	BRAKE & HOLDING FORCE	Magnetic Brake & Holding Force	Minor Holding Force	No Holding Force
	POWER SOURCE/ OUTPUT	1 PHASE / 25W-90W ● A closed-circuit control system with motor and generator combined. ● Wide range of speed. ● Simple speed control, easy wiring. ● Magnetic safety brake, great holding force.	1 PHASE / 6W-60W ● A closed-circuit control system with motor and generator combined. ● Wide range of speed. ● Simple speed control, easy wiring. ● Built-in easy brake function. ● Frequent forward & reverse.	1 PHASE / 6W-90W ● A closed-circuit control system with motor and generator combined. ● Wide range of speed. ● Simple speed control, easy wiring.
CONSTANT SPEED	**MODEL**	Brake Motor	Reversible Motor	Induction Motor
	TURNING DIRECTION	Forward or Reverse	Frequent Forward/ Reverse	Single Direction
	BRAKE & HOLDING FORCE	Magnetic Brake & Holding Force	Minor Holding Force	No Holding Force
	POWER SOURCE/ OUTPUT	1 PHASE / 25W-90W ● Magnetic safety brake, great holding force. ● Various models. 3 PHASE / 25W-90W ● Magnetic safety brake, great holding force. ● Various models.	1 PHASE / 6W-60W ● Rated 30 mins. ● $\frac{\text{Starting torque}}{\text{Rated torque}} = 0.8{\sim}1.0$ ● Easy to switch directions. ● Built-in easy brake system, minimized over run.	1 PHASE / 6W-90W ● Continuous rating. ● For general purposes ● Multi-applications. ● $\frac{\text{Starting torque}}{\text{Rated torque}} = 0.7{\sim}0.9$ ● Various models. 3 PHASE / 25W-90W ● High power, high efficiency. ● Suitable for industrial machinery.

★ Specifications subject to change without prior notice.　　★ Products with UL certification will be marked "UL" on the nameplates.

PRODUCT NAME CODING SYSTEM

● INDUCTION MOTOR

4 I K 25 C GN - A M

ACCESSORIES

F: Fan **M:** Magnetic Brake
P: Thermo Switch
T: Terminal Box
Ts: Small Box(87L x 59W x 43Hmm)
TL: Large Box(132L x 55W x 50Hmm)
FF: Forced Fan

VOLT/ POLE

A: 1ø110V/4P **B:** 1ø110V/2P **C:** 1ø220V/4P
D: 1ø220V/2P **CE:** 230V~240V (50HZ)/ 4P
S: 3ø220V/4P **T:** 3ø220V/2P **U:** 3ø380V/4P **V:** 3ø380V/2P

SHAFT SHAPE

A: Round (Smooth) **GN:** Helical Gear
GX: Helical Gear
SW: Worm Gear

(For Clutch Brake Motor)
GK: Spur Gear Shaft **GS:** Spur Gear Shaft
(GS/GX for 60W/90W Only)

C: Torque Motor Assembled with Controller
R: Variable Speed

OUTPUT

6: 6W **15:** 15W **25:** 25W **40:** 40W **60:** 60W **90:** 90W

MOTOR SERIES

K: K Series

TYPE

I: Induction **R:** Reversible
T: Torque (Controller is Separated from Torque Motor)

SIZE

2: 60mm **3:** 70mm **4:** 80mm **5:** 90mm

PRODUCT NAME CODING SYSTEM

| 5 | GX | 100 | KE | BH |

ADD. SPECS

H: Heavy Duty **B:** Medium Loading
BH: Heavy Duty Square Flange
BH、H、B are only available with 90mm frame size.

BEARING TYPE

Precision Type:
KE: Ball Bearing
BE: Used For Both Self-Oiling Bearing and Ball Bearing
General Type:
K: Ball Bearing ☐ : Self-Oiling Bearing

SPEED RATIO

100: 1/100 **1/3 ～1/180** **10X:** Intermediate Speed Reducer

GEAR TYPE

GN: Helical Gear **GX:** Helical Gear
GB series is suitable for BLDC motor.

SIZE

2: 60mm **3:** 70mm **4:** 80mm **5:** 90mm

TORQUE MOTOR

● CHARACTERISTICS OF THE TORQUE MOTOR

1 A torque motor possesses strong starting torque and sloping characteristics. Within the full range of revolution-torque curve, especially under low speed and constraint, it can rotate steadily.

2 The motor torque changes approximately proportion to the square of the voltage. The speed can be changed easily by varying the voltage supplied to the motor.

3 The torque motor is designed differently than other motors. It can obtain stable torque in low speed under a restrained condition. Suitable in force static-torque situation, or restraints mode is required when the high-speed operation is finished. Continuously operation is available at 60V, rated for short interval operation is required above 60V, and 5 minutes rated at 110V. ※When operated under the restraint mode with speed reducer, the motor output torque would increase greatly. Please do not exceed the allowable torque of the speed reducer, and NEVER strike with force to stop the motor to prevent impact damage to the speed reducer.

4 In an application where an object is released continuously at a constant speed and wound up with constant tension, the torque must be doubled and the speed must be halved if the diameter of the winding spool is doubled.

5 Within the range of the revolution-torque characteristic curve, the motor can be used as a brake when the rotating motion is in the opposite direction.

● TYPES OF THE TORQUE MOTOR

■ REGULATOR BUILT-IN TYPE

The voltage regulator is stored inside the terminal box, where it can control the motor speed easily with the speed controller it is attached to. No need to attach the regulator on the exterior of the motor, making the installation more convenient.

■ STANDARD TYPE

External voltage regulator is required to adjust speed and torque.

MODEL	RATED TIME	MAX. OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	RATED SPEED (rpm)	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
2TK3(C)A(GN)-AP	5 min./ Continuous	3/1	110/60	60	990/570	0.59/0.33	0.19/0.14	0.44/0.37	6 μ f/300V
	5 min./ Continuous	3/1	110/60	50	1150/880	1.02/0.39	0.26/0.11	0.47/0.33	6 μ f/300V
3TK6(C)A(GN)-AP	5 min./ Continuous	6/2	110/60	60	1550/1070	2.23/0.57	0.38/0.18	0.76/0.44	10 μ f/300V
	5 min./ Continuous	6/2	110/60	50	1250/840	2.20/0.58	0.47/0.23	0.59/0.36	10 μ f/300V
4TK10(C)A(GN)-AP	5 min./ Continuous	10/3	110/60	60	1500/700	2.87/0.99	0.65/0.41	0.91/0.61	12 μ f/300V
	5 min./ Continuous	10/3	110/60	50	1140/1050	2.94/1.15	0.86/0.28	0.67/0.49	12μ f/300V
5TK20(C)A(GN)-AP	5 min./ Continuous	20/5	110/60	60	1340/1170	4.61/2.37	1.45/0.42	1.87/1.25	20 μ f/300V
	5 min./ Continuous	20/5	110/60	50	1100/1010	4.57/1.95	1.76/0.48	1.36/0.92	20 μ f/300V
5TK40(C)A(GX)-AFP	5 min./ Continuous	40/10	110/60	60	1510/1280	7.89/2.09	2.58/0.76	1.55/0.97	24 μ f/300V
	5 min./ Continuous	40/10	110/60	50	1360/680	6.9/2.37	0.72/1.44	1.10/0.92	24 μ f/300V

MODEL	RATED TIME	MAX. OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	RATED SPEED (rpm)	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
2TK3(C)A(GN)-CP	5 min./ Continuous	3/1	220/120	60	1170/1180	0.63/0.36	0.23/0.08	0.18/0.14	1 μ f/450V
	5 min./ Continuous	3/1	220/120	50	1070/650	0.76/0.32	0.27/0.15	0.15/0.10	1 μ f/450V
3TK6(C)A(GN)-CP	5 min./ Continuous	6/2	220/120	60	1240/1050	1.38/0.62	0.47/0.18	0.33/0.22	2 μ f/450V
	5 min./ Continuous	6/2	220/120	50	1100/1180	1.63/0.7	0.54/0.17	0.27/0.20	2 μ f/450V
4TK10(C)A(GN)-CP	5 min./ Continuous	10/3	220/120	60	1200/1300	2.76/1.23	0.80/0.22	0.37/0.28	2.5 μ f/450V
	5 min./ Continuous	10/3	220/120	50	1050/1020	2.84/1.19	0.91/0.28	0.29/0.21	2.5 μ f/450V
5TK20(C)A(GN)-CP	5 min./ Continuous	20/5	220/120	60	1350/1240	3.97/1.24	1.44/0.39	0.5/0.32	3 μ f/450V
	5 min./ Continuous	20/5	220/120	50	1070/760	4.26/1.35	1.83/0.65	0.37/0.24	3 μ f/450V
5TK40(C)A(GX)-CFP	5 min./ Continuous	40/10	220/120	60	1480/1360	7.9/2.4	2.63/0.72	0.45/0.5	6 μ f/450V
	5 min./ Continuous	40/10	220/120	50	1100/900	7.1/3.2	3.53/1.1	0.71/0.54	6 μ f/450V

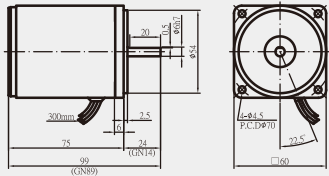NOTES：Custom order is required when applied voltage exceeding the rated voltage.
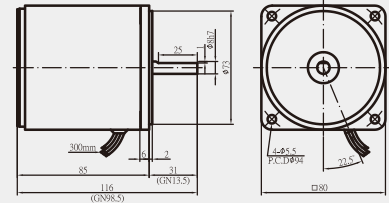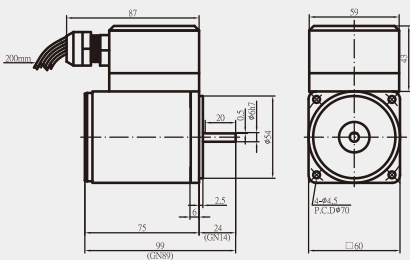
TORQUE MOTOR

■ OUTLINE & SPECIFICATION
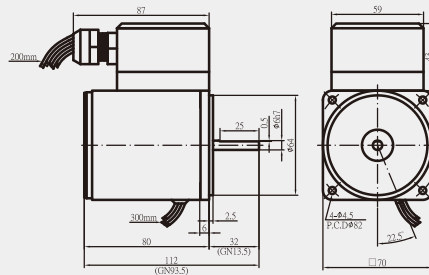■ UNIT：mm

3W 2TK3A(GN)-AP(CP)
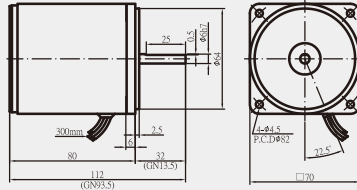
6W 3TK6A(GN)-AP(CP)

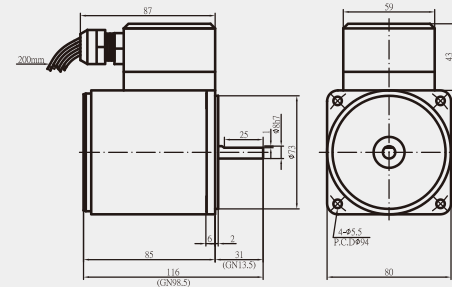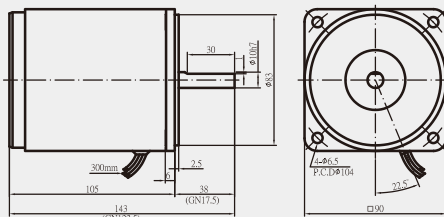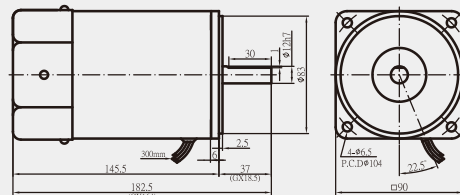**10W** 4TK10A(GN)-AP(CP)

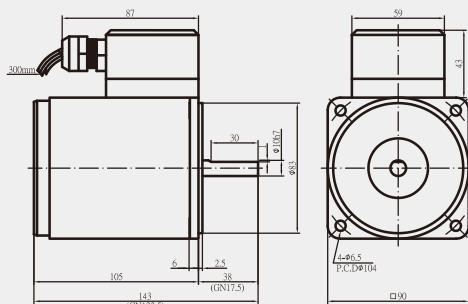**3W** 2TK3CA(GN)-AP(CP)

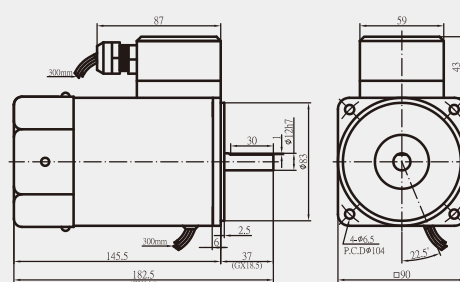**6W** 3TK6CA(GN)-AP(CP)

10W 4TK10CA(GN)-AP(CP)

20W 5TK20A(GN)-AP(CP)

40W 5TK40A(GN/GX)-AP(CP)

20W 5TK20CA(GN)-AP(CP)

40W 5TK40CA(GN/GX)-AP(CP)

GENERAL PURPOSE MOTOR

SPEED CONTROLLED MOTOR

CONTROLLER

BRAKE MOTOR

CLUTCH BRAKE MOTOR

TORQUE MOTOR

SPEED REDUCER

COMPONENTS

● HOW TO SELECT A SPEED REDUCER

■ ROTATION AND TORQUE GIVEN FROM CONJUNCTION WITH SPEED REDUCER

Following is the calculation formula:

Rotations : $N_G = \dfrac{N_m}{i}$

Torque : $T_G = T_M \cdot i \cdot \eta$

N_G ：Rotations after conjunction with speed reducer (rpm)

N_M ：Rotations of motor (rpm)

i : Ratio

T_G ：Torque after conjunction with speed reducer (kg・cm)

T_M ：Torque of motor (kg・cm)

η : The transmission efficiency of speed reducer

■ MAXIMUM TORQUE ALLOWED

The maximum torque a speed reducer can tolerate is limited due to materials or other specs. Please see the specification of speed reducer for maximum torque allowed at different ratio.

■ ALLOWABLE RADIAL LOAD AND AXIAL LOAD

Radial load refers to the bending load of output shaft at the 1/2 point, commonly used in units linked by chains. Radial load can be disregarded if a coupling is used. Do not over-load since radial load and axial load may affect service life and strength.

■ ADJUSTED THE SPEED REDUCER RATIO VIA ENVIRONMENT TEMPERATURE

Transmission efficiency of a speed reducer apparently does affected by the environment temperature. The graphic display the torque loss percentage at different ambient temperature (for reference only).
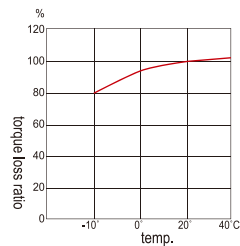
■ MOTOR EQUIP WITH ROUND SHAFT AND GEAR SHAFT, ONLY GEAR SHAFT CAN CONJUNCT WITH SPEED REDUCER.

Speed Reducer 4GN15K ▲△
Motor (Gear shaft) 4IK25GN-A ▲ △

Motor (Round shaft) 4IK25A-A

Speed Reducer 4GN15K
Intermediate Speed Reducer 4GN10X
Motor (Gear shaft) 4IK25GN-A

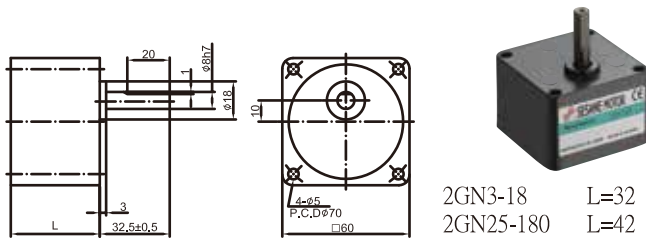### ■ LOAD PATTERNS VS. LIFESPAN OF SPEED REDUCER

Speed Reducer lifespan will be vary by ways of loading including but not limit to operation time frame, different type of bearing. The following table assumes that the load gear is under the maximum permissible torque. (Reference for engineers)

Unit：hrs

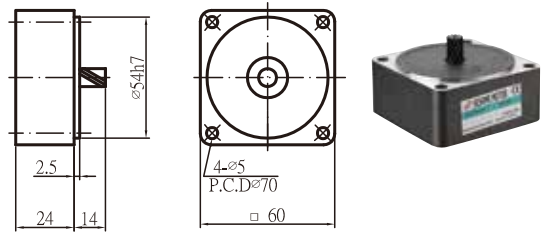| BEARING				BALL BEARING			
LOAD PATTERN	5 hrs/day	8 hrs/day	24 hrs/day	5 hrs/day	8 hrs/day	24 hrs/day	Application instructions
FIXED LOAD	2000	1500	1000	6250	5000	3400	Operated in one direction, such as conveyors.
SLIGHT IMPACT	1500	1250	800	4200	3400	2500	Frequent start/stop, ex. cam operaton.
STRONG IMPACT	800 ~1000	700 ~1000	600 ~700	2000 ~2500	1700 ~2500	1400 ~1700	Reversible motors, instant moment reversed, with brake system in an instant brake.

Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.
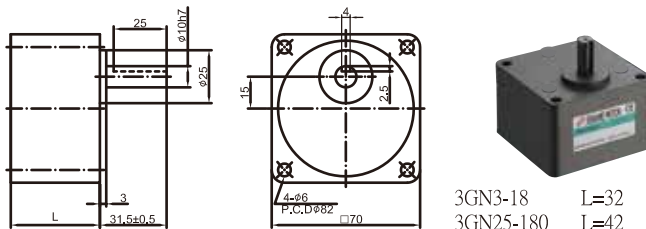
■ 2 GN□KE . 2 GN□ / SPEED REDUCER

2GN3-18   L=32
2GN25-180 L=42

SPEED(rpm)	500	300	200	180	150	120	100	60	50	30	20	15	10
SPEED REDUCTION RATIO 50HZ	3	5	7.5	-	10	12.5	15	25	30	50	75	100	150
SPEED REDUCTION RATIO 60HZ	3.6	6	9	10	-	15	18	30	36	60	90	120	180
MAX. TORQUE (kgf.cm)	1.1	1.8	2.7	3.0	3.9	4.5	5.4	8.1	9.7	15	23	25	25

■ 2GN10X . 2GN10XK / INTERMEDIATE SPEED REDUCER

■ 3 GN□KE . 3 GN□ / SPEED REDUCER

3GN3-18   L=32
3GN25-180 L=42

SPEED(rpm)	500	300	200	180	150	120	100	60	50	45	37.5	30	20	15	10
SPEED REDUCTION RATIO 50HZ	3	5	7.5	-	10	12.5	15	25	30	-	40	50	75	100	150
SPEED REDUCTION RATIO 60HZ	3.6	6	9	10	-	15	18	30	36	40	-	60	90	120	180
MAX. TORQUE (kgf.cm)	2.6	4.4	6.6	7.4	9.8	11	13	20	24	24	32	36	50	50	50

■ 3GN10X . 3GN10XK / INTERMEDIATE SPEED REDUCER

■ 4 GN□KE . 4 GN□ / SPEED REDUCER

4GN3-180   L=43

SPEED(rpm)	500	300	200	180	150	120	100	60	50	45	37.5	30	20	15	10
SPEED REDUCTION RATIO 50HZ	3	5	7.5	-	10	12.5	15	25	30	-	40	50	75	100	150
SPEED REDUCTION RATIO 60HZ	3.6	6	9	10	-	15	18	30	36	40	-	60	90	120	180
MAX. TORQUE (kgf.cm)	4.4	7.4	11	12	15	11	22	33	40	40	50	60	80	80	80
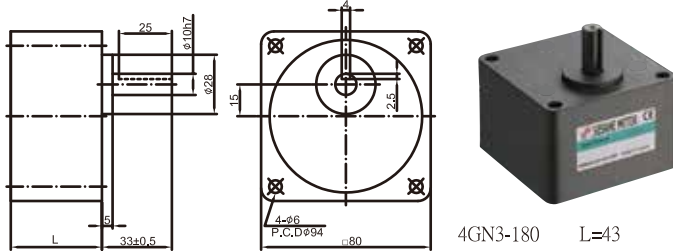
■ 4GN10X . 4GN10XK / INTERMEDIATE SPEED REDUCER

■ 5 GN□KE . 5 GN□ / SPEED REDUCER

5GN3-18   L=42
5GN20-180 L=60
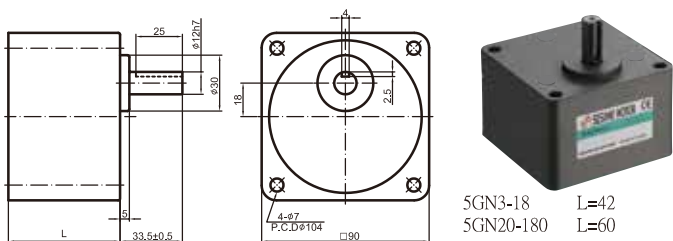
SPEED(rpm)	500	300	200	180	150	120	100	90	75	60	50	45	37.5	30	20	15	10
SPEED REDUCTION RATIO 50HZ	3	5	7.5	-	10	12.5	15	-	20	25	30	-	40	50	75	100	150
SPEED REDUCTION RATIO 60HZ	3.6	6	9	10	-	15	18	20	-	30	36	40	-	60	90	120	180
MAX. TORQUE (kgf.cm)	10	17	26	29	36	43	52	52	65	78	93	93	100	100	100	100	100

■ 5GN10X . 5GN10XK / INTERMEDIATE SPEED REDUCER

GENERAL PURPOSE MOTOR

SPEED CONTROLLED MOTOR

CONTROLLER

BRAKE MOTOR

CLUTCH BRAKE MOTOR

TORQUE MOTOR

SPEED REDUCER
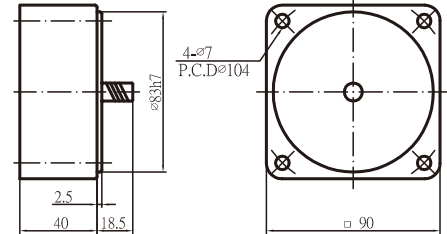
COMPONENTS

SPEED REDUCER
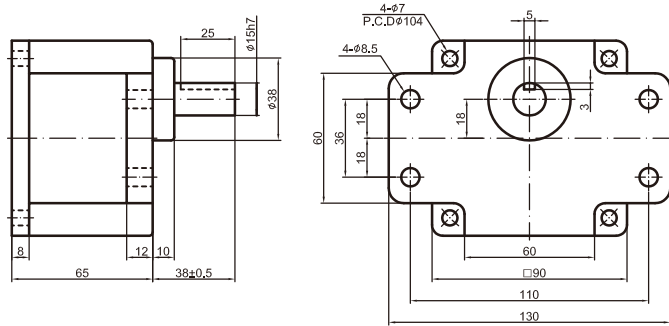
■ OUTLINE & SPECIFICATION
■ UNIT : mm

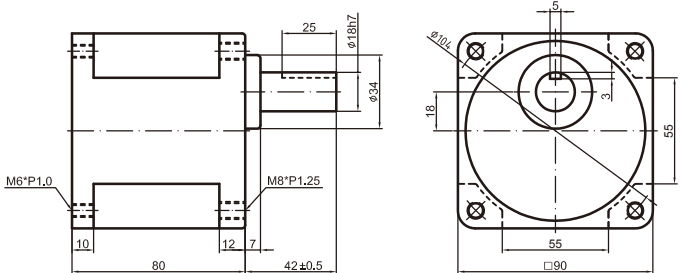## ■ 5 GX□KB / SPEED REDUCER
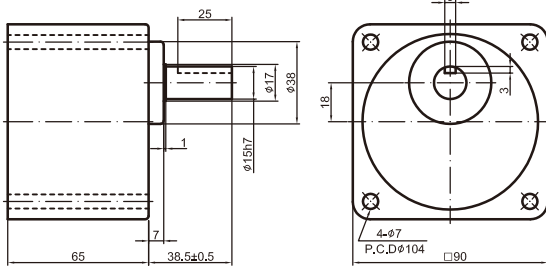
■ 5GX10XK / INTERMEDIATE SPEED REDUCER

■ 5 GX□K / SPEED REDUCER

SPEED(rpm)	500	300	200	120	100	90	75	60	50	30	20	15	10	9	7.5
SPEED REDUCTION RATIO 50HZ	3	5	7.5	12.5	15	-	20	25	30	50	75	100	150	-	200
SPEED REDUCTION RATIO 60HZ	3.6	6	9	15	18	20	-	30	36	60	90	120	180	200	-
MAX. TORQUE (kgf.cm)	15	26	38	57	69	69	86	103	124	200	200	200	200	200	200

■ 5 GX□KBH / GRAVITY FORCE TYPE REDUCER

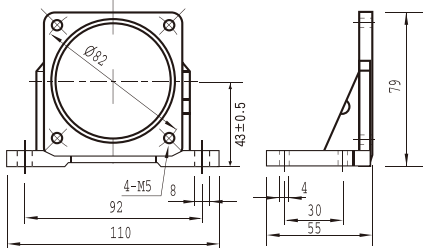| SPEED(rpm)	30	20	15	10	9	7.5
SPEED REDUCTION RATIO 50HZ	50	75	150	150	-	200
SPEED REDUCTION RATIO 60HZ	60	90	180	120	200	-
MAX. TORQUE(kgf.cm)	350	350	350	350	350	350

NOTES :

1. Please fill in the required speed reduction ratio in the □ (square) after the speed reducer model no.
2. Rotational speed is calculated by dividing the synchronous speed of the motor (50Hz: 1500rpm; 60Hz: 1800rpm) with the reduction ratio. Depending on total load, actual rotational speed is 2%~20~ less.
3. Speed reducers marked in the highlighted areas have opposite rotational direction to the motor. Others unmarked have the same rotational direction as the motor.
4. Attention: metal chips or objects in speed reducer will result in gear damage, noise and shorten service-life when assembling with motor.
5. Please make sure that the shaft size of the motor matches to that of the accompanying reducer model before assembly, otherwise inconformity will occur.
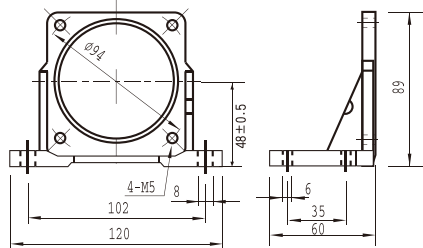
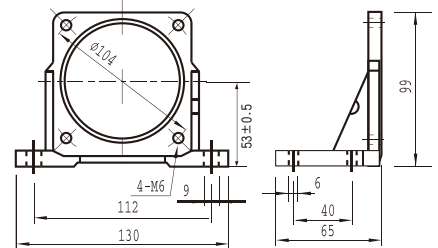# COMPONENTS

L TYPE BASE BRACKET FOR MOTOR INSTALLATION

PAL-3N (□70mm)

Ø82
79
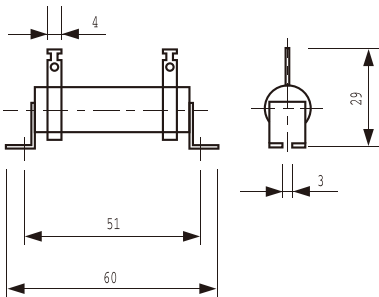43±0.5
4-M5
8
92
30
110
55
4

PAL-4N (□80mm)

Ø94
89
48±0.5
4-M5
8
102
35
120
60
6

PAL-5N (□90mm)

Ø104
99
53±0.5
4-M6
9
112
40
130
65
6

EXTERNAL RESISTOR FOR ELECTRONIC BRAKE CIRCUITS

DDR10W10ΩJ (10/10)

4
29
3
51
60

DDR20W20ΩJ (20/20)

5
35
4
76
92

DDR30W20ΩJ (30/20)

5
35
4
94
110

DDR50W50ΩJ (50/50)

8
35
6
142
164

DDR80W50ΩJ (80/50)

8
60
6
145
166
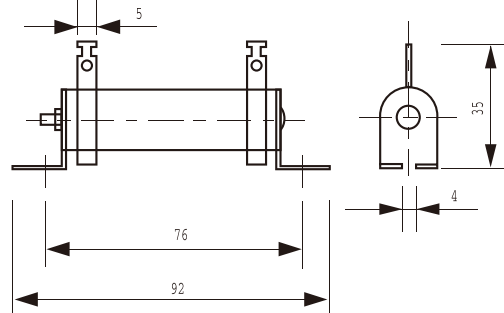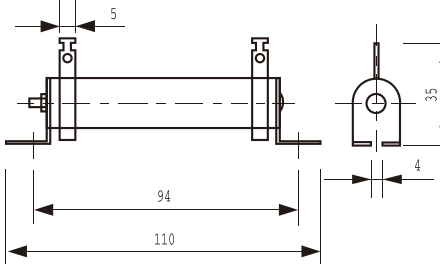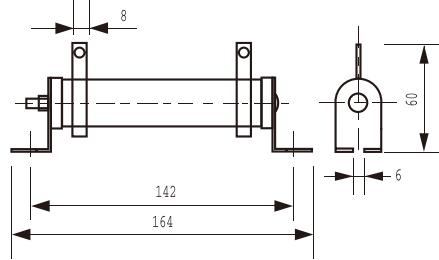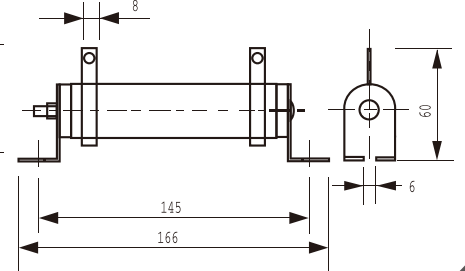
EXTENDED BASE BRACKET

PF-083A PIN Base (8 PIN)
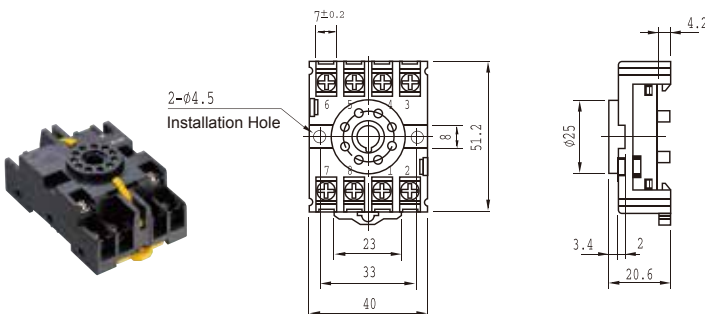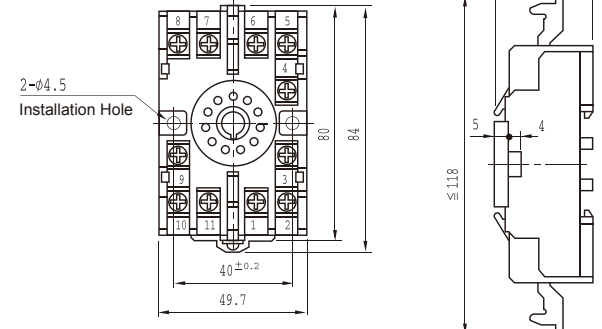
2-ϕ4.5
Installation Hole
7±0.2
4.2
8
51.2
6
3
7
2
23
33
40
Ø25
3.4
2
20.6

11-PFA PIN Base (11 PIN)

2-ϕ4.5
Installation Hole
8 7 6 5
4
80
84
9 3
10 11 1 2
40±0.2
49.7
≦35.5
5
4
≦118

GENERAL PURPOSE MOTOR

SPEED CONTROLLED MOTOR

CONTROLLER

BRAKE MOTOR

CLUTCH BRAKE MOTOR

TORQUE MOTOR

SPEED REDUCER

COMPONENTS

SESAME

SESAME MOTOR CORP.

599, Sec 1, Hemu Rd., Shengang, Taichung,
42953, Taiwan
TEL : +886-4-2561-0011
FAX : +886-4-2562-7766
www.sesamemotor.com
info@sesamemotor.com.tw
Skype Phone : sesame_motor

MOTOR AND
SPEED REDUCER

AGENT

V.3.0.02