BRAKE MOTOR

CONSTRUCTION (POWER-OFF BRAKE TYPE)

Our brake motor is an excitation type motor. Once voltage is introduced into the coil, the magnet working against the spring will hold the moving plate, releasing the brake, and allowing the motor shaft to move freely.



■ INSULATION RESISTANCE

Tested value at 10MΩ and above, measured by DC 500V Hi-Resistance meter between the coil and housing.

■ HI-POT RESISTANCE

No damages caused after 1kV at 60Hz was tested for one minute between the coil and housing.

ADJUSTMENT OF THE BRAKE CLEARANCE

Brake clearance is the gap between magnetic coils and moving plate. The ideal pre-setting is 0.15mm (around the thickness of a name card). After a period of usage, the clearance is widened due to lining friction and wear. If the clearance is bigger than 0.3mm, please contact us or replace the lining.

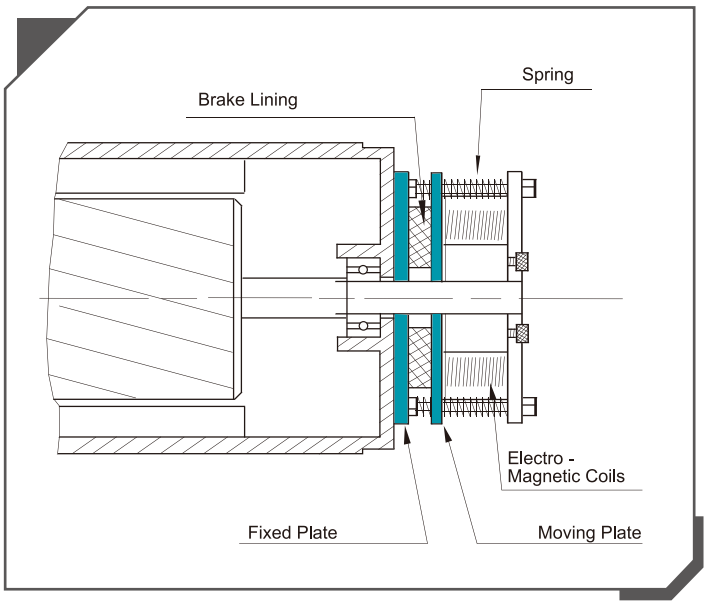
FEATURES

■ HIGH BRAKING & HOLDING FORCE

Built-in excitation brake: as the power is shut off, it can stop the motor instantly and accurately holds the load, making it most suitable for emergency braking.

■ BRAKE PRECISION

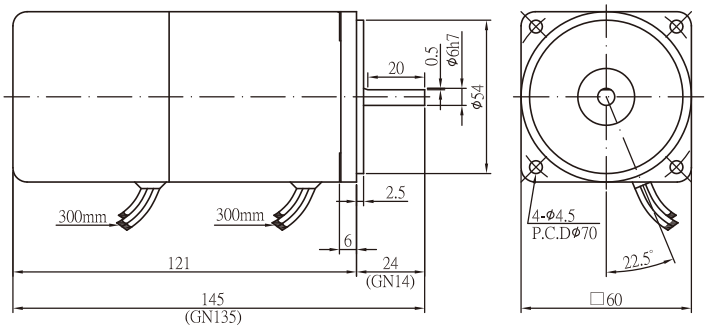
Regardless of rpm, the magnetic brake can control the overturns within 2-3 turns, making it suitable for frequent forward/reverse operation.



Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR -IP22

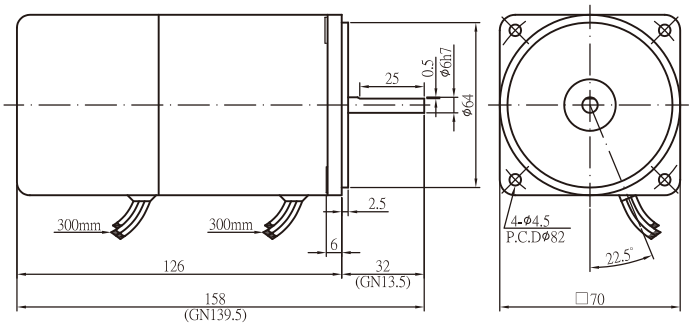
■ OUTLINE & SPECIFICATION
■ UNIT：mm





6W

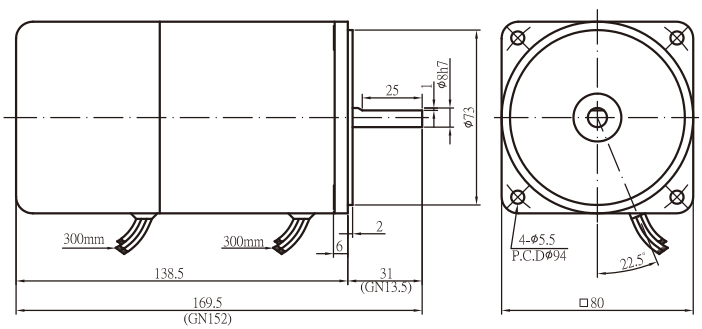
6W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
2IK6A(GN)-AM	6	1ø100/110	50/60	4	1150/1400	30 /minutes	0.7/0.63	0.5/0.41	0.22/0.21	2.5/300V
2IK6A(GN)-CM	6	1ø200/220	50/60	4	1150/1550	30 /minutes	0.65/0.7	0.51/0.54	0.1/0.11	0.7/450V
2IK6A(GN)-CEM	6	1ø230/240	50	4	1100/1200	30 /minutes	0.74/0.77	0.55/0.5	0.11/0.1	0.7/450V





15W

15W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
3IK15A(GN)-AM	15	1ø100/110	50/60	4	1150/1650	30 /minutes	0.88/1.04	1.22/0.91	0.36/0.35	5/300V
3IK15A(GN)-CM	15	1ø200/220	50/60	4	1150/1600	30 /minutes	0.75/1.1	1.12/0.93	0.18/0.18	1.2/450V
3IK15A(GN)-CEM	15	1ø230/240	50	4	1300/1300	30 /minutes	1.06/1.06	1.14/1.13	0.17/0.17	1.2/450V





25W

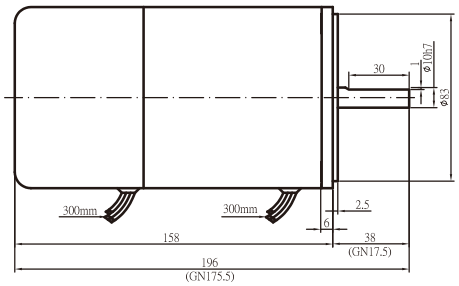
25W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
4IK25A(GN)-AM	25	1ø100/110	50/60	4	1250/1600	30 /minutes	1.4/1.4	1.93/1.51	0.57/0.45	6/300V
4IK25A(GN)-CM	25	1ø200/220	50/60	4	1250/1600	30 /minutes	1.57/1.38	1.91/1.52	0.28/0.25	1.5/450V
4IK25A(GN)-CEM	25	1ø230/240	50	4	1300/1300	30 /minutes	1.38/1.55	1.9/1.86	0.25/0.24	1.5/450V
4IK25A(GN)-SM	25	3ø220	50/60	4	1300/1550	30 /minutes	5.12/4.04	1.89/1.56	0.22/0.19	-
4IK25A(GN)-UM	25	3ø380	50/60	4	1200/1350	30 /minutes	3.96/2.97	2.04/1.79	0.11/0.11	-

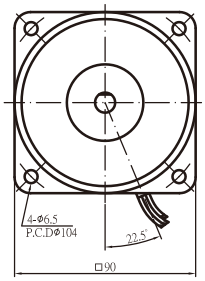
NOTES：

1. The applicable frequency for the ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR should not exceed more than 10 times per minute.
2. Static friction torque of a ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR is: 6W~25W: 4Kg.cm, 40W~90W: 10Kg.cm.

ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR -IP22

OUTLINE & SPECIFICATION
UNIT : mm

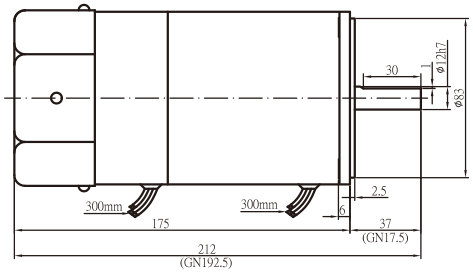


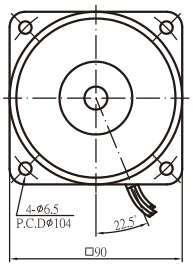


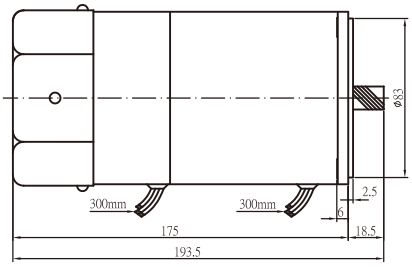


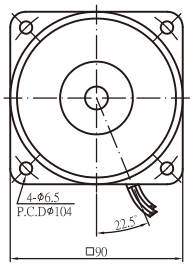
40W

40W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
5IK40A(GN)-AM	40	1ø100/110	50/60	4	1250/1600	30 /minutes	2.14/2.66	3.17/2.41	0.87/0.76	10/300V
5IK40A(GN)-CM	40	1ø200/220	50/60	4	1300/1650	30 /minutes	1.75/2.17	3.01/2.35	0.4/0.34	2.5/450V
5IK40A(GN)-CEM	40	1ø230/240	50	4	1350/1350	30 /minutes	2.3/2.58	2.87/2.84	0.32/0.32	2.5/450V
5IK40A(GN)-SM	40	3ø220	50/60	4	1400/1600	30 /minutes	10.51/7.83	2.83/2.4	0.32/0.28	-
5IK40A(GN)-UM	40	3ø380	50/60	4	1350/1600	30 /minutes	9.25/6.68	2.85/2.45	0.16/0.15	-



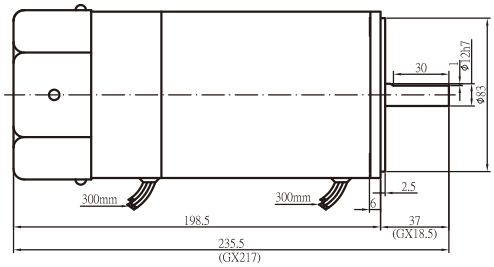


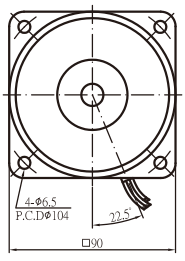




60W/60W-GX

60W/60W-GX MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
5IK60GX-AFM 5IK60A(GN)-AFM	60	1ø100/110	50/60	4	1200/1650	30 /minutes	2.6/2.94	5.0/3.5	1.8/1.12	16/300V
5IK60GX-CFM 5IK60A(GN)-CFM	60	1ø200/220	50/60	4	1250/1600	30 /minutes	3.62/4.41	4.64/3.63	0.64/0.54	4/450V
5IK60GX-CEFM 5IK60A(GN)-CEFM	60	1ø230/240	50	4	1300/1350	30 /minutes	4.14/5.22	4.56/4.4	0.56/0.55	4/450V
5IK60GX-SFM 5IK60A(GN)-SFM	60	3ø220	50/60	4	1300/1550	30 /minutes	13.72/10.70	4.47/3.77	0.41/0.39	-
5IK60GX-UFM 5IK60A(GN)-UFM	60	3ø380	50/60	4	1400/1550	30 /minutes	14.33/10.15	4.2/3.79	0.21/0.22	-







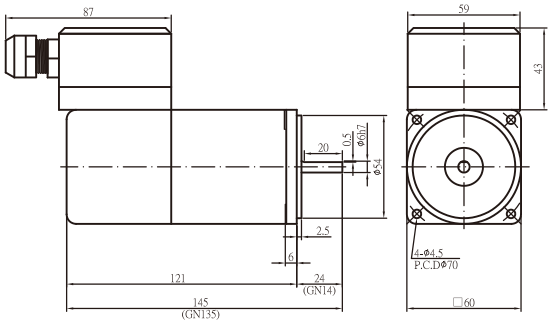
90W

90W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
5IK90A(GX)-AFM	90	1ø100/110	50/60	4	1300/1650	30 /minutes	4.76/5.86	6.68/5.33	1.5/1.41	22/250V
5IK90A(GX)-CFM	90	1ø200/220	50/60	4	1300/1650	30 /minutes	4.3/4.21	6.89/5.34	0.76/0.72	5/450V
5IK90A(GX)-CEFM	90	1ø230/240	50	4	1350/1350	30 /minutes	4.93/5.08	6.44/6.42	0.66/0.68	5/450V
5IK90A(GX)-SFM	90	3ø220	50/60	4	1400/1650	30 /minutes	23.3/18.25	6.4/5.3	0.7/0.6	-
5IK90A(GX)-UFM	90	3ø380	50/60	4	1400/1650	30 /minutes	23.3/18.14	6.27/5.23	0.4/0.3	-

Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR, TERMINAL BOX TYPE -IP54

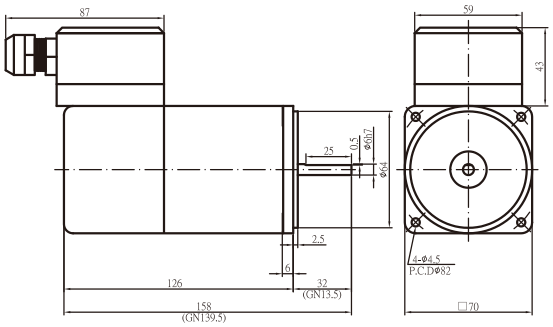
■ OUTLINE & SPECIFICATION
■ UNIT：mm





6W

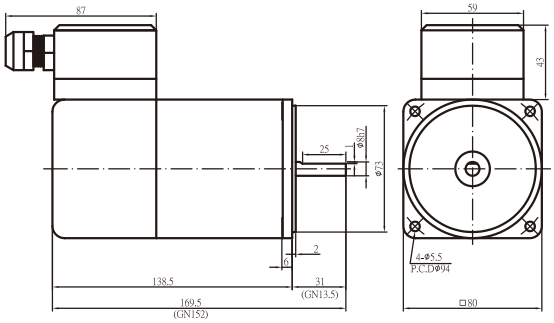
6W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
2IK6A(GN)-AMT	6	1ø100/110	50/60	4	1150/1400	30 /minutes	0.7/0.63	0.51/0.41	0.22/0.21	2.5/300V
2IK6A(GN)-CMT	6	1ø200/220	50/60	4	1150/1550	30 /minutes	0.65/0.7	0.51/0.54	0.1/0.11	0.7/450V
2IK6A(GN)-CEMT	6	1ø230/240	50	4	1100/1200	30 /minutes	0.74/0.77	0.55/0.5	0.11/0.1	0.7/450V





15W

15W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
3IK15A(GN)-AMT	15	1ø100/110	50/60	4	1150/1650	30 /minutes	0.88/1.04	1.22/0.91	0.36/0.35	5/300V
3IK15A(GN)-CMT	15	1ø200/220	50/60	4	1150/1600	30 /minutes	0.75/1.1	1.12/0.93	0.18/0.18	1.2/450V
3IK15A(GN)-CEMT	15	1ø230/240	50	4	1300/1300	30 /minutes	1.06/1.06	1.14/1.13	0.17/0.17	1.2/450V





25W

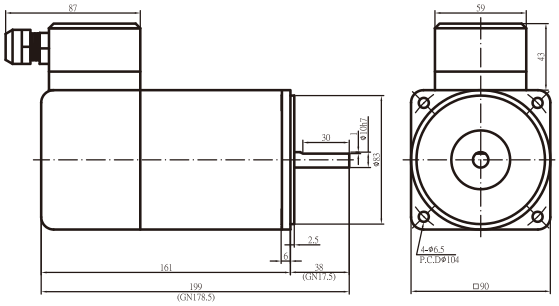
25W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
4IK25A(GN)-AMT	25	1ø100/110	50/60	4	1250/1600	30 /minutes	1.4/1.4	1.93/1.51	0.57/0.45	6/300V
4IK25A(GN)-CMT	25	1ø200/220	50/60	4	1250/1600	30 /minutes	1.57/1.38	1.91/1.52	0.28/0.25	1.5/450V
4IK25A(GN)-CEMT	25	1ø230/240	50	4	1300/1300	30 /minutes	1.38/1.55	1.9/1.86	0.25/0.24	1.5/450V
4IK25A(GN)-SMT	25	3ø220	50/60	4	1300/1550	30 /minutes	5.12/4.04	1.89/1.56	0.22/0.19	-
4IK25A(GN)-UMT	25	3ø380	50/60	4	1200/1350	30 /minutes	3.96/2.97	2.04/1.79	0.11/0.11	-

NOTES：

1. The applicable frequency for the ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR should not exceed more than 10 times per minute.
2. Static friction torque of a ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR is: 6W~25W: 4Kg.cm, 40W~90W: 10Kg.cm.

ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR, TERMINAL BOX TYPE -IP54

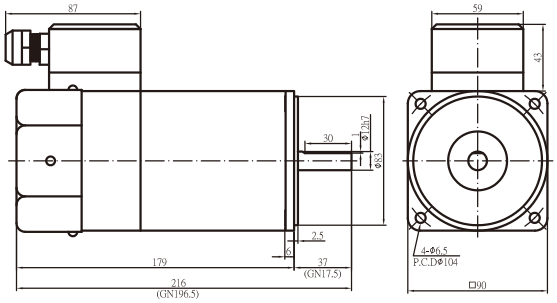
OUTLINE & SPECIFICATION
UNIT：mm

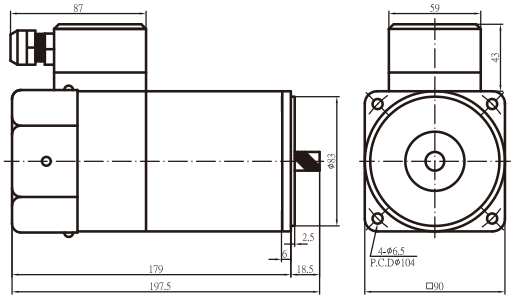




40W

40W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RRATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
5IK40A(GN)-AMT	40	1ø100/110	50/60	4	1250/1600	30 /minutes	2.14/2.66	3.17/2.41	0.87/0.76	10/300V
5IK40A(GN)-CMT	40	1ø200/220	50/60	4	1300/1650	30 /minutes	1.75//2.17	3.01/2.35	0.4/0.34	2.5/450V
5IK40A(GN)-CEMT	40	1ø230/240	50	4	1350/1350	30 /minutes	2.3/2.58	2.87/2.84	0.32/0.32	2.5/450V
5IK40A(GN)-SMT	40	3ø220	50/60	4	1400/1600	30 /minutes	10.51/7.83	2.83/2.4	0.29/0.27	-
5IK40A(GN)-UMT	40	3ø380	50/60	4	1350/1600	30 /minutes	9.25/6.68	2.85/2.45	0.16/0.15	-

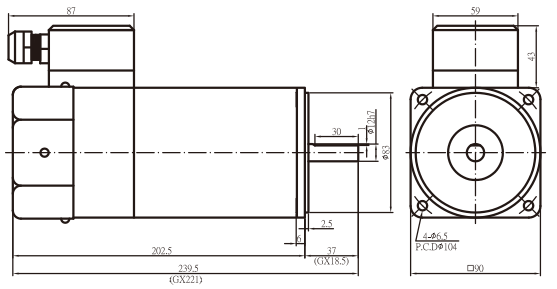






60W/60W-GX

60W/60W-GX MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
5IK60A(GN) AFMT 5IK60GX-AFMT	60	1ø100/110	50/60	4	1200/1650	30 /minutes	2.6/2.94	5.0/3.5	1.8/1.12	16/300V
5IK60A(GN)-CFMT 5IK60GX-CFMT	60	1ø200/220	50/60	4	1250/1600	30 /minutes	3.62/4.41	4.64/3.63	0.64/0.54	4/450V
5IK60A(GN)-CEFMT 5IK60GX-CEFMT	60	1ø220/240	50	4	1300/1350	30 /minutes	4.14/5.22	4.56/4.40	0.56/0.55	4/450V
5IK60A(GN)-SFMT 5IK60GX-SFMT	60	3ø220	50/60	4	1300/1550	30 /minutes	13.72/10.70	4.47/3.77	0.41/0.39	-
5IK60A(GN)-UFMT 5IK60GX-UFMT	60	3ø380	50/60	4	1400/1550	30 /minutes	14.33/10.15	4.2/3.79	0.21/0.22	-





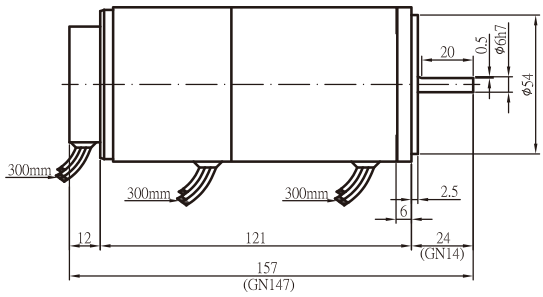
90W

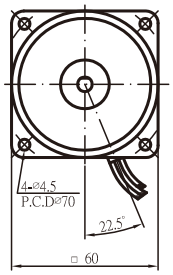
90W MODEL	OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	RATED SPEED (rpm)	RATED TIME	STARTING TORQUE (Kg.cm)	RATED TORQUE (Kg.cm)	RATED CURRENT (A)	CAPACITY (μF)
5IK90A(GX)-AFMT	90	1ø100/110	50/60	4	1300/1650	30 /minutes	4.76/5.86	6.68/5.33	1.5/1.41	22/250V
5IK90A(GX)-CFMT	90	1ø200/220	50/60	4	1300/1650	30 /minutes	4.3/4.21	6.89/5.34	0.76/0.72	5/450V
5IK90A(GX)-CEFMT	90	1ø220/240	50	4	1350/1350	30 /minutes	4.93/5.08	6.44/6.42	0.66/0.68	5/450V
5IK90A(GX)-SFMT	90	3ø220	50/60	4	1400/1650	30 /minutes	23.3/18.25	6.4/5.3	0.7/0.6	-
5IK90A(GX)-UFMT	90	3ø380	50/60	4	1400/1650	30 /minutes	23.3/18.14	6.3/5.3	0.4/0.3	-

Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

ELECTRO-MAGNETIC VARIABLE SPEED BRAKE MOTOR

■ OUTLINE & SPECIFICATION
■ UNIT：mm

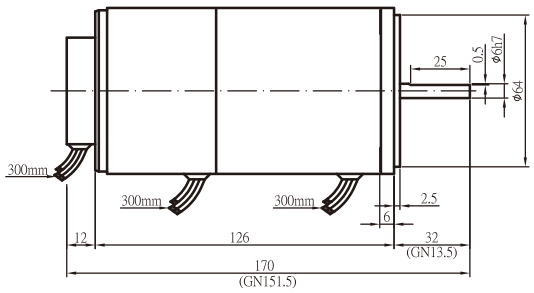


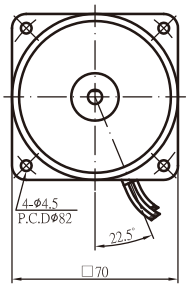




6W

6W TYPE	RATED OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	CURRENT (A)	ADJUSTABLE RANGE (rpm)	STARTING TORQUE (Kg.cm)	MAXIMUM TORQUE/ PRE-SET TURNNINGS (Kg.cm)		CAPACITOR	
								1200rpm	90rpm	CAPACITY (μF)	WITHSTAND VOLTAGE (VAC)
2IK6RA(GN)-AM	6	100/110	50/60	4	0.22/0.21	90~1400/90~1700	0.7/0.63	0.4/0.55	0.72/0.5	2.5	300
2IK6RA(GN)-CM	6	200/220	50/60	4	0.1/0.11	90~1400/90~1700	0.65/0.7	0.44/0.66	0.6/0.7	0.7	450
2IK6RA(GN)-CEM	6	230/240	50	4	0.11/0.1	90~1400	0.74/0.77	0.39/0.52	0.72/0.8	0.7	450

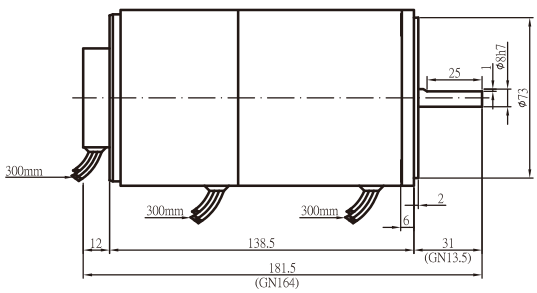


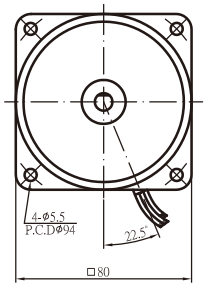




15W

15W TYPE	RATED OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	CURRENT (A)	ADJUSTABLE RANGE (rpm)	STARTING TORQUE (Kg.cm)	MAXIMUM TORQUE/ PRE-SET TURNNINGS (Kg.cm)		CAPACITOR	
								1200rpm	90rpm	CAPACITY (μF)	WITHSTAND VOLTAGE (VAC)
3IK15RA(GN)-AM	15	100/110	50/60	4	0.36/0.35	90~1400/90~1700	0.88/1.04	0.9/1.5	1.0/1.1	5	300
3IK15RA(GN)-CM	15	200/220	50/60	4	0.18/0.18	90~1400/90~1700	0.75/1.1	1.1/1.5	1.0/1.1	1.2	450
3IK15RA(GN)-CEM	15	230/240	50	4	0.17/0.17	90~1400	1.06/1.06	1.40/1.32	1.02/1.25	1.2	450







25W

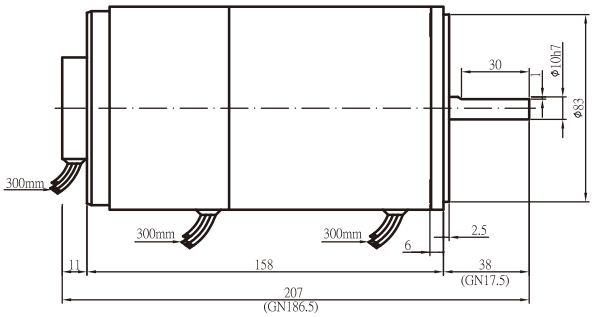
25W TYPE	RATED OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	CURRENT (A)	ADJUSTABLE RANGE (rpm)	STARTING TORQUE (Kg.cm)	MAXIMUM TORQUE/ PRE-SET TURNNINGS (Kg.cm)		CAPACITOR	
								1200rpm	90rpm	CAPACITY (μF)	WITHSTAND VOLTAGE (VAC)
4IK25RA(GN)-AM	25	100/110	50/60	4	0.57/0.45	90~1400/90~1700	1.4/1.4	2.17/2.5	1.4/1.4	6	300
4IK25RA(GN)-CM	25	200/220	50/60	4	0.28/0.25	90~1400/90~1700	1.57/1.38	2.1/2.4	1.6/1.3	1.5	450
4IK25RA(GN)-CEM	25	230/240	50	4	0.25/0.24	90~1400	1.38/1.55	2.2/2.4	1.5/1.7	1.5	450

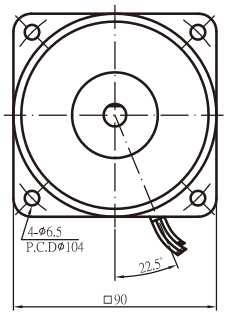
NOTES：

1. The applicable frequency for the ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR should not exceed more than 10 times per minute.
2. Static friction torque of a ELECTRO-MAGNETIC INDUCTION BRAKE MOTOR is: 6W~25W: 4Kg.cm, 40W~90W: 10Kg.cm.

ELECTRO-MAGNETIC VARIABLE SPEED BRAKE MOTOR

OUTLINE & SPECIFICATION
UNIT：mm

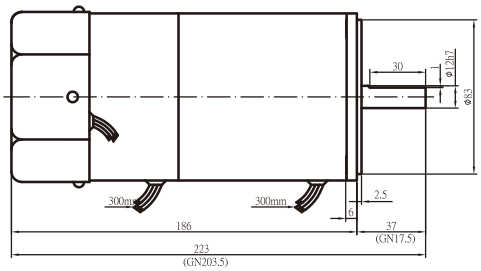


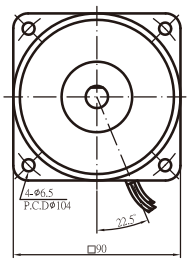


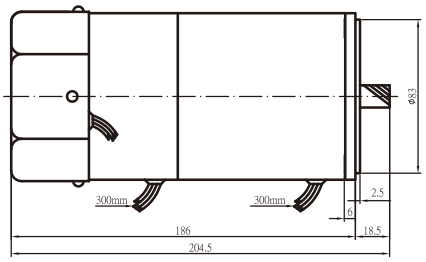


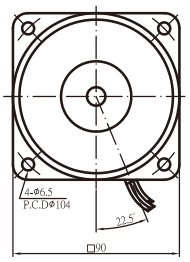
40W

40W TYPE	RATED OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	CURRENT (A)	ADJUSTABLE RANGE (rpm)	STARTING TORQUE (Kg.cm)	MAXIMUM TORQUE/ PRE-SET TURNNINGS (Kg.cm)		CAPACITOR	
								1200rpm	90rpm	CAPACITY (μF)	WITHSTAND VOLTAGE (VAC)
5IK40RA(GN)-AM	40	100/110	50/60	4	0.87/0.76	90~1400/90~1700	2.14/2.66	3.18/4.2	2.2/2.8	10	300
5IK40RA(GN)-CM	40	200/220	50/60	4	0.4/0.34	90~1400/90~1700	1.75/2.17	3.6/4.2	1.8/2.1	2.5	450
5IK40RA(GN)-CEM	40	230/240	50	4	0.32/0.32	90~1400	2.3/2.58	4.4/4.6	2.4/2.6	2.5	450



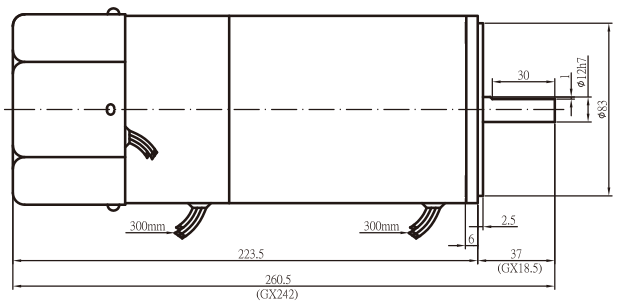


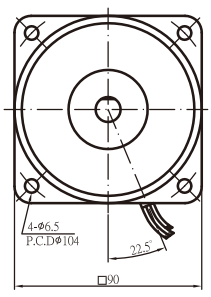




60W/60W-GX

60W/60W-GX TYPE	RATED OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	CURRENT (A)	ADJUSTABLE RANGE (rpm)	STARTING TORQUE (Kg.cm)	MAXIMUM TORQUE/ PRE-SET TURNNINGS (Kg.cm)		CAPACITOR	
								1200rpm	90rpm	CAPACITY (μF)	WITHSTAND VOLTAGE (VAC)
5IK60RA(GN)-AFM 5IK60RGX-AFM	60	100/110	50/60	4	1.8/1.12	90~1400/90~1700	2.6/2.94	5.6/6.9	3.5/4.0	16	300
5IK60RA(GN)-CFM 5IK60RGX-CFM	60	200/220	50/60	4	0.64/0.54	90~1400/90~1700	3.62/4.41	5.9/6.9	4.6/4.4	4	450
5IK60RA(GN)-CEFM 5IK60RGX-CEFM	60	230/240	50	4	0.56/0.55	90~1400	4.1/5.22	6.17/7.2	4.37/5.2	4	450







90W

90W TYPE	RATED OUTPUT (W)	VOLTAGE (V)	FREQ. (HZ)	POLE (P)	CURRENT (A)	ADJUSTABLE RANGE (rpm)	STARTING TORQUE (Kg.cm)	MAXIMUM TORQUE/ PRE-SET TURNNINGS (Kg.cm)		CAPACITOR	
								1200rpm	90rpm	CAPACITY (μF)	WITHSTAND VOLTAGE (VAC)
5IK90RA(GX)-AFM	90	100/110	50/60	4	1.5/1.41	90~1400/90~1700	4.76/5.86	8.4/10.2	5/6.1	22	250
5IK90RA(GX)-CFM	90	200/220	50/60	4	0.76/0.72	90~1400/90~1700	4.3/4.21	8/8.7	4.4/4.4	5	450
5IK90RA(GX)-CEFM	90	230/240	50	4	0.66/0.68	90~1400	4.93/5.08	9.8/10.2	5.2/5.6	5	450

Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

ELECTRONIC INSTANT BRAKE (SB Series)



OPERATING FREQUENCY AND LIMITATION

Although the "IN" model could be used for inch movement, a rise in temperature would result from frequent start-stop action of the motor. Please suspend operation temporally if the surface temperature of the motor exceeds 90˚C.

BRAKING PRINCIPLES

Electronic brake circuit is design to introduce pulsated direct current rectified by the half wave into motor, to produce directional magnetic field and stop the motor instantly. Brake current is produced by the controller and introduced into motor in a very short time only. The time frame for brake current enter into the motor (approx 0.5 seconds) is controlled by timing circuit inside the controller. No friction created between parts, therefore lifespan is extended.

INSTALLATION CAUTIONS.

- Apply only one electronic brake onto one motor.
- Motor wiring depends on motor output, please follow the wire diagram to make the wire connection.
- When SW1 is switched from “run” to “brake”, the electronic brake is applied to stop the motor instantly.
- Be cautious about the 200 and above voltage among terminals when wiring.
- Apply industrial standard relay switch and gate switch. SB32-IN and SB32S-IN contact capacity is above AC200V, 5A.
- Wire-diagram, it is based on motor shaft point of view, as for clockwise rotate connectivity.
  For conduct counter-clock rotation: 1. induction motor: yellow line and white wire on the exchange. 2. reversible motor: switch SW2 switches.
  CW: clockwise CCW: counter-clockwise rotation
- For operated a reversible motor, it is require more than 0.5 second to switch its reversible mode.
- In the case of frequent braking, its external resistance will be very hot. For the installation, should pay particular attention.
- Within 0.5 seconds after motor start and operation, please do not perform reversible operation.
- To protect power connect spot from spark light when power on or off, it is required to enforce the connectivity via wire diagram such as surge absorber with CR circuit. Ro=5~200Ω(1/2W above) Co=0.1~0.2 μF(400VAC above)

SPECIFICATIONS

MODEL	VOLTAGE (V)	PHASE	BRAKE HOLDING FORCE	BRAKE PRECISION	MOTOR OUTPUT (W)	TEMPERATURE
SB31-IN	100 ~ 125	1ø Single Phase	0.5 / Second	200˚	6 ~ 90	-10˚C ~ +40˚C
SB32-IN	200 ~ 240	1ø Single Phase	0.5 / Second	200˚	6 ~ 90	-10˚C ~ +40˚C
SB32S-IN	200 ~ 240	3ø Three Phase	0.5 / Second	200˚	6 ~ 90	-10˚C ~ +40˚C

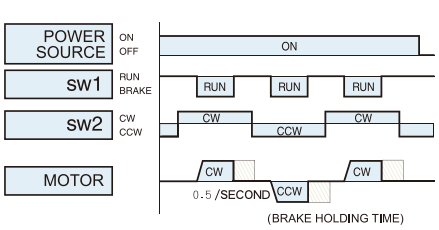
INSULATING RESISTANCE :

Tested value at 10MΩ and above, measured by DC 500V hi-resistance meter between the coil and housing.

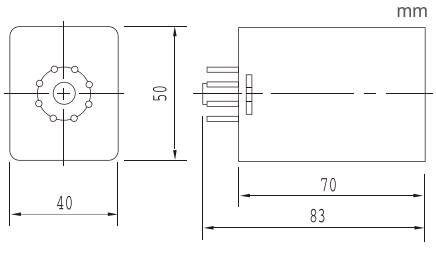
INSULATION ENDURANCE :

No damages caused after 1kV at 60Hz was tested for one minute between the coil and housing.

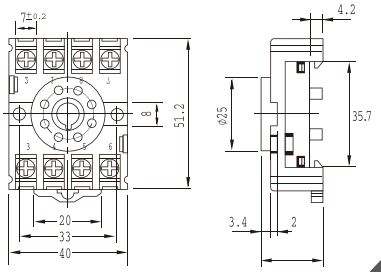
OPERATIONAL STEPS OF AN ELECTRONIC BRAKE



DRAWING DIMENSIONS



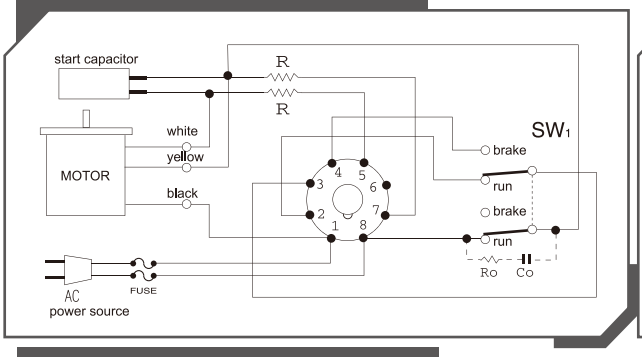
8-PIN BASE :



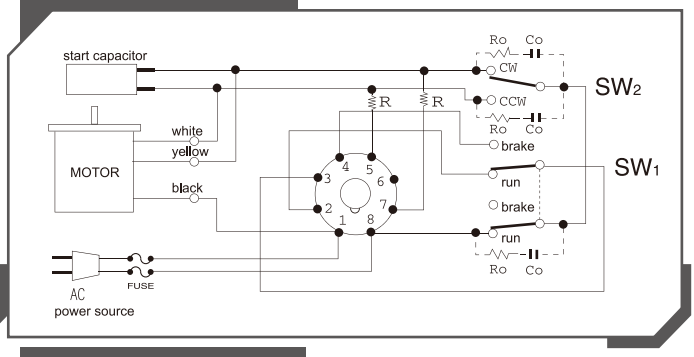
ELECTRONIC INSTANT BRAKE

SB31-IN SINGLE PHASE 110~125V
SB32-IN SINGLE PHASE 200~240V

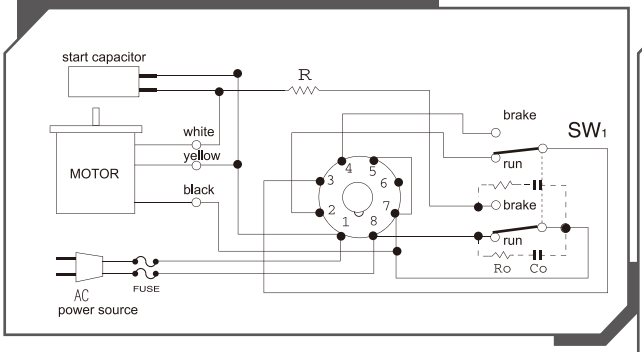
OUTPUT 6W~25W，SINGLE DIRECTION ROTATION



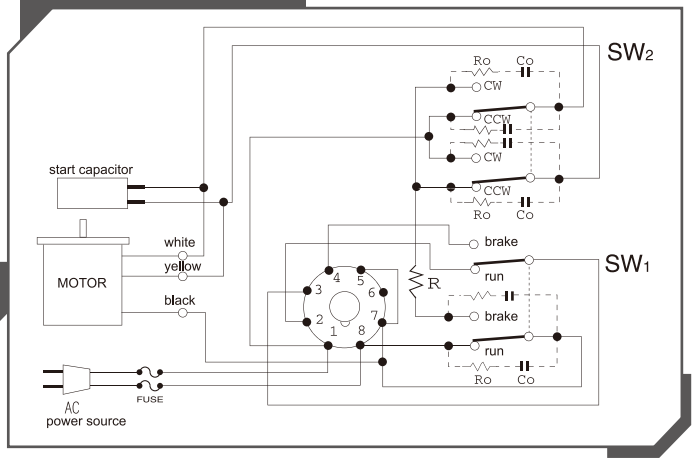
OUTPUT 6W~25W，REVERSIBLE



OUTPUT 40W~90W，SINGLE DIRECTION ROTATION

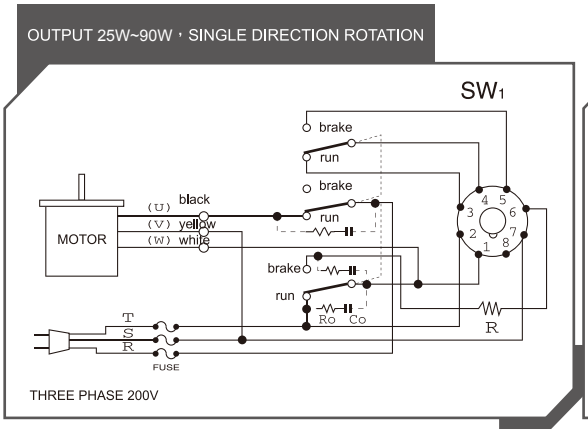


OUTPUT 40W~90W，REVERSIBLE

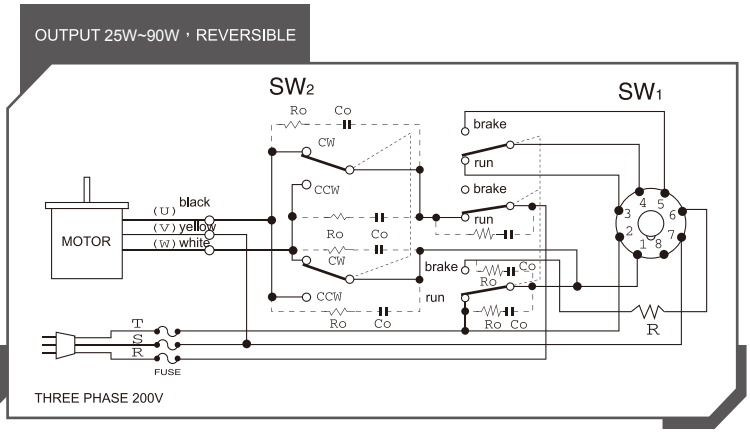


SB32S THREE PHASE 200~240V

OUTPUT 25W~90W，SINGLE DIRECTION ROTATION



OUTPUT 25W~90W，REVERSIBLE



SELECTION OF EXTERNAL RESISTANCE

- Output 6W~25W: external resistance 20W/20Ω. (Model:DDR20W20 ΩJ)
- In frequent braking situation, temperature of external resistance would be very high. please use external resistance 30W20Ω. (Model:DDR30W20ΩJ)
- Output 40W~90W: external resistance 50W/50Ω. (Model:DDR50W50 ΩJ)
- In frequent braking situation, temperature of external resistance would be very high. please use external resistance 80W50Ω. (Model:DDR80W50ΩJ)

Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

SPEED REDUCER

■ OUTLINE & SPECIFICATION
■ UNIT : mm

HOW TO SELECT A SPEED REDUCER

■ ROTATION AND TORQUE GIVEN FROM CONJUNCTION WITH SPEED REDUCER

Following is the calculation formula:

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

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

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

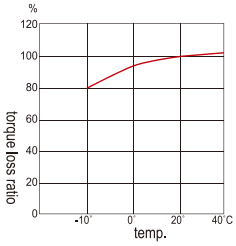
The maximum torque a speed reducer can tolerate is limited due to materials or other specs. Please see the specification of speed reducer for maximum torque allowed at different ratio.

■ 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

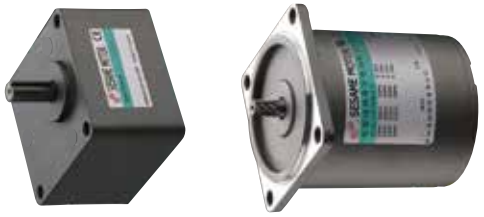
Transmission efficiency of a speed reducer apparently does affected by the environment temperature. The graphic display the torque loss percentage at different ambient temperature (for reference only).



■ MOTOR EQUIP WITH ROUND SHAFT AND GEAR SHAFT, ONLY GEAR SHAFT CAN CONJUNCT WITH SPEED REDUCER.

Speed Reducer
4GN15K
▲△

Motor (Gear shaft)
4IK25GN-A
▲ △



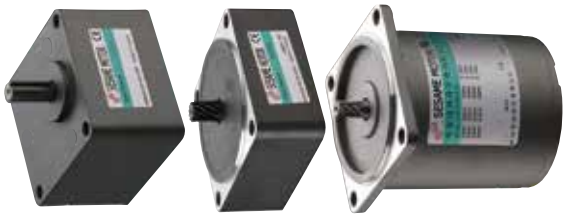
Motor (Round shaft)
4IK25A-A



Speed Reducer
4GN15K

Intermediate
Speed Reducer
4GN10X

Motor (Gear shaft)
4IK25GN-A



■ LOAD PATTERNS VS. LIFESPAN OF SPEED REDUCER

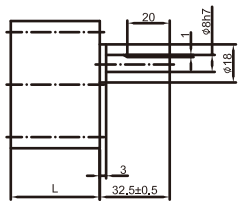
Speed Reducer lifespan will be vary by ways of loading including but not limit to operation time frame, different type of bearing. The following table assumes that the load gear is under the maximum permissible torque. (Reference for engineers)

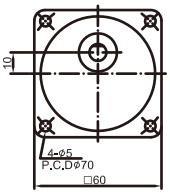
Unit : hrs

	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

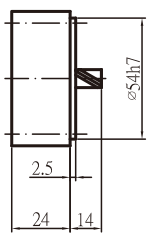


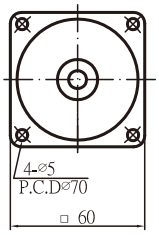




2GN3-18 L=32
2GN25-180 L=42

■2GN10X . 2GN10XK / INTERMEDIATE SPEED REDUCER

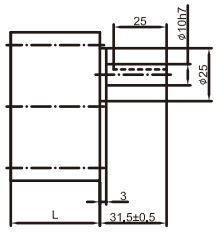


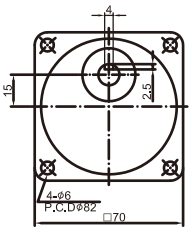




SPEED(rpm)	500	300	200	180	150	120	100	60	50	30	20	15	10
SPEED REDUCTION RATIO 50HZ	3	5	7.5	-	10	12.5	15	25	30	50	75	100	150
SPEED REDUCTION RATIO 60HZ	3.6	6	9	10	-	15	18	30	36	60	90	120	180
MAX. TORQUE (kgf.cm)	1.1	1.8	2.7	3.0	3.9	4.5	5.4	8.1	9.7	15	23	25	25

■3 GN□KE . 3 GN□ / SPEED REDUCER

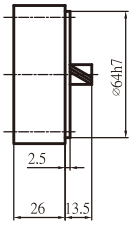


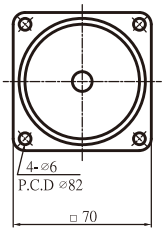




3GN3-18 L=32
3GN25-180 L=42

■3GN10X . 3GN10XK / INTERMEDIATE SPEED REDUCER

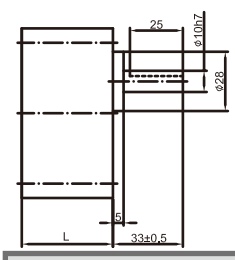


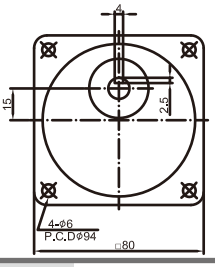




SPEED(rpm)	500	300	200	180	150	120	100	60	50	45	37.5	30	20	15	10
SPEED REDUCTION RATIO 50HZ	3	5	7.5	-	10	12.5	15	25	30	-	40	50	75	100	150
SPEED REDUCTION RATIO 60HZ	3.6	6	9	10	-	15	18	30	36	40	-	60	90	120	180
MAX. TORQUE (kgf.cm)	2.6	4.4	6.6	7.4	9.8	11	13	20	24	24	32	36	50	50	50

■4 GN□KE . 4 GN□ / SPEED REDUCER

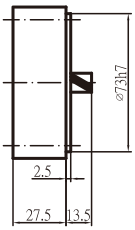


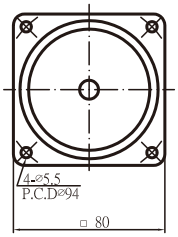




4GN3-180 L=43

■4GN10X . 4GN10XK / INTERMEDIATE SPEED REDUCER

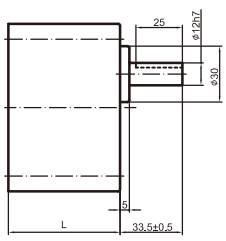


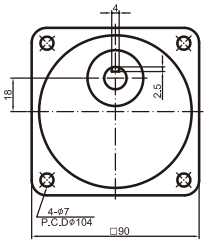




SPEED(rpm)	500	300	200	180	150	120	100	60	50	45	37.5	30	20	15	10
SPEED REDUCTION RATIO 50HZ	3	5	7.5	-	10	12.5	15	25	30	-	40	50	75	100	150
SPEED REDUCTION RATIO 60HZ	3.6	6	9	10	-	15	18	30	36	40	-	60	90	120	180
MAX. TORQUE (kgf.cm)	4.4	7.4	11	12	15	11	22	33	40	40	50	60	80	80	80

■5 GN□KE . 5 GN□ / SPEED REDUCER

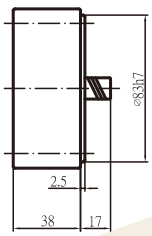


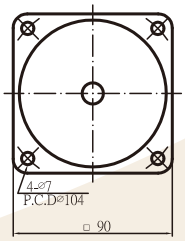




5GN3-18 L=42
5GN20-180 L=60

■5GN10X . 5GN10XK / INTERMEDIATE SPEED REDUCER







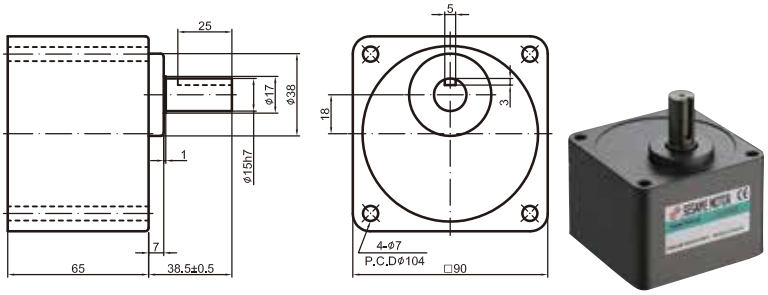
SPEED(rpm)	500	300	200	180	150	120	100	90	75	60	50	45	37.5	30	20	15	10
SPEED REDUCTION RATIO 50HZ	3	5	7.5	-	10	12.5	15	-	20	25	30	-	40	50	75	100	150
SPEED REDUCTION RATIO 60HZ	3.6	6	9	10	-	15	18	20	-	30	36	40	-	60	90	120	180
MAX. TORQUE (kgf.cm)	10	17	26	29	36	43	52	52	65	78	93	93	100	100	100	100	100

SPEED REDUCER

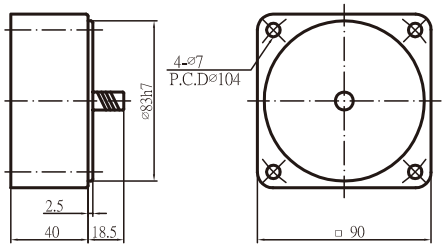
OUTLINE & SPECIFICATION
UNIT : mm



■5 GX□KB / SPEED REDUCER

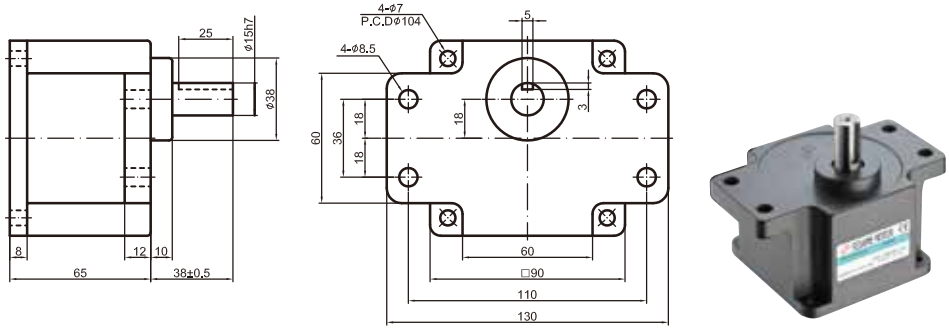


■5GX10XK / INTERMEDIATE SPEED REDUCER



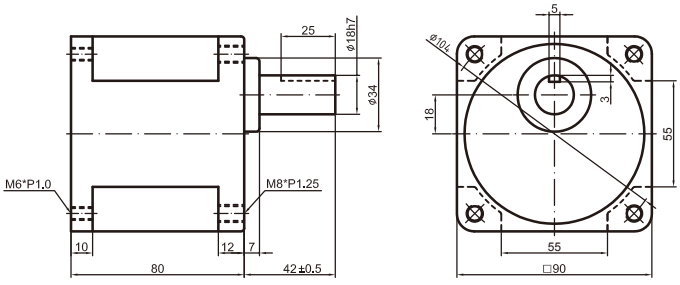


■5 GX□K / SPEED REDUCER



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.

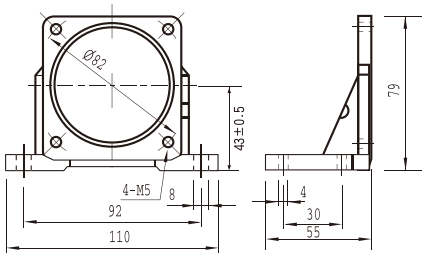
Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

COMPONENTS

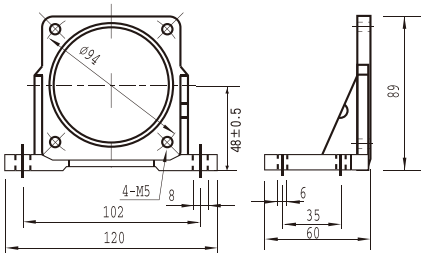


L TYPE BASE BRACKET FOR MOTOR INSTALLATION

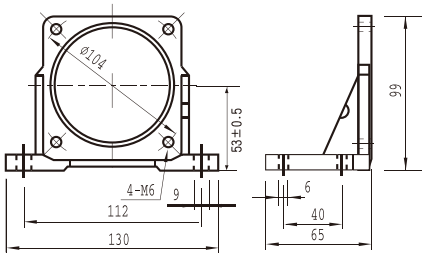
PAL-3N (□70mm)



PAL-4N (□80mm)

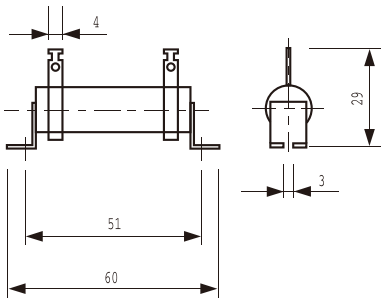


PAL-5N (□90mm)

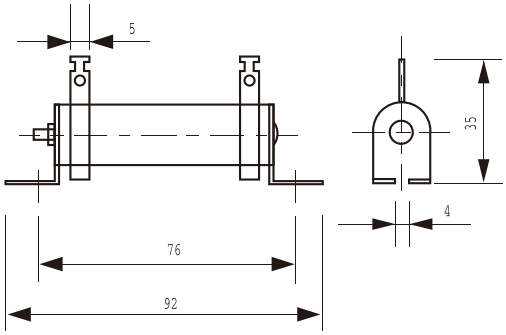


EXTERNAL RESISTOR FOR ELECTRONIC BRAKE CIRCUITS

DDR10W10ΩJ (10/10)

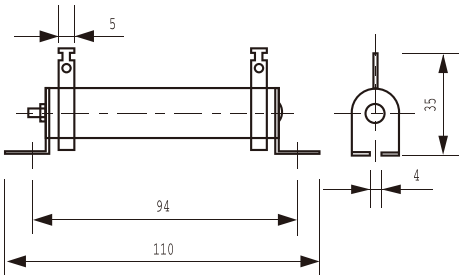


DDR20W20ΩJ (20/20)

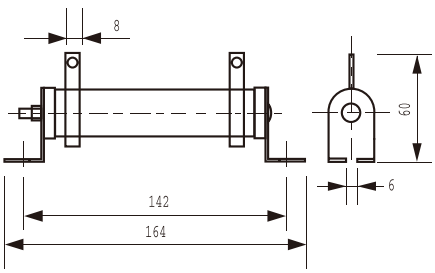




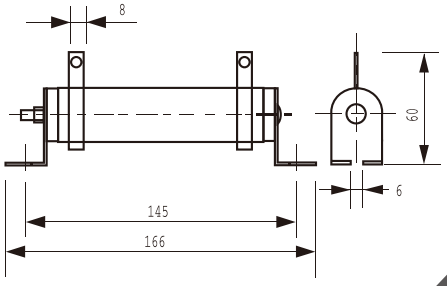
DDR30W20ΩJ (30/20)



DDR50W50ΩJ (50/50)



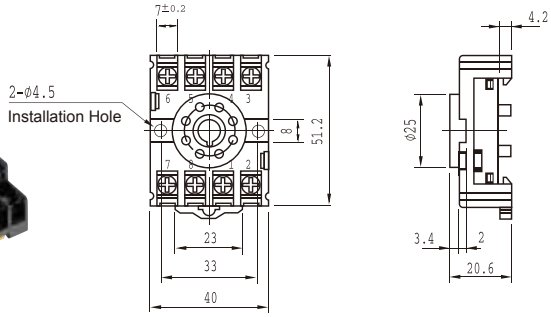
DDR80W50ΩJ (80/50)



EXTENDED BASE BRACKET

PF-083A PIN Base (8 PIN)





11-PFA PIN Base (11 PIN)

