

## COMPACT GEAR MOTOR

# K

SERIES

### GENERAL SPECIFICATION COMPACT ELECTRIC MOTOR AND GEAR REDUCER

#### General Specification

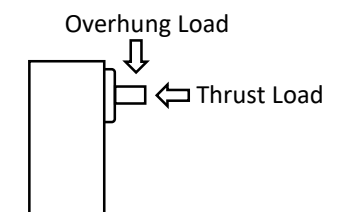
Features	Specifications
Insulation Resistance	100 MΩ or more when DC500V is applied between the windings and the frame after rated motor operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5 kV at 50Hz and 60Hz applied between the windings and the frame for 1 minute after rated motor operation under normal operating temperature and humidity.
Temperature Rise	Temperature rise of windings are 80°C or less measured by the resistance change method after rated motor operation with connecting a gearhead or equivalent heat radiation plate.*
Insulation Class	Class B (130°C).
Overheat Protection	Impedance protected. (Optional Overload Thermal Protection)
Motor Protection	IP20 for motor with conductive wire; IP54 for motor with terminal box.
Operating Temperature	-10 °c to +50 °c.
Ambient Humidity	85% or less (non-condensation).
Conformity Certification	CE / CCC

#### Life Service Factor

Type of Load	Life Service Factor			Specifications:
	5hrs/day Operation	8hrs/day Operation	24hrs/days Operation	
Constant Load	0.8	1	1.5	The service life of the motor usually rely on the quality of its ball bearing. Standard service life of ball bearing is 10,000 hours* Load: Constant continuous running Frame: 80°C (roller bearing), 50°C (sinter oil bearing) Life expectancy may vary due to frequent load variation  Remark : Constant Load: Continuous one way operation. Light Load: Frequent start-stop, cam impact. Medium Load: Instant CW/CCW, instant stop.
Light Load	1.2	1.5	2	
Medium Load	1.5	2	2.5	

#### Gearhead Operation Efficiency Permissible Thrust Load and Overhung Load

Gear Model	Gear Ratio	Max Torque (kg.cm)	Permissible Overhung Load (kgf)		Permissible Thrust Load (kgf)	Gearhead Operation Efficiency
			10mm from shaft end	20mm from shaft end		
2GN □ K	3 ~ 18	25	5	8	3	81%
	25 ~ 75		12	18		73%
	90 ~ 300		12	18		66%
3GN □ K	3 ~ 18	50	8	12	4	81%
	25 ~ 75		15	25		73%
	90 ~ 240		15	25		66%
4GN □ K	3 ~ 18	80	10	15	5	81%
	25 ~ 75		20	30		73%
	90 ~ 300		20	30		66%
5GN □ K	3 ~ 18	100	25	35	10	81%
	25 ~ 75		30	45		73%
	90 ~ 240		30	45		66%
5GU □ K 5GU □ KB	3 ~ 9	200	40	50	15	81%
	12.5 ~ 18		45	60		81%
	25 ~ 75		50	70		73%
	90 ~ 240		50	70		66%
6GU □ KB	3 ~ 9	400	55	80	20	90%
	12.5 ~ 18		55	80		90%
	25 ~ 75		65	100		86%
	90 ~ 240		65	100		81%



**LDS**  
LEADERDRIVES

**COMPACT GEAR MOTOR  
HIGH PERFORMANCE | MINI DRIVE**







# COMPACT GEAR MOTOR

## K SERIES

### MOUNTING INSTRUCTION COMPACT ELECTRIC MOTOR AND GEAR REDUCER

#### Precautions for Installation

Check the technical specification and voltage on the identification label of the gear motor with your design requirement before any installation. For helical gear motor, gearhead should well-match with the motor dimension and specification.

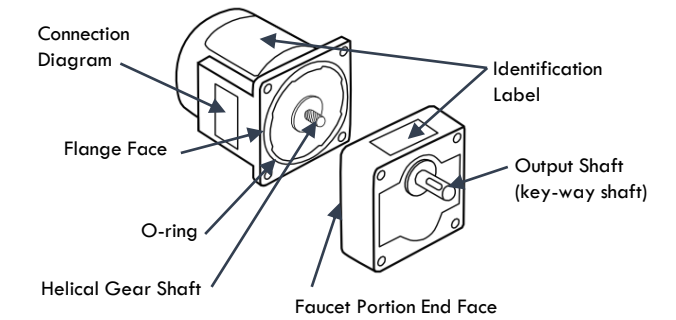
#### Round shaft motor

After drilling holes on the mounting plate, use 4 screws, washers and nuts to fasten the motor onto the mounting plate (screws and nuts are not offered with this motor). Please make sure there is no gap between the motor's flange face and mounting plate.

#### Helical gear shaft motor (in combination with gearhead)

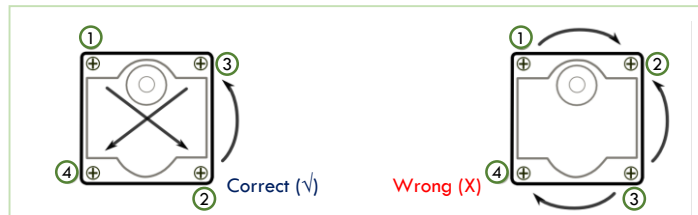
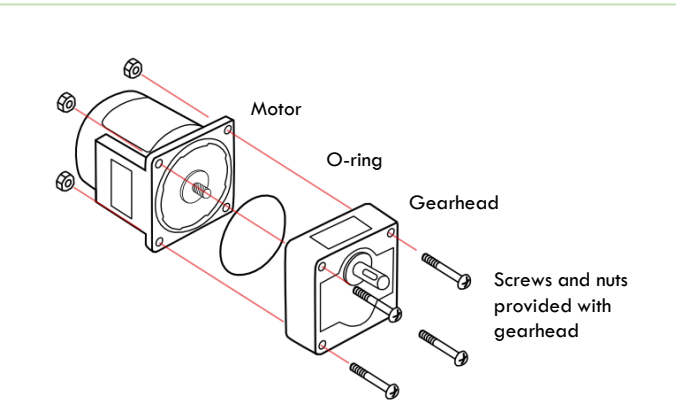
After drilling holes on the mounting plate, use the 4 screws and nuts supplied with the gearhead to fasten gearhead and motor (come with O-ring) on the mounting plate. Make sure the gearhead is installed properly on the motor and there is no gap between the motor flange face and gearhead.

Gearhead is combined with a motor using the recessed areas on each unit as guides. DO NOT contact a tooth tip of pinion shaft to a tooth tip of gearhead. Set each tooth of motor and gearhead correctly and gently press and turn the gearhead in clockwise and counter-clockwise.



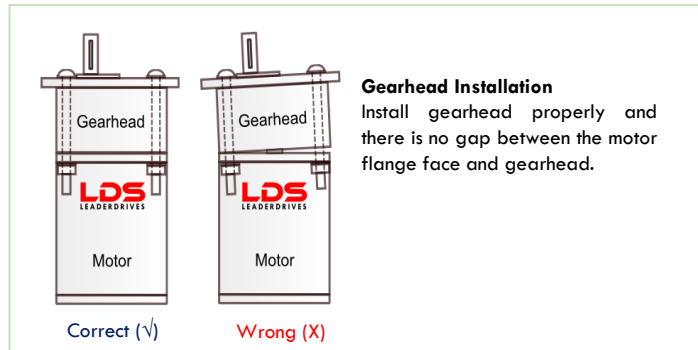
**Remark:** When face mounting the geared motor to an assembly, Do not remove or twist the gearhead from or on the motor. This will cause the O-ring to deform (become distorted or damaged) resulting in grease leakage when reassembled

During replacement or maintenance, please replace the o-ring if it is damaged or distorted. You may contact your LDS representative to obtain the o-ring for free of charge.



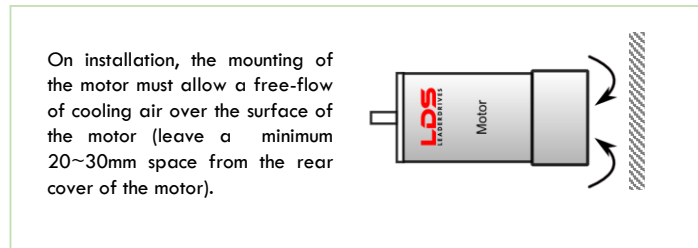
#### Tightening of fixing bolts

Do not forcibly assemble the motor and gear head. Do not damage the tooth of the motor and gear head. Incorrect assembly results in abnormal noise generation or shortened unit life.



#### Gearhead Installation

Install gearhead properly and there is no gap between the motor flange face and gearhead.

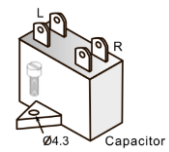


Screw used for installation			
Model (Motor)	Model (Gearhead)	Screw Size	Installation Torque
2IK/2RK	2GN	M4	20kgfcm
3IK/3RK	3GN	M5	25kgfcm
4IK/4RK	4GN	M5	25kgfcm
5IK/5RK	5GN/5GU	M6	30kgfcm
6IK/6RK	6GU	M8	35kgfcm

#### Important Instruction for Capacitor Installation

Before installation, please ensure correct capacitor is being used with your motor (supplied with single phase motor).

Capacitor should be installed at least 10cm away from the motor by using M4 screws. Too close to a motor will result in excessive heat hence shorten the lifespan of capacitor.



# COMPACT GEAR MOTOR

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### GLOSSARY OF TERMS COMPACT ELECTRIC MOTOR AND GEAR REDUCER

#### AC Electric Motor

An AC motor is an electric motor that is driven by alternating current. It is used in the conversion of electrical energy into mechanical energy. This mechanical energy is made from utilizing the force that is exerted by the rotating magnetic fields produced by the alternating current that flows through its coils.

#### Ambient Temperature

Ambient temperature is the temperature of the air surrounding the motor. This is the threshold point or temperature the motor assumes when shut off and completely cool. Higher ambient temperatures increase internal pressure, which will require an increase to the service factor used. High or low temperatures may employ different seal materials and lubrication viscosities.

#### Ampere / Current (A / Amp / Amps)

Amps figures on the nameplate are just the motor's maximum ratings. They do not reflect actual operating conditions of your machine/equipment. Use a True-RMS Industrial Logging Multi-meter with a clamp accessory to measure the ampere to check if the motor operation is under-loaded (and thus costly to operate) or over-loaded (and at risk of burnout).

#### Causes of Motor Failure

**Motor overload** occurs when a motor is under excessive load. Its symptoms are excessive current draw, insufficient torque and overheating. **Motor overheat** refers to an unexpected rise of temperature in motor windings that can cause damage to the motor stator. It is a major cause of premature wear on electrical and mechanical components that ultimately leads to motor failure.

#### Coactive Axial Cooling Fan

Axial Fan is designed for force-air cooling of electric motor, and to protect the electric motor by keeping them at an optimal cooling temperature. LDS uses renown Maglev Motor Axial Fan with high airflow (40CFM) to enhance a superior life expectancy of the motor (especially for single phase motor).

#### Efficiency (%)

Motor efficiency is the ratio between the amount of mechanical work the motor performs and the electrical power it consumes to do the work, represented by a percentage. A higher percentage represents a more efficient motor. Electric motor efficiency is dependent on (but not limited to) design, materials, construction, rating, load, power quality, and operating conditions.

#### Electrical Grounding (Earthing)

Electrical grounding / Grounding / Earthing refer to a safety measure used to prevent people from accidentally coming in contact with electrical hazards. Electrical Grounding is essential in every equipment and can be done through attaching the ground conductor to any of the mounting bolt of the motor.

#### Frequency (Hz)

To operate successfully, the motor frequency must match the power system (supply) frequency. In Malaysia and Singapore, the frequency is 50 Hz (cycles). In other parts of the world, the frequency may be 50Hz or 60 Hz.

#### Insulation class

Insulation classes group insulations by their resistance to thermal aging and failure. There is two common insulation classes in LDS products:  
Insulation Class B : Max 130°C / Insulation Class F : Max 155°C.

#### Inverter (Frequency Inverter) vs. Speed Controller.

A frequency inverter changes output voltage frequency and magnitude to vary the speed, power, and torque of a connected three phase induction motor to meet load conditions. A speed controller controls the rotation speed of single phase capacitor run induction motor via a modular tachogenerator (permanent magnet type) connected to the rear shaft of the motor (rotor).

**Over-voltage** refers to the voltages exceeding rated voltage designed in the motor. A 10% overvoltage means motor will be overload by approximately 10%.

#### Poles

LDS motors are available 2Pole (3000rpm), 4Pole (1500rpm) and 6Pole (1000rpm), in 50Hz System (8pole – 750rpm is not available).

#### Power Rating / Output Power

A power rating is a measurement of the maximum amount of power that can be used with a specific tool or device. It is measured in Watt (W), Kilowatt (kW) or Horsepower (HP).

#### Rated Output Torque [Kgm / Kgcm / Nm]

This is the limit of mechanical strength of the speed reduction mechanism. Make sure that the applied torque, including the acceleration torque and load fluctuation, does not exceed the permissible torque (the load should never be greater than what the motor is rated for).

#### Rated Voltage (V)

Motors are designed to yield optimal performance when operating at a specific voltage level. LDS Motors are available in single-phase (1Ø) 100-110V and 220-240V, three-phase (3Ø) 220-240V and 380-415V.

#### Service Factor (S.F)

Service factor can be generally defined as an application's required value over the rated value of the unit. Service factor should be determined for conditions such as non-uniform load, hours of service, and elevated ambient temperature. A service factor of 1.0 means a unit has just enough capacity to handle the application. There is no tolerance for additional requirements, which could cause the gearbox to overheat or fail.

#### Temperature / Temperature Rise in Motor

Temperature rise is the change within a motor when operating at full load. When a motor is operating, all energy losses of the motor are transformed into heat, causing the motor temperature to rise. In an ambient temperature area, surface temperature of LDS's 1-phase motor will rise to 80°C after 60minute of continuous operation; 3-phase motor's surface temperature will rise to 40°C after 60minute of continuous operation. (Use infrared thermometer to measure the motor temperature. Do not judge the motor temperature by touching the motor surface, or you could get injured).

#### Thermal Overload Protection (TP)

Thermal protection is a method of electric motor protection that is activated when a motor operating at the rated voltage locks up for some reason with the power still being supplied. It uses a thermal relay inside the motor to break the circuit to the winding coil at a temperature below the level that would cause burning (overheating). Other protection methods including overload relay, motor thermostat and fuse.

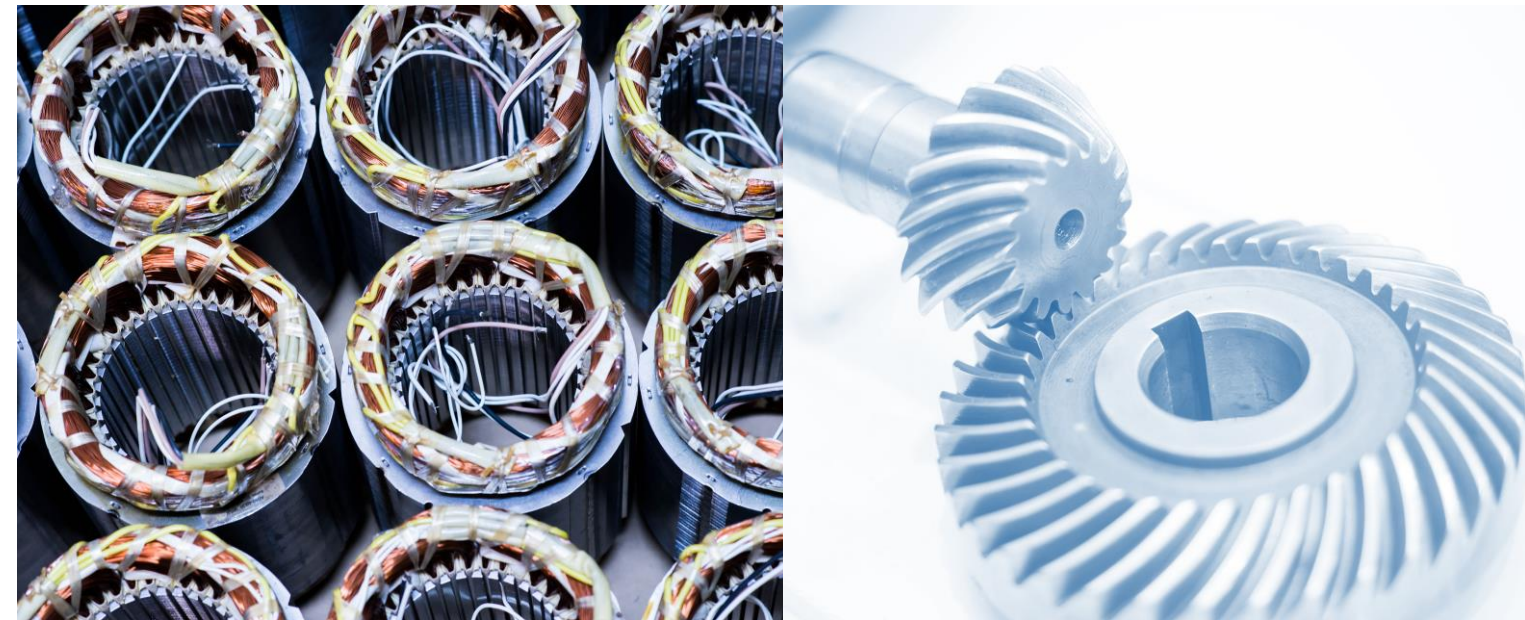
#### Type of Load

**High shock or impact loads** can cause increased wear on the gear teeth and shaft bearings. This wear could cause premature failure if not accounted for when sizing. These loads will require an increased service factor. **Uniform loads** are loads that remain constant during the application, while non-uniform loads change during the application. **Non-uniform loads**, even if small, will require a higher service factor than uniform loads. An example of a uniform load would be a conveyor with a consistent product amount riding on it. A non-uniform load would be any sort of intermittent cutting application. This intermittent cutting force causes a periodic increase in the torque on the gearbox, which is a non-uniform load.

**Under-Voltage** will cause under-power of electric motor. The motor slip also increases proportionally to the square of the voltage drop. As a result, the motor will be running slower with a lower output and the process would not be producing as expected.

**Unbalanced Voltages** are unequal voltage values on 3-phase circuits that can exist anywhere in a power distribution system.





# INVERTER MOTOR

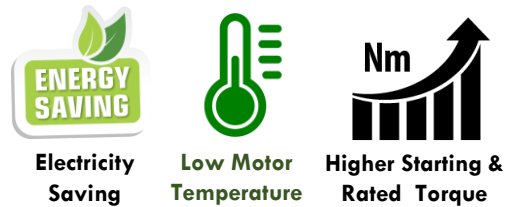
## COMPACT ASYNCHRONOUS MOTOR

### V-Series

- Asynchronous Motor Series with LED Digital Display Inverter Controller
- Smallest size and light weight to achieve compact equipment requirement
- Motor Rating : 25W ▪ 40W ▪ 60W ▪ 90W ▪ 120W ▪ 150W ▪ 180W ▪ 200W ▪ 250W
- Gearhead Ratio (1/X) : Single Stage 3~300 (Double Stage up to 3000)
- Inverter Input Voltage : AC 1ph 220V ~ 240V, 50Hz/60Hz
- Inverter Output Voltage : AC 3ph 220V

### Key advantages of Inverter Motor compared to Speed Control Motor package

- Easy operation and installation with higher starting torque up to 200%
- Low motor operating temperature to further extend product lifespan
- Wide adjustable speed range up to 400Hz (Speed control motor max. 50Hz)
- Motor Overload Protection with alarm signal is possible via ampere setting
- Easy switching of multiple-speed, forward/reverse running direction
- Adjustable acceleration and deceleration of speed provide soft-starting and stopping, and smooth speed change
- Improved speed regulation can be accomplished by slip compensation
- Direct replaceable - same size and mounting with major speed control motors
- Inverter Motor as replacement for DC motor with controller is possible



### INVERTER GEAR MOTOR OPTIONS AND ACCESSORIES



**Optional Helical Gear Motor / Worm Gear Motor**  
Rating up to 200W

**Bevel Gear Motor**  
Compact Right Angle solution

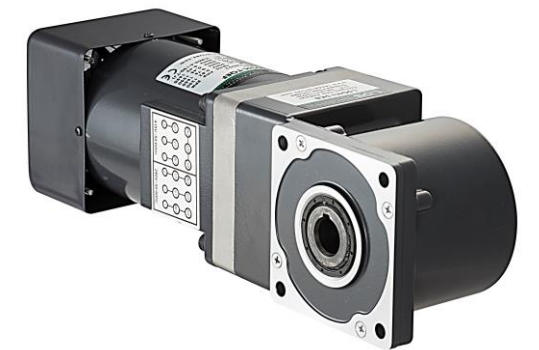
**Acrylic Protective Cover**  
For compact IGBT Inverter

# COMPACT HELICAL GEAR SPIRAL BEVEL GEAR

## AC COMPACT GEAR MOTOR

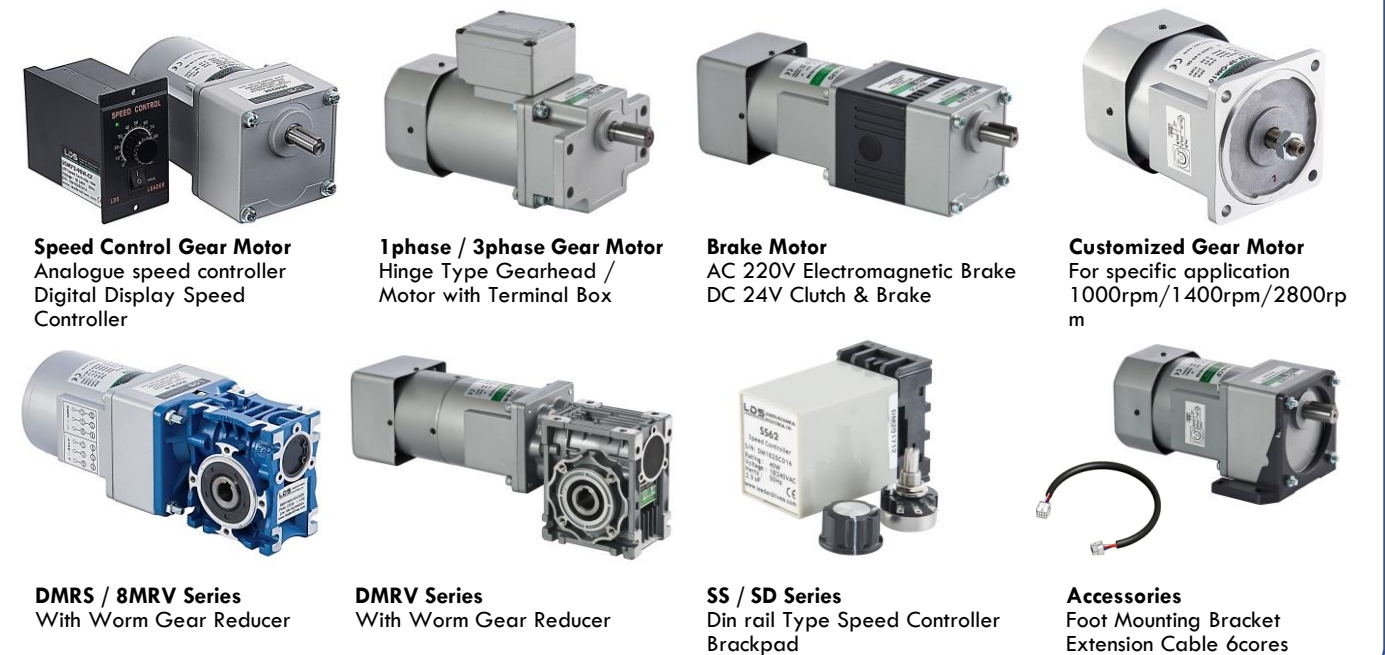
### IK Series

- Power Rating : 6W ▪ 15W ▪ 25W ▪ 40W ▪ 60W ▪ 90W ▪ 120W ▪ 150W ▪ 180W ▪ 200W
- Most common compact gear motor in the industry
- Compact design and light weight, and easy operation and installation
- Compatible with Oriental Motor, Panasonic and SPG motor
- Optional accessories: Electromagnetic brake 240V ▪ Clutch and brake DC 24V ▪ Speed controller ▪ Extension cable ▪ Axial cooling fan 240V ▪ Foot mounting bracket ▪ Decimal gear 10X ▪ Thermal protection (Automatic / Signal type)



**Compact Right Angle Package**  
Compact Bevel Gear Motor 40W ~ 180W  
\*Mounting Frame Size 90mm x 90mm  
\*Hollow Output Shaft Bore Dia. 17mm

### Compact Gear Motor Series



**Speed Control Gear Motor**  
Analogue speed controller  
Digital Display Speed Controller

**1phase / 3phase Gear Motor**  
Hinge Type Gearhead / Motor with Terminal Box

**Brake Motor**  
AC 220V Electromagnetic Brake  
DC 24V Clutch & Brake

**Customized Gear Motor**  
For specific application  
1000rpm/1400rpm/2800rpm

**DMRS / 8MRV Series**  
With Worm Gear Reducer

**DMRV Series**  
With Worm Gear Reducer

**SS / SD Series**  
Din rail Type Speed Controller  
Backpad

**Accessories**  
Foot Mounting Bracket  
Extension Cable 6cores





# COMPACT GEAR MOTOR

## K SERIES

PRODUCT CODING SYSTEM  
COMPACT ELECTRIC MOTOR AND GEAR REDUCER



# COMPACT GEAR MOTOR

## K SERIES

PRODUCT CODING SYSTEM  
COMPACT GEAR REDUCER



**6 I K 200 V GN - S F**

**Motor Frame Size**

- 2 : 60mm Sq. (2.36")
- 3 : 70mm Sq. (2.76")
- 4 : 80mm Sq. (3.15")
- 5 : 90mm Sq. (3.54")
- 6 : 104mm Sq. (4.09")

**Series**

K : K series

**Output Power**

- 6W
- 15W
- 25W
- 40W
- 60W
- 90W
- 120W
- 150W
- 180W
- 200W
- 250W

**Motor Type**

- I : Induction
- R : Reversible

**Output Power**

- A : Round Shaft (D-cut)
- GN : Helical Gear Shaft
- GX : Helical Gear Shaft X\*
- GB : Clutch & Brake Shaft

**Option**

- R : Variable Speed
- V : Inverter Duty

**Voltage**

- A : 1Ø100V, 50Hz
- A2 : 1Ø110V, 50Hz
- C : 1Ø220V, 50Hz
- C2 : 1Ø240V, 50Hz
- S : 3Ø220V, 50Hz
- S2 : 3Ø240V, 50Hz
- S3 : 3Ø380V, 50Hz
- S4 : 3Ø415V, 50Hz
- TQ : 3Ø240/415V, 50Hz
- U : 3Ø220/380V, 50Hz

**Option/ Accessories**

- B : Electro-magnetic Brake
- EF : Co-active Powerful Cooling Fan (40CFM)
- F : Standard Cooling Fan (Shaft-mounted type)
- N : Special Key Shaft
- T : Terminal Box (IP44)
- W : Thermal Overload Protection (Signal Type)
- Y : Thermal Overload Protection (Automatic Reset Type)
- 2P : 2Pole Motor (2,800rpm)
- VS : Viton Oil Seal

Remark  
\* Default motor design is 4pole, 50Hz (1,400rpm)

PRODUCTS AT A GLANCE



Round-Shaft Electric Motor  
2,800 □ 1,400rpm  
6W~200W



Key-Shaft Electric Motor  
1,400 □ 2,800rpm  
40W~200W



Induction & Reversible  
Gear Motor (Capacitor Run)  
6W~200W



Induction Gear Motor  
(with Flange gearhead &  
Terminal Box)



Compact Gear Motor with  
Decimal Gearhead  
Gear Ratio 1/300 ~1/2400



Electro-Magnetic Brake  
Gear Motor (Brake 220V)  
6W~200W



Clutch & Brake Gear Motor  
(Clutch & Brake DC24V)  
40W~200W



Variable Speed Gear Motor  
with Analogue Controller  
6W~200W, 1Phase



Variable Speed Motor  
with Analogue Controller  
6W~200W, 1Phase



Compact Gear Motor  
With Compact IGBT Inverter  
25W~200W, 1Phase



Worm Gear Package  
Gear reduction ratio 5~100  
40W~200W



Worm Gear Package  
with Electromagnetic Brake  
40W~200W



Worm Gear Package  
Gear Reduction  
Ratio 125~14,400



Hollow Shaft  
Spiral Bevel Gear Motor  
40W~180W



Compact Spiral Bevel Gear Motor  
With Compact IGBT Inverter  
40W~180W, 1Phase

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.



Parallel Shaft Gearhead  
Square Gearbox Type  
Gear Reduction Ratio 3~300  
For Motor Power 6W ~ 200W  
(Part No: 2GN\_K, 3GN\_K,  
4GN\_K, 5GN\_K, 5GU\_KB, 6GU\_KB)



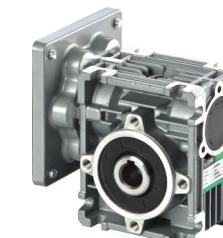
Parallel Shaft Gearhead  
Hinge Type Gearbox  
(a.k.a Flange Type Gearbox)  
Gear Reduction Ratio 3~240  
For Motor Power 60W ~ 180W  
(Part No: 5GU\_K)



Decimal Gear (use with Gearhead)  
Gear Reduction Ratio multiply by 10x  
For Motor Power 40W ~ 180W  
(Part No: 5GN10X, 5GU10X)



Spiral Bevel Gearhead  
Right Angle Hollow Shaft Type  
Gear Reduction Ratio  
9~ 225 (370 ~ 2250)  
For Motor Power 40W ~ 180W  
(Part No: 5GN\_RH / 5GU\_RH)



Worm Gearhead  
Right Angle Hollow Shaft Type  
Gear Reduction Ratio  
5~ 80 (100 ~ 14400)  
For Motor Power 40W ~ 180W  
(DMRV#30, 8MRV#30,  
DMRV#40, 8MRV#40)

**6**

**Gearhead Frame Size**

- 2 : 60mm Sq. (2.36")
- 3 : 70mm Sq. (2.76")
- 4 : 80mm Sq. (3.15")
- 5 : 90mm Sq. (3.54")
- 6 : 104mm Sq. (4.09")

**GU**

**Gearhead Type**

- GN : For helical gear motor 6W~40W
- GU : For helical gear motor 60W~200W

**240**

**Gear Reduction Ratio**

1/3 ~ 1/300

**K**

**Design**

- K : Ball Bearing
- X : Decimal Gearhead (10X)

**B**

**5GU Gear Box Option**

- For Motor Power 60W ~ 200W Motor
- [ ] : Hinge Type Gearhead
- B : Square type Gearhead

**Option**

- [ ] : Wet Grease Filled
- BQ : Dry Grease Filled
- VS : Viton Oil Seal for Output Shaft



PERMISSIBLE OUTPUT TORQUE

Parallel Shaft Gear Reducer Ratio and Output Torque (Single Reduction, Based on 4Pole Motor, 50Hz)

Gear Reduction Ratio		3	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90		
Output Speed (RPM)		450	270	225	180	150	108	90	75	54	45	37.5	27	22.5	18	15		
Rated Power	Max Output Torque (kgcm)	6W	2GN	1.2	1.9	2.3	2.9	3.4	4.7	5.7	6.8	9.3	11	13	16	20	24	30
		15W	3GN	3	4.7	5.7	7.1	8.5	12	14	18	23	28	33	46	50	50	50
		25W	4GN	5	7.8	9.4	12	14	20	23	28	38	46	55	76	80	80	80
		40W	5GN	7.3	12	15	18	22	30	36	43	54	65	77	100	100	100	100
		60W	5GU	12	19	22	28	34	48	55	62	82	98	118	164	196	200	200
		90W	5GU	18	28	34	43	51	71	85	96	125	150	178	200	200	200	200
		120W	5GU	24	40	48	58	65	94	108	130	180	200	200	200	200	200	200
		150W	5GU	27	46	55	65	72	105	118	148	200	200	200	200	200	200	200
		180W	5GU	30	51	61	72	79	113	127	155	200	200	200	200	200	200	200
		61K-200W	6GU	42	70	84	105	126	176	211	253	351	400	400	400	400	400	400

Gear Reduction Ratio		100	120	150	180	200	240	300	(360)	(500)	(750)	(1000)	(1200)	(1500)	(1800)	(2400)
Output Speed (RPM)		13.5	11.3	9	7.5	6.7	5.6	4.5	(3.75)	(2.7)	(1.8)	(1.35)	(1.12)	(0.9)	(0.75)	(0.56)
Rated Power	Max Output Torque (kgcm)	6W	2GN	30	30	30	30	30	--	--	--	--	--	--	--	--
		15W	3GN	50	50	50	50	50	--	--	--	--	--	--	--	--
		25W	4GN	80	80	80	80	80	80	--	--	--	--	--	--	--
		40W	5GN	100	100	100	100	100	100	(100)	(100)	(100)	(100)	(100)	(100)	(100)
		60W	5GU	200	200	200	200	200	200	(200)	(200)	(200)	(200)	(200)	(200)	(200)
		90W	5GU	200	200	200	200	200	200	(200)	(200)	(200)	(200)	(200)	(200)	(200)
		120W	5GU	200	200	200	200	200	200	(200)	(200)	(200)	(200)	(200)	(200)	(200)
		150W	5GU	200	200	200	200	200	200	(200)	(200)	(200)	(200)	(200)	(200)	(200)
		180W	5GU	200	200	200	200	200	200	(200)	(200)	(200)	(200)	(200)	(200)	(200)
		61K-200W	6GU	400	400	400	400	--	--	--	--	--	--	--	--	--

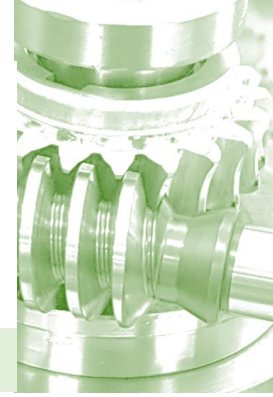
( ) For 5GN / 5GU Parallel Shaft Gear Head, Gear Reduction Ratio 300 ~ 2400 can be achieved by adding Decimal Gear Reducer (5GN10X or 5GU10X).

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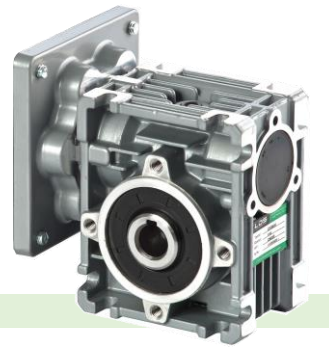
# COMPACT GEAR MOTOR

## K SERIES PRODUCT CODING SYSTEM COMPACT GEAR REDUCER



# COMPACT GEAR MOTOR

## K SERIES PRODUCT CODING SYSTEM COMPACT GEAR REDUCER



Parallel Shaft Gearhead  
Square Gearbox Type  
Gear Reduction Ratio 3~300  
For Motor Power 6W ~ 180W  
(Part No: 2GN\_K, 3GN\_K,  
4GN\_K, 5GN\_K, 5GU\_KB)



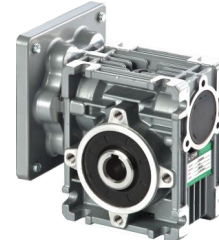
Parallel Shaft Gearhead  
Hinge Type Gearbox  
(a.k.a Flange Type Gearbox)  
Gear Reduction Ratio 3~240  
For Motor Power 60W ~ 180W  
(Part No: 5GU\_K)



Decimal Gear (use with Gearhead)  
Gear Reduction Ratio multiply by 10x  
For Motor Power 40W ~ 180W  
(Part No: 5GN10X, 5GU10X)



Spiral Bevel Gearhead  
Right Angle Hollow Shaft Type  
Gear Reduction Ratio  
9~ 225 (370 ~ 2250)  
For Motor Power 40W ~ 180W  
(Part No: 5GN\_RH / 5GU\_RH)



Worm Gearhead  
Right Angle Hollow Shaft Type  
Gear Reduction Ratio  
5~ 80 (100 ~ 14400)  
For Motor Power 40W ~ 180W  
(DMRV#30, DMRS#30, 8MRV#30,  
DMRV#40, DMRS#40, 8MRV#40)

## 5 - GU - 225 - RH

**Spiral Bevel Gear Reducer Model**  
5 : 90mm Sq. (3.54")

**Gearhead Type**  
GN : For helical gear motor 40W  
GU : For helical gear motor 60W-180W

**Gear Reduction Ratio**  
1/9 ~ 1/225

**Output Shaft Type**  
RH : Hollow Shaft  
RS : Solid Output Shaft

**Option**  
[ ] : Normal Oil Seal  
VS : Viton Oil Seal

\* Compact Hypoid Bevel Gear Reducer is applicable for Compact Gear Motor 40W ~ 180W only.



### PERMISSIBLE OUTPUT TORQUE

Compact Bevel Gear Reducer Ratio and Output Torque (Based on 4Pole Motor, 50Hz)

Gear Reduction Ratio		9	15	18	22.5	27	37	45	54	75	90	108	150	180	225
Output Speed (RPM)		150	90	75	60	50	36	30	25	18	15	12.5	9.0	7.5	6
Rated Power	40W	22	37	44	54	54	90	110	132	150	208	220	220	220	220
	60W	34	57	68	83	83	140	170	204	220	220	220	220	220	220
	90W	51	85	102	125	125	210	220	220	220	220	220	220	220	220
	120W	65	108	130	159	159	220	220	220	220	220	220	220	220	220
	150W	72	120	144	176	176	220	220	220	220	220	220	220	220	220
	180W	79	132	158	193	193	220	220	220	220	220	220	220	220	220

Gear Reduction Ratio		(270)	(370)	(450)	(540)	(750)	(900)	(1080)	(1500)	(1800)	(2250)
Output Speed (RPM)		5	3.6	3	2.5	1.8	1.5	1.25	0.9	0.75	0.6
Rated Power	40W	220	220	220	220	220	220	220	220	220	220
	60W	220	220	220	220	220	220	220	220	220	220
	90W	220	220	220	220	220	220	220	220	220	220
	120W	220	220	220	220	220	220	220	220	220	220
	150W	220	220	220	220	220	220	220	220	220	220
	180W	220	220	220	220	220	220	220	220	220	220

( ) For Hypoid Bevel Gear Head, Gear Reduction Ratio 270 ~ 2250 can be achieved by adding Decimal Gear Reducer (5GN10X or 5GU10X).

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.

## 8MRV - 030 - 80 - CM09

**Aluminium Worm Gear Reducer Model**  
8MRV  
DMRV  
DMRS

**Series (#)**  
030  
040  
050  
063

**Output Shaft Option**  
[ ] : Hollow Output Shaft  
L : Single Shaft - Left  
R : Single Shaft - Right  
T : Double Shaft

**Ratio**  
1/5 ~ 1/19,200

**Input Flange Design**

CM09 : Single Worm Gearbox (5IK)  
CG09 : Double Gearbox (5GN/5GU)  
(Parallel Shaft Gearbox +  
Worm Gearbox)  
CM10 : Single Worm Gearbox (6IK)  
CG10 : Double Gearbox (6GN/6GU)  
(Parallel Shaft Gearbox +  
Worm Gearbox)

\* Aluminium Worm Gear Reducer is applicable for Compact Gear Motor 40W ~ 200W only.

### PERMISSIBLE OUTPUT TORQUE

#030 Series Worm Gear Reducer Ratio and Output Torque (Based on 4Pole Motor, 50Hz)

Gear Reduction Ratio		5	7.5	10	15	20	25	30	40	50	60	80	(100)	(135)	(150)	(180)	Gear Ratio 1/225 ~ 1/19,200 available upon request
Output Speed (RPM)		270	180	135	90	68	54	45	34	27	22.5	16.9	13.5	10	9	7.5	
Rated Power	40W	14	21	28	42	56	70	84	112	140	168	210	210	210	210	210	
	60W	17	26	34	51	68	85	102	136	170	204	210	210	210	210	210	
	90W	25	38	50	75	100	125	150	200	210	210	210	210	210	210	210	
	120W	34	50	67	101	134	168	210	210	210	210	210	210	210	210	210	
	150W	42	62	83	125	166	208	210	210	210	210	210	210	210	210	210	
	180W	49	74	98	147	196	210	210	210	210	210	210	210	210	210	210	

#040 Series Worm Gear Reducer Ratio and Output Torque (Based on 4Pole Motor, 50Hz)

Gear Reduction Ratio		5	7.5	10	15	20	25	30	40	50	60	80	(100)	(135)	(150)	(180)	Gear Ratio 1/225 ~ 1/19,200 available upon request
Output Speed (RPM)		270	180	135	90	68	54	45	34	27	22.5	16.9	13.5	10	9	7.5	
Rated Power	40W	14	21	28	42	56	70	84	112	140	168	224	280	378	400	400	
	60W	17	26	34	51	68	85	102	136	170	204	272	340	400	400	400	
	90W	25	38	50	75	100	125	150	200	250	300	400	400	400	400	400	
	120W	34	50	67	101	134	168	201	268	335	400	400	400	400	400	400	
	150W	42	62	83	125	166	208	249	332	400	400	400	400	400	400	400	
	180W	49	74	98	147	196	245	294	392	400	400	400	400	400	400	400	
6IK-200W	63	94	125	188	250	313	375	400	400	400	400	400	400	400	400		

#050 Series Worm Gear Reducer Ratio and Output Torque (Based on 4Pole Motor, 50Hz)

Gear Reduction Ratio		5 ~ 30	40	50	60	80	100	(135)	(150)	(180)	(225)	(270)	(375)	(450)	(540)	Gear Ratio 1/750 ~ 1/18,000 available upon request
Output Speed (RPM)		270 ~ 45	34	27	22.5	16.9	13.5	10	9	7.5	6	5	3.6	3	2.5	
Rated Power	40W	Refer to #030 or #040 Datasheet	112	140	168	224	280	378	420	504	600	600	600	600	600	
	60W		136	170	204	272	340	459	510	600	600	600	600	600	600	
	90W		200	250	300	400	500	600	600	600	600	600	600	600	600	
	120W		268	335	402	536	600	600	600	600	600	600	600	600	600	
	150W		332	415	498	600	600	600	600	600	600	600	600	600	600	
	180W		392	490	588	600	600	600	600	600	600	600	600	600	600	
6IK-200W	500	600	600	600	600	600	600	600	600	600	600	600	600	600		

( ) For Aluminium Worm Gear Reducer, Gear Reduction Ratio 125 ~ 18,000 can be achieved by adding Parallel Shaft Gear Reducer (5GN\_K-N or 5GU\_KB-N).

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.





## COMPACT GEAR MOTOR

### K SERIES INDUCTION MOTOR SINGLE PHASE (1Ø – CAPACITOR RUN)



The most common of all motors is the standard Induction Motor, it's designed for continuous 24/7 operation in one direction. While it is capable of going both forward and reverse, its main role is just single direction use.

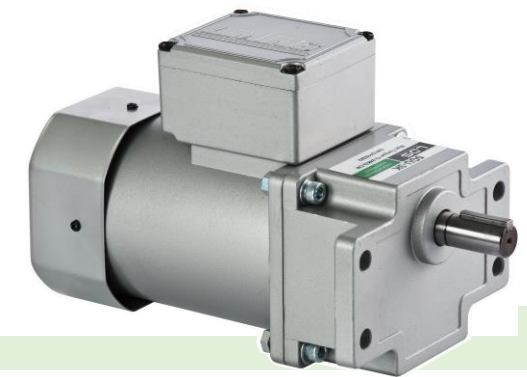
#### General Specifications:

Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)	Capacitor	
	Round Shaft	Helical Shaft (For Gearhead)					Torque (Kg.cm)	RPM		Capacity (µF)	VAC
6W	2IK6A-A	2IK6GN-A	1Ø110	50	0.25	0.44	0.45	1300	4P	2.5	250
				60	0.22	0.42	0.38	1600			
	2IK6A-C2	2IK6GN-C2	1Ø240	50	0.14	0.41	0.45	1300		0.8	450
				60	0.12	0.40	0.38	1600			
15W	3IK15A-A	3IK15GN-A	1Ø110	50	0.38	1.01	1.22	1300	4P	4	250
				60	0.34	0.98	0.98	1600			
	3IK15A-C2	3IK15GN-C2	1Ø240	50	0.2	0.88	1.22	1300		1.2	450
				60	0.18	0.86	0.98	1600			
25W	4IK25A-A	4IK25GN-A	1Ø110	50	0.45	1.3	1.87	1320	4P	6	250
				60	0.43	1.2	1.48	1620			
	4IK25A-C2	4IK25GN-C2	1Ø240	50	0.23	1.45	1.82	1320		1.5	450
				60	0.21	1.42	1.5	1620			
40W	5IK40A-A	5IK40GN-A	1Ø110	50	0.83	2.26	3.0	1350	4P	10	250
				60	0.7	2.16	2.5	1650			
	5IK40A-C2	5IK40GN-C2	1Ø240	50	0.4	2.17	3.4	1350		2.5	450
				60	0.37	2.15	2.84	1650			
60W	5IK60A-AF	5IK60GN-AF	1Ø110	50	1.18	3.35	4.37	1350	4P	16	250
				60	1.1	3.1	4.3	1650			
	5IK60A-C2F	5IK60GN-C2F	1Ø240	50	0.58	3.35	4.37	1350		3.5	450
				60	0.5	3.1	4.3	1650			
90W	5IK90A-AF	5IK90GN-AF	1Ø110	50	1.58	4.5	6.2	1350	4P	20	250
				60	1.43	4.3	5.43	1650			
	5IK90A-C2F	5IK90GN-C2F	1Ø240	50	0.80	4.6	6.2	1350		5.5	450
				60	0.74	4.4	5.43	1650			
120W	5IK120A-AF	5IK120GN-AF	1Ø110	50	1.85	6.7	8.5	1350	4P	25	250
				60	1.60	5.8	7.3	1650			
	5IK120A-C2F	5IK120GN-C2F	1Ø240	50	0.98	6.4	8.5	1350		6	450
				60	0.94	5.7	7.3	1650			
150W	5IK150A-C2F	5IK150GN-C2F	1Ø240	50	1.10	7.0	9.94	1320	4P	7	450
				60	1.04	6.4	8.65	1620			
180W	5IK180A-C2F	5IK180GN-C2F	1Ø240	50	1.15	7.8	11.3	1320	4P	8	450
				60	1.10	7.1	9.25	1620			
200W	6IK200A-C2F	6IK200GN-C2F	1Ø240	50	1.38	9.8	15.6	1350	4P	12	450
				60	1.31	9.2	13.6	1350			
250W	6IK250A-C2F	6IK250GN-C2F	1Ø240	50	1.45	10.6	16.9	1350	4P	16	450
				60	1.37	9.9	14.6	1350			

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Single Phase 220V/230V Available upon request.

## COMPACT GEAR MOTOR

### K SERIES INDUCTION MOTOR THREE PHASE (3Ø)



The most common of all motors is the standard Induction Motor, it's designed for continuous 24/7 operation in one direction. While it is capable of going both forward and reverse, its main role is just single direction use.

#### General Specifications:

Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)
	Round Shaft	Helical Shaft (For Gearhead)					Torque (Kg.cm)	RPM	
25W	4IK25A-S	4IK25GN-S	3Ø220	50	0.23	3.0	2.06	1320	4P
				60	0.21	2.6	1.63	1620	
	4IK25A-S4	4IK25GN-S4	3Ø415	50	0.14	2.6	1.75	1320	
				60	0.13	2.0	1.46	1620	
40W	5IK40A-S	5IK40GN-S	3Ø220	50	0.36	4.7	3.17	1350	4P
				60	0.33	4.2	2.8	1650	
	5IK40A-S4	5IK40GN-S4	3Ø415	50	0.21	4.5	3.0	1350	
				60	0.19	4.3	2.9	1650	
60W	5IK60A-SF	5IK60GN-SF	3Ø220	50	0.5	7.4	4.9	1350	4P
				60	0.45	6.4	4.0	1650	
	5IK60A-S4F	5IK60GN-S4F	3Ø415	50	0.27	7.2	4.85	1350	
				60	0.25	6.2	3.88	1650	
90W	5IK90A-SF	5IK90GN-SF	3Ø220	50	0.65	9.7	6.5	1350	4P
				60	0.60	8.4	5.3	1650	
	5IK90A-S4F	5IK90GN-S4F	3Ø415	50	0.37	9.7	6.5	1350	
				60	0.34	8.4	5.3	1650	
120W	5IK120A-SF	5IK120GN-SF	3Ø220	50	0.75	11.5	8.95	1350	4P
				60	0.72	9.5	7.5	1650	
	5IK120A-S4F	5IK120GN-S4F	3Ø415	50	0.43	11.5	8.95	1350	
				60	0.39	9.5	7.5	1650	
150W	5IK150A-SF	5IK150GN-SF	3Ø220	50	0.95	12.8	10.7	1320	4P
				60	0.88	10.2	9.5	1620	
	5IK150A-S4F	5IK150GN-S4F	3Ø415	50	0.50	12.8	10.5	1320	
				60	0.46	10.2	9.3	1620	
180W	5IK180A-SF	5IK180GN-SF	3Ø220	50	1.04	13.4	12.3	1320	4P
				60	1.00	10.8	10.1	1620	
	5IK180A-S4F	5IK180GN-S4F	3Ø415	50	0.59	13.4	12.3	1320	
				60	0.55	10.8	10.1	1620	
200W	6IK200A-SF	6IK200GN-SF	3Ø220	50	1.00	18.5	15.7	1400	4P
				60	0.89	15.9	13.8	1700	
	6IK200A-S4F	6IK200GN-S4F	3Ø415	50	0.57	18.5	15.7	1400	
				60	0.52	15.9	13.8	1700	
250W	6IK250A-SF	6IK250GN-SF	3Ø220	50	1.13	21.6	17.3	1400	4P
				60	1.01	19.2	15.1	1700	
	6IK250A-S4F	6IK250GN-S4F	3Ø415	50	0.66	21.6	17.3	1400	
				60	0.59	19.2	15.1	1700	

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Single Phase 220V/230V, Dual-voltage motor 3ph220V/380V and 3ph240V/415V available upon request. Voltage "U" represents Dual-voltage 220V/380V; and "TQ" represents Dual-voltage 240V/415V.





## COMPACT GEAR MOTOR

**K** SERIES

**INDUCTION MOTOR - 2POLE  
SINGLE PHASE (1Ø) / THREE PHASE (3Ø)**



## COMPACT GEAR MOTOR

**K** SERIES

**REVERSIBLE MOTOR - RATED 30MIN  
SINGLE PHASE (1Ø)**



### General Specifications (Single Phase Motor - 1Ø) :

Output Power (Watt)	Product Code	AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)	Capacitor	
	Round Shaft					Torque (Kg.cm)	RPM		Capacity (µF)	VAC
60W	5IK60A-A2F-2P	1Ø110	50	0.95	1.8	2.0	2780	2P	16	250
			60	0.90	1.8	1.8	3220			
	5IK60A-C2F-2P	1Ø240	50	0.48	1.8	2.0	2780	2P	3.5	450
			60	0.46	1.8	1.8	3220			
90W	5IK90A-A2F-2P	1Ø110	50	1.6	3	3.6	2780	2P	20	250
			60	1.6	3	3.2	3220			
	5IK90A-C2F-2P	1Ø240	50	0.82	3	3.6	2780	2P	5.5	450
			60	0.78	3	3.2	3220			
120W	5IK120A-A2F-2P	1Ø110	50	2.0	4.2	5.0	2780	2P	25	250
			60	2.0	4.2	4.3	3220			
	5IK120A-C2F-2P	1Ø240	50	1.0	4.2	5.0	2780	2P	6	450
			60	0.93	4.2	4.3	3220			
150W	5IK150A-SF-2P	1Ø240	50	1.2	5.3	6.1	2720	2P	7	450
			60	1.1	5.3	5.4	3160			
180W	5IK180A-C2F-2P	1Ø240	50	1.3	6.5	6.8	2720	2P	8	450
			60	1.2	6.5	6.0	3160			

### General Specifications (Three Phase Motor - 3Ø) :

Output Power (Watt)	Product Code	AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)
	Round Shaft					Torque (Kg.cm)	RPM	
60W	5IK60A-SF-2P	3Ø220	50	0.32	9.6	2	2780	2P
			60	0.31	9.0	1.7	3220	
	5IK60A-S4F-2P	3Ø415	50	0.18	9.6	2	2780	2P
			60	0.17	9.0	1.7	3220	
90W	5IK90A-SF-2P	3Ø220	50	0.70	16	3.6	2780	2P
			60	0.65	12	3.2	3220	
	5IK90A-S4F-2P	3Ø415	50	0.4	16	3.6	2780	2P
			60	0.37	12	3.2	3220	
120W	5IK120A-SF-2P	3Ø220	50	1.0	20	4.4	2780	2P
			60	0.94	16	4.1	3220	
	5IK120A-S4F-2P	3Ø415	50	0.59	20	4.4	2780	2P
			60	0.55	16	4.1	3220	
150W	5IK150A-SF-2P	3Ø220	50	1.3	23	5	2720	2P
			60	1.2	18	4.2	3160	
	5IK150A-S4F-2P	3Ø415	50	0.7	23	5	2720	2P
			60	0.64	18	4.2	3160	
180W	5IK180A-SF-2P	3Ø220	50	1.5	25	5.5	2720	2P
			60	1.3	21	4.9	3160	
	5IK180A-S4F-2P	3Ø415	50	0.8	25	5.5	2720	2P
			60	0.7	21	4.9	3160	

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Single Phase 220V/230V, Dual-voltage motor 3ph220V/380V and 3ph240V/415V available upon request. Voltage "U" represents Dual-voltage 220V/380V; and "TQ" represents Dual-voltage 240V/415V.

The Reversible Motor is designed for start/stop operations with changes of direction frequently. It is rated at 30 minutes while used in this fashion. It uses a simple damping brake to slow the motor quickly to be able to change direction efficiently. This generates heat when the motor is frequently changing direction which is why all reversible motors are rated for 30 minutes only. (But when large stored torque is required, model with electromagnetic brake should be used).

### General Specifications:

Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)	Capacitor	
	Round Shaft	Helical Shaft (For Gearhead)					Torque (Kg.cm)	RPM		Capacity (µF)	VAC
6W	2RK6A-A	2RK6GN-A	1Ø110	50	0.28	0.46	0.53	1300	4P	4	250
				60	0.24	0.44	0.4	1600			
	2RK6A-C	2RK6GN-C2	1Ø240	50	0.15	0.43	0.47	1300	4P	1.2	450
				60	0.13	0.42	0.4	1600			
15W	3RK15A-A	3RK15GN-A	1Ø110	50	0.42	1.06	1.28	1300	4P	6	250
				60	0.37	1.03	1.03	1600			
	3RK15A-C2	3RK15GN-C2	1Ø240	50	0.22	0.92	1.28	1300	4P	1.5	450
				60	0.2	0.9	1.03	1600			
25W	4RK25A-A	4RK25GN-A	1Ø110	50	0.5	1.37	1.96	1320	4P	8	250
				60	0.47	1.26	1.55	1620			
	4RK25A-C2	4RK25GN-C2	1Ø240	50	0.25	1.52	1.91	1320	4P	2	450
				60	0.23	1.49	1.58	1620			
40W	5RK40A-A	5RK40GN-A	1Ø110	50	0.91	2.37	3.15	1350	4P	14	250
				60	0.77	2.27	2.63	1650			
	5RK40A-C2	5RK40GN-C2	1Ø240	50	0.44	2.28	3.57	1350	4P	3	450
				60	0.41	2.26	2.98	1650			
60W	5RK60A-AF	5RK60GN-AF	1Ø110	50	1.3	3.52	4.59	1350	4P	20	250
				60	1.21	3.26	4.52	1650			
	5RK60A-C2F	5RK60GN-C2F	1Ø240	50	0.64	3.52	4.59	1350	4P	4	450
				60	0.55	3.26	4.52	1650			
90W	5RK90A-AF	5RK90GN-AF	1Ø110	50	1.74	4.73	6.51	1350	4P	24	250
				60	1.57	4.73	5.7	1650			
	5RK90A-C2F	5RK90GN-C2F	1Ø240	50	0.88	4.73	6.51	1350	4P	6	450
				60	0.81	4.73	5.7	1650			
120W	5RK120A-AF	5RK120GN-AF	1Ø110	50	2.04	7.04	8.93	1350	4P	30	250
				60	1.76	6.09	7.67	1650			
	5RK120A-C2F	5RK120GN-C2F	1Ø240	50	1.01	6.72	8.93	1350	4P	7	450
				60	0.94	5.97	7.67	1650			
150W	5RK120A-C2F	5RK120GN-C2F	1Ø240	50	1.30	7.8	9.94	1320	4P	8	450
				60	1.21	7.2	8.85	1620			

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Single Phase 220V/230V available upon request.





## COMPACT GEAR MOTOR

# K SERIES

### ELECTROMAGNETIC BRAKE MOTOR SINGLE PHASE (1Ø – CAPACITOR RUN) POWER-OFF ACTIVATED TYPE



Electromagnetic Brake motor is ideal for vertical application in which the load must be held. It's a load-holding brake motor with a power off activated type electromagnetic brake, where the motor stops instantaneously when the power is cut off, while still holding the load in position (optimal solution for emergency brakes and vertical load applications).

#### General Specifications:

Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)	Capacitor	
	Round Shaft	Helical Shaft (For Gearhead)					Torque (Kg.cm)	RPM		Capacity (µF)	VAC
6W	2IK6A-AB	2IK6GN-AB	1Ø110	50	0.25	0.44	0.45	1300	4P	2.5	250
				60	0.22	0.42	0.38	1600			
	2IK6A-C2B	2IK6GN-C2B	1Ø240	50	0.14	0.41	0.45	1300	4P	0.8	450
				60	0.12	0.4	0.38	1600			
15W	3IK15A-AB	3IK15GN-AB	1Ø110	50	0.38	1.01	1.22	1300	4P	4	250
				60	0.34	0.98	0.98	1600			
	3IK15A-C2B	3IK15GN-C2B	1Ø240	50	0.2	0.88	1.22	1300	4P	1.2	450
				60	0.18	0.86	0.98	1600			
25W	4IK25A-AB	4IK25GN-AB	1Ø110	50	0.45	1.3	1.87	1320	4P	6	250
				60	0.43	1.2	1.48	1620			
	4IK25A-C2B	4IK25GN-C2B	1Ø240	50	0.23	1.45	1.82	1320	4P	1.5	450
				60	0.21	1.42	1.5	1620			
40W	5IK40A-AB	5IK40GN-AB	1Ø110	50	0.83	2.26	3.0	1350	4P	10	250
				60	0.7	2.16	2.5	1650			
	5IK40A-C2B	5IK40GN-C2B	1Ø240	50	0.4	2.17	3.4	1350	4P	2.5	450
				60	0.37	2.15	2.84	1650			
60W	5IK60A-AFB	5IK60GN-AFB	1Ø110	50	1.18	3.35	4.37	1350	4P	16	250
				60	1.1	3.1	4.3	1650			
	5IK60A-C2FB	5IK60GN-C2FB	1Ø240	50	0.58	3.35	4.37	1350	4P	3.5	450
				60	0.5	3.1	4.3	1650			
90W	5IK90A-AFB	5IK90GN-AFB	1Ø110	50	1.58	4.5	6.2	1350	4P	20	250
				60	1.43	4.5	5.43	1650			
	5IK90A-C2FB	5IK90GN-C2FB	1Ø240	50	0.80	4.5	6.2	1350	4P	5.5	450
				60	0.74	4.5	5.43	1650			
120W	5IK120A-AFB	5IK120GN-AFB	1Ø110	50	1.85	6.7	8.5	1350	4P	25	250
				60	1.60	5.8	7.3	1650			
	5IK120A-C2FB	5IK120GN-C2FB	1Ø240	50	0.98	6.4	8.5	1350	4P	6	450
				60	0.94	5.7	7.3	1650			
150W	5IK150A-C2FB	5IK150GN-C2FB	1Ø240	50	1.20	7.0	9.94	1320	4P	7	450
				60	1.12	6.4	8.65	1620			
180W	5IK180A-C2FB	5IK180GN-C2FB	1Ø240	50	1.30	7.8	11.3	1320	4P	8	450
				60	1.23	7.1	9.25	1620			

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Single Phase 220V/230V Available upon request.

## COMPACT GEAR MOTOR

# K SERIES

### ELECTROMAGNETIC BRAKE MOTOR THREE PHASE (3Ø) POWER-OFF ACTIVATED TYPE



#### Features:

- DC Electromagnetic Brake with built in Rectifier (Input voltage AC220V)
- Brake Precision – The electromagnetic brake controls the rotation within 2-3 turns, making it suitable for forward/reverse operation
- Ideal for low frequency of braking operation (Maximum 6 cycles of start/stop per minute)
- Variable Speed Brake Motor and Asynchronous Brake Motor configurations available.

Electromagnetic Brake	Motor Rating	
	6W-25W	40W-180W
Static friction torque (kgcm)	5.1	10.2
Rated voltage (DC-V)	24	24
Input voltage (Rectifier)	220V	220V
Capacity (Watt)	4W	7W
Movement (Start/Stop Operation)	Max: 6 cycles per minute with a 1-2 second pause period	

#### General Specifications:

Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)
	Round Shaft	Helical Shaft (For Gearhead)					Torque (Kg.cm)	RPM	
25W	4IK25A-SB	4IK25GN-SB	3Ø220	50	0.23	3.0	2.06	1320	4P
				60	0.21	2.6	1.63	1620	
	4IK25A-S4B	4IK25GN-S4B	3Ø415	50	0.14	2.6	1.75	1320	4P
				60	0.13	2.0	1.46	1620	
40W	5IK40A-SB	5IK40GN-SB	3Ø220	50	0.36	4.7	3.17	1350	4P
				60	0.33	4.2	2.8	1650	
	5IK40A-S4B	5IK40GN-S4B	3Ø415	50	0.21	4.5	3.0	1350	4P
				60	0.19	4.3	2.9	1650	
60W	5IK60A-SFB	5IK60GN-SFB	3Ø220	50	0.5	7.4	4.9	1350	4P
				60	0.45	6.4	4.0	1650	
	5IK60A-S4FB	5IK60GN-S4FB	3Ø415	50	0.27	7.2	4.85	1350	4P
				60	0.25	6.2	3.88	1650	
90W	5IK90A-SFB	5IK90GN-SFB	3Ø220	50	0.65	9.7	6.5	1350	4P
				60	0.60	8.4	5.3	1650	
	5IK90A-S4FB	5IK90GN-S4FB	3Ø415	50	0.37	9.7	6.5	1350	4P
				60	0.34	8.4	5.3	1650	
120W	5IK120A-SFB	5IK120GN-SFB	3Ø220	50	0.75	11.5	8.95	1350	4P
				60	0.72	9.5	7.5	1650	
	5IK120A-S4FB	5IK120GN-S4FB	3Ø415	50	0.43	11.5	8.95	1350	4P
				60	0.39	9.5	7.5	1650	
150W	5IK150A-SFB	5IK150GN-SFB	3Ø220	50	0.95	12.8	10.7	1320	4P
				60	0.88	10.2	9.5	1620	
	5IK150A-S4FB	5IK150GN-S4FB	3Ø415	50	0.50	12.8	10.5	1320	4P
				60	0.46	10.2	9.3	1620	
180W	5IK180A-SFB	5IK180GN-SFB	3Ø220	50	1.10	13.4	12.3	1320	4P
				60	1.05	10.8	10.1	1620	
	5IK180A-S4FB	5IK180GN-S4FB	3Ø415	50	0.64	13.4	12.3	1320	4P
				60	0.60	10.8	10.1	1620	

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Dual-voltage motor 3ph220V/380V and 3ph240V/415V available upon request. Voltage "U" represents Dual-voltage 220V/380V; and "TQ" represents Dual-voltage 240V/415V.





## COMPACT GEAR MOTOR

**K** SERIES

### REVERSIBLE ELECTROMAGNETIC BRAKE MOTOR SINGLE PHASE (1Ø – CAPACITOR RUN) POWER-OFF ACTIVATED TYPE



The Reversible Electromagnetic Brake Motor is designed for start/stop operations with changes of direction frequently. It uses a simple damping brake in addition to the electromagnetic brake to slow the motor more quickly to be able to change direction efficiently. This generates heat when the motor is frequently changing direction which is why all reversible electromagnetic brake motors are rated for 30 minutes only.

#### General Specifications:

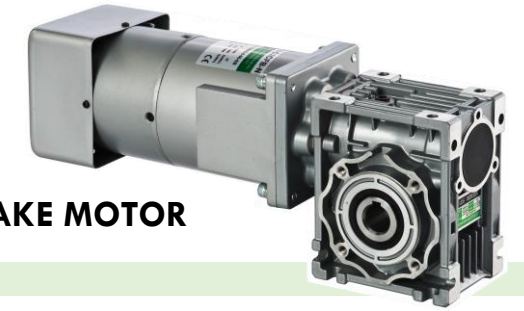
Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)	Capacitor	
	Round Shaft	Helical Shaft (For Gearhead)					Torque (Kg.cm)	RPM		Capacity (µF)	VAC
6W	2RK6A-AB	2RK6GN-AB	1Ø110	50	0.28	0.46	0.53	1300	4P	4	250
				60	0.24	0.44	0.40	1600			
6W	2RK6A-C2	2RK6GN-C2B	1Ø240	50	0.15	0.43	0.47	1300	4P	1.2	450
				60	0.13	0.42	0.40	1600			
15W	3RK15A-AB	3RK15GN-AB	1Ø110	50	0.42	1.06	1.28	1300	4P	6	250
				60	0.37	1.03	1.03	1600			
15W	3RK15A-C2B	3RK15GN-C2B	1Ø240	50	0.22	0.92	1.28	1300	4P	1.5	450
				60	0.2	0.9	1.03	1600			
25W	4RK25A-AB	4RK25GN-AB	1Ø110	50	0.5	1.37	1.96	1320	4P	8	250
				60	0.47	1.26	1.55	1620			
25W	4RK25A-C2B	4RK25GN-C2B	1Ø240	50	0.25	1.52	1.91	1320	4P	2	450
				60	0.23	1.49	1.58	1620			
40W	5RK40A-AB	5RK40GN-AB	1Ø110	50	0.91	2.37	3.15	1350	4P	14	250
				60	0.77	2.27	2.63	1650			
40W	5RK40A-C2B	5RK40GN-C2B	1Ø240	50	0.44	2.28	3.57	1350	4P	3	450
				60	0.41	2.26	2.98	1650			
60W	5RK60A-AFB	5RK60GN-AFB	1Ø110	50	1.30	3.52	4.59	1350	4P	20	250
				60	1.21	3.26	4.52	1650			
60W	5RK60A-C2FB	5RK60GN-C2FB	1Ø240	50	0.64	3.46	4.59	1350	4P	4	450
				60	0.55	3.26	4.52	1650			
90W	5RK90A-AFB	5RK90GN-AFB	1Ø110	50	1.74	4.73	6.51	1350	4P	24	250
				60	1.57	4.73	5.7	1650			
90W	5RK90A-C2FB	5RK90GN-C2FB	1Ø240	50	0.88	4.73	6.51	1350	4P	6	450
				60	0.81	4.73	5.7	1650			
120W	5RK120A-AFB	5RK120GN-AFB	1Ø110	50	2.04	7.04	8.93	1350	4P	30	250
				60	1.96	6.09	7.67	1650			
120W	5RK120A-C2FB	5RK120GN-C2FB	1Ø240	50	1.01	6.72	8.93	1350	4P	7	450
				60	0.94	5.99	7.67	1650			
150W	5RK150A-C2FB	5RK150GN-C2FB	1Ø240	50	1.10	7.8	9.94	1320	4P	8	450
				60	1.04	7.2	8.65	1620			

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Single Phase 220V/230V Available upon request.

## COMPACT GEAR MOTOR

**K** SERIES

### REVERSIBLE ELECTROMAGNETIC BRAKE MOTOR THREE PHASE (3Ø) POWER-OFF ACTIVATED TYPE



#### Features:

- DC Electromagnetic Brake with built in Rectifier (Input voltage AC220V)
- Brake Precision – The electromagnetic brake controls the rotation within 2-3 turns, making it suitable for forward/reverse operation
- Ideal for low frequency of braking operation (Maximum 6 cycles of start/stop per minute)
- Variable Speed Brake Motor and Asynchronous Brake Motor configurations available.

Electromagnetic Brake	Motor Rating	
	6W-25W	40W-180W
Static friction torque (kgcm)	5.1	10.2
Rated voltage (DC-V)	24	24
Input voltage (Rectifier)	220V	220V
Capacity (Watt)	4W	7W
Movement (Start/Stop Operation)	Max: 6 cycles per minute with a 1-2 second pause period	

#### General Specifications:

Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)
	Round Shaft	Helical Shaft (For Gearhead)					Torque (Kg.cm)	RPM	
25W	4RK25A-SB	4RK25GN-SB	3Ø220	50	0.24	2.82	1.96	1300	4P
				60	0.22	2.44	1.55	1600	
25W	4RK25A-S4B	4RK25GN-S4B	3Ø415	50	0.15	2.44	1.66	1300	4P
				60	0.14	1.88	1.39	1600	
40W	5RK40A-SB	5RK40GN-SB	3Ø220	50	0.38	4.42	3.01	1320	4P
				60	0.35	3.95	2.66	1620	
40W	5RK40A-S4B	5RK40GN-S4B	3Ø415	50	0.22	4.23	2.85	1320	4P
				60	0.20	4.04	2.76	1620	
60W	5RK60A-SFB	5RK60GN-SFB	3Ø220	50	0.61	6.96	4.66	1350	4P
				60	0.55	6.02	3.80	1650	
60W	5RK60A-S4FB	5RK60GN-S4FB	3Ø415	50	0.34	6.77	4.61	1350	4P
				60	0.30	5.83	3.69	1650	
90W	5RK90A-SFB	5RK90GN-SFB	3Ø220	50	0.74	9.12	6.18	1350	4P
				60	0.69	7.90	5.04	1650	
90W	5RK90A-S4FB	5RK90GN-S4FB	3Ø415	50	0.46	9.12	6.18	1350	4P
				60	0.39	7.90	5.04	1650	
120W	5RK120A-SFB	5RK120GN-SFB	3Ø220	50	0.99	10.81	8.50	1320	4P
				60	0.91	8.93	7.13	1620	
120W	5RK120A-S4FB	5RK120GN-S4FB	3Ø415	50	0.51	10.81	8.50	1320	4P
				60	0.44	8.93	7.13	1620	
150W	5RK150A-SFB	5RK150GN-SFB	3Ø220	50	1.05	12.0	10.7	1320	4P
				60	1.00	10.1	9.5	1620	
150W	5RK150A-S4FB	5RK150GN-S4FB	3Ø415	50	0.55	12.0	10.5	1320	4P
				60	0.51	10.0	9.3	1620	

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Single Phase 220V/230V, Dual-voltage motor 3ph220V/380V and 3ph240V/415V available upon request. Voltage "U" represents Dual-voltage 220V/380V; and "TQ" represents Dual-voltage 240V/415V.





## COMPACT GEAR MOTOR

**K** SERIES

**CLUTCH & BRAKE MOTOR  
SINGLE PHASE (1Ø – CAPACITOR RUN)  
FREQUENT START-STOP OPERATION**



The DC 24V Clutch and Brake motor use a high precision, highly responsive clutch & brake for frequent start/stop operation. When the brake is in use, the clutch will separate the link from the brake, so there are no overruns, making positioning precise and accurate.

Clutch & Brake Models	GN –CB Type		GU-CB Type	
	Brake	Clutch	Brake	Clutch
Static friction torque (kg.cm)	25	20	35	30
Rated voltage (DC-V)	24	24	24	24
Capacity (Watt)	5	6	5.76	6.72
Movement (Start/Stop Operation)	Max: 60-80 cycle per minute*			

### General Specifications:

Output Power (Watt)	Product Code Helical Shaft (For Gearhead)	AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)	Capacitor	
						Torque (Kg.cm)	RPM		Capacity (µF)	VAC
40W	5IK40GB-A	1Ø110	50	0.83	2.26	3.0	1350	4P	10	250
			60	0.7	2.16	2.5	1650			
	5IK40GB-C2	1Ø240	50	0.4	2.17	3.4	1350		2.5	450
			60	0.37	2.15	2.84	1650			
60W	5IK60GB-AF	1Ø110	50	1.18	3.35	4.37	1350	4P	16	250
			60	1.1	3.1	4.3	1650			
	5IK60GB-C2F	1Ø240	50	0.58	3.35	4.37	1350		3.5	450
			60	0.5	3.1	4.3	1650			
90W	5IK90GB-AF	1Ø110	50	1.58	4.5	6.2	1350	4P	20	250
			60	1.43	4.3	5.43	1650			
	5IK90GB-C2F	1Ø240	50	0.80	4.6	6.2	1350		5.5	450
			60	0.74	4.4	5.43	1650			
120W	5IK120GB-AF	1Ø110	50	1.85	6.7	8.5	1350	4P	25	250
			60	1.60	5.8	7.3	1650			
	5IK120GB-C2F	1Ø240	50	0.98	6.4	8.5	1350		6	450
			60	0.94	5.7	7.3	1650			
150W	5IK150GB-C2F	1Ø240	50	1.20	7.0	9.94	1320	4P	7	450
			60	1.12	6.4	8.65	1620			
180W	5IK180GB-C2F	1Ø240	50	1.30	7.8	11.3	1320	4P	8	450
			60	1.23	7.1	9.25	1620			

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Single Phase 220V/230V Available upon request.

## COMPACT GEAR MOTOR

**K** SERIES

**CLUTCH & BRAKE MOTOR  
THREE PHASE (3Ø)  
FREQUENT START-STOP OPERATION**



Features:

- Variable Speed Clutch and Brake Motor and Asynchronous Clutch and Brake Motor configurations available.

Clutch & Brake Models	GN –CB Type		GU-CB Type	
	Brake	Clutch	Brake	Clutch
Static friction torque (kg.cm)	25	20	35	30
Rated voltage (DC-V)	24	24	24	24
Capacity (Watt)	5	6	5.76	6.72
Movement (Start/Stop Operation)	Max: 60-80 cycles per minute*			

### General Specifications:

Output Power (Watt)	Product Code Helical Shaft (For Gearhead)	AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)
						Torque (Kg.cm)	RPM	
40W	5IK40GB-S	3Ø220	50	0.36	4.7	3.17	1350	4P
			60	0.33	4.2	2.8	1650	
	5IK40GB-S4	3Ø415	50	0.21	4.5	3.0	1350	
			60	0.19	4.3	2.9	1650	
60W	5IK60GB-SF	3Ø220	50	0.5	7.4	4.9	1350	4P
			60	0.45	6.4	4.0	1650	
	5IK60GB-S4F	3Ø415	50	0.27	7.2	4.85	1350	
			60	0.25	6.2	3.88	1650	
90W	5IK90GB-SF	3Ø220	50	0.65	9.7	6.5	1350	4P
			60	0.60	8.4	5.3	1650	
	5IK90GB-S4F	3Ø415	50	0.37	9.7	6.5	1350	
			60	0.34	8.4	5.3	1650	
120W	5IK120GB-SF	3Ø220	50	0.75	11.5	8.95	1350	4P
			60	0.72	9.5	7.5	1650	
	5IK120GB-S4F	3Ø415	50	0.43	11.5	8.95	1350	
			60	0.39	9.5	7.5	1650	
150W	5IK150GB-SF	3Ø220	50	0.95	12.8	10.7	1320	4P
			60	0.88	10.2	9.5	1620	
	5IK150GB-S4F	3Ø415	50	0.50	12.8	10.5	1320	
			60	0.46	10.2	9.3	1620	
180W	5IK180GB-SF	3Ø220	50	1.10	13.4	12.3	1320	4P
			60	1.05	10.8	10.1	1620	
	5IK180GB-S4F	3Ø415	50	0.64	13.4	12.3	1320	
			60	0.60	10.8	10.1	1620	

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Dual-voltage motor 3ph220V/380V and 3ph240V/415V available upon request. Voltage "U" represents Dual-voltage 220V/380V; and "TQ" represents Dual-voltage 240V/415V.





## COMPACT GEAR MOTOR

# K SERIES

### VARIABLE SPEED MOTOR WITH ANALOGUE TYPE SPEED CONTROLLER – SINGLE PHASE



Variable Speed Motor uses an Induction Motor with a modular tacho-generator fitted to the rear of the motor. The tacho-generator is made of a magnet connected directly to the motor shaft and a stator coil that detects the magnetic poles, and generates an AC voltage at 12 cycles per revolution. The motor can run in either forward or reverse directions. It has independent powerful cooling fan to cool down motor in order to achieve longer lifespan.

#### General Specifications:

Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Number of Pole (P)	Rated Speed (rpm)	Permissible Torque		Starting Torque (Kg.cm)	Capacitor	
	Round Shaft	Helical Shaft						1200rpm	90rpm		Capacitor (µF)	VAC
6W	2IK6RA-A2	2IK6RGN-A2	1Ø110	50	0.25	4P	90 ~ 1300	0.46	0.25	0.33	2.5	250
	2IK6RA-C2	2IK6RGN-C2		60			90 ~ 1600					
15W	3IK15RA-A2	3IK15RGN-A2	1Ø110	50	0.38	4P	90 ~ 1300	1.22	0.42	0.55	4.0	250
	3IK15RA-C2	3IK15RGN-C2		60			90 ~ 1300					
25W	4IK25RA-A2	4IK25RGN-A2	1Ø110	50	0.43	4P	90 ~ 1320	1.76	0.45	1.20	6.0	250
	4IK25RA-C2	4IK25RGN-C2		60			90 ~ 1620					
40W	5IK40RA-A2	5IK40RGN-A2	1Ø110	50	0.8	4P	90 ~ 1350	2.80	0.55	1.90	10	250
	5IK40RA-C2	5IK40RGN-C2		60			90 ~ 1650					
60W	5IK60RA-A2F	5IK60RGN-A2F	1Ø110	50	1.2	4P	90 ~ 1350	5.00	0.70	3.00	16	250
	5IK60RA-C2F	5IK60RGN-C2F		60			90 ~ 1650					
90W	5IK90RA-A2F	5IK90RGN-A2F	1Ø110	50	1.58	4P	90 ~ 1350	6.60	0.86	4.50	20	250
	5IK90RA-C2F	5IK90RGN-C2F		60			90 ~ 1650					
120W	5IK120RA-A2F	5IK120RGN-A2F	1Ø110	50	2.1	4P	90 ~ 1350	7.50	0.97	5.50	25	250
	5IK120RA-C2F	5IK120RGN-C2F		60			90 ~ 1650					
150W	5IK150RA-C2F	5IK150RGN-C2F	1Ø240	50	1.2	4P	90 ~ 1320	9.10	1.08	6.40	7.0	450
	5IK150RA-C2F	5IK150RGN-C2F		60			90 ~ 1620					
180W	5IK180RA-C2F	5IK180RGN-C2F	1Ø240	50	1.3	4P	90 ~ 1320	11.0	1.20	7.20	8.0	450
	5IK180RA-C2F	5IK180RGN-C2F		60			90 ~ 1620					

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Single Phase 220V/230V available upon request.

## COMPACT GEAR MOTOR

# K SERIES

### ASYNCHRONOUS MOTOR WITH LED DIGITAL DISPLAY IGBT INVERTER – SINGLE PHASE



Asynchronous Motor a.k.a. Inverter Duty Motor is designed for optimized performance to run with variable frequency drive. It offers longer product lifespan, consistent performance, and less vibration operation.

#### Features:

- The package include a 3phase motor operated by 1phase IGBT inverter with LED High Brightness Display.
- 120% | 150% Overload Protection with wide speed control range from 0-400Hz by operation panel or speed potentiometer.
- Spec-Key button on the panel allows preset of 2 different speeds, forward/reverse operation instantly.
- Acceleration and deceleration control enables soft-start and soft-stop operation. Setting of upper and lower speed limits, and counter function.
- Compatible mounting with conventional USM Type speed controller.
- Instantaneous reversal, electromagnetic brake, catch & brake options available.

#### General Specifications (4 Pole Motor):

Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)
	Round Shaft	Helical Shaft					Torque (Kg.cm)	Rated Speed (RPM)	
25W	4IK25VA-S	4IK25VGN-S	3Ø220	50	0.23	3.0	2.06	90 ~ 1350	4P
				60			1.63	90 ~ 1650	
40W	5IK40VA-S	5IK40VGN-S	3Ø220	50	0.36	4.7	3.17	90 ~ 1350	4P
				60			2.8	90 ~ 1650	
60W	5IK60VA-SF	5IK60VGN-SF	3Ø220	50	0.5	7.4	4.9	90 ~ 1400	4P
				60			4.5	90 ~ 1700	
90W	5IK90VA-SF	5IK90VGN-SF	3Ø220	50	0.65	9.7	6.5	90 ~ 1400	4P
				60			5.3	90 ~ 1700	
120W	5IK120VA-SF	5IK120VGN-SF	3Ø220	50	0.75	11.5	8.95	90 ~ 1400	4P
				60			7.5	90 ~ 1700	
150W	5IK150VA-SF	5IK150VGN-SF	3Ø220	50	0.95	12.8	10.7	90 ~ 1380	4P
				60			9.5	90 ~ 1680	
180W	5IK180VA-SF	5IK180VGN-SF	3Ø220	50	1.04	13.4	12.3	90 ~ 1350	4P
				60			10.1	90 ~ 1750	
200W	6IK200VA-SF	6IK200VGN-SF	3Ø220	50	1.00	18.5	15.7	90 ~ 1400	4P
				60			13.8	90 ~ 1700	
250W	6IK250VA-SF	6IK250VGN-SF	3Ø220	50	1.13	21.6	17.3	90 ~ 1400	4P
				60			15.7	90 ~ 1700	

#### General Specifications (2 Pole Motor):

Output Power (Watt)	Product Code		AC Voltage (V)	Frequency (Hz)	Current (A)	Starting Torque (Kg.cm)	Rated		Number of Pole (P)
	Round Shaft	Helical Shaft					Torque (Kg.cm)	Rated Speed (RPM)	
60W	5IK60VA-SF-2P		3Ø220	50	0.48	9.6	2	200 ~ 2780	2P
				60			1.7	200 ~ 3280	
90W	5IK90VA-SF-2P		3Ø220	50	0.62	16	3.6	200 ~ 2780	2P
				60			3.2	200 ~ 3280	
120W	5IK120VA-SF-2P		3Ø220	50	0.72	20	4.4	200 ~ 2780	2P
				60			4.1	200 ~ 3280	
150W	5IK150VA-SF-2P		3Ø220	50	0.98	23	5	200 ~ 2720	2P
				60			4.2	200 ~ 3160	
180W	5IK180VA-SF-2P		3Ø220	50	1.17	25	5.5	200 ~ 2720	2P
				60			4.9	200 ~ 3160	

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.



## COMPACT INVERTER

# IGBT SERIES

1 PHASE INVERTER  
WITH 150% OVERLOAD PROTECTION



## COMPACT INVERTER

# IGBT SERIES

1 PHASE INVERTER  
WITH 150% OVERLOAD PROTECTION



MODEL NO	IGBT - K100	IGBT - K200
Motor Rating (maximum)	25W ~ 120W (1/6HP)	25W ~ 250W (1/3 HP)
Rated Output Capacity	0.4kVA	0.6kVA
Rated Output Current	1 Amp	1.5 Amp
Rated Output Voltage	AC 3 Phase 220V (3Ø220V)	
Range of Output Frequency	0.1Hz ~ 400Hz	
Power Source Voltage	AC 1 Phase 200V~240V (1Ø), 50Hz/60Hz	
Input Current	2 Amp	3 Amp
Permissible AC Power Source Fluctuation	200V ~ 240V, 50Hz/60Hz, ± 5%	
Overload Protection	120%   150% of rated output current for 1 minute	
Cooling Method	Self-cooling	
Protection Level	IP20	
Dimension	Body 52 x 127 x 60mm • Mounting Frame: 60 x 100 x 3mm	
Weight	0.4KG	
Options	With Braking Transistor / Without Braking Transistor	
Remark	Product dimension and mounting compatible with US Type Speed Controller (USM71-USM72 / US71-US72)	

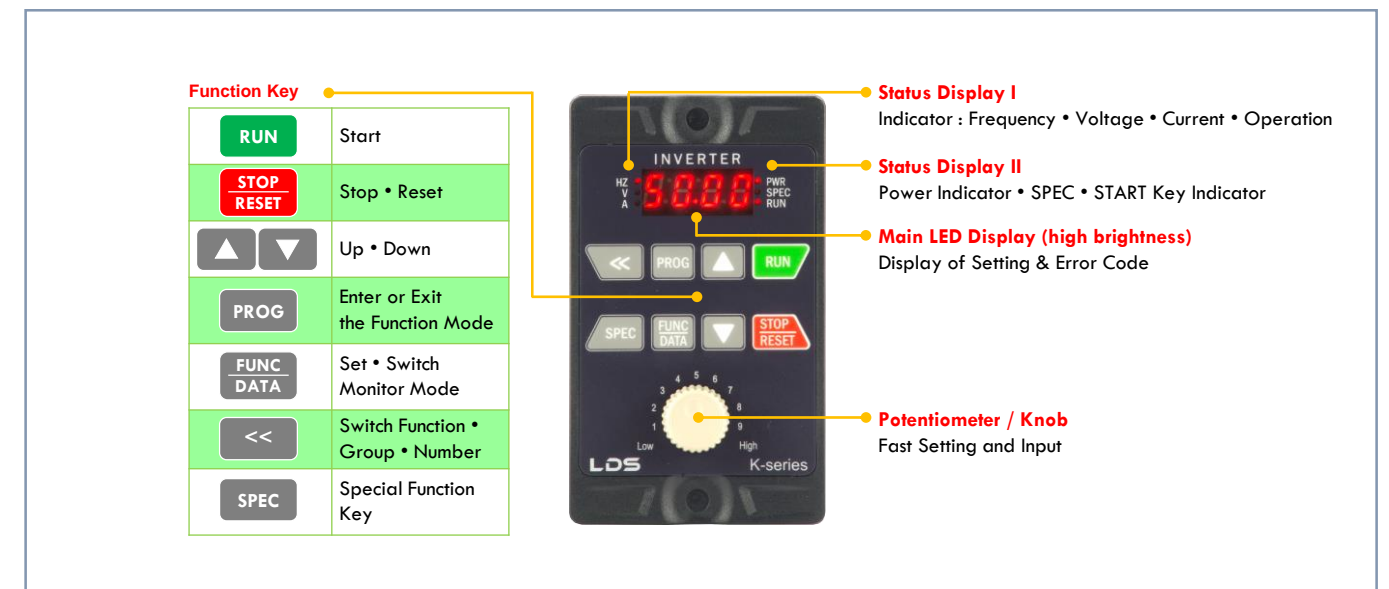
### GENERAL SPECIFICATIONS / CONTROL CHARACTERISTICS

Control Method:	Voltage vector sinusoidal PWM control (V/F control) Switching frequency : 800~16kHz	Other Functions:	Automatic operation for energy-saving • Automatic torque compensation • Automatic adjustment for output voltage stability • Automatic adjustment of switching frequency • Slip compensation / Counter function • Restart after instantaneous power failure • Modbus (RS-485) communication • Over-torque detection • Jump frequency • Setting for upper and lower limits of output frequency • 8-preset speeds • S-curve acceleration & deceleration • Temperature management • Parameters duplication
Frequency Range:	0.1Hz ~ 400.00Hz	Frequency Setting Signal:	Operation panel (including KP-601A keypad): ▲ ▼ Analogue Signal: (DC 0 ~ 10V) / 0~100% Digital Signal: Jog speed, 8-preset speeds Modbus (RS485) Communication
Resolution:	Digital Command : 0.01 Hz • Analogue Command: 0.06Hz / 60Hz	Operation Signal:	Operation panel (including KP-601A keypad): RUN / STOP • Digital Signal: FWD (forward) / REV (reverse) rotation control • Modbus (RS-485) communication
Overload Protection:	150% of rated output current for 1 minute	Multi-Function Inputs:	3 programmable input terminal: X1~X3 • Response time (1~255, unit 1ms) • Refer to the F5.19~F5.21 functions setting description.
DC Braking:	Start/Stop Braking Time: 0 ~ 60.0 second • Stop Braking Frequency : 0.1Hz ~ 60Hz • Braking Ability: 0~150% of rated current	Analogue Inputs:	1 set of analogue input: VI (DC 0 ~ 10V) • Analogue filter (0~255, unit 5ms), the dead band of analogue frequency, gain and bias are adjustable
Braking Torque:	Approximately 20%		
V/F Pattern:	Linear, Energy-Saving mode (automatic adjusting V/F pattern according to the load condition) • Square of 1.5, 1/7 and 2 curves. • V/F pattern (2 V/F points) • Output voltage adjustment of V/F pattern • (Variable voltage adjustment of V/F pattern for acceleration and deceleration).		

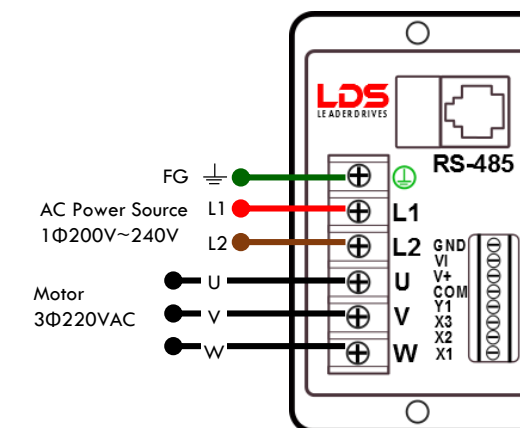
The compact IGBT inverter is especially advantageous for standard application by virtue of its user friendliness. It offers simple and safe operability, energy saving, compact design as well as superior performance. The inverter is use in numerous application such as conveyor drives, feeders, machining tool and door drives. It is compactible with Unit Type AC Speed Controller (US series).

#### Features:

- 120% | 150% Overload Protection.
- Wide speed control range from 0-400Hz by operation panel or speed potentiometer.
- Spec-Key button on panel allows switch of 2 different speeds, forward/reverse operation instantly.
- Acceleration and Deceleration control enables soft-start and soft-stop operation.
- Setting of upper and lower speed limits, DC braking, and counter function.
- Compact design enable panel mounting and space saving.



### MAIN CONTROL CIRCUIT TERMINALS



### PORTABLE KEYPAD



- The keypad
- Enable remote control of the inverter via Modbus (RS485) Communication.
  - Duplication of parameter from Inverter to Inverter.



Acrylic Protective Cover

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement. Comprehensive Product Manual of the Inverter available upon request.



# PRODUCTS

OVERVIEW



**6W**

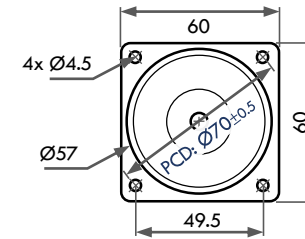
## COMPACT GEAR MOTOR (6W ~ 180W)

 <p>Round-Shaft Electric Motor 2,800 ▫ 1,400 ▫ 900rpm 6W~200W</p>	 <p>Key-Shaft Electric Motor 2,800 ▫ 1,400 ▫ 900rpm 40W~200W</p>	 <p>Induction &amp; Reversible Gear Motor (Capacitor Run) 6W~200W</p>	 <p>Induction Gear Motor (with Flange gearhead &amp; Terminal Box)</p>
 <p>Compact Gear Motor with Decimal Gearhead Gear Ratio 1/300 ~1/2400</p>	 <p>Electro-Magnetic Brake Gear Motor (Brake 220V) 6W~180W</p>	 <p>Clutch &amp; Brake Gear Motor (Clutch &amp; Brake DC24V) 40W~180W</p>	 <p>Hollow Shaft Spiral Bevel Gear Motor 40W~180W</p>
 <p>Variable Speed Gear Motor with Analogue Controller 6W~200W, 1Phase</p>	 <p>Variable Speed Motor with Analogue Controller 6W~200W, 1Phase</p>	 <p>Compact Gear Motor With Compact IGBT Inverter 25W~200W, 1Phase</p>	 <p>Compact Spiral Bevel Gear Motor with Compact IGBT Inverter 40W~180W</p>
 <p>Worm Gear Package Gear reduction ratio 5~80 40W~180W</p>	 <p>Worm Gear Package with Electromagnetic Brake 40W~180W</p>	 <p>Worm Gear Package Gear Reduction Ratio 125~14,400</p>	 <p>Variable Speed Gear Motor with Analogue Controller 40W~180W</p>

## DIMENSION : COMPACT AC MOTOR

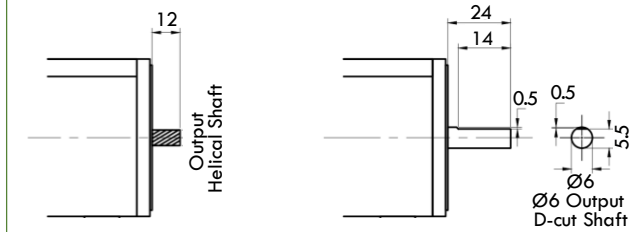
### 1 MOTOR FRAME DIMENSION FOR ALL 6W MOTOR

INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
SPEED CONTROL MOTOR

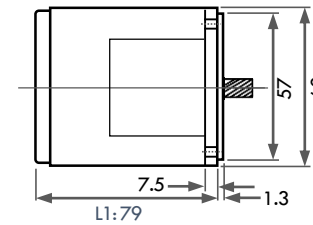


### 2 MOTOR OUTPUT SHAFT TYPE FOR ALL 6W MOTOR

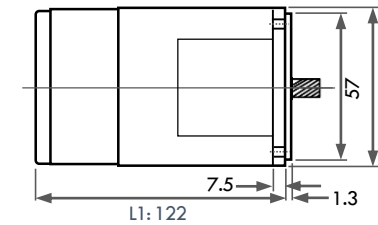
HELICAL-SHAFT (PINION-SHAFT)    OUTPUT ROUND-SHAFT (D-CUT)  
21K6GN-□                                    21K6A-□  
21K6RG-□                                    21K6RA-□  
2RK6GN-□                                    2RK6A-□  
2RK6RG-□                                    2RK6RA-□



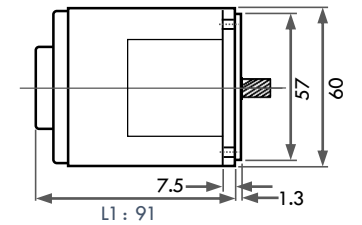
### 3 INDUCTION MOTOR 6W 21K6GN-□ REVERSIBLE MOTOR 6W 2RK6GN-□



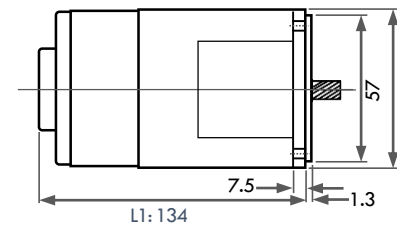
### 4 ELECTROMAGNETIC BRAKE MOTOR 6W 21K6GN-□-B REVERSIBLE BRAKE MOTOR 6W 2RK6GN-□-B



### 5 SPEED CONTROL MOTOR 6W 21K6RG-□ REVERSIBLE SPEED CONTROL MOTOR 6W 2RK6RG-□



### 6 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 6W 21K6RG-□-B REVERSIBLE SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 6W 2RK6RG-□-B



**NOTE:**

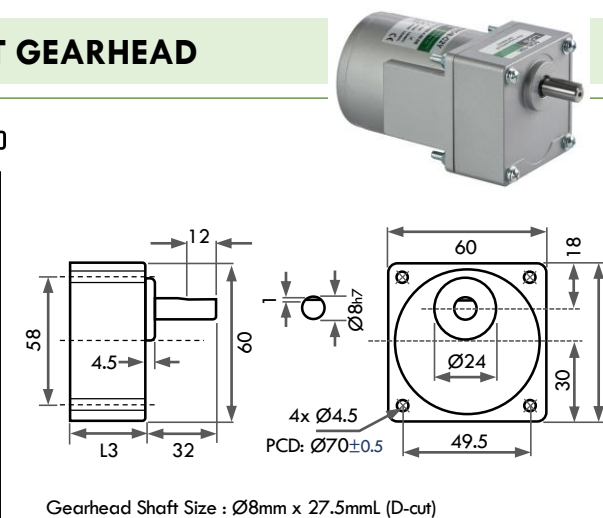
- INPUT VOLTAGE OF ELECTRIC MOTOR
- A : 1PHASE 100V (50/60HZ)
- A2 : 1PHASE 110V (50/60HZ)
- C : 1PHASE 220V (50/60HZ)
- C2 : 1PHASE 240V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR

## DIMENSION : COMPACT GEARHEAD

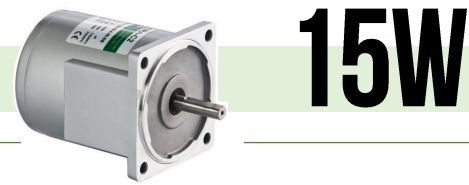
### 7 2GN-K PARALLEL SHAFT GEARHEAD

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
2GN5K ~ 2GN18K	5, 6, 7.5, 9, 12.5, 15, 18	30
2GN3K, 2GN25K ~ 2GN75K	3, 25, 30, 36, 50, 60, 75	35
2GN90K ~ 2GN300K	90, 100, 120, 150, 180, 240, 300	41



Unit of measurement : mm (millimeter)

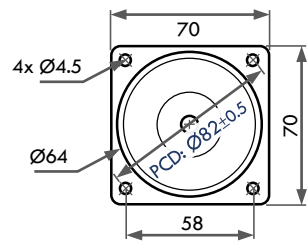
**DIMENSION : COMPACT AC MOTOR**



**15W**

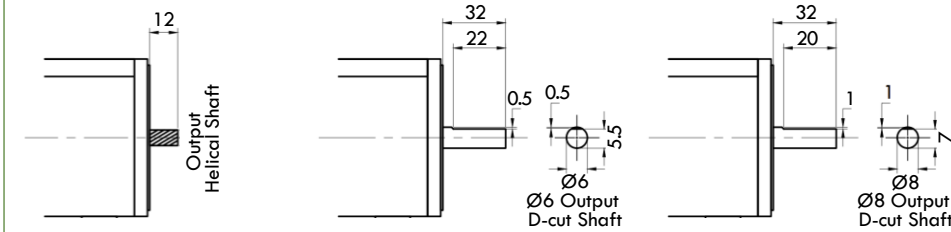
**1 MOTOR FRAME DIMENSION FOR ALL 15W MOTOR**

INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
SPEED CONTROL MOTOR

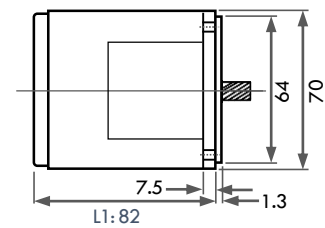


**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 15W MOTOR**

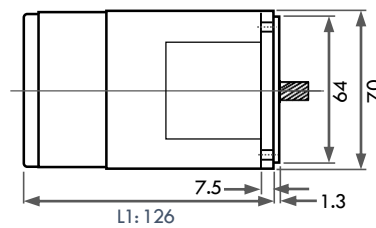
<b>HELICAL-SHAFT (PINION-SHAFT)</b>	<b>OUTPUT ROUND-SHAFT (D-CUT)</b>	<b>OUTPUT ROUND-SHAFT (D-CUT)</b>
3IK15GN-□	3IK15A-□	3IK15A-□-S8
3IK15RGN-□	3IK15RA-□	3IK15RA-□-S8
3RK15GN-□	3RK15A-□	3RK15A-□-S8
3RK15RGN-□	3RK15RA-□	3RK15RA-□-S8



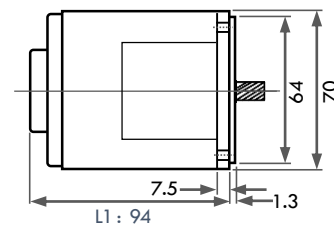
**3 INDUCTION MOTOR 15W**  
3IK15GN-□  
REVERSIBLE MOTOR 15W  
3RK15GN-□



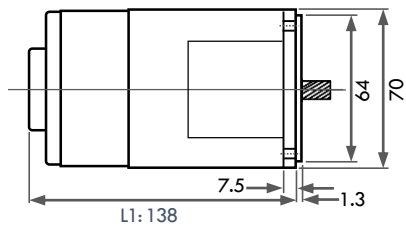
**4 ELECTROMAGNETIC BRAKE MOTOR 15W**  
3IK15GN-□-B  
REVERSIBLE BRAKE MOTOR 15W  
3RK15GN-□-B



**5 SPEED CONTROL MOTOR 15W**  
3IK15RGN-□  
REVERSIBLE SPEED CONTROL MOTOR 15W  
3RK15RGN-□

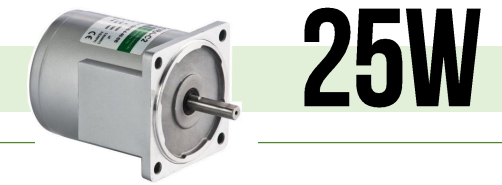


**6 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 15W**  
3IK15RGN-□-B  
REVERSIBLE SPEED CONTROL  
ELECTROMAGNETIC BRAKE MOTOR 15W  
3RK15RGN-□-B



**NOTE:**  
□ INPUT VOLTAGE OF ELECTRIC MOTOR  
A : 1PHASE 100V (50/60HZ)  
A2 : 1PHASE 110V (50/60HZ)  
C : 1PHASE 220V (50/60HZ)  
C2 : 1PHASE 240V (50/60HZ)  
  
L1 : BODY LENGTH OF STANDARD MOTOR

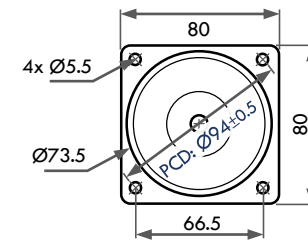
**DIMENSION : COMPACT AC MOTOR**



**25W**

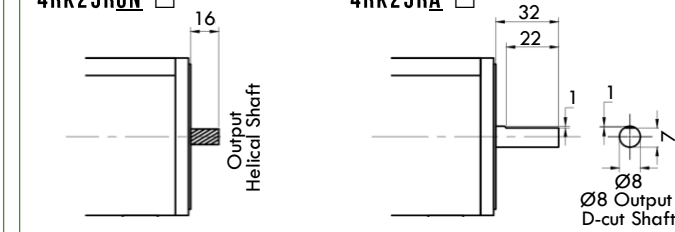
**1 MOTOR FRAME DIMENSION FOR ALL 25W MOTOR**

INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
SPEED CONTROL MOTOR

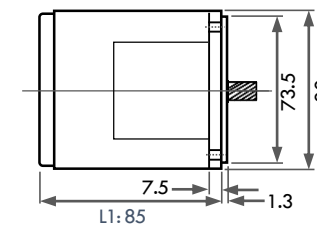


**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 25W MOTOR**

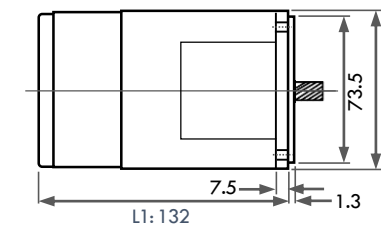
<b>HELICAL-SHAFT (PINION-SHAFT)</b>	<b>OUTPUT ROUND-SHAFT (D-CUT)</b>
4IK25GN-□	4IK25A-□
4IK25RGN-□	4IK25RA-□
4IK25VGN-□	4IK25VA-□
4RK25GN-□	4RK25A-□
4RK25RGN-□	4RK25RA-□



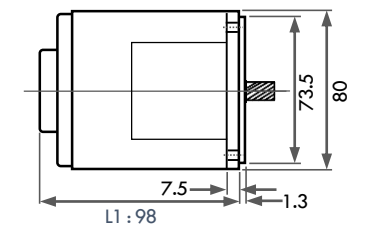
**3 INDUCTION MOTOR 25W**  
4IK25GN-□ / 4IK25VGN-□  
REVERSIBLE MOTOR 25W  
4RK25GN-□



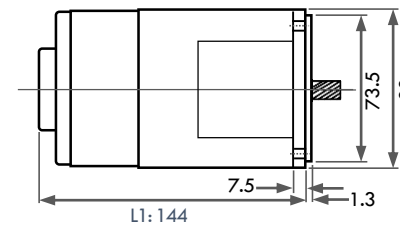
**4 ELECTROMAGNETIC BRAKE MOTOR 25W**  
4IK25GN-□-B / 4IK25VGN-□-B  
REVERSIBLE BRAKE MOTOR 25W  
4RK25GN-□-B



**5 SPEED CONTROL MOTOR 25W**  
4IK25RGN-□  
REVERSIBLE SPEED CONTROL MOTOR 25W  
4RK25RGN-□

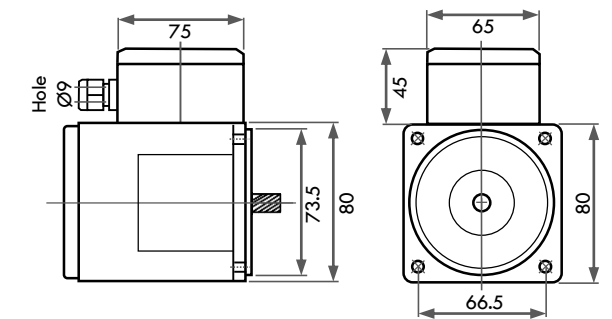


**6 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 25W**  
4IK25RGN-□-B  
REVERSIBLE SPEED CONTROL  
ELECTROMAGNETIC BRAKE MOTOR 25W  
4RK25RGN-□-B



**7 MOTOR WITH TERMINAL BOX (IP44)**

4IK25A-□T  
4IK25GN-□T  
4IK25VGN-□T  
4IK25RA-□T  
4IK25RGN-□T  
4IK25GN-□BT  
4RK25A-□T  
4RK25GN-□T  
4RK25RGN-□T  
4RK25GN-□BT

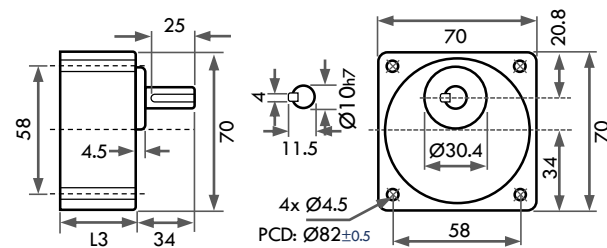


**DIMENSION : COMPACT GEARHEAD**



**7 3GN-K PARALLEL SHAFT GEARHEAD**

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
3GN5K ~ 3GN18K	5, 6, 7.5, 9, 12.5, 15, 18	31
3GN3K, 3GN25K ~ 3GN75K	3, 25, 30, 36, 50, 60, 75	37
3GN90K ~ 3GN240K	90, 100, 120, 150, 180, 240	43



Gearhead Shaft Size : Ø10mm x 27.5mmL (4x4mm Keyway)

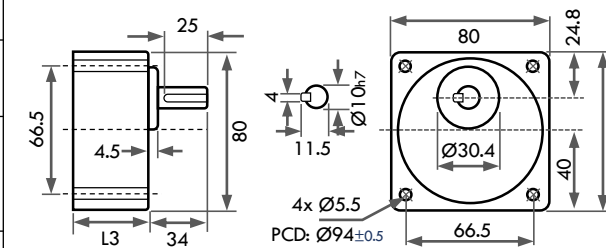
Unit of measurement : mm (millimeter)

**DIMENSION : COMPACT GEARHEAD**



**8 4GN-K PARALLEL SHAFT GEARHEAD**

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
4GN5K ~ 4GN18K	5, 6, 7.5, 9, 12.5, 15, 18	33
4GN3K, 4GN25K ~ 4GN75K	3, 25, 30, 36, 50, 60, 75	40
4GN90K ~ 4GN300K	90, 100, 120, 150, 180, 240, 300	47

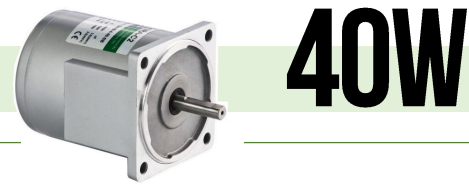


Gearhead Shaft Size : Ø10mm x 27.5mmL (4x4mm Keyway)

**NOTE:**  
□ INPUT VOLTAGE OF ELECTRIC MOTOR  
A : 1PHASE 100V (50/60HZ)  
A2 : 1PHASE 110V (50/60HZ)  
C : 1PHASE 220V (50/60HZ)  
C2 : 1PHASE 240V (50/60HZ)  
S : 3PHASE 220V (50/60HZ)  
S4 : 3PHASE 415V (50/60HZ)  
TQ : 3PHASE 240/415V (50/60HZ)  
U : 3PHASE 220/380V (50/60HZ)  
  
L1 : BODY LENGTH OF STANDARD MOTOR  
Unit of measurement : mm (millimeter)



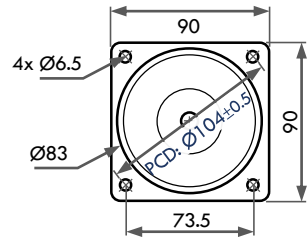
**DIMENSION : COMPACT AC MOTOR**



**40W**

**1 MOTOR FRAME DIMENSION FOR ALL 40W MOTOR**

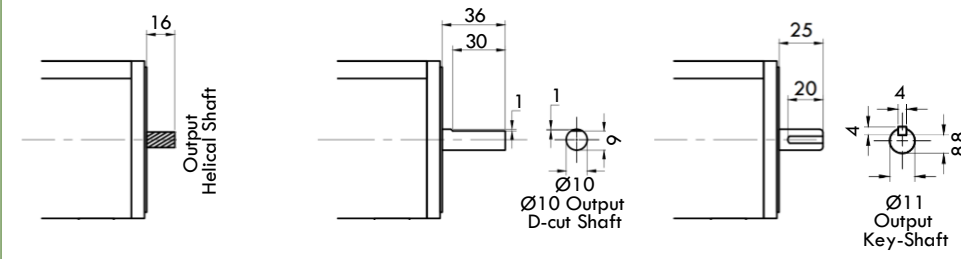
INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
CLUTCH & BRAKE MOTOR  
SPEED CONTROL MOTOR



**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 40W MOTOR**

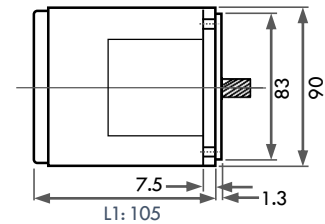
HELICAL-SHAFT (PINION-SHAFT) OUTPUT ROUND-SHAFT (D-CUT) OUTPUT KEY-SHAFT

51K40GN/GX-□ 51K40A-□ 51K40A-□-N  
51K40RGN/RGX-□ 51K40RA-□ 51K40RA-□-N  
51K40VGN/VGX-□ 51K40VA-□ 51K40VA-□-N  
5RK40GN/GX-□ 5RK40A-□ 5RK40A-□-N  
5RK40RGN/RGX-□ 5RK40RA-□ 5RK40RA-□-N



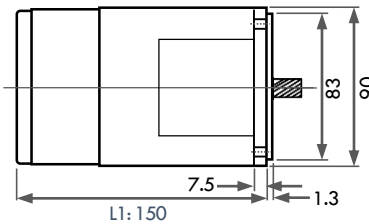
**3 INDUCTION / ASYNCHRONOUS MOTOR 40W**

51K40GN-□ / 51K40VGN-□  
REVERSIBLE MOTOR 40W  
5RK40GN-□



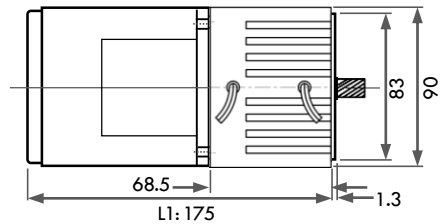
**4 ELECTROMAGNETIC BRAKE MOTOR 40W**

51K40GN-□-B / 51K40VGN-□-B  
REVERSIBLE BRAKE MOTOR 40W  
5RK40GN-□-B



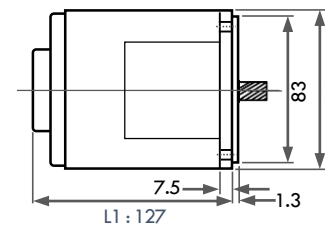
**5 ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 40W**

51K40GB-□ & 5GU-CB  
51K40VGB-□ & 5GU-CB



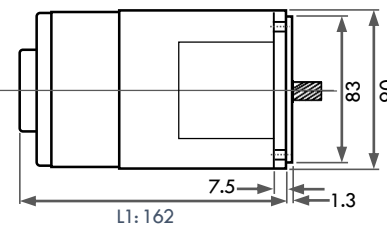
**6 SPEED CONTROL MOTOR 40W**

51K40RGN-□  
REVERSIBLE SPEED CONTROL MOTOR 40W  
5RK40RGN-□



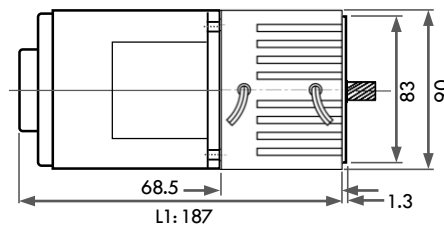
**7 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 40W**

51K40RGN-□-B  
REVERSIBLE SPEED CONTROL  
ELECTROMAGNETIC BRAKE MOTOR 40W  
5RK40RGN-□-B



**8 SPEED CONTROL ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 40W**

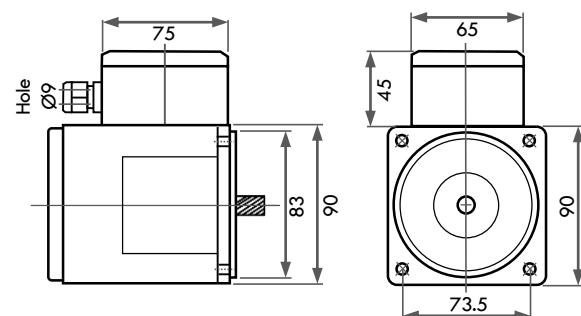
51K40RGB-□ & 5GU-CB



**MOTOR WITH TERMINAL BOX**

**9 MOTOR WITH TERMINAL BOX (IP44)**

51K40A-□T 5RK40A-□T  
51K40GN-□T 5RK40GN-□T  
51K40GX-□T 5RK40GX-□T  
51K40GB-□T 5RK40GB-□T  
51K40VGN-□T 5RK40VGN-□T  
51K40RGN-□T 5RK40RGN-□T  
51K40RGX-□T 5RK40RGX-□T  
51K40RGN-□BT 5RK40RGN-□BT  
51K40GX-□BT 5RK40GX-□BT  
51K40GB-□BT 5RK40GB-□BT



**NOTE:**

- INPUT VOLTAGE OF ELECTRIC MOTOR
- A : 1PHASE 100V (50/60HZ)
- A2 : 1PHASE 110V (50/60HZ)
- C : 1PHASE 220V (50/60HZ)
- C2 : 1PHASE 240V (50/60HZ)
- S : 3PHASE 220V (50/60HZ)
- S4 : 3PHASE 415V (50/60HZ)
- TQ : 3PHASE 240/415V (50/60HZ)
- U : 3PHASE 220/380V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR

Unit of measurement : mm (millimeter)

**DIMENSION : COMPACT GEARHEAD**

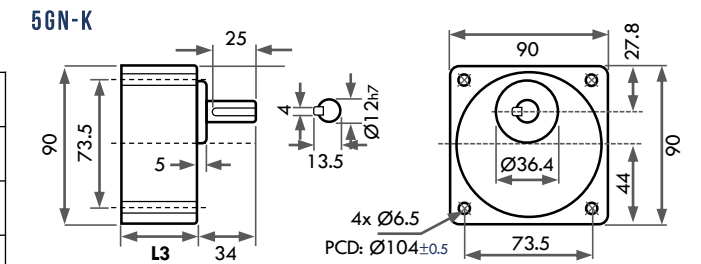
**40W**



MOTOR WITH PARALLEL SHAFT GEARHEAD 5GN-K  
MOTOR WITH DECIMAL GEAR (DOUBLE REDUCTION GEARHEAD) 5GN10X + 5GU-KB  
MOTOR WITH RIGHT ANGLE WORM GEARHEAD DMRV030 (8MRV030)  
MOTOR WITH WORM GEARHEAD (DOUBLE REDUCTION GEARHEAD) 5GN-K-N + 8MRV030  
MOTOR WITH RIGHT ANGLE SPIRAL BEVEL GEARHEAD 5GU-RH

**10 5GN-K PARALLEL SHAFT GEARHEAD**

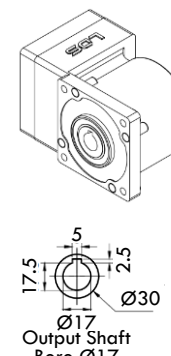
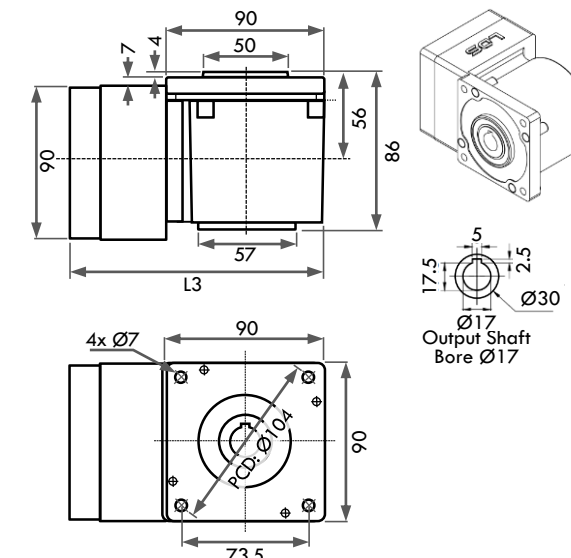
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
<b>SINGLE GEARHEAD</b>		
5GN3K ~ 5GN18K	3, 5, 6, 7.5, 9, 12.5, 15, 18	43
5GN25K ~ 5GN75K	25, 30, 36, 50, 60, 75	51
5GN90K ~ 5GN240K	90, 100, 120, 150, 180, 240	60
<b>DOUBLE GEARHEAD</b>		
5GN30K ~ 5GN75K (COUPLE WITH 5GN10X)	300, 360, 500, 600, 750	104
5GN90K ~ 5GN240K (COUPLE WITH 5GN10X)	900, 1000, 1200, 1500, 1800, 2400	113



Gearhead Shaft Size : Ø12mm x 29mm (4x4mm Keyway)

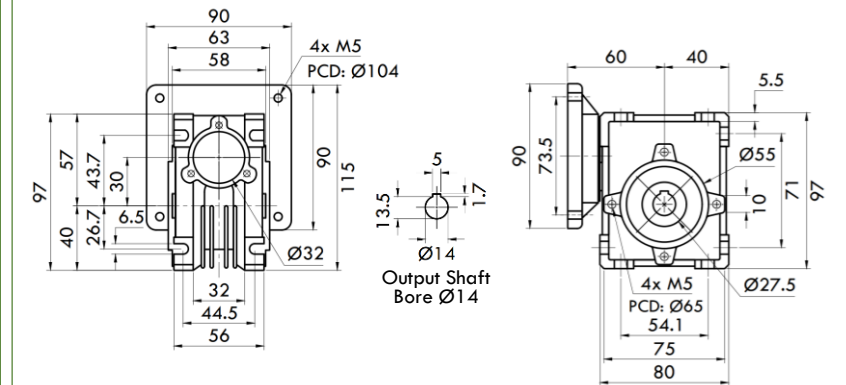
**11 5GU-RH HOLLOW SHAFT SPIRAL BEVEL GEARHEAD**

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
5GU9RH ~ 5GU225RH (SINGLE REDUCTION)	9, 15, 18, 22.5, 27, 37.5, 45, 54, 75, 90, 108, 150, 180, 225	145
5GU27RH ~ 5GU225RH + 5GX10X (DOUBLE REDUCTION)	270, 375, 450, 540, 750, 900, 1080, 1500, 1800, 2250 (COUPLED WITH DECIMAL GEAR)	198



**12 8MRV030-CM09 DMRV030-CM09 HOLLOW SHAFT WORM GEARHEAD**

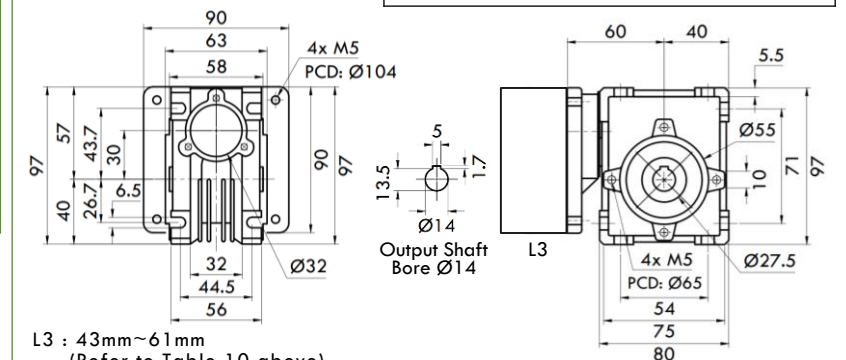
PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-5-CM09 ~ 8MRV030-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



Output Shaft Bore Ø14

**13 8MRV030-C609 DMRV030-C609 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-C609 + 5GN-K-N	100, 135, 150, 180, 225, 270 ~ 19,200 (COUPLED WITH PARALLEL SHAFT GEARHEAD)



L3 : 43mm~61mm (Refer to Table 10 above)

Unit of measurement : mm (millimeter)

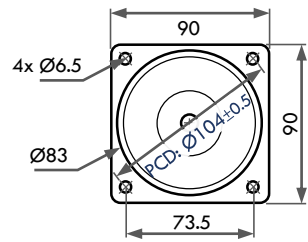
**DIMENSION : COMPACT AC MOTOR**



**60W**

**1 MOTOR FRAME DIMENSION FOR ALL 60W MOTOR**

INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
CLUTCH & BRAKE MOTOR  
SPEED CONTROL MOTOR

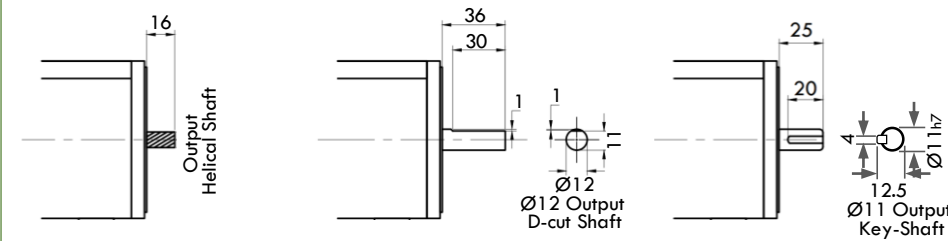


**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 60W MOTOR**

**HELICAL-SHAFT (PINION-SHAFT)**  
51K60GN/GX-□F  
51K60RGN/RGX-□F  
51K60VGN/VGX-□F  
5RK60GN/GX-□F  
5RK60RGN/RGX-□F

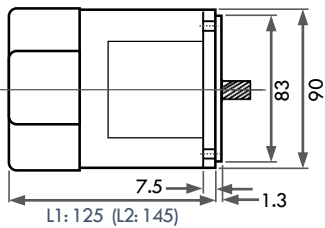
**OUTPUT ROUND-SHAFT (D-CUT)**  
51K60A-□F  
51K60RA-□F  
51K60VA-□F  
5RK60A-□F  
5RK60RA-□F

**OUTPUT KEY-SHAFT**  
51K60A-□F-N  
51K60RA-□F-N  
51K90VA-□F-N  
5RK60A-□F-N  
5RK60RA-□F-N



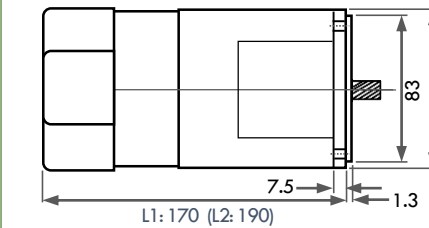
**3 INDUCTION / ASYNCHRONOUS MOTOR 60W**

51K60GN-□F / 51K60VGN-□F  
REVERSIBLE MOTOR 60W  
5RK60GN-□F



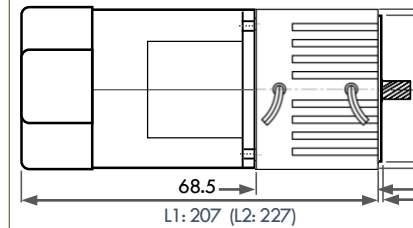
**4 ELECTROMAGNETIC BRAKE MOTOR 60W**

51K60GN-□F-B / 51K60VGN-□F-B  
REVERSIBLE BRAKE MOTOR 60W  
5RK60GN-□F-B



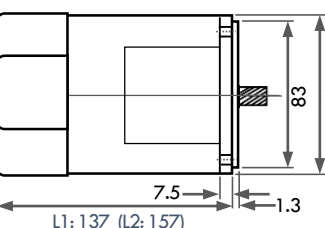
**5 ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 60W**

51K60GB-□F & 5GU-CB  
51K60VGB-□F & 5GU-CB



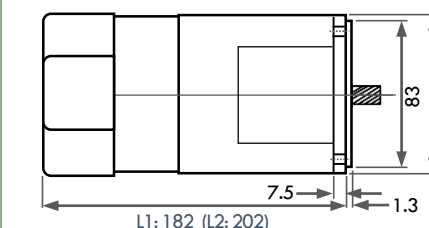
**6 SPEED CONTROL MOTOR 60W**

51K60RGN-□F  
REVERSIBLE SPEED CONTROL MOTOR 60W  
5RK60RGN-□F



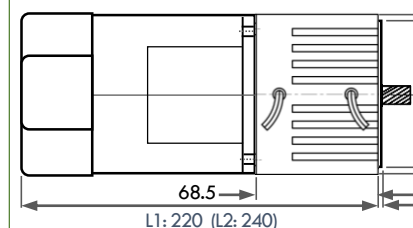
**7 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 60W**

51K60RGN-□F-B  
REVERSIBLE SPEED CONTROL  
ELECTROMAGNETIC BRAKE MOTOR 60W  
5RK60RGN-□F-B



**8 SPEED CONTROL ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 60W**

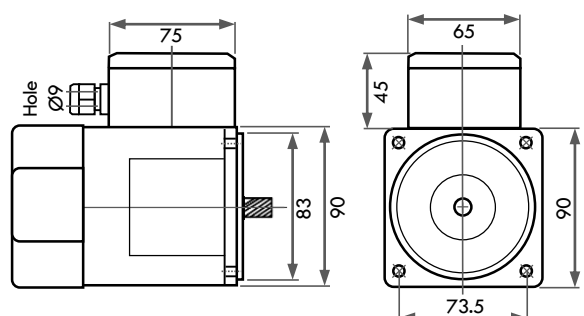
51K60RGB-□F & 5GU-CB



**MOTOR WITH TERMINAL BOX**

**9 MOTOR WITH TERMINAL BOX (IP44)**

51K60A-□FT 5RK60A-□FT  
51K60GN-□FT 5RK60GN-□FT  
51K60GX-□FT 5RK60GX-□FT  
51K60GB-□FT 5RK60GB-□FT  
51K60VGN-□FT 5RK60VGN-□FT  
51K60RGN-□FT 5RK60RGN-□FT  
51K60RGX-□FT 5RK60RGX-□FT  
51K60RGB-□FT 5RK60RGB-□FT  
51K60GN-□FBT 5RK60GN-□FBT  
51K60GX-□FBT 5RK60GX-□FBT  
51K60GB-□FBT 5RK60GB-□FBT



**NOTE:**  
□ INPUT VOLTAGE OF ELECTRIC MOTOR  
A : 1PHASE 100V (50/60HZ)  
A2 : 1PHASE 110V (50/60HZ)  
C : 1PHASE 220V (50/60HZ)  
C2 : 1PHASE 240V (50/60HZ)  
S : 3PHASE 220V (50/60HZ)  
S4 : 3PHASE 415V (50/60HZ)  
TQ : 3PHASE 240/415V (50/60HZ)  
U : 3PHASE 220/380V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR  
L2 : BODY LENGTH OF MOTOR WITH  
COACTIVE POWERFUL COOLING FAN (+20)

Unit of measurement : mm (millimeter)

**DIMENSION : COMPACT GEARHEAD**

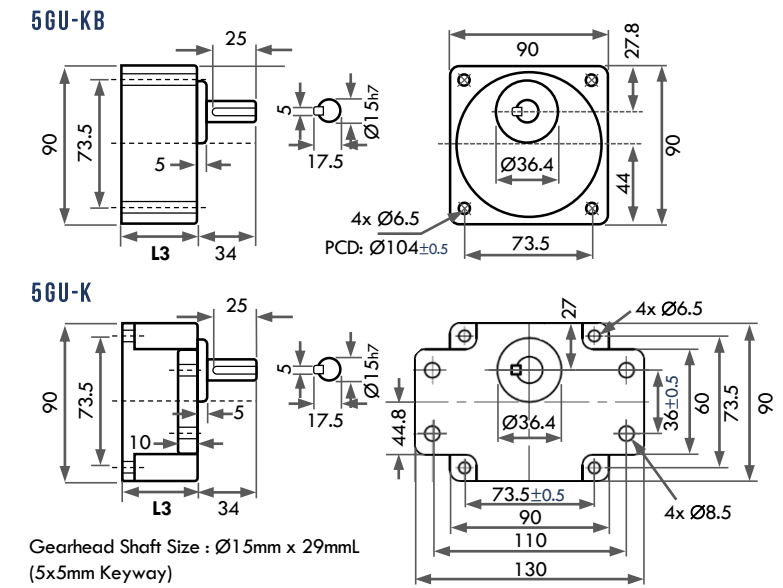
**60W**



MOTOR WITH PARALLEL SHAFT GEARHEAD 5GU-KB  
MOTOR WITH TERMINAL BOX AND HINGE TYPE GEARHEAD 5GU-K  
CLUTCH & BRAKE MOTOR WITH PARALLEL SHAFT GEARHEAD AND CO-ACTIVE POWERFUL COOLING FAN  
MOTOR WITH WORM GEARHEAD (DOUBLE REDUCTION GEARHEAD) 5GN-K-N + 8MRV030  
MOTOR WITH RIGHT ANGLE SPIRAL BEVEL GEARHEAD 5GU-RH

**10 5GU-KB PARALLEL SHAFT GEARHEAD (SQUARE GEARBOX)  
5GU-K PARALLEL SHAFT GEARHEAD (HINGE TYPE GEARBOX)**

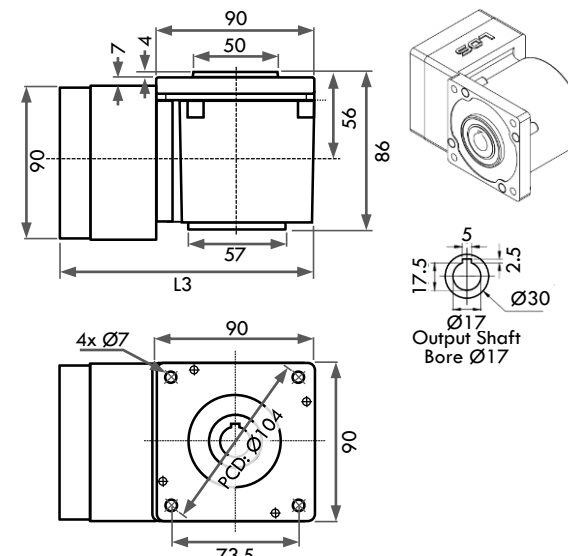
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
<b>SINGLE GEARHEAD</b>		
5GU3KB ~ 5GU18KB	3, 5, 6, 7.5, 9, 12.5, 15, 18	43
5GU25KB ~ 5GU75KB	25, 30, 36, 50, 60, 75	51
5GU90KB ~ 5GU240KB	90, 100, 120, 150, 180, 240	60
5GU3K ~ 5GU75K	3, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75	51
5GU90K ~ 5GU240K	90, 100, 120, 150, 180, 240	60
<b>DOUBLE GEARHEAD</b>		
5GU30KB ~ 5GU75KB + (COUPLE WITH 5GU10X)	300, 360, 500, 600, 750	104
5GU90KB ~ 5GU240KB (COUPLE WITH 5GU10X)	900, 1000, 1200, 1500, 1800, 2400	113



Gearhead Shaft Size : Ø15mm x 29mmL  
(5x5mm Keyway)

**11 5GU-RH HOLLOW SHAFT SPIRAL BEVEL GEARHEAD**

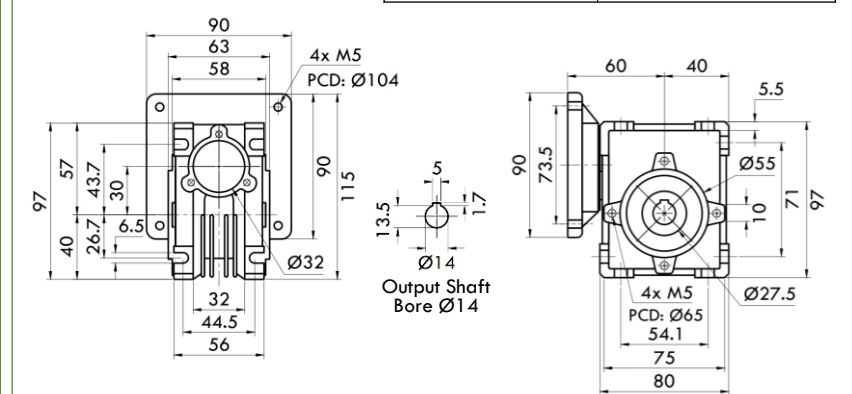
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
5GU9RH ~ 5GU225RH (SINGLE REDUCTION)	9, 15, 18, 22.5, 27, 37.5, 45, 54, 75, 90, 108, 150, 180, 225	145
5GU27RH ~ 5GU225RH + 5GX10X (DOUBLE REDUCTION)	270, 375, 450, 540, 750, 900, 1080, 1500, 1800, 2250 (COUPLED WITH DECIMAL GEAR)	198



Unit of measurement : mm (millimeter)

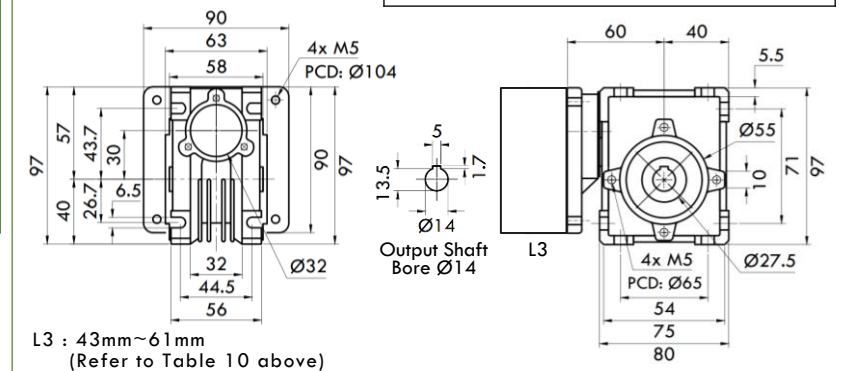
**12 8MRV030-CM09 DMRV030-CM09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-5-CM09 ~ 8MRV030-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



**13 8MRV030-CG09 DMRV030-CG09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-CG09 + 5GN-K-N (COUPLED WITH PARALLEL SHAFT GEARHEAD)	100, 135, 150, 180, 225, 270 ~ 19,200



L3 : 43mm~61mm (Refer to Table 10 above)

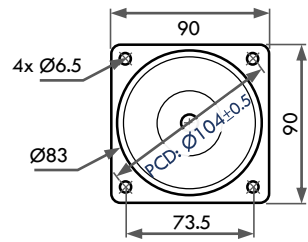


**DIMENSION : COMPACT AC MOTOR**

**90W**

**1 MOTOR FRAME DIMENSION FOR ALL 90W MOTOR**

INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
CLUTCH & BRAKE MOTOR  
SPEED CONTROL MOTOR

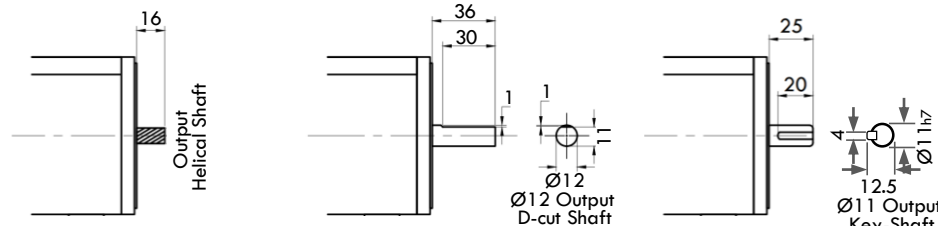


**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 90W MOTOR**

**HELICAL-SHAFT (PINION-SHAFT)**  
51K90GN/GX-□F  
51K90RGN/RGX-□F  
51K90VGN/VGX-□F  
5RK90GN/GX-□F  
5RK90RGN/RGX-□F

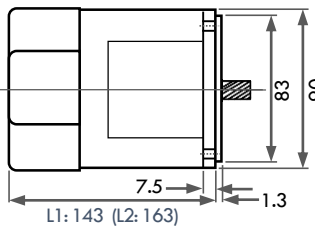
**OUTPUT ROUND-SHAFT (D-CUT)**  
51K90A-□F  
51K90RA-□F  
51K90VA-□F  
5RK90A-□F  
5RK90RA-□F

**OUTPUT KEY-SHAFT**  
51K90A-□F-N  
51K90RA-□F-N  
51K90VA-□F-N  
5RK90A-□F-N  
5RK90RA-□F-N

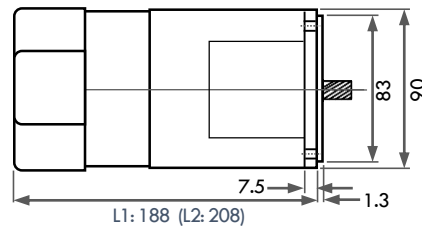


Note : Ø12mmx35mmL output key-shaft available upon request

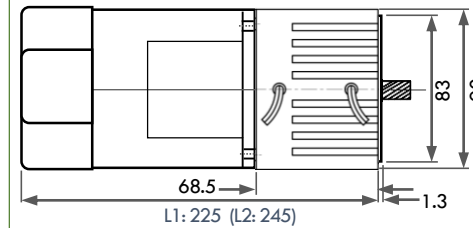
**3 INDUCTION / ASYNCHRONOUS MOTOR 90W**  
51K90GN-□F / 51K90VGN-□F  
REVERSIBLE MOTOR 90W  
5RK90GN-□F



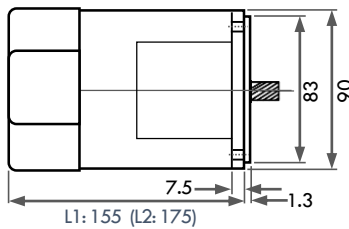
**4 ELECTROMAGNETIC BRAKE MOTOR 90W**  
51K90GN-□F-B / 51K90VGN-□F-B  
REVERSIBLE BRAKE MOTOR 90W  
5RK90GN-□F-B



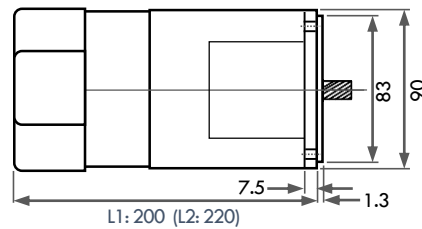
**5 ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 90W**  
51K90GB-□F & 5GU-CB  
51K90VGB-□F & 5GU-CB



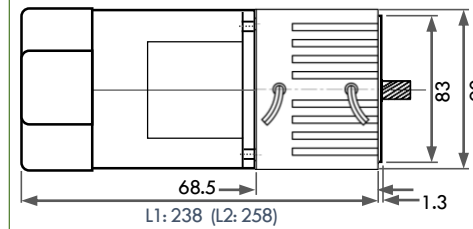
**6 SPEED CONTROL MOTOR 90W**  
51K90RGN-□F  
REVERSIBLE SPEED CONTROL MOTOR 90W  
5RK90RGN-□F



**7 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 90W**  
51K90RGN-□F-B  
REVERSIBLE SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 90W  
5RK90RGN-□F-B



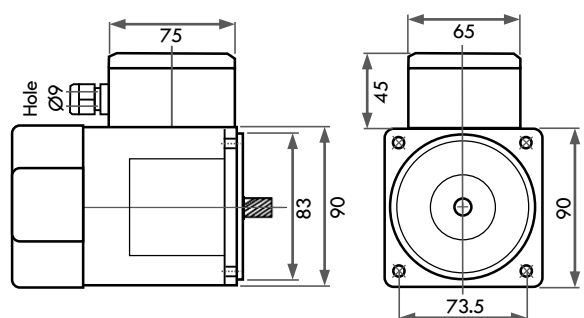
**8 SPEED CONTROL ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 90W**  
51K90RGN-□F & 5GU-CB



**MOTOR WITH TERMINAL BOX**

**9 MOTOR WITH TERMINAL BOX (IP44)**

51K90A-□FT 5RK90A-□FT  
51K90GN-□FT 5RK90GN-□FT  
51K90GX-□FT 5RK90GX-□FT  
51K90GB-□FT 5RK90GB-□FT  
51K90VGN-□FT 5RK90VGN-□FT  
51K90RGN-□FT 5RK90RGN-□FT  
51K90RGX-□FT 5RK90RGX-□FT  
51K90RGN-□FT 5RK90RGN-□FT  
51K90GN-□FBT 5RK90GN-□FBT  
51K90GX-□FBT 5RK90GX-□FBT  
51K90GB-□FBT 5RK90GB-□FBT



**NOTE:**

- INPUT VOLTAGE OF ELECTRIC MOTOR
- A : 1PHASE 100V (50/60HZ)
- A2 : 1PHASE 110V (50/60HZ)
- C : 1PHASE 220V (50/60HZ)
- C2 : 1PHASE 240V (50/60HZ)
- S : 3PHASE 220V (50/60HZ)
- S4 : 3PHASE 415V (50/60HZ)
- TQ : 3PHASE 240/415V (50/60HZ)
- U : 3PHASE 220/380V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR  
L2 : BODY LENGTH OF MOTOR WITH COACTIVE POWERFUL COOLING FAN (+20)

Unit of measurement : mm (millimeter)

**DIMENSION : COMPACT GEARHEAD**

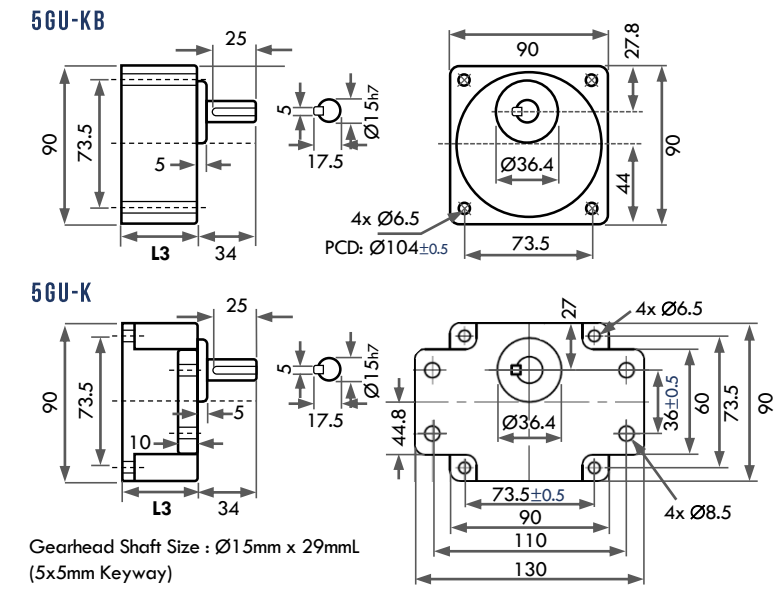
**90W**



MOTOR WITH PARALLEL SHAFT GEARHEAD 5GU-KB  
ELECTROMAGNETIC BRAKE MOTOR WITH PARALLEL SHAFT GEARHEAD AND CO-ACTIVE POWERFUL COOLING FAN  
MOTOR WITH RIGHT ANGLE WORM GEARHEAD DMRV030  
MOTOR WITH WORM GEARHEAD (DOUBLE REDUCTION GEARHEAD) 5GN-K-N + 8MRV040-CG09  
MOTOR WITH RIGHT ANGLE SPIRAL BEVEL GEARHEAD 5GU-RH

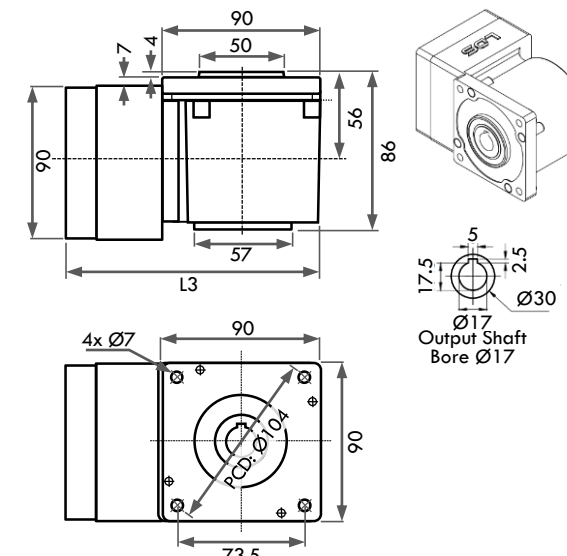
**10 5GU-KB PARALLEL SHAFT GEARHEAD (SQUARE GEARBOX)**  
5GU-K PARALLEL SHAFT GEARHEAD (HINGE TYPE GEARBOX)

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
<b>SINGLE GEARHEAD</b>		
5GU3KB ~ 5GU18KB	3, 5, 6, 7.5, 9, 12.5, 15, 18	43
5GU25KB ~ 5GU75KB	25, 30, 36, 50, 60, 75	51
5GU90KB ~ 5GU240KB	90, 100, 120, 150, 180, 240	60
5GU3K ~ 5GU75K	3, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75	51
5GU90K ~ 5GU240K	90, 100, 120, 150, 180, 240	60
<b>DOUBLE GEARHEAD</b>		
5GU30KB ~ 5GU75KB + (COUPLE WITH 5GU10X)	300, 360, 500, 600, 750	104
5GU90KB ~ 5GU240KB (COUPLE WITH 5GU10X)	900, 1000, 1200, 1500, 1800, 2400	113



**11 5GU-RH HOLLOW SHAFT SPIRAL BEVEL GEARHEAD**

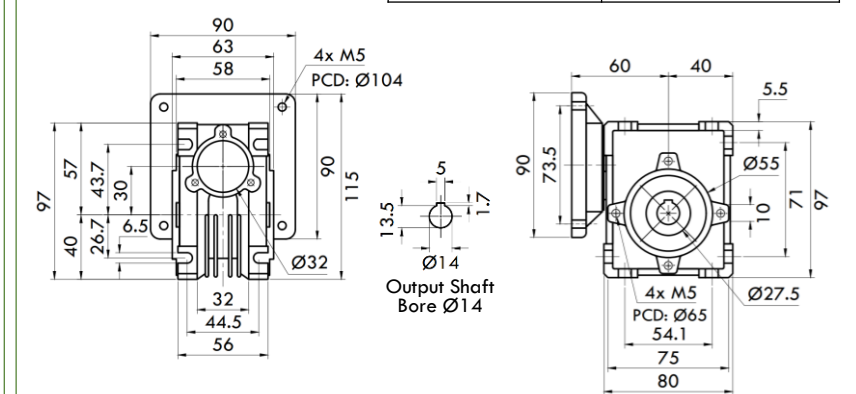
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
5GU9RH ~ 5GU225RH (SINGLE REDUCTION)	9, 15, 18, 22.5, 27, 37.5, 45, 54, 75, 90, 108, 150, 180, 225	145
5GU27RH ~ 5GU225RH + 5GX10X (DOUBLE REDUCTION)	270, 375, 450, 540, 750, 900, 1080, 1500, 1800, 2250 (COUPLED WITH DECIMAL GEAR)	198



Unit of measurement : mm (millimeter)

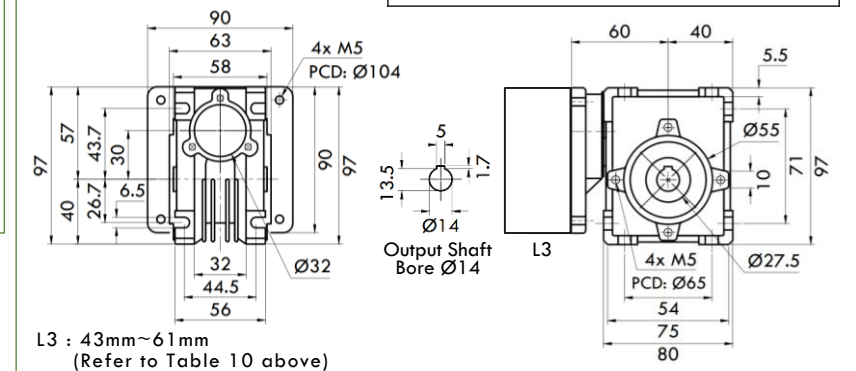
**12 8MRV030-CM09 DMRV030-CM09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-5-CM09 ~ 8MRV030-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



**13 8MRV030-CG09 DMRV030-CG09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-CG09 + 5GN-K-N (COUPLED WITH PARALLEL SHAFT GEARHEAD)	100, 135, 150, 180, 225, 270 ~ 19,200



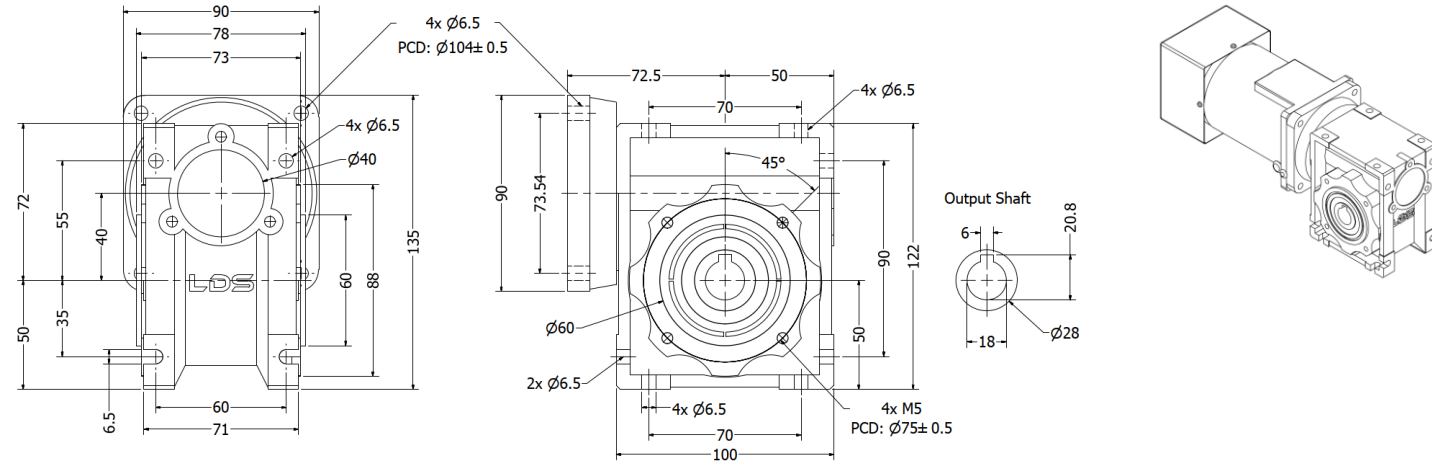
L3 : 43mm~61mm (Refer to Table 10 above)

**DIMENSION : COMPACT AC MOTOR**

**90W**

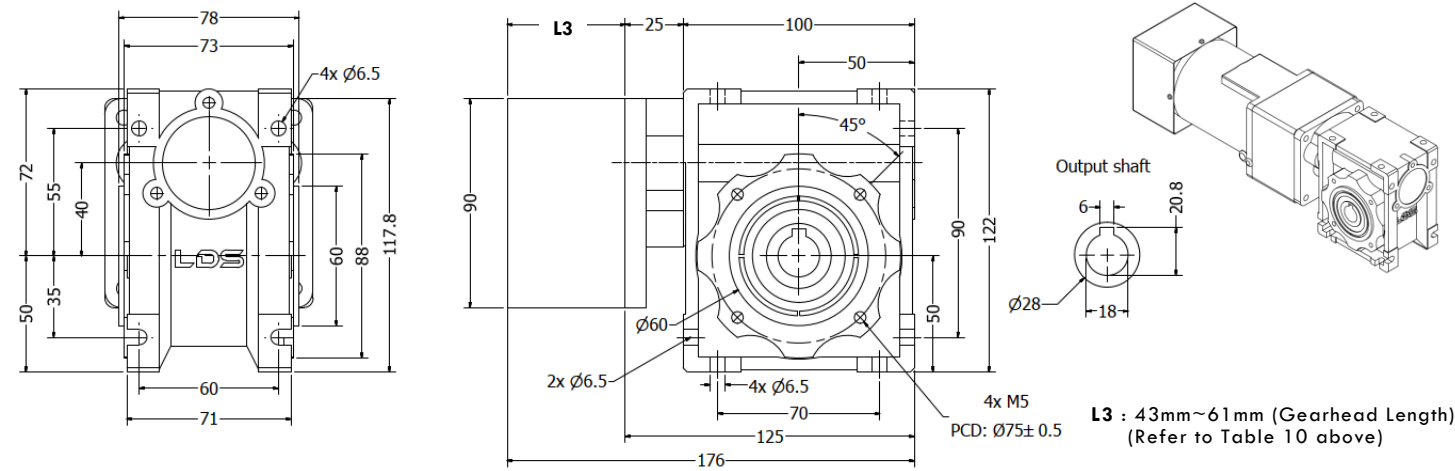
**14 8MRV040-CM09 & DMRS040-CM09  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-5-CM09 ~ 8MRV040-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



**15 8MRV040-CG09 & 56N~K-N & DMRS040-CG09 & 56N~K-N  
HOLLOW SHAFT WORM GEARHEAD**

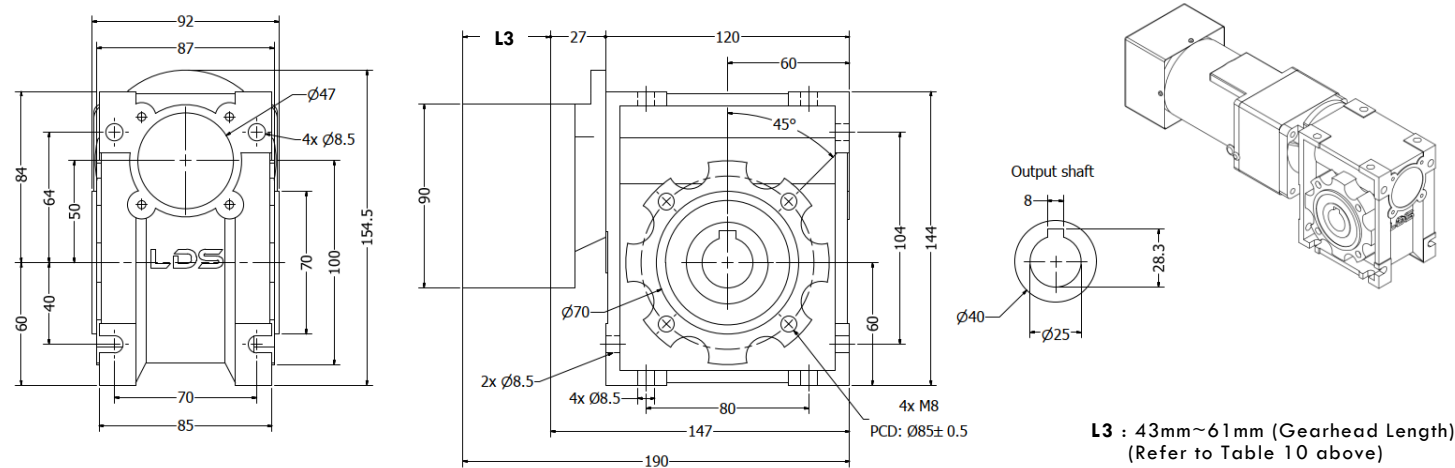
PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-15-CG09 & 56N-K-N ~ 8MRV040-80-CG09 & 56N-K-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 19,200



L3 : 43mm~61mm (Gearhead Length)  
(Refer to Table 10 above)

**16 8MRV050-CG09 & 56U~KB-N & DMRS050-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV050-15-CG09 & 56U-KB-N ~ 8MRV050-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000



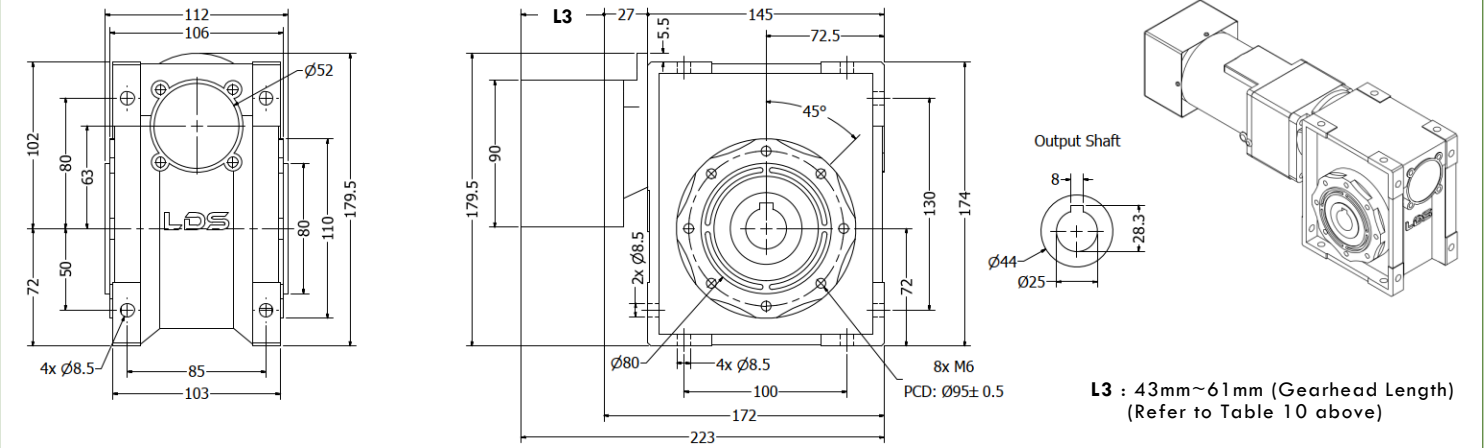
L3 : 43mm~61mm (Gearhead Length)  
(Refer to Table 10 above)

**DIMENSION : COMPACT AC MOTOR**

**90W**

**17 8MRV063-CG09 & 56U~KB-N & DMRS063-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

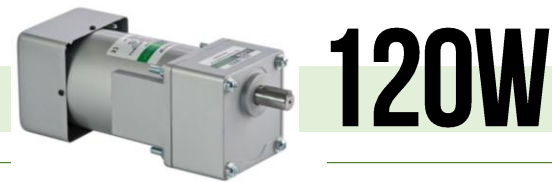
PRODUCT CODE	GEAR RATIO (1/X)
8MRV063-15-CG09 & 56U-KB-N ~ 8MRV063-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000



L3 : 43mm~61mm (Gearhead Length)  
(Refer to Table 10 above)



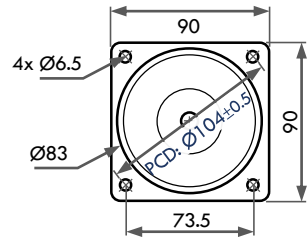
**DIMENSION : COMPACT AC MOTOR**



**120W**

**1 MOTOR FRAME DIMENSION FOR ALL 120W MOTOR**

INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
CLUTCH & BRAKE MOTOR  
SPEED CONTROL MOTOR

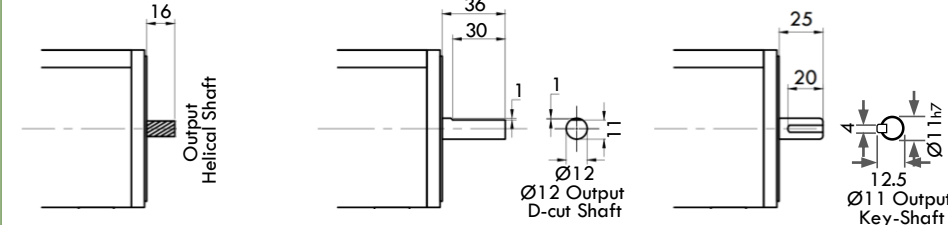


**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 120W MOTOR**

**HELICAL-SHAFT (PINION-SHAFT)**  
5IK120GN/GX-□F  
5IK120RGN/RGX-□F  
5IK120VGN/VGX-□F  
5RK120GN/GX-□F  
5RK120RGN/RGX-□F

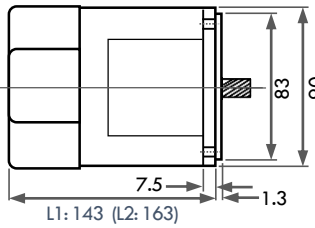
**OUTPUT ROUND-SHAFT (D-CUT)**  
5IK120A-□F  
5IK120RA-□F  
5IK120VA-□F  
5RK120A-□F  
5RK120RA-□F

**OUTPUT KEY-SHAFT**  
5IK120A-□F-N  
5IK120RA-□F-N  
5IK120VA-□F-N  
5RK120A-□F-N  
5RK120RA-□F-N

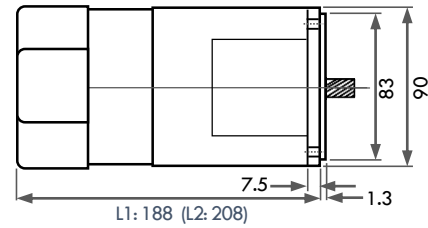


Note : Ø12mmx35mmL output key-shaft available upon request

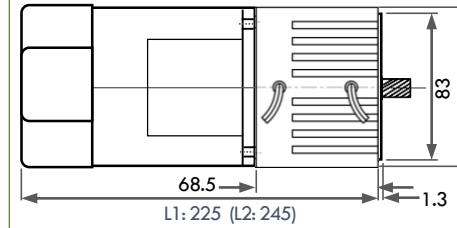
**3 INDUCTION / ASYNCHRONOUS MOTOR 120W**  
5IK120GN-□F / 5IK120VGN-□F  
REVERSIBLE MOTOR 120W  
5RK120GN-□F



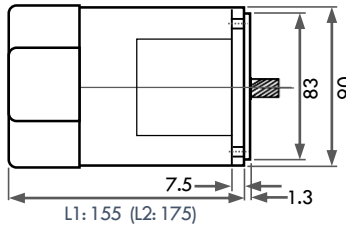
**4 ELECTROMAGNETIC BRAKE MOTOR 120W**  
5IK120GN-□F-B / 5IK120VGN-□F-B  
REVERSIBLE BRAKE MOTOR 120W  
5RK120GN-□F-B



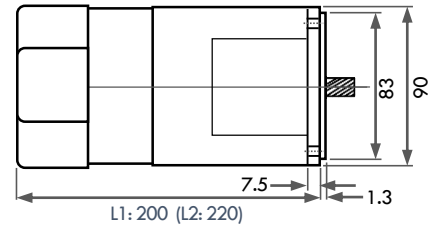
**5 ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 120W**  
5IK120GB-□F & 5GU-CB  
5IK120VGB-□F & 5GU-CB



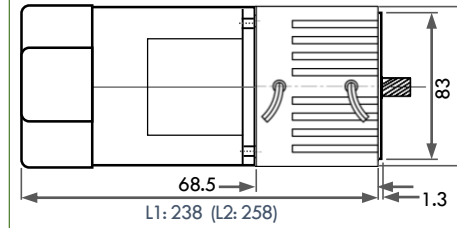
**6 SPEED CONTROL MOTOR 120W**  
5IK120RGN-□F  
REVERSIBLE SPEED CONTROL MOTOR 120W  
5RK120RGN-□F



**7 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 120W**  
5IK120RGN-□F-B  
REVERSIBLE SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 120W  
5RK120RGN-□F-B



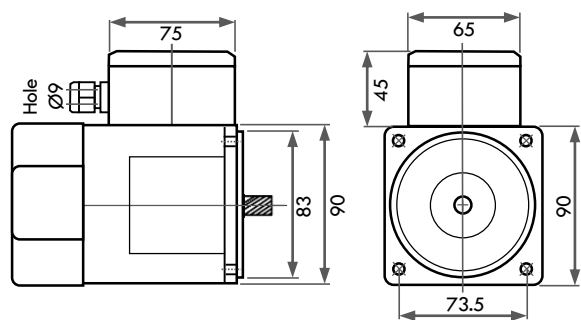
**8 SPEED CONTROL ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 120W**  
5IK120RGN-□F & 5GU-CB



**MOTOR WITH TERMINAL BOX**

**9 MOTOR WITH TERMINAL BOX (IP44)**

5IK120A-□FT 5RK120A-□FT  
5IK120GN-□FT 5RK120GN-□FT  
5IK120GX-□FT 5RK120GX-□FT  
5IK120GB-□FT 5RK120GB-□FT  
5IK120RGN-□FT 5RK120RGN-□FT  
5IK120RGX-□FT 5RK120RGX-□FT  
5IK120RGN-□FT 5RK120RGN-□FT  
5IK120RGN-□FT 5RK120RGN-□FT  
5IK120GN-□FT 5RK120GN-□FT  
5IK120GX-□FT 5RK120GX-□FT  
5IK120GB-□FT 5RK120GB-□FT



**NOTE:**

- INPUT VOLTAGE OF ELECTRIC MOTOR
- A : 1PHASE 100V (50/60HZ)
- A2 : 1PHASE 110V (50/60HZ)
- C : 1PHASE 220V (50/60HZ)
- C2 : 1PHASE 240V (50/60HZ)
- S : 3PHASE 220V (50/60HZ)
- S4 : 3PHASE 415V (50/60HZ)
- TQ : 3PHASE 240/415V (50/60HZ)
- U : 3PHASE 220/380V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR  
L2 : BODY LENGTH OF MOTOR WITH COACTIVE POWERFUL COOLING FAN (+20)

Unit of measurement : mm (millimeter)

**DIMENSION : COMPACT GEARHEAD**

**120W**



MOTOR WITH TERMINAL BOX AND HINGE TYPE GEARHEAD  
5GU-K

MOTOR WITH DECIMAL GEAR (DOUBLE REDUCTION GEARHEAD)  
5GU10X + 5GU-KB

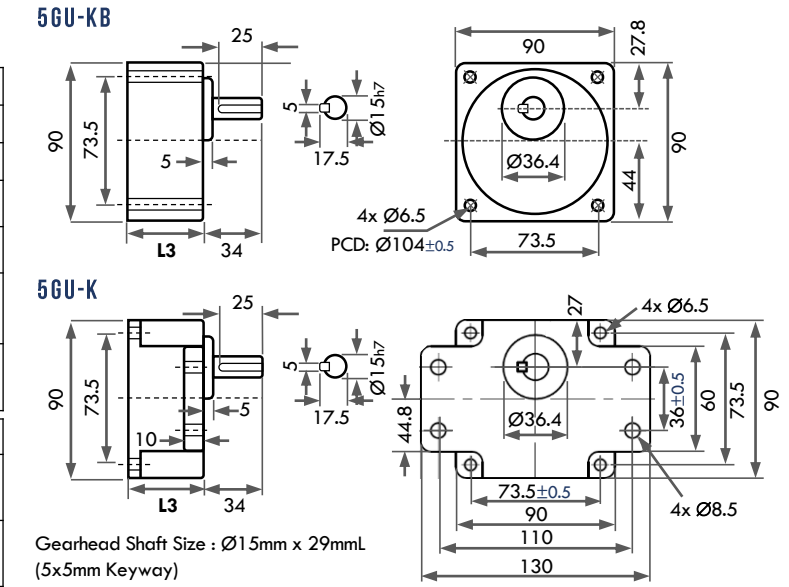
MOTOR WITH RIGHT ANGLE WORM GEARHEAD  
DMRV030

MOTOR WITH RIGHT ANGLE WORM GEARHEAD  
8MRV040-CM09

MOTOR WITH RIGHT ANGLE SPIRAL BEVEL GEARHEAD  
5GU-RH

**10 5GU-KB PARALLEL SHAFT GEARHEAD (SQUARE GEARBOX)**  
5GU-K PARALLEL SHAFT GEARHEAD (HINGE TYPE GEARBOX)

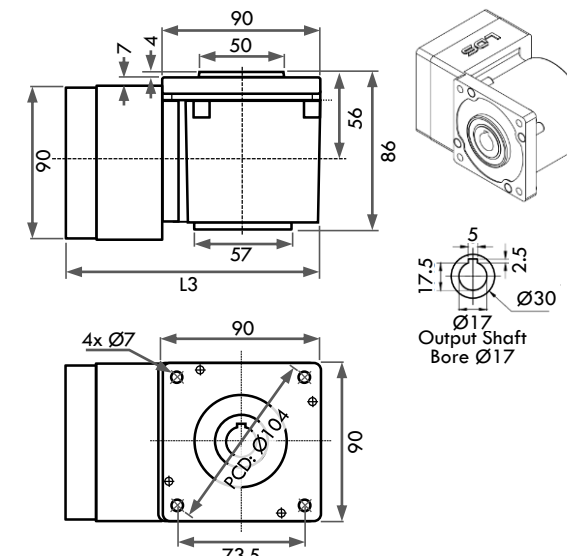
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
<b>SINGLE GEARHEAD</b>		
5GU3KB ~ 5GU18KB	3, 5, 6, 7.5, 9, 12.5, 15, 18	43
5GU25KB ~ 5GU75KB	25, 30, 36, 50, 60, 75	51
5GU90KB ~ 5GU240KB	90, 100, 120, 150, 180, 240	60
5GU3K ~ 5GU75K	3, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75	51
5GU90K ~ 5GU240K	90, 100, 120, 150, 180, 240	60
<b>DOUBLE GEARHEAD</b>		
5GU30KB ~ 5GU75KB + (COUPLE WITH 5GU10X)	300, 360, 500, 600, 750	104
5GU90KB ~ 5GU240KB (COUPLE WITH 5GU10X)	900, 1000, 1200, 1500, 1800, 2400	113



Gearhead Shaft Size : Ø15mm x 29mmL (5x5mm Keyway)

**11 5GU-RH HOLLOW SHAFT SPIRAL BEVEL GEARHEAD**

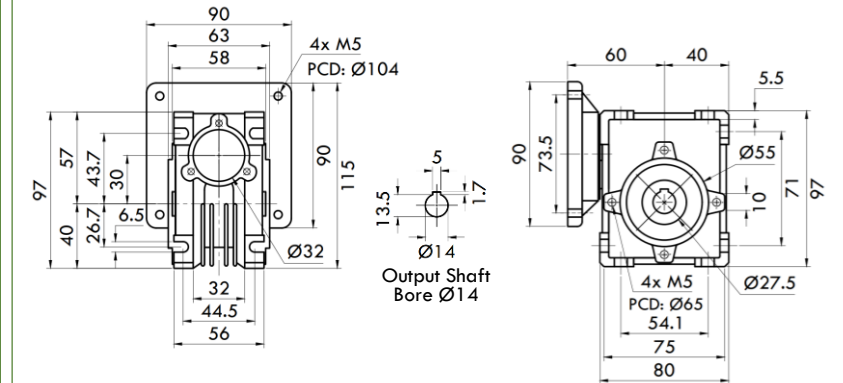
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
5GU9RH ~ 5GU225RH (SINGLE REDUCTION)	9, 15, 18, 22.5, 27, 37.5, 45, 54, 75, 90, 108, 150, 180, 225	145
5GU27RH ~ 5GU225RH + 5GX10X (DOUBLE REDUCTION)	270, 375, 450, 540, 750, 900, 1080, 1500, 1800, 2250 (COUPLED WITH DECIMAL GEAR)	198



Unit of measurement : mm (millimeter)

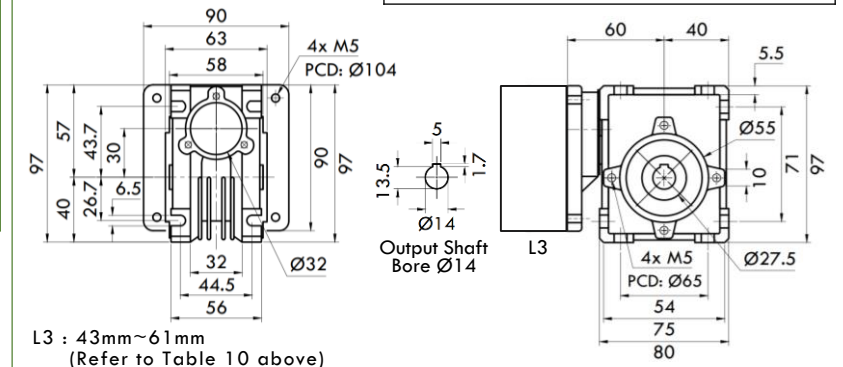
**12 8MRV030-CM09 DMRV030-CM09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-5-CM09 ~ 8MRV030-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



**13 8MRV030-CG09 DMRV030-CG09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-CG09 + 5GN-K-N (COUPLED WITH PARALLEL SHAFT GEARHEAD)	100, 135, 150, 180, 225, 270 ~ 19,200



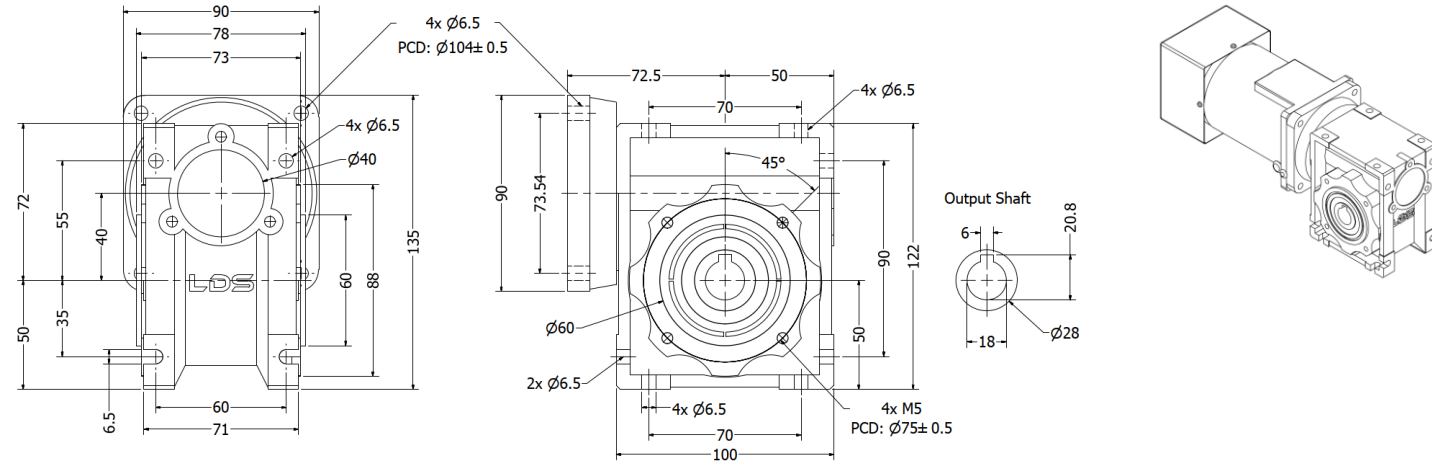
L3 : 43mm~61mm (Refer to Table 10 above)

**DIMENSION : COMPACT AC MOTOR**

# 120W

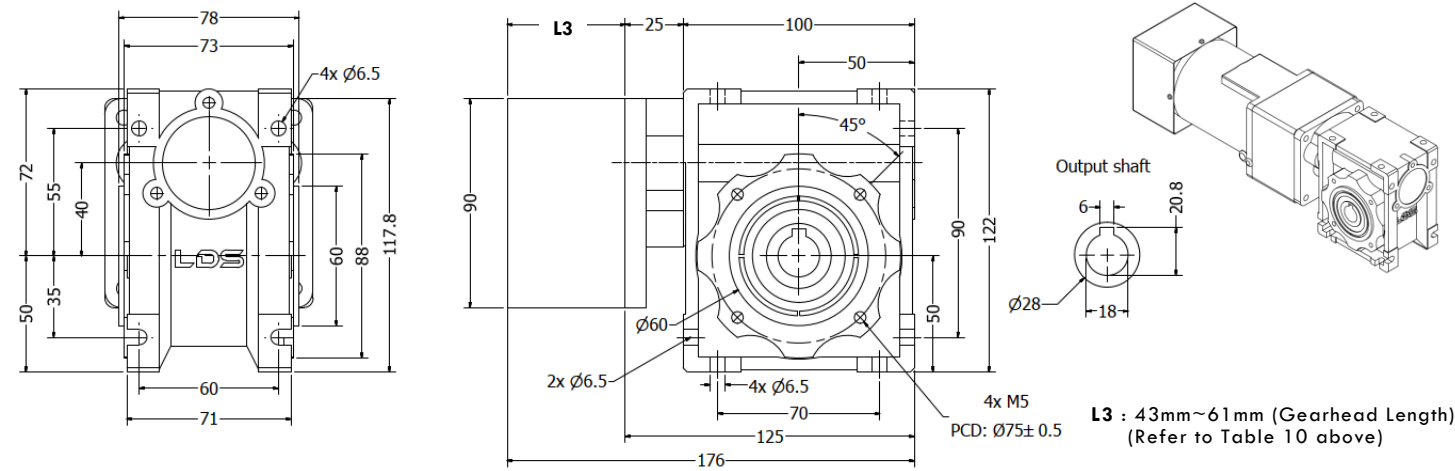
**14 8MRV040-CM09 & DMRS040-CM09  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-5-CM09 ~ 8MRV040-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



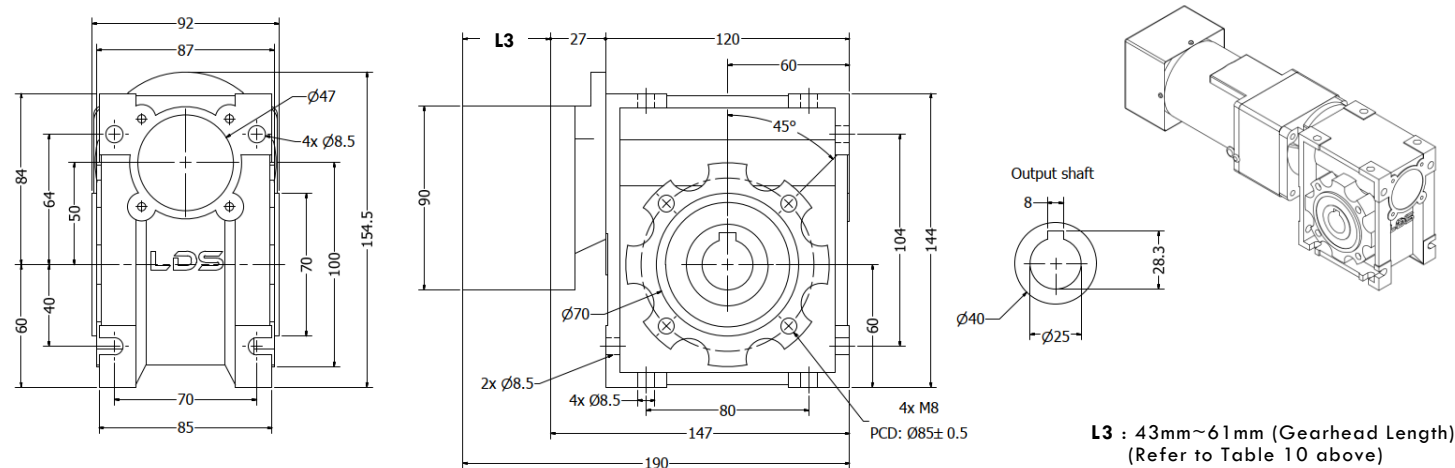
**15 8MRV040-CG09 & 56N~K-N & DMRS040-CG09 & 56N~K-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-15-CG09 & 56N-K-N ~ 8MRV040-80-CG09 & 56N-K-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 19,200



**16 8MRV050-CG09 & 56U~KB-N & DMRS050-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV050-15-CG09 & 56U-KB-N ~ 8MRV050-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000

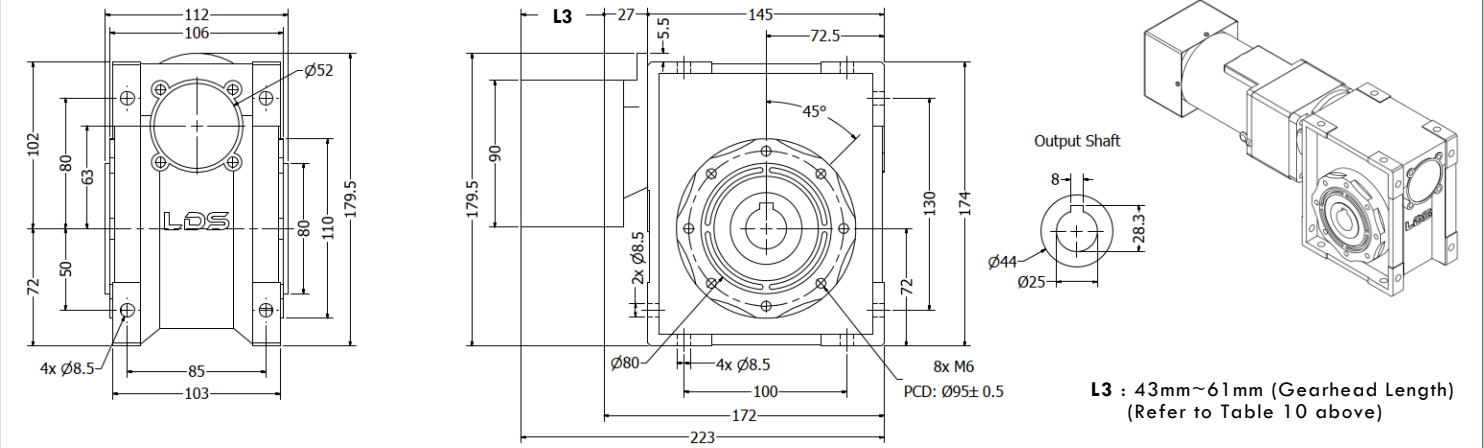


**DIMENSION : COMPACT AC MOTOR**

# 120W

**17 8MRV063-CG09 & 56U~KB-N & DMRS063-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

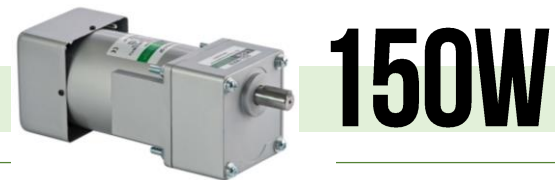
PRODUCT CODE	GEAR RATIO (1/X)
8MRV063-15-CG09 & 56U-KB-N ~ 8MRV063-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000



L3 : 43mm~61mm (Gearhead Length)  
(Refer to Table 10 above)



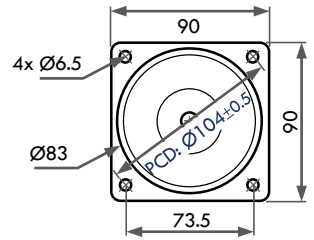
**DIMENSION : COMPACT AC MOTOR**



**150W**

**1 MOTOR FRAME DIMENSION FOR ALL 150W MOTOR**

INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
CLUTCH & BRAKE MOTOR  
SPEED CONTROL MOTOR

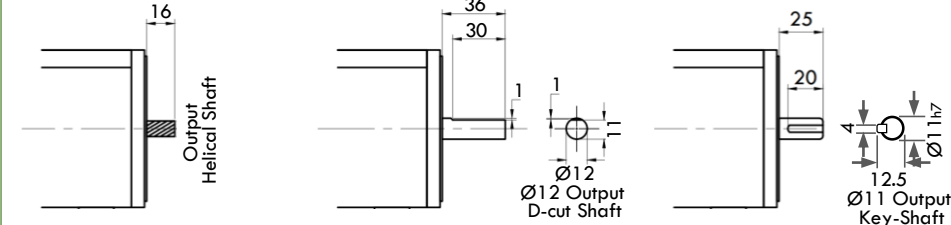


**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 150W MOTOR**

**HELICAL-SHAFT (PINION-SHAFT)**  
51K150GN/GX-□EF  
51K150RGX/RGX-□EF  
51K150VGN/VGX-□EF  
5RK150GN/GX-□EF  
5RK150RGX/RGX-□EF

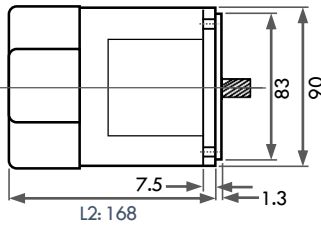
**OUTPUT ROUND-SHAFT (D-CUT)**  
51K150A-□EF  
51K150RA-□EF  
51K150VA-□EF  
5RK150A-□EF  
5RK150RA-□EF

**OUTPUT KEY-SHAFT**  
51K150A-□EF-N  
51K150RA-□EF-N  
51K150VA-□EF-N  
5RK150A-□EF-N  
5RK150RA-□EF-N

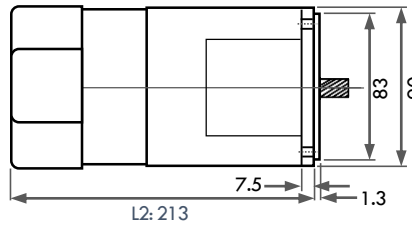


Note : Ø12mmx35mmL output key-shaft available upon request

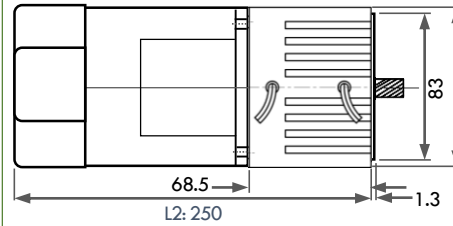
**3 INDUCTION / ASYNCHRONOUS MOTOR 150W**  
51K150GN-□EF / 51K150VGN-□EF  
REVERSIBLE MOTOR 150W  
5RK150GN-□EF



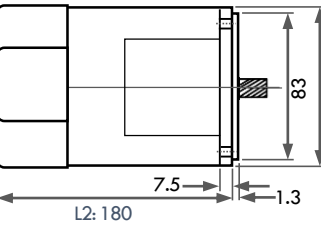
**4 ELECTROMAGNETIC BRAKE MOTOR 150W**  
51K150GN-□EF-B / 51K150VGN-□EF-B  
REVERSIBLE BRAKE MOTOR 150W  
5RK150GN-□EF-B



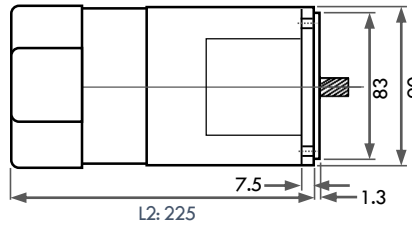
**5 ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 150W**  
51K150GB-□EF & 5GU-CB  
51K150VGB-□EF & 5GU-CB



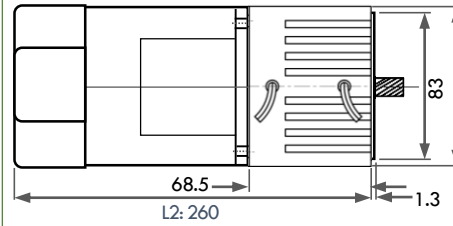
**6 SPEED CONTROL MOTOR 150W**  
51K150RGN-□EF  
REVERSIBLE SPEED CONTROL MOTOR 150W  
5RK150RGN-□EF



**7 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 150W**  
51K150RGN-□EF-B  
REVERSIBLE SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 150W  
5RK150RGN-□EF-B



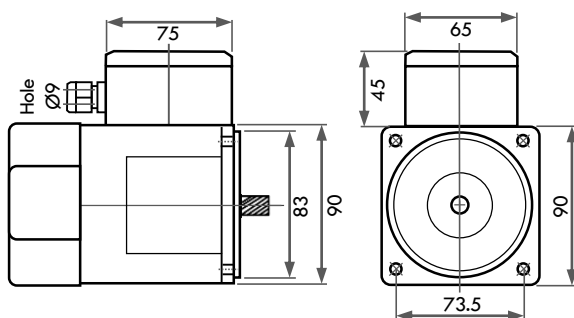
**8 SPEED CONTROL ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 150W**  
51K150RGB-□EF & 5GU-CB



**MOTOR WITH TERMINAL BOX**

**9 MOTOR WITH TERMINAL BOX (IP44)**

51K150A-□EFT 5RK150A-□EFT  
51K150GN-□EFT 5RK150GN-□EFT  
51K150GX-□EFT 5RK150GX-□EFT  
51K150GB-□EFT 5RK150GB-□EFT  
51K150VGN-□EFT 5RK150VGN-□EFT  
51K150RGN-□EFT 5RK150RGN-□EFT  
51K150RGX-□EFT 5RK150RGX-□EFT  
51K150RGB-□EFT 5RK150RGB-□EFT  
51K150GN-□EFBT 5RK150GN-□EFBT  
51K150GX-□EFBT 5RK150GX-□EFBT  
51K150GB-□EFBT 5RK150GB-□EFBT



**NOTE:**

□ INPUT VOLTAGE OF ELECTRIC MOTOR  
C : 1PHASE 220V (50/60HZ)  
C2 : 1PHASE 240V (50/60HZ)  
S : 3PHASE 220V (50/60HZ)  
S4 : 3PHASE 415V (50/60HZ)  
TQ : 3PHASE 240/415V (50/60HZ)  
U : 3PHASE 220/380V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR  
L2 : BODY LENGTH OF MOTOR WITH COACTIVE POWERFUL COOLING FAN (+20)

Unit of measurement : mm (millimeter)

**DIMENSION : COMPACT GEARHEAD**

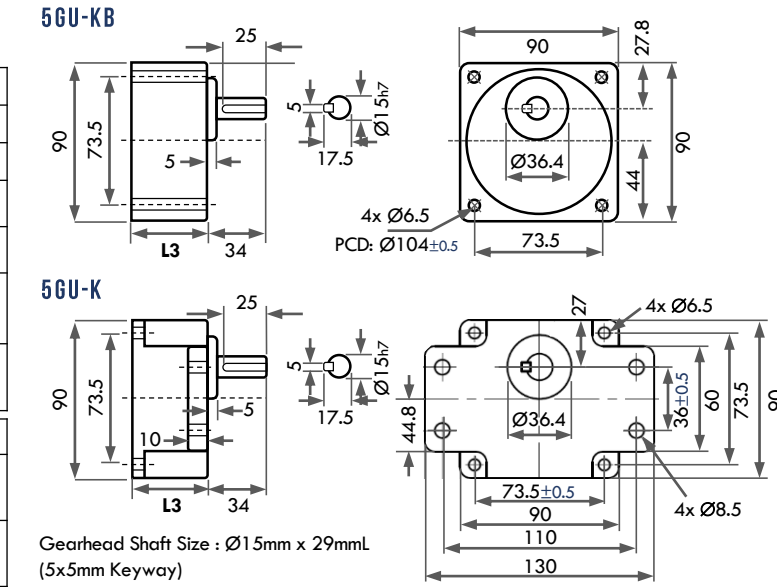
**150W**



MOTOR WITH PARALLEL SHAFT GEARHEAD 5GU-KB  
MOTOR WITH DECIMAL GEAR (DOUBLE REDUCTION GEARHEAD) 5GU10X + 5GU-KB  
CLUTCH & BRAKE MOTOR WITH PARALLEL SHAFT GEARHEAD AND COACTIVE POWERFUL COOLING FAN  
MOTOR WITH WORM GEARHEAD (DOUBLE REDUCTION GEARHEAD) 5GN-K-N + 8MRV040-CG09  
MOTOR WITH RIGHT ANGLE SPIRAL BEVEL GEARHEAD 5GU-RH

**10 5GU-KB PARALLEL SHAFT GEARHEAD (SQUARE GEARBOX)**  
5GU-K PARALLEL SHAFT GEARHEAD (HINGE TYPE GEARBOX)

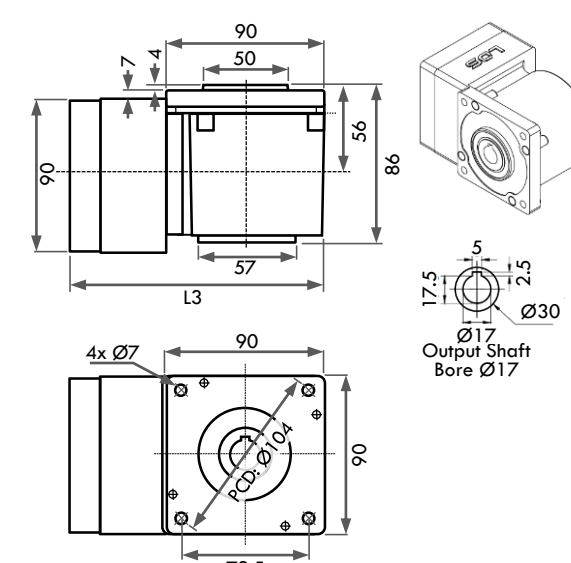
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
<b>SINGLE GEARHEAD</b>		
5GU3KB ~ 5GU18KB	3, 5, 6, 7.5, 9, 12.5, 15, 18	43
5GU25KB ~ 5GU75KB	25, 30, 36, 50, 60, 75	51
5GU90KB ~ 5GU240KB	90, 100, 120, 150, 180, 240	60
5GU3K ~ 5GU75K	3, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75	51
5GU90K ~ 5GU240K	90, 100, 120, 150, 180, 240	60
<b>DOUBLE GEARHEAD</b>		
5GU30KB ~ 5GU75KB + (COUPLE WITH 5GU10X)	300, 360, 500, 600, 750	104
5GU90KB ~ 5GU240KB (COUPLE WITH 5GU10X)	900, 1000, 1200, 1500, 1800, 2400	113



Gearhead Shaft Size : Ø15mm x 29mmL (5x5mm Keyway)

**11 5GU-RH HOLLOW SHAFT SPIRAL BEVEL GEARHEAD**

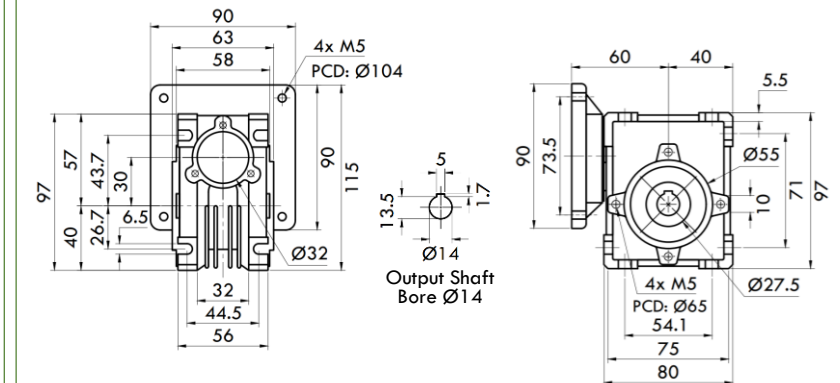
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
5GU9RH ~ 5GU225RH (SINGLE REDUCTION)	9, 15, 18, 22.5, 27, 37.5, 45, 54, 75, 90, 108, 150, 180, 225	145
5GU27RH ~ 5GU225RH + 5GX10X (DOUBLE REDUCTION)	270, 375, 450, 540, 750, 900, 1080, 1500, 1800, 2250 (COUPLED WITH DECIMAL GEAR)	198



Unit of measurement : mm (millimeter)

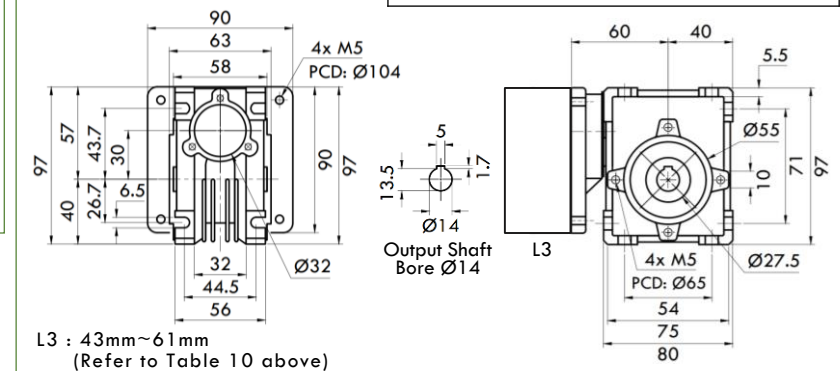
**12 8MRV030-CM09 DMRV030-CM09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-5-CM09 ~ 8MRV030-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



**13 8MRV030-CG09 DMRV030-CG09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-CG09 + 5GN-K-N (COUPLED WITH PARALLEL SHAFT GEARHEAD)	100, 135, 150, 180, 225, 270 ~ 19,200



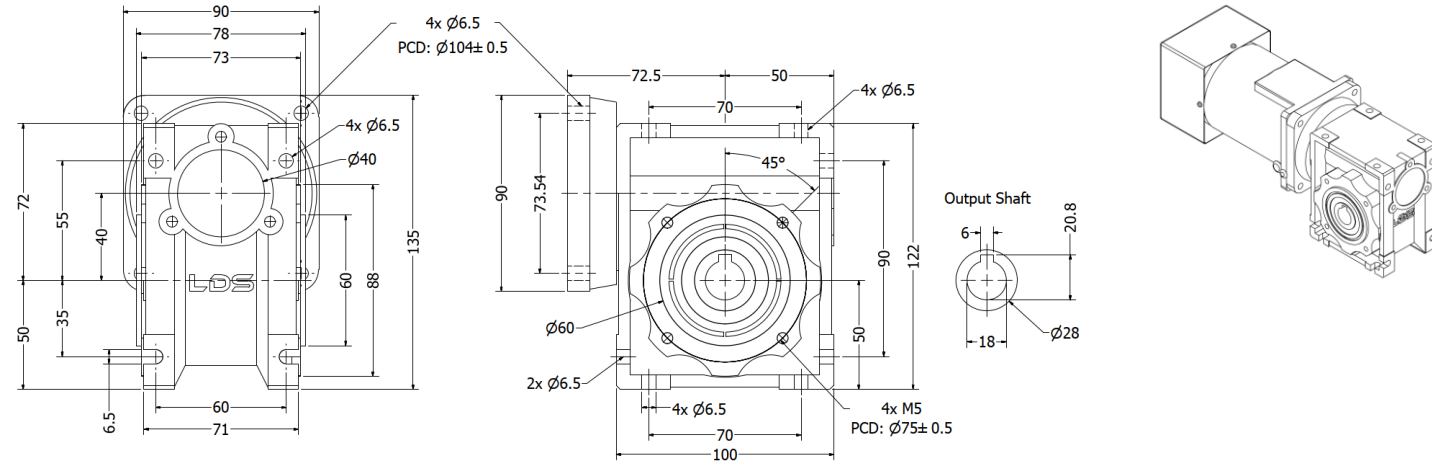
L3 : 43mm~61mm (Refer to Table 10 above)

**DIMENSION : COMPACT AC MOTOR**

# 150W

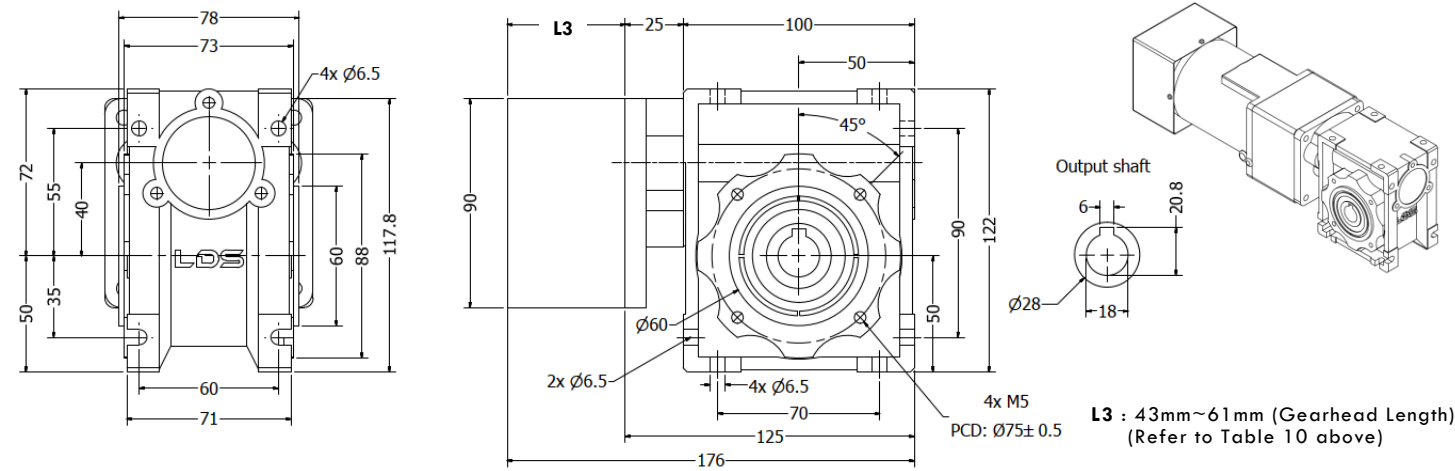
**14 8MRV040-CM09 & DMRS040-CM09  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-5-CM09 ~ 8MRV040-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



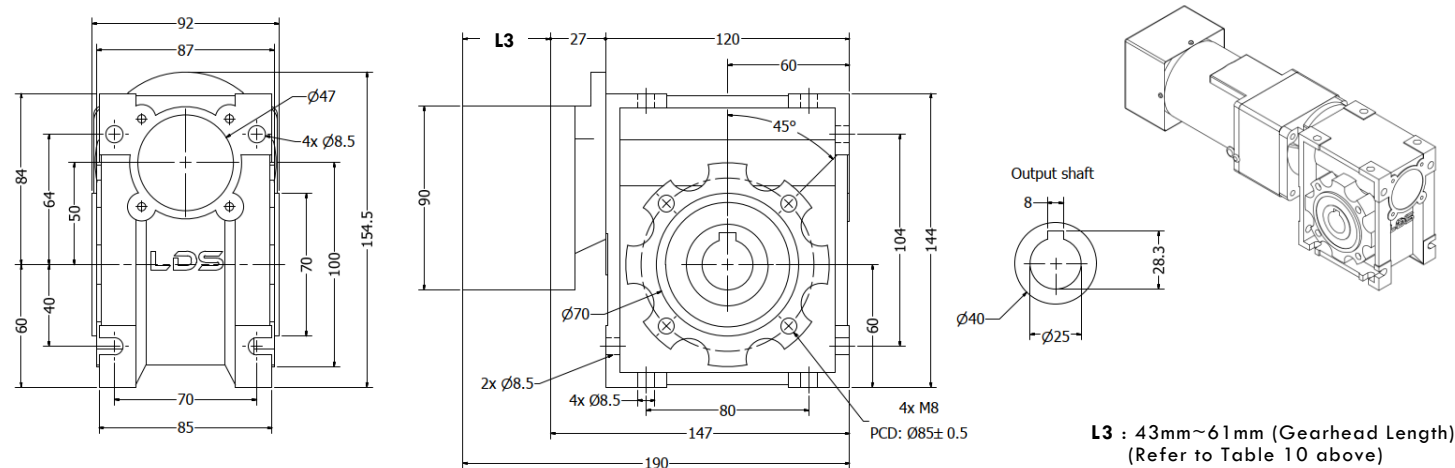
**15 8MRV040-CG09 & 56N~K-N  
DMRS040-CG09 & 56N~K-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-15-CG09 & 56N-K-N ~ 8MRV040-80-CG09 & 56N-K-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 19,200



**16 8MRV050-CG09 & 56U~KB-N  
DMRS050-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV050-15-CG09 & 56U-KB-N ~ 8MRV050-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000

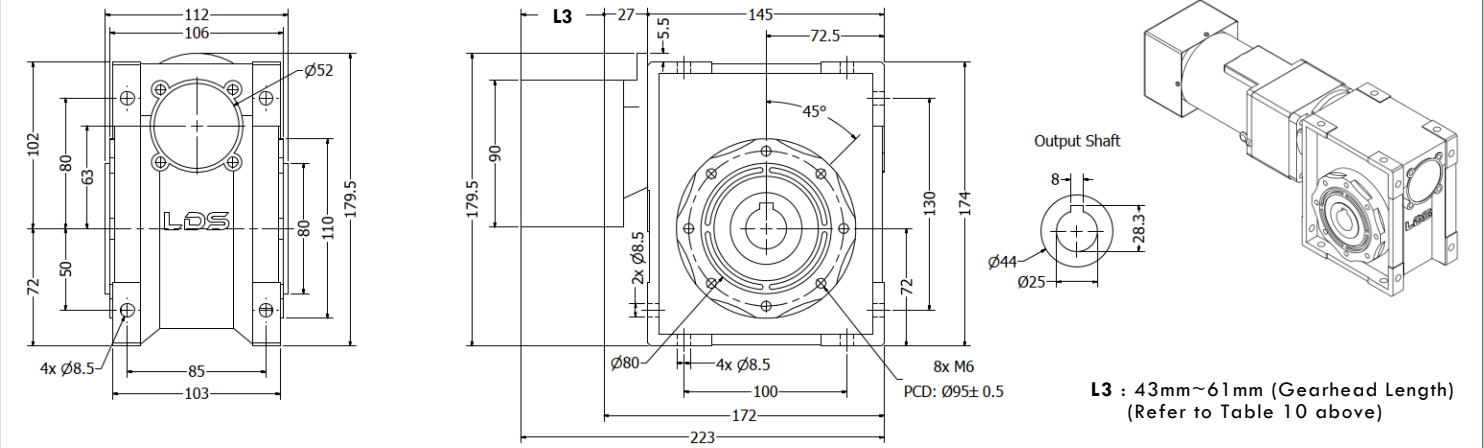


**DIMENSION : COMPACT AC MOTOR**

# 150W

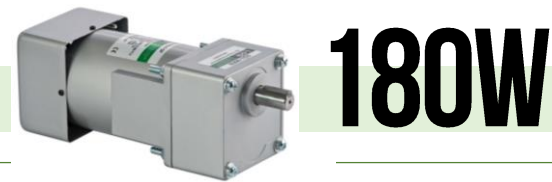
**17 8MRV063-CG09 & 56U~KB-N  
DMRS063-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV063-15-CG09 & 56U-KB-N ~ 8MRV063-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000



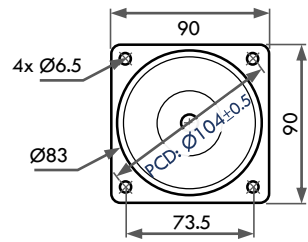


**DIMENSION : COMPACT AC MOTOR**



**1 MOTOR FRAME DIMENSION FOR ALL 180W MOTOR**

INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
CLUTCH & BRAKE MOTOR  
SPEED CONTROL MOTOR

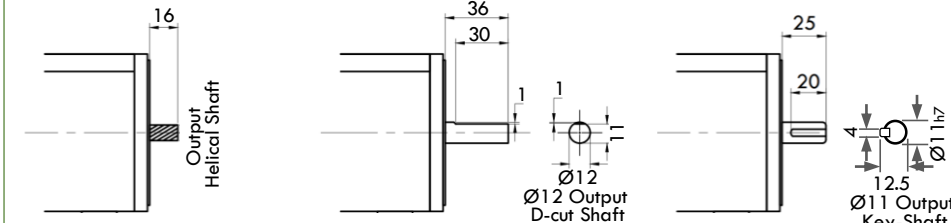


**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 180W MOTOR**

**HELICAL-SHAFT (PINION-SHAFT)**  
51K180GN/GX-□EF  
51K180RGN/RGX-□EF  
51K180VGN/VGX-□EF  
5RK180GN/GX-□EF  
5RK180RGN/RGX-□EF

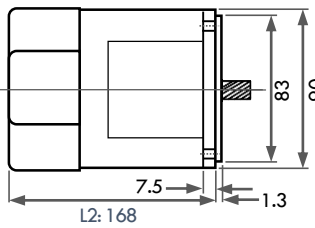
**OUTPUT ROUND-SHAFT (D-CUT)**  
51K180A-□EF  
51K180RA-□EF  
51K180VA-□EF  
5RK180A-□EF  
5RK180RA-□EF

**OUTPUT KEY-SHAFT**  
51K180A-□EF-N  
51K180RA-□EF-N  
51K180VA-□EF-N  
5RK180A-□EF-N  
5RK180RA-□EF-N

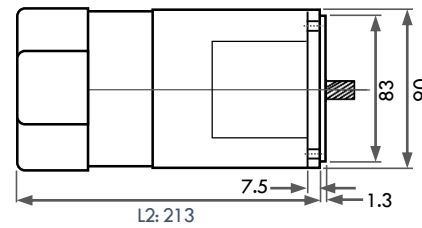


Note : Ø12mmx35mmL output key-shaft available upon request

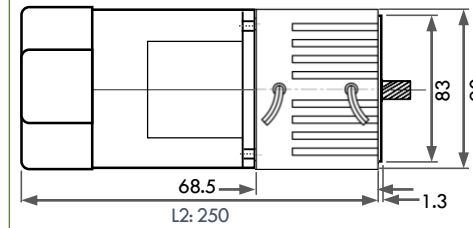
**3 INDUCTION / ASYNCHRONOUS MOTOR 180W**  
51K180GN-□EF / 51K180VGN-□EF  
REVERSIBLE MOTOR 180W  
5RK180GN-□EF



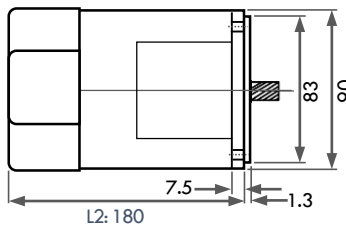
**4 ELECTROMAGNETIC BRAKE MOTOR 180W**  
51K180GN-□EF-B / 51K180VGN-□EF-B  
REVERSIBLE BRAKE MOTOR 180W  
5RK180GN-□EF-B



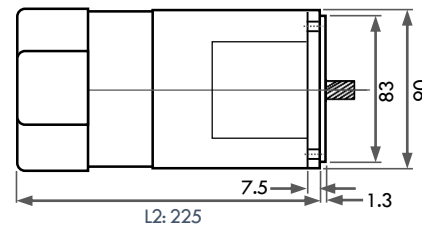
**5 ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 180W**  
51K180GB-□EF & 5GU-CB  
51K180VGB-□EF & 5GU-CB



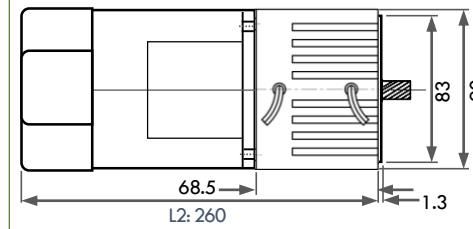
**6 SPEED CONTROL MOTOR 180W**  
51K180RGN-□EF  
REVERSIBLE SPEED CONTROL MOTOR 180W  
5RK180RGN-□EF



**7 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 180W**  
51K180RGN-□EF-B  
REVERSIBLE SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 180W  
5RK180RGN-□EF-B



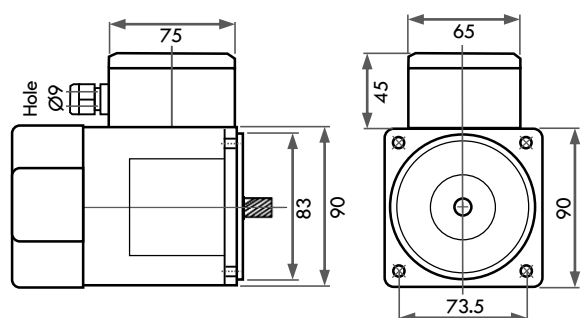
**8 SPEED CONTROL ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 180W**  
51K180RGB-□EF & 5GU-CB



**MOTOR WITH TERMINAL BOX**

**9 MOTOR WITH TERMINAL BOX (IP44)**

51K180A-□EFT 5RK180A-□EFT  
51K180GN-□EFT 5RK180GN-□EFT  
51K180GX-□EFT 5RK180GX-□EFT  
51K180GB-□EFT 5RK180GB-□EFT  
51K180VGB-□EFT 5RK180VGB-□EFT  
51K180RGN-□EFT 5RK180RGN-□EFT  
51K180RGX-□EFT 5RK180RGX-□EFT  
51K180RGB-□EFT 5RK180RGB-□EFT  
51K180GN-□EFBT 5RK180GN-□EFBT  
51K180GX-□EFBT 5RK180GX-□EFBT  
51K180GB-□EFBT 5RK180GB-□EFBT



**NOTE:**

□ INPUT VOLTAGE OF ELECTRIC MOTOR  
C : 1PHASE 220V (50/60HZ)  
C2 : 1PHASE 240V (50/60HZ)  
S : 3PHASE 220V (50/60HZ)  
S4 : 3PHASE 415V (50/60HZ)  
TQ : 3PHASE 240/415V (50/60HZ)  
U : 3PHASE 220/380V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR  
L2 : BODY LENGTH OF MOTOR WITH COACTIVE POWERFUL COOLING FAN (+20)

Unit of measurement : mm (millimeter)

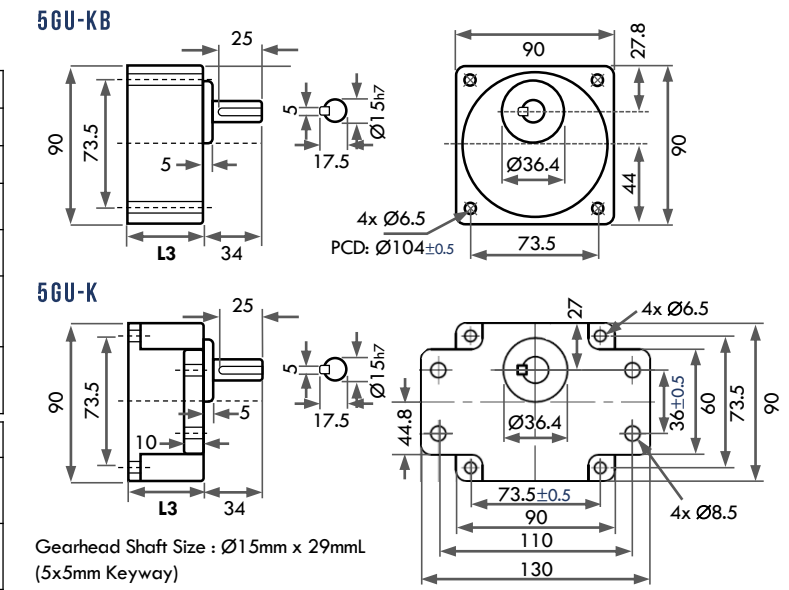
**DIMENSION : COMPACT GEARHEAD**



MOTOR WITH TERMINAL BOX AND HINGE TYPE GEARHEAD 5GU-K  
MOTOR WITH DECIMAL GEAR (DOUBLE REDUCTION GEARHEAD) 5GU10X + 5GU-KB  
CLUTCH & BRAKE MOTOR WITH PARALLEL SHAFT GEARHEAD AND COACTIVE POWERFUL COOLING FAN  
MOTOR WITH RIGHT ANGLE WORM GEARHEAD 8MRV040-CM09  
MOTOR WITH RIGHT ANGLE SPIRAL BEVEL GEARHEAD 5GU-RH

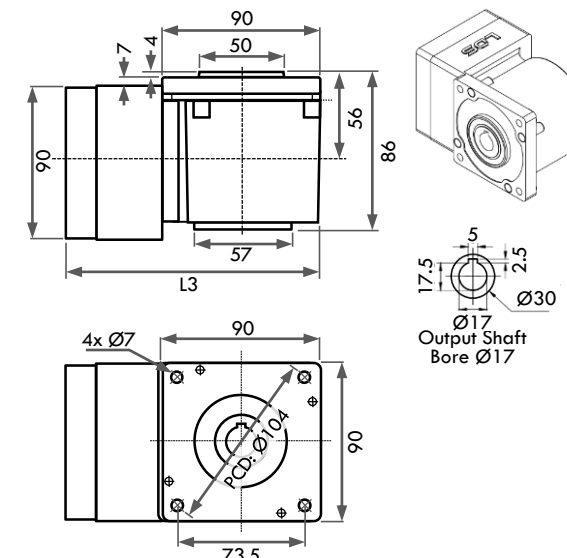
**10 5GU-KB PARALLEL SHAFT GEARHEAD (SQUARE GEARBOX)**  
5GU-K PARALLEL SHAFT GEARHEAD (HINGE TYPE GEARBOX)

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
<b>SINGLE GEARHEAD</b>		
5GU3KB ~ 5GU18KB	3, 5, 6, 7.5, 9, 12.5, 15, 18	43
5GU25KB ~ 5GU75KB	25, 30, 36, 50, 60, 75	51
5GU90KB ~ 5GU240KB	90, 100, 120, 150, 180, 240	60
5GU3K ~ 5GU75K	3, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75	51
5GU90K ~ 5GU240K	90, 100, 120, 150, 180, 240	60
<b>DOUBLE GEARHEAD</b>		
5GU30KB ~ 5GU75KB + (COUPLE WITH 5GU10X)	300, 360, 500, 600, 750	104
5GU90KB ~ 5GU240KB (COUPLE WITH 5GU10X)	900, 1000, 1200, 1500, 1800, 2400	113



**11 5GU-RH HOLLOW SHAFT SPIRAL BEVEL GEARHEAD**

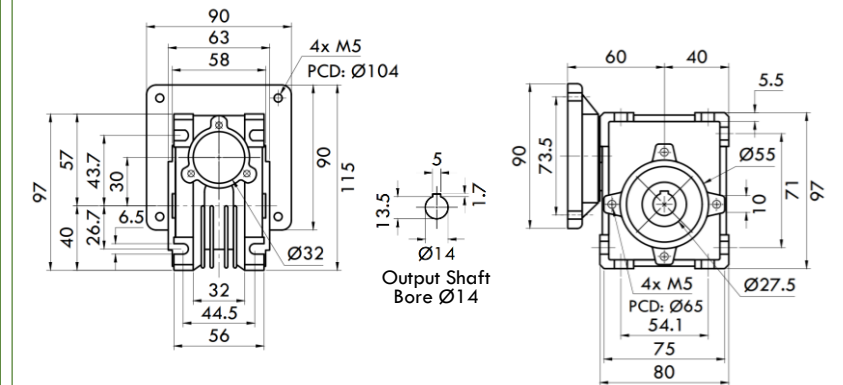
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
5GU9RH ~ 5GU225RH (SINGLE REDUCTION)	9, 15, 18, 22.5, 27, 37.5, 45, 54, 75, 90, 108, 150, 180, 225	145
5GU27RH ~ 5GU225RH + 5GX10X (DOUBLE REDUCTION)	270, 375, 450, 540, 750, 900, 1080, 1500, 1800, 2250 (COUPLED WITH DECIMAL GEAR)	198



Unit of measurement : mm (millimeter)

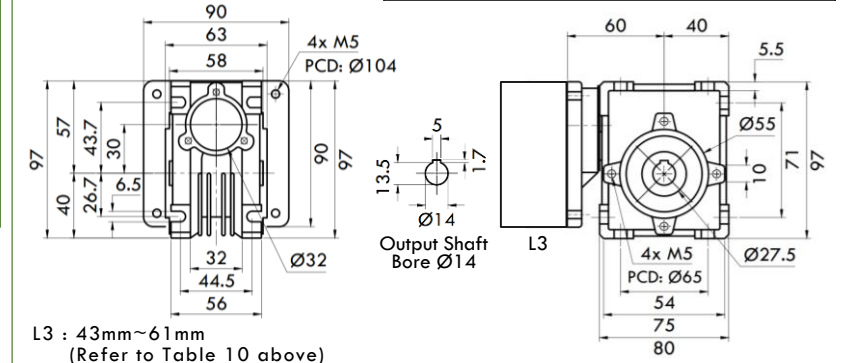
**12 8MRV030-CM09 DMRV030-CM09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-5-CM09 ~ 8MRV030-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



**13 8MRV030-CG09 DMRV030-CG09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-CG09 + 5GN-K-N (COUPLED WITH PARALLEL SHAFT GEARHEAD)	100, 135, 150, 180, 225, 270 ~ 19,200



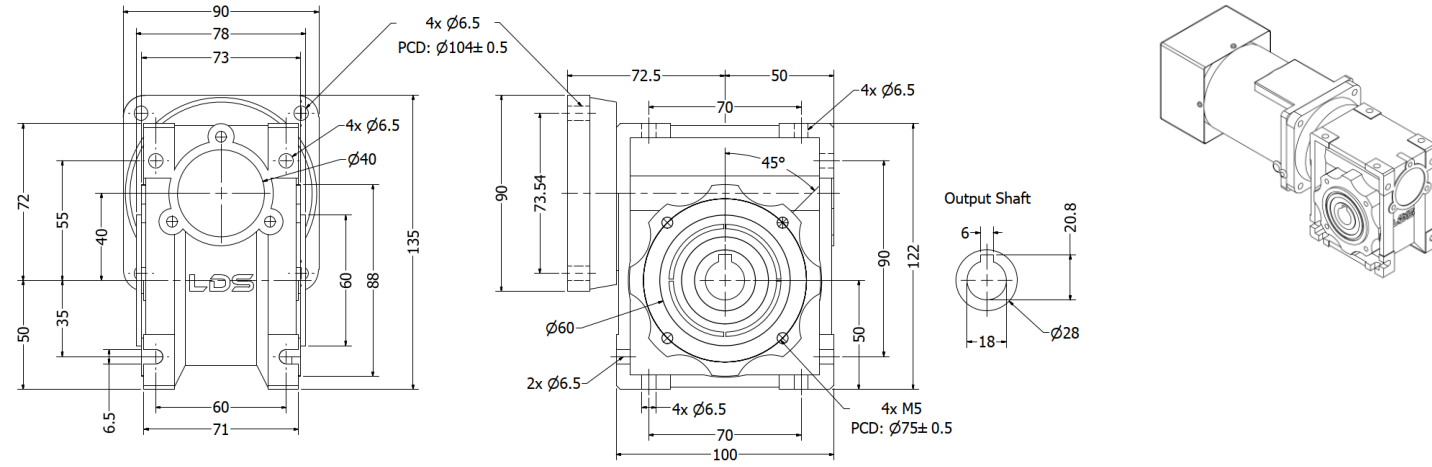
L3 : 43mm~61mm (Refer to Table 10 above)

**DIMENSION : COMPACT AC MOTOR**

# 180W

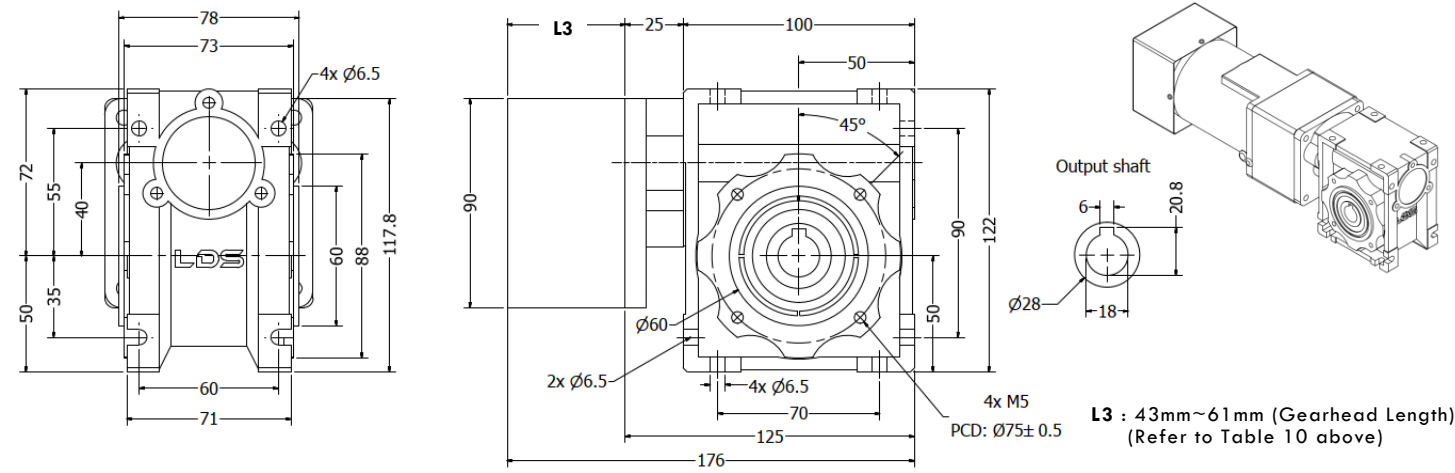
**14 8MRV040-CM09 & DMRS040-CM09  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-5-CM09 ~ 8MRV040-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



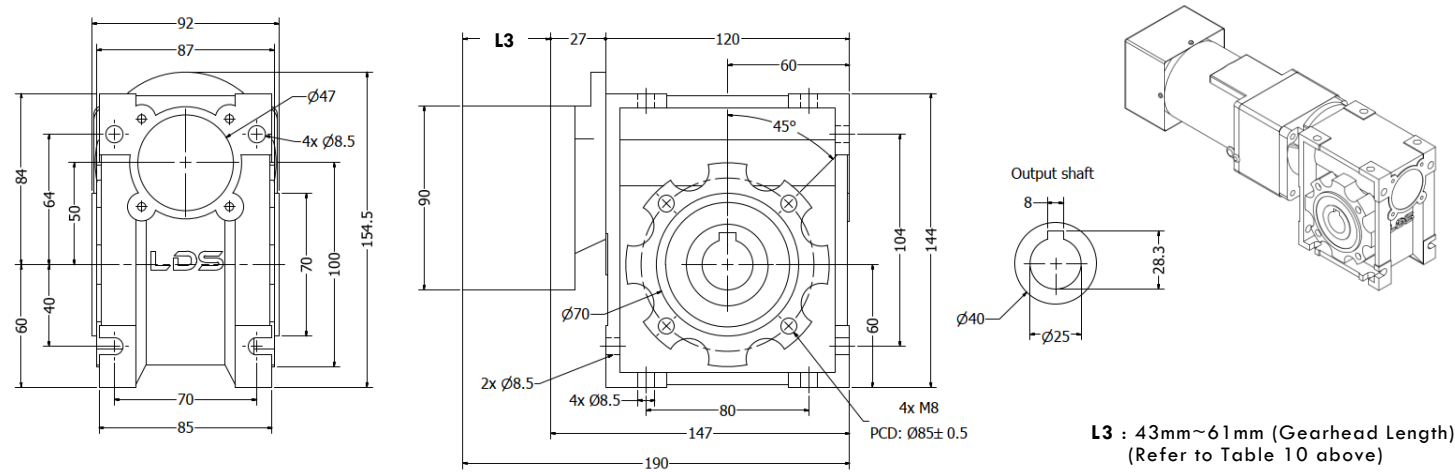
**15 8MRV040-CG09 & 56N~K-N & DMRS040-CG09 & 56N~K-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-15-CG09 & 56N-K-N ~ 8MRV040-80-CG09 & 56N-K-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 19,200



**16 8MRV050-CG09 & 56U~KB-N & DMRS050-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV050-15-CG09 & 56U-KB-N ~ 8MRV050-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000

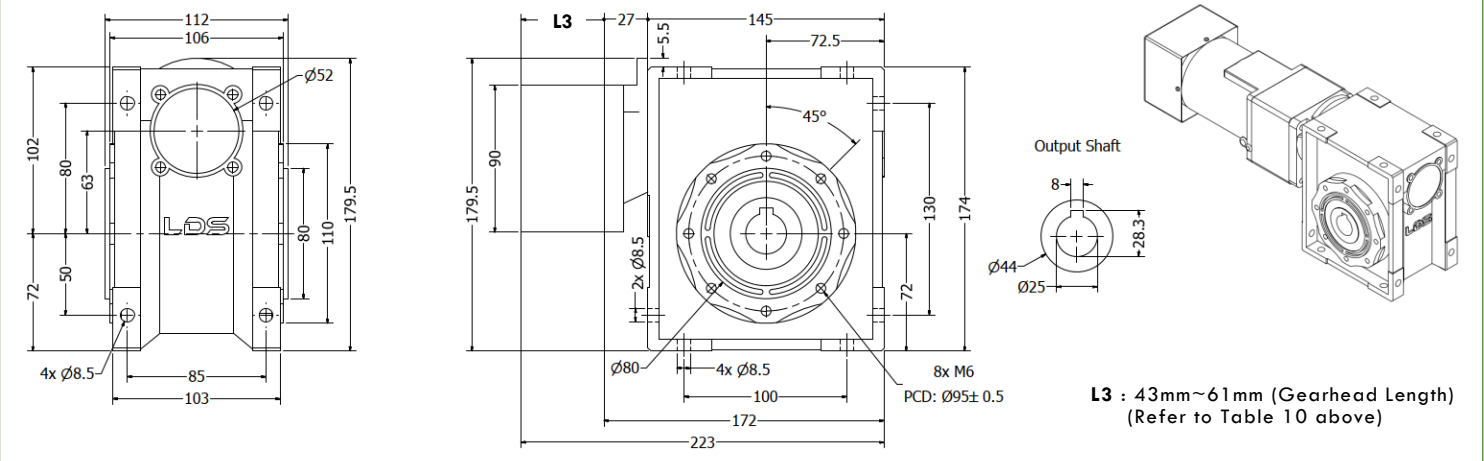


**DIMENSION : COMPACT AC MOTOR**

# 180W

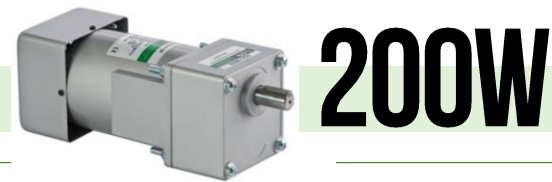
**17 8MRV063-CG09 & 56U~KB-N & DMRS063-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV063-15-CG09 & 56U-KB-N ~ 8MRV063-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000





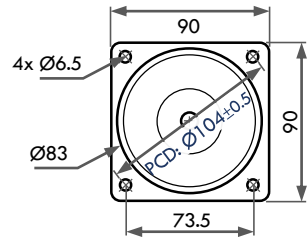
**DIMENSION : COMPACT AC MOTOR**



**200W**

**1 MOTOR FRAME DIMENSION FOR ALL 200W MOTOR**

INDUCTION MOTOR  
REVERSIBLE MOTOR  
ELECTROMAGNETIC BRAKE MOTOR  
CLUTCH & BRAKE MOTOR  
SPEED CONTROL MOTOR

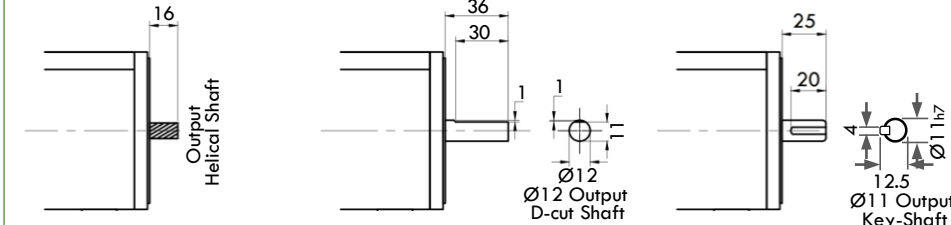


**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 200W MOTOR**

**HELICAL-SHAFT (PINION-SHAFT)**  
51K200GN/GX-□EF  
51K200RGX/RGX-□EF  
51K200VGN/VGX-□EF  
5RK200GN/GX-□EF  
5RK200RGX/RGX-□EF

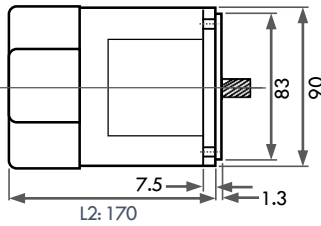
**OUTPUT ROUND-SHAFT (D-CUT)**  
51K200A-□EF  
51K200RA-□EF  
51K200VA-□EF  
5RK200A-□EF  
5RK200RA-□EF

**OUTPUT KEY-SHAFT**  
51K200A-□EF-N  
51K200RA-□EF-N  
51K200VA-□EF-N  
5RK200A-□EF-N  
5RK200RA-□EF-N

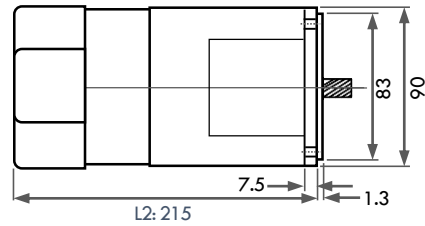


Note : Ø12mmx35mmL output key-shaft available upon request

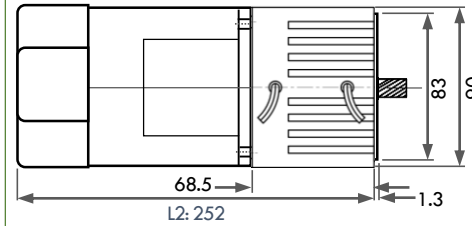
**3 INDUCTION / ASYNCHRONOUS MOTOR 200W**  
51K200GN-□EF / 51K200VGN-□EF  
REVERSIBLE MOTOR 200W  
5RK200GN-□EF



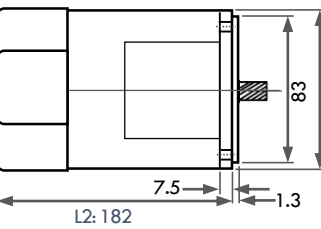
**4 ELECTROMAGNETIC BRAKE MOTOR 200W**  
51K200GN-□EF-B / 51K200VGN-□EF-B  
REVERSIBLE BRAKE MOTOR 200W  
5RK200GN-□EF-B



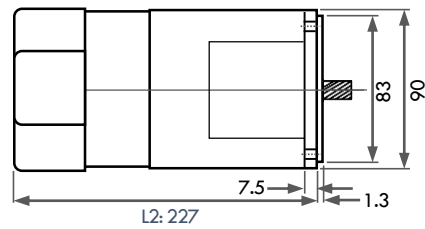
**5 ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 200W**  
51K200GB-□EF & 5GU-CB  
51K200VGB-□EF & 5GU-CB



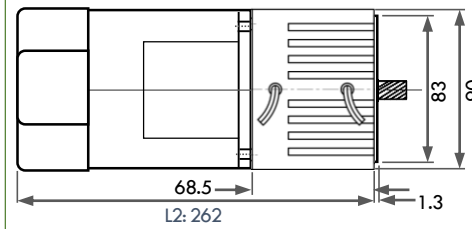
**6 SPEED CONTROL MOTOR 200W**  
51K200RGN-□EF  
REVERSIBLE SPEED CONTROL MOTOR 200W  
5RK200RGN-□EF



**7 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 200W**  
51K200RGN-□EF-B  
REVERSIBLE SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 200W  
5RK200RGN-□EF-B



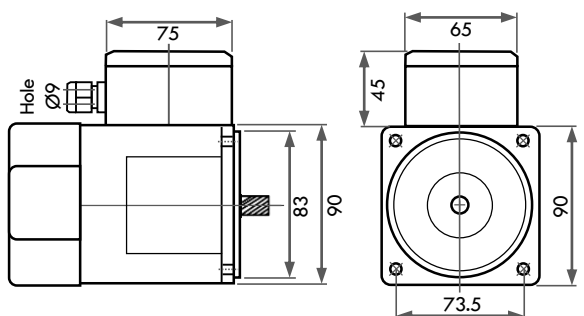
**8 SPEED CONTROL ELECTROMAGNETIC CLUTCH & BRAKE MOTOR 200W**  
51K200RGB-□EF & 5GU-CB



**MOTOR WITH TERMINAL BOX**

**9 MOTOR WITH TERMINAL BOX (IP44)**

51K200A-□EFT 5RK200A-□EFT  
51K200GN-□EFT 5RK200GN-□EFT  
51K200GX-□EFT 5RK200GX-□EFT  
51K200GB-□EFT 5RK200GB-□EFT  
51K200VGN-□EFT 5RK200VGN-□EFT  
51K200RGN-□EFT 5RK200RGN-□EFT  
51K200RGX-□EFT 5RK200RGX-□EFT  
51K200RGB-□EFT 5RK200RGB-□EFT  
51K200GN-□EFBT 5RK200GN-□EFBT  
51K200GX-□EFBT 5RK200GX-□EFBT  
51K200GB-□EFBT 5RK200GB-□EFBT



**NOTE:**

□ INPUT VOLTAGE OF ELECTRIC MOTOR  
C : 1PHASE 220V (50/60HZ)  
C2 : 1PHASE 240V (50/60HZ)  
S : 3PHASE 220V (50/60HZ)  
S4 : 3PHASE 415V (50/60HZ)  
TQ : 3PHASE 240/415V (50/60HZ)  
U : 3PHASE 220/380V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR  
L2 : BODY LENGTH OF MOTOR WITH COACTIVE POWERFUL COOLING FAN (+20)

Unit of measurement : mm (millimeter)

**DIMENSION : COMPACT GEARHEAD**

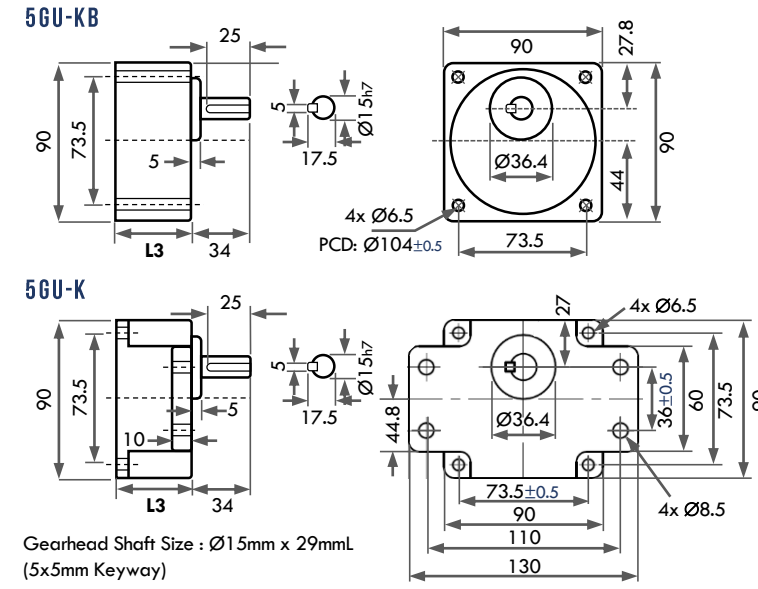
**200W**



MOTOR WITH PARALLEL SHAFT GEARHEAD 5GU-KB  
MOTOR WITH DECIMAL GEAR (DOUBLE REDUCTION GEARHEAD) 5GU10X + 5GU-KB  
CLUTCH & BRAKE MOTOR WITH PARALLEL SHAFT GEARHEAD AND COACTIVE POWERFUL COOLING FAN  
MOTOR WITH RIGHT ANGLE WORM GEARHEAD 8MRV040-CM09  
MOTOR WITH RIGHT ANGLE SPIRAL BEVEL GEARHEAD 5GU-RH

**10 5GU-KB PARALLEL SHAFT GEARHEAD (SQUARE GEARBOX)**  
5GU-K PARALLEL SHAFT GEARHEAD (HINGE TYPE GEARBOX)

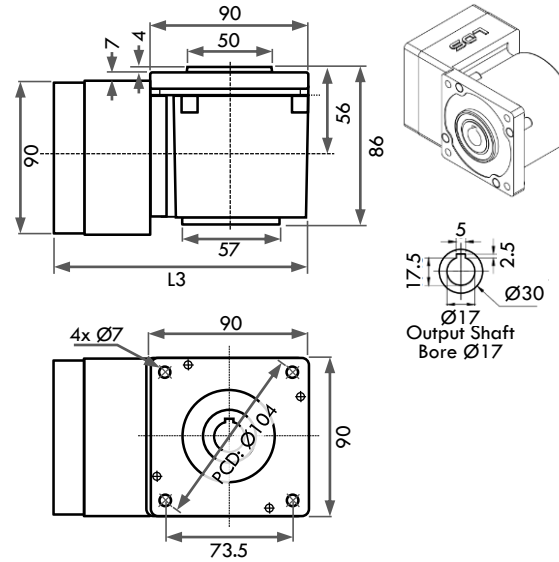
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
<b>SINGLE GEARHEAD</b>		
5GU3KB ~ 5GU18KB	3, 5, 6, 7.5, 9, 12.5, 15, 18	43
5GU25KB ~ 5GU75KB	25, 30, 36, 50, 60, 75	51
5GU90KB ~ 5GU240KB	90, 100, 120, 150, 180, 240	60
5GU3K ~ 5GU75K	3, 5, 6, 7.5, 9, 12.5, 15, 18, 25, 30, 36, 50, 60, 75	51
5GU90K ~ 5GU240K	90, 100, 120, 150, 180, 240	60
<b>DOUBLE GEARHEAD</b>		
5GU30KB ~ 5GU75KB + (COUPLE WITH 5GU10X)	300, 360, 500, 600, 750	104
5GU90KB ~ 5GU240KB (COUPLE WITH 5GU10X)	900, 1000, 1200, 1500, 1800, 2400	113



Gearhead Shaft Size : Ø15mm x 29mmL (5x5mm Keyway)

**11 5GU-RH HOLLOW SHAFT SPIRAL BEVEL GEARHEAD**

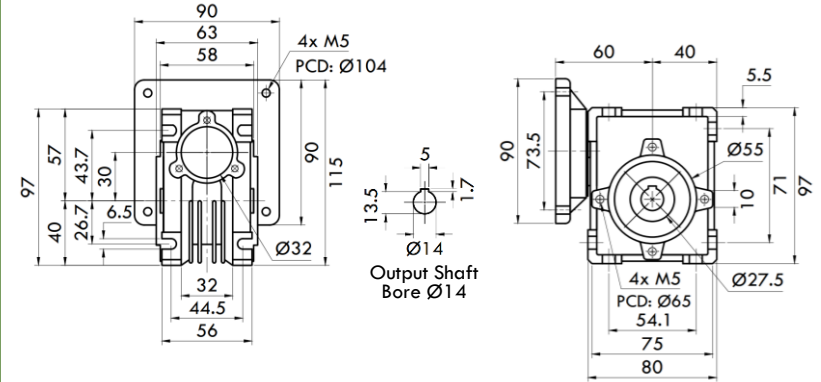
PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
5GU9RH ~ 5GU225RH (SINGLE REDUCTION)	9, 15, 18, 22.5, 27, 37.5, 45, 54, 75, 90, 108, 150, 180, 225	145
5GU27RH ~ 5GU225RH + 5GX10X (DOUBLE REDUCTION)	270, 375, 450, 540, 750, 900, 1080, 1500, 1800, 2250 (COUPLED WITH DECIMAL GEAR)	198



Unit of measurement : mm (millimeter)

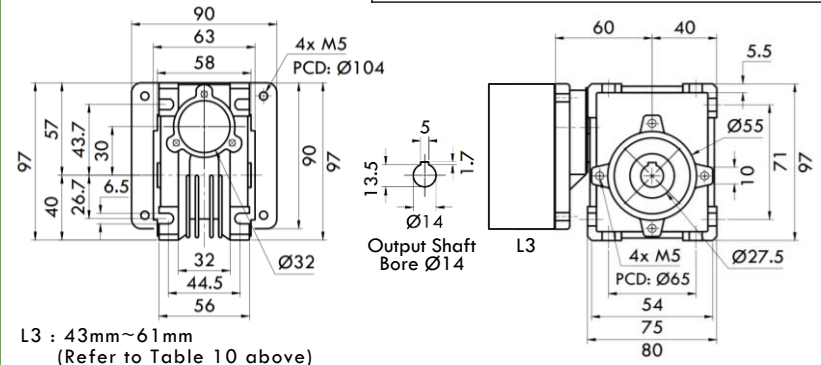
**12 8MRV030-CM09 DMRV030-CM09 HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-5-CM09 ~ 8MRV030-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



**13 8MRV030-CG09 DMRV030-CG09 HOLLOW SHAFT WORM GEARHEAD**

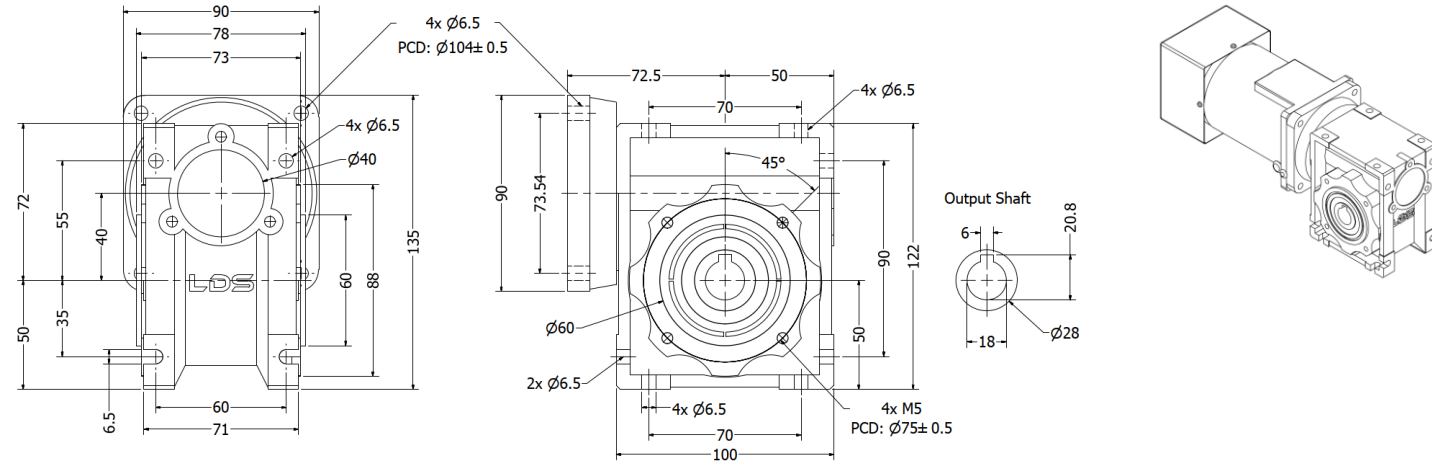
PRODUCT CODE	GEAR RATIO (1/X)
8MRV030-CG09 + 5GN-K-N (COUPLED WITH PARALLEL SHAFT GEARHEAD)	100, 135, 150, 180, 225, 270 ~ 19,200



L3 : 43mm~61mm (Refer to Table 10 above)

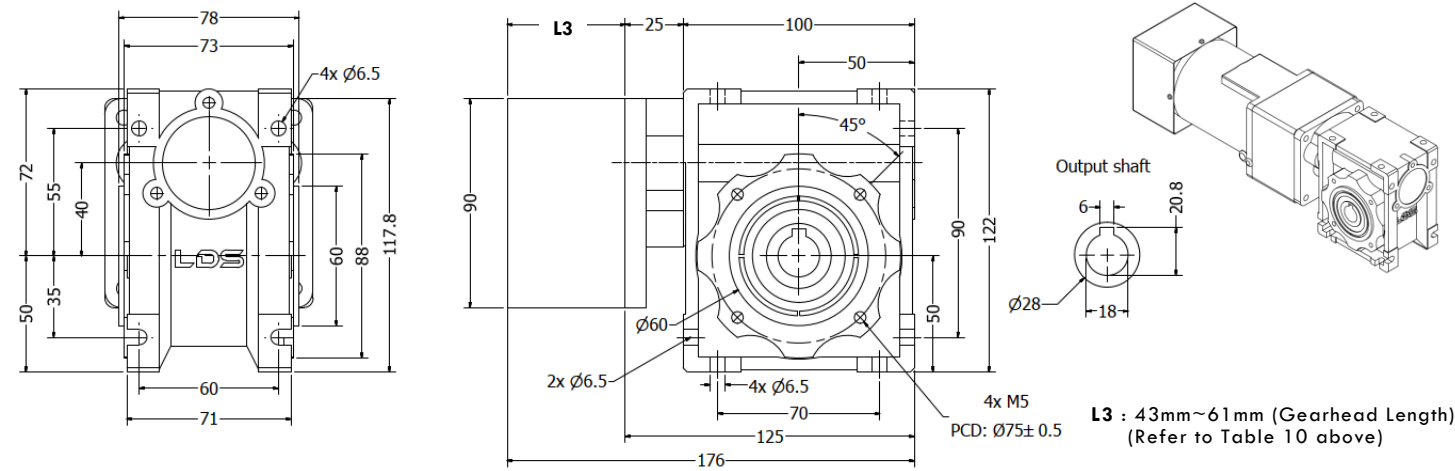
**14** 8MRV040-CM09 & DMRS040-CM09  
HOLLOW SHAFT WORM GEARHEAD

PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-5-CM09 ~ 8MRV040-80-CM09	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



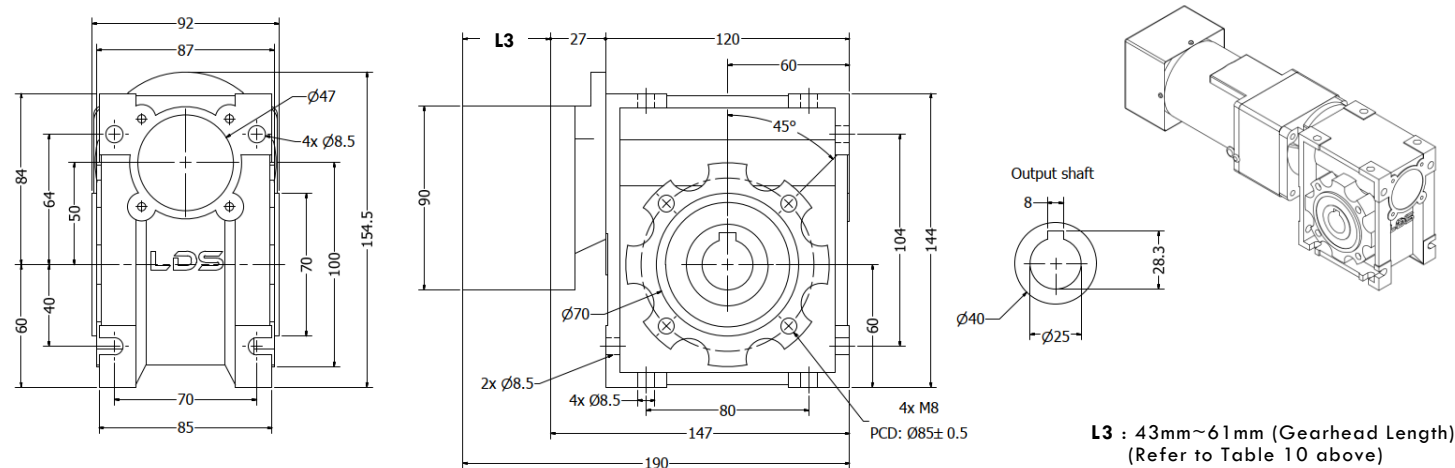
**15** 8MRV040-CG09 & 56N~K-N & DMRS040-CG09 & 56N~K-N  
HOLLOW SHAFT WORM GEARHEAD

PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-15-CG09 & 56N-K-N ~ 8MRV040-80-CG09 & 56N-K-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 19,200



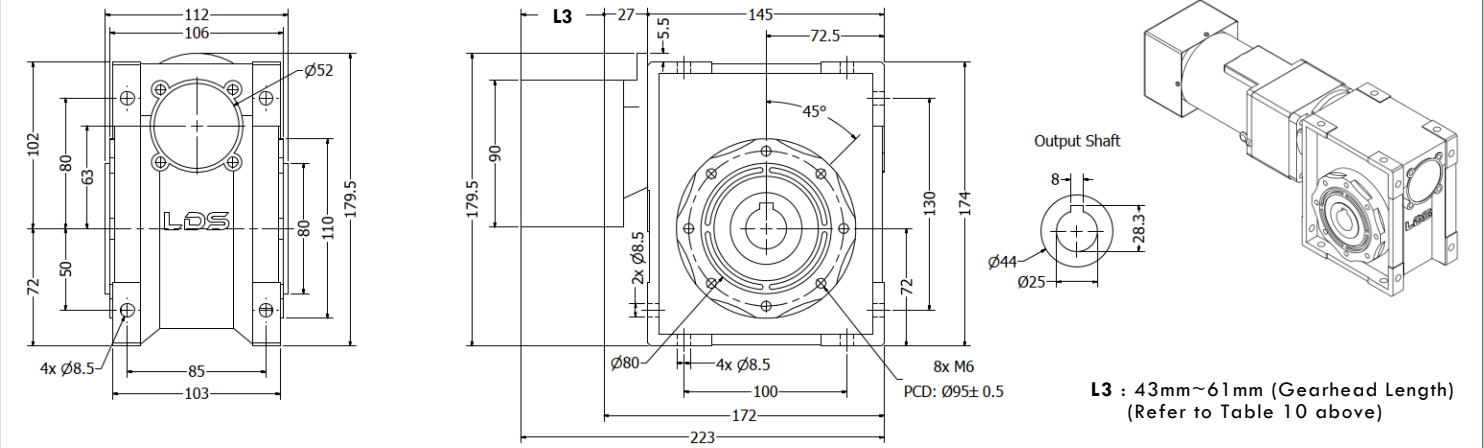
**16** 8MRV050-CG09 & 56U~KB-N & DMRS050-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD

PRODUCT CODE	GEAR RATIO (1/X)
8MRV050-15-CG09 & 56U-KB-N ~ 8MRV050-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000



**17** 8MRV063-CG09 & 56U~KB-N & DMRS063-CG09 & 56U~KB-N  
HOLLOW SHAFT WORM GEARHEAD

PRODUCT CODE	GEAR RATIO (1/X)
8MRV063-15-CG09 & 56U-KB-N ~ 8MRV063-100-CG09 & 56U-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 24,000







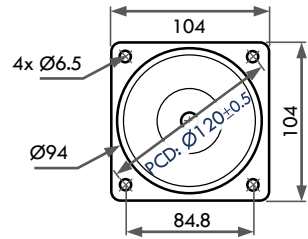
**NOTE:**

- INPUT VOLTAGE OF ELECTRIC MOTOR
- C : 1PHASE 220V (50/60HZ)
- C2 : 1PHASE 240V (50/60HZ)
- S : 3PHASE 220V (50/60HZ)
- S4 : 3PHASE 415V (50/60HZ)
- TQ : 3PHASE 240/415V (50/60HZ)
- U : 3PHASE 220/380V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR

**1 MOTOR FRAME DIMENSION FOR ALL 200W MOTOR**

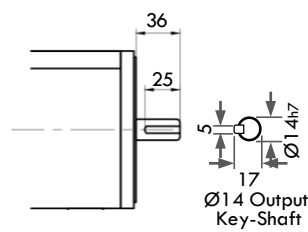
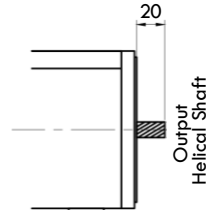
- INDUCTION MOTOR
- REVERSIBLE MOTOR
- ELECTROMAGNETIC BRAKE MOTOR
- CLUTCH & BRAKE MOTOR
- SPEED CONTROL MOTOR



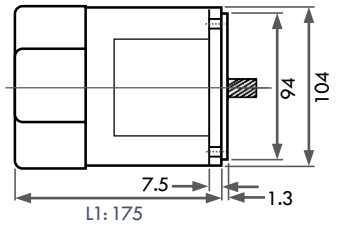
**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 200W MOTOR**

- HELICAL-SHAFT (PINION-SHAFT)**
- 6IK200GN/GX-□F
  - 6IK200RG/ RGX-□F
  - 6IK200VGN/VGX-□F
  - 6RK200GN/GX-□F
  - 6RK200RG/ RGX-□F

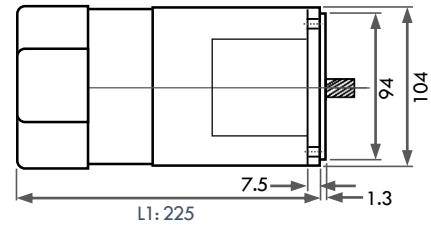
- OUTPUT KEY-SHAFT**
- 6IK200A-□F
  - 6IK200RA-□F
  - 6IK200VA-□F
  - 6RK200A-□F
  - 6RK200RA-□F



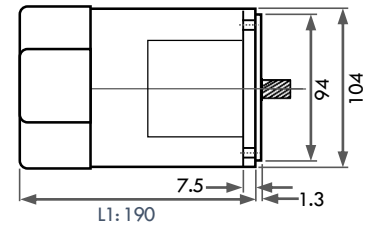
**3 INDUCTION / ASYNCHRONOUS MOTOR 200W**  
6IK200GN-□F / 6IK200VGN-□F  
REVERSIBLE MOTOR 200W  
6RK200GN-□F



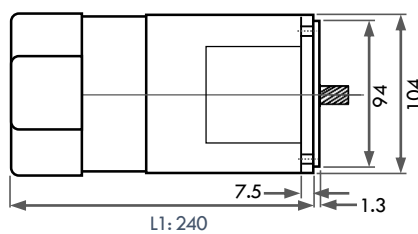
**4 ELECTROMAGNETIC BRAKE MOTOR 200W**  
6IK200GN-□F-B / 6IK200VGN-□F-B  
REVERSIBLE BRAKE MOTOR 200W  
6RK200GN-□F-B



**5 SPEED CONTROL MOTOR 200W**  
6IK200RG-□F  
REVERSIBLE SPEED CONTROL MOTOR 200W  
6RK200RG-□F

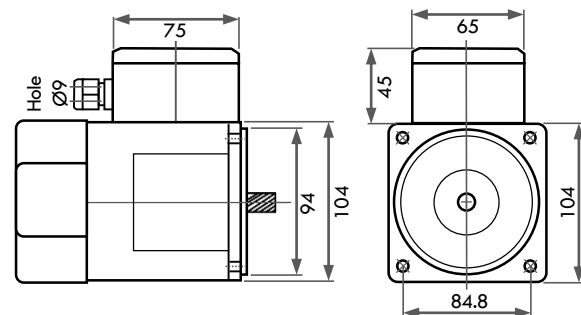


**6 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 200W**  
6IK200RG-□F-B  
REVERSIBLE SPEED CONTROL  
ELECTROMAGNETIC BRAKE MOTOR 200W  
6RK200RG-□F-B



**7 MOTOR WITH TERMINAL BOX (IP44)**

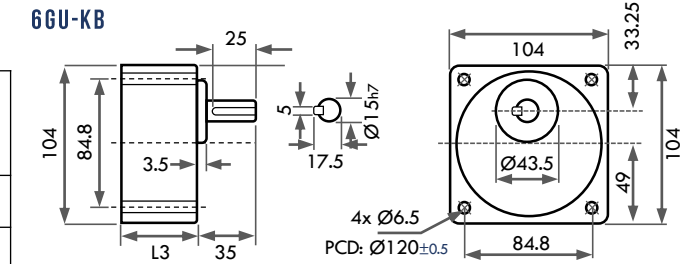
- 6IK200A-□FT
- 6IK200GN-□FT
- 6IK200VGN-□FT
- 6IK200RG-□FT
- 6IK200GN-□FBT
- 6RK200A-□FT
- 6RK200GN-□FT
- 6RK200VGN-□FT
- 6RK200RG-□FT
- 6RK200GN-□FBT



Unit of measurement : mm (millimeter)

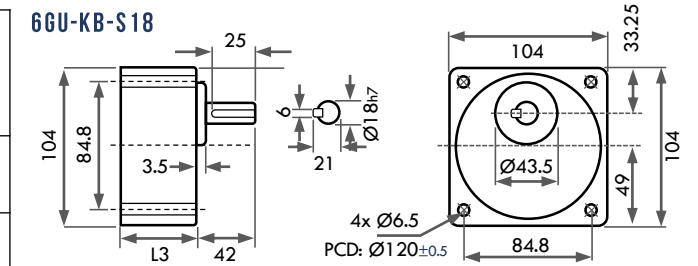
**8 6GU-KB PARALLEL SHAFT GEARHEAD (OUTPUT SHAFT DIA. 15MM)**

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
SINGLE GEARHEAD		
6GU3KB ~ 6GU18KB	3, 5, 6, 7.5, 9, 12.5, 15, 18	53
6GU25KB ~ 6GU75KB	25, 30, 36, 50, 60, 75	61



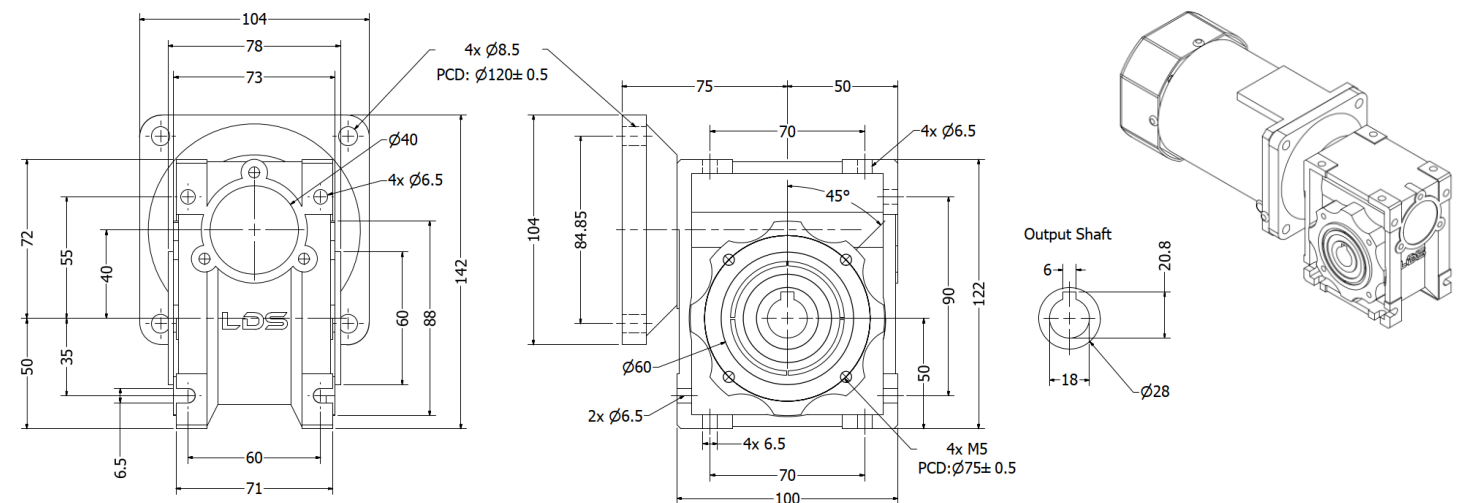
**9 6GU-KB-S18 PARALLEL SHAFT GEARHEAD (OUTPUT SHAFT DIA. 18MM)**

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
SINGLE GEARHEAD		
6GU3KB-S18 ~ 6GU18KB-S18	5, 6, 7.5, 9, 12.5, 15, 18	53
6GU25KB-S18 ~ 6GU75KB-S18	3, 25, 30, 36, 50, 60, 75	61
6GU90KB-S18 ~ 6GU180KB-S18	90, 100, 120, 150, 180	70



**10 8MRV040-CM10 DMRS040-CM10 HOLLOW SHAFT WORM GEARHEAD**

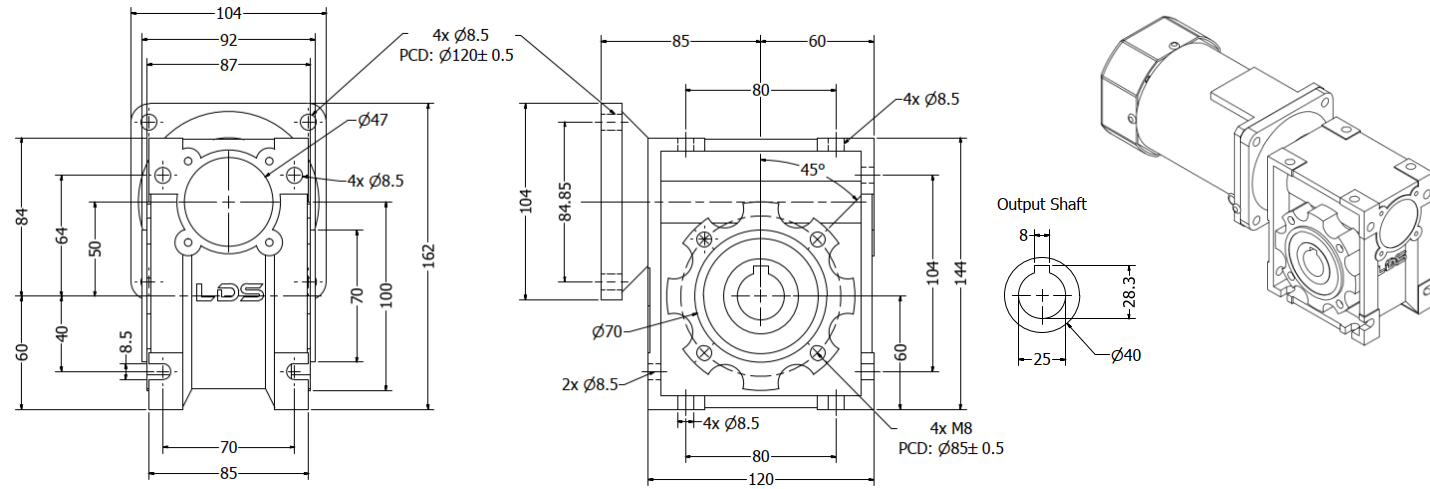
PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-5-CM10 ~ 8MRV040-80-CM10	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



Unit of measurement : mm (millimeter)

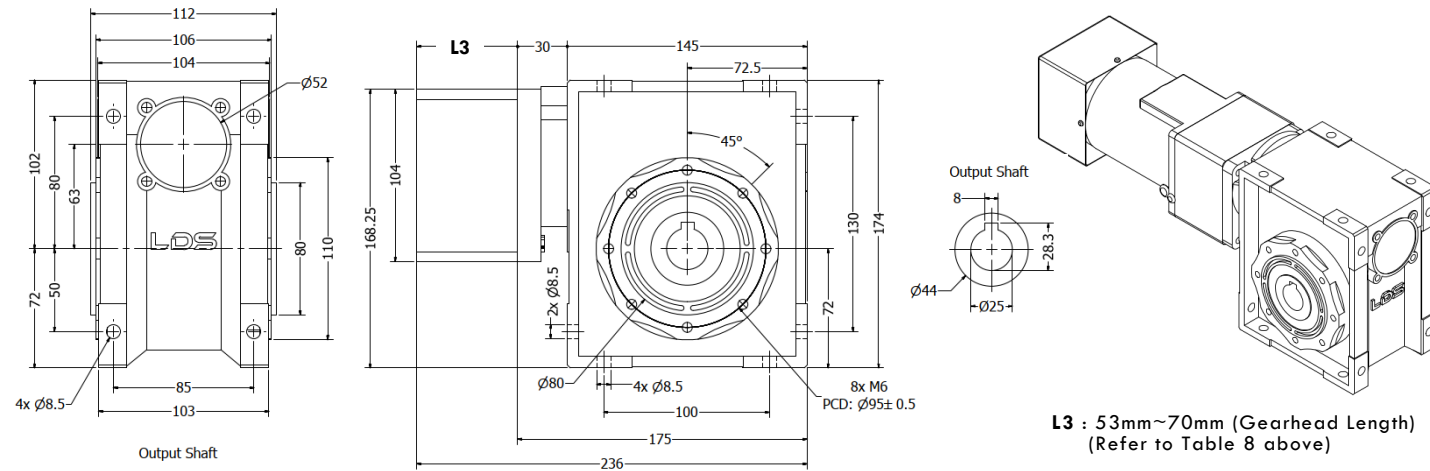
**11 8MRV050-CM10  
DMRS050-CM10  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV050-5-CM10 ~ 8MRV050-100-CM10	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100



**12 8MRV063-CG10 & 6GU~KB-N  
DMRS063-CG10 & 6GU~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV063-15-CG10 & 6GU-KB-N ~ 8MRV063-100-CG10 & 6GU-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 18,000



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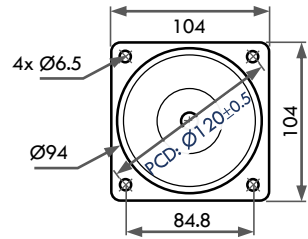


**NOTE:**  
 INPUT VOLTAGE OF ELECTRIC MOTOR  
 C : 1PHASE 220V (50/60HZ)  
 C2 : 1PHASE 240V (50/60HZ)  
 S : 3PHASE 220V (50/60HZ)  
 S4 : 3PHASE 415V (50/60HZ)  
 TQ : 3PHASE 240/415V (50/60HZ)  
 U : 3PHASE 220/380V (50/60HZ)

L1 : BODY LENGTH OF STANDARD MOTOR

**1 MOTOR FRAME DIMENSION FOR ALL 250W MOTOR**

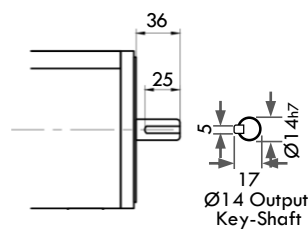
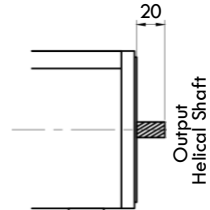
INDUCTION MOTOR  
 REVERSIBLE MOTOR  
 ELECTROMAGNETIC BRAKE MOTOR  
 CLUTCH & BRAKE MOTOR  
 SPEED CONTROL MOTOR



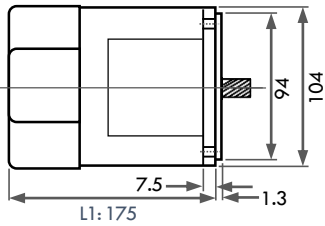
**2 MOTOR OUTPUT SHAFT TYPE FOR ALL 250W MOTOR**

HELICAL-SHAFT (PINION-SHAFT)  
 6IK250GN/GX-□F  
 6IK250RGN/RGX-□F  
 6IK250VGN/VGX-□F  
 6RK250GN/GX-□F  
 6RK250RGN/RGX-□F

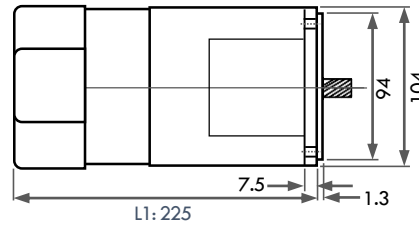
OUTPUT KEY-SHAFT  
 6IK250A-□F  
 6IK250RA-□F  
 6IK250VA-□F  
 6RK250A-□F  
 6RK250RA-□F



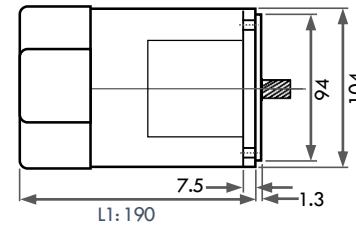
**3 INDUCTION / ASYNCHRONOUS MOTOR 250W**  
 6IK250GN-□F / 6IK250VGN-□F  
 REVERSIBLE MOTOR 250W  
 6RK250GN-□F



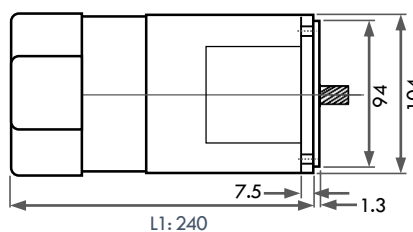
**4 ELECTROMAGNETIC BRAKE MOTOR 250W**  
 6IK250GN-□F-B / 6IK250VGN-□F-B  
 REVERSIBLE BRAKE MOTOR 250W  
 6RK250GN-□F-B



**5 SPEED CONTROL MOTOR 250W**  
 6IK250RGN-□F  
 REVERSIBLE SPEED CONTROL MOTOR 250W  
 6RK250RGN-□F

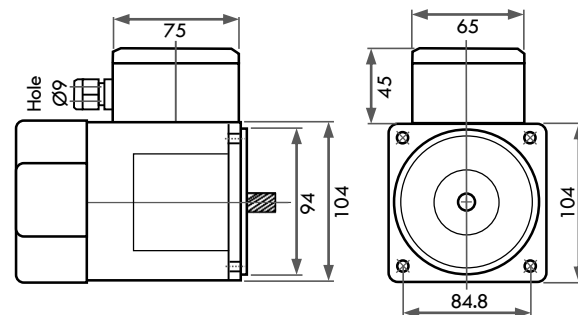


**6 SPEED CONTROL ELECTROMAGNETIC BRAKE MOTOR 250W**  
 6IK250RGN-□F-B  
 REVERSIBLE SPEED CONTROL  
 ELECTROMAGNETIC BRAKE MOTOR 250W  
 6RK250RGN-□F-B



**7 MOTOR WITH TERMINAL BOX (IP44)**

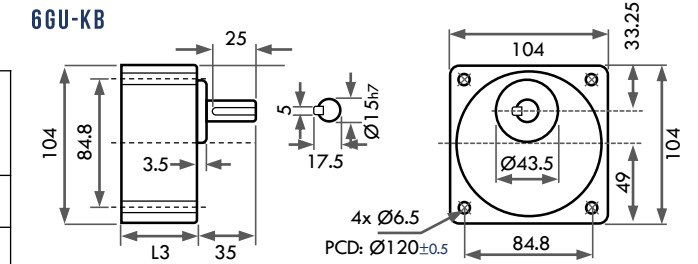
6IK250A-□FT  
 6IK250GN-□FT  
 6IK250VGN-□FT  
 6IK250RGN-□FT  
 6IK250GN-□FBT  
 6RK250A-□FT  
 6RK250GN-□FT  
 6RK250VGN-□FT  
 6RK250RGN-□FT  
 6RK250GN-□FBT



Unit of measurement : mm (millimeter)

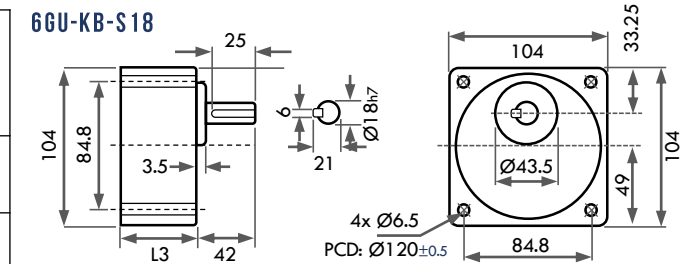
**8 6GU-KB PARALLEL SHAFT GEARHEAD (OUTPUT SHAFT DIA. 15MM)**

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
SINGLE GEARHEAD		L3
6GU3KB ~ 6GU18KB	3, 5, 6, 7.5, 9, 12.5, 15, 18	53
6GU25KB ~ 6GU75KB	25, 30, 36, 50, 60, 75	61



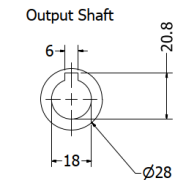
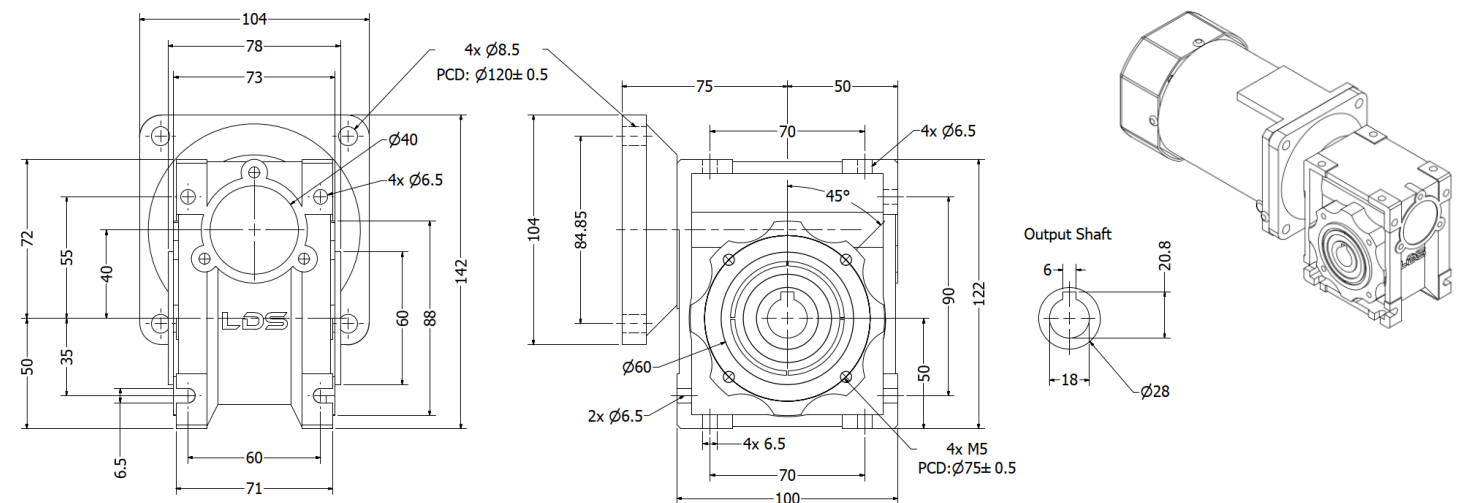
**9 6GU-KB-S18 PARALLEL SHAFT GEARHEAD (OUTPUT SHAFT DIA. 18MM)**

PRODUCT CODE	GEAR REDUCTION RATIO (1/X)	L3
SINGLE GEARHEAD		L3
6GU3KB-S18 ~ 6GU18KB-S18	5, 6, 7.5, 9, 12.5, 15, 18	53
6GU25KB-S18 ~ 6GU75KB-S18	3, 25, 30, 36, 50, 60, 75	61
6GU90KB-S18 ~ 6GU180KB-S18	90, 100, 120, 150, 180	70



**10 8MRV040-CM10 DMRS040-CM10 HOLLOW SHAFT WORM GEARHEAD**

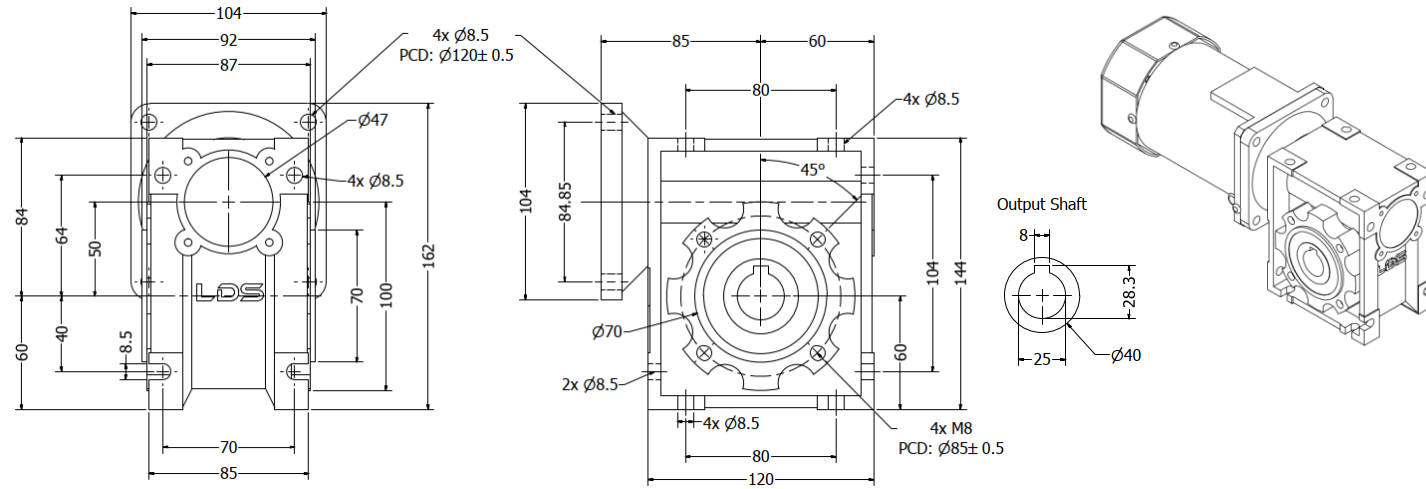
PRODUCT CODE	GEAR RATIO (1/X)
8MRV040-5-CM10 ~ 8MRV040-80-CM10	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80



Unit of measurement : mm (millimeter)

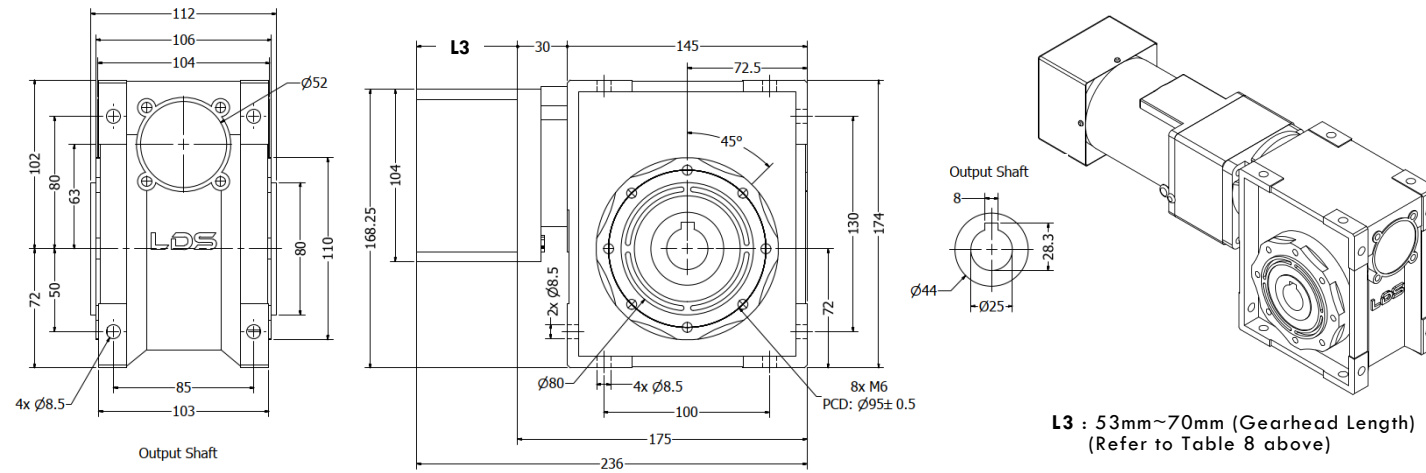
**11 8MRV050-CM10  
DMRS050-CM10  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV050-5-CM10 ~ 8MRV050-100-CM10	5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100



**12 8MRV063-CG10 & 6GU~KB-N  
DMRS063-CG10 & 6GU~KB-N  
HOLLOW SHAFT WORM GEARHEAD**

PRODUCT CODE	GEAR RATIO (1/X)
8MRV063-15-CG10 & 6GU-KB-N ~ 8MRV063-100-CG10 & 6GU-KB-N	75, 100, 125, 135, 150, 180, 225, 270, 375, 450 ~ 18,000

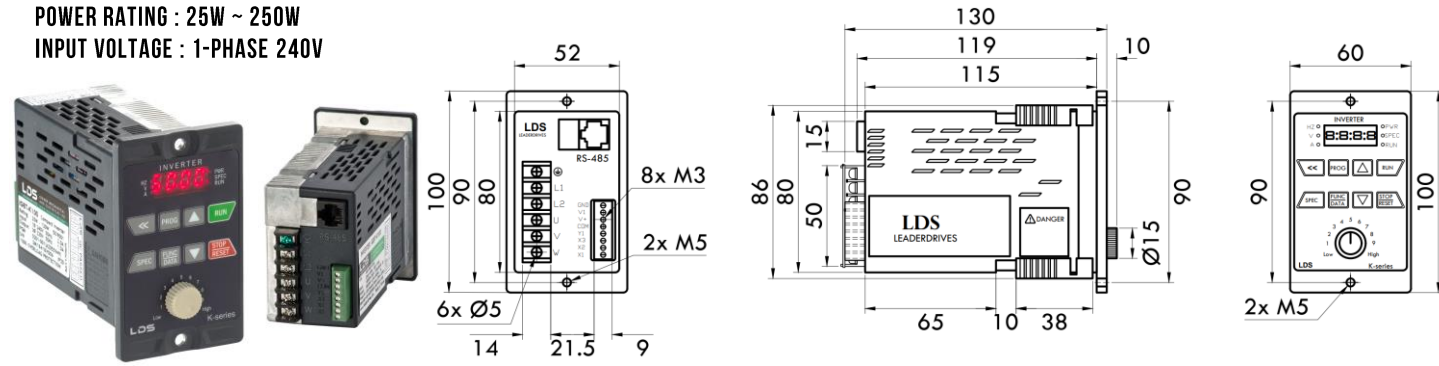


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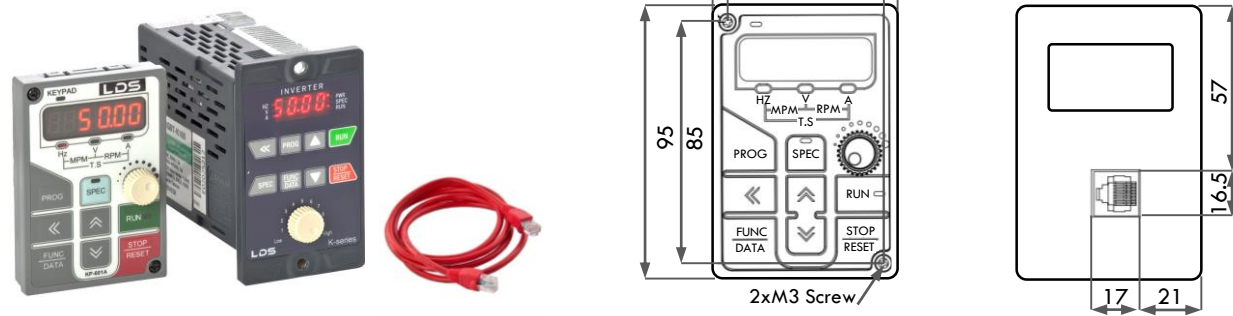
① IGBT-K060 ▪ IGBT-K100 ▪ IGBT-K200 SERIES

COMPACT IGBT INVERTER  
POWER RATING : 25W ~ 250W  
INPUT VOLTAGE : 1-PHASE 240V



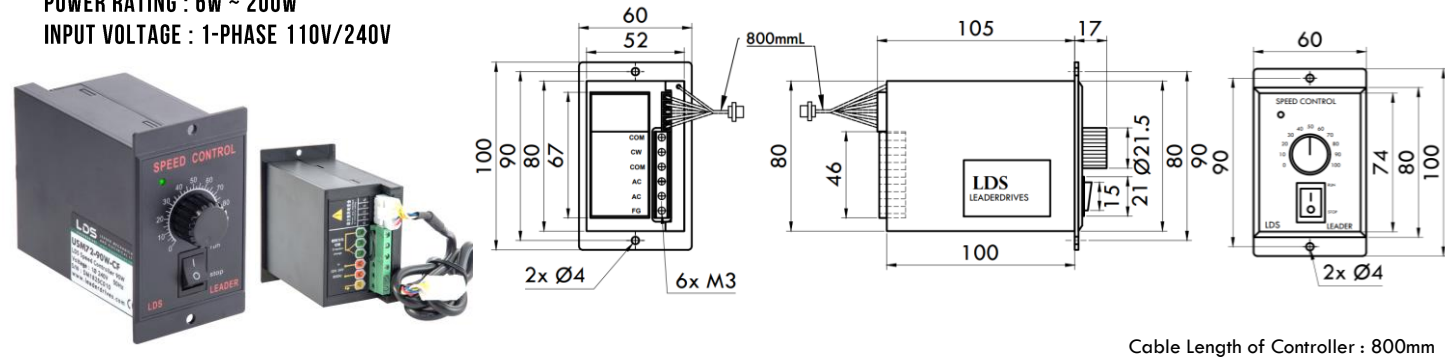
② PORTABLE KEYPAD & ETHERNET CABLE

(COMMUNICATION VIA MODBUS 485)  
FOR IGBT INVERTER



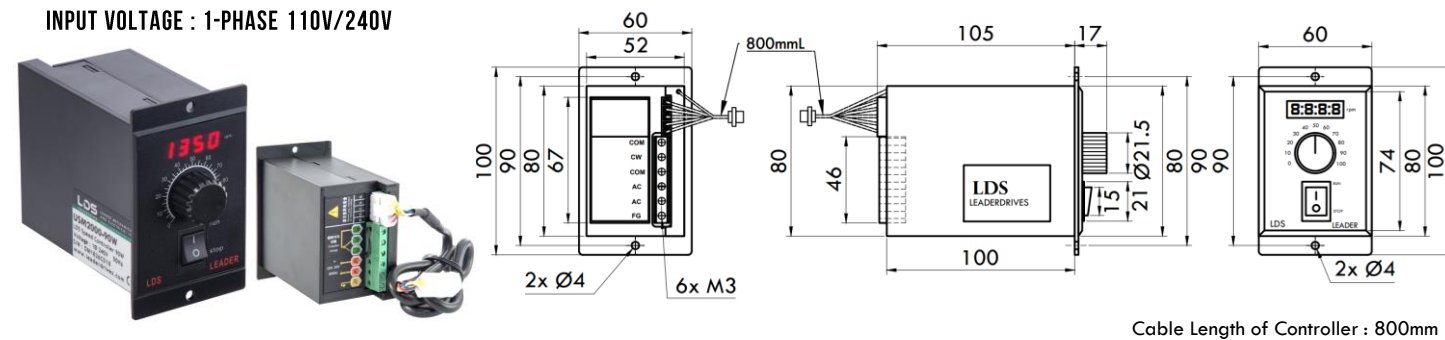
③ USM71 ▪ USM72 SERIES

UNIT TYPE SPEED CONTROLLER  
POWER RATING : 6W ~ 200W  
INPUT VOLTAGE : 1-PHASE 110V/240V



④ USM1000 ▪ USM2000 SERIES

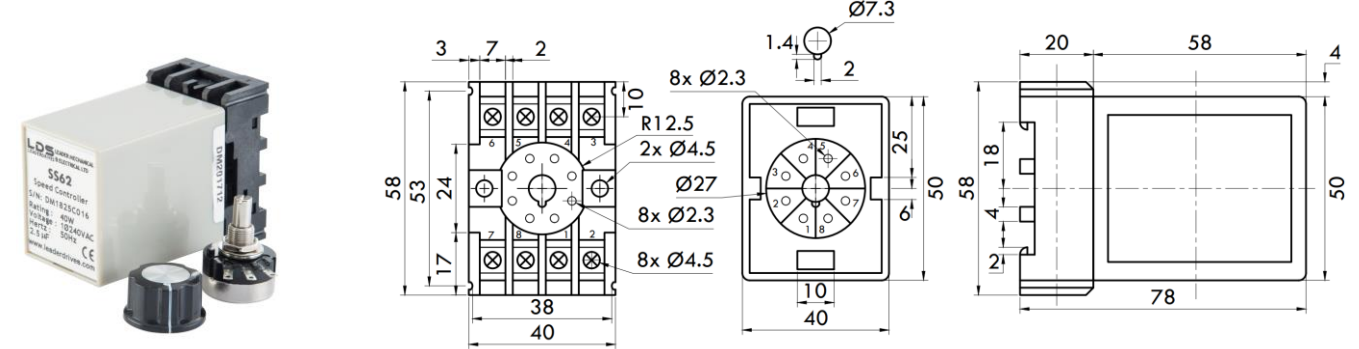
UNIT TYPE SPEED CONTROLLER WITH LED DIGITAL DISPLAY  
POWER RATING : 6W ~ 200W  
INPUT VOLTAGE : 1-PHASE 110V/240V



Unit of measurement : mm (millimeter)

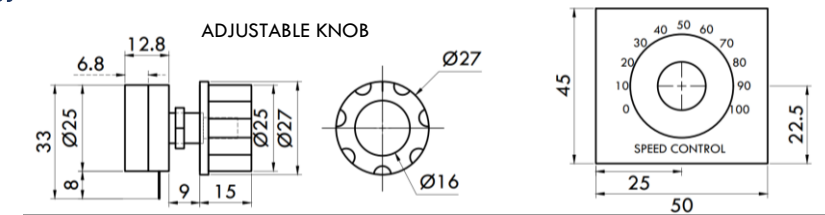
⑤ SS61 ▪ SS62 SERIES

DIN RAIL TYPE SPEED CONTROLLER WITH EXTERNAL POTENTIOMETER  
POWER RATING : 6W ~ 180W  
INPUT VOLTAGE : 1-PHASE 110V/240V



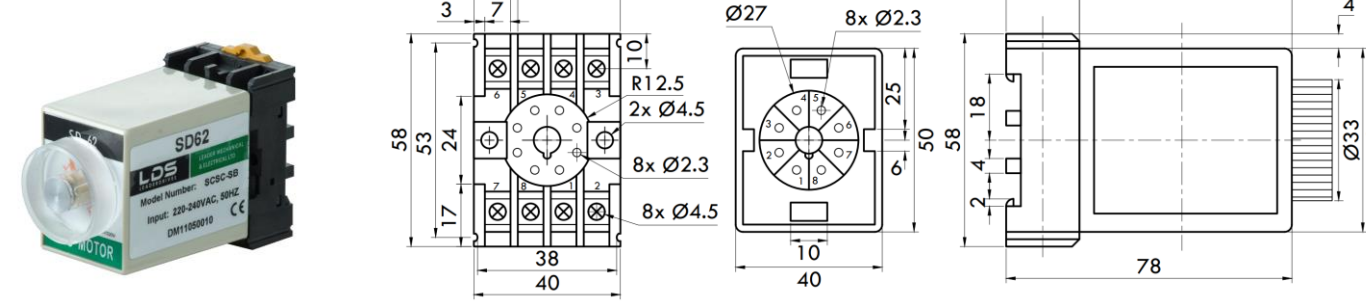
EXTERNAL SPEED POTENTIOMETER (VR KNOB)

FOR DIN RAIL TYPE SPEED CONTROLLER  
POTENTIOMETER RESISTANCE : 20K OHM (20KΩ), 1W



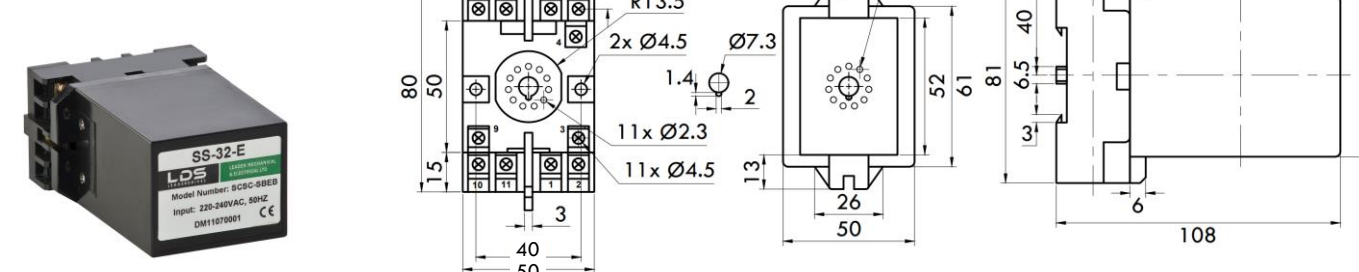
⑥ SD61 ▪ SD62 SERIES

DIN RAIL TYPE SPEED CONTROLLER  
POWER RATING : 6W ~ 180W  
INPUT VOLTAGE : 1-PHASE 110V/240V



⑦ SS31 ▪ SS32 SERIES

DIN RAIL TYPE BRAKE PACK SPEED CONTROLLER  
WITH EXTERNAL POTENTIOMETER  
POWER RATING : 6W ~ 180W  
INPUT VOLTAGE : 1-PHASE 110V/240V

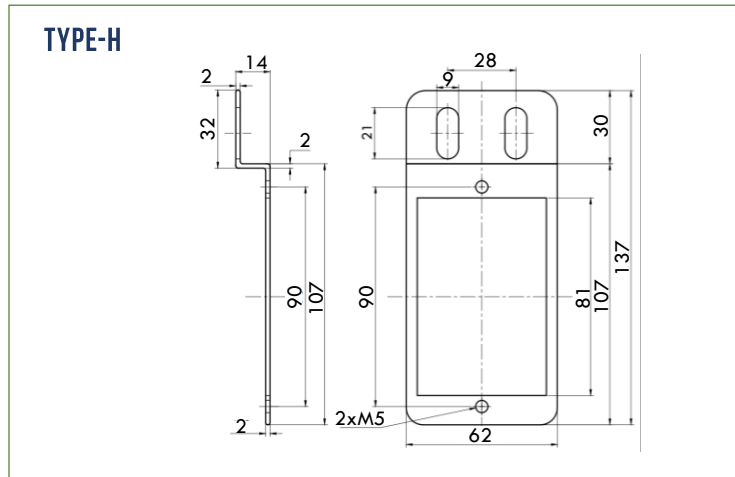


Unit of measurement : mm (millimeter)

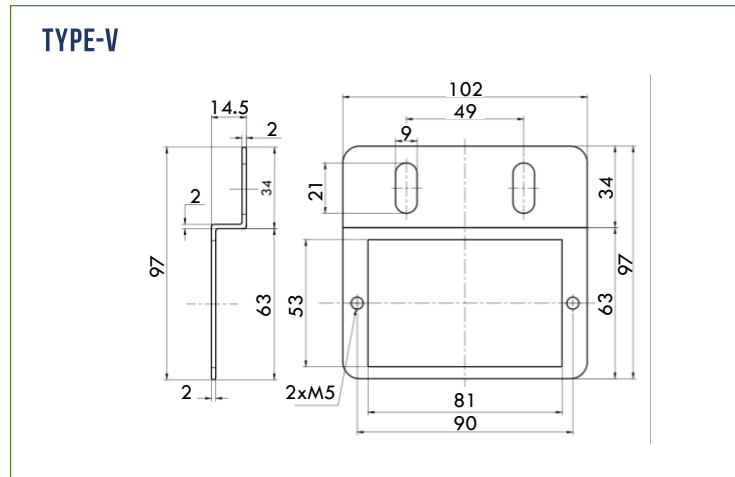
**DIMENSION : ACCESSORIES OF COMPACT GEAR MOTOR**

**MOUNTING BRACKET FOR SPEED CONTROLLER AND COMPACT IGBT INVERTER**

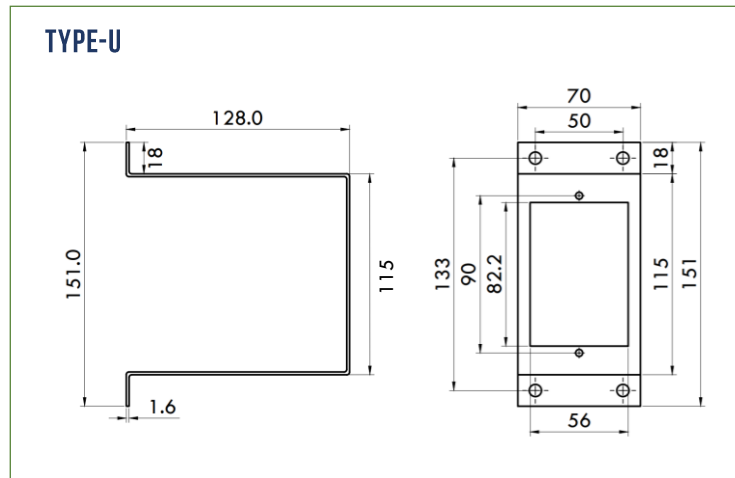
**TYPE-H**  
(TOP-MOUNT)  
FOR IGBT INVERTER &  
USM SPEED CONTROLLER



**TYPE-V**  
(SIDE MOUNT)  
FOR IGBT INVERTER &  
USM SPEED CONTROLLER

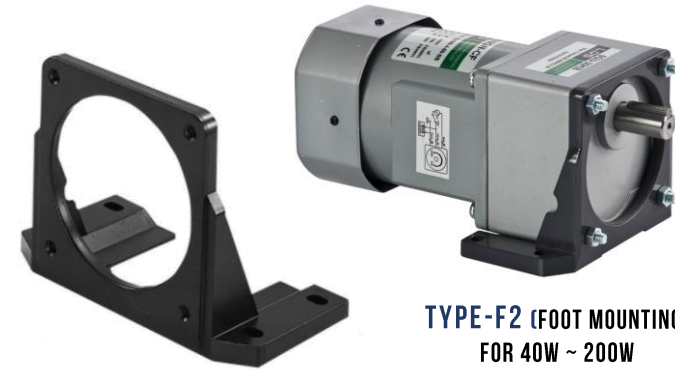


**TYPE-U**  
(WALL-MOUNT)  
FOR IGBT INVERTER &  
USM SPEED CONTROLLER



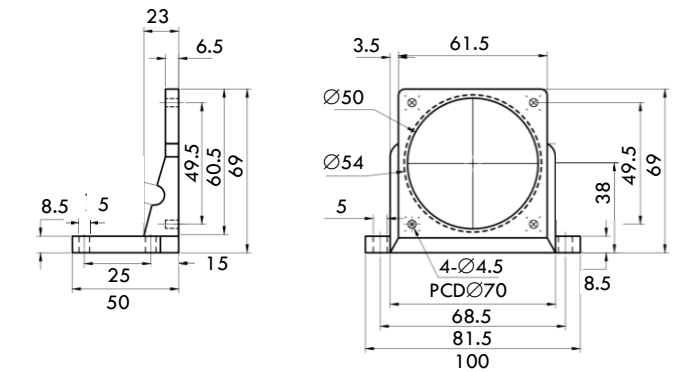
**DIMENSION : ACCESSORIES OF COMPACT GEAR MOTOR**

**MOUNTING BRACKET COMPACT GEAR MOTOR**

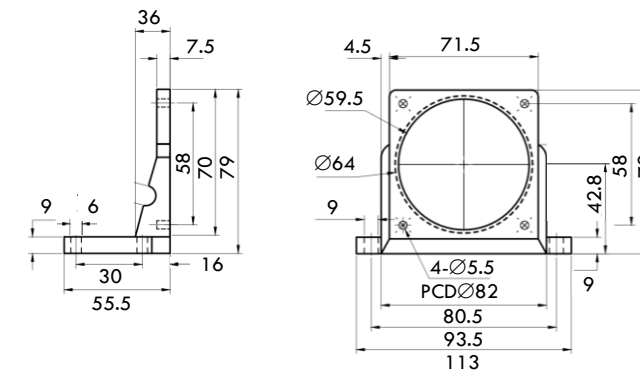


**TYPE-F2 (FOOT MOUNTING)**  
FOR 40W ~ 200W  
COMPACT GEAR MOTOR

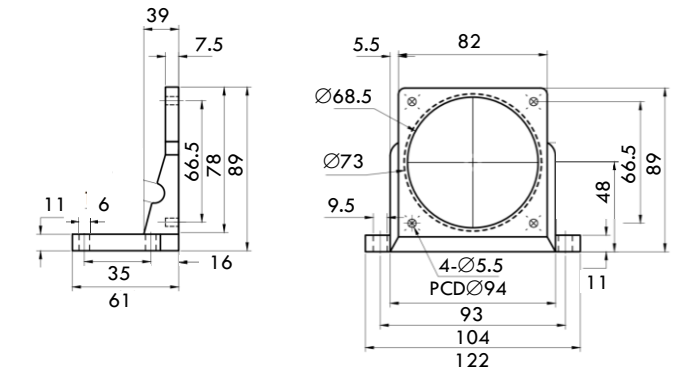
**TYPE-F2#2**  
(FOR 6W MOTOR - 2IK & 2RK / 2GN GEAR HEAD)



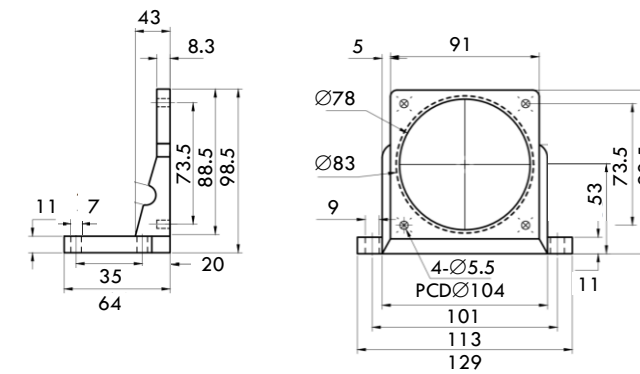
**TYPE-F2#3**  
(FOR 15W MOTOR - 3IK & 3RK / 3GN GEARHEAD)



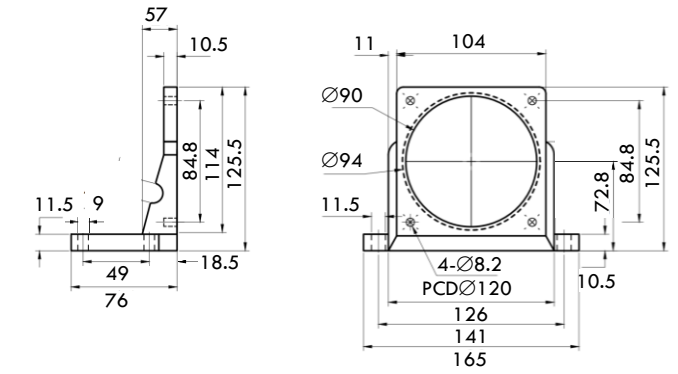
**TYPE-F2#4**  
(FOR 25W MOTOR - 4IK & 4RK / 4GN GEAR HEAD)



**TYPE-F2#5**  
(FOR 40W-200W MOTOR - 5IK & 5RK / 5GN & 5GU GEARHEAD)



**TYPE-F2#6**  
(FOR 200W-250W MOTOR - 6IK & 6RK / 6GU GEAR HEAD)



**COMPACT GEAR ACCESSORIES :**

<b>AXIAL COOLING FAN 40CFM</b> (COACTIVE POWERFUL COOLING FAN) 1.7W / 32DBA / BLDC WITH VAPOR BEARING	<b>ACRYLIC PROTECTIVE COVER FOR IGBT INVERTER (ACRYLIC MADE)</b>	<b>EXTENSION CABLE FOR VARIABLE SPEED MOTOR. AVAILABLE IN 1M ▪ 1.5M ▪ 2M ▪ 3M LENGTH</b>	<b>4-PIN CAPACITOR 0.8 ~ 24 MICROFARED</b>	<b>OUTPUT FLANGE FOR WORM GEAR REDUCER #30F ▪ #40F</b>	<b>PROTECTIVE ENCLOSURE FOR WORM GEAR REDUCER 8MRV#30 ▪ 8MRV#40</b>

Unit of measurement : mm (millimeter)

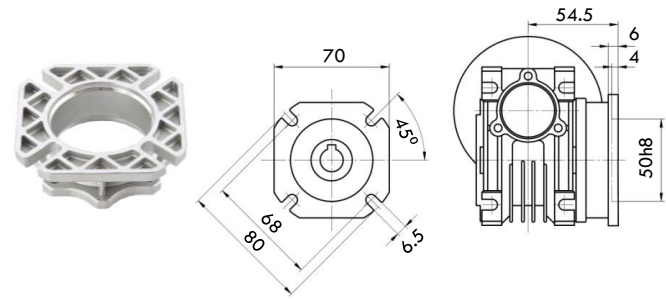
Unit of measurement : mm (millimeter)



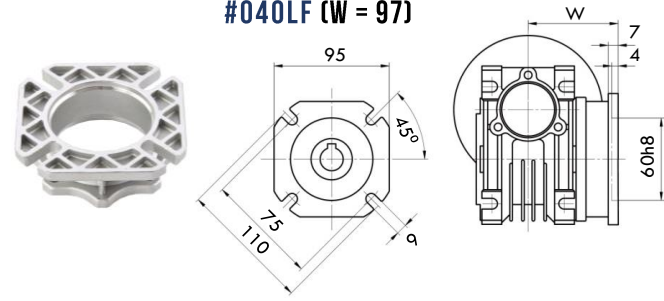
**DIMENSION : ACCESSORIES OF COMPACT GEAR MOTOR**

**OUTPUT FLANGE FOR ALUMINIUM WORM GEAR REDCER**

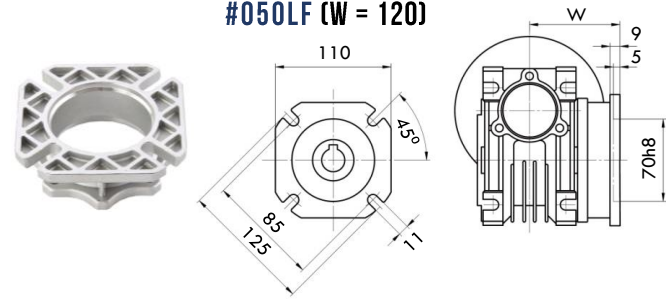
**OUTPUT FLANGE : #030F**



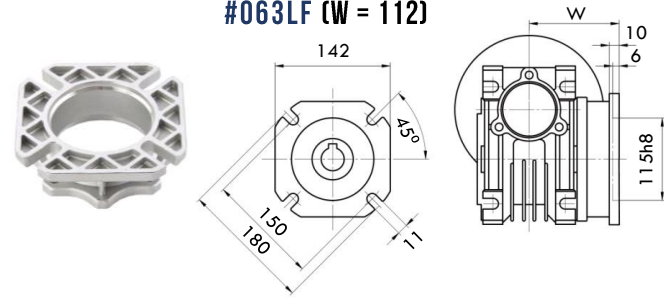
**OUTPUT FLANGE : #040F (W = 67)  
#040LF (W = 97)**



**OUTPUT FLANGE : #050F (W = 90) -  
#050LF (W = 120)**

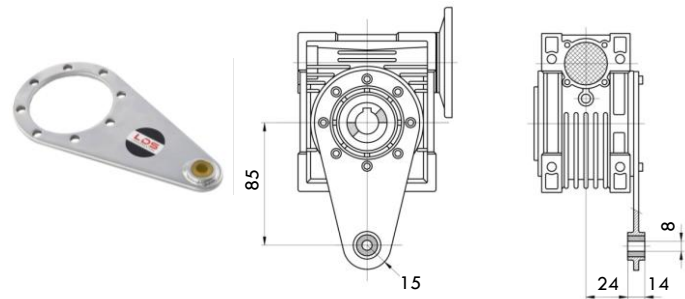


**OUTPUT FLANGE : #063F (W = 82)  
#063LF (W = 112)**

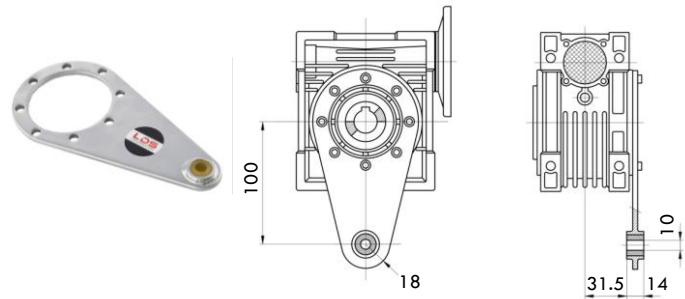


**TORQUE ARM FOR ALUMINIUM WORM GEAR REDCER**

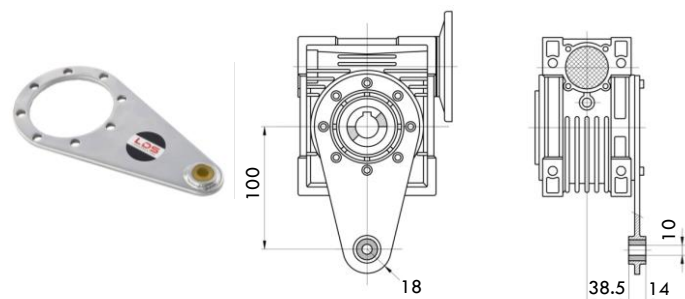
**TORQUE ARM : #030TA**



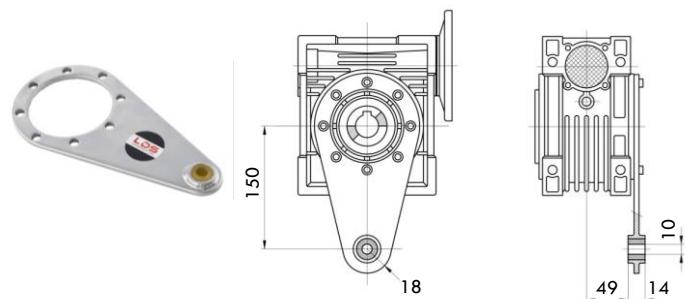
**TORQUE ARM : #040TA**



**TORQUE ARM : #050TA**



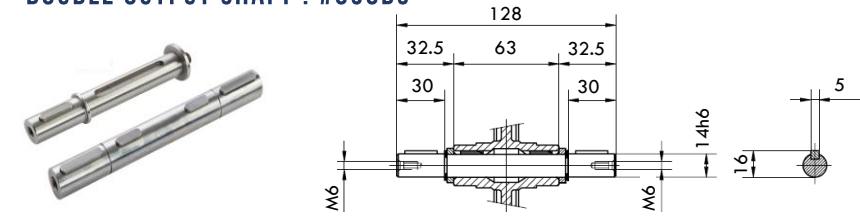
**TORQUE ARM : #063TA**



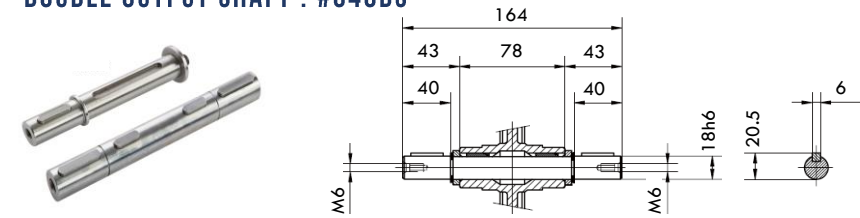
**DIMENSION : ACCESSORIES OF COMPACT GEAR MOTOR**

**LOW SPEED OUTPUT SHAFT FOR ALUMINIUM WORM GEAR REDCER**

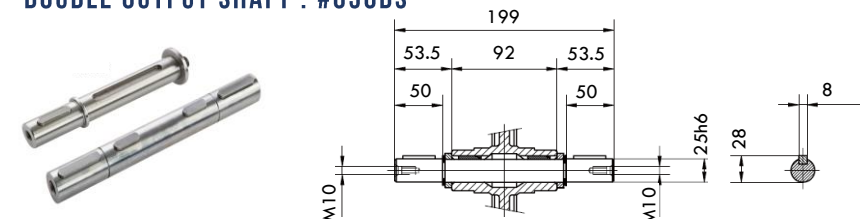
**SINGLE OUTPUT SHAFT : #030SS  
DOUBLE OUTPUT SHAFT : #030DS**



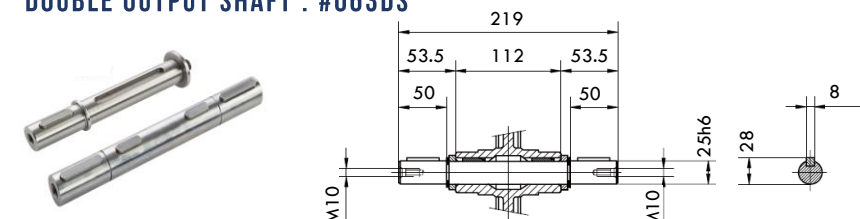
**SINGLE OUTPUT SHAFT : #040SS  
DOUBLE OUTPUT SHAFT : #040DS**



**SINGLE OUTPUT SHAFT : #050SS  
DOUBLE OUTPUT SHAFT : #050DS**



**SINGLE OUTPUT SHAFT : #063SS  
DOUBLE OUTPUT SHAFT : #063DS**

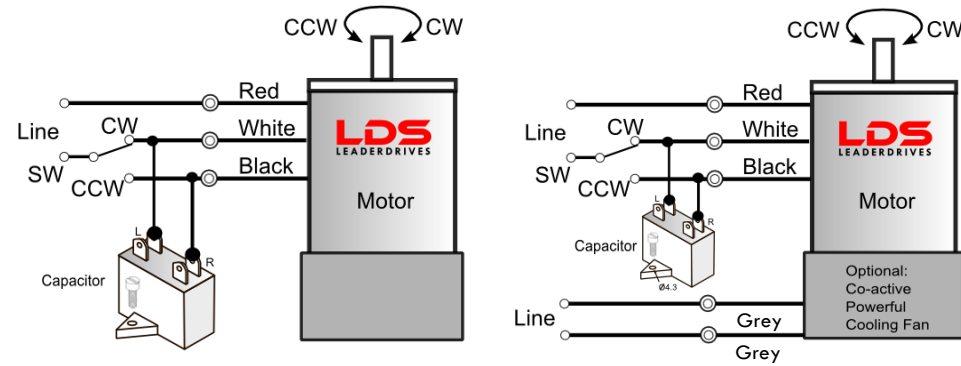


# CONNECTION DIAGRAM

## INDUCTION MOTOR ■ REVERSIBLE MOTOR (1PHASE)

Motor Input Voltage : AC 1Ø 100~110V ■ 1Ø 220~240V  
 Coactive Fan Input Voltage : AC 100~110V ■ AC 220~240V

**Direction of Rotation:**  
 To change the rotation, switch to CW or CCW connection.

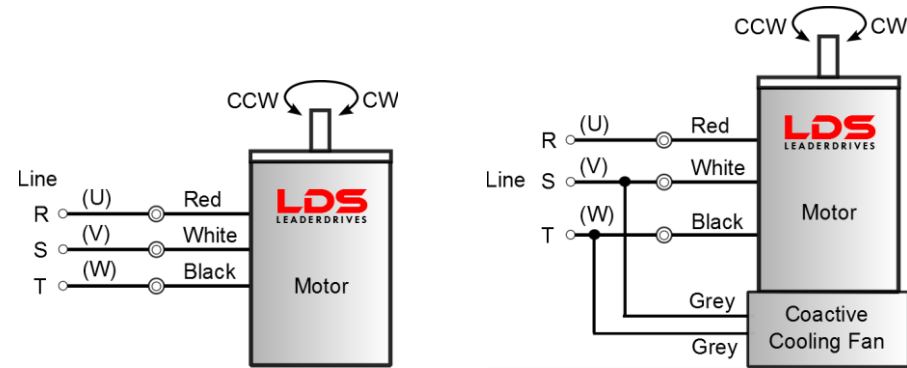


## INDUCTION MOTOR (3PHASE)

Motor Input Voltage : AC 3Ø 220~240V  
 Coactive Fan Input Voltage : AC 220~240V

**Direction of Rotation:**  
 To change the rotation, exchange any two wires between U, V and W.

\* If the motor is powered by an inverter or electronic soft starter, use separate Power Supply 220V to connect to the Coactive Cooling Fan.

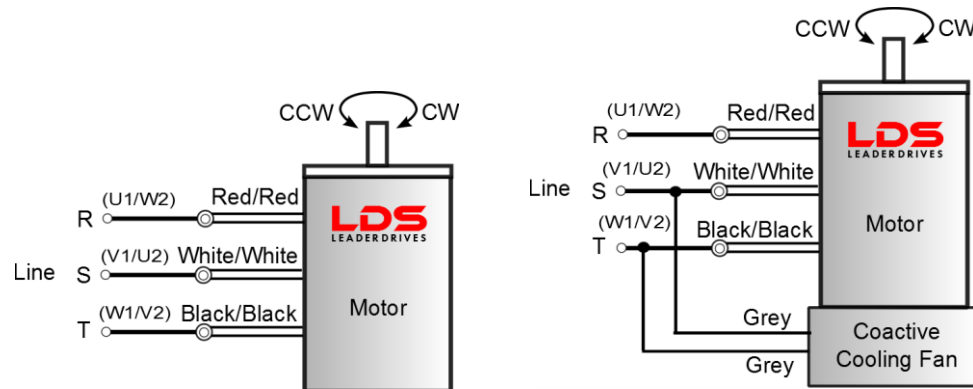


## INDUCTION MOTOR (3PHASE - 6 WIRES)

Motor Input Voltage : AC 3Ø 220~240V  
 Coactive Fan Input Voltage : AC 3Ø 220~240V

**Direction of Rotation:**  
 To change the rotation, exchange any two wires between U1/W2, V1/U2, and W1/V2.

\* If the motor is powered by an inverter or electronic soft starter, use separate Power Supply 220V to connect to the Coactive Cooling Fan.



Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.

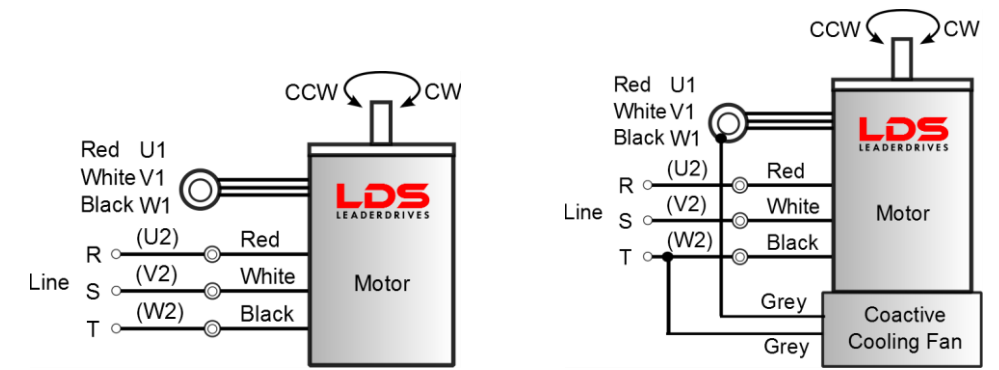
# CONNECTION DIAGRAM

## INDUCTION MOTOR (3PHASE - 6 WIRES)

Motor Input Voltage : AC 3Ø 380~415V  
 Coactive Fan Input Voltage : AC 3Ø 220~240V

**Direction of Rotation:**  
 To change the rotation, exchange any two wires between U2, V2 and W2.

\*If the motor is powered by an inverter or electronic soft starter, use separate Power Supply 220V to connect to the Coactive Cooling Fan.

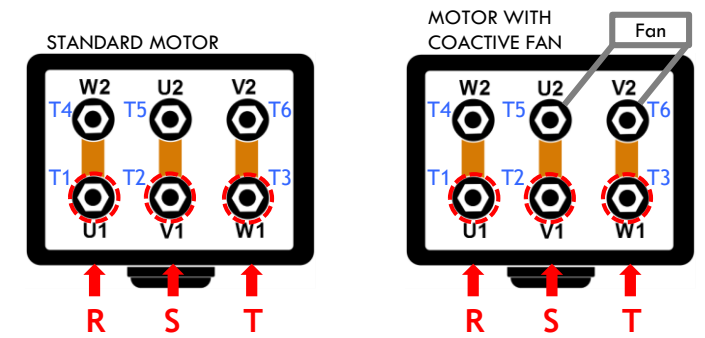


## INDUCTION MOTOR WITH TERMINAL BOX (3PHASE)

Motor Input Voltage : AC 3Ø 220~240V  
 Coactive Fan Input Voltage : AC 220~240V

**Direction of Rotation:**  
 To change the rotation, exchange any two wires between U1, V1 and W1.

\* If the motor is powered by an inverter or electronic soft starter, use separate Power Supply 220V to connect to the Coactive Cooling Fan.

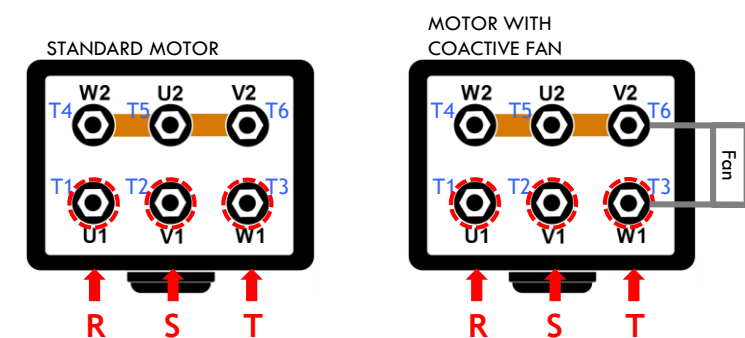


## INDUCTION MOTOR WITH TERMINAL BOX (3PHASE)

Motor Input Voltage : AC 3Ø 380~415V  
 Coactive Fan Input Voltage : AC 220~240V

**Direction of Rotation:**  
 To change the rotation, exchange any two wires between U1, V1 and W1.

\* If the motor is powered by an inverter or electronic soft starter, use separate Power Supply 220V to connect to the Coactive Cooling Fan.



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## CONNECTION DIAGRAM

### ELECTROMAGNETIC BRAKE MOTOR REVERSIBLE ELECTROMAGNETIC BRAKE MOTOR (1PHASE)

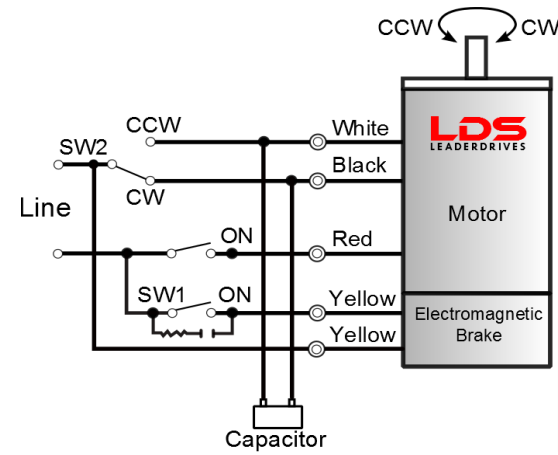
Motor Input Voltage : AC 1Ø 100~110V •  
AC 1Ø 220~240V

Brake Input Voltage : AC 100~110V •  
AC 220~240V  
(Build-in AC to DC Rectifier Included)

**Operation :**

**Run/Stop:** SW 1 operates motor and electromagnetic brake action. Motor will rotate when SW1 is switched to ON (short circuit). When SW1 is switched to OFF (open), the motor stopped immediately by the electromagnetic brake and holds the load.

To release the brake while the motor is stopped, apply voltage between only two brake lead wires (yellow). The electromagnetic brake is release and the motor shaft can be rotated easily by hand.



### ELECTROMAGNETIC BRAKE MOTOR (3PHASE)

Motor Input Voltage : AC 3Ø 220~240V

Brake Input Voltage : AC 220~240V (Build-in AC to DC Rectifier Included)

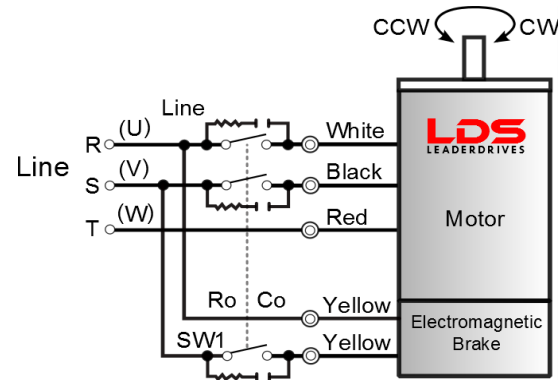
**Operation :**

**Run/Stop:** SW 1 operates motor and electromagnetic brake action. Motor will rotate when SW1 is switched to ON (short circuit). When SW1 is switched to OFF (open), the motor stopped immediately by the electromagnetic brake and holds the load.

To release the brake while the motor is stopped, apply voltage between only two brake lead wires (yellow). The electromagnetic brake is release and the motor shaft can be rotated easily by hand.

**Direction of Rotation:** To change the rotation, exchange any two wires between U, V and W.

\* If the motor is powered by an inverter or electronic soft starter, use Relay or separate Power Supply 220V for Brake Rectifier.



### ELECTROMAGNETIC BRAKE MOTOR (3PHASE – 6 WIRES)

Motor Input Voltage : AC 3Ø 380~415V

Brake Input Voltage : AC 220~240V  
(Build-in AC to DC Rectifier Included)

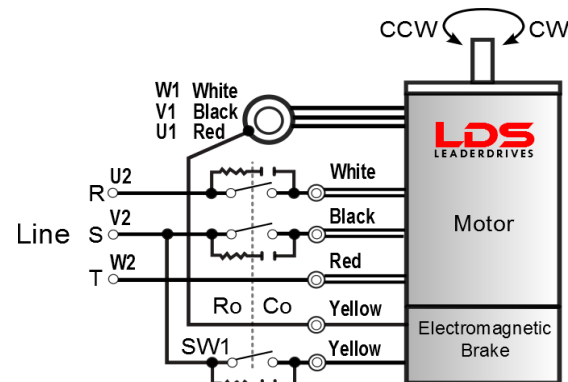
**Operation :**

**Run/Stop:** SW 1 operates motor and electromagnetic brake action. Motor will rotate when SW1 is switched to ON (short circuit). When SW1 is switched to OFF (open), the motor stopped immediately by the electromagnetic brake and holds the load.

To release the brake while the motor is stopped, apply voltage between only two brake lead wires (yellow). The electromagnetic brake is release and the motor shaft can be rotated easily by hand.

**Direction of Rotation:** To change the rotation, exchange any two wires between U2, V2 and W2.

\* If the motor is powered by an inverter or electronic soft starter, use Relay or separate Power Supply 220V for Brake Rectifier.



Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.

## CONNECTION DIAGRAM

### ELECTROMAGNETIC BRAKE MOTOR TERMINAL BOX (3PHASE)

Motor Input Voltage : AC 3Ø 220~240V

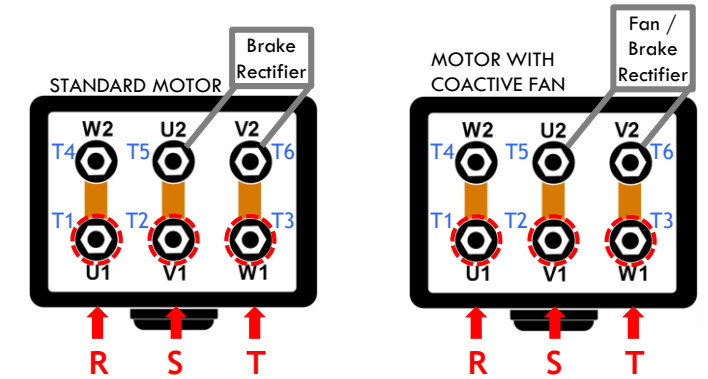
Brake Input Voltage : AC 220~240V  
(Build-in AC to DC Rectifier Included)

Coactive Fan Input Voltage : AC 220~240V

**Direction of Rotation:**

To change the rotation, exchange any two wires between U1, V1 and W1.

\* If the motor is powered by an inverter or electronic soft starter, use Relay or separate Power Supply 220V for Brake Rectifier.



### ELECTROMAGNETIC BRAKE MOTOR TERMINAL BOX (3PHASE)

Motor Input Voltage : AC 3Ø 380~415V

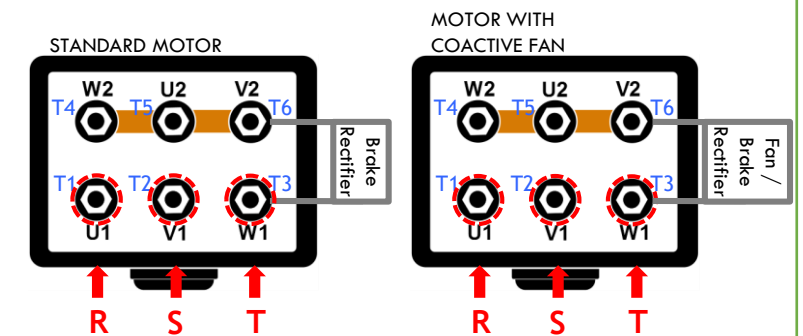
Brake Input Voltage : AC 220~240V  
(Build-in AC to DC Rectifier Included)

Coactive Fan Input Voltage : AC 220~240V

**Direction of Rotation:**

To change the rotation, exchange any two wires between U1, V1 and W1.

\* If the motor is powered by an inverter or electronic soft starter, use Relay or separate Power Supply 220V for Brake Rectifier.



**Operation :**

**Run/Stop:** The brake systems are wired to the motor terminal block. When power is applied to the motor, the brake release (the motor stopped immediately by the electromagnetic brake and holds the load)

To release the brake while the motor is stopped, apply voltage between only two brake lead wires (yellow). The electromagnetic brake is release and the motor shaft can be rotated easily by hand.

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.

# CONNECTION DIAGRAM

## CLUTCH & BRAKE MOTOR (1PHASE)

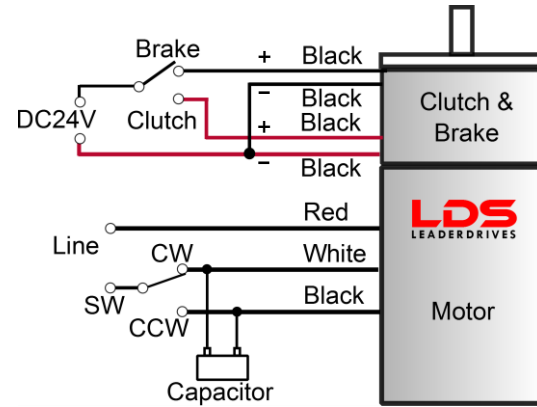
Motor Input Voltage : AC 1Ø 100~110V ▪ 1Ø 220~240V  
Clutch & Brake Input Voltage : DC 24V

**Operation:**  
Use separate power supply for the motor (AC) and the clutch and brake (AC to DC).

When the motor is rotating, connect the switch to the clutch, the output shaft will start rotating and transmits power accordingly.

When the motor is rotating, connect the switch to the brake, it will stop instantly and hold great retention force.

When the DC power is off, the output shaft can rotate freely.



## CLUTCH & BRAKE MOTOR (3PHASE)

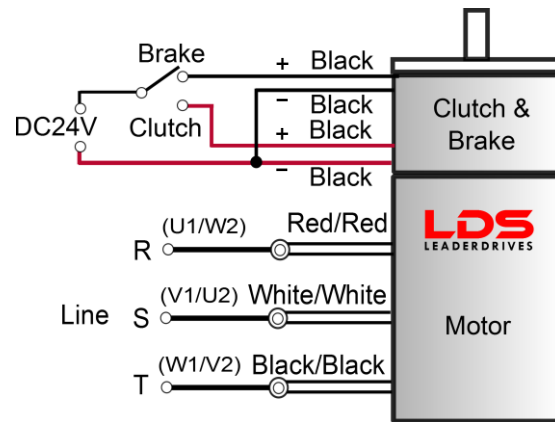
Motor Input Voltage : AC 3Ø 220~240V  
Clutch & Brake Input Voltage : DC 24V

**Operation:**  
Use separate power source for the motor (AC) and the clutch and brake (AC to DC).

When the motor is rotating, connect the switch to the clutch, the output shaft will start rotating and transmits power accordingly.

When the motor is rotating, connect the switch to the brake, it will stop instantly and hold great retention force.

When the DC power is off, the output shaft can rotate freely.



## CLUTCH & BRAKE MOTOR (3PHASE)

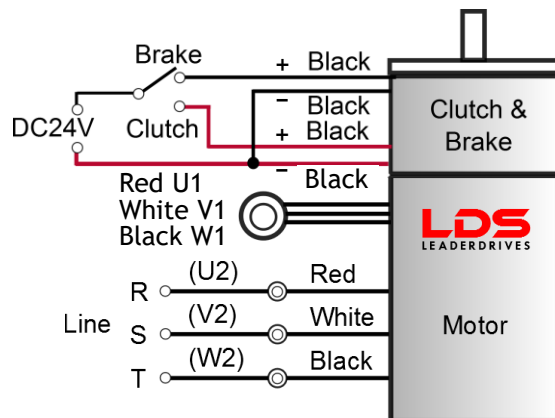
Motor Input Voltage : AC 3Ø 380~415V  
Clutch & Brake Input Voltage : DC 24V

**Operation:**  
Use separate power source for the motor (AC) and the clutch and brake (AC to DC).

When the motor is rotating, connect the switch to the clutch, the output shaft will start rotating and transmits power accordingly.

When the motor is rotating, connect the switch to the brake, it will stop instantly and hold great retention force.

When the DC power is off, the output shaft can rotate freely.



Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.

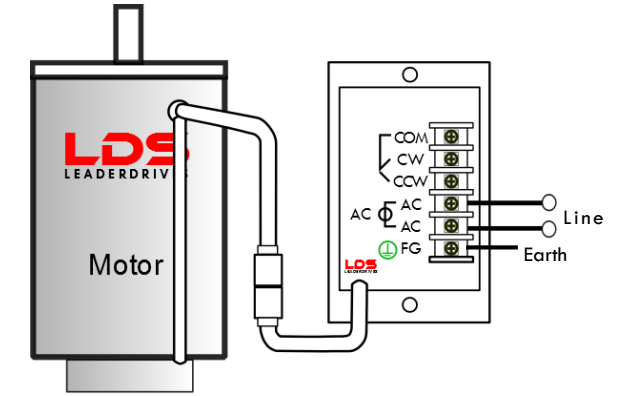
# CONNECTION DIAGRAM

## VARIABLE SPEED MOTOR WITH USM TYPE SPEED CONTROLLER (1PHASE)

Motor Input Voltage : AC 1Ø 100~110V ▪ 1Ø 220~240V  
Controller Input Voltage : AC 1Ø 100~110V ▪ 1Ø 220~240V

**Operation:**  
Connect the motor lead wires connectors to the control unit (speed controller). Then connect the power cord to the power source.

**Direction of Rotation:**  
To change the rotation, switch COM-CW to COM-CCW connection, and vice versa.



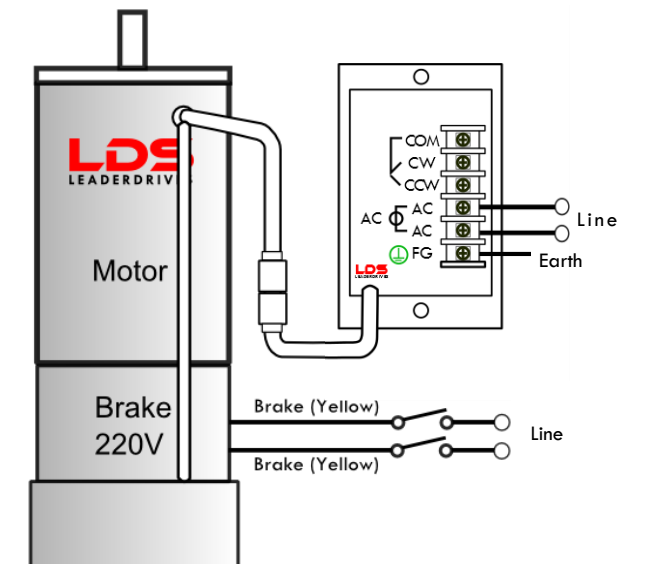
## VARIABLE SPEED MOTOR WITH ELECTROMAGNETIC BRAKE AND USM TYPE SPEED CONTROLLER (1PHASE)

Motor Input Voltage : AC 1Ø 100~110V ▪ 1Ø 220~240V  
Controller Input Voltage : AC 1Ø 100~110V ▪ 1Ø 220~240V  
Brake Input Voltage : AC 100~110V ▪ 220~240V  
(Build-in AC to DC Rectifier Included)

**Operation:**  
Connect the motor lead wires connectors to the control unit (speed controller). Then connect the power cord to the power source.

Use Relay or separate Power Supply 110V/220V for the Brake Rectifier (Yellow Wire).

**Direction of Rotation:**  
To change the rotation, switch COM-CW to COM-CCW connection, and vice versa.



Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.



# CONNECTION DIAGRAM

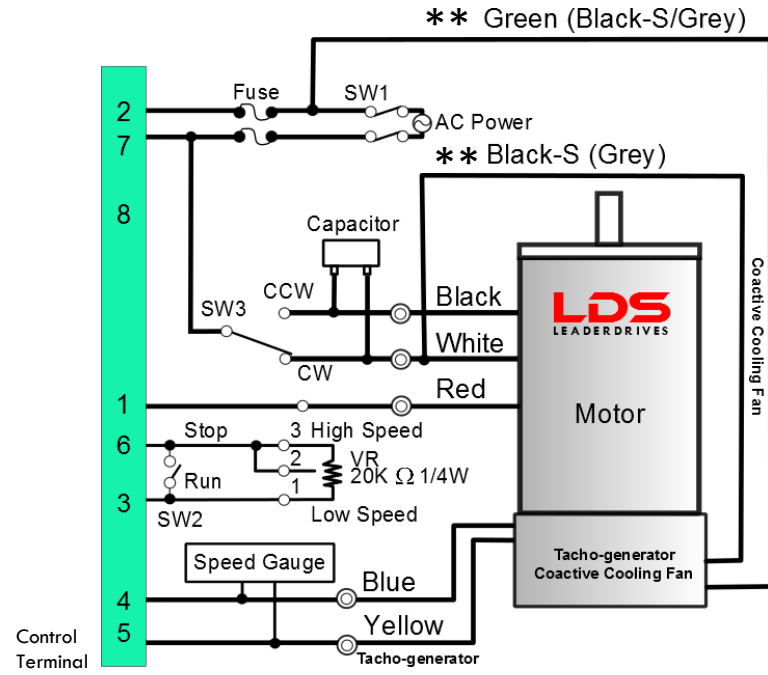
## VARIABLE SPEED MOTOR WITH DIN RAIL TYPE SPEED CONTROLLER SS ■ SD SERIES (8 PIN, 1PHASE)

Motor Input Voltage :  
AC 1Ø 100~110V ■  
AC 1Ø 220~240V

Controller Input Voltage :  
AC 1Ø 100~110V ■  
AC 1Ø 220~240V

**Direction of Rotation:**  
To change the rotation, switch to CW or CCW connection (SW3).

\*\* Connect Green wire and Black-S wire to respective terminal if u use LDS Extension Cable.



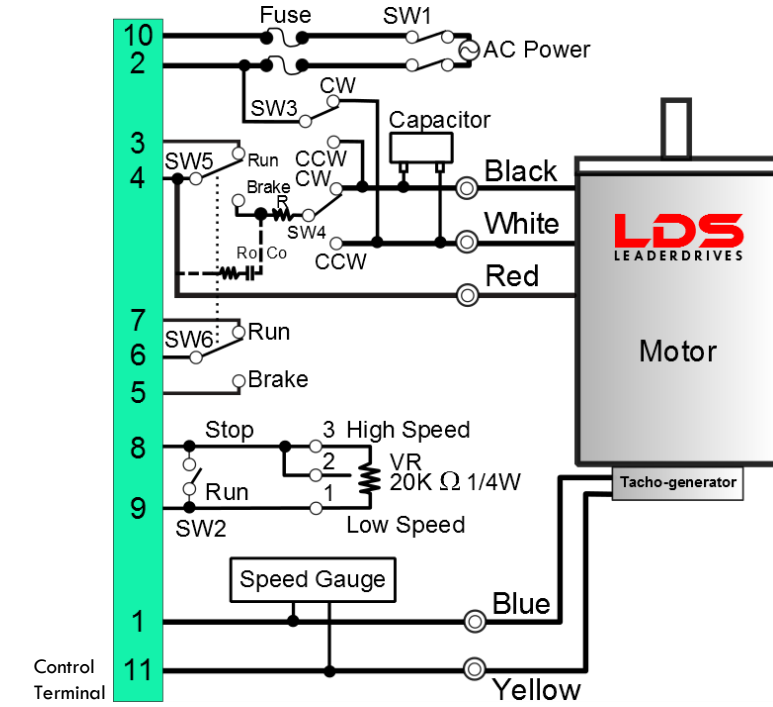
# CONNECTION DIAGRAM

## VARIABLE SPEED MOTOR WITH BRAKE PACK SS31 ■ SS32 SERIES (11 PIN, 1PHASE)

Motor Input Voltage :  
AC 1Ø 100~110V ■  
AC 1Ø 220~240V

Controller Input Voltage :  
AC 1Ø 100~110V ■  
AC 1Ø 220~240V

**Direction of Rotation:**  
To change the rotation, switch to CW or CCW connection (SW3).



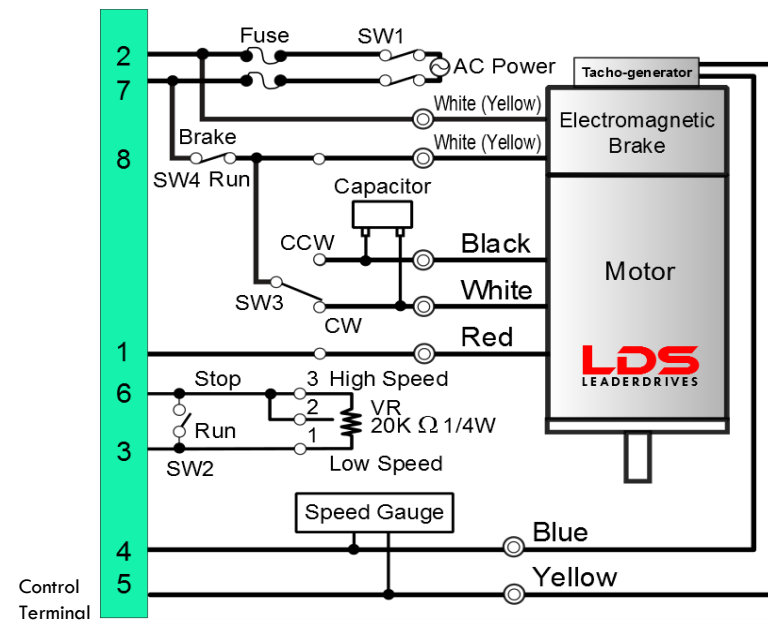
## VARIABLE SPEED MOTOR WITH ELECTROMAGNETIC BRAKE AND DIN RAIL TYPE SPEED CONTROLLER SS ■ SD SERIES (8 PIN, 1PHASE)

Motor Input Voltage :  
AC 1Ø 100~110V ■  
AC 1Ø 220~240V

Controller Input Voltage :  
AC 1Ø 100~110V ■  
AC 1Ø 220~240V

Brake Input Voltage :  
AC 100~110V ■  
AC 220~240V  
(Build-in AC to DC Rectifier Included)

**Direction of Rotation:**  
To change the rotation, switch to CW or CCW connection (SW3).



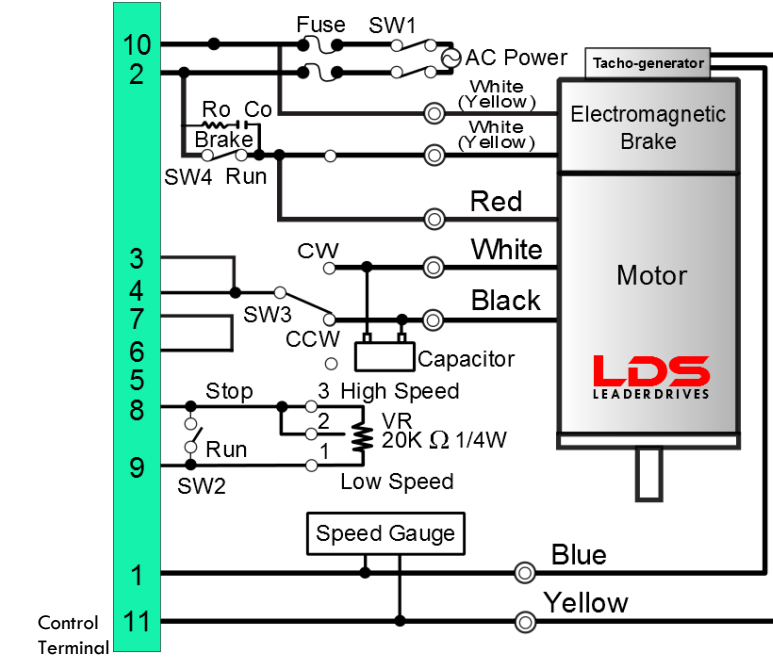
## VARIABLE SPEED MOTOR WITH ELECTROMAGNETIC BRAKE AND BRAKE PACK SS31 ■ SS32 SERIES (11 PIN, 1PHASE)

Motor Input Voltage :  
AC 1Ø 100~110V ■  
AC 1Ø 220~240V

Controller Input Voltage :  
AC 1Ø 100~110V ■  
AC 1Ø 220~240V

Brake Input Voltage :  
AC 100~110V ■  
AC 220~240V  
(Build-in AC to DC Rectifier Included)

**Direction of Rotation:**  
To change the rotation, switch to CW or CCW connection (SW3).



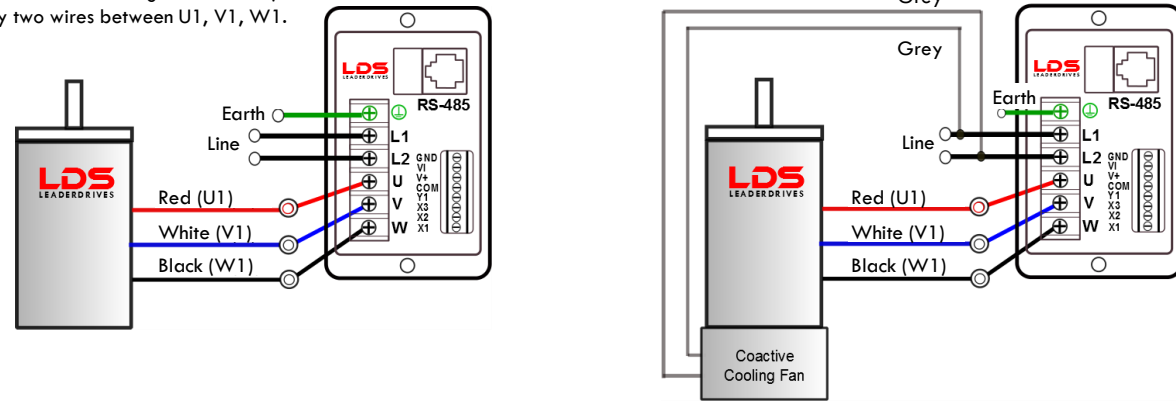
# CONNECTION DIAGRAM

## ASYNCHRONOUS MOTOR (3PHASE) WITH COMPACT IGBT INVERTER (1PHASE)

Motor Input Voltage : AC 3Ø 220~240V  
 Inverter Input Voltage : AC 1Ø 220~240V  
 Coactive Fan Input Voltage : AC 220~240V

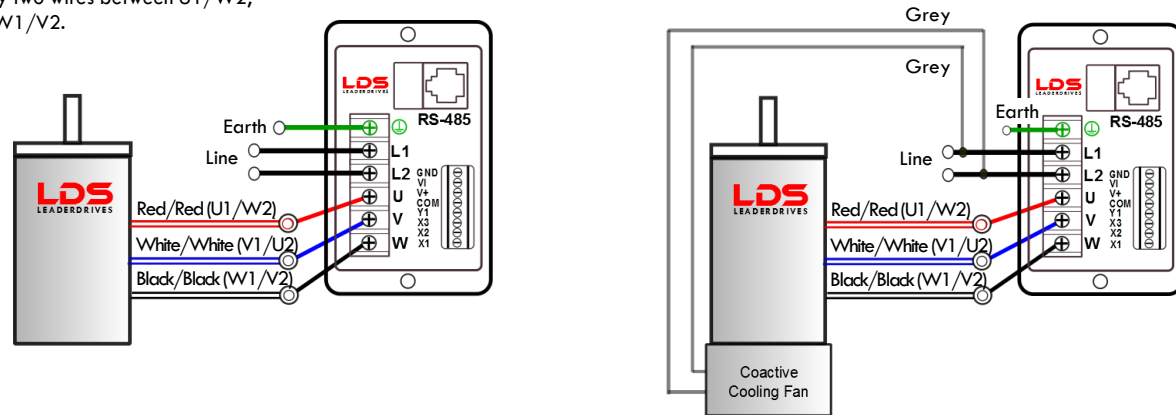
### MOTOR WITH 3 LEADWIRES

**Direction of Rotation:** To change the rotation, exchange any two wires between U1, V1, W1.

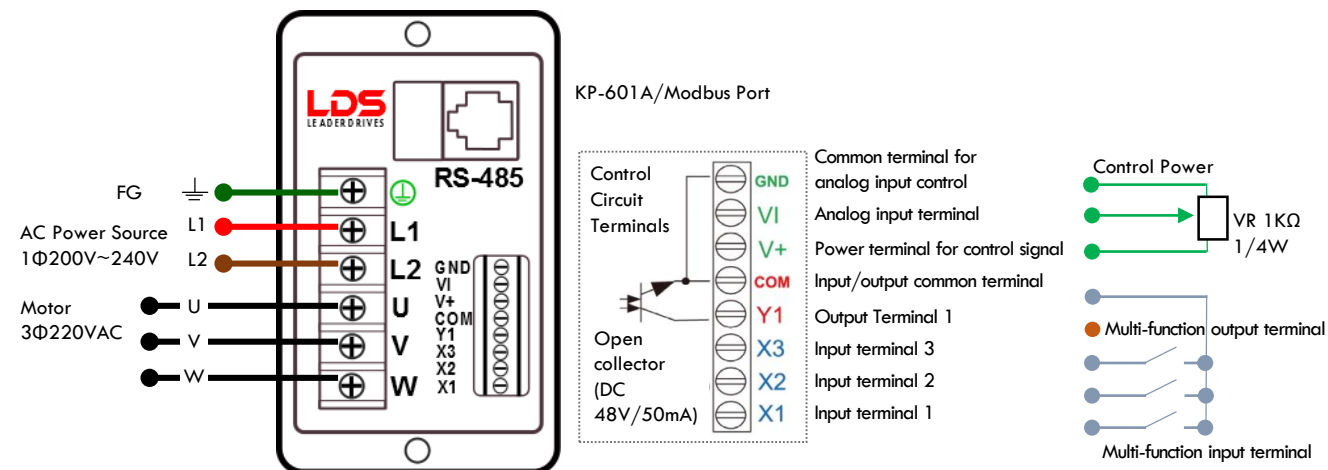


### MOTOR WITH 6 LEADWIRES

**Direction of Rotation:** To change the rotation, exchange any two wires between U1/W2, V1/U2, and W1/V2.



## COMPACT IGBT INVERTER (1PHASE) MAIN CONTROL CIRCUIT TERMINALS



\* Use Relay or separate Power Supply 220V for Brake Rectifier and Coactive Cooling Fan.

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.