

B AC Motors

Brake Motor 40W (□90mm)

40W Brake Motor 40W(□90mm)

Motor Specification

Model 9BDG*~40□: Gear Type Shaft 9BDD*~40: D-Cut Type Shaft 9BDK*~40: Key Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load			Capacitor μF / VAC	
								Speed r/min	Current A	Torque kgfcm N.m		
9BDGA~40□	40	1∅110	60	4	30min.	4.20	0.420	1600	1.25	2.60	0.260	16.0 / 250
9BDGD~40□	40	1∅220	60	4	30min.	4.20	0.420	1600	0.61	2.60	0.260	4.0 / 450
9BDGE~40□	40	1∅220	50	4	30min.	3.00	0.300	1350	0.36	3.00	0.300	3.0 / 450
		1∅240				3.60	0.360		0.39	3.40	0.340	
9BDGG~40□	40	3∅220	50	4	Cont.	9.00	0.900	1300	0.31	3.20	0.320	-
			60			7.40	0.740	1600	0.27	2.45	0.245	
9BDGK~40□	40	3∅380	50	4	Cont.	9.00	0.900	1300	0.20	3.20	0.320	-
			60			7.20	0.720	1550	0.18	2.80	0.280	
		3∅400	50	4	Cont.	10.00	1.000	1300	0.20	3.40	0.340	
			60			7.80	0.780	1550	0.18	3.00	0.300	
		3∅415	50	4	Cont.	11.00	1.100	1350	0.20	3.00	0.300	
			60			8.60	0.860	1600	0.18	2.80	0.280	
		3∅440	50	4	Cont.	12.00	1.200	1350	0.21	3.40	0.340	
			60			9.80	0.980	1600	0.19	3.00	0.300	

1) Enter the phase & voltage code in the place * and enter the model type of attaching Gearbox in the box (□) within the motor model name.

2) All models contain a built-in thermal protector.

3) Gear Type Shaft is for attaching Gearbox and D-Cut & Key Type Shafts are for using motor only.

※ It is not possible to use inverter for three phase 380~440V motor. When inverter is used, the insulation of winding coil becomes hot and may cause damage to the motor.

Max. Permissible Torque at Output Shaft of Gearbox

60Hz

Motor Model	Gearbox Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180	200
			900	600	500	360	300	240	200	180	144	120	100	72	60	50	45	36	30	24	20	18	15	12	10	9
9BDG□~40G	9GBK□ BMH	kgfcm N.m	4.6 0.46	7.0 0.68	8.4 0.82	11.6 1.14	13.9 1.37	17.4 1.71	20.9 2.05	23.2 2.28	29.1 2.85	34.9 3.42	37.8 3.70	52.5 5.15	63.0 6.17	68.5 6.72	76.2 7.46	95.2 9.33	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80

Motor Model	Gearbox Model	Gear Ratio r/min	10	12	15	18	25	30	36	50	60
			180	150	120	100	72	60	50	36	30
9BDG□~40W	9WD□BL/□BR/ □BRL	kgfcm N.m	21.3 2.09	25.0 2.45	30.0 2.94	34.6 3.39	45.5 4.46	51.5 5.05	59.9 5.87	78.0 7.64	85.8 8.41

50Hz

Motor Model	Gearbox Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180	200
			750	500	417	300	250	200	167	150	120	100	83	60	50	42	38	30	25	20	17	15	13	10	8	7.5
9BDG□~40G	9GBK□ BMH	kgfcm N.m	5.6 0.55	8.5 0.83	10.2 1.00	14.1 1.38	16.9 1.66	21.2 2.07	25.4 2.49	28.2 2.77	35.3 3.46	42.3 4.15	45.9 4.50	63.8 6.25	76.5 7.50	83.2 8.16	92.5 9.06	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	100.0 9.80	

Motor Model	Gearbox Model	Gear Ratio r/min	10	12	15	18	25	30	36	50	60
			150	125	100	83	60	50	42	30	25
9BDG□~40W	9WD□BL/□BR/ □BRL	kgfcm N.m	27.9 2.73	32.6 3.20	39.3 3.85	45.3 4.44	59.5 5.83	67.3 6.60	78.3 7.68	102.0 10.00	112.2 11.00

1) Enter the phase & voltage code in the box (□) within the motor model name.

2) Enter the gear ratio in the box (□) within the Gearbox model name.

3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.

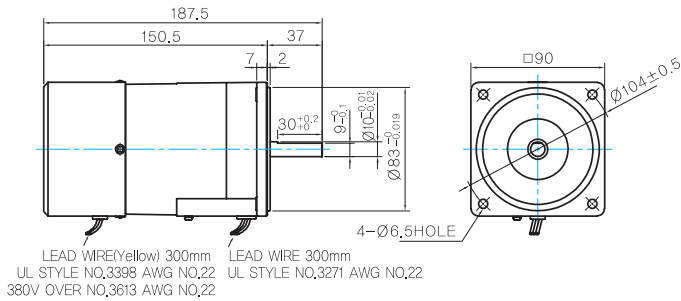
4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio.

The actual speed is 2~20% less than the displayed value, depending on the size of the load.

Dimensions

MOTOR ONLY

- MOTOR MODEL: 9BDD□-40 (NO FAN)

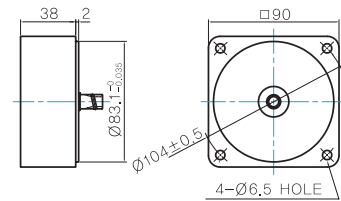


MOTOR OUTPUT SHAFT

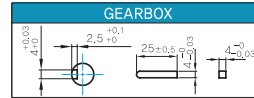
MODEL	SPEC
D-CUT TYPE	
9BDD□-40	
KEY TYPE	
9BDK□-40	

INTER-DECIMAL GEARBOX

- MODEL: 9XD10□□



KEY SPEC

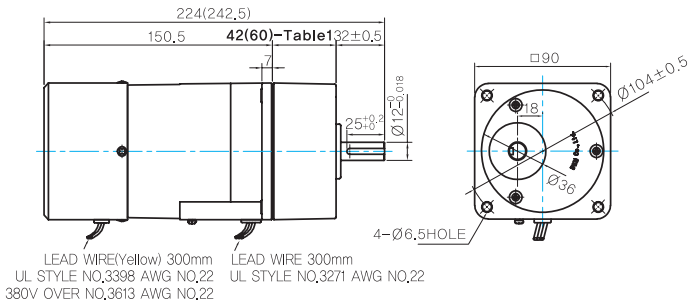


GEARED MOTOR

G TYPE GEARBOX

- MOTOR MODEL: 9BDG□-40G (NO FAN)

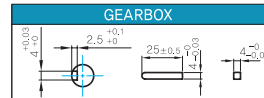
- GEARBOX MODEL: 9GBK□BMH



GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

KEY SPEC



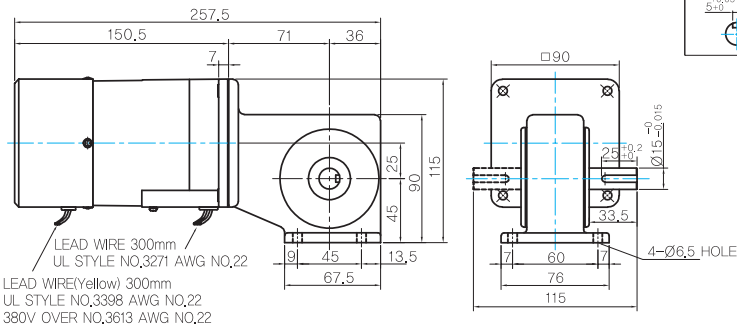
- 42(60)-Table1

SIZE(mm)	GEAR RATIO
42	9GBK2BMH - 9GBK18BMH
60	9GBK25BMH - 9GBK200BMH

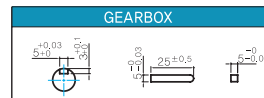
W TYPE GEARBOX

- MOTOR MODEL: 9BDG□-40W (NO FAN)

- GEARBOX MODEL: 9WD□BL/BR/BRL



KEY SPEC



WEIGHT

PART	WEIGHT(Kg)	
MOTOR	3.0	
GEAR BOX	9GBK2BMH - 9GBK15BMH	0.67
	9GBK18BMH - 9GBK30BMH	0.96
	9GBK36BMH - 9GBK200BMH	1.07
	9WD□BL/BR/BRL	1.0
	9XD10□□	0.5

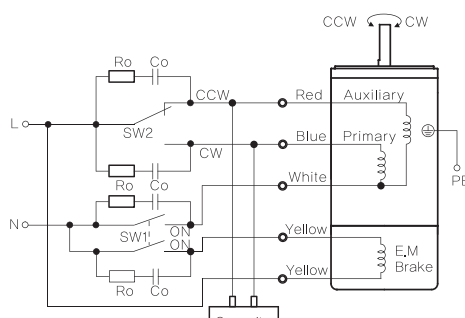
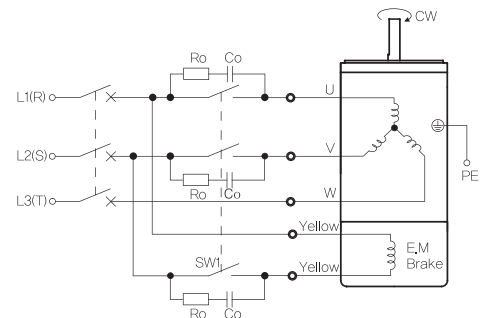
Motor Images



B AC Motors

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Connection Diagrams

Single Phase	Three Phase																				
 <p>The diagram shows a single-phase AC motor with a primary winding (Blue) and an auxiliary winding (Red). A capacitor is connected between the two windings. Two switches, SW1 and SW2, are used for control. SW1 is a double-throw switch that controls both the motor and the electromagnetic brake (E.M. Brake). SW2 is a selector switch for rotation direction (CW or CCW). Surge suppression components (Ro and Co) are connected in parallel with the motor windings.</p> <p>* Rotation Direction: To rotate the motor in a clockwise (CW) direction, turn SW2 to CW. To rotate the motor in a counterclockwise (CCW) direction, turn SW2 to CCW.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #0070C0; color: white;"> <th rowspan="2">Switch No.</th> <th colspan="2">Specifications</th> <th rowspan="2">Note</th> </tr> <tr style="background-color: #0070C0; color: white;"> <th>Single Phase 110V/115V Input</th> <th>Single Phase 220V/230V Input</th> </tr> </thead> <tbody> <tr> <td>SW1</td> <td>AC 125V 3A minimum (Inductive load)</td> <td>AC 250V 1.5A minimum (Inductive load)</td> <td>Switched Simultaneously</td> </tr> <tr> <td>SW2</td> <td></td> <td></td> <td>—</td> </tr> </tbody> </table>	Switch No.	Specifications		Note	Single Phase 110V/115V Input	Single Phase 220V/230V Input	SW1	AC 125V 3A minimum (Inductive load)	AC 250V 1.5A minimum (Inductive load)	Switched Simultaneously	SW2			—	 <p>The diagram shows a three-phase AC motor with windings U, V, and W. A capacitor is connected between the windings. A double-throw switch SW1 controls both the motor and the electromagnetic brake (E.M. Brake). Surge suppression components (Ro and Co) are connected in parallel with the motor windings.</p> <p>* CCW Direction: Change any two connections among R, S and T.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #0070C0; color: white;"> <th>Switch No.</th> <th>Specifications</th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>SW1</td> <td>AC 250V 1.5A minimum (Inductive load)</td> <td>Switched Simultaneously</td> </tr> </tbody> </table>	Switch No.	Specifications	Note	SW1	AC 250V 1.5A minimum (Inductive load)	Switched Simultaneously
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- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) SW1 operates both motor and electromagnetic brake action.
- 4) The electromagnetic brake will be released and the motor will rotate when SW1 is switched simultaneously to ON. When SW1 is switched simultaneously to OFF, the motor stops immediately with the electromagnetic brake and holds the load.
- 5) If you wish to release the brake while the motor is stopped, apply voltage between the two brake lead wires (yellow).
- 6) Ro and Co indicate CR circuit for surge suppression. [Ro=5~200Ω, Co=0.1~0.2μF, 200WV (400WV)]