

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 | | Rated Load | | | | Capacitor μF / VAC |
|---|-------------|--------------|-----------------|-------|--------|-----------------|-------|----------------|--------------|---------------------|-------|-----------------------|
| | | | | | | kgfcm | N.m | Speed r/min | Current A | Torque kgfcm N.m | | |
| 9BDGA-40□ | 40 | 1φ110 | 60 | 4 | 30min. | 4.20 | 0.420 | 1600 | 1.25 | 2.60 | 0.260 | 16.0 / 250 |
| 9BDGD-40□ | 40 | 1φ220 | 60 | 4 | 30min. | 4.20 | 0.420 | 1600 | 0.61 | 2.60 | 0.260 | 4.0 / 450 |
| 9BDGE-40□ | 40 | 1φ220 | 50 | 4 | 30min. | 3.00 | 0.300 | 1350 | 0.36 | 3.00 | 0.300 | 3.0 / 450 |
| | | 1φ240 | | | | 3.60 | 0.360 | | 0.39 | 3.40 | 0.340 | |
| 9BDGG-40□ | 40 | 3φ220 | 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 | 3φ380 | 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 | |
| | | | 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 | |
| | | 3φ415 | 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 | |
| | | 3φ440 | 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.

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 | 4.6 | 7.0 | 8.4 | 11.6 | 13.9 | 17.4 | 20.9 | 23.2 | 29.1 | 34.9 | 37.8 | 52.5 | 63.0 | 68.5 | 76.2 | 95.2 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| | | N.m | 0.46 | 0.68 | 0.82 | 1.14 | 1.37 | 1.71 | 2.05 | 2.28 | 2.85 | 3.42 | 3.70 | 5.15 | 6.17 | 6.72 | 7.46 | 9.33 | 9.80 | 9.80 | 9.80 | 9.80 | 9.80 | 9.80 | 9.80 | 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 | 21.3 | 25.0 | 30.0 | 34.6 | 45.5 | 51.5 | 59.9 | 78.0 | 85.8 | | | | | | | | | | | | | | | |
| | | N.m | 2.09 | 2.45 | 2.94 | 3.39 | 4.46 | 5.05 | 5.87 | 7.64 | 8.41 | | | | | | | | | | | | | | | |

50Hz

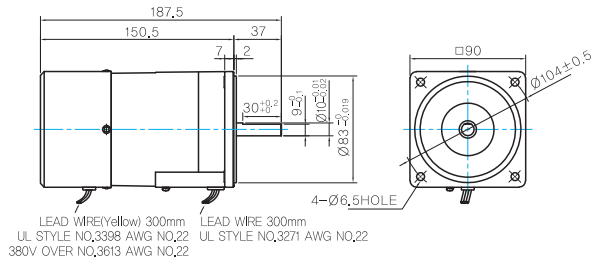
| Motor Model | Gearbox Model | Gear Ratio r/min | 2 | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 25 | 30 | 36 | 40 | 50 | 60 | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|-------------|---------------------|---------------------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 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 | 5.6 | 8.5 | 10.2 | 14.1 | 16.9 | 21.2 | 25.4 | 28.2 | 35.3 | 42.3 | 45.9 | 63.8 | 76.5 | 83.2 | 92.5 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| | | N.m | 0.55 | 0.83 | 1.00 | 1.38 | 1.66 | 2.07 | 2.49 | 2.77 | 3.46 | 4.15 | 4.50 | 6.25 | 7.50 | 8.16 | 9.06 | 9.80 | 9.80 | 9.80 | 9.80 | 9.80 | 9.80 | 9.80 | 9.80 | 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 | 27.9 | 32.6 | 39.3 | 45.3 | 59.5 | 67.3 | 78.3 | 102.0 | 112.2 | | | | | | | | | | | | | | | |
| | | N.m | 2.73 | 3.20 | 3.85 | 4.44 | 5.83 | 6.60 | 7.68 | 10.00 | 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

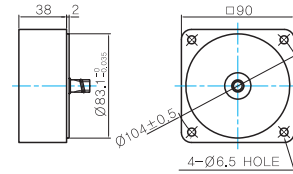
| MODEL | SPEC |
|------------|------|
| D-CUT TYPE | |
| 9BDD□-40 | |
| KEY TYPE | |
| 9BDK□-40 | |

KEY SPEC

| GEARBOX |
|---------|
| |

INTER-DECIMAL GEARBOX

- MODEL: 9XD10□□

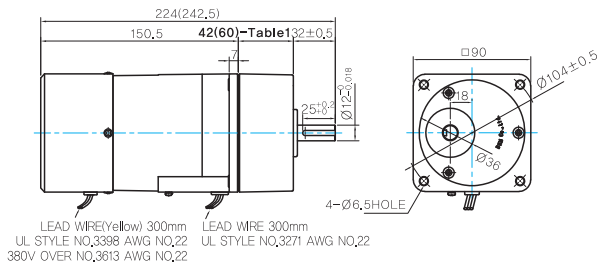


GEARED MOTOR

G TYPE GEARBOX

- MOTOR MODEL: 9BDG□-40G (NO FAN)

- GEARBOX MODEL: 9GBK□BMH



GEARBOX OUTPUT SHAFT

| MODEL | SPEC |
|----------|------|
| KEY TYPE | |

KEY SPEC

| GEARBOX |
|---------|
| |

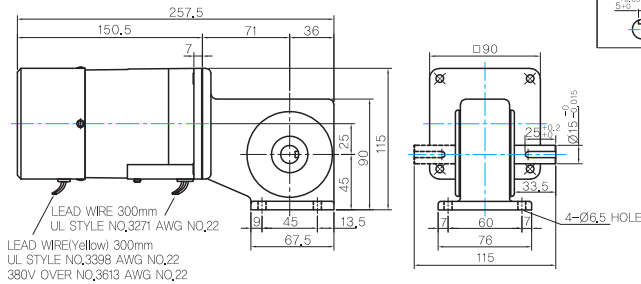
- 42(60)-Table1

| 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

| GEARBOX |
|---------|
| |

WEIGHT

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

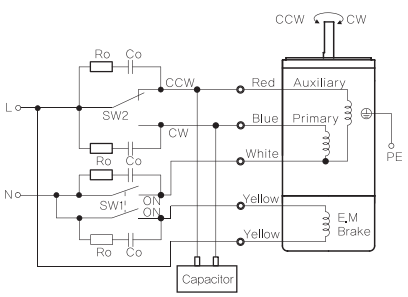
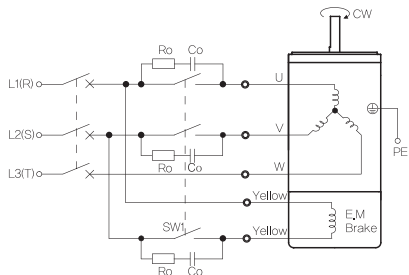
Motor Images



B AC Motors

Brake Motor 40W (□90mm)

Connection Diagrams

| Single Phase | Three Phase | | | | | | | | | | | | | | | | | | | | |
|--|---------------------------------------|---------------------------------------|-------------------------|------|------------------------------|------------------------------|-----|-------------------------------------|---------------------------------------|-------------------------|-----|--|--|---|--|------------|----------------|------|-----|---------------------------------------|-------------------------|
|  <p>The diagram shows a single-phase AC input (L and N) connected to a motor. Two switches, SW1 and SW2, are used. SW2 controls the motor's rotation direction (CW or CCW) and is connected to the auxiliary winding. SW1 controls the electromagnetic brake (E.M. Brake) and is connected to the primary winding. A capacitor is connected between the primary and auxiliary windings. The motor has three main leads: Red (Auxiliary), Blue (Primary), and White (Common). Two yellow leads are for the E.M. Brake. A PE terminal is also shown.</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 input (L1(R), L2(S), L3(T)) connected to a motor. A switch SW1 controls the electromagnetic brake (E.M. Brake) and is connected to the primary winding. The motor has three main leads: U, V, and W. Two yellow leads are for the E.M. Brake. A PE terminal is also shown.</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 |
| 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 | | | - | | | | | | | | | | | | | | | | | | |
| Switch No. | Specifications | Note | | | | | | | | | | | | | | | | | | | |
| SW1 | AC 250V 1.5A minimum (Inductive load) | Switched Simultaneously | | | | | | | | | | | | | | | | | | | |

- 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)]