

# B AC Motors

## Brake Motor 15W (□80mm)

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### Motor Specification

Model 8BDG*-15□: Gear Type Shaft 8BDD*-15: D-Cut 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		
8BDGA-15□	15	1∅110	60	4	30min.	1.55	0.155	1600	0.44	1.20	0.120	6.0 / 250
8BDGD-15□	15	1∅220	60	4	30min.	1.50	0.150	1600	0.25	1.00	0.100	1.5 / 450
8BDGE-15□	15	1∅220	50	4	30min.	1.25	0.125	1200	0.16	1.30	0.130	1.5 / 450
		1∅240				1.45	0.145		0.17	1.40	0.140	
8BDGG-15□	15	3∅220	50	4	Cont.	4.80	0.480	1300	0.22	1.40	0.140	-
			60			4.00	0.400	1600	0.18	1.00	0.100	
8BDGK-15□	15	3∅380	50	4	Cont.	4.60	0.460	1300	0.13	1.20	0.120	-
			60			3.60	0.360	1550	0.11	1.00	0.100	
		3∅400	50	4	Cont.	5.00	0.500	1300	0.14	1.40	0.140	
			60			4.00	0.400	1600	0.12	1.00	0.100	
		3∅415	50	4	Cont.	5.40	0.540	1350	0.15	1.20	0.120	
			60			4.20	0.420	1600	0.13	1.00	0.100	
		3∅440	50	4	Cont.	6.00	0.600	1350	0.16	1.40	0.140	
			60			4.60	0.460	1600	0.14	1.40	0.140	

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 Type Shaft is 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	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180
			r/min	600	500	360	300	240	200	144	120	100	72	60	50	45	36	30	24	20	18	15	12
8BDG□-15G	8GBK□BMH	kgfcm	3.0	3.6	5.0	6.0	7.5	9.0	12.5	14.9	17.9	22.5	27.0	29.4	32.6	40.8	49.0	61.2	73.4	80.0	80.0	80.0	80.0
		N.m	0.29	0.35	0.49	0.59	0.73	0.88	1.22	1.46	1.76	2.21	2.65	2.88	3.20	4.00	4.80	6.00	7.20	7.84	7.84	7.84	7.84

Motor Model	Gearbox Model	Gear Ratio	200	250	300	360
			r/min	9	7	6
8BDG□-15G	8GBK□BMH	kgfcm	80.0	80.0	80.0	80.0
		N.m	7.84	7.84	7.84	7.84

Motor Model	Gearbox Model	Gear Ratio	10	12	15	18	25	30	36	50	60
			r/min	180	150	120	100	72	60	50	36
8BDG□-15W	8WD□BL/□BR/□BRL	kgfcm	9.8	11.5	13.9	16.0	21.0	23.8	27.6	36.0	39.6
		N.m	0.96	1.13	1.36	1.57	2.06	2.33	2.71	3.53	3.88

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180
			r/min	500	417	300	250	200	167	120	100	83	60	50	42	38	30	25	20	17	15	13	10
8BDG□-15G	8GBK□BMH	kgfcm	3.5	4.2	5.8	7.0	8.7	10.5	14.5	17.4	20.9	26.3	31.5	34.3	38.1	47.6	57.1	71.4	80.0	80.0	80.0	80.0	80.0
		N.m	0.34	0.41	0.57	0.68	0.85	1.02	1.42	1.71	2.05	2.57	3.09	3.36	3.73	4.66	5.60	7.00	7.84	7.84	7.84	7.84	7.84

Motor Model	Gearbox Model	Gear Ratio	200	250	300	360
			r/min	7	6	5
8BDG□-15G	8GBK□BMH	kgfcm	80.0	80.0	80.0	80.0
		N.m	7.84	7.84	7.84	7.84

Motor Model	Gearbox Model	Gear Ratio	10	12	15	18	25	30	36	50	60
			r/min	150	125	100	83	60	50	42	30
8BDG□-15W	8WD□BL/□BR/□BRL	kgfcm	11.5	13.4	16.2	18.6	24.5	27.7	32.3	42.0	46.2
		N.m	1.13	1.32	1.58	1.83	2.40	2.72	3.16	4.12	4.53

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.

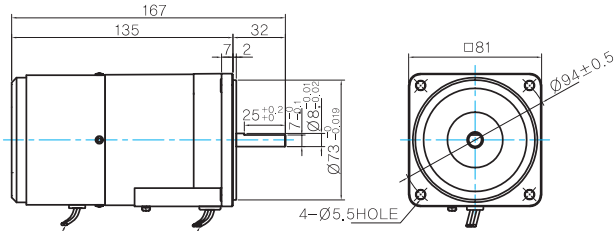
3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.

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

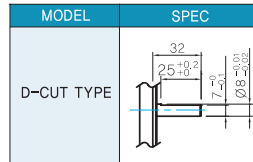
- MOTOR MODEL: 8BDD□-15 (NO FAN)



LEAD WIRE(Yellow) 300mm  
UL STYLE NO,3398 AWG NO,22  
380V OVER NO,3613 AWG NO,22

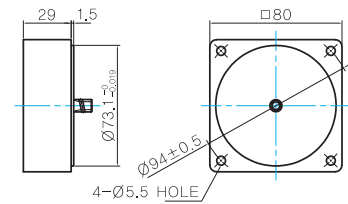
LEAD WIRE 300mm  
UL STYLE NO,3271 AWG NO,22

- MOTOR OUTPUT SHAFT



### INTER-DECIMAL GEARBOX

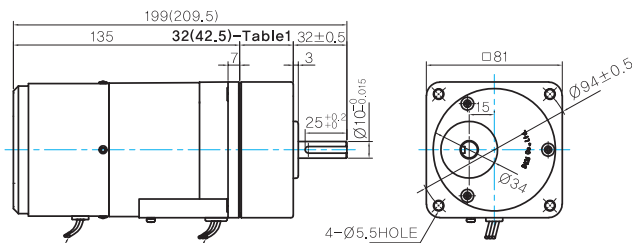
- MODEL: 8XD10□□



### GEARED MOTOR

#### G TYPE GEARBOX

- MOTOR MODEL: 8BDG□-15G (NO FAN)

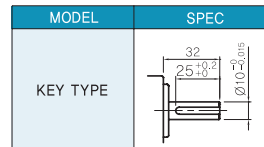


LEAD WIRE(Yellow) 300mm  
UL STYLE NO,3398 AWG NO,22  
380V OVER NO,3613 AWG NO,22

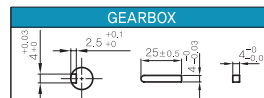
LEAD WIRE 300mm  
UL STYLE NO,3271 AWG NO,22

- GEARBOX MODEL: 8GBK□BMH

- GEARBOX OUTPUT SHAFT



- KEY SPEC

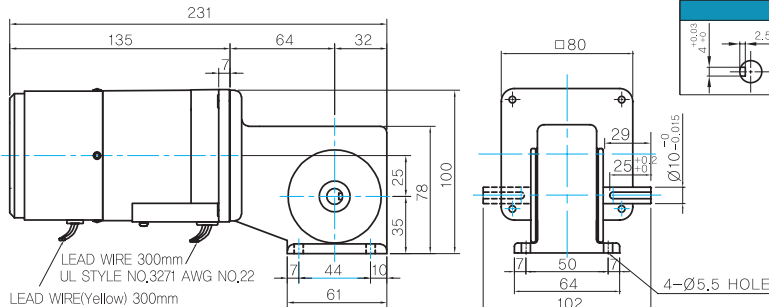


- 32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK25BMH - 8GBK360BMH

#### W TYPE GEARBOX

- MOTOR MODEL: 8BDG□-15W (NO FAN)

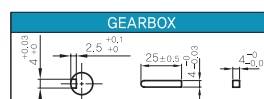


LEAD WIRE 300mm  
UL STYLE NO,3271 AWG NO,22

LEAD WIRE(Yellow) 300mm  
UL STYLE NO,3398 AWG NO,22  
380V OVER NO,3613 AWG NO,22

- GEARBOX MODEL: 8WD□BL/BR/BRL

- KEY SPEC



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	2,0	
GEAR BOX	8GBK3BMH - 8GBK18BMH	0,48
	8GBK25BMH - 8GBK30BMH	0,61
	8GBK36BMH - 8GBK180BMH	0,67
	8GBK200BMH - 8GBK360BMH	0,63
	8WD□BL/BR/BRL	0,67
	8XD10□□	0,44

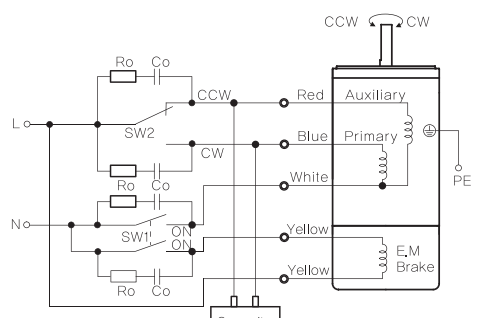
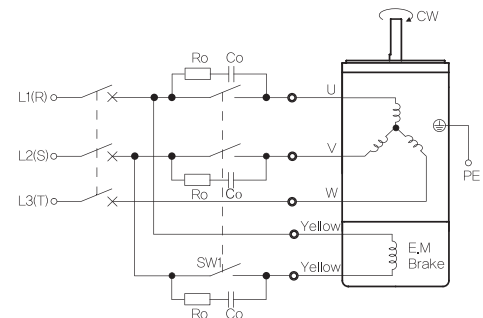
## Motor Images



# B AC Motors

## Brake Motor 15W (□80mm)

### Connection Diagrams

Single Phase	Three Phase																				
 <p>The diagram shows a single-phase AC input (L, N) connected to a motor. The motor has an Auxiliary winding (Red), Primary winding (Blue), and E.M. Brake winding (Yellow). A capacitor is connected between the primary and auxiliary windings. Two switches, SW1 and SW2, are used for control. SW1 is a double-throw switch that controls both the motor and the brake. SW2 is a selector switch for rotation direction (CW or CCW). Surge suppression components (Ro, Co) are connected to the input lines.</p> <p><b>* Rotation Direction:</b>            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. The motor has three main windings (U, V, W) and an E.M. Brake winding (Yellow). A capacitor is connected between the main windings. A switch SW1 controls the motor and brake. Surge suppression components (Ro, Co) are connected to the input lines.</p> <p><b>* CCW Direction:</b>            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)]