

# 60W

Speed Control  
Reversible Motor  
60W(□90mm)

## Motor Specification

Model 9SRDG*-60F2□: Gear Type Shaft 9SRDD*-60F2: D-Cut Type Shaft 9SRDK*-60F2: Key Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Speed Range r/min	Starting Torque		Permissible Torque				Capacitor μF / VAC
							kgfcm	N.m	1200r/min		90r/min		
									kgfcm	N.m	kgfcm	N.m	
9SRDGA-60F2□	60	1φ110	60	4	30min.	90-1700	3.20	0.320	6.10	0.610	2.80	0.280	20.0 / 250
9SRDGD-60F2□	60	1φ220	60	4	30min.	90-1700	3.80	0.380	6.50	0.650	3.00	0.300	5.0 / 400
9SRDGE-60F2□	60	1φ220	50	4	30min.	90-1400	5.20	0.520	5.20	0.520	1.00	0.100	5.0 / 400
		1φ240					5.80	0.580	5.80	0.580	1.00	0.100	

- 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 are for attaching Gearbox and D-Cut & Key Type Shaft are for using motor only.

## Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	12.5	15	18	20
9SRDG□ -60F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm N.m	10.1 0.99	15.2 1.49	18.2 1.79	25.3 2.48	30.4 2.98	38.0 3.72	45.6 4.47	57.2 5.60	68.6 6.73	82.4 8.07	83.0 8.13
			220	60	kgfcm N.m	10.8 1.06	16.2 1.59	19.4 1.90	27.0 2.64	32.4 3.17	40.5 3.97	48.6 4.76	60.9 5.97	73.1 7.17	87.8 8.60	88.4 8.66
			220/ 240	50	kgfcm N.m	9.6 0.94	14.4 1.42	17.3 1.70	24.1 2.36	28.9 2.83	36.1 3.54	43.3 4.25	54.4 5.33	65.3 6.39	78.3 7.67	78.9 7.73
		90	110	60	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	26.3 2.57	31.5 3.09	37.8 3.70	38.1 3.73
			220	60	kgfcm N.m	5.0 0.49	7.5 0.73	9.0 0.88	12.5 1.22	14.9 1.46	18.7 1.83	22.4 2.20	28.1 2.76	33.8 3.31	40.5 3.97	40.8 4.00
			220/ 240	50	kgfcm N.m	1.7 0.16	2.5 0.24	3.0 0.29	4.2 0.41	5.0 0.49	6.2 0.61	7.5 0.73	9.4 0.92	11.3 1.10	13.5 1.32	13.6 1.33

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	25	30	36	40	50	60	75	90	100	120	150	180	200	
9SRDG□ -60F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm N.m	103.7 10.16	124.4 12.20	149.3 14.63	165.9 16.26	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	
			220	60	kgfcm N.m	110.5 10.83	132.6 12.99	159.1 15.59	176.8 17.33	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
			220/ 240	50	kgfcm N.m	98.6 9.66	118.3 11.60	142.0 13.91	157.8 15.46	197.2 19.33	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
		90	110	60	kgfcm N.m	47.6 4.66	57.1 5.60	68.5 6.72	76.2 7.46	95.2 9.33	114.2 11.20	128.1 12.55	153.7 15.06	170.8 16.74	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
			220	60	kgfcm N.m	51.0 5.00	61.2 6.00	73.4 7.20	81.6 8.00	102.0 10.00	122.4 12.00	137.3 13.45	164.7 16.14	183.0 17.93	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
			220/ 240	50	kgfcm N.m	17.0 1.67	20.4 2.00	24.5 2.40	27.2 2.67	34.0 3.33	40.8 4.00	45.8 4.48	54.9 5.38	61.0 5.98	73.2 7.17	91.5 8.97	109.8 10.76	109.8 10.76	

- 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.

# B AC Motors

## S.C. Reversible Motor 60W (□90mm)

### Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	3	3.6	6	9	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	200	
9SRDG□ -60F2H	9HBK□ BH	1200	110	60	kgfcm	15.2	18.2	30.4	45.6	57.2	68.6	82.4	83.0	103.7	124.4	149.3	207.4	248.9	279.1	300.0	300.0	300.0	300.0	300.0	300.0	
					N.m	1.49	1.79	2.98	4.47	5.60	6.73	8.07	8.13	10.16	12.20	14.63	20.33	24.39	27.35	29.40	29.40	29.40	29.40	29.40	29.40	29.40
			220	60	kgfcm	16.2	19.4	32.4	48.6	60.9	73.1	87.8	88.4	110.5	132.6	159.1	221.0	265.2	297.4	300.0	300.0	300.0	300.0	300.0	300.0	300.0
		N.m	1.59	1.90	3.17	4.76	5.97	7.17	8.60	8.66	10.83	12.99	15.59	21.66	25.99	29.14	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
		220/240	50	kgfcm	14.4	17.3	28.9	43.3	54.4	65.3	78.3	78.9	98.6	118.3	142.0	197.2	236.6	265.4	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
		N.m	1.42	1.70	2.83	4.25	5.33	6.39	7.67	7.73	9.66	11.60	13.91	19.33	23.19	26.00	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
	90	110	60	kgfcm	7.0	8.4	13.9	20.9	26.3	31.5	37.8	38.1	47.6	57.1	68.5	95.2	114.2	128.1	153.7	170.8	205.0	256.2	300.0	300.0	300.0	300.0
				N.m	0.68	0.82	1.37	2.05	2.57	3.09	3.70	3.73	4.66	5.60	6.72	9.33	11.20	12.55	15.06	16.74	20.09	25.11	29.40	29.40	29.40	29.40
			220	60	kgfcm	7.5	9.0	14.9	22.4	28.1	33.8	40.5	40.8	51.0	61.2	73.4	102.0	122.4	137.3	164.7	183.0	219.6	274.5	300.0	300.0	300.0
		N.m	0.73	0.88	1.46	2.20	2.76	3.31	3.97	4.00	5.00	6.00	7.20	10.00	12.00	13.45	16.14	17.93	21.52	26.90	29.40	29.40	29.40	29.40	29.40	
		220/240	50	kgfcm	2.5	3.0	5.0	7.5	9.4	11.3	13.5	13.6	17.0	20.4	24.5	34.0	40.8	45.8	54.9	61.0	73.2	91.5	109.8	109.8	109.8	109.8
		N.m	0.24	0.29	0.49	0.73	0.92	1.10	1.32	1.33	1.67	2.00	2.40	3.33	4.00	4.48	5.38	5.98	7.17	8.97	10.76	10.76	10.76	10.76	10.76	10.76

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SRDG□ -60F2W	9WD□BL/ □BR/□BRL	1200	110	60	kgfcm	50.0	58.6	70.5	81.3	106.8	120.8	140.5	142.9	122.4
					N.m	4.90	5.74	6.90	7.96	10.46	11.84	13.77	14.00	12.00
			220	60	kgfcm	53.3	62.4	75.1	86.6	113.8	128.7	149.8	142.9	122.4
		N.m	5.22	6.12	7.36	8.48	11.15	12.61	14.68	14.00	12.00			
		220/240	50	kgfcm	47.6	55.7	67.0	77.3	101.5	114.8	133.6	142.9	122.4	
		N.m	4.66	5.46	6.57	7.57	9.95	11.25	13.10	14.00	12.00			
	90	110	60	kgfcm	23.0	26.9	32.3	37.3	49.0	55.4	64.5	84.0	92.4	
				N.m	2.25	2.63	3.17	3.66	4.80	5.43	6.32	8.23	9.06	
			220	60	kgfcm	24.6	28.8	34.7	40.0	52.5	59.4	69.1	90.0	99.0
		N.m	2.41	2.82	3.40	3.92	5.15	5.82	6.77	8.82	9.70			
		220/240	50	kgfcm	8.2	9.6	11.6	13.3	17.5	19.8	23.0	30.0	33.0	
		N.m	0.80	0.94	1.13	1.31	1.72	1.94	2.26	2.94	3.23			

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80
9SRDG□ -60F2WH	9WHD□-030	1200	110	60	kgfcm	38.4	49.4	69.5	87.8	100.7	117.1	144.0	164.7	163.3	132.7
					N.m	3.77	4.84	6.81	8.61	9.86	11.48	14.11	16.14	16.00	13.00
			220	60	kgfcm	41.0	52.7	74.1	93.6	107.3	124.8	153.4	173.5	163.3	132.7
		N.m	4.01	5.16	7.26	9.17	10.51	12.23	15.03	17.00	16.00	13.00			
		220/240	50	kgfcm	36.5	47.0	66.1	83.5	95.7	111.4	136.9	156.6	163.3	132.7	
		N.m	3.58	4.60	6.48	8.18	9.38	10.91	13.41	15.35	16.00	13.00			
	90	110	60	kgfcm	17.6	22.7	31.9	40.3	46.2	53.8	66.1	75.6	84.0	98.6	
				N.m	1.73	2.22	3.13	3.95	4.53	5.27	6.48	7.41	8.23	9.66	
			220	60	kgfcm	18.9	24.3	34.2	43.2	49.5	57.6	70.8	81.0	90.0	105.6
		N.m	1.85	2.38	3.35	4.23	4.85	5.64	6.94	7.94	8.82	10.35			
		220/240	50	kgfcm	6.3	8.1	11.4	14.4	16.5	19.2	23.6	27.0	30.0	35.2	
		N.m	0.62	0.79	1.12	1.41	1.62	1.88	2.31	2.65	2.94	3.45			

### Motor Images





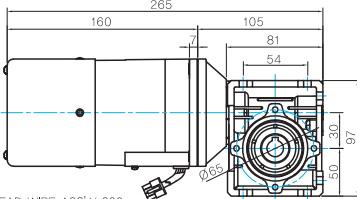
# B AC Motors

## S.C. Reversible Motor 60W (□90mm)

### Dimensions

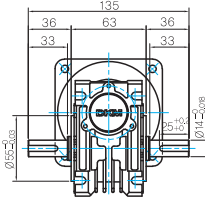
#### WH TYPE GEARBOX

● MOTOR MODEL:  
9SRDG□-60F2WH (POWERFUL FAN)

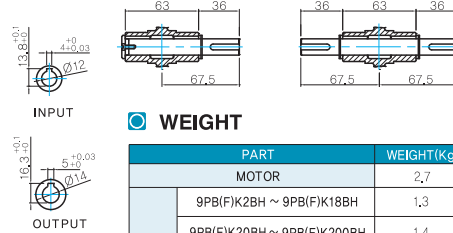


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.22  
T,G UL STYLE NO.1430 AWG NO.24

● GEARBOX MODEL:  
9WHD□-030



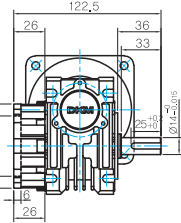
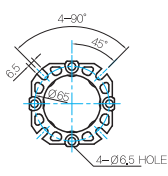
● SHAFT(Unidirectional, Bi-directional)



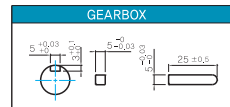
#### WEIGHT

PART	WEIGHT(Kg)
MOTOR	2,7
9PB(F)K2BH ~ 9PB(F)K18BH	1,3
9PB(F)K20BH ~ 9PB(F)K200BH	1,4
9HB(F)K3BH ~ 9HB(F)K9BH	1,45
9HB(F)K12.5BH ~ 9HB(F)K18BH	1,5
9HB(F)K20BH ~ 9HB(F)K60BH	1,7
9HB(F)K75BH ~ 9HB(F)K200BH	1,8
9WD□BL/BR/BRL	1,0
9WHD□-030	1,13
9XD10□	0,5

#### FLANGE



#### KEY SPEC



\* The output flange and shafts are sold separately.

### Connection Diagrams

FX1000A – Connector Type	FX1000A – Terminal Type
<p>Direction: Clockwise COM+CW, Counterclockwise COM+CCW Capacitor: Connect 3-9 or 6-9, according to its capacity</p>	
DSKM-Using Internal Volume	DSKM-Using External Volume
	<p>* External speed setting device (20k Ω 1/4W)</p> <p>External speed setting device to NO. 2pin of the socket</p>

1) At first connect the speed controller with the motor as instructed in connection diagrams. And then input the external power to both of the terminal 'AC' for the rated speed operation.

Now you can adjust the main volume to control the output speed of motor.

2) The direction of motor rotation is as viewed from the shaft end of the motor.

3) CW represents the clockwise direction, while CCW represents the counterclockwise direction.

4) When using powerful fan (F2 type) attached motor, connect two black wires of the fan to No.1 and No.2 terminals in order to supply power.