

60W

ELECTROMAGNETIC BRAKE MOTOR
□90㎜ LEAD WIRE TYPE

SIZE mm sq.	Type	Poles	Output	Voltage	Frequency	Duty	Rated Load				Starting Torque		Capacitor
							Current	Speed	Torque				
			(W)	(V)	(Hz)		(A)	(rpm)	(kg-cm)	(N-m)	(kg-cm)	(N-m)	(uF)
90	S9R60GA( )-E S9R60GA( )-E(TP) S9R60GA( )-ECE	4	60	1Ø 110	60	30min.	1.70	1550	3.90	0.390	7.00	0.700	25.0
	S9R60GB( )-E S9R60GB( )-E(TP) S9R60GB( )-ECE	4	60	1Ø 220	60	30min.	0.90	1550	3.90	0.390	7.00	0.700	6.5
	S9R60GC( )-E S9R60GC( )-E(TP) S9R60GC( )-ECE	4	60	1Ø 100	50	30min.	1.50	1250	4.80	0.480	6.20	0.620	25.0
					60		1.75	1500	4.00	0.400			
	S9R60GD( )-E S9R60GD( )-E(TP) S9R60GD( )-ECE	4	60	1Ø 200	50	30min.	0.75	1250	4.80	0.480	6.20	0.620	6.5
					60		0.90	1500	4.00	0.400			
	S9R60GE( )-E S9R60GE( )-ECE	4	60	1Ø 100	50	30min.	1.30	1300	4.80	0.480	5.80	0.580	25.0
					60		1.70	1550	4.00	0.400			
				1Ø 115	60		1.40	1600	3.90	0.390			20.0
	S9R60GX( )-E S9R60GX( )-ECE	4	60	1Ø 220	50	30min.	0.58	1300	4.60	0.460	6.00	0.600	5.0
				1Ø 240			0.61		4.90	0.490	7.00	0.700	
	S9I60GU( )-E S9I60GU( )-ECE	4	60	3Ø 200	50	Cont.	0.60	1300	4.60	0.460	9.30	0.930	—
					60		0.50	1550	3.90	0.390	8.00	0.800	
	S9I60GT( )-E S9I60GT( )-ECE	4	60	3Ø 220	50	Cont.	0.80	1350	4.40	0.440	11.35	1.135	—
					60		0.57	1600	3.90	0.390	9.30	0.930	
	S9I60GS( )-E S9I60GS( )-ECE	4	60	3Ø 380	50	Cont.	0.27	1300	4.60	0.460	8.25	0.825	—
					60		0.24	1550	3.90	0.390	6.50	0.650	
				3Ø 400	50	Cont.	0.29	1300	4.70	0.470	9.30	0.930	
					60		0.25	1550	4.00	0.400	7.35	0.735	
				3Ø 415	50	Cont.	0.27	1350	4.60	0.460	9.95	0.995	
					60		0.23	1600	3.80	0.380	7.50	0.750	
				3Ø 440	50	Cont.	0.31	1350	4.70	0.470	10.75	1.075	
					60		0.25	1600	3.90	0.390	8.40	0.840	

❖ 기종명 S9R60GE-E는 UL 규격 인증 제품으로 THERMALLY PROTECTED TYPE입니다.(UL FILE NO. E172720) (S9R60GE-E is UL approved (UL FILE NO. E172720) thermally protected type.)
❖ 사용하는 전압 사양에 따라 CONDENSER 용량이 다르게 사용되므로 사용전압에 맞게 CONDENSER 용량을 바르게 사용하여 주십시오. 고장의 원인이 됩니다. 주문시 사용전압을 제시하여 주십시오. 제시가 없으면 115V용 CONDENSER로 포장 출하됩니다. (Appropriate capacitors shall be used according to the voltage for S9R60GE-E type since the size of the capacitor differs by different voltages. Malfunction may occur when not used properly. Capacitor for 115V will be delivered otherwise the required voltage is informed.)
❖ 기종명 맨 끝자리에 CE가 명기된 MODEL의 인증 관련 내용은 SPG 규격 인증품 현황을 참고하여 주십시오. S9R60GE( )-ECE는 115V용 사양으로만 출하됩니다. (CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP. S9R60GE( )-ECE is available only for 115V specification.)
❖ 기종명 맨 끝자리에 TP가 명기된 MODEL은 일반 MOTOR에 TP가 내장된 THERMALLY PROTECTED TYPE입니다. 또한 기종명 S9R60GE-E, S9R60GX-E는 TP가 내장된 THERMALLY PROTECTED TYPE입니다. (TP marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted. S9R60GE-E, S9R60GX-E is thermally protected type with TP mounted.)
❖ 본 DATA는 전자 BRAKE MOTOR에서 전자 BRAKE를 제거하고 MOTOR 단독으로 측정한 DATA입니다. (Above data is measured with brake removed from eletromagnetic brake motor.)
❖ ( )는 L, H Type을 표시합니다. L은 GEAR HEAD의 L과, H는 GEAR HEAD의 H와 사용하여 주십시오. (( ) is for marking 'L' type or 'H'. 'L' should be used with gearhead 'L' and 'H' should be used with gearhead 'H'.)
❖ 삼상 380V~440V 모터에서는 인버터 사용을 주의하여 주십시오. 인버터 사용시 권선의 절연이 열화되어 모터가 파손될 수 있습니다. (For a three-phase 380V~440V motor, be cautious when using the inverter. When inverter is used, the insulation of winding becomes hot and may cause damage to motor.)

50Hz

MODEL \ GEAR RATIO		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	rpm	500	416	300	250	200	166	150	120	100	83	75	60	50	41	37	30	25	20	16	15	12	10	8	7.5
S9KC□B( )	kg-cm	12.2	14.6	20.3	24.3	30.4	36.5	40.5	45.6	54.8	65.7	73.0	82.5	99.0	119	132	165	198	200	200	200	200	200	200	200
S9KC□B( )-S	N·m	1.196	1.431	1.989	2.381	2.989	3.577	3.969	4.469	5.370	6.439	7.154	8.085	9.702	11.66	12.94	16.17	19.40	19.60	19.60	19.60	19.60	19.60	19.60	19.60

60Hz

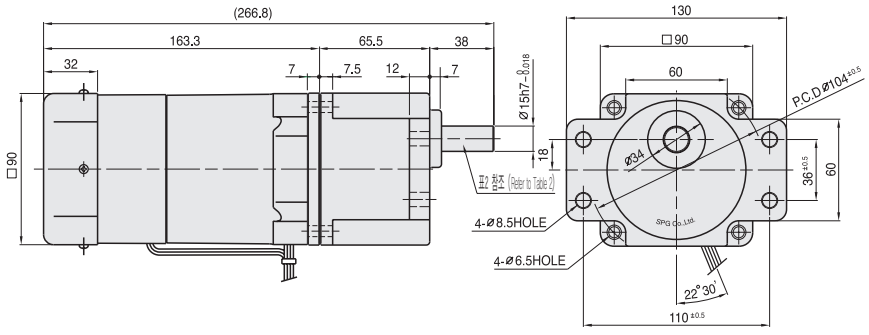
MODEL \ GEAR RATIO		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	rpm	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	9
S9KC□B( )	kg-cm	9.72	11.7	16.2	19.4	24.3	29.2	32.4	36.5	43.8	52.6	58.4	66.0	79.2	95.0	106	132	158	177	200	200	200	200	200	200
S9KC□B( )-S	N·m	0.953	1.147	1.588	1.901	2.381	2.862	3.175	3.577	4.292	5.155	5.723	6.468	7.762	9.310	10.39	12.94	15.48	17.35	19.60	19.60	19.60	19.60	19.60	19.60

❖ GEAR HEAD 품명중 □은 감속비를 표시합니다. (The code in □ of gearhead model is for gear ratio.)
❖ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. (It is the permissible torque of the assembled motor and gearhead.)
❖ 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 200㎏-㎝입니다. (The permissible torque of the motor and inter-decimal gearhead is 200 kg-cm.)
❖ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향입니다. (■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor. Others indicate rotation in the opposite direction.)
❖ 회전수는 MOTOR의 동기 회전수(50Hz : 1500rpm, 60Hz : 1800rpm)를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제의 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (Rpm is based on synchronous speed (50Hz: 1500rpm, 60Hz: 1800rpm) divided by gear ratio. The actual rotation speed can be 2~20% less than displayed value depending on the load.)
❖ ( )는 L, H Type을 표시합니다. L은 MOTOR의 L과, H는 MOTOR의 H와 사용하여 주십시오. (( ) is for marking 'L' type or 'H'. 'L' should be used with motor 'L' and 'H' should be used with motor 'H'.)

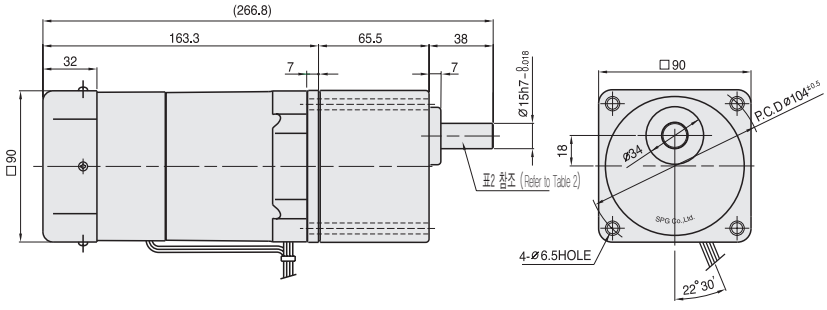
DIMENSIONS

✚ GEARED MOTOR

※MOTOR MODEL : S9R60G□□-E
※HEAD MODEL : S9□C3B□-S~S9□C200B□-S

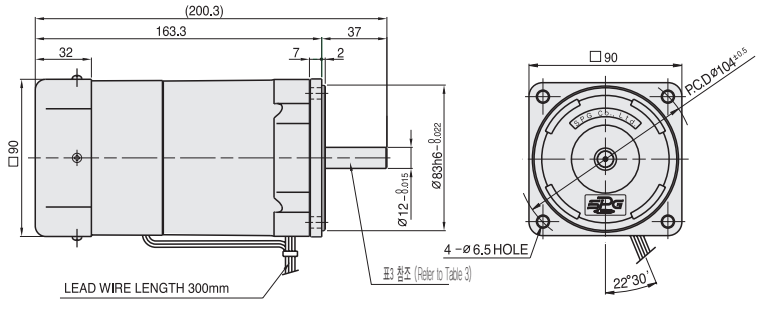


※HEAD MODEL : S9□C3B□-S~S9□C200B□



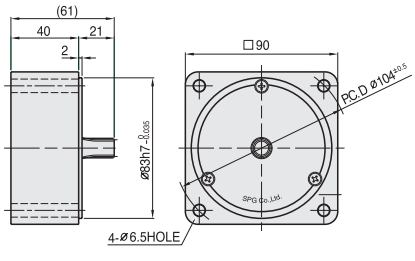
✚ MOTOR

※MOTOR MODEL : S9R60□□□-E



✚ INTER-DECIMAL GEAR HEAD

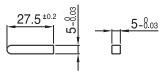
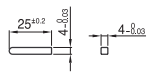
※MODEL : S9GX10B(H,L)-S



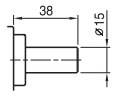
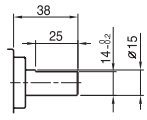
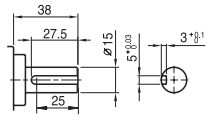
✚ WEIGHT – (표1 (Table1))

PART		WEIGHT(kg)
MOTOR		2.90
DECIMAL GEAR HEAD		0.65
GEAR HEAD	S9□C3B□ ~S9□C10B□	1.21
	S9□C12.5B□ ~S9□C20B□	1.30
	S9□C25B□ ~S9□C60B□	1.40
	S9□C75B□ ~S9□C200B□	1.45

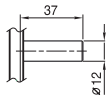
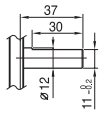
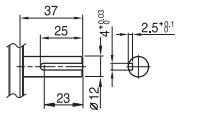
✚ KEY SPEC

GEAR HEAD	MOTOR
	

✚ GEAR HEAD 출력축 사양 (SPEC for output shaft of gearhead) – (표2 (Table2))

MODEL	출력축 구분 (TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE S9SC3B□ ~S9SC200B□	
D-CUT TYPE S9DC3B□ ~S9DC200B□	
KEY TYPE S9KC3B□ ~S9KC200B□	

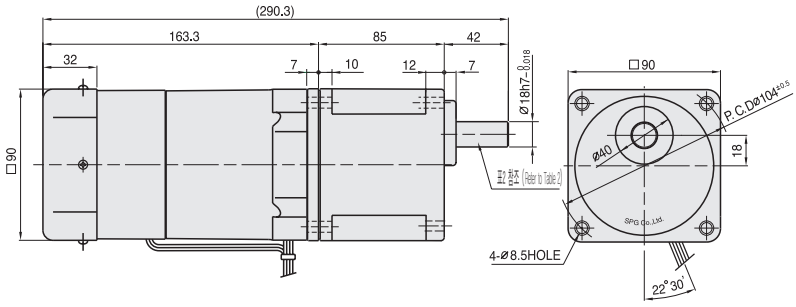
✚ MOTOR 출력축 사양 (SPEC for output shaft of motor) – (표3 (Table3))

MODEL	출력축 구분 (TYPES OF OUTPUT SHAFT)
GEAR TYPE S9R60G□□-E	
STRAIGHT TYPE S9R60S□-E	
D-CUT TYPE S9R60D□-E	
KEY TYPE S9R60K□-E	

DIMENSIONS

✚ GEARED MOTOR

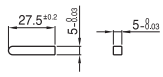
※MOTOR MODEL : S9R60G□H-E
※HEAD MODEL □ : S9□D3B~S9□D200B



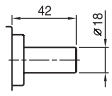
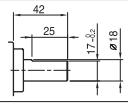
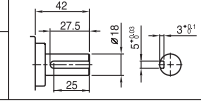
✚ WEIGHT – (표1 (Table1))

PART		WEIGHT(kg)
MOTOR		2.90
GEAR HEAD	S9□D3B ~S9□D10B	1.65
	S9□D12.5B ~S9□D20B	1.80
	S9□D25B ~S9□D60B	1.90
	S9□D75B ~S9□D200B	1.95

✚ KEY SPEC

GEAR HEAD


✚ GEAR HEAD 출력축 사양 (SPEC for output shaft of gearhead) – (표2 (Table2))

MODEL	출력축 구분 (TYPES OF OUTPUT SHAFT)	MODEL	출력축 구분 (TYPES OF OUTPUT SHAFT)	MODEL	출력축 구분 (TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE		D-CUT TYPE		KEY TYPE	
S9SD3B ~S9SD200B		S9DD3B ~S9DD200B		S9KD3B ~S9KD200B	

50Hz

MODEL	GEAR RATIO	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	rpm	500	416	300	250	200	166	150	120	100	83	75	60	50	41	37	30	25	20	16	15	12	10	8	7.5
S9KD□B	kg-cm	12.2	14.6	20.3	24.3	30.4	36.5	40.5	45.6	54.8	65.7	73.0	82.5	99.0	119	132	165	198	221	266	295	300	300	300	300
	N·m	1.196	1.431	1.989	2.381	2.989	3.577	3.969	4.469	5.370	6.439	7.154	8.085	9.702	11.66	12.94	16.17	19.40	21.67	26.09	28.93	29.42	29.42	29.42	29.42

60Hz

MODEL	GEAR RATIO	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	rpm	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	9
S9KD□B	kg-	9.72	11.7	16.2	19.4	24.3	29.2	32.4	36.5	43.8	52.6	58.4	66.0	79.2	95.0	106	132	158	177	212	236	283	300	300	300
	cmN·m	0.953	1.147	1.588	1.901	2.381	2.862	3.175	3.577	4.292	5.155	5.723	6.468	7.762	9.310	10.39	12.94	15.48	17.35	20.79	23.14	27.75	29.42	29.42	29.42

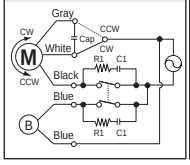
❖ GEAR HEAD 품명중 □은 감속비를 표시합니다. (The code in □ of gearhead model is for gear ratio.)
❖ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. (It is the ambient torque of the assembled motor and gearhead.)
❖ 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 300kg-cm입니다. (The permissible torque of the motor and inter-decimal gearhead is 300 kg-cm.)
❖ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다. (■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor. Others indicate rotation in the opposite direction.)
❖ 회전수는 MOTOR의 동기 회전수(50Hz : 1500rpm, 60Hz : 1800rpm)를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제의 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (Rpm is based on synchronous speed (50Hz: 1500rpm, 60Hz: 1800rpm) divided by gear ratio. The actual rotation speed can be 2~20% less than displayed value depending on the load.)
❖ 'H' Type 전용으로 기종명에 표시하지 않습니다. MOTOR의 H와 사용하여 주십시오. (Only "H" type is applicable. Please use "H" type motor.)

SCHEMATIC DIAGRAMS

회전방향은 MOTOR의 SHAFT 끝쪽에서 볼 때의 회전방향입니다. (The direction of motor rotation is as viewed from the front shaft end of the motor.)

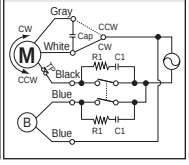
S9R60GA-E
S9R60GC-E

CW,CCW



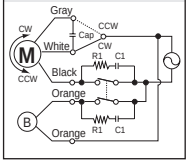
S9R60GA-ECE
S9R60GC-ECE
S9R60GE-E
S9R60GE-ECE

CW,CCW



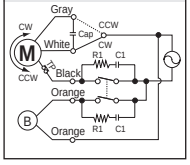
S9R60GB-E
S9R60GD-E

CW,CCW



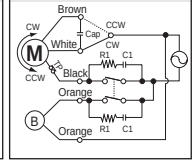
S9R60GB-ECE
S9R60GD-ECE

CW,CCW



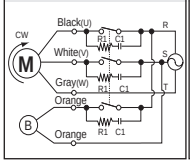
S9R60GX-E
S9R60GX-ECE

CW,CCW

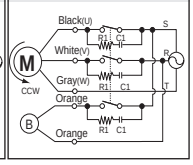


S9I60GU-E
S9I60GT-E

CW

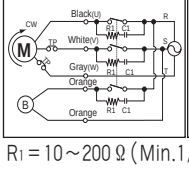


CCW

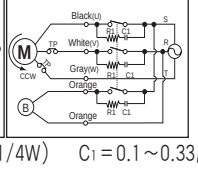


S9I60GU-ECE
S9I60GT-ECE

CW

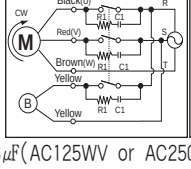


CCW

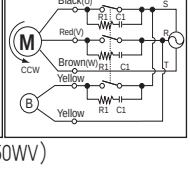


S9I60GS-E
S9I60GS-ECE

CW



CCW



R_1 = 10~200 Ω (Min.1/4W) C_1 = 0.1~0.33 μF (AC125WV or AC250WV)