

60W

INDUCTION MOTOR, REVERSIBLE MOTOR
□90㎜ TERMINAL BOX TYPE

INDUCTION MOTOR - CONTINUOUS RATING

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	S9I60GA( )-T S9I60GA( )-T1	4	60	1 Ø 110	60	Cont.	1.35	1600	3.80	0.380	4.80	0.480	15.0
	S9I60GB( )-T S9I60GB( )-T1	4	60	1 Ø 220	60	Cont.	0.68	1600	3.90	0.390	4.80	0.480	4.0
	S9I60GC( )-T S9I60GC( )-T1	4	60	1 Ø 100	50	Cont.	1.26	1300	4.60	0.460	3.40	0.340	15.0
					60		1.37	1550	3.90	0.390			
	S9I60GD( )-T S9I60GD( )-T1	4	60	1 Ø 200	50	Cont.	0.65	1300	4.70	0.470	3.85	0.385	4.0
					60		0.70	1550	4.00	0.400			
	S9I60GX( )-T S9I60GX( )-T1 S9I60GX( )-TCE S9I60GX( )-T1CE	4	60	1 Ø 220	50	Cont.	0.47	1300	4.60	0.460	3.20	0.320	3.5
				1 Ø 240			0.50		4.90	0.490	3.90	0.390	
	S9I60GU( )-T S9I60GU( )-T1 S9I60GU( )-TCE S9I60GU( )-T1CE	4	60	3 Ø 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( )-T S9I60GT( )-T1 S9I60GT( )-TCE S9I60GT( )-T1CE	4	60	3 Ø 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( )-T S9I60GS( )-T1 S9I60GS( )-TCE S9I60GS( )-T1CE	4	60	3 Ø 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	
				3 Ø 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	
				3 Ø 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	
				3 Ø 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 맨 끝자리에 CE가 명기된 MODEL의 인증 관련 내용은 SPG 규격 인증품 현황을 참고하여 주십시오. (CE marked at the end of the model name indicates that it is thermally protected type which has received CE with built-in TP.)
또한 기종명 S9I40GX, S9I40GX-T, S9I40GS-T는 TP가 내장된 THERMALLY PROTECTED TYPE입니다. (TP marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted. S9I40GX, S9I40GX-T, S9I40GS-T is thermally protected type with TP mounted.)

❖ ( )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.)

REVERSIBLE MOTOR - 30MINUTES RATING

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( )-T S9R60GA( )-T1 S9R60GA( )-T(TP) S9R60GA( )-T1(TP) S9R60GA( )-TCE S9R60GA( )-T1CE	4	60	1 Ø 110	60	30min.	1.60	1600	3.80	0.380	7.00	0.700	25.0
	S9R60GB( )-T S9R60GB( )-T1 S9R60GB( )-T(TP) S9R60GB( )-T1(TP) S9R60GB( )-TCE S9R60GB( )-T1CE	4	60	1 Ø 220	60	30min.	0.75	1600	3.80	0.380	7.00	0.700	6.0
	S9R60GC( )-T S9R60GC( )-T1 S9R60GC( )-T(TP) S9R60GC( )-T1(TP) S9R60GC( )-TCE S9R60GC( )-T1CE	4	60	1 Ø 100	50	30min.	1.40	1250	4.80	0.480	6.00	0.600	25.0
					60		1.60	1550	3.90	0.390			
	S9R60GD( )-T S9R60GD( )-T1 S9R60GD( )-T(TP) S9R60GD( )-T1(TP) S9R60GD( )-TCE S9R60GD( )-T1CE	4	60	1 Ø 200	50	30min.	0.70	1250	4.80	0.480	5.50	0.550	6.0
					60		0.76	1550	3.90	0.390			
	S9R60GE( )-T S9R60GE( )-T1 S9R60GE( )-TCE S9R60GE( )-T1CE	4	60	1 Ø 100	50	30min.	1.40	1250	4.80	0.480	5.90	0.590	25.0
					60		1.60	1550	3.90	0.390			
				1 Ø 115	60		1.30	1600	3.90	0.390	6.00	0.600	20.0
	S9R60GX( )-T S9R60GE( )-T1CE S9R60GX( )-TCE S9R60GX( )-T1CE	4	60	1 Ø 220	50	30min.	0.63	1250	4.80	0.480	5.90	0.590	5.0
				1 Ø 240			0.67		5.00	0.500	6.30	0.630	

❖ 기종명 S9R60GE-T는 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-T 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( )-TCE는 115V용 사양으로만 출하됩니다. (CE marked at the end of the model name indicates that it is thermally protected type which has received CE. S9R60GE-TCE is available only for 115V specification.)

❖ 기종명 맨 끝자리에 TP가 명기된 MODEL은 일반 MOTOR의 TP가 내장된 THERMALLY PROTECTED TYPE입니다. 또한 기종명 S9R60GE-T, S9R60GX-T는 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-T, S9R60GX-T is thermally protected type with TP mounted.)

❖ 본 DATA는 BRAKE BLOCK을 MOTOR에 장착된 상태에서 측정한 DATA입니다. (Above data is measured with friction brake mounted.)

❖ ( )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'.)

50Hz

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
MODEL	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

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
MODEL	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 품명 중 □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 200kg-cm입니다. (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.)

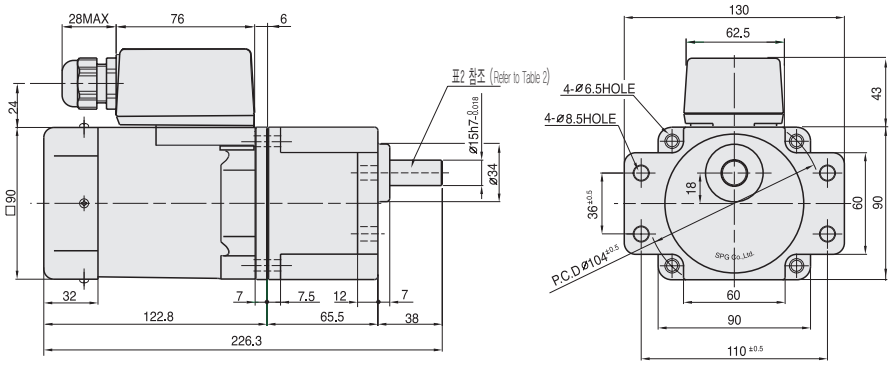
❖ 회전수는 MOTOR의 동기 회전수(50Hz : 1500rpm, 60Hz : 1800rpm)를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제의 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (Rpm is based on synchronous speed (50Hz: 1500rpm, 60Hz: 1800rpm) divided by gear ratio. The actual rotation speed can be 2~20% less than displayed value depending on the load.)

❖ ( )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'.)

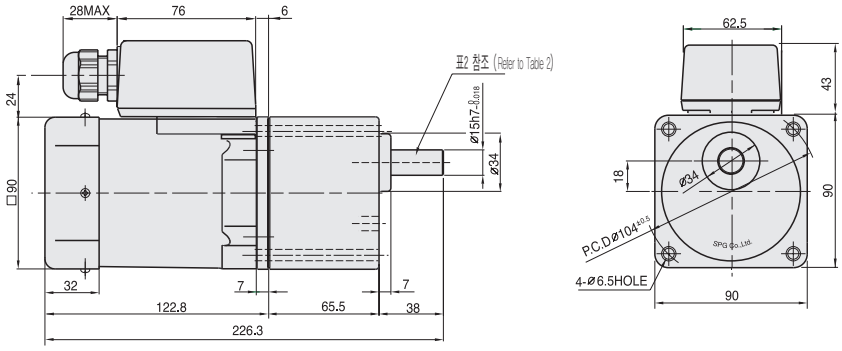
DIMENSIONS

GEARED MOTOR

※MOTOR MODEL : S9(I,R)60G□□-T
※HEAD MODEL □ : S9□C3B□-S~S9□C200B□-S

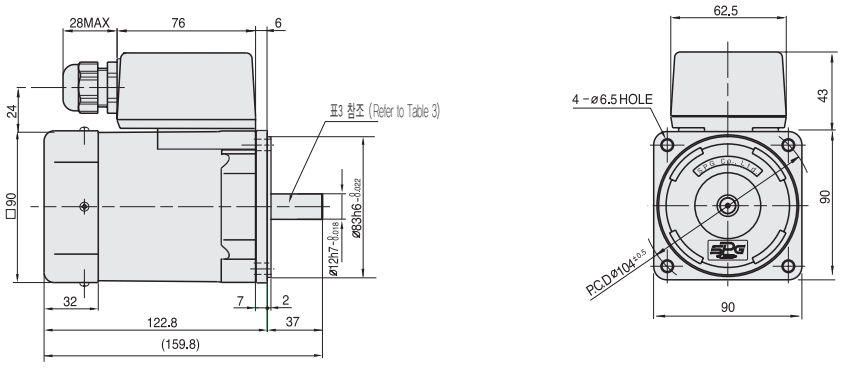


※HEAD MODEL : S9□C3B□~S9□C200B□



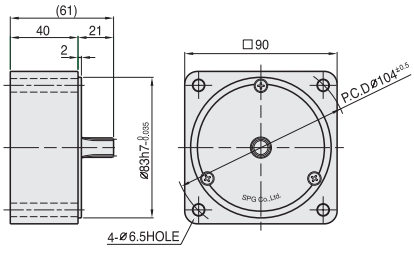
MOTOR

※MOTOR MODEL : S9(I,R)60□□□-T



INTER-DECIMAL GEAR HEAD

※ MODEL : S9GX10B(H,L)-S



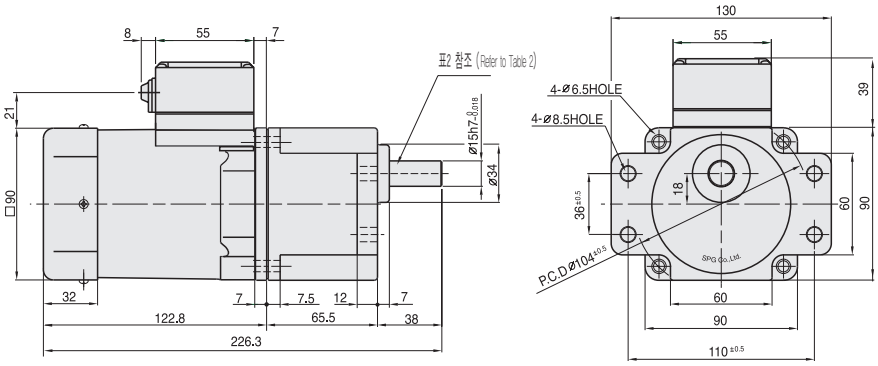
WEIGHT - (표1 (Table1))

PART		WEIGHT(kg)
MOTOR		2.60
REVERSIBLE MOTOR		2.65
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

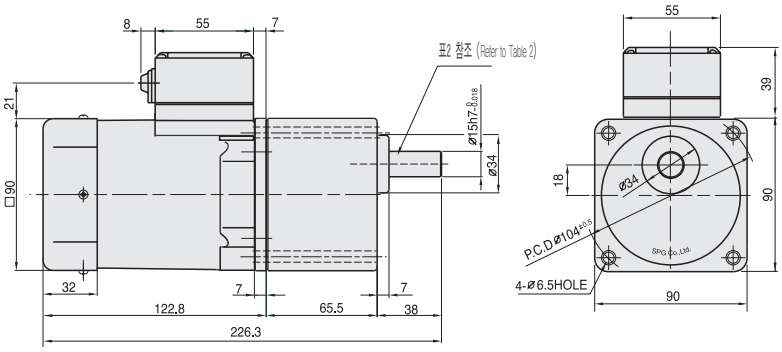
DIMENSIONS

✚ GEARED MOTOR

※MOTOR MODEL : S9(I,R)60G□□-T1
※HEAD MODEL : S9□C3B□-S~S9□C200B□-S

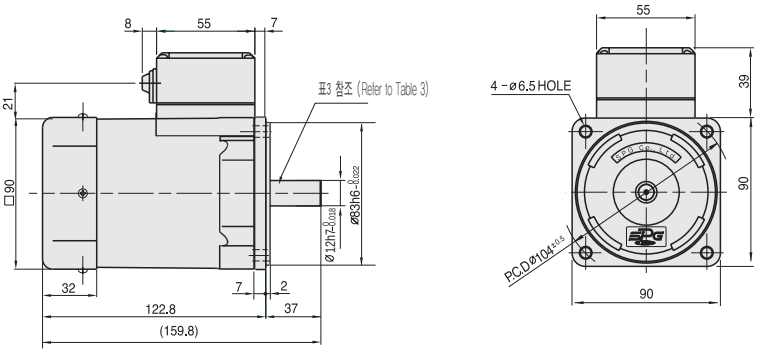


※HEAD MODEL □ : S9□C3B□~S9□C200B□



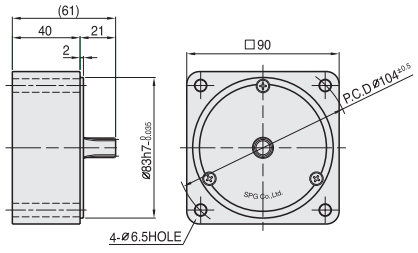
✚ MOTOR

※MOTOR MODEL : S9(I,R)60□□□-T1



✚ INTER-DECIMAL GEAR HEAD

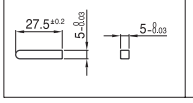
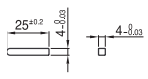
※ MODEL : S9GX10B(H,L)-S



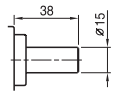
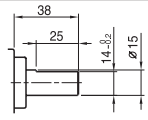
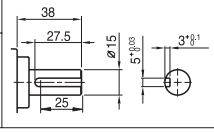
✚ WEIGHT – (표1 (Table1))

PART		WEIGHT(kg)
MOTOR		2.55
REVERSIBLE MOTOR		2.60
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

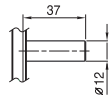
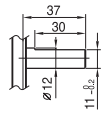
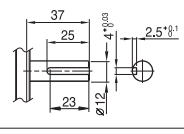
✚ KEY SPEC

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□	

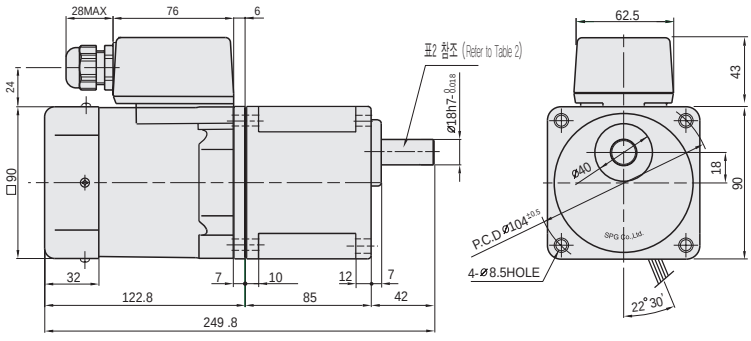
✚ MOTOR 출력축 사양 (SPEC for output shaft of motor) – (표3 (Table3))

MODEL	출력축 구분 (TYPES OF OUTPUT SHAFT)
GEAR TYPE S9(I,R)60G□□-T S9(I,R)60G□□-T1	
STRAIGHT TYPE S9(I,R)60S□-T S9(I,R)60S□-T1	
D-CUT TYPE S9(I,R)60D□-T S9(I,R)60D□-T1	
KEY TYPE S9(I,R)60K□-T S9(I,R)60K□-T1	

DIMENSIONS

✚ GEARED MOTOR

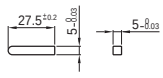
※MOTOR MODEL : S9(I,R)60G□H-T
※HEAD MODEL : S9□D3B~S9□D200B



✚ WEIGHT – (표2 (Table2))

PART		WEIGHT(kg)
MOTOR		2.60
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

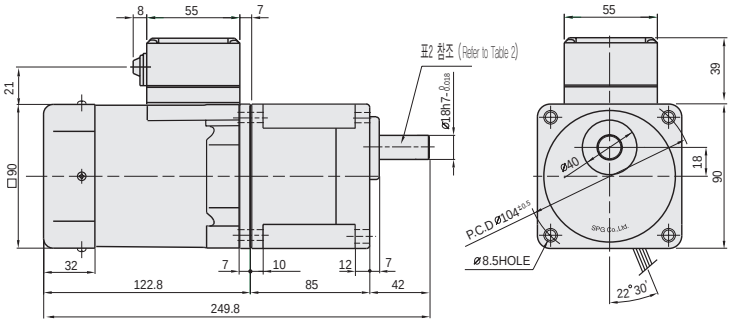
✚ KEY SPEC

GEAR HEAD


DIMENSIONS

✚ GEARED MOTOR

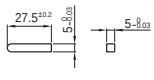
※MOTOR MODEL : S9(I,R)60G□H-T1
※HEAD MODEL : S9□D3B~S9□D200B



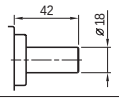
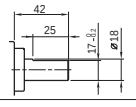
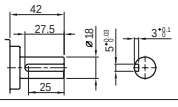
✚ WEIGHT – (표1 (Table1))

PART		WEIGHT(kg)
MOTOR		2.55
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		S9KDB ~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

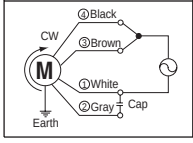
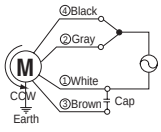
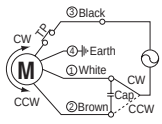
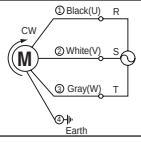
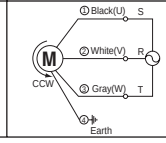
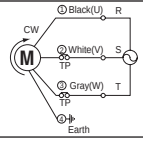
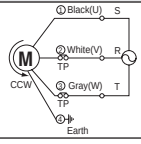
MODEL \ GEAR RATIO		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	rpm	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	9
S9KD□B	kg-cm	9.72	11.7	16.2	19.4	24.3	29.2	32.4	36.5	43.8	52.6	58.4	66.0	79.2	95.0	106	132	158	177	212	236	283	300	300	300
	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	20.79	23.14	27.75	29.42	29.42	29.42

❖ GEAR HEAD 품명 중 □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 300kg-cm입니다. (The permissible torque of the motor and inter-decimal gearhead is 300 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.)
❖ 'H' Type 전용으로 기종명에 표시하지 않습니다. MOTOR의 H와 사용하여 주십시오. (Only "H" type is applicable. Please use "H" type motor.)

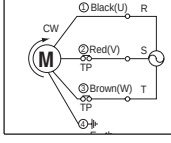
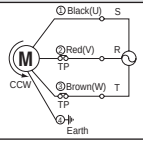
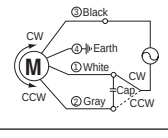
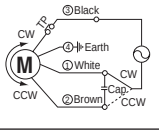
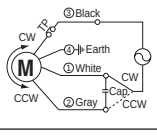
SCHEMATIC DIAGRAMS

회전방향은 MOTOR의 SHAFT 끝쪽에서 볼 때의 회전방향입니다. 원안의 번호는 TERMINAL BOX 내의 단자 번호입니다. (The direction of motor rotation is as viewed from the front shaft end of the motor. Circled number is the terminal number inside terminal box.)

■INDUCTION MOTOR

S9I60GA( )-T S9I60GB( )-T S9I60GC( )-T S9I60GD( )-T S9I60GA( )-T1S9I60GB( )-T1 S9I60GC( )-T1 S9I60GD( )-T1		S9I60GX( )-T S9I60GX( )-TCE S9I60GX( )-T1 S9I60GX( )-T1CE	S9I60GU( )-T S9I60GT( )-T S9I60GU( )-T1 S9I60GT( )-T1		S9I60GU( )-TCE S9I60GT( )-TCE S9I60GU( )-T1CE S9I60GT( )-T1CE	
CW	**CCW**	**CW,CCW**	**CW**	**CCW**	**CW**	**CCW**
						

■REVERSIBLE MOTOR

S9I60GS( )-TCE S9I60GS( )-T S9I60GS( )-T1CE S9I60GS( )-T1	S9R60GA( )-T, S9R60GB( )-T S9R60GA( )-T1, S9R60GB( )-T1 S9R60GC( )-T, S9R60GD( )-T S9R60GC( )-T1, S9R60GD( )-T1	S9R60GX( )-T, S9R60GX( )-TCE S9R60GX( )-T1, S9R60GX( )-T1CE	S9R60GA( )-T(TP), S9R60GB( )-T(TP), S9R60GC( )-T(TP), S9R60GD( )-T(TP), S9R60GA( )-T1(TP), S9R60GB( )-T1(TP), S9R60GC( )-T1(TP), S9R60GD( )-T1(TP), S9R60GA( )-TCE , S9R60GB( )-TCE , S9R60GC( )-TCE S9R60GD( )-TCE , S9R60GE( )-T , S9R60GE( )-TCE S9R60GA( )-T1CE , S9R60GB( )-T1CE , S98R60GC( )-T1CE S9R60GD( )-T1CE , S9R60GE( )-T1 , S9R60GE( )-T1CE
CW **CCW**	**CW,CCW**	**CW,CCW**	**CW,CCW**
						

주의 : INDUCTION MOTOR 회전방향의 교환은 MOTOR가 완전히 정지한 후에 실시하여 주십시오. MOTOR가 회전 중에 회전방향을 교환할 경우 회전방향이 바뀌지 않거나, 회전방향이 바뀌어지는 데 있어서 시간이 걸리는 수도 있습니다. (Change the direction of motor rotation only after the motor stops completely. If an attempt is made to change the direction of rotation while the motor is running, the motor may ignore the reversing command or change its direction of rotation after some delay.)