

90W

INDUCTION MOTOR, REVERSIBLE MOTOR
 90mm TERMINAL BOX TYPE

■ INDUCTION MOTOR - CONTINUOUS RATING

SIZE mm sq.	Type	Poles	Output (W)	Voltage (V)	Frequency (Hz)	Duty	Rated Load				Starting (kg-cm)	Torque (N-m)	Capacitor (uF)
							Current (A)	Speed (rpm)	Torque (kg-cm) (N-m)				
90	S9190GA()-T S9190GA()-T1	4	90	1 ∅ 110	60	Cont.	2.00	1600	5.60	0.560	5.70	0.570	25.0
	S9190GB()-T S9190GB()-T1	4	90	1 ∅ 220	60	Cont.	1.00	1600	5.60	0.560	5.70	0.570	6.0
	S9190GC()-T S9190GC()-T1	4	90	1 ∅ 100	50 60	Cont.	1.80 2.00	1300 1550	6.90 5.80	0.690 0.580	5.00	0.500	25.0
	S9190GD()-T S9190GD()-T1	4	90	1 ∅ 200	50 60	Cont.	0.90 1.00	1300 1550	6.90 5.80	0.690 0.580	5.00	0.500	6.0
	S9190GX()-T S9190GX()-T1 S9190GX()-TCE S9190GX()-T1CE	4	90	1 ∅ 220 1 ∅ 240	50	Cont.	0.68 0.72	1300	6.90 7.20	0.690 0.720	4.80 5.20	0.480 0.520	5.0
	S9190GU()-T S9190GU()-T1 S9190GU()-TCE S9190GU()-T1CE	4	90	3 ∅ 200	50 60	Cont.	0.63 0.60	1300 1550	6.90 6.00	0.690 0.600	10.60 8.90	1.060 0.890	—
	S9190GT()-T S9190GT()-T1 S9190GT()-TCE S9190GT()-T1CE	4	90	3 ∅ 220	50 60	Cont.	0.68 0.55	1350 1600	6.80 5.70	0.680 0.570	13.00 10.50	1.300 1.050	—
	S9190GS()-T S9190GS()-T1 S9190GS()-TCE S9190GS()-T1CE	4	90	3 ∅ 380	50	Cont.	0.32	1300	6.80	0.680	10.55	1.055	—
					60	Cont.	0.30	1550	5.70	0.570	8.20	0.820	
					50	Cont.	0.35	1300	6.90	0.690	11.70	1.170	
					60		0.32	1550	5.80	0.580	8.90	0.890	
					50	Cont.	0.33	1350	6.80	0.680	12.00	1.200	
					60		0.29	1600	5.70	0.570	9.50	0.950	
	50	Cont.	0.35	1350	6.90	0.690	13.30	1.330					
	60	Cont.	0.31	1600	5.80	0.580	10.50	1.050					

- "CE" marked at the end of the model name indicates that it is thermally protected type which has received CE marking (File NO. E9766002E01, Certificate Institute: TÜV Rheinland) with built-in TP.
- "TP" marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted. S9140GX, S9140GX-T, S9140GS-T is thermally protected type with TP mounted.
- In case 3 phase 380V motor is controlled with inverter, please be careful to use considerin
- () is for marking 'L' type or 'H'. 'L' should be used with gearhead 'L' and 'H' should be used with gearhead 'H'.

REVERSIBLE MOTOR - 30 MINUTES RATING

SIZE mm sq.	Type	Poles	Output (W)	Voltage (V)	Frequency (Hz)	Duty	Rated Load				Starting Torque		Capacitor (uF)
							Current (A)	Speed (rpm)	Torque (kg-cm) (N-m)		(kg-cm)	(N-m)	
90	S9R90GA(-T) S9R90GA(-T1) S9R90GA(-T1(TP)) S9R90GA(-T1(TP)) S9R90GA(-TCE) S9R90GA(-TICE)	4	90	1 Ø 110	60	30min.	2.25	1550	5.80	0.580	8.50	0.850	30.0
	S9R90GB(-T) S9R90GB(-T1) S9R90GB(-T1(TP)) S9R90GB(-T1(TP)) S9R90GB(-TCE) S9R90GB(-TICE)	4	90	1 Ø 220	60	30min.	1.00	1550	5.80	0.580	8.50	0.850	7.0
	S9R90GC(-T) S9R90GC(-T1) S9R90GC(-T1(TP)) S9R90GC(-T1(TP)) S9R90GC(-TCE) S9R90GC(-TICE)	4	90	1 Ø 100	50 60	30min.	2.10 2.25	1200 1500	7.50 6.00	0.750 0.600	6.50	0.650	30.0
	S9R90GD(-T) S9R90GD(-T1) S9R90GD(-T1(TP)) S9R90GD(-T1(TP)) S9R90GD(-TCE) S9R90GD(-TICE)	4	90	1 Ø 200	50 60	30min.	0.90 1.00	1200 1500	7.50 6.00	0.750 0.600	6.50	0.650	7.0
	S9R90GE(-T) S9R90GE(-T1) S9R90GE(-TCE) S9R90GE(-TICE)	4	90	1 Ø 100 1 Ø 115	50 60	30min.	1.80 1.90 1.80	1200 1500 1550	7.50 6.00 6.00	0.750 0.600 0.600	6.50 8.00	0.650 0.800	30.0 25.0
	S9R90GX(-T) S9R90GX(-T1) S9R90GX(-TCE) S9R90GX(-TICE)	4	90	1 Ø 220 1 Ø 240	50	30min.	0.82 0.86	1250	7.20 7.40	0.720 0.740	6.50 8.00	0.650 0.800	6.0

- Please use appropriate capacitors according to the using voltage for S9R60GE-T type since the size of the capacitors differ to the different voltages and when not used properly, it may cause malfunction. Please inform required voltage when ordering or capacitor for 115V will be delivered.
- "CE" marked at the end of the model name indicates that it is thermally protected type which has received CE marking (File NO. E9766002E01, Certificate Institute: TÜV Rheinland) S9R60GE-TCE is available only for 115V specification.
- "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.
- Above data is measured with friction brake mounted.
- () 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	18.2	21.9	30.4	36.5	45.6	54.7	60.8	68.4	82.1	98.6	110	124	149	178	198	200	200	200	200	200	200	200	200	200
	N·m	1.784	2.146	2.979	3.577	4.469	5.361	5.958	6.703	8.046	9.663	10.78	12.15	14.60	17.44	19.40	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
S9KC□B()-S	kg-cm	14.6	17.5	24.3	29.2	36.5	43.7	48.6	54.8	65.7	78.8	87.6	99.0	119	143	158	198	200	200	200	200	200	200	200	200
	N·m	1.431	1.715	2.381	2.862	3.577	4.675	4.763	5.370	6.439	7.722	8.585	9.702	11.66	14.01	15.48	19.40	19.60	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	14.6	17.5	24.3	29.2	36.5	43.7	48.6	54.8	65.7	78.8	87.6	99.0	119	143	158	198	200	200	200	200	200	200	200	200
	N·m	1.431	1.715	2.381	2.862	3.577	4.675	4.763	5.370	6.439	7.722	8.585	9.702	11.66	14.01	15.48	19.40	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60

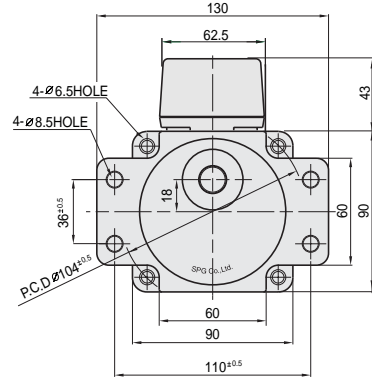
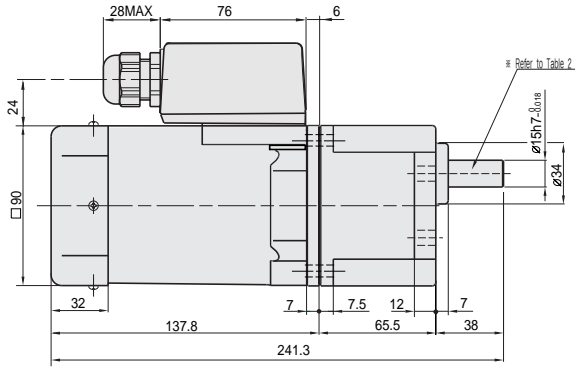
- The code in □ of gearhead model is for gear ratio.
- It is the permissible torque of the assembled motor and gearhead.
- The permissible torque of the assembled with motor and inter-decimal gearhead is 200kg·cm.
- ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor. Others indicate rotation in the opposite direction.
- Rotational speed based on synchronous speed (50Hz:1500rpm, 60Hz:1800rpm) divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load.
- () is for marking 'L' type or 'H'. 'L' should be used with motor 'L' and 'H' should be used with motor 'H'.

DIMENSIONS

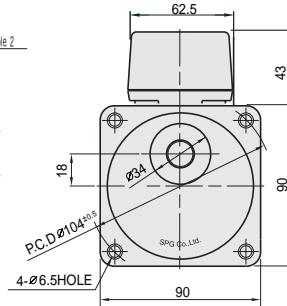
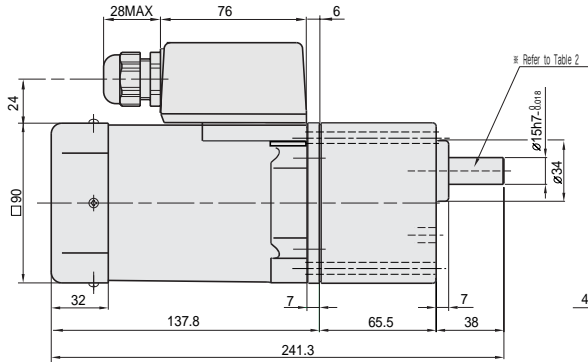
▼ GEARED MOTOR

※ MOTOR MODEL : S9(I,R)90□□-T

※ HEAD MODEL : S9□C3B□-S~S9□C200B□-S

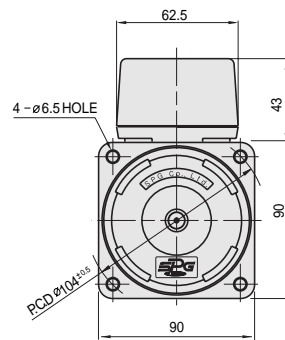
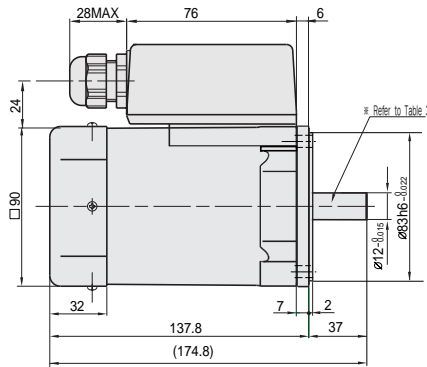


※ HEAD MODEL □ : S9□C3B□~S9□C200B□



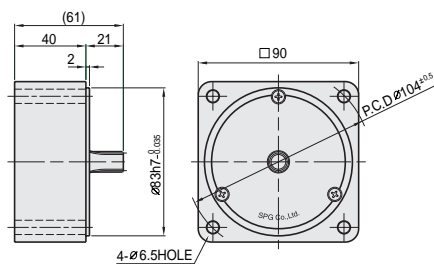
▼ MOTOR

※ MOTOR MODEL : S9(I,R)90□□□-T



▼ INTER-DECIMAL GEARHEAD

※ MODEL : S9GX10B(H,L)-S



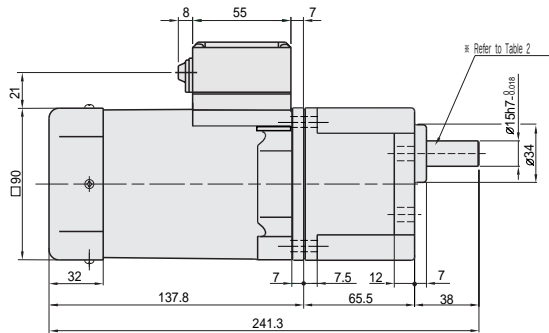
▼ WEIGHT-(Table 1)

PART	WEIGHT(kg)	
INDUCTION MOTOR	3.10	
REVERSIBLE MOTOR	3.15	
DECIMAL GEARHEAD	0.65	
GEAR HEAD	S9 □ C3B □	1.21
	~S9 □ C10B □	
	S9 □ C12.5B □	1.30
	~S9 □ C20B □	
	S9 □ C25B □	1.40
	~S9 □ C60B □	
S9 □ C75B □	1.45	
~S9 □ C200B □		

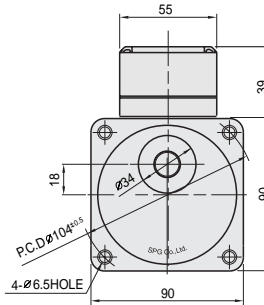
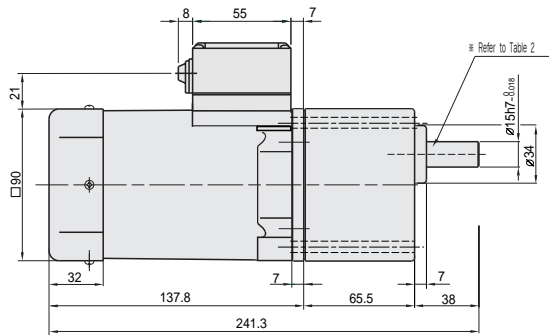
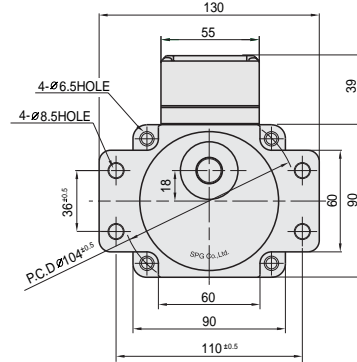
DIMENSIONS

▼ GEARED MOTOR

※ MOTOR MODEL : S9(I,R)90G□□-T1
 ※ HEAD MODEL : S9□C3B□-S~S9□C200B□-S

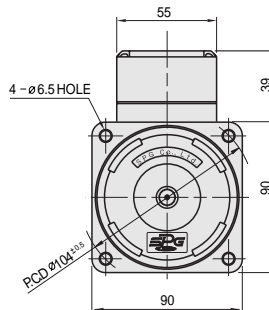
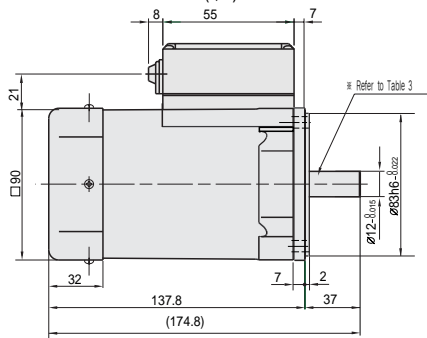


※ HEAD MODEL : S9□C3B□~S9□C200B□



▼ MOTOR

※ MOTOR MODEL : S9(I,R)90□□□-T1

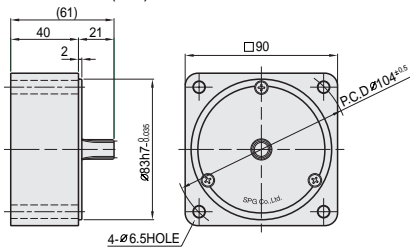


▼ WEIGHT-(Table 1)

PART	WEIGHT(kg)	
INDUCTION MOTOR	3.05	
REVERSIBLE MOTOR	3.10	
DECIMAL GEARHEAD	0.65	
GEAR	S9 □ C3B □ ~S9 □ C10B □	1.21
	S9 □ C12.5B □ ~S9 □ C20B □	1.30
HEAD	S9 □ C25B □ ~S9 □ C60B □	1.40
	S9 □ C75B □ ~S9 □ C200B □	1.45

▼ INTER-DECIMAL GEARHEAD

※ MODEL : S9GX10B(H,L)-S



▼ KEY SPEC

GEARHEAD	MOTOR

▼ SPEC for output shaft of gearhead-(Table 2)

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

▼ SPEC for output shaft of motor-(Table 3)

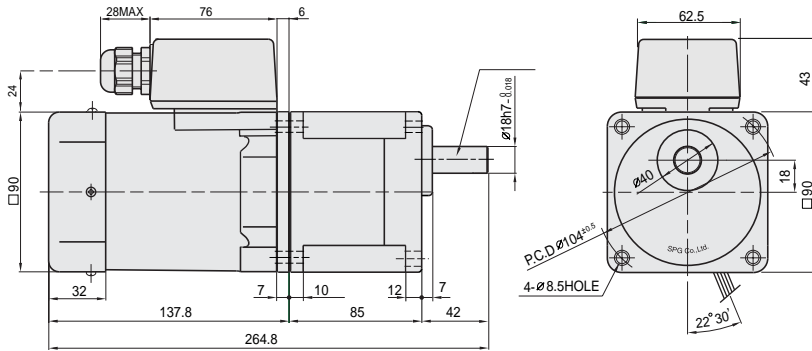
MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE S9(I,R)90G□□-T S9(I,R)90G□□-T1	
STRAIGHT TYPE S9(I,R)90S□-T S9(I,R)90S□-T1	
D-CUT TYPE S9(I,R)90D□-T S9(I,R)90D□-T1	
KEY TYPE S9(I,R)90K□-T S9(I,R)90K□-T1	

DIMENSIONS

▼ GEARED MOTOR

* MOTOR MODEL : S9(I,R)90G□H-T

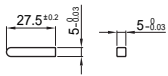
* HEAD MODEL : S9□D3B~S9□D200B



▼ WEIGHT-(Table 1)

	PART	WEIGHT(kg)
	MOTOR	3.10
GEAR HEAD	S9 □ D3 B ~S9 □ D10 B	1.65
	S9 □ D12.5 B ~S9 □ D20 B	1.80
	S9 □ D25 B ~S9 □ D60 B	1.90
	S9 □ D75 B ~S9 □ D200 B	1.95

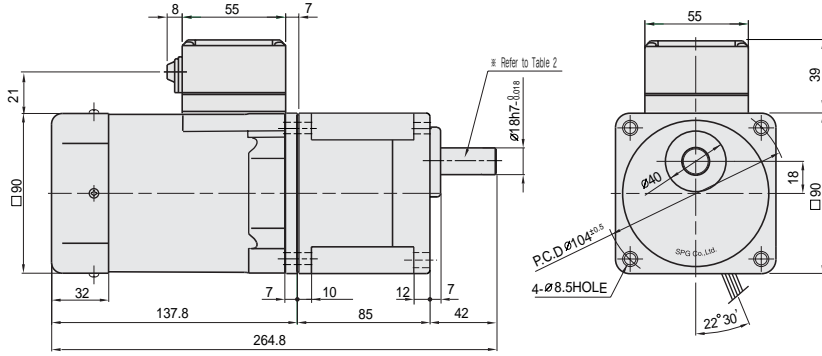
▼ KEY SPEC



DIMENSIONS

GEARED MOTOR

* MOTOR MODEL : S9(I,R)90G□H-T1 * HEAD MODEL : S9□D3B~S9□D200B

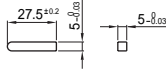


WEIGHT-(Table 1)

PART	WEIGHT(kg)	
MOTOR	3.05	
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

SPEC for output shaft of gearhead-(Table 3)

KEY SPEC



MODEL	TYPES OF OUTPUT SHAFT	MODEL	TYPES OF OUTPUT SHAFT	MODEL	TYPES OF OUTPUT SHAFT
S9SD3B ~S9SD200B	STRAIGHT TYPE 	S9DD3B ~S9DD200B	D-CUT TYPE 	S9KDB ~S9KD200B	KEY TYPE

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																								
	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	18.2	21.9	30.4	36.5	45.6	54.7	60.8	68.4	82.1	98.6	110	124	149	178	198	248	297	300	300	300	300	300	300	300
	N·m	1.784	2.146	2.979	3.577	4.469	5.361	5.958	6.703	8.046	9.663	10.78	12.15	14.60	17.44	19.40	24.32	29.13	29.42	29.42	29.42	29.42	29.42	29.42	29.42

60Hz

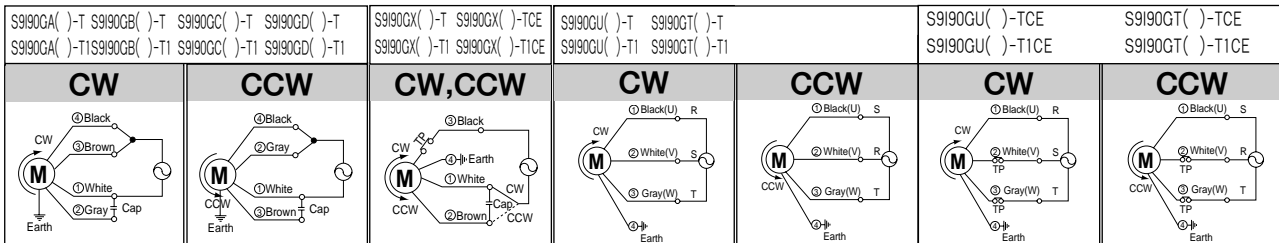
GEAR RATIO	3 3.6 5 6 7.5 9 10 12.5 15 18 20 25 30 36 40 50 60 75 90 100 120 150 180 200																							
	rpm	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10
S9KD□B	kg-cm	14.6	17.5	24.3	29.2	36.5	43.7	48.6	54.8	65.7	78.8	87.6	99.0	119	143	158	198	238	266	300	300	300	300	300
	N·m	1.431	1.715	2.381	2.862	3.577	4.675	4.763	5.370	6.439	7.722	8.585	9.702	11.66	14.01	15.48	19.40	23.34	26.09	29.42	29.42	29.42	29.42	29.42

- The code in □ of gearhead model is for gear ratio.
- It is the permissible torque of the assembled motor and gearhead.
- The permissible torque of the assembled with motor and inter-decimal gearhead is 300kg·cm.
- ■ 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.
- Rotational speed based on synchronous speed (50Hz:1500rpm, 60Hz:1800rpm) divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load.
- There is not marked the 'H' type caused by exclusive use. Please use 'H' type motor.

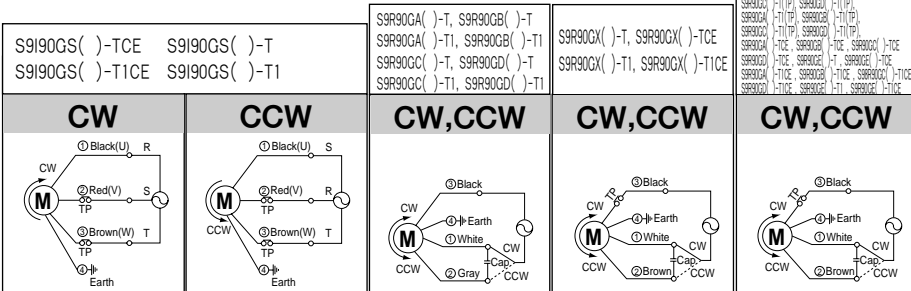
SCHEMATIC DIAGRAMS

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



REVERSIBLE MOTOR



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. ①, ②, ③, ④: Terminal NO.