

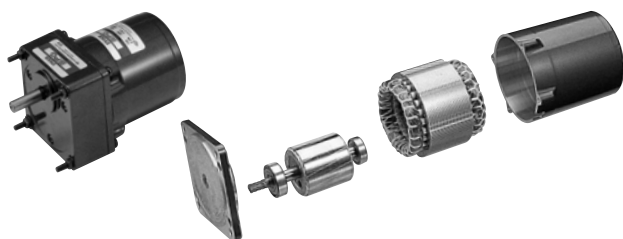
INDUCTION MOTORS

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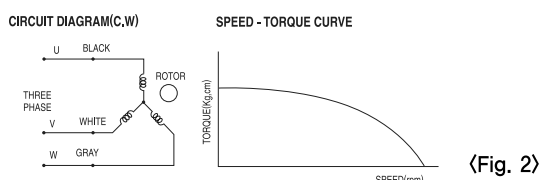
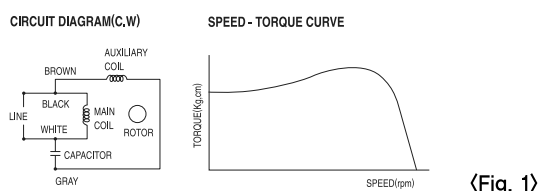


Characteristics of INDUCTION MOTOR



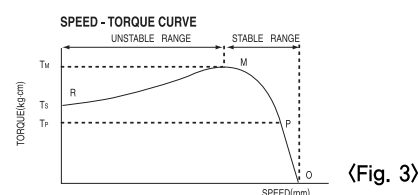
1. Characteristics of INDUCTION MOTOR

- A small induction motor usually means the condenser – run induction motor. This motor always uses both auxiliary winding and condenser not only when starting but also during operation. Generally, its starting torque isn't great, but its structure is simple reliable and efficient. Refer to <Fig. 1>.
- The motor can be used in continuous rated operations.
- The number of rated rotation of the motor varies depending on the load imposed on it.
- It is suitable for operations that do not require the speed control.
- Its insulation class is E. SPG's UL conformance motor is class A.
- There are two types. One is a condenser-run single-phase induction motor and the other is a three-phase induction motor.
- Since the single-phase motor is a condenser-run induction motor, it provides high efficiency and low noise.
- The power source for a single motor includes A(110V 60Hz), B(220V 60Hz), C(100V 50/60Hz), D(200V 50/60Hz), E(115V 60Hz), and X(220-240V 50Hz).
- For a single-phase induction motor, make sure that the condenser complies with the capacity of the motor.
- For a single-phase induction motor, reversing the direction of the rotation within a short time during operation is not possible due to adverse exerting of the inertia torque against reversing. Thus, stop the motor first and change the rotational direction next.
- As an induction motor is driven by a three-phase power source, the three-phase motor provides high efficiency, relatively great starting torque, and high reliability. The three-phase motor is popular as a general-purpose motor.
- The power source for a three-phase motor, an induction motor, includes U(200V 50/60Hz), T(220V 50/60Hz), and S(380-440V 50/60Hz). Refer to <Fig. 2>.



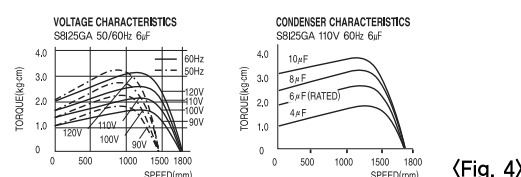
2. Characteristics of Rotation and TORQUE

- Under a constant voltage, the relationship between the number of rotation and the torque is as shown in <Fig. 3>. With no-load, the number of rotation roughly approximates the number of synchronous rotation, but as the load increases, the number of rotation decreases and approaches to the speed(rpm) indicated by the point P where the torque T_p horizontally meets the load curve.
- When the load is further increased and reaches the point M, the motor stops at the point R because the motor no longer generates further torque. Therefore, the leg R-M is referred to as an unstable zone and the leg M-O is a stable zone for operation.



3. Characteristics of Voltage and CONDENSOR

- The Characteristics of voltage can be represented by the torque's Characteristics about the applied voltage. The torque of induction motor changes proportionate to twice the voltage.
- The characteristics of torque also change according to the capacity of the condenser.
- As the capacity of the condenser boost, the starting torque and stalling torque increase. But if the capacity increases by 2.5-3.0 folds, the operating torque decreases and the starting torque do not increase.
- As a simple method to increase the torque when the induction motor is short on torque, either the voltage or the condenser capacity can be increased to continue the operation. In this case, the loss input of the motor increases and the temperature rises rapidly.
- However, if the motor must be run with insufficient torque, take measures to let the motor release heat as much as possible and operate the motor while keeping the temperature of the motor's housing below 90°C. Refer to (Fig. 4).



GENERAL SPECIFICATION OF INDUCTION MOTORS

ITEM	SPECIFICATION
Insulation Resistance	100M Ω or more when 500V megger is applied between the windings and the housing after rated motor operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5kVat 50/60Hz applied between the windings and the case after rated motor operation under normal ambient temperature and humidity.
Temperature Rise	80°C or less increase measured by thermometer after rated operation.
Insulation Class	Class B(130°C)
Overheat Protection Device	Built-in THERMAL PROTECTOR (automatic return type) : Open 120°C $\pm$ 5°C Close 76°C $\pm$ 15°C
Ambient Temperature	-10°C ~ 40°C
Ambient Humidity	85% maximum(non condensing)



3W

INDUCTION MOTOR □ 60mm LEAD WIRE TYPE

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)	
60	S6I03GA S6I03GACE	4	3	1 ∅ 110	60	Cont.	0.15	1500	0.21	0.021	0.25	0.025	2.0
	S6I03GC S6I03GCCCE	4	3	1 ∅ 100	50	Cont.	0.15	1200	0.25	0.025	0.25	0.025	2.0
					60			1450	0.21	0.021			
	S6I03GE S6I06GECE	4	3	1 ∅ 100	50	Cont.	0.15	1200	0.25	0.025	0.25	0.025	2.0
					60			1450	0.21	0.021			
					1 ∅ 115		0.15	1450	0.21	0.021			1.5

❖ Appropriate capacitors shall be used according to the voltage for S6I03GE 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.

❖ CE marked at the end of model name indicates that it is impedance protected type which has received CE. S6I03GECE is available only for 115V specification.

❖ "L" or "H" type does not apply to motors under 40W.

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	250
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	6
	kg-cm	0.6	0.7	1.0	1.2	1.5	1.8	2.0	2.5	3.0	3.6	3.6	4.6	5.5	6.6	7.3	8.2	9.8	12.3	15.0	15.0	15.0	15.0	15.0	15.0	15.0
S6DT□B	Nm	0.06	0.07	0.10	0.12	0.15	0.18	0.20	0.25	0.30	0.36	0.36	0.46	0.55	0.66	0.73	0.82	0.98	1.23	1.5	1.5	1.5	1.5	1.5	1.5	1.5

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	250
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	7.2
	kg-cm	0.5	0.6	0.8	1.0	1.3	1.5	1.7	2.1	2.6	3.1	3.4	3.8	4.6	5.5	6.8	6.9	8.3	10.0	12.0	14.0	15.0	15.0	15.0	15.0	15.0
S6DT□B	Nm	0.05	0.06	0.08	0.10	0.13	0.15	0.17	0.21	0.26	0.31	0.34	0.38	0.46	0.55	0.68	0.69	0.83	1.0	1.2	1.4	1.5	1.5	1.5	1.5	1.5

❖ 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 motor and inter-decimal gearhead is 5 kg-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.

❖ 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.

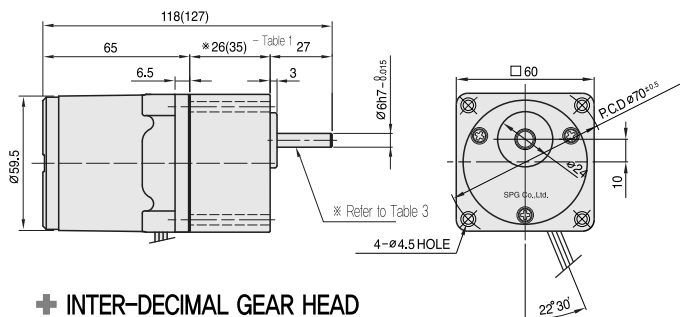
❖ "L" or "H" type does not apply to motors under 40W.

DIMENSIONS

GEARED MOTOR

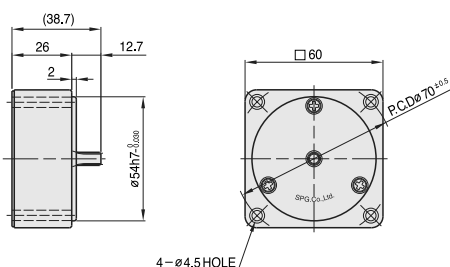
* MOTOR MODEL : S6I03G□

* HEAD MODEL : S6□T3□~S6□T250□



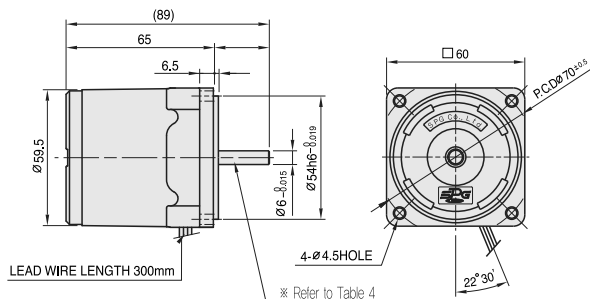
INTER-DECIMAL GEAR HEAD

* MODEL : S6GX10B



MOTOR

* MOTOR MODEL : S6I03□□



* 26(35) - (Table 1)

GEAR RATIO	SIZE(mm)
S6□T3□ ~ S6□T18□	26
S6□T20□ ~ S6□T250□	35

WEIGHT - (Table 2)

PART		WEIGHT(kg)
MOTOR		0.60
DECIMAL GEAR HEAD		0.18
GEAR HEAD	S6□T3□ ~S6□T18□	0.21
	S6□T20□ ~S6□T40□	0.27
	S6□T50□ ~S6□T250□	0.30

SPEC for output shaft of gearhead - (Table 3)

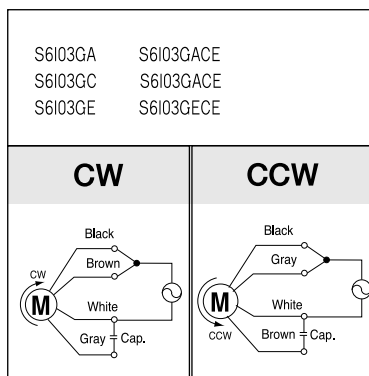
MODEL	TYPES OF OUTPUT SHAFT
STRAIGHT TYPE	27
S6ST3□ ~ S6ST250□	$\phi 6$
D-CUT TYPE	27
S6DT3□ ~ S6DT250□	12, 5.5- $\phi 6$

SPEC for output shaft of motor - (Table 4)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	12.7
S6I03G□	$\phi 6$
STRAIGHT TYPE	24
S6I03S□	$\phi 6$
D-CUT TYPE	24, 20, 5.5- $\phi 6$
S6I03D□	$\phi 6$

SCHEMATIC DIAGRAMS

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



6W

INDUCTION MOTOR □ 60mm LEAD WIRE TYPE

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)	
60	S6I06GA S6I06GACE	4	6	1 ∅ 110	60	Cont.	0.20	1550	0.40	0.040	0.55	0.055	2.5
	S6I06GB S6I06GBCE	4	6	1 ∅ 220	60	Cont.	0.10	1550	0.40	0.040	0.55	0.055	0.7
	S6I06GC S6I06GCCE	4	6	1 ∅ 100	50	Cont.	0.21	1200	0.50	0.050	0.45	0.045	2.5
					60		0.19	1500	0.42	0.042			
	S6I06GD S6I06GDCE	4	6	1 ∅ 200	50	Cont.	0.10	1200	0.50	0.050	0.45	0.045	0.7
					60			1500	0.42	0.042			
	S6I06GE S6I06GECE	4	6	1 ∅ 100	50	Cont.	0.18	1200	0.50	0.050	0.52	0.052	2.5
					60		0.19	1500	0.42	0.042			
				1 ∅ 115	60		0.19	1500	0.42	0.042	0.55	0.055	2.0
	S6I06GX S6I06GXCE	4	6	1 ∅ 220	50	Cont.	0.08	1200	0.50	0.050	0.50	0.050	0.6
				1 ∅ 240			0.09		0.53	0.053	0.55	0.055	

❖ S6I06GE is UL approved (UL FILE No. E172722) impedance protected type.

❖ Appropriate capacitors shall be used according to the voltage for S6I06GE 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 informed of the required voltage.

❖ CE marked at the end of model name indicates that it is impedance protected type which has received CE. S6I06GECE is available only for 115V specification.

❖ "L" or "H" type does not apply to motors under 40W.

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	250
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	6
	kg-cm	1.3	1.5	2.1	2.6	3.2	3.9	4.3	5.4	6.4	7.7	7.7	9.7	11.6	13.9	15.5	17.5	21.0	26.2	30.0	30.0	30.0	30.0	30.0	30.0	30.0
S6DA□B		N-m	0.127	0.147	0.206	0.255	0.314	0.382	0.421	0.529	0.627	0.755	0.755	0.951	1.137	1.362	1.519	1.715	2.058	2.568	2.942	2.942	2.942	2.942	2.942	2.942

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	250
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	7.2
	kg-cm	1.0	1.3	1.7	2.1	2.6	3.1	3.5	4.4	5.2	6.3	6.3	7.8	9.4	11.3	12.6	14.2	17.0	21.3	25.5	28.4	30.0	30.0	30.0	30.0	30.0
S6DA□B		N-m	0.098	0.127	0.167	0.206	0.255	0.304	0.343	0.431	0.510	0.617	0.617	0.764	0.921	1.107	1.235	1.392	1.666	2.087	2.499	2.783	2.942	2.942	2.942	2.942

❖ 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 motor and inter-decimal gearhead is 30 kg-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.

❖ 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.

❖ "L" or "H" type does not apply to motors under 40W.



15W

INDUCTION MOTOR □ 70mm LEAD WIRE TYPE

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)	
70	S7I15GA S7I15GA(TP) S7I15GACE	4	15	1 ∅ 110	60	Cont.	0.34	1600	1.00	0.100	1.10	0.110	5.0
	S7I15GB S7I15GB(TP) S7I15GBCE	4	15	1 ∅ 220	60	Cont.	0.19	1550	1.10	0.110	1.10	0.110	1.2
	S7I15GC S7I15GC(TP) S7I15GCCE	4	15	1 ∅ 100	50	Cont.	0.35	1250	1.20	0.120	0.90	0.090	5.0
					60		0.34	1550	1.00	0.100			
	S7I15GD S7I15GD(TP) S7I15GDCE	4	15	1 ∅ 200	50	Cont.	0.19	1200	1.25	0.125	0.90	0.090	1.2
					60		0.18	1500	1.20	0.120			
	S7I15GE S7I15GECE	4	15	1 ∅ 100	50	Cont.	0.35	1200	1.25	0.125	0.90	0.090	5.0
					60		0.33	1550	1.00	0.100			4.0
					1 ∅ 115		0.30	1600	1.00	0.100			4.0
	S7I15GX S7I15GXCE	4	15	1 ∅ 220	50	Cont.	0.16	1200	1.25	0.125	0.75	0.075	0.9
				1 ∅ 240			0.18		1.35	0.135	0.90	0.090	

❖ S7I15GE is UL approved (UL FILE No.E172720) thermally protected type.

❖ Appropriate capacitors shall be used according to the voltage for S7I15GE 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.

❖ CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP.
S7I15GECE 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.
S7I15GE, S7I15GX is thermally protected type with TP mounted.

❖ "L" or "H" type does not apply to motors under 40W.

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
	kg-cm	3.2	3.9	5.4	6.5	8.1	9.7	10.8	13.5	16.2	19.4	19.4	24.2	29.1	34.9	38.8	43.6	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
S7KA□B	N-m	0.314	0.382	0.530	0.637	0.794	0.951	1.059	1.324	1.587	1.902	1.902	2.373	2.854	3.423	3.805	4.276	4.900	4.900	4.900	4.900	4.900	4.900	4.900	4.900

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
	kg-cm	3.0	3.6	5.1	6.1	7.6	9.1	10.1	12.7	15.2	18.2	18.2	22.8	27.3	32.8	36.5	41.0	49.2	50.0	50.0	50.0	50.0	50.0	50.0	50.0
S7KA□B	N-m	0.294	0.353	0.500	0.598	0.745	0.892	0.990	1.245	1.491	1.785	1.785	2.236	2.677	3.217	3.579	4.021	4.825	4.900	4.900	4.900	4.900	4.900	4.900	4.900

❖ 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 motor and inter-decimal gearhead is 50 kg-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.

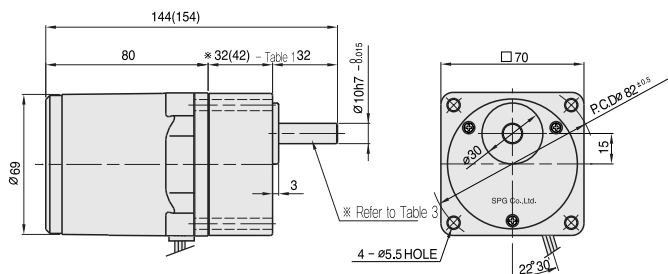
❖ Rpm is based on synchronous speed (50Hz: 1500rpm, 60Hz: 1800rpm) divided by gear ratio.
The actual rotation speed can be 2~20% less than displayed value depending on the load.

❖ "L" or "H" type does not apply to motors under 40W.

DIMENSIONS

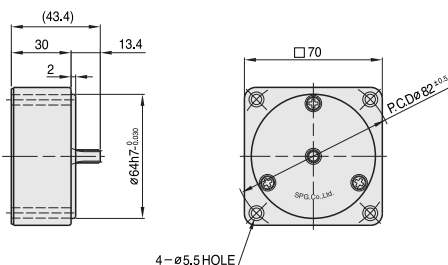
GEARED MOTOR

- * MOTOR MODEL : S7I15G□
- * HEAD MODEL : S7□A3□~S7□A200□



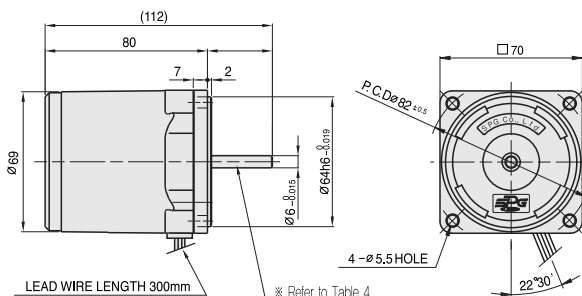
INTER-DECIMAL GEAR HEAD

- * MODEL : S7GX10B



MOTOR

- * MOTOR MODEL : S7I15□□



*26(35) - (Table 1)

GEAR RATIO	SIZE(mm)
S7□A3□ ~ S7□A18□	32
S7□A20□ ~ S7□A200□	42

WEIGHT - (Table 2)

PART	WEIGHT(kg)
MOTOR	1.04
DECIMAL GEAR HEAD	0.32
GEAR HEAD	
S7□A3□ ~ S7□A18□	0.38
S7□A20□ ~ S7□A40□	0.47
S7□A50□ ~ S7□A250□	0.52

KEY SPEC

GEAR HEAD
25 ^{+0.2} 4 ^{+0.03} 4 ^{+0.03}

SPEC for output shaft of gearhead - (Table 3)

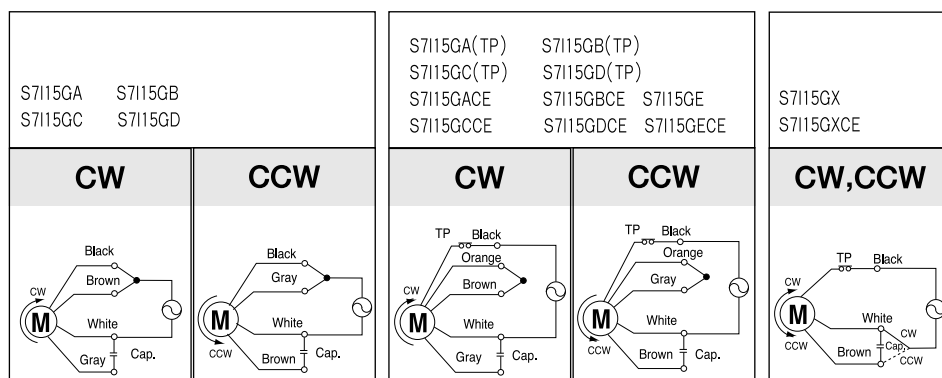
MODEL	TYPES OF OUTPUT SHAFT
STRAIGHT TYPE	
S7SA3□ ~S7SA200□	32 10 10
D-CUT TYPE	
S7DA3□ ~S7DA200□	32 25 10 9.5
KEY TYPE	
S7KA3□ ~S7KA200□	32 25 10 2.5 ^{+0.1} 4 ^{+0.03} 23

SPEC for output shaft of motor - (Table 4)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	
S7I15G□	13.4
STRAIGHT TYPE	
S7I15S□	32 6 6
D-CUT TYPE	
S7I15D□	32 25 5.5 ^{+0.1} 6 6

SCHEMATIC DIAGRAMS

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



15W

INDUCTION MOTOR □ 80mm LEAD WIRE TYPE

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)	
80	S8I15GA S8I15GA(TP) S8I15GACE	4	15	1 ∅ 110	60	Cont.	0.43	1600	1.00	0.100	1.20	0.120	4.0
	S8I15GB S8I15GB(TP) S8I15GBCE	4	15	1 ∅ 220	60	Cont.	0.22	1600	1.00	0.100	1.20	0.120	1.0
	S8I15GC S8I15GC(TP) S8I15GCCE	4	15	1 ∅ 100	50	Cont.	0.51	1300	1.20	0.120	0.95	0.095	4.0
					60		0.43	1550	1.00	0.100			
	S8I15GD S8I15GD(TP) S8I15GDCE	4	15	1 ∅ 200	50	Cont.	0.25	1300	1.20	0.120	0.95	0.095	1.0
					60		0.22	1550	1.00	0.100			
	S8I15GE S8I15GECE	4	15	1 ∅ 100	50	Cont.	0.51	1250	1.20	0.120	0.95	0.095	4.0
					60		0.42	1550	1.00	0.100			3.0
					1 ∅ 115	60	0.46	1600	1.00	0.100			
	S8I15GX S8I15GXCE	4	15	1 ∅ 220	50	Cont.	0.16	1200	1.30	0.130	0.95	0.095	1.0
				1 ∅ 240			0.17		1.40	0.140	1.10	0.110	

❖ S8I15GE is UL approved (UL FILE No. E172720) thermally protected type.

❖ Appropriate capacitors shall be used according to the voltage for S8I15GE 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.

❖ CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP.
S8I15GECE 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.
S8I15GE, S8I15GX is thermally protected type with TP mounted.

❖ "L" or "H" type does not apply to motors under 40W.

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
	kg-cm	3.4	4.1	5.7	6.8	8.5	10.2	11.3	14.2	17.0	20.4	20.4	25.6	30.7	36.8	40.9	46.2	55.4	69.2	80	80	80	80	80	80
S8KA□B		N-m	0.333	0.402	0.559	0.666	0.833	1.000	1.107	1.392	1.666	1.999	2.509	3.009	3.606	4.008	4.530	5.433	6.786	7.840	7.840	7.840	7.840	7.840	7.840

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
	kg-cm	2.9	3.5	4.9	5.8	7.3	8.7	9.7	12.2	14.6	17.5	17.5	21.9	26.3	31.5	35.0	39.6	47.5	59.4	71.3	79.2	80	80	80	80
S8KA□B		N-m	0.284	0.343	0.481	0.568	0.715	0.853	0.951	1.196	1.432	1.715	1.715	2.146	2.577	3.087	3.430	3.881	4.658	5.825	6.992	7.767	7.840	7.840	7.840

❖ 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 motor and inter-decimal gearhead is 80 kg-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.

❖ 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.

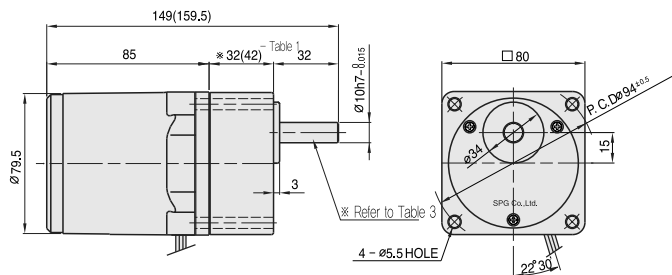
❖ "L" or "H" type does not apply to motors under 40W.

DIMENSIONS

+ GEARED MOTOR

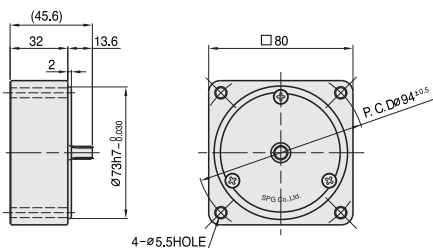
※MOTOR MODEL : S8I15G□

※ HEAD MODEL : S8□A3□~S8□A200□



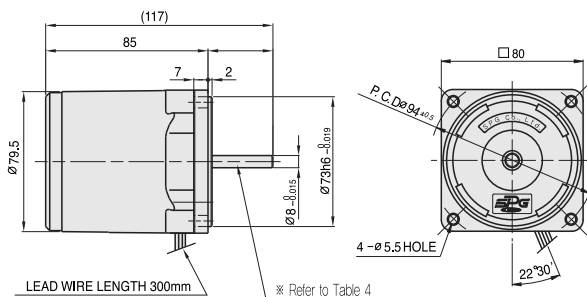
+ INTER-DECIMAL GEAR HEAD

※ MODEL : S8GX10B



+ MOTOR

※MOTOR MODEL : S7I15□□



✚ ※26(35) – (Table 1)

GEAR RATIO	SIZE(mm)
S8□A3□ ~ S8□A18□	32
S8□A20□ ~ S8□A200□	42.5

+ WEIGHT – (Table 2)

PART		WEIGHT(kg)
MOTOR		1,14
DECIMAL GEAR HEAD		0,43
GEAR HEAD	S8□A3□ ~S8□A18□	0,43
	S8□A20□ ~S8□A40□	0,57
	S8□A50□ ~S8□A200□	0,61

+ KEY SPEC

GEAR HEAD	MOTOR

✚ SPEC for output shaft of gearhead – (Table3)

MODEL	TYPES OF OUTPUT SHAFT
STRAIGHT TYPE	
D-CUT TYPE	
KEY TYPE	

➤ SPEC for output shaft of motor – (Table 4)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	
S8I15G□	
STRAIGHT TYPE	
S8I15S□	
D-CUT TYPE	
S8I15D□	
KEY TYPE	
S8I15K□	

SCHEMATIC DIAGRAMS

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

S8I15GA S8I15GB S8I15GC S8I15GD		S8I15GA(TP) S8I15GB(TP) S8I15GC(TP) S8I15GD(TP) S8I15GACE S8I15GBCE S8I15GE S8I15GCCCE S8I15GDCE S8I15GECE		S8I15GX S8I15GXCE	
CW		CW		CW,CCW	

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.



25W

INDUCTION MOTOR □ 80mm LEAD WIRE TYPE

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)	
80	S8I25GA S8I25GA(TP) S8I25GACE	4	25	1 ∅ 110	60	Cont.	0.51	1600	1.60	0.160	1.80	0.180	6.0
	S8I25GB S8I25GB(TP) S8I25GBCE	4	25	1 ∅ 220	60	Cont.	0.23	1550	1.65	0.165	1.80	0.180	1.5
	S8I25GC S8I25GC(TP) S8I25GCCE	4	25	1 ∅ 100	50	Cont.	0.57	1250	2.00	0.200	1.45	0.145	6.0
					60		0.52	1550	1.65	0.165			
	S8I25GD S8I25GD(TP) S8I25GDCE	4	25	1 ∅ 200	50	Cont.	0.30	1250	2.00	0.200	1.45	0.145	1.5
					60		0.29	1500	1.70	0.170			
	S8I25GE S8I25GECE	4	25	1 ∅ 100	50	Cont.	0.54	1250	2.00	0.200	1.20	0.120	6.0
					60		0.55	1500	1.70	0.170			4.5
					60		0.59	1500	1.70	0.170			
	S8I25GX S8I25GXCE	4	25	1 ∅ 220	50	Cont.	0.23	1200	2.10	0.210	1.10	0.110	1.3
				1 ∅ 240			0.25		2.20	0.220	1.30	0.130	
	S8I25GU S8I25GUCE	4	25	3 ∅ 200	50	Cont.	0.26	1300	1.95	0.195	3.50	0.350	—
					60		0.24	1550	1.65	0.165	2.90	0.290	
	S8I25GT S8I25GTCE	4	25	3 ∅ 220	50	Cont.	0.28	1350	1.90	0.190	4.20	0.420	—
					60		0.24	1600	1.60	0.160	3.50	0.350	
	S8I25GS S8I25GSCE	4	25	3 ∅ 380	50	Cont.	0.14	1250	2.00	0.200	3.15	0.315	—
					60		0.12	1500	1.70	0.170	2.50	0.250	
				3 ∅ 400	50	Cont.	0.14	1250	2.10	0.210	3.50	0.350	
					60		0.12	1500	1.80	0.180	2.75	0.275	
				3 ∅ 415	50	Cont.	0.15	1300	1.95	0.195	3.75	0.375	
					60		0.13	1550	1.65	0.165	3.00	0.300	
				3 ∅ 440	50	Cont.	0.15	1300	2.10	0.210	4.40	0.440	
					60		0.13	1550	1.80	0.180	3.40	0.340	

- ❖ S8I25GE is UL approved (UL FILE No. E172720) thermally protected type.
- ❖ Appropriate capacitors shall be used according to the voltage for S8I25GE 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.
- ❖ CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP. S8I25GECE 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.
- S8I25GE, S8I25GX, S8I25GS is thermally protected type with TP mounted.
- ❖ Be cautious when using a three-phase 380V motor controlled with inverter.
- ❖ "L" or "H" type does not apply to motors under 40W.
- ❖ 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

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
	kg-cm	5.3	6.4	8.9	10.7	13.4	16.0	17.8	22.3	26.7	32.1	32.1	40.2	48.2	57.8	64.2	72.6	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
S8KA□B		Nm	0.519	0.627	0.872	1.049	1.313	1.568	1.744	2.185	2.617	3.146	3.146	3.940	4.724	5.664	6.292	7.115	7.840	7.840	7.840	7.840	7.840	7.840	7.840

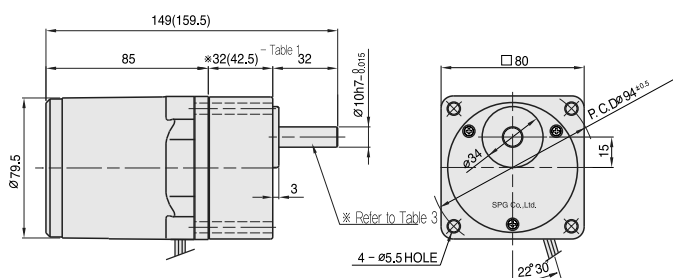
60Hz

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
	kg-cm	4.4	5.2	7.3	8.7	10.9	13.1	14.6	18.2	21.9	26.2	26.3	32.9	39.4	47.3	52.6	59.4	71.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0
S8KA□B		Nm	0.431	0.510	0.715	0.853	1.068	1.284	1.431	1.784	2.146	2.568	2.577	3.224	3.861	4.635	5.155	5.821	6.987	7.840	7.840	7.840	7.840	7.840	7.840

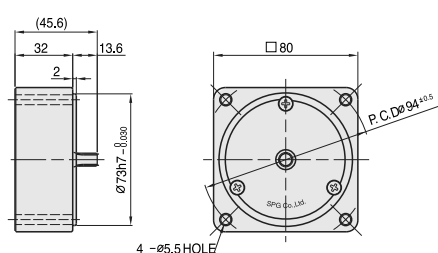
- ❖ The code in □ of gearhead model is for gear ratio. ❖ It is the permissible torque of the assembled motor and gearhead.
- ❖ The permissible torque of the motor and inter-decimal gearhead is 80 kg-cm.
- ❖ ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor. Others indicate rotation in the opposite direction.
- ❖ 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.
- ❖ "L" or "H" type does not apply to motors under 40W.

DIMENSIONS

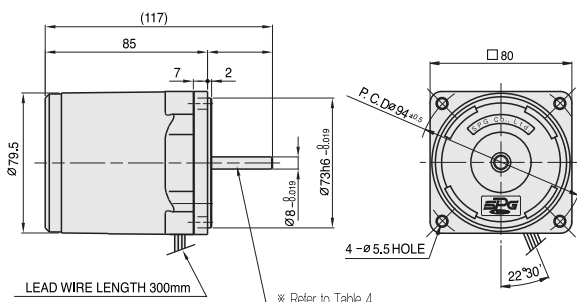
- ✚ GEARED MOTOR * MOTOR MODEL : S8I25G□
* HEAD MODEL : S8□A3□~S8□A200□



- ✚ INTER-DECIMAL GEAR HEAD
* MODEL : S8GX10B



- ✚ MOTOR * MOTOR MODEL : S8I25□□



- ✚ *26(35) - (Table 1)

GEAR RATIO	SIZE(mm)
S8□A3□ ~ S8□A18□	32
S8□A20□ ~ S8□A200□	42.5

- ✚ WEIGHT - (Table 2)

PART	WEIGHT(kg)
MOTOR	1.46
DECIMAL GEAR HEAD	0.43
GEAR HEAD	
S8□A3□ ~ S8□A18□	0.43
S8□A20□ ~ S8□A40□	0.57
S8□A50□ ~ S8□A200□	0.61

- ✚ KEY SPEC

GEAR HEAD	MOTOR
25 ^{+0.2} _{-0.1}	25 ^{+0.2} _{-0.1}
4 ^{+0.03} _{-0.02}	3 ^{+0.02} _{-0.01}
4 ^{+0.03} _{-0.02}	3 ^{+0.02} _{-0.01}

- ✚ SPEC for output shaft of gearhead - (Table 3)

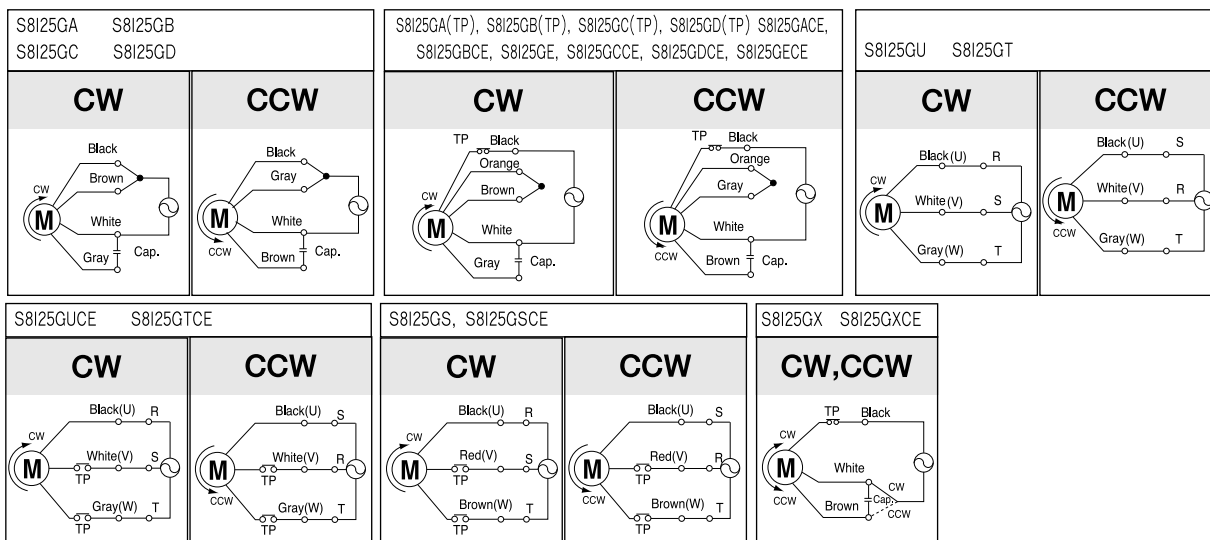
MODEL	TYPES OF OUTPUT SHAFT
STRAIGHT TYPE	
S8SA3□ ~S8SA200□	32 ø8
D-CUT TYPE	32 25 7 ^{+0.1} _{-0.1} ø8
KEY TYPE	32 25 ø8 3 ^{+0.02} _{-0.01} 1.8 ^{+0.1} _{-0.1} 23.5
S8KA3□ ~S8KA200□	

- ✚ SPEC for output shaft of motor - (Table 4)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	
S8I25G□	13.6
STRAIGHT TYPE	
S8I25S□	32 ø8
D-CUT TYPE	32 25 7 ^{+0.1} _{-0.1} ø8
KEY TYPE	32 25 ø8 3 ^{+0.02} _{-0.01} 1.8 ^{+0.1} _{-0.1} 23.5
S8I25K□	

SCHEMATIC DIAGRAMS

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



40W

INDUCTION MOTOR □ 90mm LEAD WIRE TYPE

SIZE mm sq.	Type	Poles	Output	Voltage	Frequency	Duty	Rated Load				Starting Torque		Capacitor
			(W)	(V)	(Hz)		Current (A)	Speed (rpm)	Torque (kg-cm) (N-m)		(kg-cm)	(N-m)	
90	S9I40GA() S9I40GA()(TP) S9I40GA()CE	4	40	1 ∅ 110	60	Cont.	0.82	1600	2.50	0.250	2.90	0.290	10.0
	S9I40GB() S9I40GB()(TP) S9I40GB()CE	4	40	1 ∅ 220	60	Cont.	0.41	1600	2.50	0.250	2.90	0.290	2.5
	S9I40GC() S9I40GC()(TP) S9I40GC()CE	4	40	1 ∅ 100	50 60	Cont.	0.80 0.85	1300 1550	3.10 2.60	0.310 0.260	2.40	0.240	10.0
	S9I40GD() S9I40GD()(TP) S9I40GD()CE	4	40	1 ∅ 200	50 60	Cont.	0.41 0.43	1300 1550	3.10 2.60	0.310 0.260	2.40	0.240	2.5
	S9I40GE() S9I40GE()CE	4	40	1 ∅ 100 1 ∅ 115	50 60	Cont.	0.82 0.85 0.91	1300 1550 1550	3.10 2.60 2.60	0.310 0.260 0.260	2.40	0.240	10.0 8.0
	S9I40GX() S9I40GX()CE	4	40	1 ∅ 220 1 ∅ 240	50	Cont.	0.34 0.37	1250	3.15 3.35	0.315 0.335	1.80 2.10	0.180 0.210	2.0
	S9I40GU() S9I40GU()CE	4	40	3 ∅ 200	50 60	Cont.	0.36 0.33	1300 1550	3.10 2.60	0.310 0.260	6.30 5.20	0.630 0.520	—
	S9I40GT() S9I40GT()CE	4	40	3 ∅ 220	50 60	Cont.	0.39 0.33	1350 1600	3.00 2.50	0.300 0.250	7.60 6.10	0.760 0.610	—
	S9I40GS() S9I40GS()CE	4	40	3 ∅ 380	50	Cont.	0.21	1300	3.20	0.320	6.30	0.630	—
					60		0.19	1550	2.70	0.270	4.85	0.485	
				3 ∅ 400	50	Cont.	0.21	1300	3.30	0.330	6.90	0.690	
					60		0.19	1550	2.80	0.280	5.25	0.525	
				3 ∅ 415	50	Cont.	0.21	1350	3.10	0.310	7.30	0.730	
					60		0.19	1600	2.60	0.260	5.70	0.570	
				3 ∅ 440	50	Cont.	0.21	1350	3.20	0.320	8.20	0.820	
					60		0.19	1600	2.70	0.270	6.30	0.630	

❖ S9I40GE is UL approved (UL FILE No. E172720) thermally protected type.

❖ Appropriate capacitors shall be used according to the voltage for S9I40GE 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.

❖ CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP.
S9I40GE()CE 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.
S9I40GE, S9I40GX, S9I40GS is thermally protected type with TP mounted.

❖ Be cautious when using a three-phase 380V motor controlled with inverter.

❖ () is for marking 'L' type or 'H'. 'L' should be used with gearhead 'L' and 'H' should be used with gearhead 'H'.

❖ 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

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
	kg-Cm	8.3	9.9	13.8	16.5	20.7	24.8	27.5	34.4	41.3	49.6	49.6	62.1	74.5	89.4	99.3	100	100	100	100	100	100	100	100	100
S9KB□B()	N-m	0.813	0.970	1.352	1.617	2.029	2.430	2.695	3.371	4.047	4.861	4.861	6.086	7.301	8.761	9.731	9.800	9.800	9.800	9.800	9.800	9.800	9.800	9.800	9.800

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
	kg-cm	6.8	8.2	11.3	13.6	17.0	20.4	22.7	28.4	34.0	40.8	40.9	51.1	61.3	73.6	81.8	100	100	100	100	100	100	100	100	100
S9KB□B()	N-m	0.666	0.804	1.107	1.333	1.666	1.999	2.225	2.783	3.332	3.998	4.008	5.008	6.007	7.213	8.016	9.800	9.800	9.800	9.800	9.800	9.800	9.800	9.800	9.800

❖ 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 motor and inter-decimal gearhead is 100 kg-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.

❖ 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.

❖ () is for marking 'L' type or 'H'. 'L' should be used with motor 'L' and 'H' should be used with motor 'H'.



60W

INDUCTION MOTOR □ 90mm LEAD WIRE TYPE

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)	
90	S9I60GA() S9I60GA()(TP) S9I60GA()CE	4	60	1 ∅ 110	60	Cont.	1.35	1600	3.80	0.380	4.80	0.480	15.0
	S9I60GB() S9I60GB()(TP) S9I60GB()CE	4	60	1 ∅ 220	60	Cont.	0.68	1600	3.90	0.390	4.80	0.480	4.0
	S9I60GC() S9I60GC()(TP) S9I60GC()CE	4	60	1 ∅ 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() S9I60GD()(TP) S9I60GD()CE	4	60	1 ∅ 200	50	Cont.	0.65	1300	4.70	0.470	3.85	0.385	4.0
					60		0.70	1550	4.00	0.400			
	S9I60GE() S9I60GE()CE	4	60	1 ∅ 100	50	Cont.	1.10	1300	4.60	0.460	3.20	0.320	15.0
					60		1.20	1550	3.90	0.390			12.0
				1 ∅ 115	60		1.20	1550	4.00	0.400			
	S9I60GX() S9I60GX()CE	4	60	1 ∅ 220 1 ∅ 240	50	Cont.	0.47 0.50	1300	4.60 4.90	0.460 0.490	3.20 3.90	0.320 0.390	3.5
	S9I60GU() S9I60GU()CE	4	60	3 ∅ 200	50 60	Cont.	0.60 0.50	1300 1550	4.60 3.90	0.460 0.390	9.30 8.00	0.930 0.800	—
	S9I60GT() S9I60GT()CE	4	60	3 ∅ 220	50 60	Cont.	0.80 0.57	1350 1600	4.40 3.90	0.440 0.390	11.35 9.30	1.135 0.930	—
	S9I60GS() S9I60GS()CE	4	60	3 ∅ 380	50 60	Cont.	0.27 0.24	1300 1550	4.60 3.90	0.460 0.390	8.25 6.50	0.825 0.650	—
					50		0.29	1300	4.70	0.470	9.30	0.930	
				3 ∅ 400	50 60	Cont.	0.25 0.27	1550 1350	4.00 4.60	0.400 0.460	7.35 9.95	0.735 0.995	
					50		0.23	1600	3.80	0.380	7.50	0.750	
				3 ∅ 415	50 60	Cont.	0.31 0.25	1350 1600	4.70 3.80	0.470 0.380	10.75 7.50	1.075 0.750	
					50		0.31	1350	4.70	0.470	10.75	1.075	
				3 ∅ 440	50 60	Cont.	0.25 0.25	1350 1600	4.70 3.90	0.470 0.390	8.40 8.40	0.840 0.840	
					60		0.25	1600	3.90	0.390	8.40	0.840	

- ❖ S9I60GE is UL approved (UL FILE No. E172720) thermally protected type.
- ❖ Appropriate capacitors shall be used according to the voltage for S9I60GE 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.
- ❖ CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP.
S9I60GE()CE 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.
- ❖ S9I60GE, S9I60GX, S9I60GS is thermally protected type with TP mounted.
- ❖ Be cautious when using a three-phase 380V motor controlled with inverter.
- ❖ () is for marking 'L' type or 'H'. 'L' should be used with gearhead 'L' and 'H' should be used with gearhead 'H'.
- ❖ 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

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
	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
	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
	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
	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

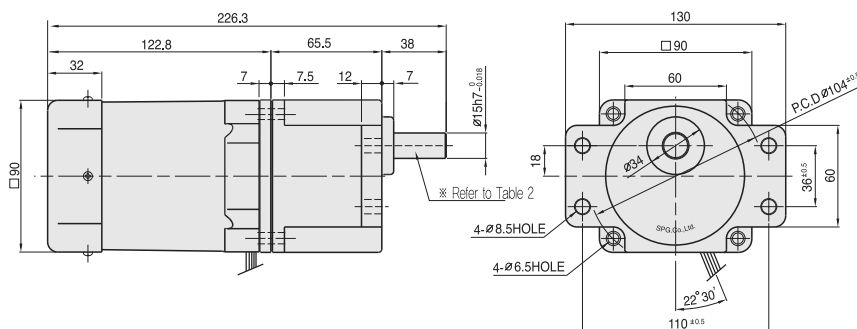
- ❖ The code in □ of gearhead model is for gear ratio. ❖ It is the permissible torque of the assembled motor and gearhead.
- ❖ The permissible torque of the motor and inter-decimal gearhead is 200 kg-cm.
- ❖ ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor. Others indicate rotation in the opposite direction.
- ❖ 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.
- ❖ () 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

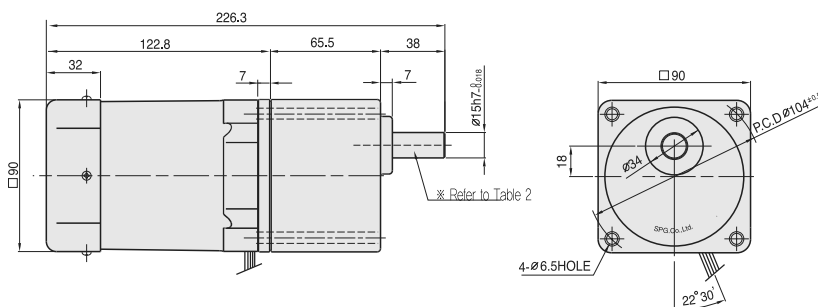
* MOTOR MODEL : S9I60G□□

* HEAD MODEL : S9□C3B□-S~S9□C200B□-S



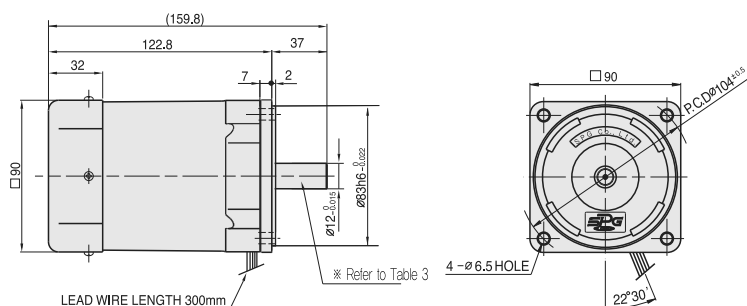
* MOTOR MODEL : S9I60G□□

* HEAD MODEL : S9□C3B□-S~S9□C200B□-S



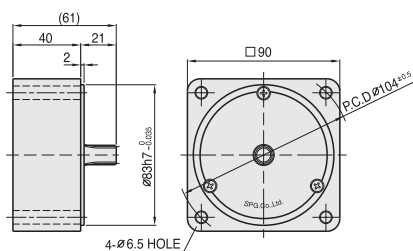
MOTOR

* MOTOR MODEL : S9I60□□□



INTER-DECIMAL GEAR HEAD

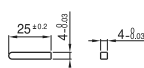
* MODEL : S9GX10B(H,L)-S



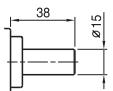
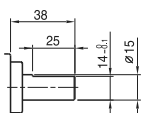
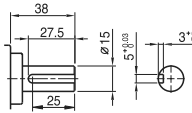
WEIGHT - (Table1)

PART		WEIGHT(kg)
MOTOR		2.44
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

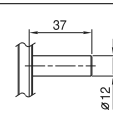
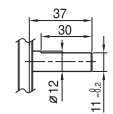
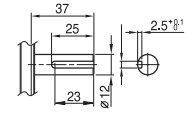
KEY SPEC

GEAR HEAD	MOTOR
	

SPEC for output shaft of gearhead - (Table2)

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

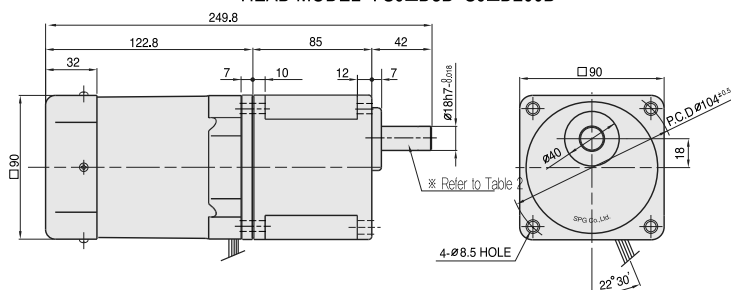
SPEC for output shaft of motor - (Table3)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	
S9I60G□□	
STRAIGHT TYPE	
S9I60S□	
D-CUT TYPE	
S9I60D□	
KEY TYPE	
S9I60K□	

DIMENSIONS

GEARED MOTOR

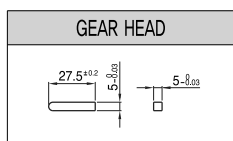
* MOTOR MODEL : S9I60G□H
* HEAD MODEL : S9□D3B~S9□D200B



WEIGHT - (Table 1)

PART		WEIGHT(kg)
MOTOR		2.44
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



SPEC for output shaft of gearhead - (Table 2)

MODEL	TYPES OF OUTPUT SHAF	MODEL	TYPES OF OUTPUT SHAF	MODEL	TYPES OF OUTPUT SHAF
STRAIGHT TYPE S9SD3B ~S9SD200B		D-CUT TYPE S9DD3B ~S9DD200B		KEY TYPE S9KD3B ~S9KD200B	

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
	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

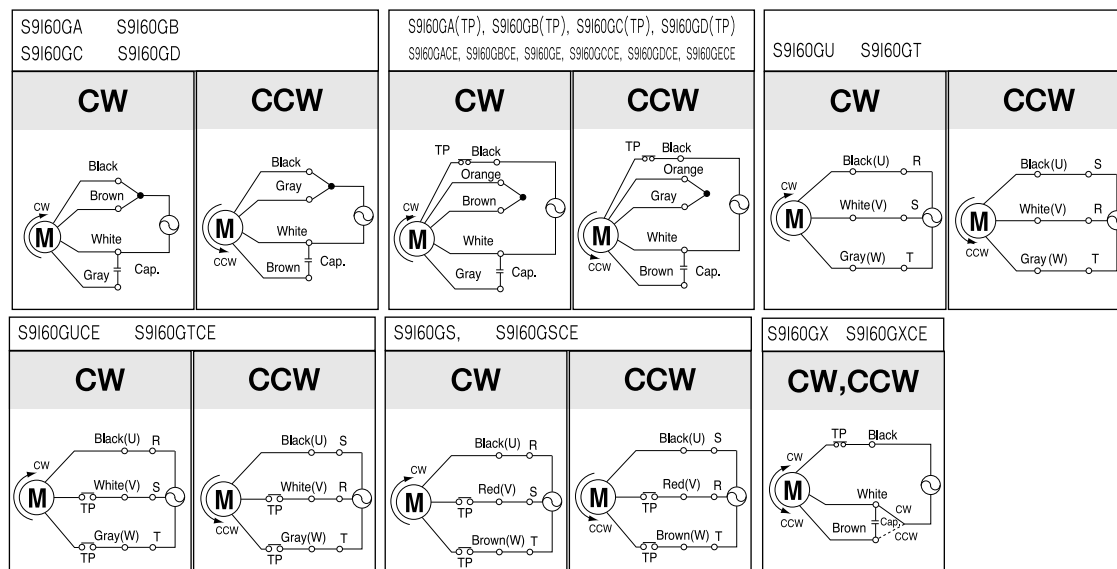
60Hz

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
	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

- ❖ 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 motor and inter-decimal gearhead is 300 kg-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.
- ❖ 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.
- ❖ Only "H" type is applicable. Please use 'H' type motor.

SCHEMATIC DIAGRAMS

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



90W

INDUCTION MOTOR □ 90mm LEAD WIRE TYPE

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	S9I90GA() S9I90GA()(TP) S9I90GA()CE	4	90	1 ∅ 110	60	Cont.	2.00	1600	5.60	0.560	5.70	0.570	25.0
	S9I90GB() S9I90GB()(TP) S9I90GB()CE	4	90	1 ∅ 220	60	Cont.	1.00	1600	5.60	0.560	5.70	0.570	6.0
	S9I90GC() S9I90GC()(TP) S9I90GC()CE	4	90	1 ∅ 100	50	Cont.	1.80	1300	6.90	0.690	5.00	0.500	25.0
					60		2.00	1550	5.80	0.580			
	S9I90GD() S9I90GD()(TP) S9I90GD()CE	4	90	1 ∅ 200	50	Cont.	0.90	1300	6.90	0.690	5.00	0.500	6.0
					60		1.00	1550	5.80	0.580			
	S9I90GE() S9I90GE()CE	4	90	1 ∅ 100	50	Cont.	1.50	1300	6.90	0.690	5.00	0.500	25.0
					60		1.80	1550	5.80	0.580			20.0
				1 ∅ 115	60		1.80	1550	6.00	0.600			
	S9I90GX() S9I90GX()CE	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
	S9I90GU() S9I90GU()CE	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	—
	S9I90GT() S9I90GT()CE	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	—
	S9I90GS() S9I90GS()CE	4	90	3 ∅ 380	50 60	Cont.	0.32 0.30	1300 1550	6.80 5.70	0.680 0.570	10.55 8.20	1.055 0.820	—
				3 ∅ 400	50 60		0.35 0.32	1300 1550	6.90 5.80	0.690 0.580	11.70 8.90	1.170 0.890	
				3 ∅ 415	50 60	Cont.	0.33 0.29	1350 1600	6.80 5.70	0.680 0.570	12.00 9.50	1.200 0.950	
				3 ∅ 440	50 60		0.35 0.31	1350 1600	6.90 5.80	0.690 0.580	13.30 10.50	1.330 1.050	

- ❖ S9I90GE is UL approved (UL FILE No. E172720) thermally protected type.
- ❖ Appropriate capacitors shall be used according to the voltage for S9I60GE 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.
- ❖ CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP.
- ❖ S9I90GE()CE 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.
- ❖ S9I90GE, S9I90GX, S9I90GS is thermally protected type with TP mounted.
- ❖ Be cautious when using a three-phase 380V motor controlled with inverter.
- ❖ () is for marking 'L' type or 'H'. 'L' should be used with gearhead 'L' and 'H' should be used with gearhead 'H'.
- ❖ 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

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
S9K□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
S9K□B()-S	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

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
S9K□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
S9K□B()-S	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

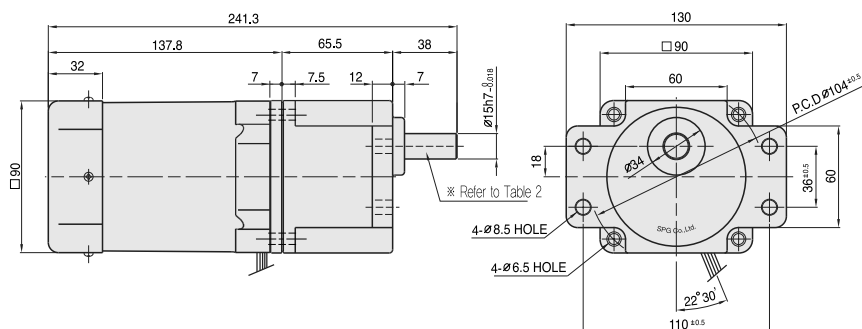
- ❖ The code in □ of gearhead model is for gear ratio. ❖ It is the permissible torque of the assembled motor and gearhead.
- ❖ The permissible torque of the motor and inter-decimal gearhead is 200 kg-cm.
- ❖ ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor. Others indicate rotation in the opposite direction.
- ❖ 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.
- ❖ () is for marking 'L' type or 'H'. 'L' should be used with motor 'L' and 'H' should be used with motor 'H'.

DIMENSIONS

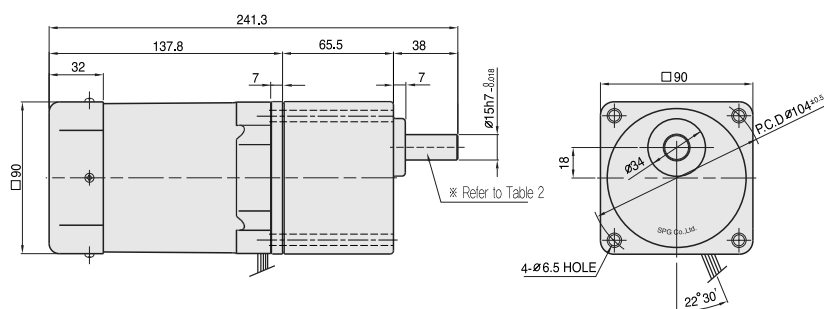
GEARED MOTOR

* MOTOR MODEL : S9I90G□□

* HEAD MODEL : S9□C3B□-S~S9□C200B□-S

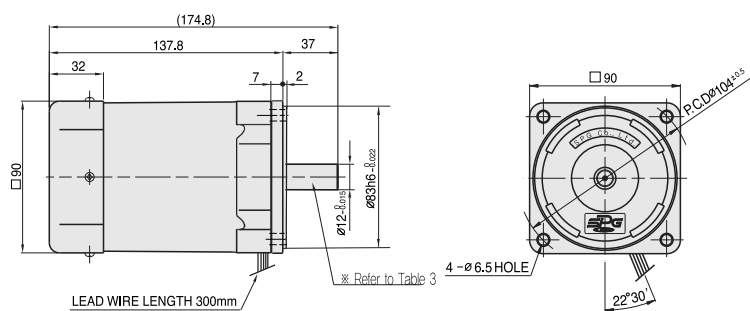


* HEAD MODEL : S9□C3B□~S9□C200B□



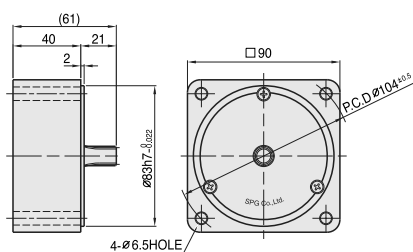
MOTOR

* MOTOR MODEL : S9I90□□□



INTER-DECIMAL GEAR HEAD

* MOTOR MODEL : S9GX10B(H,L)-S



WEIGHT - (Table 1)

PART		WEIGHT(kg)
MOTOR		2.93
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
27.5 ^{+0.2} _{-0.2} 5 ^{+0.03} _{-0.03}	25 ^{+0.2} _{-0.2} 4 ^{+0.03} _{-0.03}

SPEC for output shaft of gearhead - (Table 2)

MODEL	TYPES OF OUTPUT SHAFT
STRAIGHT TYPE	38 ø15
S9SC3B□ ~S9SC200B□	
D-CUT TYPE	38 27.5 14 ^{+0.2} _{-0.2} ø15
S9DCB3□ ~S9DC200B□	
KEY TYPE	38 27.5 ø15 5 ^{+0.03} _{-0.03} 3 ^{+0.1} _{-0.1}
S9KC3B□ ~S9KC200B□	

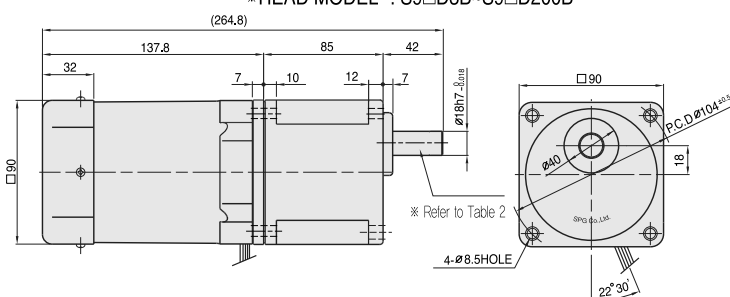
SPEC for output shaft of motor - (Table 3)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	21.1 ø12
S9I90G□□	
STRAIGHT TYPE	37 ø12
S9I90S□	
D-CUT TYPE	37 30 ø12 11 ^{+0.3} _{-0.3}
S9I90D□	
KEY TYPE	37 25 ø12 23 2.5 ^{+0.1} _{-0.1}
S9I90K□	

DIMENSIONS

+ GEARED MOTOR

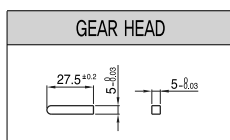
* MOTOR MODEL : S9I90G□H
* HEAD MODEL : S9□D3B~S9□D200B



+ WEIGHT - (Table1)

PART		WEIGHT(kg)
MOTOR		2.93
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



+ SPEC for output shaft of gearhead - (Table2)

MODEL	TYPES OF OUTPUT SHAF	MODEL	TYPES OF OUTPUT SHAF	MODEL	TYPES OF OUTPUT SHAF
STRAIGHT TYPE		D-CUT TYPE		KEY TYPE	
S9SD3B ~S9SD200B		S9DDB3B ~S9DD200B		S9KD3B ~S9KD200B	

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
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

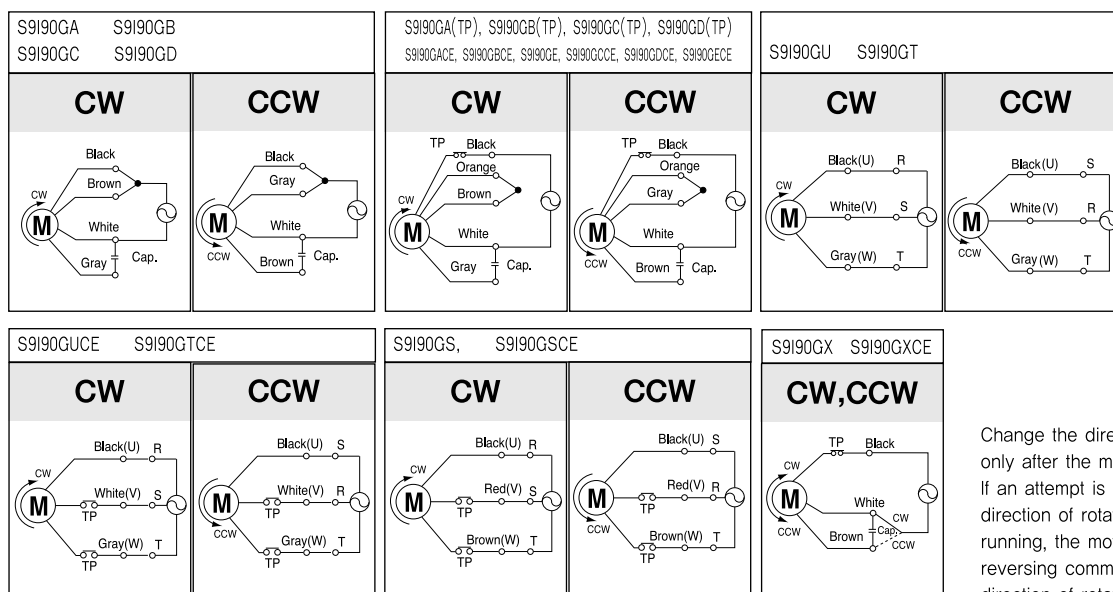
60Hz

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
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
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	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	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 motor and inter-decimal gearhead is 300 kg-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.
- ❖ 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.
- ❖ Only "H" type is applicable. Please use "H" type motor.

SCHEMATIC DIAGRAMS

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



120W

INDUCTION MOTOR □ 90mm LEAD WIRE TYPE

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)	
90	S9I120GA S9I120GA(TP) S9I120GACE	4	120	1 ∅ 110	60	Cont.	2.10	1600	7.60	0.760	6.20	0.620	25.0
	S9I120GB S9I120GB(TP) S9I120GBCE	4	120	1 ∅ 220	60	Cont.	1.00	1600	7.50	0.750	6.00	0.600	6.0
	S9I120GC S9I120GC(TP) S9I120GCCE	4	120	1 ∅ 100	50	Cont.	2.00	1250	9.60	0.960	5.70	0.570	25.0
					60			1550	7.90	0.790			
	S9I120GD S9I120GD(TP) S9I120GDCE	4	120	1 ∅ 200	50	Cont.	1.00	1250	9.50	0.950	5.50	0.550	6.0
					60			1550	7.80	0.780			

❖ CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP.

❖ TP marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted.

❖ Only "H" type is applicable.

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
	kg-cm	23.2	27.8	38.7	46.4	58.0	69.6	77.4	87.0	104	125	139	156	188	200	200	200	200	200	200	200	200	200	200	200
S9KC□BH-S		N-m	2.276	2.731	3.793	4.552	5.689	6.827	7.586	8.534	10.24	12.29	13.65	15.36	18.43	19.61	19.61	19.61	19.61	19.61	19.61	19.61	19.61	19.61	19.61

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
	kg-cm	18.7	22.5	31.2	37.4	46.8	56.1	62.4	70.2	84.2	101	112	126	152	182	200	200	200	200	200	200	200	200	200	200
S9KC□BH-S		N-m	1.835	2.202	3.058	3.670	4.587	5.505	6.116	6.881	8.257	9.909	11.01	12.39	14.86	17.84	19.61	19.61	19.61	19.61	19.61	19.61	19.61	19.61	19.61

❖ 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 motor and inter-decimal gearhead is 200 kg-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.

❖ 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.

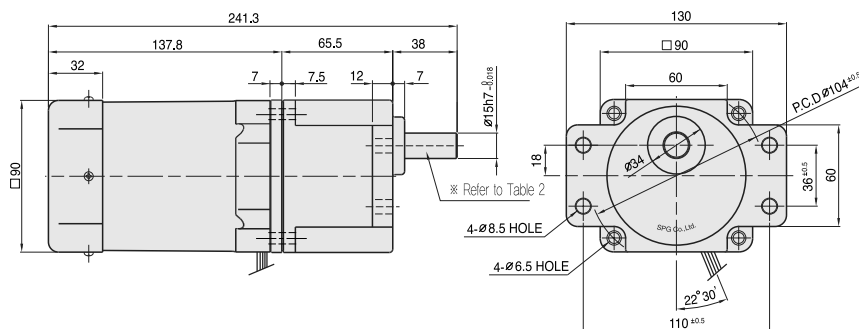
❖ Only "H" type is applicable.

DIMENSIONS

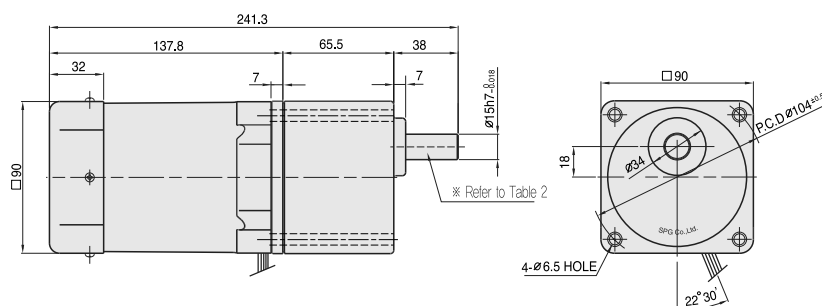
✦ GEARED MOTOR

※ MOTOR MODEL : S9I120G□

※ HEAD MODEL : S9□C3BH-S~S9□C200BH-S

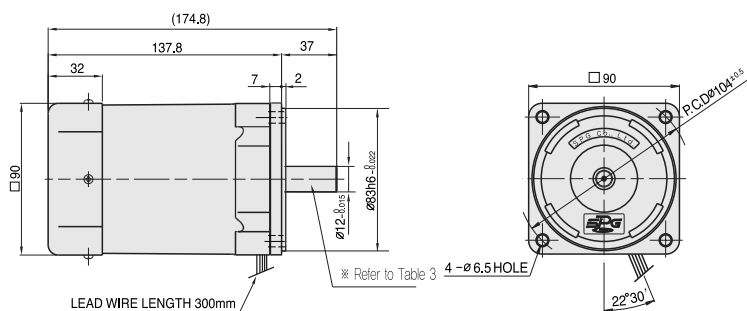


※ HEAD MODEL □ : S9□C3BH~S9□C200BH



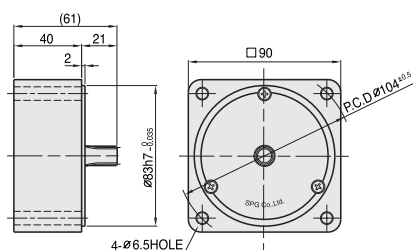
✦ MOTOR

※ MOTOR MODEL : S9I120□□



✦ INTER-DECIMAL GEAR HEAD

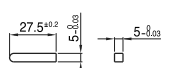
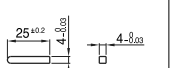
※ MODEL : S9GX10BH-S



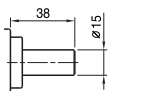
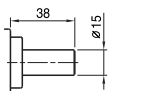
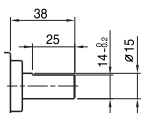
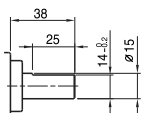
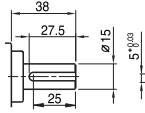
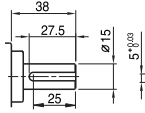
✦ WEIGHT - (Table1)

PART		WEIGHT(kg)
MOTOR		2.93
DECIMAL GEAR HEAD		0.65
GEAR HEAD	S9□C3BH ~S9□C10BH	1.21
	S9□C12.5BH ~S9□C20BH	1.30
	S9□C25BH ~S9□C60BH	1.40
	S9□C75BH ~S9□C200BH	1.45

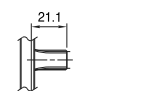
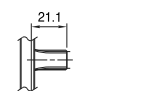
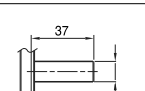
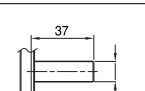
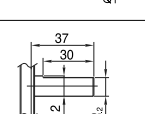
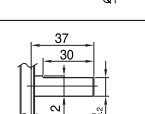
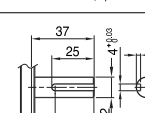
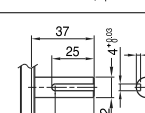
✦ KEY SPEC

GEAR HEAD	MOTOR
	

✦ SPEC for output shaft of gearhead - (Table2)

MODEL	TYPES OF OUTPUT SHAFT
STRAIGHT TYPE	
S9SC3BH ~S9SC200BH	
D-CUT TYPE	
S9DC3BH ~S9DC200BH	
KEY TYPE	
S9KC3BH ~S9KC200BH	

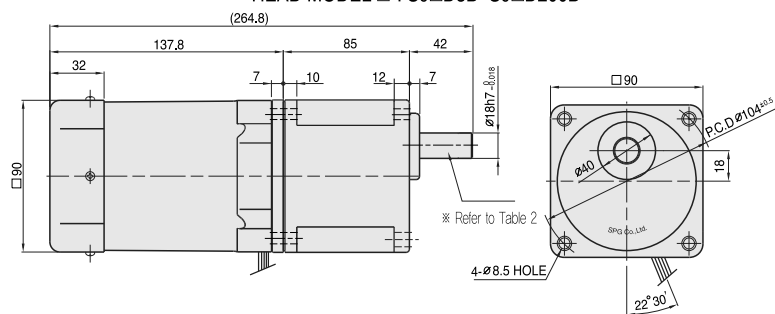
✦ SPEC for output shaft of motor - (Table3)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	
S9I120G□	
STRAIGHT TYPE	
S9I120S□	
D-CUT TYPE	
S9I120D□	
KEY TYPE	
S9I120□	

DIMENSIONS

GEARED MOTOR

* MOTOR MODEL : S9I120G□
* HEAD MODEL □ : S9□D3B~S9□D200B



WEIGHT - (Table1)

PART		WEIGHT(kg)
MOTOR		2.93
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

SPEC for output shaft of gearhead - (Table2)

MODEL	TYPES OF OUTPUT SHAF	MODEL	TYPES OF OUTPUT SHAF	MODEL	TYPES OF OUTPUT SHAF
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	23.2	27.8	38.7	46.4	58.0	69.6	77.4	87.0	104	125	139	156	188	225	250	300	300	300	300	300	300	300	300	300
	N·m	2.276	2.731	3.793	4.552	5.689	6.827	7.586	8.534	10.24	12.29	13.65	15.36	18.43	22.12	24.58	29.42	29.42	29.42	29.42	29.42	29.42	29.42	29.42	29.42

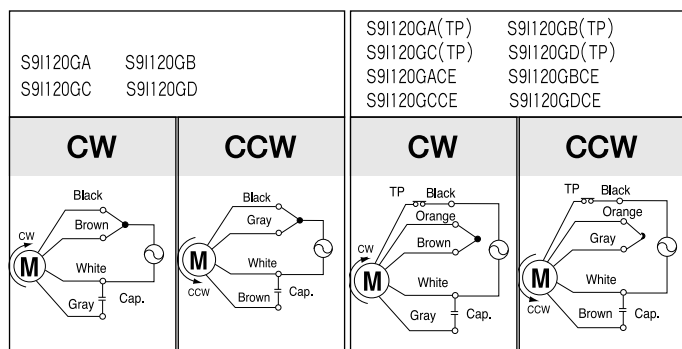
60Hz

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
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
S9KD□B	kg-cm	18.7	22.5	31.2	37.4	46.8	56.1	62.4	70.2	84.2	101	112	126	152	182	202	252	300	300	300	300	300	300	300	300
	N·m	1.835	2.202	3.058	3.670	4.587	5.505	6.116	6.881	8.757	9.909	11.01	12.39	14.86	17.84	19.82	24.77	29.42	29.42	29.42	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 motor and inter-decimal gearhead is 5 kg-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.
- ❖ 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.
- ❖ Only "H" type is applicable.

SCHEMATIC DIAGRAMS

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



150W

INDUCTION MOTOR □ 90mm LEAD WIRE TYPE

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)	
90	S9I150GU S9I150GUCE	4	150	3 ∅ 200	50	Cont.	1.0	1250	11.70	1.170	18.0	1.800	—
					60		0.9	1500	9.70	0.970	15.0	1.500	
	S9I150GT S9I150GTCE	4	150	3 ∅ 220	50	Cont.	1.0	1300	11.30	1.130	22.0	2.200	—
					60		0.9	1550	9.40	0.940	19.0	1.900	
	S9I150GS S9I150GSCE	4	150	3 ∅ 380	50	Cont.	0.46	1250	11.70	1.170	18.00	1.800	—
					60		0.42	1500	9.70	0.970	15.00	1.500	
				3 ∅ 400	50	Cont.	0.49	1250	11.70	1.170	19.00	1.900	
					60		0.43	1500	9.70	0.970	16.00	1.600	

❖ CE marked at the end of model name indicates that it is thermally protected type which has received CE with built-in TP.

❖ TP marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted.

❖ Only "H" type is applicable.

❖ 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

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
	kg-cm	23.1	27.7	38.5	46.2	57.7	69.3	77.0	86.6	104	125	139	156	187	224	249	300	300	300	300	300	300	300	300	300
S9KH□B	N·m	2.264	2.717	3.773	4.528	5.660	6.792	7.546	8.489	10.24	12.29	13.65	15.36	18.34	21.97	24.42	29.42	29.42	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
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
	kg-cm	23.2	27.8	38.7	46.4	58.0	69.6	77.4	87.0	104	125	139	156	188	225	250	300	300	300	300	300	300	300	300	300
S9KH□B	N·m	2.276	2.731	3.793	4.552	5.689	6.827	7.586	8.534	10.24	12.29	13.65	15.36	18.43	22.06	24.52	29.42	29.42	29.42	29.42	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.

❖ ■ 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.

❖ 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.

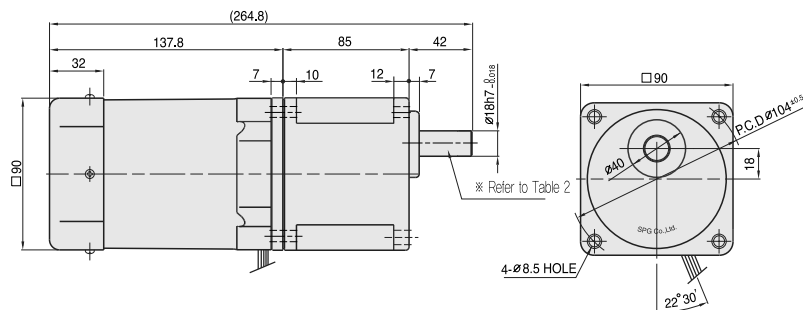
❖ Only "H" type is applicable.

DIMENSIONS

GEARED MOTOR

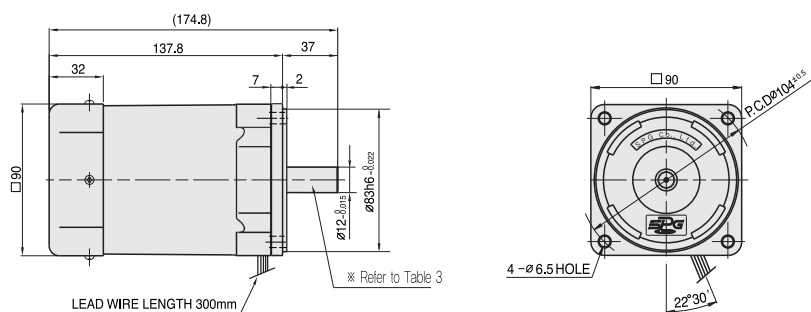
※ MOTOR MODEL : S9I150G□

※ HEAD MODEL : S9□H3B~S9□H200B



MOTOR

※ MODEL : S9I150□□



WEIGHT - (Table1)

PART		WEIGHT(kg)
MOTOR		2.93
GEAR HEAD	S9□H3B ~S9□H10B	1.65
	S9□H12.5B ~S9□H20B	1.80
	S9□H25B ~S9□H60B	1.90
	S9□H75B ~S9□H200B	1.95

KEY SPEC

GEAR HEAD	MOTOR

SPEC for output shaft of gearhead - (Table2)

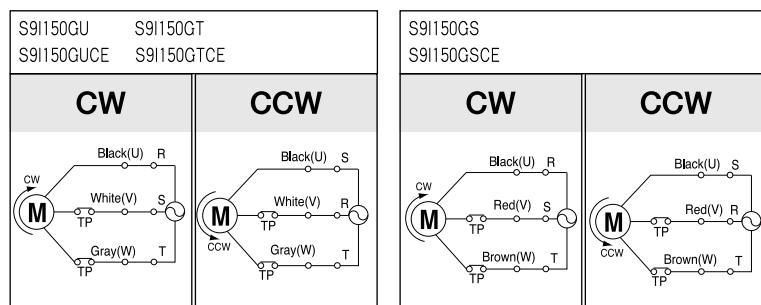
MODEL	TYPES OF OUTPUT SHAFT
STRAIGHT TYPE	
S9SH3B ~S9SH200B	
D-CUT TYPE	
S9DH3B ~S9DH200B	
KEY TYPE	
S9KH3B ~S9KH200B	

SPEC for output shaft of motor - (Table3)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	
S9I150G□	
STRAIGHT TYPE	
S9I150S□	
D-CUT TYPE	
S9I150D□	
KEY TYPE	
S9I150K□	

SCHEMATIC DIAGRAMS

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



180W

INDUCTION MOTOR □ 90mm LEAD WIRE TYPE

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)	
90	S9I180GA S9I180GA(TP) S9I180GACE	4	180	1 ∅ 110	60	Cont.	2.60	1600	11.50	1.150	8.00	0.800	25.0
	S9I180GB S9I180GB(TP) S9I180GBCE	4	180	1 ∅ 220	60	Cont.	1.32	1600	11.50	1.150	8.00	0.800	6.5
	S9I180GC S9I180GC(TP) S9I180GCCE	4	180	1 ∅ 100	50	Cont.	3.20	1250	14.00	1.400	7.00	0.700	25.0
					60		2.90	1550	11.60	1.160			
	S9I180GD S9I180GD(TP) S9I180GDCE	4	180	1 ∅ 200	50	Cont.	1.60	1250	14.00	1.400	7.00	0.700	6.5
					60		1.45	1550	11.60	1.160			

❖ TP marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted.

❖ Only "H" type is applicable.

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
	kg-cm	34.0	41.0	57.0	68.0	85.1	102	113	128	153	184	204	230	278	300	300	300	300	300	300	300	300	300	300	300
S9KH□B		N·m	3.336	4.021	5.590	6.672	8.341	10.01	11.12	12.55	15.01	18.04	20.02	22.56	27.26	29.42	29.42	29.42	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
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
	kg-cm	28.1	34.0	47.0	57.0	71.0	84.2	94.0	105	126	152	168	189	227	273	300	300	300	300	300	300	300	300	300	300
S9KH□B		N·m	2.756	3.334	4.609	5.590	6.963	8.257	9.218	10.30	12.39	14.91	16.51	18.58	22.29	26.75	29.42	29.42	29.42	29.42	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.

❖ ■ 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.

❖ 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.

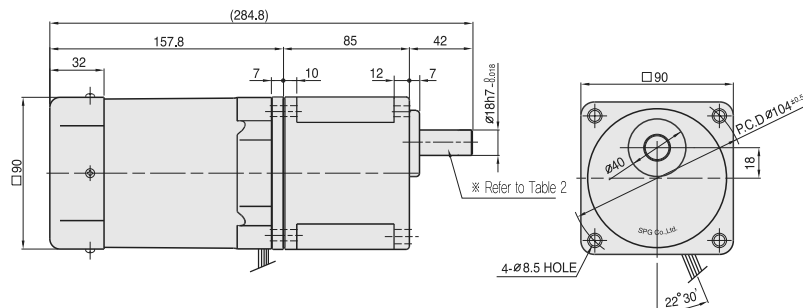
❖ Only "H" type is applicable.

DIMENSIONS

GEARED MOTOR

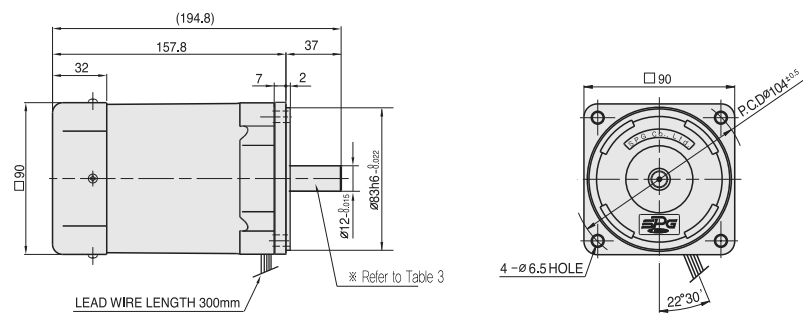
※ MOTOR MODEL : S9I180G□

※ HEAD MODEL : S9□H3B~S9□H200B



MOTOR

※ MOTOR MODEL : S9I180□□



WEIGHT - (Table1)

PART		WEIGHT(kg)
MOTOR		3.70
GEAR HEAD	S9□H3B ~S9□H10B	1.65
	S9□H12.5B ~S9□H20B	1.80
	S9□H25B ~S9□H60B	1.90
	S9□H75B ~S9□H200B	1.95

KEY SPEC

GEAR HEAD	MOTOR

SPEC for output shaft of gearhead - (Table2)

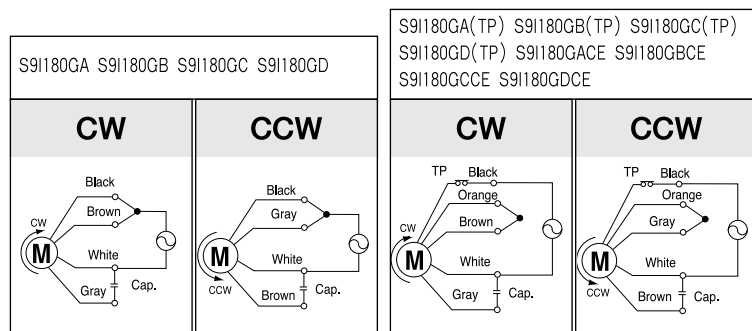
MODEL	TYPES OF OUTPUT SHAFT
STRAIGHT TYPE	
S9SH3B ~S9SH200B	
D-CUT TYPE	
S9DH3B ~S9DH200B	
KEY TYPE	
S9KH3B ~S9KH200B	

SPEC for output shaft of motor - (Table3)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	
S9I180G□	
STRAIGHT TYPE	
S9I180S□	
D-CUT TYPE	
S9I180D□	
KEY TYPE	
S9I180K□	

SCHEMATIC DIAGRAMS

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



200W

INDUCTION MOTOR □ 90mm LEAD WIRE TYPE

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)	
90	S9I200GU S9I200GUCE	4	200	3 ø 200	50	Cont.	1.3	1250	16.00	1.600	24.00	2.400	—
					60		1.2	1500	13.40	1.340	20.00	2.000	
	S9I200GT S9I200GTCE	4	200	3 ø 220	50	Cont.	1.3	1300	15.00	1.500	30.00	3.000	—
					60		1.2	1550	12.90	1.290	25.00	2.500	
	S9I200GS S9I200GSCE	4	200	3 ø 380	50	Cont.	0.62	1250	16.00	1.600	26.00	2.600	—
					60		0.55	1500	13.40	1.340	22.00	2.200	
				3 ø 400	50	Cont.	0.64	1250	16.00	1.600	30.00	3.000	—
					60		0.55	1500	13.40	1.340	25.00	2.500	

❖ TP marked at the end of the model name indicates that it is standard motor with Thermal Protector mounted.

❖ Only "H" type is applicable.

❖ 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

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
	kg-cm	39.0	47.0	64.8	77.8	97.2	117	130	146	175	210	233	262	300	300	300	300	300	300	300	300	300	300	300	300
S9KH□B	N·m	3.813	4.609	6.355	7.626	9.532	11.47	12.75	14.32	17.16	20.59	22.88	25.74	29.42	29.42	29.42	29.42	29.42	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
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
	kg-cm	32.0	38.3	53.3	64.0	79.9	96.0	107	120	144	173	192	216	259	300	300	300	300	300	300	3000	300	300	300	300
S9KH□B	N·m	3.134	3.760	5.223	6.267	7.384	9.414	10.49	11.75	14.10	16.97	18.83	21.18	25.40	29.42	29.42	29.42	29.42	29.42	29.42	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.

❖ ■ 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.

❖ Rpm is based on synchronous speed (50Hz: 1500rpm, 60Hz: 1800rpm) divided by gear ratio.

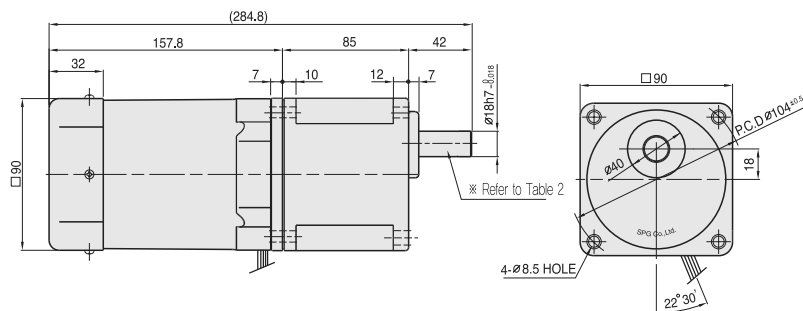
The actual rotation speed can be 2~20% less than displayed value depending on the load.

❖ Only "H" type is applicable.

DIMENSIONS

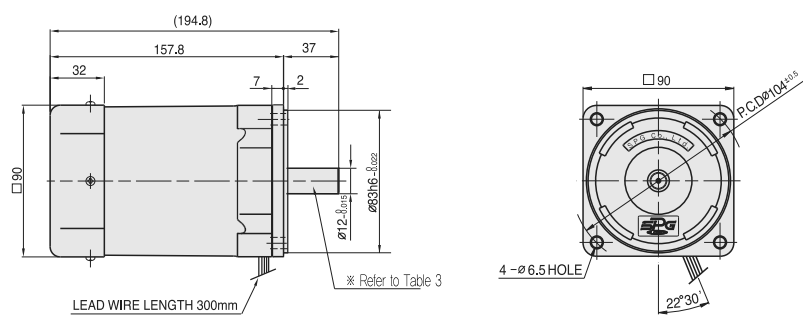
GEARED MOTOR

- ※ MOTOR MODEL : S9I200G□
 ※ HEAD MODEL : S9□H3B~S9□H200B



MOTOR

- ※ MOTOR MODEL : S9I200□□



WEIGHT - (Table1)

PART		WEIGHT(kg)
MOTOR		3.70
GEAR HEAD	S9□H3B ~S9□H10B	1.65
	S9□H12.5B ~S9□H20B	1.80
	S9□H25B ~S9□H60B	1.90
	S9□H75B ~S9□H200B	1.95

KEY SPEC

GEAR HEAD	MOTOR

SPEC for output shaft of gearhead - (Table2)

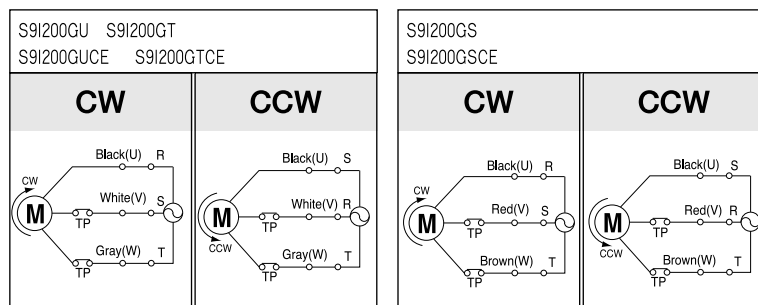
MODEL	TYPES OF OUTPUT SHAFT
STRAIGHT TYPE	
S9SH3B ~S9SH200B	
D-CUT TYPE	
S9DH3B ~S9DH200B	
KEY TYPE	
S9KH3B ~S9KH200B	

SPEC for output shaft of motor - (Table3)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	
S9I200G□	
STRAIGHT TYPE	
S9I200S□	
D-CUT TYPE	
S9I200D□	
KEY TYPE	
S9I200K□	

SCHEMATIC DIAGRAMS

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