

UNIT TYPE SPEED CONTROL MOTOR

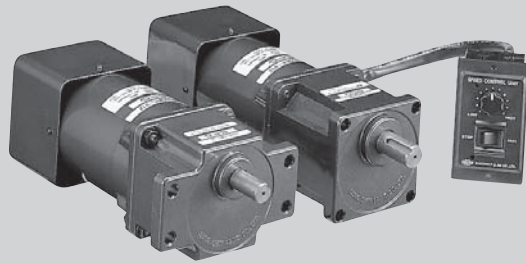


Characteristics of the unit type speed control motor

- This is a unit product that uses the separate unit type controller and motor simultaneously.
- The motor and the controller are connected with one touch.
AC power is connected and does not require a separate connection method. Speed can be controlled by a volume switch on the exterior. Therefore, it is appropriate for uses requiring remote control.
- The unit type controller has a speed controller circuit, a condenser for the motor and the volume.(By the size of the condenser, some units have to use the condenser on the outside.)
- The unit type controller does not have an instantaneous braking function.
- By using an extension cable(sold separately), it is possible to have a max distance of 2m between the motor and the controller.
- The control range is 90[rpm]~1400[rpm] for 50Hz and 90[rpm]~1700[rpm] for 60Hz.

GENERAL SPECIFICATIONS OF SPEED CONTROL 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 1.5V at 50/60Hz applied between the windings and the case after rated motor operation under normal ambient temperature and humidity for 1min.
Temperature Rise	80°C or less increase measured by thermometer after rated operation, (45°C less than the motor with fan motors with fan)
Insulation Class	B Class (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)



90W

INDUCTION SPEED CONTROL MOTOR

□ 90mm CONNECTOR TYPE

SIZE mm sq.	Motor Type	Controller Type	Poles	Output (W)	Voltage (V)	Freq. (Hz)	Duty	Speed Range (rpm)	Permissible Torque				Starting Torque		Cap. (μ F)
									at 1200rpm		at 90rpm		(kg-cm)	(N-m)	
90	S9190GA()-V12 S9190GA()-V12(TP) S9190GA()-V12CE	SUA90IA-V12	4	90	1 ϕ 110	60	Cont.	90-1700	6.30	0.630	3.00	0.300	6.50	0.650	24.0
	S9190GB()-V12 S9190GB()-V12(TP) S9190GB()-V12CE	SUA90IB-V12	4	90	1 ϕ 220	60	Cont.	90-1700	6.30	0.630	3.00	0.300	6.50	0.650	7.0
	S9190GC()-V12 S9190GC()-V12(TP) S9190GC()-V12CE	SUA90IC-V12	4	90	1 ϕ 100	50 60	Cont.	90-1400 90-1700	5.80 5.30	0.580 0.530	2.50	0.250	5.50	0.550	24.0
	S9190GD()-V12 S9190GD()-V12(TP) S9190GD()-V12CE	SUA90ID-V12	4	90	1 ϕ 200	50 60	Cont.	90-1400 90-1700	5.80 5.30	0.580 0.530	2.50	0.250	5.50	0.550	7.0
	S9190GX()-V12 S9190GX()-V12CE	SUA90IX-V12	4	90	1 ϕ 220 1 ϕ 240	50	Cont.	90-1400	5.40 6.10	0.540 0.610	2.20 2.20	0.220 0.220	4.60 5.50	0.460 0.550	5.0

- ◆ CE marked at the end of motor model name indicates that it is impedance protected type which has received CE.
- ◆ TP marked at the end of the motor model name indicates that it is standard motor with Thermal Protector mounted.
- ◆ S9190GX()-V12, S9190GX()-V12CE is thermally protected type with TP mounted.
- ◆ () is for marking 'L' type or 'H'. 'L' should be used with gearhead 'L' and 'H' should be used with gearhead 'H'.

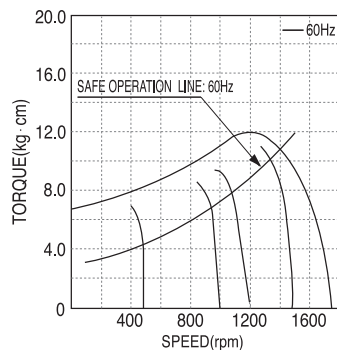
50Hz

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□()	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	200	200
S9KC□()-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	19.60	19.60

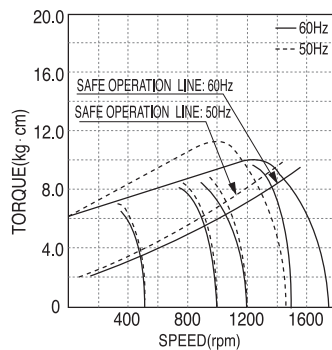
60Hz

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□()	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	200
S9KC□()-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	19.60

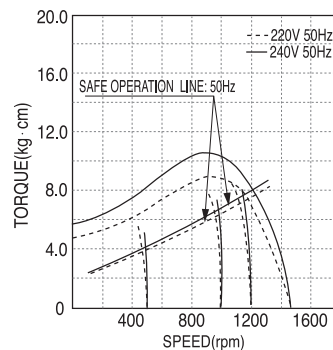
- ◆ The code in □ of gearhead model is for gear ratio.
- ◆ It is the permissible torque of the assembled motor and gearhead.
- ◆ The permissible torque of the motor and inter-decimal gearhead is 200 kg-cm.
- ◆ ■ color indicates that the output shaft of the geared motor rotates in the same direction as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



▲ S9190GA()-V12 S9190GB()-V12
S9190GA()-V12(TP) S9190GB()-V12(TP)
S9190GA()-V12CE S9190GB()-V12CE



▲ S9190GC()-V12 S9190GD()-V12
S9190GC()-V12(TP) S9190GD()-V12(TP)
S9190GC()-V12CE S9190GD()-V12CE

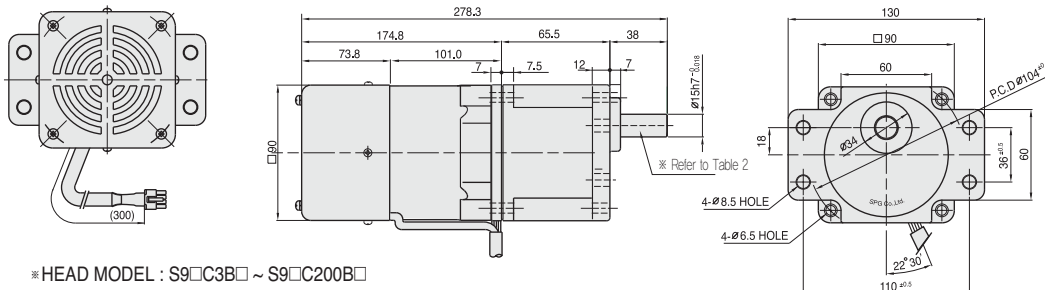


▲ S9190GX()-V12
S9190GX()-V12CE

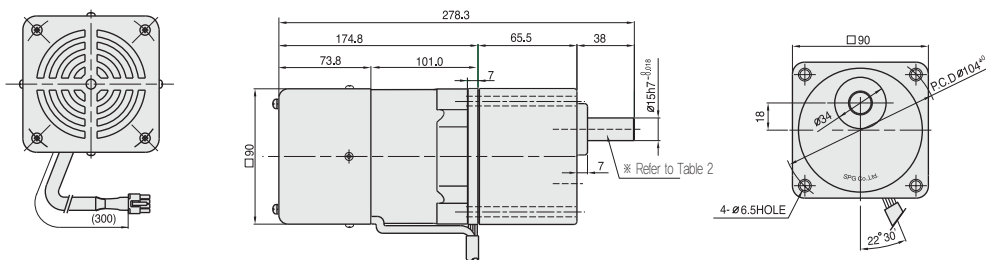
DIMENSIONS

+ GEARED MOTOR

※ MOTOR MODEL : S9I90G□-H-V12
 ※ HEAD MODEL : S9□C3B□-S ~ S9□C200B□-S

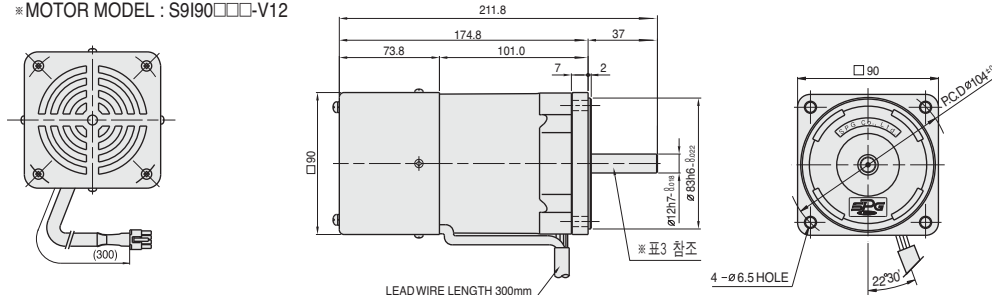


※ HEAD MODEL : S9□C3B□ ~ S9□C200B□



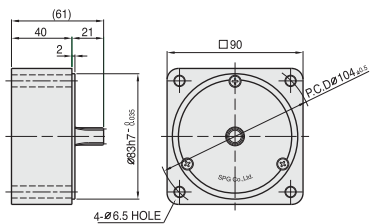
+ MOTOR

※ MOTOR MODEL : S9I90□□□-V12



+ INTER-DECIMAL GEAR HEAD

※ MODEL : S9GX10B(H,L)-S



+ 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□	

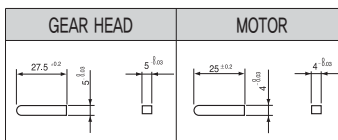
+ SPEC for output shaft of motor - (Table3)

MODEL	TYPES OF OUTPUT SHAFT
GEAR TYPE	
S9I90G□□-V12	
STRAIGHT TYPE	
S9I90S□□-V12	
D-CUT TYPE	
S9I90D□□-V12	
KEY TYPE	
S9I90K□□-V12	

+ WEIGHT - (Table1)

PART	WEIGHT(kg)	
MOTOR	3.53	
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

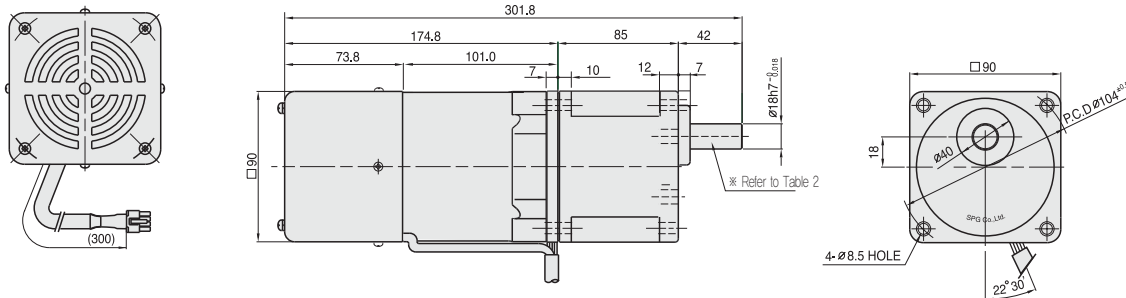
+ KEY SPEC



DIMENSIONS

+ GEARED MOTOR

- ※ MOTOR MODEL : S9I90G□H-V12
- ※ HEAD MODEL : S9□D3B~S9□D200B



+ WEIGHT - (Table1)

PART		WEIGHT(kg)
MOTOR		3.53
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 - (Table2)

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

+ KEY SPEC

GEAR HEAD

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	kg-cm	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	N·m	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
			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

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	kg-cm	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	N·m	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
			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.