



COMPACT TYPE

STANDARD TYPE

WORM GEARED TYPE

SPECIAL TYPE



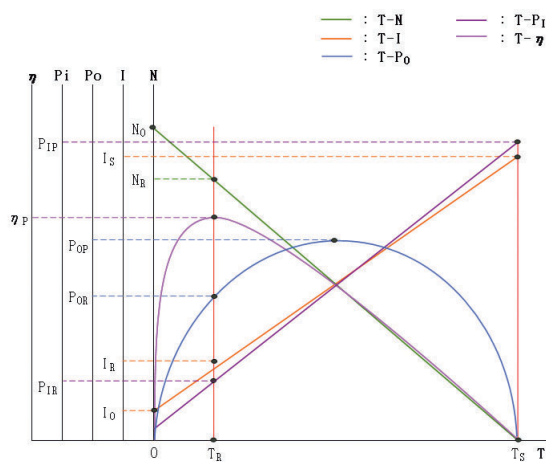
TECHNICAL EXPLANTION(DC MOTOR)

THECHNICAL EXPLANATION

1. FEATURE

- Excellent performance on starting owing to high starting torque
- High efficiency in comparison with the same size AC Motor
- Easy to control speed and change the rotational direction
- Instantaneous stop
- Due to the wide range of the rated voltage, low voltage motors applicable to portable equipments can be realized

2. DC MOTOR PERFORMANCE CURVE



Symbol : Motor Data(Unit)	Meaning
N : Revolution Speed(rpm)	No : No load revolution speed NR : Rated load revolution speed
T : Torque(kgf · cm)	TR : Rated load torque TS : Peak Torque (Stall)
I : Current(A)	Io : No-load current(A) IR : Rated load current Is : Peak current (Stall)
Po : Output(W)	POP : Max. output POR : Rated output
Pi : Input(W)	PIP : Max. input(W) PIR : Rated input
η : Efficiency(%)	ηP : Peak efficiency

Calculation Formula

$$Po(W) = N(\text{rpm}) \times T(\text{kgf} \cdot \text{cm}) \times 1.027 \times 10^{-2}$$

$$Pi(W) = I(A) \times V(V), (V : \text{Supply Voltage})$$

$$\eta(\%) = Po/Pi \times 100$$

Examples

$$POP = (TS/2) \times (No/2) \times 1.027 \times 10^{-2}$$

$$POR = TR \times NR \times 1.027 \times 10^{-2}$$

$$PIP = Is \times V$$

$$PIR = IR \times V$$

$$\eta P = POR/PIR \times 100$$

3. Selecting DC Motor

The output of a motor represents the ability of a motor.

Generally, "Motor output" means the output at rated torque (T_R)

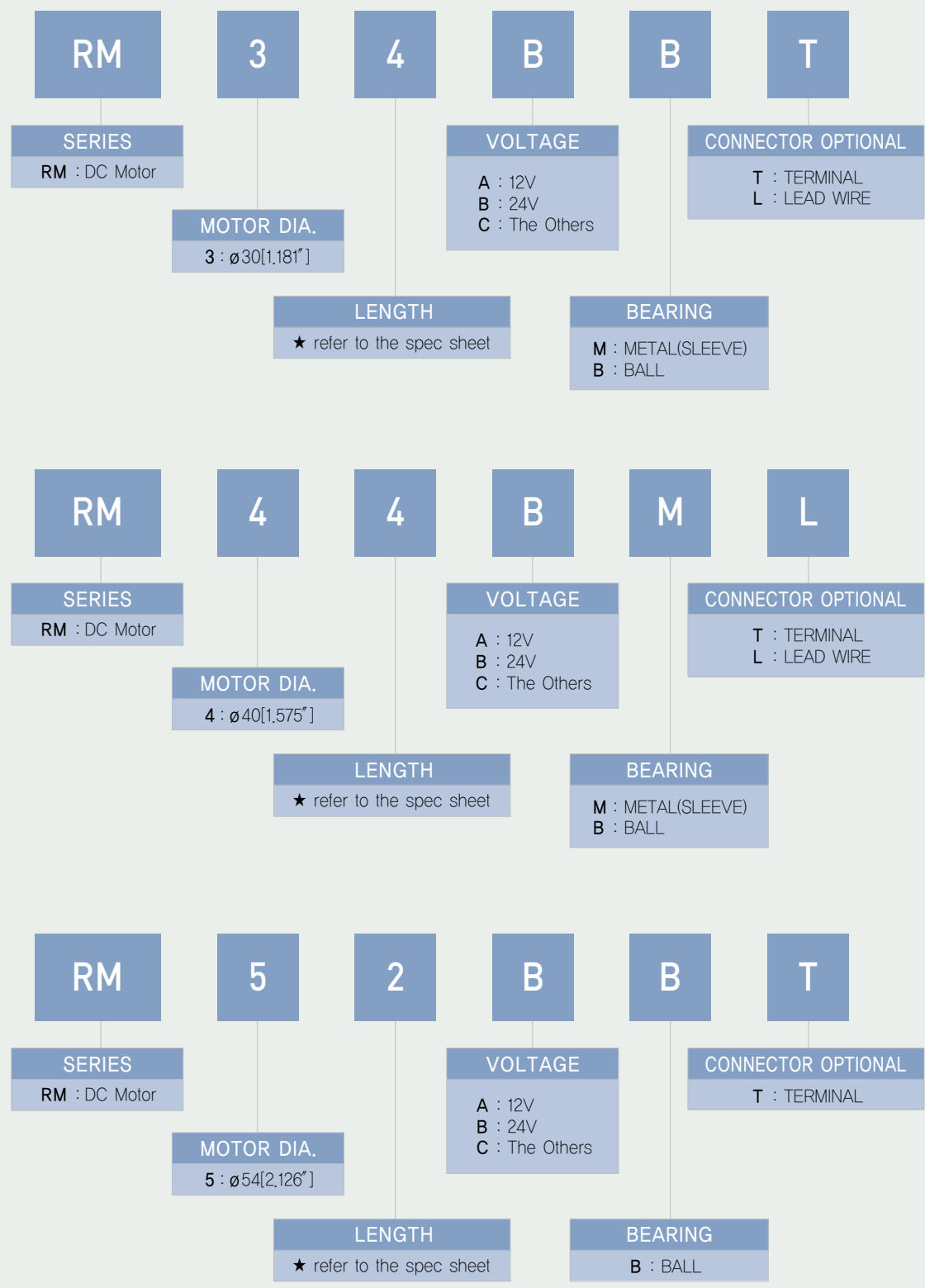
The motor is able to operate continuously without heatsink when the load torque is less than the rate torque (T_R)

Otherwise, the motor should operate intermittently. When the motor operates at the overload torque, it might be damaged.

CODING SYSTEM

COMPACT TYPE

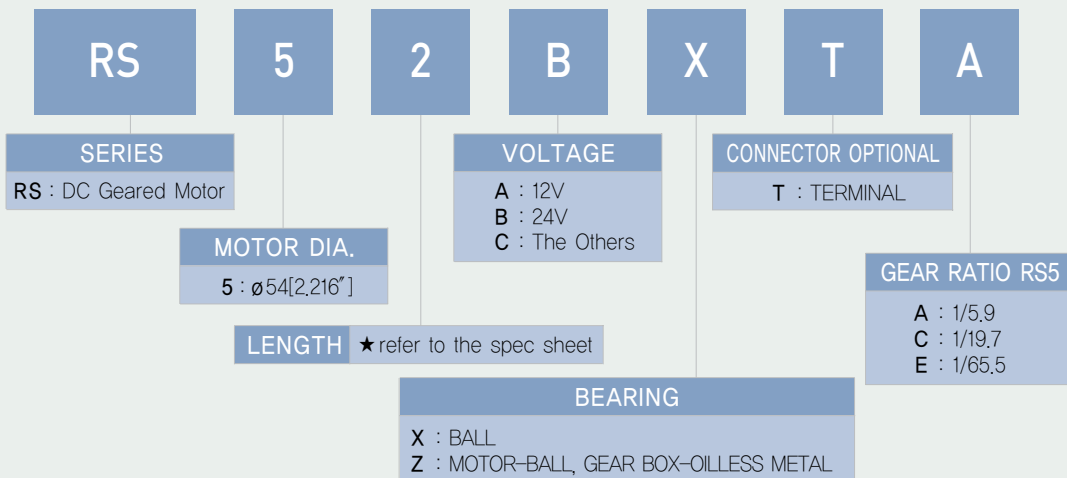
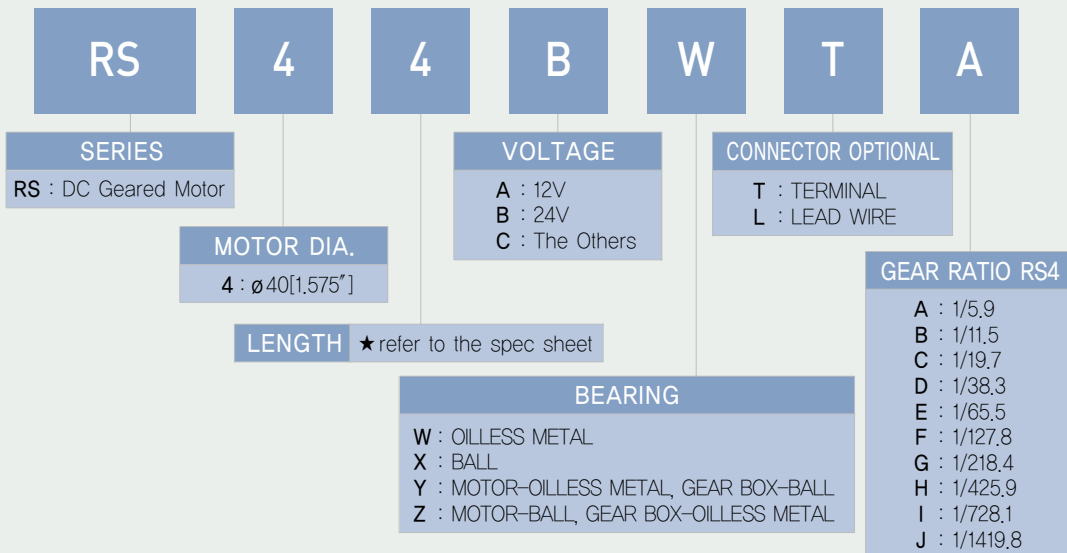
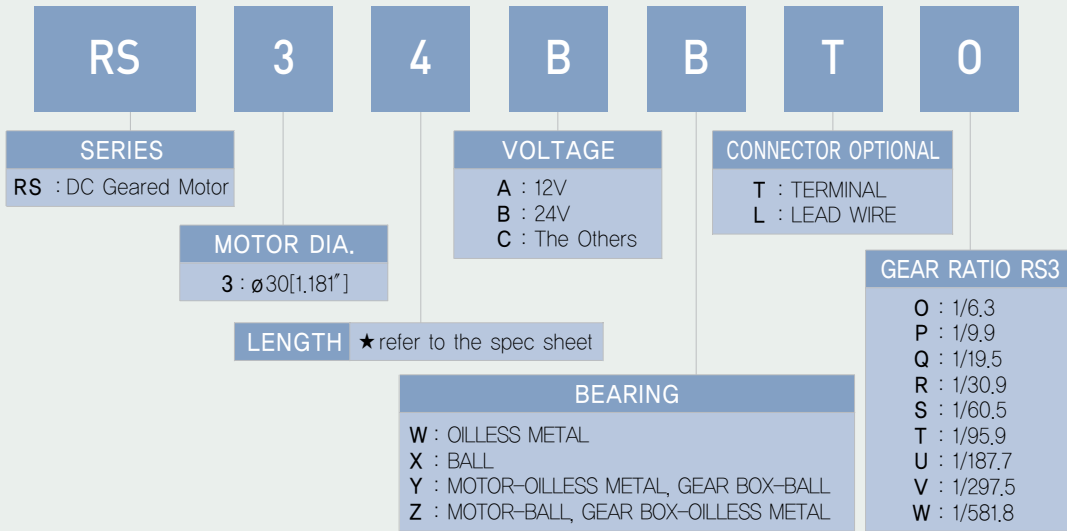
RM TYPE



CODING SYSTEM

COMPACT TYPE

RS TYPE



CODING SYSTEM

COMPACT TYPE

DC MOTOR

S	9	D	40	-	24	C	H	O A01
BRAND S : SPG Co., Ltd		MOTOR TYPE D : PERMANENT MAGNET DC MOTOR		VOLTAGE 12 : 12V 24 : 24V 36 : 36V 48 : 48V 90 : 90V		SHAFT IMPACT TYPE H : HEAVY IMPACT L : LIGHT IMPACT (일반적으로 L은 생략)		
SIZE 6 : □ 60(mm) 7 : □ 70(mm) 8 : □ 80(mm) 9 : □ 90(mm)		OUTPUT 06 : 6W 10 : 10W 15 : 15W 25 : 25W 40 : 40W 60 : 60W 90 : 90W 120 : 120W 150 : 150W 200 : 200W 300 : 300W		SHAFT TYPE A : GEAR HEAD KA/DA/SA TYPE B : GEAR HEAD KB/DB/SB TYPE C : GEAR HEAD KC/DC/SC TYPE GEAR HEAD KD/DD/SD TYPE H : GEAR HEAD KH/DH/SH TYPE D : D-CUT TYPE K : KEY TYPE S : STRAIGHT TYPE G : SPECIAL & WORM GEAR TYPE M : Ø11 SITI TYPE W : Ø 9 SITI TYPE			SPECIAL SERIES NO.	

GEAR HEAD

S	9	K	C	36	B	H	—	S
BRAND		SHAFT TYPE		GEAR RATIO		SHAFT IMPACT TYPE		
S : SPG Co., Ltd		A : STRAIGHT TYPE B : D-CUT TYPE C : KEY TYPE		REDUCTION RATIO (36:1/36)		H : HEAVY IMPACT L : LIGHT IMPACT (일반적으로 L은 생략)		
SIZE		OUTPUT		BEARING			SPECIAL TYPE	
6 : □ 60(mm) 7 : □ 70(mm) 8 : □ 80(mm) 9 : □ 90(mm)		A : 6W~25W B : 40W C : 60W~150W D : 60W~150W H : 200W~300W		B : BALL BEARING+METAL BEARING(6W~40W) ALL BALL BEARING(60W이상) B ₁ : ALL BALL BEARING(6W ~40W) M : METAL BEARING(6W~40W)			S : FLANGE TYPE	

DC WORM GEARED MOTOR

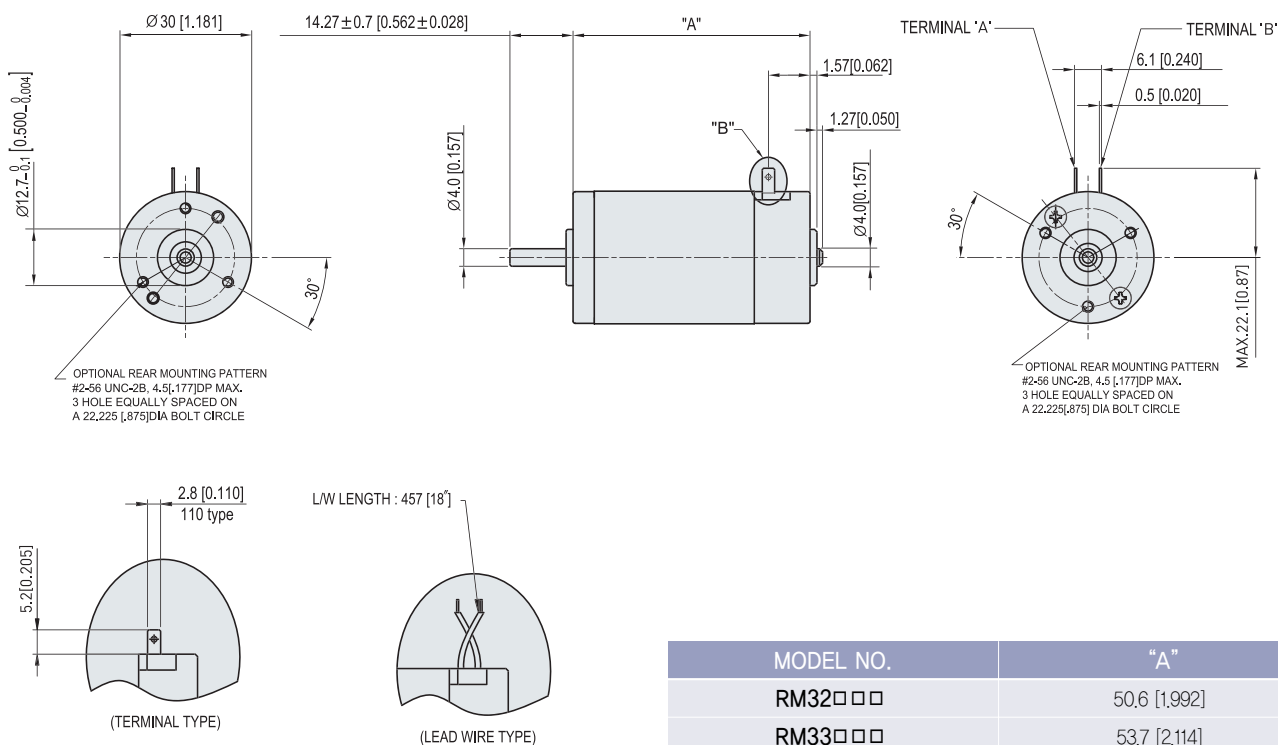
RA	6	1	B	L	S	O A01
RIGHT ANGLE TYPE		LENGTH 1 : 114,5	VOLTAGE A : 12V B : 24V C : 36V D : 48V H : 90V	GEAR RATIO 5 : 1/5 10 : 1/10 15 : 1/15 24 : 1/24 38 : 1/38 50 : 1/50 75 : 1/75	SHAFT DIRECTION L : LEFT R : RIGHT B : BOTH	SPECIAL SERIES NO.
	MOTOR DIA. 6 : ø60[1,175"]					



COMPACT TYPE RM3 SERIES MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"
RM32□□□	50.6 [1.992]
RM33□□□	53.7 [2.114]
RM34□□□	60.0 [2.362]

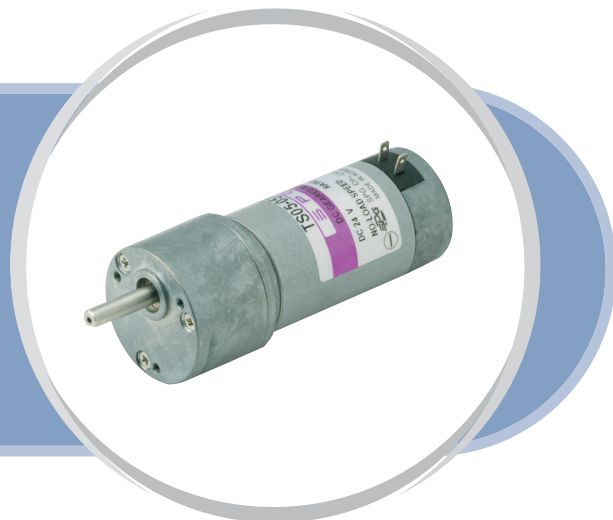
MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	No Load		Rated			Stall(Peak)			Run Duty	Weight	
	Revolution	Current	Contionuous Torque(Max.)		Revolution	Current	Peak Torque	Current			
	RPM	A	—		RPM	A	—		A	Hr	Kg
RM32B□□	7750	0.24	0.011	N-m	5800	0.55	0.048	N-m	2.05	500	0.59
			1.6	oz-in			6.8	oz-in			
			0.11	kgf · cm			0.49	kgf · cm			
RM33B□□	8132	0.28	0.014	N-m	6550	0.62	0.070	N-m	3.15	500	0.74
			2.0	oz-in			9.9	oz-in			
			0.14	kgf · cm			0.71	kgf · cm			
RM34B□□	10160	0.40	0.018	N-m	8120	1.11	0.127	N-m	6.05	500	0.89
			2.5	oz-in			18.0	oz-in			
			0.18	kgf · cm			1.30	kgf · cm			

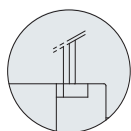
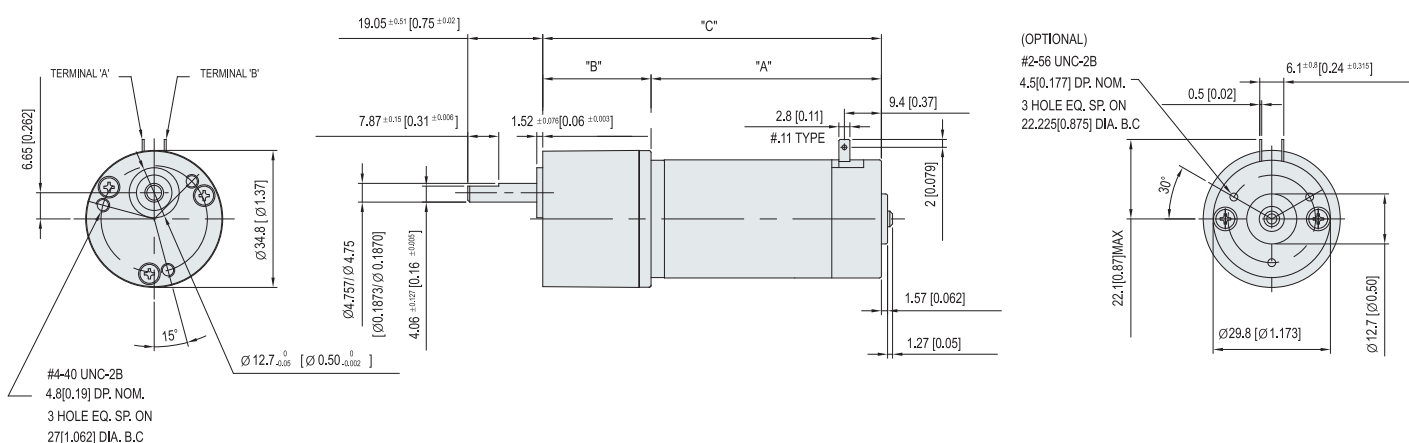
※ Run duty is valued at rated Voltage and No load.

COMPACT TYPE RS3 SERIES GEARED MOTOR



MOTOR DIMENSION

UNIT : mm[inch]



CONNECTOR OPTIONAL
LEAD WIRES
457 ± 10 [17.992 ± 0.787] (L/W LENGTH)
RED&BLACK

MODEL NO.	"A"	"B"		"C"
		RATIO : $\sim 1/187.7$	RATIO : $1/297.5 \sim$	
RS32□□□□	50.1 [1.972]			74.6 [2.937], 77.6 [3.055]
RS33□□□□	52.2 [2.055]	24.5 [0.965]	27.5 [1.083]	76.7 [3.020], 79.7 [3.138]
RS34□□□□	58.5 [2.303]			83.0 [3.268], 86.0 [3.386]

PERMISSIBLE TORQUE OF GEAR BOX

TYPE	GEAR RATIO	6.3	9.9	19.5	30.9	60.5	95.9	187.7	297.5	581.8
RS32B□□□□	No Load rpm	1230	783	397	251	128	81	41	26	13
	N-m	0.06	0.08	0.16	0.22	0.44	0.62	1.22	1.23	1.23
	oz-in	7.9	11.2	22.1	31.6	61.8	88.2	172.6	174.8	174.8
	kgf · cm	0.57	0.81	1.60	2.28	4.46	6.36	12.44	12.60	12.60
RS33B□□□□	No Load rpm	1291	821	417	263	134	85	43	27	14
	N-m	0.07	0.10	0.20	0.28	0.56	0.79	1.23	1.23	1.23
	oz-in	10.1	14.3	28.2	40.2	78.7	112.3	174.8	174.8	174.8
	kgf · cm	0.73	1.03	2.03	2.90	5.67	8.09	12.60	12.60	12.60
RS34B□□□□	No Load rpm	1613	1026	521	329	168	106	54	34	17
	N-m	0.09	0.13	0.26	0.36	0.71	1.02	1.23	1.23	1.23
	oz-in	13.0	18.4	36.2	51.7	101.2	144.3	174.8	174.8	174.8
	kgf · cm	0.94	1.33	2.61	3.72	7.29	10.40	12.60	12.60	12.60

■ 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.

■ No Load rpm equals Motor no load rpm divided by gear ratio.

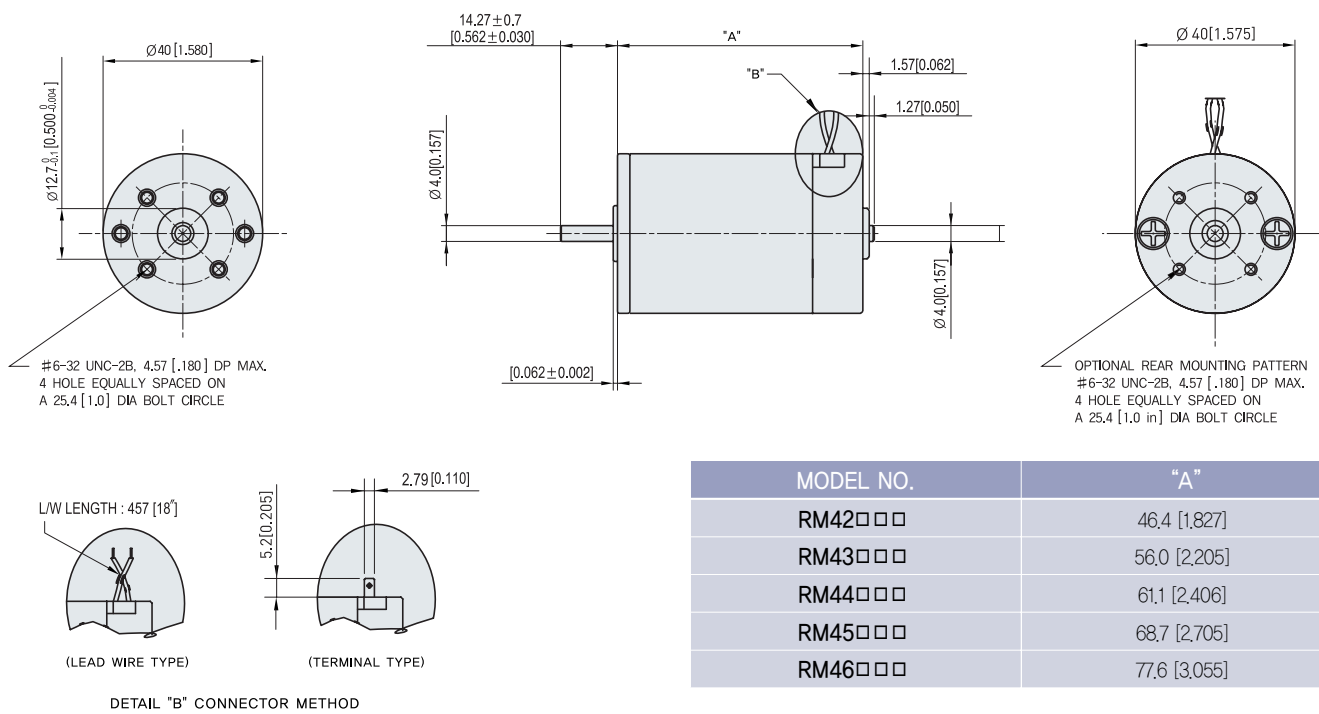
The actual rotation speed is less 2-20% than the displayed value according to the load.



COMPACT TYPE RM4 SERIES MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



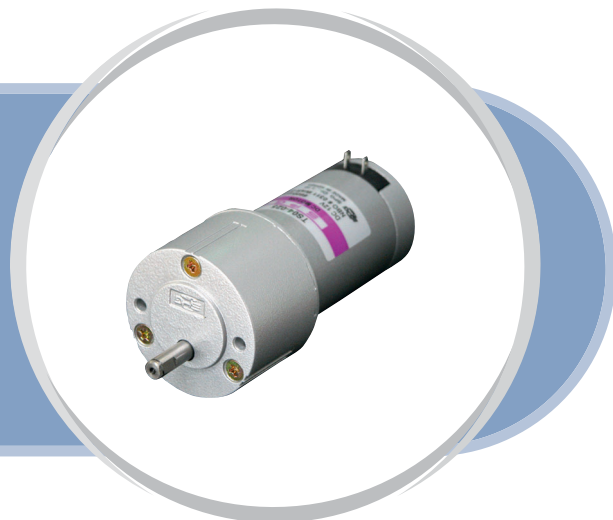
MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	No Load		Rated				Stall(Peak)			Run Duty	Weight
	Revolution	Current	Contionuous Torque(Max.)		Revolution	Current	Peak Torque		Current		
	RPM	A	—		RPM	A	—		A	Hr	Kg
RM42B□□	7015	0.24	0.02	N·m	5497	0.74	0.064	N·m	2.9	1000	0.20
			2.22	oz·in			9.02	oz·in			
			0.16	kgf · cm			0.65	kgf · cm			
RM43B□□	5993	0.20	0.03	N·m	4486	1.13	0.140	N·m	5.0	1000	0.25
			4.58	oz·in			19.84	oz·in			
			0.33	kgf · cm			1.43	kgf · cm			
RM44B□□	6151	0.24	0.04	N·m	5111	1.20	0.266	N·m	7.7	1000	0.29
			5.97	oz·in			37.61	oz·in			
			0.43	kgf · cm			2.71	kgf · cm			
RM45B□□	6348	0.30	0.05	N·m	5440	1.58	0.324	N·m	10.8	1000	0.33
			6.80	oz·in			45.93	oz·in			
			0.49	kgf · cm			3.31	kgf · cm			
RM46B□□	4916	0.24	0.07	N·m	4101	1.53	0.369	N·m	8.7	1000	0.39
			9.44	oz·in			52.32	oz·in			
			0.68	kgf · cm			3.77	kgf · cm			

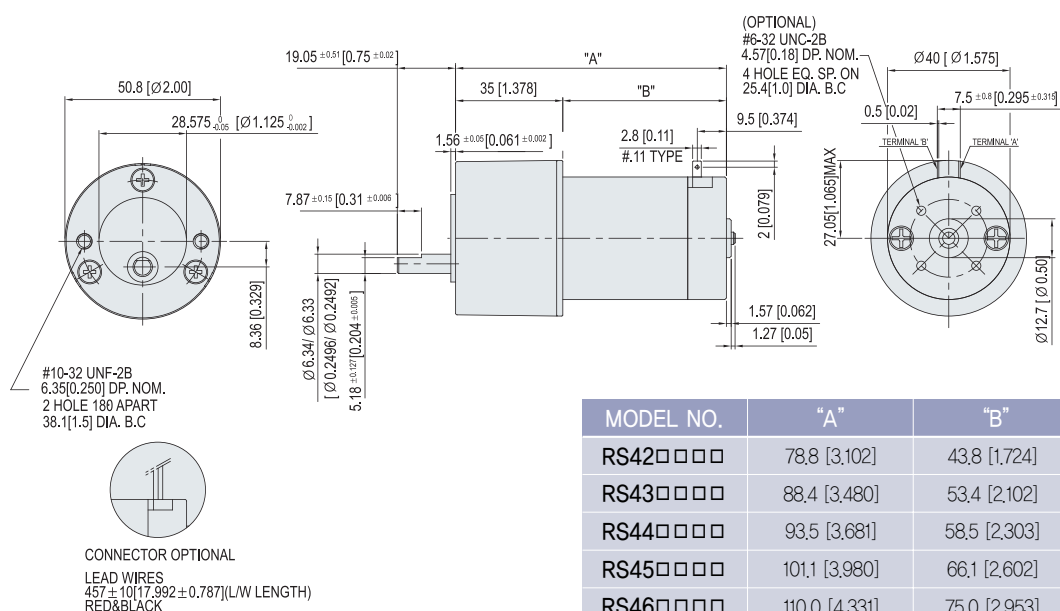
※ Run duty is valued at rated Voltage and No load.

COMPACT TYPE RS4 SERIES GEARED MOTOR



MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"	WEIGHT(kg)
RS42□□□□	78.8 [3.102]	43.8 [1.724]	0.39
RS43□□□□	88.4 [3.480]	53.4 [2.102]	0.43
RS44□□□□	93.5 [3.681]	58.5 [2.303]	0.50
RS45□□□□	101.1 [3.980]	66.1 [2.602]	0.54
RS46□□□□	110.0 [4.331]	75.0 [2.953]	0.58

PERMISSIBLE TORQUE OF GEAR BOX

TYPE	GEAR RATIO	5.9	11.5	19.7	38.3	65.5	127.8	218.4	425.9	728.1	1419.8
RS42□□□□	No Load rpm	1189	610	356	183	107	55	32	16	10	5
	N·m	0.07	0.15	0.23	0.44	0.67	1.31	2.02	2.12	2.12	2.12
	oz·in	10.6	20.7	31.9	62.0	95.4	186.2	286.3	299.7	299.7	299.7
	kgf·cm	0.76	1.49	2.30	4.47	6.88	13.42	20.63	21.60	21.60	21.60
RS43□□□□	No Load rpm	1016	521	304	156	91	47	27	14	8	4
	N·m	0.15	0.30	0.46	0.90	1.39	2.12	2.12	2.12	2.12	2.12
	oz·in	21.9	42.7	65.8	127.9	196.8	299.7	299.7	299.7	299.7	299.7
	kgf·cm	1.58	3.07	4.74	9.21	14.18	21.60	21.60	21.60	21.60	21.60
RS44□□□□	No Load rpm	1043	535	312	161	94	48	28	14	8	4
	N·m	0.20	0.39	0.61	1.18	1.81	2.12	2.12	2.12	2.12	2.12
	oz·in	28.5	55.6	85.7	166.6	256.4	299.7	299.7	299.7	299.7	299.7
	kgf·cm	2.05	4.01	6.18	12.01	18.48	21.60	21.60	21.60	21.60	21.60
RS45□□□□	No Load rpm	1076	552	322	166	97	50	29	15	9	4
	N·m	0.23	0.45	0.69	1.34	2.06	2.12	2.12	2.12	2.12	2.12
	oz·in	32.5	63.3	97.7	189.9	292.2	299.7	299.7	299.7	299.7	299.7
	kgf·cm	2.34	4.56	7.04	13.68	21.06	21.60	21.60	21.60	21.60	21.60
RS46□□□□	No Load rpm	833	427	250	128	75	38	23	12	7	3
	N·m	0.32	0.62	0.96	1.86	2.12	2.12	2.12	2.12	2.12	2.12
	oz·in	45.1	87.9	135.5	263.5	299.7	299.7	299.7	299.7	299.7	299.7
	kgf·cm	3.25	6.33	9.77	18.99	21.60	21.60	21.60	21.60	21.60	21.60

■ 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.

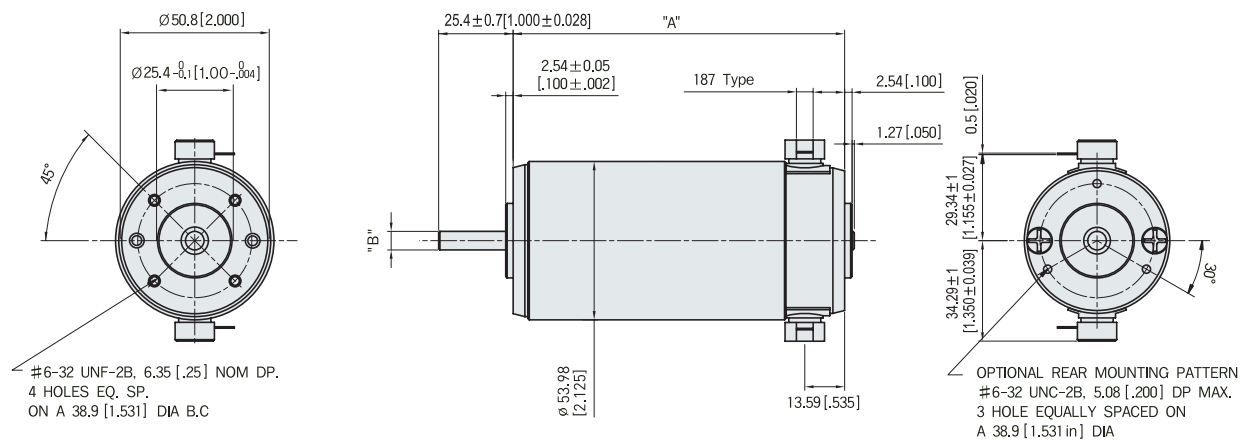
■ No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2~20% than the displayed value according to the load.



COMPACT TYPE RM5 SERIES MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"
RM51□□□	75.0 [2.953]	6,336±0.003 [0.2494±0.0001]
RM52□□□	81.0 [3.189]	
RM53□□□	94.0 [3.701]	

MODEL NO.	"A"	"B"
RM54□□□	103.4 [4.071]	6,336±0.003 [0.2494±0.0001]
RM55□□□	113.0 [4.449]	

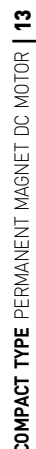
MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	No Load		Rated			Stall(Peak)			Run Duty	Weight	
	Revolution	Current	Contionuous Torque(Max.)		Revolution	Current	Peak Torque	Current			
	RPM	A	—		RPM	A	—			A	Hr
RM51B□T	4230	0.4	0.06	N-m	3725	1.36	0.46	N-m	11.36	2000	0.59
			8.0	oz-in			64.5	oz-in			
			0.58	kgf · cm			4.65	kgf · cm			
RM52B□T	4087	0.5	0.09	N-m	3595	1.94	0.67	N-m	15.55	2000	0.74
			12.8	oz-in			94.8	oz-in			
			0.92	kgf · cm			6.83	kgf · cm			
RM53B□T	3400	0.5	0.15	N-m	2930	2.67	0.96	N-m	19.27	2000	0.89
			21.2	oz-in			135.7	oz-in			
			1.53	kgf · cm			9.78	kgf · cm			
RM54B□T	3630	0.5	0.18	N-m	3180	3.18	1.31	N-m	26.47	2000	1
			25.5	oz-in			185.4	oz-in			
			1.84	kgf · cm			13.36	kgf · cm			
RM55B□T	2900	0.4	0.22	N-m	2510	3.05	1.46	N-m	23.6	2000	1.12
			31.1	oz-in			207.0	oz-in			
			2.24	kgf · cm			14.92	kgf · cm			

※ Run duty is valued at rated Voltage and No load.

A small, cylindrical, silver-colored DC motor is shown at an angle. It has a black output shaft on the right side. The front face features a central shaft with a nut and several mounting holes. A label on the side contains technical specifications. The motor is set against a white background with a blue circular graphic element.



PERMISSIBLE TORQUE OF GEAR BOX

TYPE	GEAR RATIO	5.9	19.7	65.5
RS51B□□□	No Load rpm	717	215	65
	N-m	0.27	0.82	2.12
	oz-in	38.46	115.59	299.74
	kgf · cm	2.77	8.33	21.60
RS52B□□□	No Load rpm	693	207	62
	N-m	0.43	1.29	2.12
	oz-in	61.01	183.35	299.74
	kgf · cm	4.40	13.21	21.60

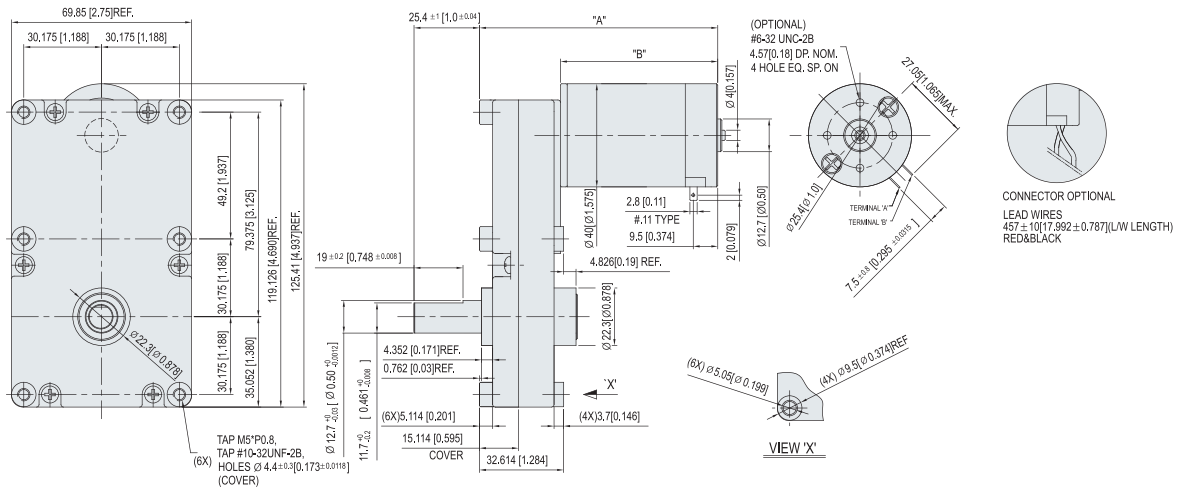
- ■ Color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- No Load rpm equals Motor no load rpm divided by gear ratio.
The actual rotation speed is less 2–20% than the displayed value according to the load.



COMPACT TYPE SG SERIES GEARED MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"
SG42□□□□	77,814 [3,064]	46,4 [1,827]
SG43□□□□	87,414 [3,441]	56,0 [2,205]
SG44□□□□	92,514 [3,642]	61,1 [2,406]

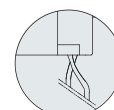
MODEL NO.	"A"	"B"
SG45□□□□	100,114 [3,941]	68,7 [2,705]
SG46□□□□	109,014 [4,292]	77,6 [3,055]

PERMISSIBLE TORQUE OF GEAR BOX

(Voltage : DC 24V)

TYPE	GEAR RATIO	395.7	1218.1	1412.5	1620.7	1709.9	3238.2
SG42B□□□	No Load rpm	17.7	5.8	5.0	4.3	4.1	2.2
	N-m	4.07	11.28	13.08	15.01	15.83	29.98
	oz-in	576.4	1596.9	1851.9	2124.8	2241.8	4245.2
	kgf · cm	41.54	115.08	133.45	153.12	161.55	305.92
SG43B□□□	No Load rpm	15.1	4.9	4.2	3.7	3.5	1.9
	N-m	8.40	23.26	26.97	30.95	32.65	33.81
	oz-in	1188.8	3293.8	3819.5	4382.4	4623.6	4787.5
	kgf · cm	85.67	237.36	275.24	315.81	333.19	345.00
SG44B□□□	No Load rpm	15.5	5.1	4.4	3.8	3.6	1.9
	N-m	10.94	30.31	33.81	33.81	33.81	33.81
	oz-in	1549.2	4292.0	4787.5	4787.5	4787.5	4787.5
	kgf · cm	111.64	309.29	345.00	345.00	345.00	345.00
SG45B□□□	No Load rpm	16.0	5.2	4.5	3.9	3.7	2.0
	N-m	12.47	33.81	33.81	33.81	33.81	33.81
	oz-in	1765.3	4787.5	4787.5	4787.5	4787.5	4787.5
	kgf · cm	127.21	345.00	345.00	345.00	345.00	345.00
SG46B□□□	No Load rpm	12.4	4.0	3.5	3.0	2.9	1.5
	N-m	17.30	33.81	33.81	33.81	33.81	33.81
	oz-in	2449.8	4787.5	4787.5	4787.5	4787.5	4787.5
	kgf · cm	176.54	345.00	345.00	345.00	345.00	345.00

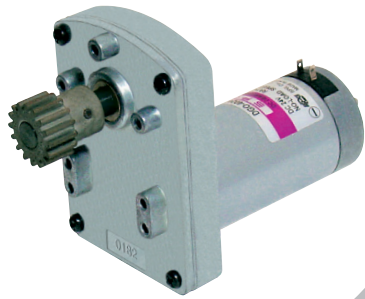
※ Please contact our sales Department regarding other gear ratio.



MODEL NO.	"A"	"B"
SP45□□□□	104.8 [4.126]	68.7 [2.705]
SP46□□□□	113.7 [4.476]	77.6 [3.055]

TYPE	GEAR RATIO	32.4	73.5	148.8	253	747.5	3105.2
SP42B□□□	No Load rpm	216,5	95,4	47,1	27,7	9,4	2,3
	N-m	0,37	0,84	1,53	2,60	6,92	11,27
	oz-in	52,5	118,9	216,8	368,6	980,0	1595,8
	kgf·cm	3,78	8,57	15,62	26,56	70,62	115,00
SP43B□□□	No Load rpm	185,0	81,5	40,3	23,7	8,0	1,9
	N-m	0,76	1,73	3,16	5,37	11,27	11,27
	oz-in	108,1	245,3	447,1	760,2	1595,8	1595,8
	kgf·cm	7,79	17,68	32,22	54,78	115,00	115,00
SP44B□□□	No Load rpm	189,8	83,7	41,3	24,3	8,2	2,0
	N-m	1,00	2,03	4,11	7,00	11,27	11,27
	oz-in	141,0	287,8	582,5	990,5	1595,8	1595,8
	kgf·cm	10,16	20,74	41,98	71,38	115,00	115,00
SP45B□□□	No Load rpm	195,9	86,4	42,7	25,1	8,5	2,0
	N-m	1,13	2,57	4,69	7,97	11,27	11,27
	oz-in	160,6	364,3	663,9	1128,7	1595,8	1595,8
	kgf·cm	11,57	26,25	47,84	81,34	115,00	115,00
SP46B□□□	No Load rpm	151,7	66,9	33,0	19,4	6,6	1,6
	N-m	1,57	3,57	6,51	11,06	11,27	11,27
	oz-in	222,9	505,7	921,3	1566,4	1595,8	1595,8
	kgf·cm	16,06	36,44	66,39	112,88	115,00	115,00

COMPACT TYPE PERMANENT MAGNET DC MOTOR | 15

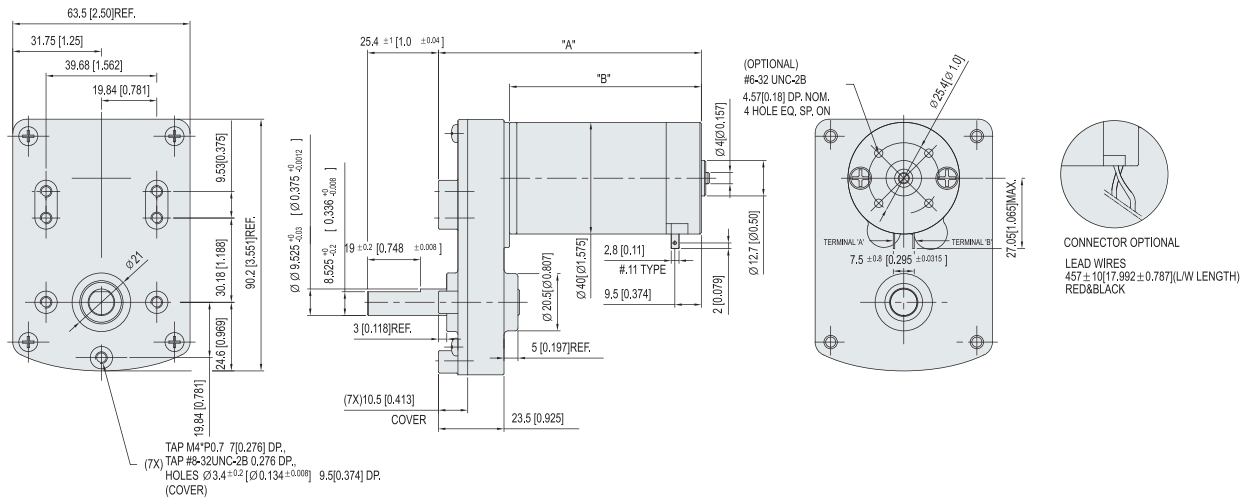


COMPACT TYPE

SR SERIES GEARED MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"
SR42□□□□	71.9 [2.831]	46.4 [1.827]
SR43□□□□	81.5 [3.209]	56.0 [2.205]
SR44□□□□	86.6 [3.409]	61.1 [2.406]

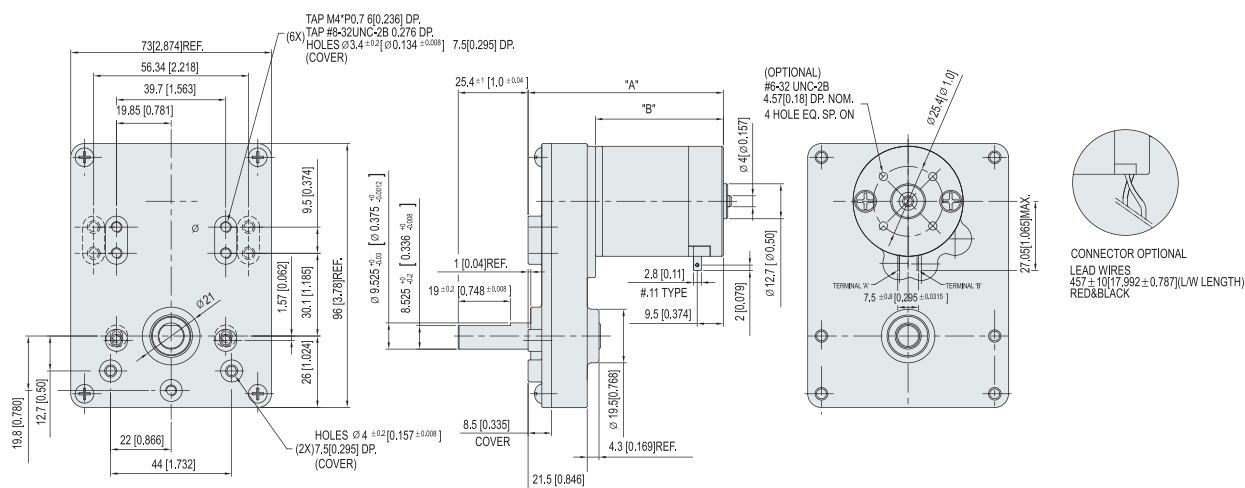
MODEL NO.	"A"	"B"
SR45□□□□	94.2 [3.709]	68.7 [2.705]
SR46□□□□	103.1 [4.059]	77.6 [3.055]

PERMISSIBLE TORQUE OF GEAR BOX

(Voltage : DC 24V)

TYPE	GEAR RATIO	58.8	62.5	124.9	144	192
SR42B□□□	No Load rpm	119.3	112.2	56.2	48.7	36.5
	N-m	0.75	0.79	1.43	1.65	2.19
	oz-in	105.7	112.4	202.2	233.1	310.7
	kgf · cm	7.62	8.10	14.57	16.80	22.39
SR43B□□□	No Load rpm	101.9	95.9	48.0	41.6	31.2
	N-m	1.54	1.64	2.94	3.39	4.53
	oz-in	218.1	231.9	417.0	480.7	641.0
	kgf · cm	15.72	16.71	30.05	34.64	46.19
SR44B□□□	No Load rpm	104.6	98.4	49.2	42.7	32.0
	N-m	2.01	2.13	3.84	4.42	5.90
	oz-in	284.2	302.1	543.3	626.4	835.2
	kgf · cm	20.48	21.77	39.15	45.14	60.19
SR45B□□□	No Load rpm	108.0	101.6	50.8	44.1	33.1
	N-m	2.29	2.43	4.37	5.04	6.72
	oz-in	323.9	344.3	619.2	713.8	951.7
	kgf · cm	23.34	24.81	44.62	51.44	68.58
SR46B□□□	No Load rpm	83.6	78.7	39.4	34.1	25.6
	N-m	3.17	3.37	6.07	7.00	9.33
	oz-in	449.5	477.8	859.3	990.5	1320.8
	kgf · cm	32.39	34.43	61.92	71.38	95.18

※ Please contact our sales Department regarding other gear ratio.



MODEL NO.	"A"	"B"
SQ42□□□□	70.9 [2.791]	46.4 [1.827]
SQ43□□□□	80.5 [3.169]	56.0 [2.205]
SQ44□□□□	85.6 [3.370]	61.1 [2.406]

MODEL NO.	"A"	"B"
SQ45□□□□	93,2 [3,669]	68,7 [2,705]
SQ46□□□□	102,1 [4,020]	77,6 [3,055]

TYPE	GEAR RATIO	38.5	68.4	144	169	192.1	225	444	517.6	844.8	1240.2
SQ42B□□□	No Load rpm	182.2	102.6	48.7	41.5	36.5	31.2	15.8	13.6	8.3	5.7
	N-m	0.44	0.78	1.65	1.93	2.20	2.57	4.57	5.33	8.69	12.76
	oz-in	62.3	110.7	233.1	273.5	311.0	364.1	646.7	754.1	1230.6	1806.6
	kgf·cm	4.49	7.98	16.80	19.71	22.41	26.24	46.60	54.34	88.68	130.19
SQ43B□□□	No Load rpm	155.7	87.6	41.6	35.5	31.2	26.6	13.5	11.6	7.1	4.8
	N-m	0.91	1.61	3.39	3.98	4.53	5.30	9.42	10.98	14.21	14.21
	oz-in	128.5	228.3	480.7	564.2	641.2	751.2	1334.0	1555.2	2012.1	2012.1
	kgf·cm	9.26	16.45	34.64	40.66	46.21	54.13	96.13	112.07	145.00	145.00
SQ44B□□□	No Load rpm	159.8	89.9	42.7	36.4	32.0	27.3	13.9	11.9	7.3	5.0
	N-m	1.18	2.10	4.42	5.19	5.90	6.91	12.28	14.21	14.21	14.21
	oz-in	167.5	297.5	626.4	735.2	835.7	978.7	1738.2	2012.1	2012.1	2012.1
	kgf·cm	12.07	21.44	45.14	52.98	60.22	70.53	125.26	145.00	145.00	145.00
SQ45B□□□	No Load rpm	164.9	92.8	44.1	37.6	33.0	28.2	14.3	12.3	7.5	5.1
	N-m	1.35	2.39	5.04	5.92	6.72	7.88	13.99	14.21	14.21	14.21
	oz-in	190.8	339.0	713.8	837.7	952.2	1115.3	1980.8	2012.1	2012.1	2012.1
	kgf·cm	13.75	24.43	51.44	60.37	68.62	80.37	142.74	145.00	145.00	145.00
SQ46B□□□	No Load rpm	127.7	71.9	34.1	34.1	25.6	21.8	11.1	9.5	5.8	4.0
	N-m	1.87	3.32	7.00	8.21	9.33	10.93	14.21	14.21	14.21	14.21
	oz-in	264.9	470.6	990.5	1162.6	1321.5	1547.8	2012.1	2012.1	2012.1	2012.1
	kgf·cm	19.09	33.91	71.38	83.78	95.23	111.54	145.00	145.00	145.00	145.00

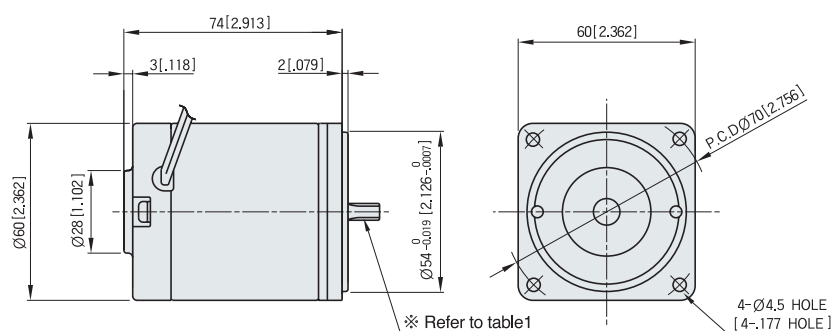
※ Please contact our sales Department regarding other gear ratio.



STANDARD TYPE S6D SERIES [6~10W]

MOTOR DIMENSION

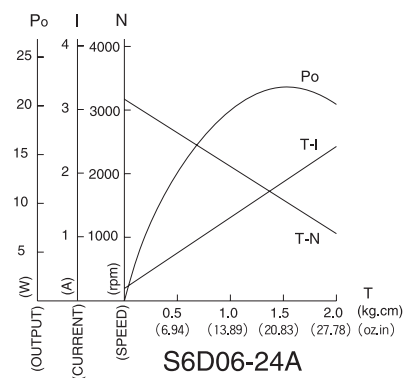
UNIT : mm[inch]



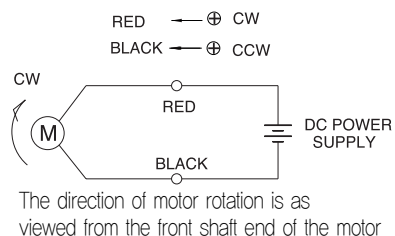
SPEC for output shaft of motor-(Table1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE
	S6D06- A S6D10- A	S6D06- S S6D10- S	S6D06- D S6D10- D

CHARACTERISTIC CURVE



CIRCUIT DIAGRAM



MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod				Run Duty	Weight
	V		Speed	Current(MAX.)	Speed	Torque		Current		
		W	RPM	A	RPM			A	Hr	Kg
S6D06-12□	12	6	3100	0.70	2800	0.021	N-m	0.80	2000	0.6
						2.9	oz-in			
						0.21	kgf cm			
S6D06-24□	24	6	3200	0.40	2950	0.020	N-m	0.50	2000	0.6
						2.8	oz-in			
						0.20	kgf cm			
S6D06-90□	90	6	3000	0.10	2800	0.021	N-m	0.15	2000	0.6
						2.9	oz-in			
						0.21	kgf cm			
S6D10-12□	12	10	3300	0.90	3000	0.032	N-m	1.60	2000	0.6
						4.6	oz-in			
						0.33	kgf cm			
S6D10-24□	24	10	3300	0.50	3000	0.032	N-m	0.80	2000	0.6
						4.6	oz-in			
						0.33	kgf cm			
S6D10-90□	90	10	3300	0.15	3100	0.030	N-m	0.20	2000	0.6
						4.3	oz-in			
						0.31	kgf cm			

※ Run duty is valued at rated Voltage and No load

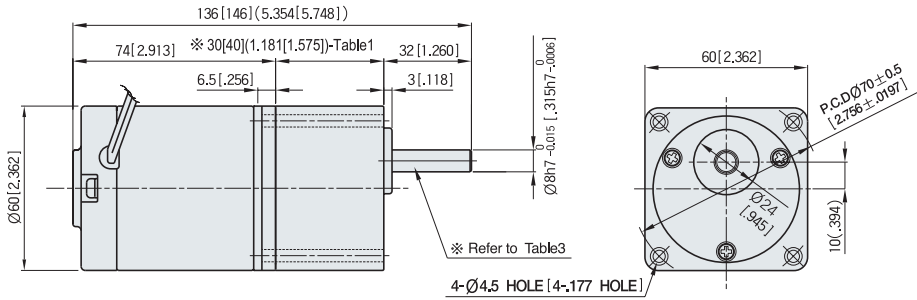
21C, for World geared motor!



GEARED MOTOR SPECIFICATION

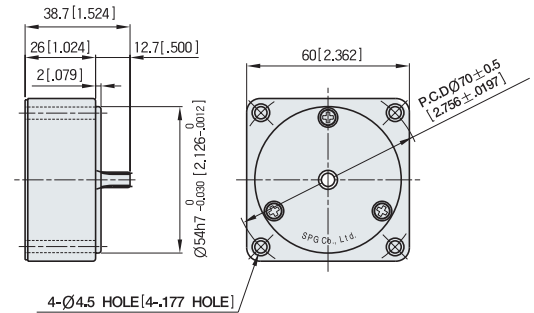
UNIT : mm[inch]

GEARED MOTOR ※ MOTOR MODEL : S6D06- A, S6D10- A
※ HEAD MODEL : S6 A3 ~S6 A250



INTER-DECIMAL GEAR HEAD

※ MODEL : S6GX10B



3040 – (Table1)

GEAR RATIO	SIZE:mminch
S6 A3 ~ S6 A18	30[1.181]
S6 A20 ~ S6 A250	40[1.575]

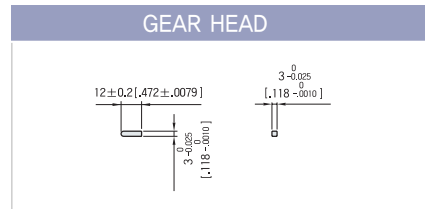
WEIGHT – (Table2)

PART	WEIGHT:kg(oz)
MOTOR	0.6/0.7(21.2/24.7)
DECIMAL GEAR HEAD	0.18(6.3)
GEAR HEAD	S6 A3 ~ S6 A18
	0.24(8.5)
	S6 A20 ~ S6 A40
	0.30(10.6)
GEAR HEAD	S6 A50 ~ S6 A250
	0.33(11.6)

SPEC for output shaft of gearhead-(Table3)

MODEL	
STRAIGHT TYPE	
S6SA3 ~ S6SA250	32[1.256] Ø8[.315]
D-CUT TYPE	
S6DA3 ~ S6DA250	32[1.256] 12[.472] 7 ⁺⁰ ₋₀ [.275-.358] Ø8[.315]
KEY TYPE	
S6KA3 ~ S6KA250	32[1.256] 12[.472] Ø8[.315] 3 ^{+0.025} ₀ [.118 0] 1.8 ^{+0.1} ₀ [.071 ^{+0.0039} 0]

KEY SPEC



GEAR HEAD RATED LOAD

1. S6D06-24A

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	250
S6DA B	No Load rpm	1067	889	640	533	427	356	320	256	213	178	160	128	107	89	80	64	53	43	36	32	27	21	18	16	13
	N-m	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.20	0.24	0.29	0.29	0.36	0.43	0.51	0.57	0.64	0.77	0.96	1.16	1.29	1.54	1.93	2.31	2.57	2.94
	oz-in	6.7	8.1	11.2	13.5	16.9	20.2	22.5	28.1	33.7	40.5	40.5	50.6	60.7	72.8	80.9	91.0	109.3	136.6	163.9	182.1	218.5	273.1	327.8	364.2	416.3
	kgf·cm	0.5	0.6	0.8	1.0	1.2	1.5	1.6	2.0	2.4	2.9	2.9	3.6	4.4	5.2	5.8	6.6	7.9	9.8	11.8	13.1	15.7	19.7	23.6	26.2	30.0

2. S6D10-24A

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	250
S6DA B	No Load rpm	1100	917	660	550	440	367	330	264	220	183	165	132	110	92	83	66	55	44	37	33	28	22	18	17	13
	N-m	0.08	0.09	0.13	0.16	0.20	0.24	0.26	0.33	0.39	0.47	0.47	0.59	0.71	0.85	0.94	1.06	1.27	1.59	1.91	2.12	2.55	2.94	2.94	2.94	2.94
	oz-in	11.1	13.4	18.5	22.3	27.8	33.4	37.1	46.4	55.6	66.8	66.8	83.5	100.2	120.2	133.5	150.2	180.3	225.3	270.4	300.5	360.5	416.3	416.3	416.3	416.3
	kgf·cm	0.8	1.0	1.3	1.6	2.0	2.4	2.7	3.3	4.0	4.8	4.8	6.0	7.2	8.7	9.6	10.8	13.0	16.2	19.5	21.7	26.0	30.0	30.0	30.0	30.0

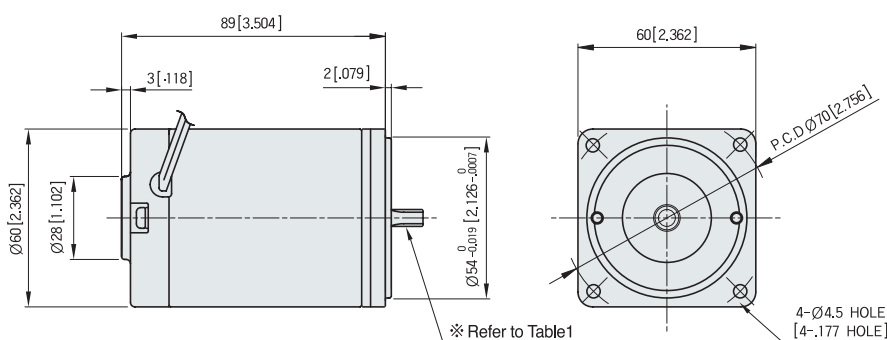
- The code in ■ of gearhead model is for gear ratio
- It is the permissible torque of the assembled motor and gearhead
The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30 f .
- ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load
- There is no marked the L code for it is an exclusive use.



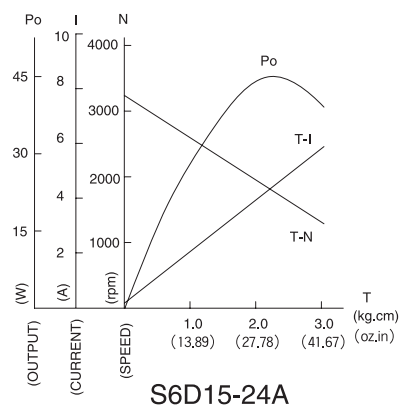
STANDARD TYPE S6D SERIES [15W]

MOTOR DIMENSION

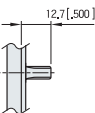
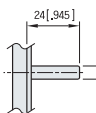
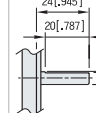
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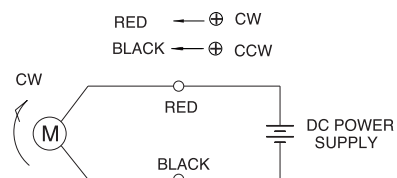
CHARACTERISTIC CURVE



SPEC for output shaft of motor-(Table 1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE
	S6D15- A	S6D15- S	S6D15- D
			

CIRCUIT DIAGRAM



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

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S6D15-12□	12	15	3200	0,80	2950	0,049	N-m	2,00	2000	0,6
						6,9	oz-in			
						0,50	kgf cm			
S6D15-24□	24	15	3300	0,40	3000	0,049	N-m	1,00	2000	0,6
						6,9	oz-in			
						0,50	kgf cm			
S6D15-90□	90	15	3000	0,20	3000	0,049	N-m	0,30	2000	0,6
						6,9	oz-in			
						0,50	kgf cm			

※ Run duty is valued at rated Voltage and No load

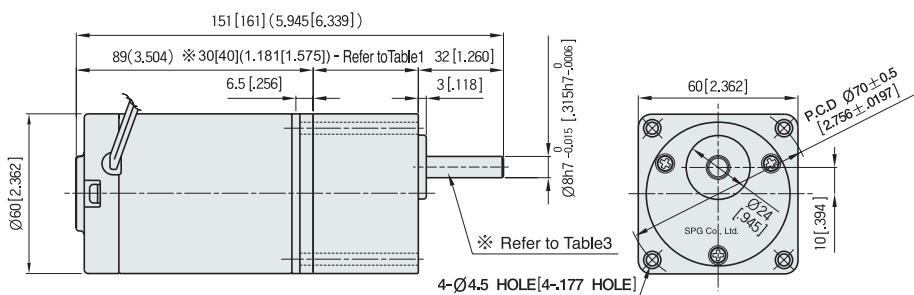
21C, for World geared motor!



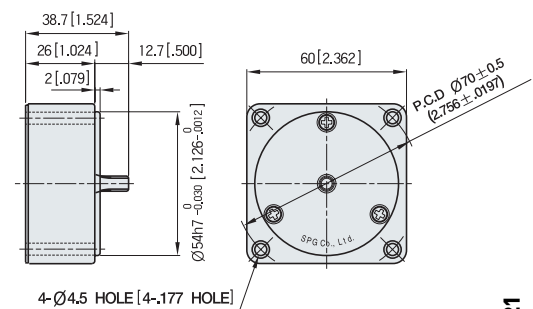
GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

GEARED MOTOR ※ MOTOR MODEL : S6D15- A
※ HEAD MODEL : S6 A3 ~S6 A250



INTER-DECIMAL GEAR HEAD
※ MODEL : S6GX10B



30(40) – (Table1)

GEAR RATIO	SIZE:mminch
S6 A3 ~ S6 A18	30 [1.181]
S6 A20 ~ S6 A250	40 [1.575]

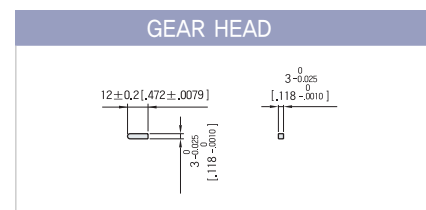
WEIGHT – (Table2)

PART	WEIGHT:kg(oz)
MOTOR	0.9(31.7)
DECIMAL GEAR HEAD	0.18(6.3)
GEAR HEAD	S6 A3 ~ S6 A18
	0.24(8.5)
	S6 A20 ~ S6 A40
	0.30(10.6)
GEAR HEAD	S6 A50 ~ S6 A250
	0.33(11.6)

SPEC for output shaft of gearhead-(Table3)

MODEL	
STRAIGHT TYPE	
S6SA3 ~ S6SA250	32 [1.256] Ø8 [0.315]
D-CUT TYPE	
S6DA3 ~ S6DA250	32 [1.256] 12 [0.472] 7 [0.275-.008] Ø8 [0.315]
KEY TYPE	
S6KA3 ~ S6KA250	32 [1.256] 12 [0.472] Ø8 [0.315] 1.8 ^{+0.1} ₀ 1.071 ^{+0.039} ₀

KEY SPEC



GEAR HEAD RATED LOAD

S6D15-24A

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	250
S6DA B	No Load rpm	1100	917	660	550	440	367	330	264	220	183	165	132	110	92	83	66	55	44	37	33	28	22	18	17	13
	N-m	0.12	0.14	0.20	0.24	0.30	0.36	0.40	0.50	0.60	0.71	0.71	0.89	1.07	1.29	1.43	1.61	1.93	2.41	2.89	2.94	2.94	2.94	2.94	2.94	2.94
	oz-in	16.9	20.2	28.1	33.7	42.2	50.6	56.2	70.3	84.3	101.2	101.2	126.5	151.7	182.1	202.3	227.6	273.1	341.4	409.7	416.3	416.3	416.3	416.3	416.3	416.3
	kgf · cm	1.2	1.5	2.0	2.4	3.0	3.6	4.1	5.1	6.1	7.3	7.3	9.1	10.9	13.1	14.6	16.4	19.7	24.6	29.5	30.0	30.0	30.0	30.0	30.0	30.0

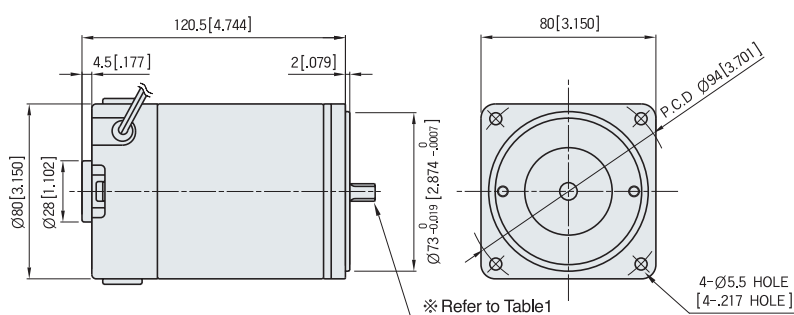
- The code in ■ of gearhead model is for gear ratio
- It is the permissible torque of the assembled motor and gearhead
The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30 f .
- ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load
- There is no marked the L code for it is an exclusive use.



STANDARD TYPE S8D SERIES [25~40W]

MOTOR DIMENSION

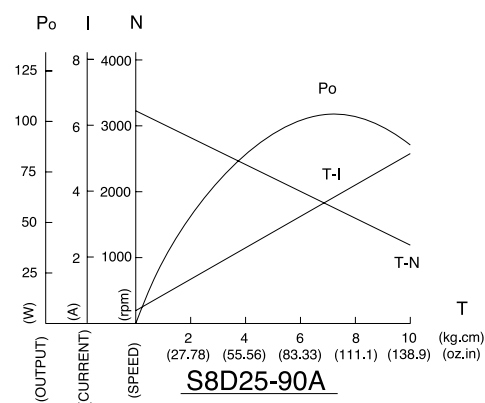
UNIT : mm[inch]



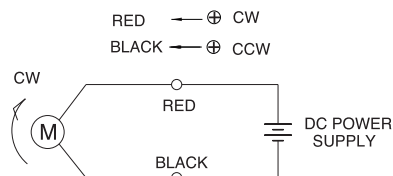
SPEC for output shaft of motor-(Table 1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S8D25- A S8D40- A	S8D25- S S8D40- S	S8D25- D S8D40- D	S8D25- K S8D40- K

CHARACTERISTIC CURVE



CIRCUIT DIAGRAM



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

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S8D25-12□	12	25	3200	1.40	3100	0.078	N-m	3.80	2000	1.7
						11.1	oz-in			
						0.80	kgf cm			
S8D25-24□	24	25	3000	0.70	2850	0.083	N-m	1.70	2000	1.7
						11.8	oz-in			
						0.85	kgf cm			
S8D25-90□	90	25	3200	0.20	3000	0.078	N-m	0.50	2000	1.7
						11.1	oz-in			
						0.80	kgf cm			
S8D40-12□	12	40	3200	2.50	2900	0.132	N-m	7.40	2000	1.7
						18.7	oz-in			
						1.35	kgf cm			
S8D40-24□	24	40	3100	0.80	3000	0.127	N-m	2.30	2000	1.7
						18.0	oz-in			
						1.30	kgf cm			
S8D40-90□	90	40	3200	0.30	3000	0.127	N-m	0.70	2000	1.8
						18.0	oz-in			
						1.30	kgf cm			

※ Run duty is valued at rated Voltage and No load

INTER-DECIMAL GEAR HEAD
※ MODEL : S8GX10B



GEAR HEAD	MOTOR
Technical drawing of a gear head. It shows a shaft with a gear. The shaft diameter is 25 ± 0.2 [$984 \pm .0073$]. The gear bore diameter is $4 \begin{smallmatrix} -0.03 \\ 0 \end{smallmatrix}$ [$1.57 \begin{smallmatrix} 0 \\ -0.012 \end{smallmatrix}$]. The gear bore length is $1 \begin{smallmatrix} -0.03 \\ 0 \end{smallmatrix}$ [$.157 \begin{smallmatrix} 0 \\ -0.012 \end{smallmatrix}$].	Technical drawing of a motor. It shows a shaft with a motor. The shaft diameter is 25 ± 0.2 [$984 \pm .0073$]. The motor bore diameter is $3 \begin{smallmatrix} -0.025 \\ 0 \end{smallmatrix}$ [$.118 \begin{smallmatrix} 0 \\ -0.010 \end{smallmatrix}$]. The motor bore length is $1 \begin{smallmatrix} -0.025 \\ 0 \end{smallmatrix}$ [$.118 \begin{smallmatrix} 0 \\ -0.010 \end{smallmatrix}$].

S6D10-24A

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
	No Load rpm	1067	889	640	533	427	356	320	256	213	178	160	128	107	89	80	64	53	43	36	32	27	21	18	16
S8KA B	N-m	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.79	0.95	1.14	1.14	1.43	1.71	2.06	2.29	2.57	3.09	3.86	4.63	5.14	6.17	7.72	7.84	7.84
	oz-in	27.0	32.4	45.0	54.0	67.4	80.9	89.9	112.4	134.9	161.9	161.9	202.3	242.8	291.3	323.7	364.2	437.0	546.3	655.5	728.4	874.0	1092.5	1110.1	1110.1
	kg · cm	1.9	2.3	3.2	3.9	4.9	5.8	6.5	8.1	9.7	11.7	11.7	14.6	17.5	21.0	23.3	26.2	31.5	39.4	47.2	52.5	63.0	78.7	80.0	80.0

S8D40-90A

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
	No Load rpm	1067	889	640	533	427	356	320	256	213	178	160	128	107	89	80	64	53	43	36	32	27	21	18	16
S8KA B	N-m	0,31	0,37	0,52	0,62	0,77	0,93	1,03	1,29	1,55	1,86	1,86	2,32	2,79	3,34	3,71	4,18	5,02	6,27	7,52	7,84	7,84	7,84	7,84	7,84
	oz-in	43,8	52,6	73,1	87,7	109,6	131,5	146,1	182,7	219,2	263,0	263,0	328,8	394,5	473,4	526,0	591,8	710,2	887,7	1065,2	1110,1	1110,1	1110,1	1110,1	1110,1
	kgf·cm	3,2	3,8	5,3	6,3	7,9	9,5	10,5	13,2	15,8	19,0	19,0	23,7	28,4	34,1	37,9	42,6	51,2	64,0	76,8	80,0	80,0	80,0	80,0	80,0

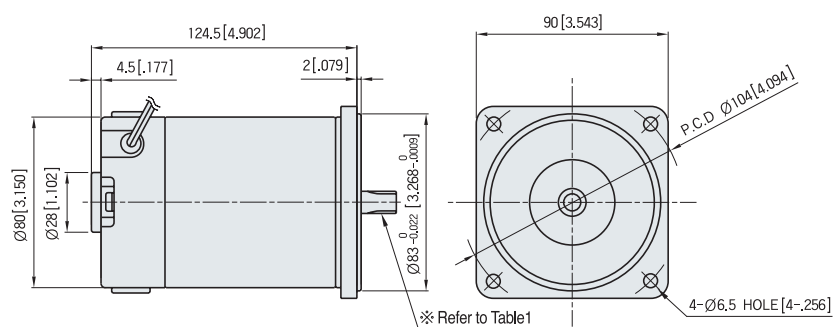
- The code in of gearhead model is for gear ratio
- It is the permissible torque of the assembled motor and gearhead
The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is $30 \cdot f \cdot \dots$
- color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2–20% than the displayed value according to the load
- There is no marked the code for it is an exclusive use.



STANDARD TYPE S9D SERIES [40W]

MOTOR DIMENSION

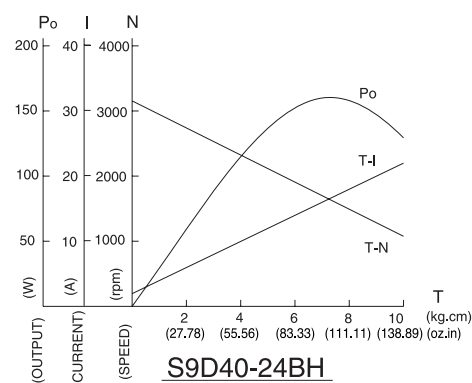
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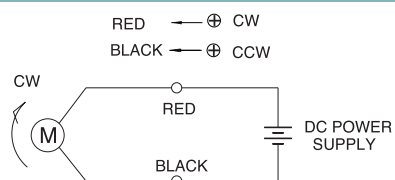
SPEC for output shaft of motor-(Table 1)

MODEL	GEARED TYPE S9D40- BH	STRAIGHT TYPE S9D40- S	D-CUT TYPE S9D40- D	KEY TYPE S9D40- K
	18.5[.728]	37[1.457]	37[1.457] 30[1.181] 9-0.1 [3.54-0.04]	37[1.457] 25[.984] 4-0.1 [1.57-0.01] 2.5 ^{+0.1} ₀ 0.098 ^{+0.009} ₀

CHARACTERISTIC CURVE



CIRCUIT DIAGRAM



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

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S9D40-12□	12	40	3100	2.5	2800	0.137	N-m	2.0	2000	0.6
						19.4	oz-in			
						1.40	kgf cm			
S9D40-24□	24	40	3100	1.5	2900	0.132	N-m	1.0	2000	0.6
						18.7	oz-in			
						1.35	kgf cm			
S9D40-90□	90	40	3200	0.3	3000	0.127	N-m	0.3	2000	0.6
						18.0	oz-in			
						1.30	kgf cm			

※ Run duty is valued at rated Voltage and No load

21C, for World geared motor!



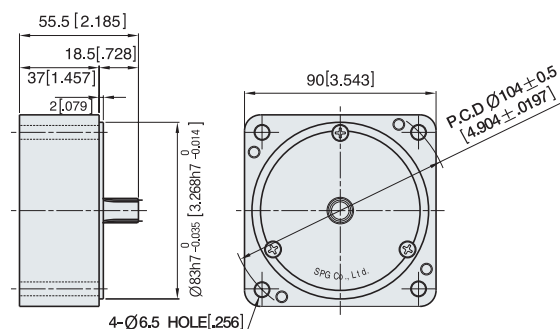
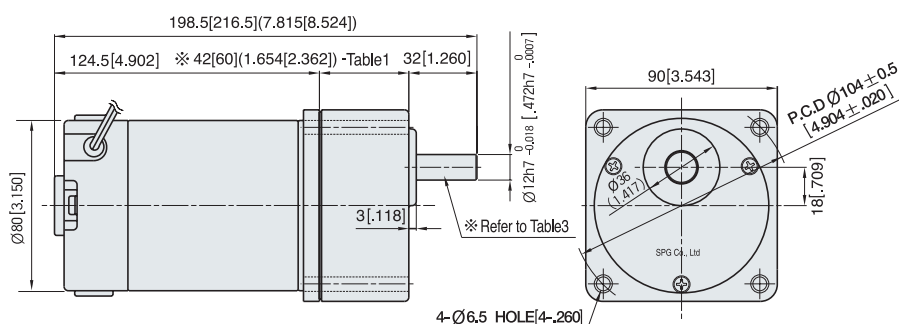
GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

GEARED MOTOR ※ MOTOR MODEL : S9 40- B
※ HEAD MODEL : S9 B3 ~S9 B200

INTER-DECIMAL GEAR HEAD

※ MODEL : S9GX10B(H,L)



30(40) – (Table1)

GEAR RATIO	SIZE:mm[inch]
S9 B3 ~S9 B18	42 [1.654]
S9 B20 ~S9 B200	60 [2.362]

WEIGHT – (Table2)

PART	WEIGHT:kg[oz]
MOTOR	0.6/0.7
DECIMAL GEAR HEAD	0.60 [21.2]
GEAR HEAD	S9 B3 ~ S9 B18
	0.73 [25.7]
	S9 B20 ~ S9 B40
	1.03 [36.3]
GEAR HEAD	S9 B50 ~ S9 B200
	1.13 [39.9]

SPEC for output shaft of gearhead-(Table3)

MODEL	
STRAIGHT TYPE	
S9SB3 ~S9SB200	
D-CUT TYPE	
S9DB3 ~S9DB200	
KEY TYPE	
S9KB3 ~S9KB200	

KEY SPEC

GEAR HEAD	MOTOR

GEAR HEAD RATED LOAD

S9D40-24BH

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
S8KA B	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
	N·m	0.32	0.39	0.54	0.64	0.80	0.96	1.07	1.34	1.61	1.93	1.93	2.41	2.89	3.47	3.86	4.34	5.21	6.51	7.81	8.68	9.80	9.80	9.80	9.80
	oz·in	45.5	54.6	75.9	91.0	113.8	136.6	151.7	189.7	227.6	273.1	273.1	341.4	409.7	491.6	546.3	614.6	737.5	921.8	1106.2	1229.1	1387.7	1387.7	1387.7	1387.7
	kgf·cm	3.3	3.9	5.5	6.6	8.2	9.8	10.9	13.7	16.4	19.7	19.7	24.6	29.5	35.4	39.4	44.3	53.1	66.4	79.7	88.6	100.0	100.0	100.0	100.0

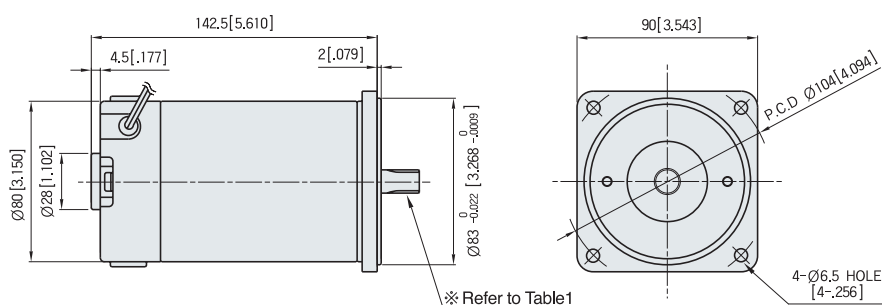
- The code in ■ of gearhead model is for gear ratio
- It is the permissible torque of the assembled motor and gearhead
The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30 f .
- ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load
- There is no marked the L code for it is an exclusive use.



STANDARD TYPE S9D SERIES [60~120W]

MOTOR DIMENSION

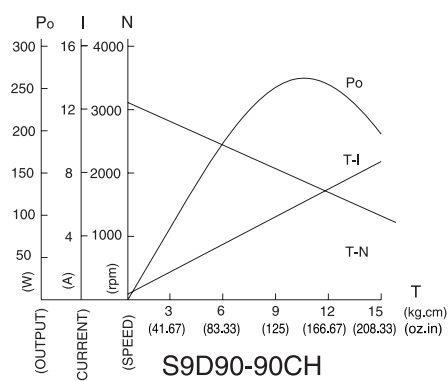
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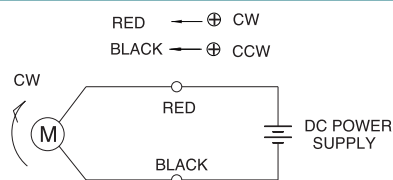
SPEC for output shaft of motor-(Table 1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
S9D60- CH	S9D60- S	S9D60- D	S9D60- K	
S9D90- CH	S9D90- S	S9D90- D	S9D90- K	
S9D120- CH	S9D120- S	S9D120- D	S9D120- K	
	21[.827]	37[1.457]	37[1.457] 30[1.181] 11.42 [4.03 -0.008] Ø12 [.472]	37[1.457] 25[.984] 11.42 [4.03 -0.008] Ø12 [.472] 2.5 ^{+0.1} ₀ [.098 +.0039]

CHARACTERISTIC CURVE



CIRCUIT DIAGRAM



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

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S9D60-12□	12	60	3000	2.5	2650	0.216	N-m	7.9	2000	2.2
						30.5	oz-in			
						2.20	kgf cm			
S9D60-24□	24	60	3000	1.2	2800	0.206	N-m	3.6	2000	2.2
						29.1	oz-in			
						2.10	kgf cm			
S9D60-90□	90	60	3100	0.3	2900	0.196	N-m	1.0	2000	2.2
						27.8	oz-in			
						2.00	kgf cm			
S9D90-12□	12	90	3100	3.0	2750	0.314	N-m	10.5	2000	2.2
						44.4	oz-in			
						3.20	kgf cm			
S9D90-24□	24	90	3250	2.4	2920	0.304	N-m	5.6	2000	2.2
						43.0	oz-in			
						3.10	kgf cm			
S9D90-90□	90	90	3100	0.3	2800	0.314	N-m	1.4	2000	2.2
						44.4	oz-in			
						3.20	kgf cm			
S9D120-12□	12	120	3300	3.5	2800	0.412	N-m	14.9	2000	2.2
						58.3	oz-in			
						4.20	kgf cm			
S9D120-24□	24	120	3300	2.0	2920	0.392	N-m	7.1	2000	2.2
						55.5	oz-in			
						4.00	kgf cm			
S9D120-90□	90	120	3000	0.3	2600	0.441	N-m	2.0	2000	2.2
						62.4	oz-in			
						4.50	kgf cm			

※ Run duty is valued at rated Voltage and No load

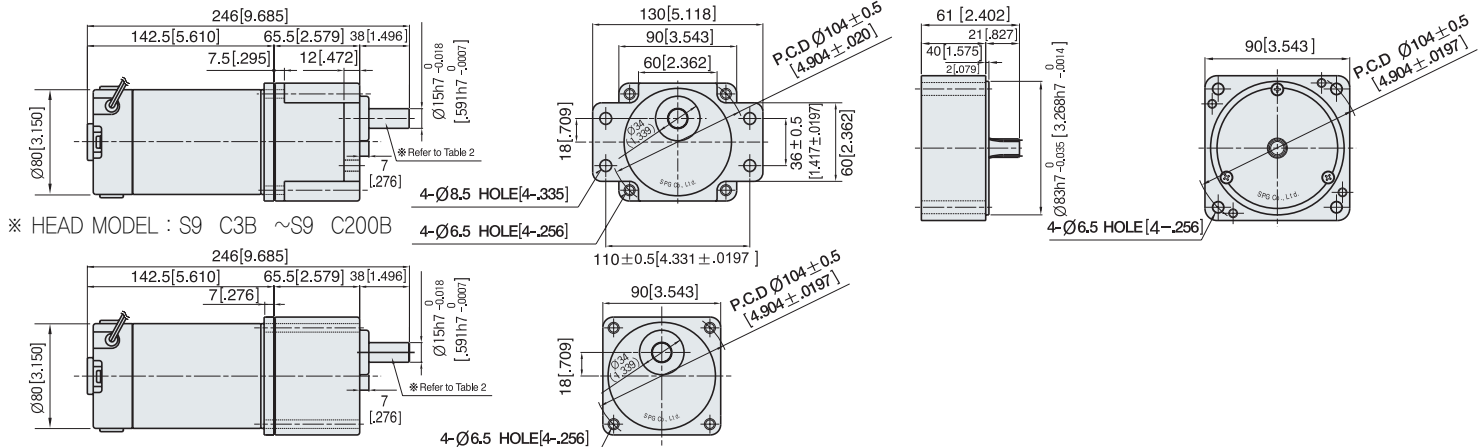
GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

GEARED MOTOR ※ MOTOR MODEL : S9D60- CH, S9D90- CH, S9D120- CH
※ HEAD MODEL : S9 C3B -S~S9 C200B -S

INTER-DECIMAL GEAR HEAD

※ MODEL : S9GX10B(H,L)-S



30(40) – (Table1)

SPEC for output shaft of gearhead-(Table 2)

KEY SPEC

PART		WEIGHT:kg(oz)
MOTOR		2.2(77.6)
DECIMAL GEAR HEAD		0.65(22.9)
GEAR HEAD	S9 C3B ~S9 C10B	1.21(42.7)
	S9 C12.5B ~S9 C20B	1.30(45.9)
	S9 C25B ~S9 C60B	1.40(49.4)
	S9 C75B ~S9 C200B	1.45(51.1)

MODEL	
STRAIGHT TYPE	
S9SB3 ~S9SB200	
D-CUT TYPE	
S9DB3 ~S9DB200	
KEY TYPE	
S9KB3 ~S9KB200	

GEAR HEAD	MOTOR

GEAR HEAD RATED LOAD

S9D60-90CH

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
S9KC□ B) S9KC□ B)-S	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
	N-m	0.48	0.57	0.79	0.95	1.19	1.43	1.59	1.79	2.14	2.57	2.86	3.21	3.86	4.63	5.14	6.43	7.72	8.68	10.42	11.57	13.89	17.36	19.60	19.60
	oz-in	67.4	80.9	112.4	134.9	168.6	202.3	224.8	252.9	303.5	364.2	404.6	455.2	546.3	655.5	728.4	910.5	1092.5	1229.1	1474.9	1638.8	1966.6	2458.2	2775.4	2775.4
S9KC□ B) S9KC□ B)-S	kgf·cm	4.9	5.8	8.1	9.7	12.2	14.6	16.2	18.2	21.9	26.2	29.2	32.8	39.4	47.2	52.5	65.6	78.7	88.6	106.3	118.1	141.7	177.1	200.0	200.0

S9D90-90CH

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
S9KC□ B) S9KC□ B)-S	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
	N-m	0.76	0.91	1.27	1.52	1.91	2.29	2.54	2.86	3.43	4.12	4.57	5.14	6.17	7.41	8.23	10.29	12.35	13.89	16.67	18.52	19.60	19.60	19.60	19.60
	oz-in	107.9	129.5	179.8	215.8	269.8	323.7	359.7	404.6	485.6	582.7	647.4	728.4	874.0	1048.8	1165.4	1456.7	1748.1	1966.6	2359.9	2622.1	2775.4	2775.4	2775.4	2775.4
S9KC□ B) S9KC□ B)-S	kgf·cm	7.8	9.3	13.0	15.6	19.4	23.3	25.9	29.2	35.0	42.0	46.7	52.5	63.0	75.6	84.0	105.0	126.0	141.7	170.1	189.0	200.0	200.0	200.0	200.0

S9D120-90CH

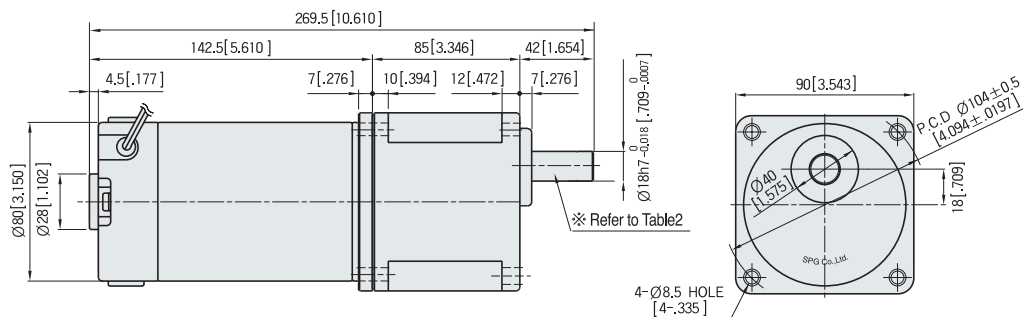
MODEL	GEAR RATIO	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
S9KC□ B) S9KC□ B)-S	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
	N-m	1.07	1.29	1.79	2.14	2.68	3.21	3.57	4.02	4.82	5.79	6.43	7.23	8.68	10.42	11.57	14.47	17.36	19.53	19.60	19.60	19.60	19.60	19.60	19.60
	oz-in	151.7	182.1	252.9	303.5	379.4	455.2	505.8	569.0	682.8	819.4	910.5	1024.3	1229.1	1474.9	1638.8	2048.5	2458.2	2765.5	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4
S9KC□ B) S9KC□ B)-S	kgf·cm	10.9	13.1	18.2	21.9	27.3	32.8	36.5	41.0	49.2	59.0	65.6	73.8	88.6	106.3	118.1	147.6	177.1	199.3	200.0	200.0	200.0	200.0	200.0	200.0

- 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 combination of the regular gearhead and the inter-decimal gearhead is 30 f .
- ■ 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.
- No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2~20% than the displayed value according to the load
- There is no marked the L code for it is an exclusive use.

GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

GEARED MOTOR ※ MOTOR MODEL : S9D60- CH, S9D90- CH, S9D120- CH
 ※ HEAD MODEL : S9 D3B~S9 D200B



30(40) – (Table1)

PART		WEIGHT:kg(oz)
MOTOR		2.2(77.6)
GEAR HEAD	S9 D3B ~S9 D10B	1.65(58.2)
	S9 D12.5B ~S9 D20B	1.80(63.5)
	S9 D25B ~S9 D60B	1.90(67.0)
	S9 D75B ~S9 D200B	1.95(68.8)

SPEC for output shaft of gearhead-(Table2)

MODEL	
STRAIGHT TYPE	
S9SD3B ~S9SD200B	
D-CUT TYPE	
S9DD3B ~S9DD200B	
KEY TYPE	
S9KD3B ~S9KD200B	

KEY SPEC

GEAR HEAD	MOTOR

GEAR HEAD RATED LOAD

S9D60-90CH

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
	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
S9KD□ B	N-m	0.48	0.57	0.79	0.95	1.19	1.43	1.59	1.79	2.14	2.57	2.86	3.21	3.86	4.63	5.14	6.43	7.72	8.68	10.42	11.57	13.89	17.36	20.83	23.15
	oz-in	67.4	80.9	112.4	134.9	168.6	202.3	224.8	252.9	303.5	364.2	404.6	455.2	546.3	655.5	728.4	910.5	1092.5	1229.1	1474.9	1638.8	1966.6	2458.2	2949.9	3277.6
	kgf·cm	4.9	5.8	8.1	9.7	12.2	14.6	16.2	18.2	21.9	26.2	29.2	32.8	39.4	47.2	52.5	65.6	78.7	88.6	106.3	118.1	141.7	177.1	212.6	236.2

S9D90-90CH

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
	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
S9KD□ B	N-m	0.76	0.91	1.27	1.52	1.91	2.29	2.54	2.86	3.43	4.12	4.57	5.14	6.17	7.41	8.23	10.29	12.35	13.89	16.67	18.52	22.22	27.78	29.40	29.40
	oz-in	107.9	129.5	179.8	215.8	269.8	323.7	359.7	404.6	485.6	582.7	647.4	728.4	874.0	1048.8	1165.4	1456.7	1748.1	1966.6	2359.9	2622.1	3146.5	3933.2	4163.0	4163.0
	kgf·cm	7.8	9.3	13.0	15.6	19.4	23.3	25.9	29.2	35.0	42.0	46.7	52.5	63.0	75.6	84.0	105.0	126.0	141.7	170.1	189.0	226.7	283.4	300.0	300.0

S9D120-90CH

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
	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
S9KD□ B	N-m	1.07	1.29	1.79	2.14	2.68	3.21	3.57	4.02	4.82	5.79	6.43	7.23	8.68	10.42	11.57	14.47	17.36	19.53	23.44	26.04	29.40	29.40	29.40	29.40
	oz-in	151.7	182.1	252.9	303.5	379.4	455.2	505.8	569.0	682.8	819.4	910.5	1024.3	1229.1	1474.9	1638.8	2048.5	2458.2	2765.5	3318.6	3687.4	4163.0	4163.0	4163.0	4163.0
	kgf·cm	10.9	13.1	18.2	21.9	27.3	32.8	36.5	41.0	49.2	59.0	65.6	73.8	88.6	106.3	118.1	147.6	177.1	199.3	239.1	265.7	300.0	300.0	300.0	300.0

■ 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 combination of the regular gearhead and the inter-decimal gearhead is 30 f .

■ ■ 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.

■ No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load

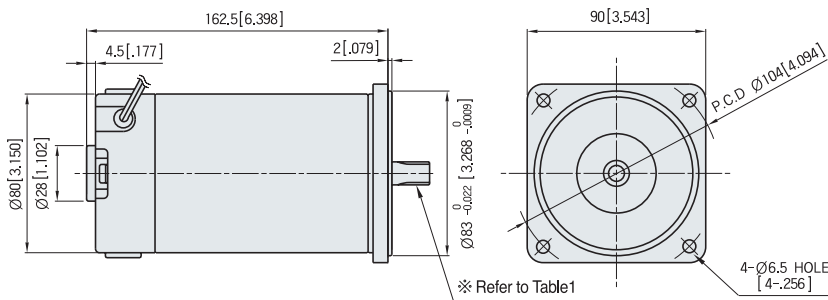
■ There is no marked the L code for it is an exclusive use.

STANDARD TYPE S9D SERIES [150W]

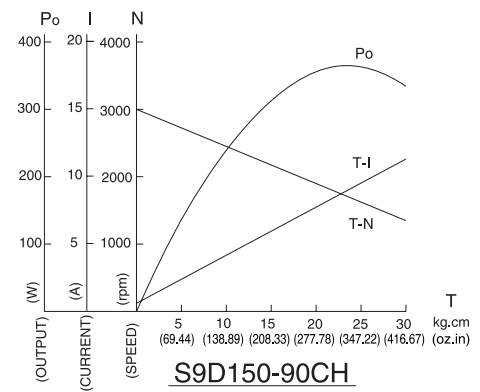


MOTOR DIMENSION

UNIT : mm[inch]



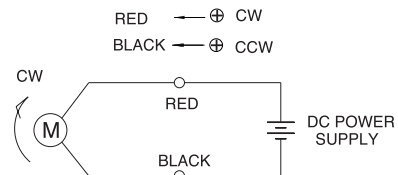
CHARACTERISTIC CURVE



SPEC for output shaft of motor-(Table1)

MODEL	GEARED TYPE S9D150- CH	STRAIGHT TYPE S9D150- S	D-CUT TYPE S9D150- D	KEY TYPE S9D150- K

CIRCUIT DIAGRAM



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

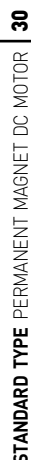
MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod			Run Duty	Weight	
			Speed	Current(MAX.)	Speed	Torque				Current
	V	W	RPM	A	RPM			A	Hr	Kg
S9D150-12□	12	150	3200	3.0	2560	0.559	N-m	2.0	2000	2.8
						79.1	oz-in			
						5.70	kgf cm			
S9D150-24□	24	150	3000	2.0	2650	0.539	N-m	1.0	2000	2.8
						76.3	oz-in			
						5.50	kgf cm			
S9D150-90□	90	150	3000	0.5	2650	0.539	N-m	0.3	2000	2.8
						76.3	oz-in			
						5.50	kgf cm			

※ Run duty is valued at rated Voltage and No load

INTER-DECIMAL GEAR HEAD
※ MODEL : S9GX10BH-S



KEY SPEC

GEAR HEAD	MOTOR

S9D150-90CH

[illegible]

- 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 combination of the regular gearhead and the inter-decimal gearhead is $30 \cdot f \cdot \dots$
- 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.
- No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2–20% than the displayed value according to the load
- There is no marked the code for it is an exclusive use.

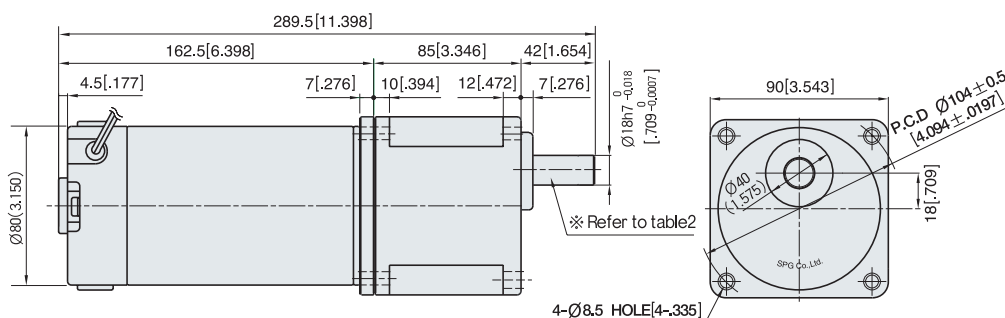
21C, for World geared motor!



GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

GEARED MOTOR ※ MOTOR MODEL : S9D150- CH
※ HEAD MODEL : S9 D3B~S9 D200B



30(40) – (Table1)

PART		WEIGHT:kg(oz)
MOTOR		2.2(77.6)
GEAR HEAD	S9 D3B ~S9 D10B	1.65(58.2)
	S9 D12.5B ~S9 D20B	1.80(63.5)
	S9 D25B ~S9 D60B	1.90(67.0)
	S9 D75B ~S9 D200B	1.95(68.8)

SPEC for output shaft of gearhead-(Table2)

MODEL	
STRAIGHT TYPE	
S9SD3B ~S9SD200B	
D-CUT TYPE	
S9DD3B ~S9DD200B	
KEY TYPE	
S9KD3B ~S9KD200B	

KEY SPEC

GEAR HEAD	MOTOR

GEAR HEAD RATED LOAD

S9D150-90HH

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
S9KD□ B S9KD□ B-S	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
	N-m	1,31	1,57	2,18	2,62	3,27	3,93	4,37	4,91	5,89	7,07	7,86	8,84	10,61	12,73	14,15	17,68	21,22	23,87	28,64	29,40	29,40	29,40	29,40	29,40
	oz-in	85,5	222,6	309,1	370,9	463,7	556,4	618,2	695,5	834,6	1001,5	1112,8	1251,9	1502,3	1802,7	2003,0	2503,8	3004,5	3380,1	4056,1	4163,0	4163,0	4163,0	4163,0	4163,0
	kgf·cm	13,4	16,0	22,3	26,7	33,4	40,1	44,6	50,1	60,1	72,2	80,2	90,2	108,3	129,9	144,3	180,4	216,5	243,6	292,3	300,0	300,0	300,0	300,0	300,0

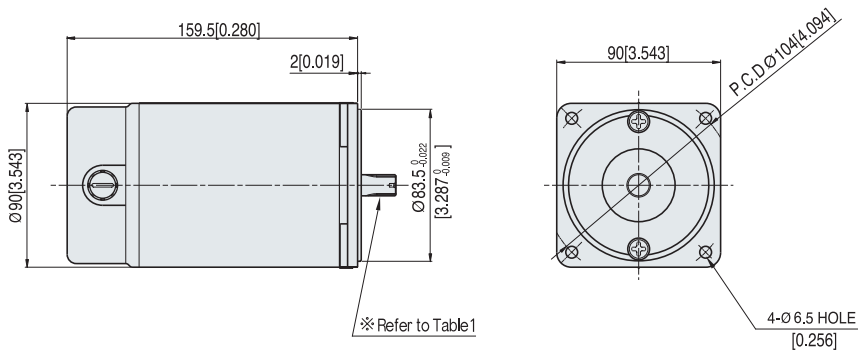
- The code in of gearhead model is for gear ratio
- It is the permissible torque of the assembled motor and gearhead
The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30 f .
- color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load
- There is no marked the L code for it is an exclusive use.



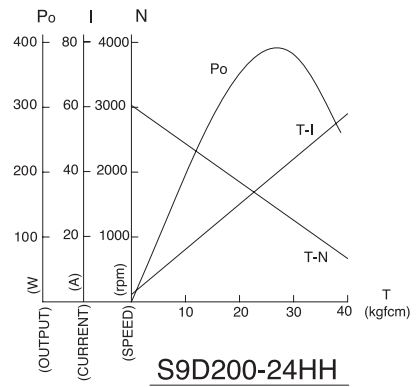
STANDARD TYPE S9D SERIES [200W]

MOTOR DIMENSION

UNIT : mm[inch]



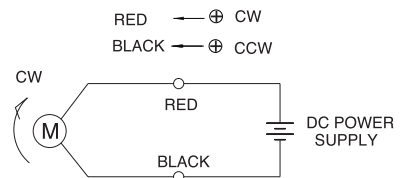
CHARACTERISTIC CURVE



SPEC for output shaft of motor-(Table 1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D300- HH	S9D300- S	S9D300- D	S9D300- K

CIRCUIT DIAGRAM



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

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S9D200-12□	12	200	3050	3.2	2260	0,843	N-m	27,0	2000	4.5
						119,3	oz-in			
						8,60	kgf cm			
S9D200-24□	24	200	3050	2.0	2600	0,735	N-m	12,0	2000	4.5
						104,1	oz-in			
						7,50	kgf cm			
S9D200-90□	90	200	3050	0.5	2670	0,715	N-m	2,8	2000	4.5
						101,3	oz-in			
						7,30	kgf cm			

* Run duty is valued at rated Voltage and No load

Technical drawing of the SPG Co., Ltd. SPG-100-018, showing dimensions in millimeters and inches.

Side View Dimensions:

- Total Length: 321.5 [12.657]
- Distance from Left End to First Flange: 194.5 [7.657]
- Distance between Flanges: 85 [3.346]
- Distance from Last Flange to Right End: 42 [1.654]
- Flange Thickness: 7 [0.276]
- Distance between Flanges (Inner): 10 [0.394]
- Distance between Flanges (Outer): 12 [0.472]
- Distance from Last Flange to Right End (Inner): 7 [0.276]
- Central Hole Diameter: $\varnothing 187^{+0.018}_{-0.007}$ [$\varnothing.708717 -0.007$]
- Small Hole Diameter: $\varnothing 40$ [1.575]
- Reference: $\times$ Refer to Table2
- Bottom Hole: 4- $\varnothing 8.5$ HOLE [$\varnothing 0.335$]

Top View Dimensions:

- Flange Side Length: 90 [3.543]
- Central Hole Diameter: P.C.D. $\varnothing 104 \pm 0.05$ [4.094 $\pm$.0197]
- Distance from Center to Corner Hole: 18 [0.709]
- Corner Hole Diameter: $\varnothing 40$ [1.575]
- SPG Co., Ltd. logo

KEY SPEC

GEAR HEAD	MOTOR
27.5$\pm$0.2 1.083$\pm$0.009 5.0$\pm$0.03 0.197$\pm$0.012 5.0$\pm$0.03	27.5$\pm$0.2 0.894$\pm$0.009 4.0$\pm$0.03 0.157$\pm$0.012 4.0$\pm$0.03

S9D200-90HH

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
	No Load rpm	1017	847	610	508	407	339	305	244	203	169	153	122	102	85	76	61	51	41	34	31	25	20	17	15
S9KH0 B	N-m	1,74	2,09	2,90	3,48	4,35	5,22	5,79	6,52	7,82	9,39	10,43	10,56	14,08	16,90	18,77	23,47	28,16	29,40	29,40	29,40	29,40	29,40	29,40	29,40
	oz-in	246,2	295,4	410,3	492,3	615,4	738,5	820,5	923,1	1107,7	1329,3	1477,0	1495,4	1993,9	2392,7	2658,5	3323,2	3987,8	4163,0	4163,0	4163,0	4163,0	4163,0	4163,0	4163,0
	kgf·cm	17,7	21,3	29,6	35,5	44,3	53,2	59,1	66,5	79,8	95,8	106,4	107,8	143,7	172,4	191,6	239,5	287,4	300,0	300,0	300,0	300,0	300,0	300,0	300,0

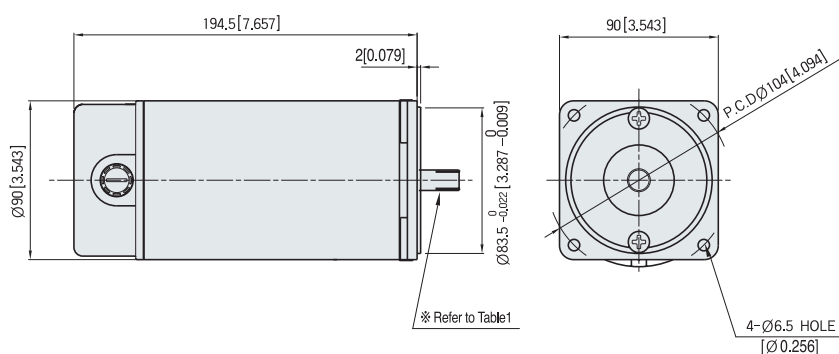
- The code in ■ of gearhead model is for gear ratio
- It is the permissible torque of the assembled motor and gearhead
The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is $30 \text{ f} \cdot \text{N} \cdot \text{m}$.
- ■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2~20% than the displayed value according to the load
- There is no marked the L code for it is an exclusive use.



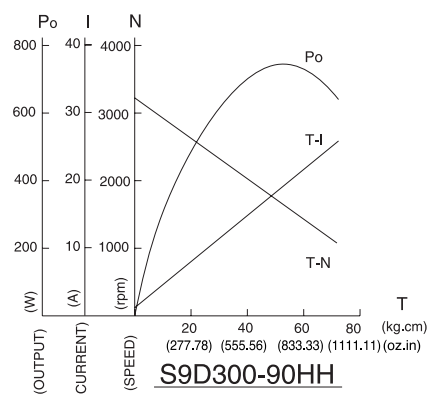
STANDARD TYPE S9D SERIES [300W]

MOTOR DIMENSION

UNIT : mm[inch]



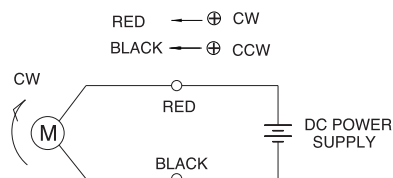
CHARACTERISTIC CURVE



SPEC for output shaft of motor-(Table1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D300- HH	S9D300- S	S9D300- D	S9D300- K

CIRCUIT DIAGRAM



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

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod			Run Duty	Weight	
			Speed	Current(MAX.)	Speed	Torque				Current
	V	W	RPM	A	RPM			A	Hr	Kg
S9D300-24□	24	300	3000	1.4	2520	1,137	N-m	13,9	2000	4,7
						161,0	oz-in			
						11,60	kgf cm			
S9D300-90□	90	300	3000	0.5	2700	1,058	N-m	4,2	2000	4,7
						149,9	oz-in			
						10,80	kgf cm			

* Run duty is valued at rated Voltage and No load

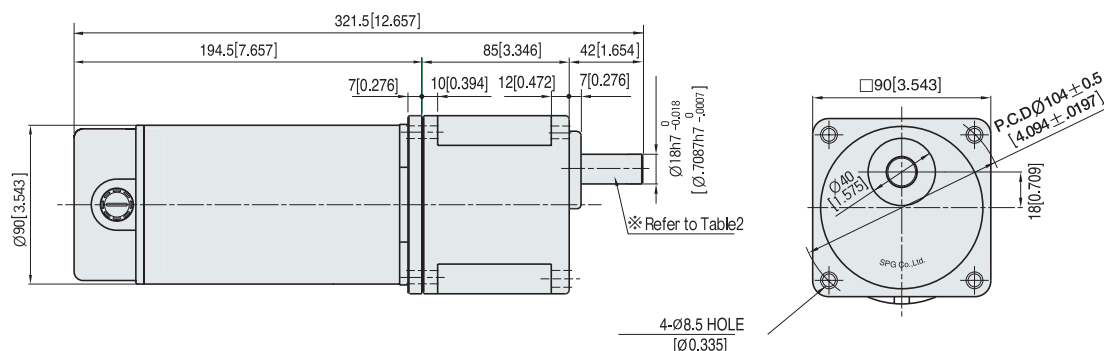
21C, for World geared motor!



GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

GEARED MOTOR ※ MOTOR MODEL : S9D300- HH
※ HEAD MODEL : S9 H3B~S9 H200B



30(40) – (Table1)

PART			WEIGHT:kg(oz)
MOTOR			5.0(176.4)
GEAR HEAD	S9 H3B	~S9 H10B	1.65(58.2)
	S9 H12.5B	~S9 H20B	1.80(63.5)
	S9 H25B	~S9 H60B	1.90(67.0)
	S9 H75B	~S9 H200B	1.95(68.8)

SPEC for output shaft of gearhead-(Table2)

MODEL	
STRAIGHT TYPE	
S9SH3B ~S9SH200B	
D-CUT TYPE	
S9DH3B ~S9DH200B	
KEY TYPE	
S9KH3B ~S9KH200B	

KEY SPEC

GEAR HEAD	MOTOR

GEAR HEAD RATED LOAD

S9D300-90HH

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
S9KH□B	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
	N·m	2.57	3.08	4.28	5.14	6.42	7.71	8.57	9.64	11.56	13.88	15.42	17.34	20.81	24.98	27.75	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
	oz·in	363.8	436.6	606.4	727.7	909.6	1091.5	1212.8	1364.4	1637.3	1964.8	2183.1	2456.0	2947.1	3536.6	3929.5	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0
	kgf·cm	26.2	31.5	43.7	52.4	65.5	78.7	87.4	98.3	118.0	141.6	157.3	177.0	212.4	254.9	283.2	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0

- 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 combination of the regular gearhead and the inter-decimal gearhead is 30 f .
- ■ 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.
- No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load
- There is no marked the L code for it is an exclusive use.

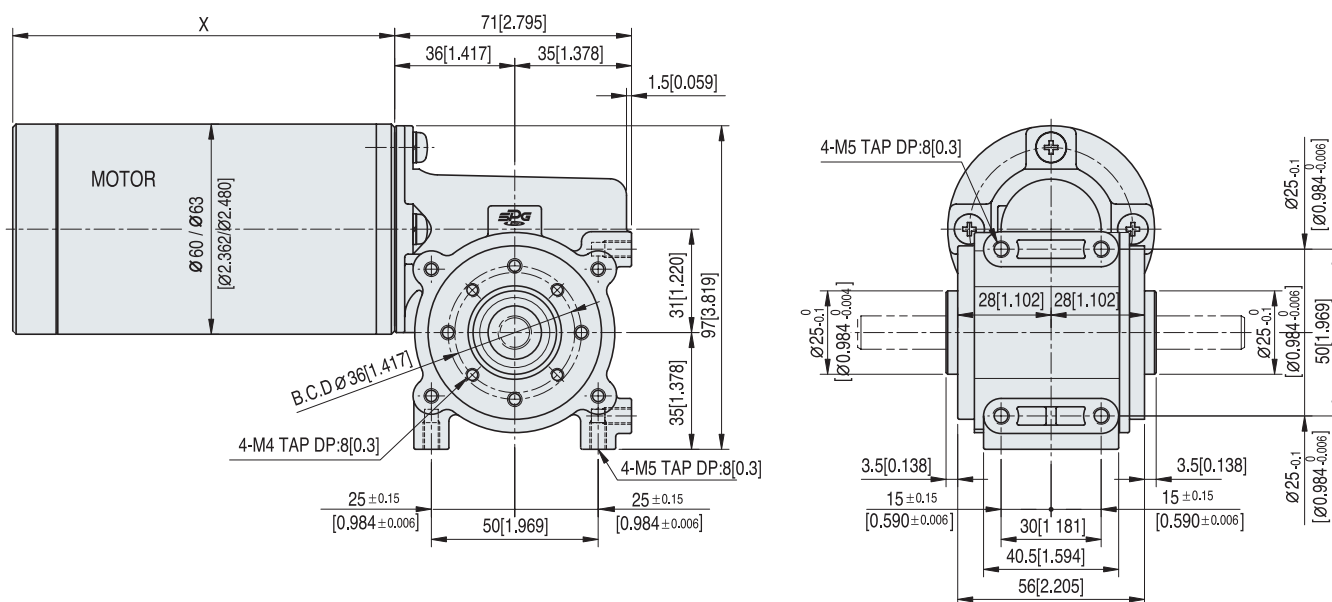


WORM GEARED TYPE

RA6 SERIES MOTOR

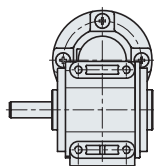
MOTOR DIMENSION

UNIT : mm[inch]

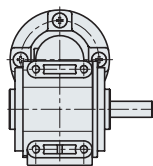


SHAFT TYPE

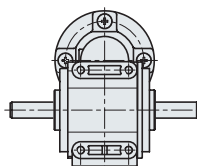
STANDARD (Shaft on left)



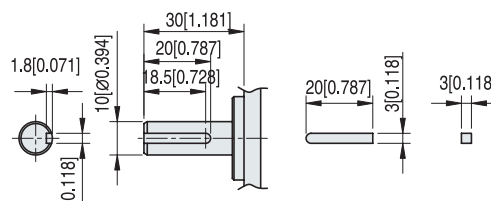
SPECIAL (Shaft on right)



SPECIAL (Shaft on both)



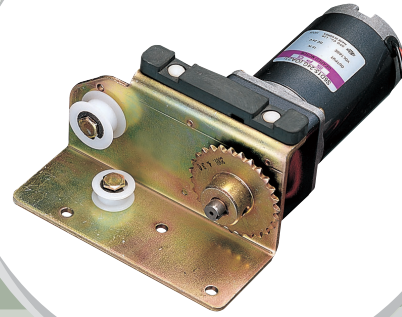
OUTPUT DIMENSION



MOTOR SPECIFICATION

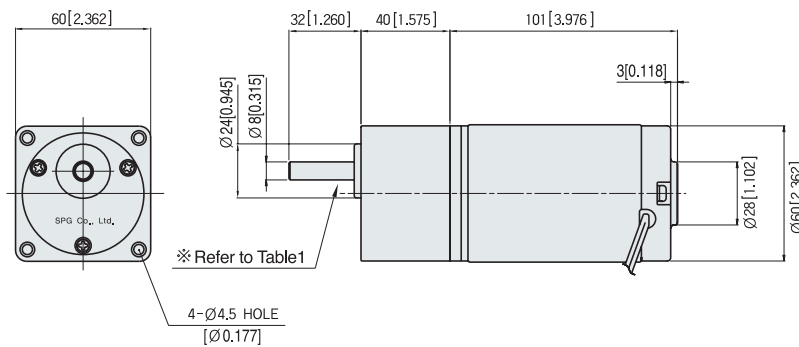
Gear Ratio	5	10	15	24	38	50	75
Output Speed(rpm)	740	370	247	154	97	74	49
Efficiency	0.7	0.65	0.55	0.5	0.4	0.35	0.25
Permissible Torque (kgf-cm)	40						
Weight of Gearbox (kg)	1						
Axial Load / Thrust Load (kgf)	30 / 35						

SPECIAL TYPE MEDICAL DC MOTOR

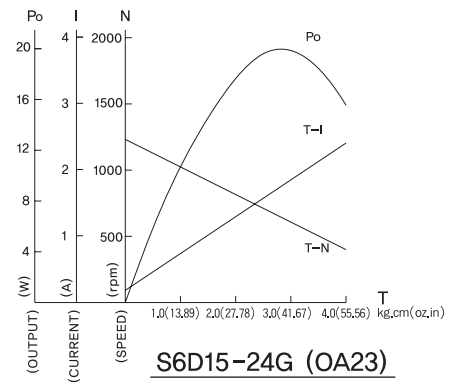


MOTOR DIMENSION

UNIT : mm[inch]



CHARACTERISTIC CURVE



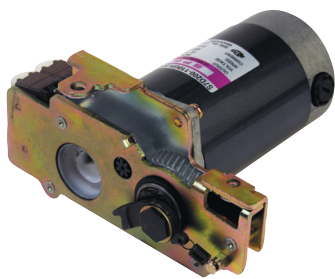
SPEC for output shaft of motor-(Table1)

MODEL	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE

MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Lod			Run Duty	Weight (Only motor)
			Revolution	Current	Revolution	Torque	Current		
	V	W	RPM	A	RPM	kg · cm(oz · in)	A	Hr	Kg(oz)
S6D15-24G(OA23)	24	15	1270	MAX.0.25	915	1.6(22.22)	1.2	2000	0.9(31.75)

※ Run duty is valued at rated Voltage and No load

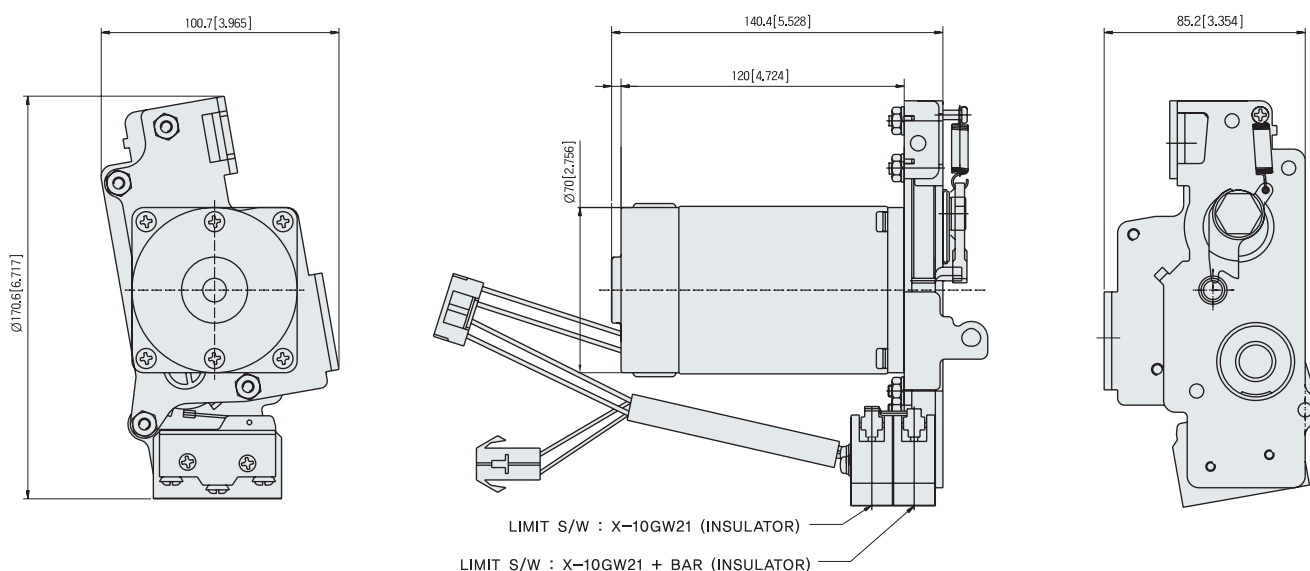


SPECIAL TYPE

HEAVY-ELECTRIC DC MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Lod			Run Duty	Weight (Only motor)
	V	W	Revolution	Current	Revolution	Torque	Current		
			RPM	A	RPM	kg · cm(oz · in)	A	Hr	Kg(oz)
S7D200-110GH(OB51)	110	220	4000	MAX,0,3	3250	6,0(83,33)	2,4	1000	2,4(84,7)
S7D225-125GH(OB52)	125	225	4500	MAX,0,3	3650	6,0(83,33)	2,4	1000	2,4(84,7)
S7D200-220GH(OB53)	220	200	4000	MAX,0,2	3250	6,0(83,33)	1,2	1000	2,4(84,7)
S7D150-24GH(OB54)	24	150	3800	MAX,1,0	2450	6,0(83,33)	11,0	1000	2,4(84,7)
S7D175-48GH(OB55)	48	175	3850	MAX,0,5	2850	6,0(83,33)	5,5	1000	2,4(84,7)

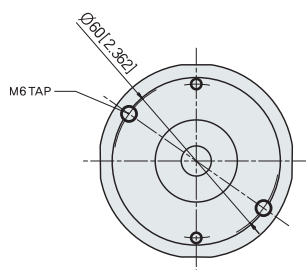
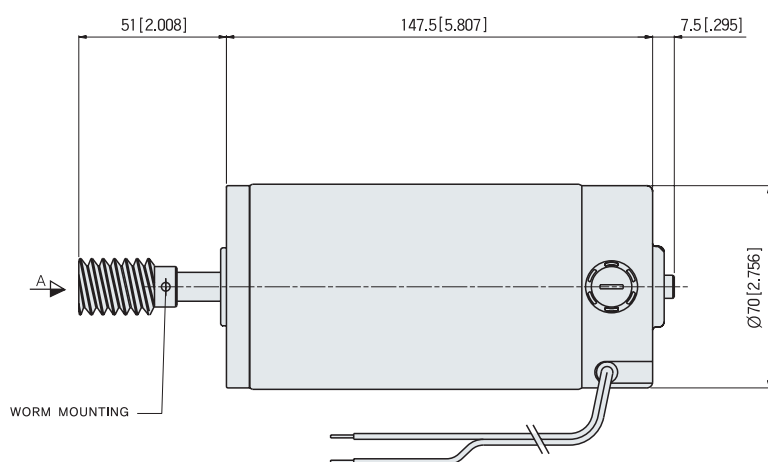
※ Run duty is valued at rated Voltage and No load

SPECIAL TYPE AUTOMATIC DOOR DC MOTOR

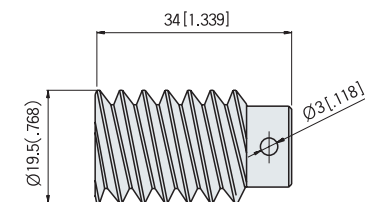


MOTOR DIMENSION

UNIT : mm[inch]



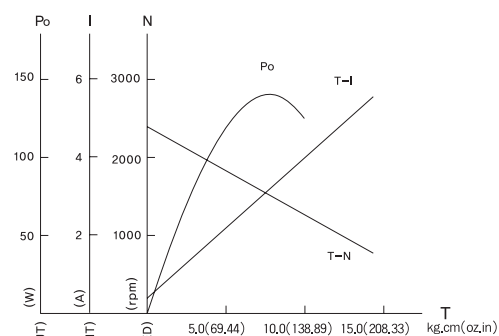
VIEW A



WORM DIMENSION (SCALE 2:1)

※ Refer to Table1

CHARACTERISTIC CURVE



S7D90-90S (OA14)

SPEC for worm gear (1)

MODULE	1.25
NO. OF STARTS	3(Right)
P.C.D	17(.669)

MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Lod			Run Duty	Weight (Only motor)
	V	W	Revolution	Current	Revolution	Torque	Current	Hr	Kg(oz)
			RPM	A	RPM	kg · cm(oz · in)	A		
S7D90-90S(OA14)	90	90	2400	MAX.0.2	2000	4.4(61.1)	1.5	2000	1.9(67.0)

※ Run duty is valued at rated Voltage and No load



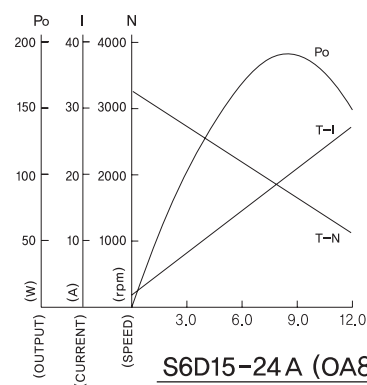
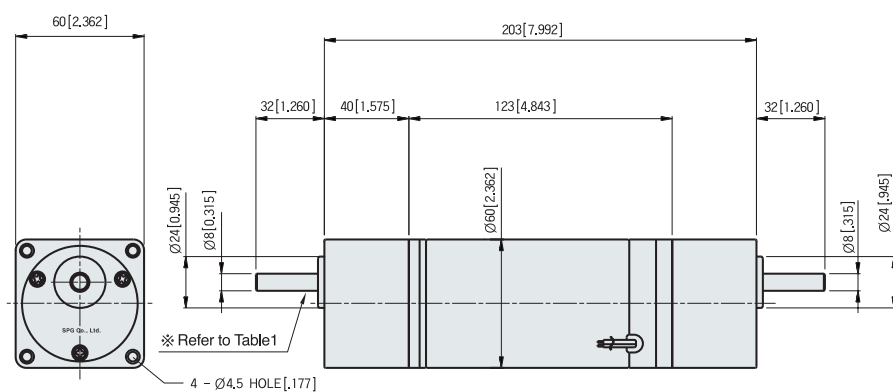
SPECIAL TYPE

DUAL GEAR-HEAD DC MOTOR

MOTOR DIMENSION

UNIT : mm[inch]

CHARACTERISTIC CURVE



SPEC for output shaft of motor-(Table1)

MODEL	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S6SA3 ~S6SA250	S6DA3 ~S6DA250	S6KA3 ~S6KA250

MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Lod			Run Duty	Weight (Only motor)
			Revolution	Current	Revolution	Torque	Current		
	V	W	RPM	A	RPM	kg · cm(oz · in)	A	Hr	Kg(oz)
S6D35-24A(OA80)	24	35	3200	MAX1.0	2850	1.20(16.66)	2.2	2000	1.5(52.9)

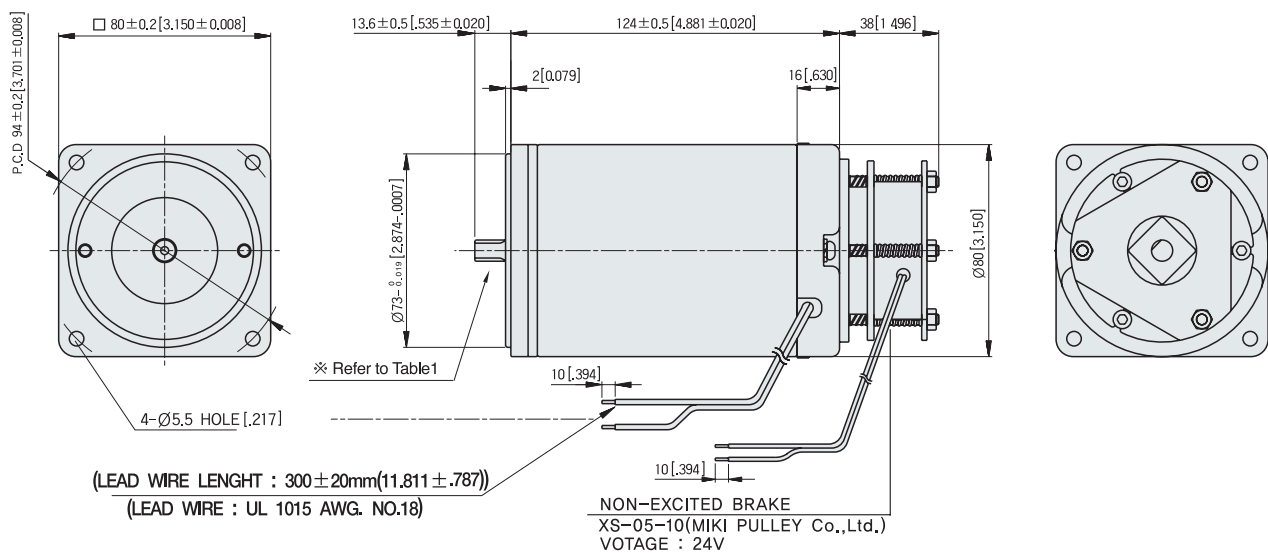
※ Run duty is valued at rated Voltage and No load

SPECIAL TYPE ELECTRIC-BRAKE ASSEMBLY DC MOTOR



MOTOR DIMENSION

UNIT : mm[inch]



SPEC for output shaft of motor-(Table1)

MODEL	GEAR TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE

MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Lod			Run Duty	Weight (Only motor)
			Revolution	Current	Revolution	Torque	Current		
	V	W	RPM	A	RPM	kg · cm(oz · in)	A	Hr	Kg(oz)
S8D40-24A(OB85)	24	40	3100	MAX,0.8	3000	1.3(18.05)	2.1	2000	5.0(176.4)

※ Run duty is valued at rated Voltage and No load

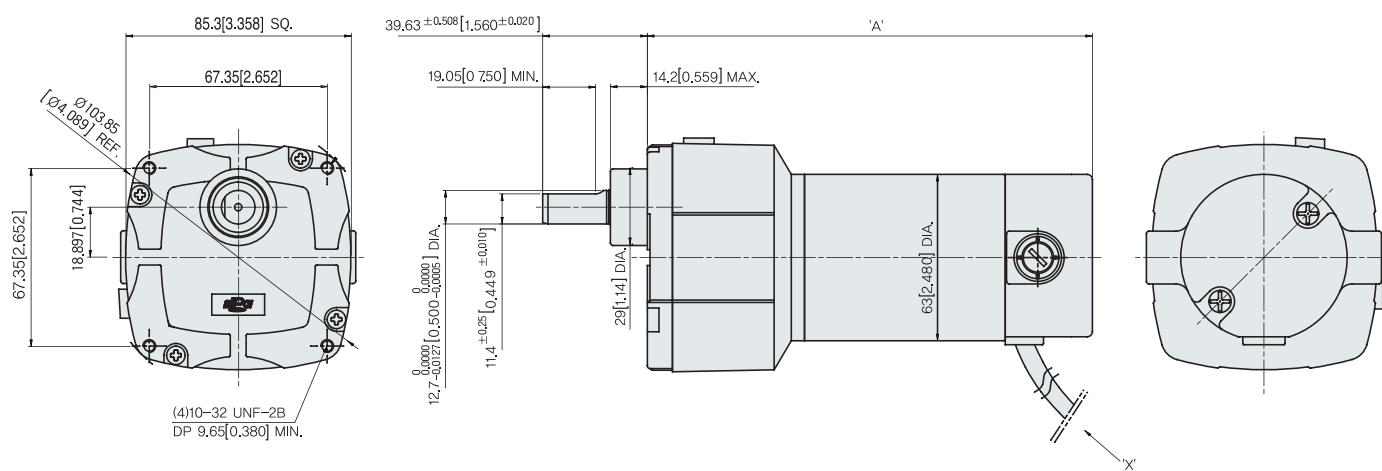


SPECIAL TYPE

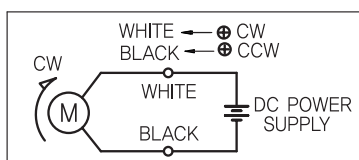
BS2 □ SERIES DC GEARED MOTOR

MOTOR DIMENSION

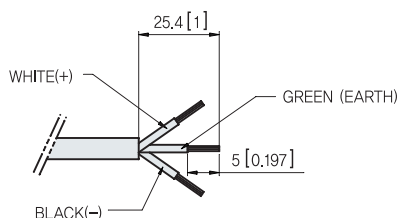
UNIT : mm[inch]



CIRCUIT DIAGRAM



(THE DIRECTION OF MOTOR ROTATION IS AS VIEWED FROM THE OUTPUT SHAFT END OF THE MOTOR)



VIEW "X"

STANDARD FEATURES

- Vented gearhousing for extended seal life.
- Industrial lip type seals on motors and output shaft.
- Needle bearing on output shaft for increased radial load capacity and long life.
- Permanently lubricated gearing utilizing oil for long life.
- Helical pinion accurately cut on motor shaft for maximum strength and minimum noise.

21C, for World geared motor!



MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Load			Dimension	Run Duty	Weight
			Speed	Current	Speed	Torque	Current	A		
	V	W	RPM	A	RPM	kg-cm(lb-in)	A	mm/inch		
BS23DA	24	26	2800	0,3 max	2450	1,03(0,89)	1,8	152,5/6,00	2000	1,9(4,19)
BS23DB	130	26	2800	0,3 max	2500	1,01(0,88)	0,4	152,5/6,00	2000	1,9(4,19)
BS24DA	24	44	2800	0,3 max	2400	1,80(1,56)	2,6	168,5/6,63	2000	2,1(4,63)
BS24DB	130	44	2800	0,3 max	2450	1,75(1,52)	0,5	168,5/6,63	2000	2,1(4,63)

※ Run Duty

Geared motor rated torque

TYPE	GEAR RATIO	6	12	18	30	60	90	180	300	450
BS23DA	rpm	408,3	204,2	136,1	81,7	40,8	27,2	13,6	8,2	5,4
	kg-cm	5,30	10,60	15,90	26,49	46,09	46,09	46,09	46,09	46,09
	N-m(lb-in)	0,52(4,60)	1,04(9,20)	1,56(13,80)	2,60(23,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)
BS23DB	rpm	416,7	208,3	138,9	83,3	41,7	27,8	13,9	8,3	5,6
	kg-cm	5,20	10,39	15,59	25,98	46,09	46,09	46,09	46,09	46,09
	N-m(lb-in)	0,51(4,51)	1,02(9,02)	1,53(13,53)	2,55(22,55)	4,52(40,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)
BS24DA	rpm	400,0	200,0	133,3	80,0	40,0	26,7	13,3	8,0	5,3
	kg-cm	9,26	18,52	27,78	46,09	46,09	46,09	46,09	46,09	46,09
	N-m(lb-in)	0,91(8,04)	1,81(16,08)	2,72(24,11)	4,52(40,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)
BS24DB	rpm	408,3	204,2	136,1	81,7	40,8	27,2	13,6	8,2	5,4
	kg-cm	9,00	18,00	27,01	45,01	46,09	46,09	46,09	46,09	46,09
	N-m(lb-in)	0,88(7,81)	1,76(15,63)	2,65(23,44)	4,41(39,07)	4,52(40,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)	4,52(40,00)

■ The peak torque of the gear head is 46,09 kg-cm(40,00 lb-in)

■ The mark indicates the ratio.

■ color indicates that the output shaft of the geared motor rotates in the opposite direction as the output shaft of the motor.
Others indicates the rotation in the same direction.

CAUTION OR SING

Before use, make sure to use it after reading the instruction manual closely.
For the questions on use, they are classified as caution and warning.



- Use only according to the specification of speed controller. If not, there will be dangerous fire, electric shock, injury and damage of the unit.
- Do not put the fingers or things into the outlet of the unit. There may be the electric shock, injury or danger of fire.
- Do not operate with the wet hands. The electric shock may occur.
- In case of moving, do not catch the output shaft, connecting part or the lead wire. There may be the injury by the drop.
- Make sure to check whether the things are what you ordered. If you install the other thing, there may occur the injury and the fire.
- The motor should be used after it is fixed tightly. If not, there may occur the injury and the damage of the unit.
- Make sure to install the cover not to touch the rotatory part. If not, there will be injury.
- Make sure to check the rotatory direction before connecting the machine. If not, there may occur the injury and the damage of the unit.
- Do not touch the side of the motor output shaft (key way, cutting part) with the naked hands. If not, there may occur the injury.
- Make sure to install the overload device, for the protection device is not attached to the motor.
It is desirable to install the protection device leakage shorter electricity except the overload protection device.
If not, the fire may occur.
- In case of putting out power plug, do not draw with grasping the plug for the electric shock and fire may occur.
- The motor and the controlling unit should be used only by the designated compounding. If not, the fire may occur.
- Before connecting with the machine and beginning to operate, make sure to install the parameter for the machine. If not, the damage may take place.
- In case of connecting with the machine and beginning to operate, do in the state of emergency stop anytime.
If not, the damage will occur.
- If there are abnormal cases, turn off the power at once. If not, there will be the electric shock, injury and the damage.
- In operating, do not touch the rotor(output shaft). If not, the damage will take place because of winding.
- In operating and right after the operation, do not touch the controlling device by your hands or body. The fire will occur.



- Never put around the explosive atmosphere, gas to be burnt, corrosive air, the location to be wet and combustibles.
If not, there may occur the electric shock and the fire.
- In case of movement, connection and checking of motor, please turn off the electric power.
- Make sure to connect motor and speed controller based on the specification. If not, there may occur the electric shock and the fire.
- The power cable and the lead line should not be bent, pulled and inserted by force. If not, the electric shock and the fire may occur.
- In case the motor and controlling unit are attached to the machine, never touch by hand or connect with the earth.
If not, the electric shock may take place.
- Never operate in the state of exposing the flowing current. If not, the electric shock may take place.
- In case of interruption of electric power and working the protection of overheat, please turn off the power.
When motors are working continuously, there may be injury and damage of the unit.
- For the 30 seconds after the power off, do not touch the output terminal of the controlling unit.
If not, the electric shock may occur because of the residual volts.

MEMO

MEMO



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