

Started the motor business since year 1994, with 10 factories and more than 1800 workers now, we are a professional manufacturer for various kinds of electric motors. Our main products include:

- AC Shaded Pole Motors (10 Series)
- AC Universal Motors (9 Series)
- AC Vacuum Cleaner Motors (12 series)
- AC Synchronous Motors (18 Series)
- AC External Rotor Motors (2 Series)
- AC & DC Crossflow Blowers, Axial Fans & Hot Air Fans
- AC & DC Planetary Geared Motors
- AC & DC Spur Geared Motors
- AC & DC Worm Geared Motors
- DC Brush Type or Brushless Motors (60 Series)
- Other OEM motors.

These motors are widely used in all kinds of home and office appliances, personal care products, power tools, automation equipments, industrial areas, etc. 7 of our 10 factories are ISO9001 certified for quality management system. Many of our products passed the tests and got approved by CE, UL, CSA, and VDE.

With a strong engineering team and 15 years of designing and production experiences, we have successfully developed motorized impeller adopting external rotor motors, high torque synchronous motors, high torque & precise AC & DC geared motors, etc. Some of our products are even unique in the world. Most of our products are widely exported to the Europe and America market.

Keeping close cooperation with our customers, being flexible to all our customers' request, being fully responsible for all our actions & words, and considering our customers' profits as our own profits are our main advantages.

موتور

بررسی، انتخاب و خرید آنلاین موتور

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DESCRIPTION OF MOTOR MODEL

5 ①	I ②	K ③	40 ④	R ⑤	GN ⑥	-C ⑦	T ⑧	E ⑨	
①	Motor Frame Size	0:42mm 2:60mm 3:70mm 4:80mm 5:90mm 6:104mm							
②	Motor Type	I: Induction Motors R: Reversible Motors T: Torque Motors							
③	Series	K: k Series							
④	Output Power (W)	(e.g.)40-40W							
⑤	R: The Suffix "-R" after the Output Power Means Speed Adjustable Motor.								
⑥	Motor Shaft Type	GN: GN Type: Pinion Shaft GU: GU Type: Pinion Shaft A: Round Shaft A1: Keyway							
⑦	Power Supply Voltage • Poles	A: Single-Phase100V50/60Hz4P H: Single-Phase220/230V60Hz4P B: Single-Phase110V50Hz2P S: Three-Phase200/220/230V50/60Hz4P C: Single-Phase220/230V50Hz4P S3: Three-Phase380/400/415V50/60Hz4P D: Single-Phase220V50Hz2P T: Three-Phase200/220/230V50/60Hz2P E: Single-Phase110/120V60Hz4P T3: Three-Phase380/400/415V50/60Hz2P							
⑧	T: Terminal Box Type F: W/Fan FF:W/Forced Fan M: Power Of Activated Type Electromagnetic Brake Motor								
⑨	Capacitor Type	J: 100V、110V、120VFor Single-Phase100V、110V、120VAC E: 220/230VFor Single-Phase220/230VAC Blank: Three-Phase Type							

The types of capacitor (e.g.J,E) are not marked on the nameplate . When the motor is approved under various safety standards , the model name on the nameplate is the approved model name .

DESCRIPTION OF REDUCER MODEL

5 ①	GN ②	50 ③	K ④	
①	Gearhead Frame Size	0:42mm 2:60mm 3:70mm 4:80mm 5:90mm 6:104		
②	Type of Pinion	GN: GN Type Gear GU:GU Type Gear		
③	Gear Ratio	(e.g) 50: Ratio1:50 10x denotes the decimal gearhead of ratio 1:10		
④	Bearing Type	K: Bearing(Make KB for type GU square case)		

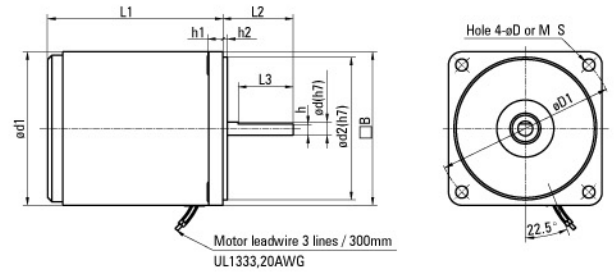
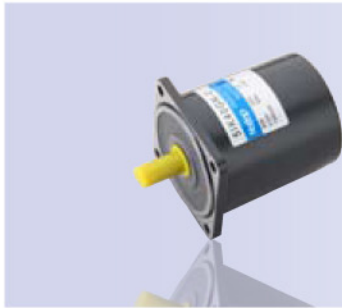
GENERAL SPECIFICATION OF MOTORS

1W-180W TYPE

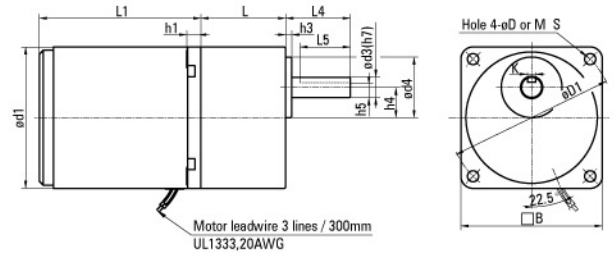
Item	Specifications
Insulation Resistance	In the circumstance of normal ambient temperature and humidity , the resistance can be up to 100MΩ or more When 500VDC megger is applied between the winding and the frame after rated motor operations.
Strength	In the circumstance of normal ambient temperature and humidity , there will be no problem to withstand 1.5 kV(three phase400v:2 kV) at 50/60Hz between the windings and the frame for 1 minute after rated motor operation.
Temperature Rise	Temperature rise of windings are 80℃ or less measured by the resistance change method after rated motor Operation with connecting a gearhead or equivalent heat radiation plate※.(Three-phase type :70℃ or less)
Insulation Class	UL/CSA Standards : Class A(105℃) EN Standards : Class B (105℃) Class F (155℃)
Overheat Protection	Thermal Protector inside (automatic return) Class B (opening : 120℃±5℃、75℃±15℃) Class F (opening : 145℃±5℃、100℃±15℃)
Ambient Temperature	Single-Phase 100VAC、 Three-Phase200VAC: -10~+50℃(Nonfreezing) Others: -10~+40℃(Nonfreezing)
Ambient Humidity	85% or less (Noncondensing)
Degree of Protection	Lead wire type:IP20 Terminal Box Type Single-phase 100V50/60Hz、110/120V60Hz、220/230V50Hz、220/230V60Hz 25W-180W Type:IP54 (Excluding the installation surface of the round shaft type) Three-phase 200/220/230V//50/60Hz、380/400/415V//50/60Hz 25W-180W Type:IP54 (Excluding the installation surface of the round shaft type)

INDUCTION MOTORS

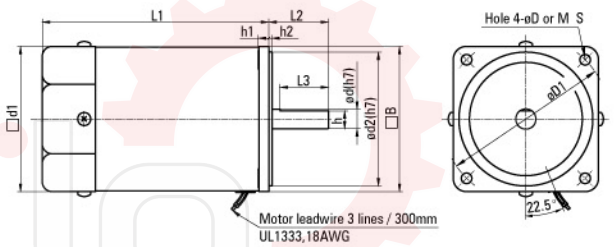
3-40W induction bare motor dimension



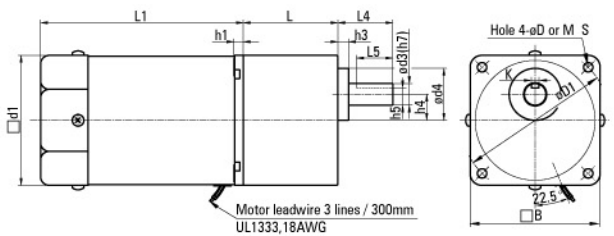
3-40W induction gear motor dimension



60-180W induction bare motor dimension



60-180W induction gear motor dimension



SIZE OF THE INDUCTION MOTOR

Series	Type Dimension Power	Induction motor assembling dimension																					
		d	d1	d2	d3	d4	L	L1	L2	L3	L4	L5	h	h1	h2	h3	h4	h5	D	D1	S	B	D
0IK	3W	5	42	37.6	5	18	28.5	64	20	-	20	12	-	5	1.5	3	8	4.5	3.5	48	-	42	-
2IK	6W	6	60	55	8	25	32/42	75	24	17	30	27	5	6.5	2	3	10	7	5	70	4	60	-
3IK	15W	6	69	65	10	25	32/42	80	32	25	33	25	5	7	2	3	15	7.5	6	82	5	70	4
4IK	25W	8	79	73	10	32	32/42.5	85	32	25	33	25	7	7	2	3	15	7.5	6	94	5	80	4
5IK	40W	10	89	83	12	36	42/60	105	37	30	32	25	9	8	2	5	18	9.5	6.5	104	6	90	4
	60W (GN)	12	90	83	12	36	42/60	126	37	30	32	25	11	8	2	5	18	9.5	6.5	104	6	90	4
	60W (GU)	12	90	83	15	36	65.5	126	37	30	38	25	11	8	2	7.5	18	12	6.5	104	6	90	5
	90W	12	90	83	15	36	65.5	141	37	30	38	25	11	8	2	7.5	18	12	6.5	104	6	90	5
6IK	120W	12	90	83	15	36	65.5	141	37	30	38	25	11	8	2	7.5	18	12	6.5	104	6	90	5
	120W	12	104	94	15	46	72	187	37	30	42	25	11	10	2	10	20	12	9	120	8	104	5
	140W	12	104	94	15	46	72	187	37	30	42	25	11	10	2	10	20	12	9	120	8	104	5
6IK	180W	12	104	94	15	46	72	187	37	30	42	25	11	10	2	10	20	12	9	120	8	104	5
	180W	12	104	94	15	46	72	187	37	30	42	25	11	10	2	10	20	12	9	120	8	104	5

Note: L, the number before "/" represents the length of the gearbox with the reduction from 3 to 18, while the number after represents the length of the gearbox with the reduction from 25 to 200.

SPECS CONT-RATED

Model • Type Lead Wire Type		Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor
Pinion Shaft	Round Shaft								
		W	V	Hz	A	mN.m	mN.m	r/min	µF
0IK3GN-BJ	0IK3A-BJ	3	1ph110	50	0.120	5	11	2500	1.5
				60	0.130		10	3000	
0IK3GN-DE	0IK3A-DE		1ph220	50	0.060	5	11	2500	0.35
				60	0.064		10	3000	
2IK6GN-AJ	2IK6A-AJ	6	1ph100	50	0.240	55	48	1200	3.5
				60	0.250	50	40	1450	
2IK6GN-CE	2IK6A-CE		1ph220	50	0.130	50	48	1200	0.8
					0.110		40	1450	
2IK6GN-S	2IK6A-S		3ph220	50	0.076	85	48	1200	-
				60	0.065	70	40	1450	
3IK15GN-AJ	3IK15A-AJ	15	1ph100	50	0.35	90	125	1200	6.0
				60	0.33	85	105	1450	
3IK15GN-CE	3IK15A-CE		1ph220	50	0.18	90	125	1200	1.2
					0.20		125	1200	
3IK15GN-S	3IK15A-S		3ph220	50	0.14	220	125	1200	-
				60	0.12	180	105	1450	
4IK25GN-AJ	4IK25A-AJ	25	1ph100	50	0.45	120	200	1250	8.0
				60	0.50		165	1550	
4IK25GN-CE	4IK25A-CE		1ph220	50	0.25	120	200	1250	1.5
					0.23		200	1250	
4IK25GN-S	4IK25A-S		3ph220	50	0.185	350	200	1250	-
				60	0.170	250	165	1550	
5IK40GN-AJ	5IK40A-AJ	40	1ph100	50	0.65	220	315	1250	12.0
				60	0.70		260	1550	
5IK40GN-CE	5IK40A-CE		1ph220	50	0.35	220	315	1250	2.5
					0.40		315	1250	
5IK40GN-S	5IK40A-S		3ph220	50	0.30	800	315	1250	-
				60	0.25	660	250	1550	
5IK60GN-AFJ	5IK60A-AFJ	60	1ph100	50	1.00	320	470	1250	20.0
				60	1.10		380	1550	
5IK60GN-CFE	5IK60A-CFE		1ph220	50	0.50	340	470	1250	4.0
					0.55		470	1250	
5IK60GN-SF	5IK60A-SF		3ph220	50	0.45	1000	470	1250	-
				60	0.40	800	380	1550	
5IK60GU-AFJ	—	60	1ph100	50	1.00	320	470	1250	20.0
				60	1.10		380	1550	
5IK60GU-CFE	—		1ph220	50	0.50	340	470	1250	4.0
					0.55		470	1250	
5IK60GU-SF	—		3ph220	50	0.45	1000	470	1250	-
				60	0.40	800	380	1550	
5IK90GU-AFJ	5IK90A-AFJ	90	1ph100	50	1.55	450	700	1250	25.0
				60	1.85		570	1550	
5IK90GU-CFE	5IK90A-CFE		1ph220	50	0.72	450	700	1250	5.0
					0.70		700	1250	
5IK90GU-SF	5IK90A-SF		3ph220	50	0.60	1350	700	1250	-
				60	0.55	1100	570	1550	
5IK120GU-AFJ	5IK120A-AFJ	120	1ph100	50	2.1	600	930	1250	30.0
				60	2.5		750	1550	
5IK120GU-CFE	5IK120A-CFE		1ph220	50	1.0	650	930	1250	7.0
					0.95		930	1250	
5IK120GU-SF	5IK120A-SF		3ph220	50	0.70	1850	930	1250	-
				60	0.60	1600	750	1550	
6IK120GU-AFJ	6IK120A-AFJ	120	1ph100	50	2.1	600	930	1250	30.0
				60	2.5		750	1550	
6IK120GU-CFE	6IK120A-CFE		1ph220	50	1.0	750	930	1250	8.0
					0.95		930	1250	
6IK120GU-SF	6IK120A-SF		3ph220	50	0.75	2200	930	1250	-
				60	0.70	2000	730	1600	
6IK140GU-AFJ	6IK140A-AFJ	140	1ph100	50	2.7	700	1080	1250	35.0
				60	3.0		870	1550	
6IK140GU-CFE	6IK140A-CFE		1ph220	50	1.05	850	1080	1250	10.0
					1.15		1080	1250	
6IK140GU-SF	6IK140A-SF		3ph220	50	0.85	2700	1080	1250	-
				60	0.75	2200	870	1550	
6IK180GU-AFJ	6IK180A-AFJ	180	1ph100	50	3.2	900	1385	1250	45.0
				60	3.5		1120	1550	
6IK180GU-CFE	6IK180A-CFE		1ph220	50	1.4	1100	1385	1250	12.0
					1ph230		1.20	3400	
6IK180GU-SF	6IK180A-SF		3ph220	50	1.20	3400	1385	1250	-
				60	1.0	2700	1120	1550	

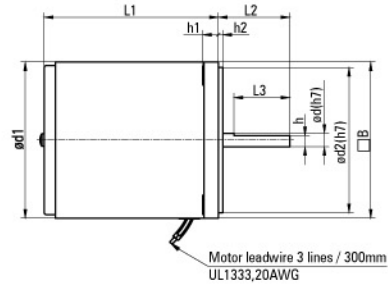
ALLOWABLE TORQUE WHEN BEING WITH GEARBOX

Allowance Torque Unit: Upside(N.M)/Belowside(kgf.cm)

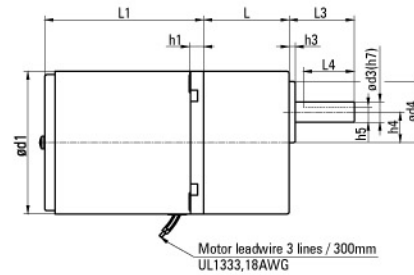
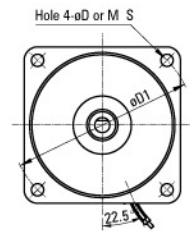
Type Motor Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	200	
	Speed r/min	50Hz	500	417	300	250	200	166	120	100	83	60	50	41	30	25	20	16	15	12.5	10	8.3	7.5	
		60Hz	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	9	
0IK3GN-BJ 0IK3GN-DE	0GN□K	50Hz	0.027	0.032	0.045	0.053	0.067	0.080	0.10	0.12	0.14	0.18	0.22	0.26	0.36	0.44	/	/	/	/	/	/	/	/
		60Hz	0.28	0.33	0.46	0.54	0.68	0.82	1.02	1.22	1.43	1.84	2.24	2.65	3.67	4.49	/	/	/	/	/	/	/	/
2IK6GN-AJ 2IK6GN-CE 2IK6GN-S	2GN□K	50Hz	0.12	0.14	0.19	0.23	0.29	0.35	0.49	0.58	0.70	0.88	1.1	1.3	1.6	1.9	2.4	2.9	3	3	3	3	3	3
		60Hz	1.22	1.43	1.94	2.35	2.96	3.57	5.0	5.92	7.14	8.98	11.2	13.3	16.3	19.4	24.5	29.6	30	30	30	30	30	30
3IK15GN-AJ 3IK15GN-CE 3IK15GN-S	3GN□K	50Hz	0.10	0.12	0.16	0.19	0.24	0.29	0.41	0.49	0.58	0.73	0.88	1.1	1.3	1.6	2.0	2.4	2.6	3	3	3	3	3
		60Hz	0.30	0.36	0.51	0.61	0.76	0.91	1.3	1.5	1.8	2.3	2.7	3.3	4.1	5	5	5	5	5	5	5	5	5
4IK25GN-AJ 4IK25GN-CE 4IK25GN-S	4GN□K	50Hz	0.26	0.31	0.43	0.51	0.64	0.77	1.1	1.3	1.5	1.9	2.3	2.8	3.5	4.2	5	5	5	5	5	5	5	5
		60Hz	0.49	0.58	0.81	0.97	1.2	1.5	2.0	2.4	2.9	3.7	4.4	5.3	6.6	7.9	8	8	8	8	8	8	8	8
5IK40GN-AJ 5IK40GN-CE 5IK40GN-S	5GN□K	50Hz	5.00	5.91	8.26	9.89	12.2	15.3	20.4	24.4	29.6	37.7	44.9	54.1	67.3	80	80	80	80	80	80	80	80	80
		60Hz	0.40	0.48	0.67	0.80	1.0	1.2	1.7	2.0	2.4	3.0	3.6	4.3	5.4	6.5	8	8	8	8	8	8	8	8
5IK60GN-AFJ 5IK60GN-CFE 5IK60GN-SF	5GN□K	50Hz	4.08	4.89	6.83	8.16	10.2	12.2	17.3	20.4	24.4	30.6	36.7	43.8	55.1	66.3	80	80	80	80	80	80	80	80
		60Hz	0.77	0.92	1.3	1.5	1.9	2.3	3.2	3.8	4.6	5.7	6.9	8.3	10	10	10	10	10	10	10	10	10	10
5IK60GU-AFJ 5IK60GU-CFE 5IK60GU-SF	5GU□KB	50Hz	7.85	9.38	13.2	15.3	19.4	23.4	32.6	38.7	46.9	58.1	70.4	84.7	100	100	100	100	100	100	100	100	100	100
		60Hz	0.63	0.76	1.1	1.3	1.6	1.9	2.6	3.2	3.8	4.7	5.7	6.8	10	10	10	10	10	10	10	10	10	10
5IK90GU-AFJ 5IK90GU-CFE 5IK90GU-SF	5GU□KB	50Hz	6.42	7.75	11.2	13.2	16.3	19.3	26.5	32.6	38.7	47.9	58.1	69.3	100	100	100	1000	100	100	100	100	100	100
		60Hz	1.1	1.4	1.9	2.3	2.9	3.4	4.8	5.7	6.8	8.6	10	10	10	10	10	10	10	10	10	10	10	10
5IK120GU-AFJ 5IK120GU-CFE 5IK120GU-SF	5GU□KB	50Hz	11.2	14.2	19.3	23.4	29.6	34.7	48.9	58.1	69.3	87.7	100	100	100	100	100	100	100	100	100	100	100	100
		60Hz	0.92	1.1	1.5	1.8	2.3	2.8	3.8	4.6	5.5	6.9	8.3	10	10	10	10	10	10	10	10	10	10	10
5IK140GU-AFJ 5IK140GU-CFE 5IK140GU-SF	6GU□K	50Hz	9.38	11.2	15.3	18.3	23.4	28.5	38.7	46.9	56.1	70.1	84.7	100	100	100	100	100	100	100	100	100	100	100
		60Hz	1.1	1.4	1.9	2.3	2.9	3.4	4.3	5.1	6.2	7.7	9.3	11.2	15.5	18.6	20	20	20	20	20	20	20	20
6IK120GU-AFJ 6IK120GU-CFE 6IK120GU-SF	6GU□K	50Hz	11.2	14.2	19.3	23.4	29.6	34.7	43.9	52.0	63.2	78.6	95.0	114	158	190	200	200	200	200	200	200	200	200
		60Hz	0.92	1.1	1.5	1.8	2.3	2.8	3.5	4.2	5.0	6.3	7.5	9.0	12.5	15.0	18.8	20	20	20	20	20	20	20
6IK180GU-AFJ 6IK180GU-CFE 6IK180GU-SF	6GU□K	50Hz	9.38	11.2	15.3	18.3	23.4	28.5	35.7	42.9	51.0	64.3	76.5	92	128	153	192	200	200	200	200	200	200	200
		60Hz	1.7	2.0	2.8	3.4	4.3	5.1	6.4	7.7	9.2	11.6	13.6	16.6	20	20	20	20	20	20	20	20	20	20
6IK140GU-AFJ 6IK140GU-CFE 6IK140GU-SF	6GU□K	50Hz	17.3	20.4	28.6	34.7	43.9	52.0	65.3	78.6	93.3	118	142	169	200	200	200	200	200	200	200	200	200	200
		60Hz	1.4	1.7	2.3	2.8	3.5	4.2	5.2	6.2	7.5	9.4	11.3	13.5	18.8	20	20	20	20	20	20	20	20	20
6IK180GU-AFJ 6IK180GU-CFE 6IK180GU-SF	6GU□K	50Hz	14.3	17.3	23.5	28.6	35.7	42.9	53.1	63.3	76.5	95.9	115	138	192	200	200	200	200	200	200	200	200	200
		60Hz	2.3	2.7	3.8	4.5	5.6	6.8	8.5	10.2	12.2	15.3	18.4	20	20	20	20	20	20	20	20	20	20	20
6IK200GU-AFJ 6IK200GU-CFE 6IK200GU-SF	6GU□K	50Hz	23.4	27.5	38.7	45.9	57.1	69.3	86.7	104	124	156	187	200	200	200	200	200	200	200	200	200	200	200
		60Hz	1.8	2.2	3.0	3.6	4.6	5.5	6.8	8.2	9.8	12.4	14.9	17.8	20	20	20	20	20	20	20	20	20	20
6IK250GU-AFJ 6IK250GU-CFE 6IK250GU-SF	6GU□K	50Hz	18.3	22.4	30.6	36.7	46.9	56.1	69.5	83.2	100	126	152	181	200	200	200	200	200	200	200	200	200	200
		60Hz	2.3	2.7	3.8	4.5	5.6	6.8	8.5	10.2	12.2	15.3	18.4	22.1	30.7	36.8	40	40	40	40	40	40	40	40
6IK300GU-AFJ 6IK300GU-CFE 6IK300GU-SF	6GU□K	50Hz	1.8	2.2	3.0	3.6	4.6	5.5	6.8	8.2	9.8	12.4	14.9	17.8	24.8	29.7	37.1	40	40	40	40	40	40	40
		60Hz	18.3	22.4	30.6	36.7	46.9	56.1	69.3	83.6	100	126	152	181	253	303	378	400	400	400	400	400	400	400
6IK400GU-AFJ 6IK400GU-CFE 6IK400GU-SF	6GU□K	50Hz	2.6	3.1	4.4	5.2	6.6	7.9	9.9	11.8	14.2	17.8	21.4	25.7	35.6	40	40	40	40	40	40	40	40	40
		60Hz	26.5	31.6	44.8	53.0	67.3	80.6	101	120	144	181	218	262	363	400	400	400	400	400	400	400	400	400
6IK500GU-AFJ 6IK500GU-CFE 6IK500GU-SF	6GU□K	50Hz	2.1	2.5	3.5	4.2	5.3	6.3	7.9	9.5	11.4	14.4	17.2	20.7	28.7	34.5	40	40	40	40	40	40	40	40
		60Hz	21.4	25.5	35.7	42.8	54.0	63.2	80.6	96.9	116	147	175	211	292	352	400	400	400	400	400	400	400	400
6IK600GU-AFJ 6IK600GU-CFE 6IK600GU-SF	6GU□K	50Hz	3.4	4.0	5.6	6.7	8.4	10.1	12.6	15.2	18.2	22.8	27.4	32.9	40	40	40	40	40	40	40	40	40	40
		60Hz	34.6	40.8	57.1	68.3	85.6	103	128	155	185	232	279	335	400	400	400	400	400	400	400	400	400	400
6IK800GU-AFJ 6IK800GU-CFE 6IK800GU-SF	6GU□K	50Hz	2.7	3.3	4.5	5.4	6.8	8.2	10.2	12.3	14.7	18.5	22.2	26.6	37	40	40	40	40	40	40	40	40	40
		60Hz	27.5	33.6	45.9	55.1	69.3	83.6	104	125	150	188	226	271	377	400	400	400	400	400	400	400	400	400

- “□” indicates the same rotating direction of the motor while the others rotate in the opposite direction.
- The speed is calculated by dividing the motor's synchronous speed (50Hz: 1500r/min; 60Hz: 1800r/min) by the gear ratio. The accurate speed is 2% ~20% less than the displayed value, depending on the size of the load.

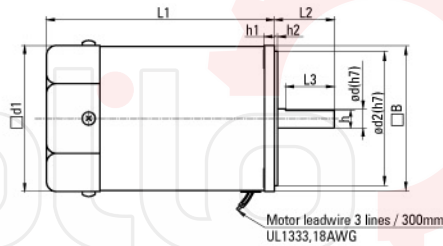
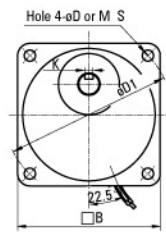
REVERSIBLE MOTORS



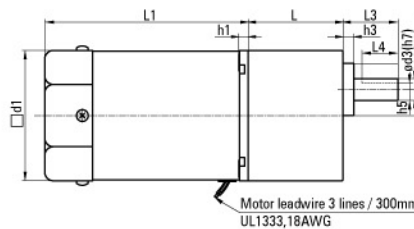
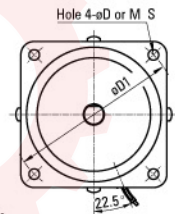
6-40W reversible bare motor



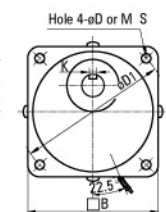
6-40W reversible gear motor



60-120W reversible bare motor



60-120W reversible gear motor



SIZE OF THE REVERSIBLE MOTOR

Series	Type Dimension Power	Reversible motor assembling dimension																					
		d	d1	d2	d3	d4	L	L1	L2	L3	L4	L5	h	h1	h2	h3	h4	h5	D	D1	S	B	K
2RK	6W	6	60	55	8	25	32/42	75	24	17	30	27	5	6.5	12	3	10	7	5	70	4	60	-
3RK	15W	6	69	65	10	25	32/42	80	32	25	33	25	5	7	2	3	15	7.5	6	82	5	70	4
4RK	25W	8	79	73	10	32	32/42.5	85	32	25	33	25	7	7	2	3	15	7.5	6	94	5	80	4
5RK	40W	10	89	83	12	36	42/60	105	37	30	32	25	9	8	2	5	18	9.5	6.5	104	6	90	4
	60W(GN)	12	90	83	12	36	42/60	126	37	30	32	25	11	8	2	5	18	9.5	6.5	104	6	90	4
	60W(GU)	12	90	83	15	36	65.5	126	37	30	38	25	11	8	2	7.5	18	12	6.5	104	6	90	5
	90W	12	90	83	15	36	65.5	141	37	30	38	25	11	8	2	7.5	18	12	6.5	104	6	90	5
	120W	12	90	83	15	36	65.5	141	37	30	38	25	11	8	2	7.5	18	12	6.5	104	6	90	5

Note: L, the number before "/" represents the length of the gearbox with the reduction from 3 to 18, while the number after represents the length of the gearbox with the reduction from 25 to 200.

SPECS 30 30 MINUTES RATING

Model - Type Lead Wire Type		Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor	
Pinion Shaft	Round Shaft									W
2RK6GN-AJ	2RK6A-AJ	6	1ph100	50	0.265	60	48	1200	4.0	
				60	0.232	55	40	1450		
2RK6GN-CE	2RK6A-CE		1ph220	50	0.145	55	48	1200	1.0	
					0.150					
3RK15GN-AJ	3RK15A-AJ		15	1ph100	50	0.40	110	125	1200	7.0
					60	0.56	105	105	1450	
3RK15GN-CE	3RK15A-CE	1ph220		50	0.23	110	125	1200	1.5	
					0.23					
4RK25GN-AJ	4RK25A-AJ	25		1ph100	50	0.59	160	200	1250	10.0
					60	0.69	140	165	1550	
4RK25GN-CE	4RK25A-CE		1ph220	50	0.29	140	200	1250	1.8	
					0.30					
5RK40GN-AJ	5RK40A-AJ		40	1ph100	50	0.78	300	315	1250	15.0
					60	1.05		260	1550	
5RK40GN-CE	5RK40A-CE	1ph220		50	0.45	270	315	1250	3.0	
					0.45					
5RK60GN-AFJ	5RK60A-AFJ	60		1ph100	50	1.26	470	470	1250	25.0
					60	1.70		380	1550	
5RK60GN-CFE	5RK60A-CFE		1ph220	50	0.55	420	470	1250	4.5	
					0.60					
5RK60GU-AFJ	—		60	1ph100	50	1.26	470	470	1250	25.0
					60	1.70		380	1550	
5RK60GU-CFE	—	1ph220		50	0.55	420	470	1250	4.5	
					0.60					
5RK90GU-AFJ	5RK90A-AFJ	90		1ph100	50	1.78	600	700	1250	30.0
					60	2.35		570	1550	
5RK90GU-CFE	5RK90A-CFE		1ph220	50	0.82	560	700	1250	6.0	
					0.81					
5RK120GU-AFJ	5RK120A-AFJ		120	1ph100	50	2.25	700	930	1250	35.0
					60	2.85		750	1550	
5RK120GU-CFE	5RK120A-CFE	1ph220		50	1.15	720	930	1250	8.0	
					1.15					

ALLOWABLE TORQUE WHEN BEING WITH GEARBOX

Allowance Torque Unit: Upside(N.M)/ Belowside(kgf.cm)

Type Motor Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	200
	Speed r/min	50Hz	500	417	300	250	200	166	120	100	83	60	50	41	30	25	20	16	15	12.5	10	8.3	7.5
		60Hz	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	9
2RK6GN-AJ 2RK6GN-CE	2GN□K	50Hz	0.12	0.14	0.19	0.23	0.29	0.35	0.49	0.58	0.70	0.88	1.1	1.3	1.6	1.9	2.4	2.9	3	3	3	3	3
		60Hz	0.10	0.12	0.16	0.19	0.24	0.29	0.41	0.49	0.58	0.73	0.88	1.1	1.3	1.6	2.0	2.4	2.6	3	3	3	3
3RK15GN-AJ 3RK15GN-CE	3GN□K	50Hz	0.30	0.36	0.51	0.61	0.76	0.91	1.3	1.5	1.8	2.3	2.7	3.3	4.1	5	5	5	5	5	5	5	5
		60Hz	0.26	0.31	0.43	0.51	0.64	0.77	1.1	1.3	1.5	1.9	2.3	2.8	3.5	4.2	5	5	5	5	5	5	5
4RK25GN-AJ 4RK25GN-CE	4GN□K	50Hz	0.49	0.58	0.81	0.97	1.2	1.5	2.0	2.4	2.9	3.7	4.4	5.3	6.6	7.9	8	8	8	8	8	8	8
		60Hz	0.40	0.48	0.67	0.80	1.0	1.2	1.7	2.0	2.4	3.0	3.6	4.3	5.4	6.5	8	8	8	8	8	8	8
5RK40GN-AJ 5RK40GN-CE	5GN□K	50Hz	0.77	0.92	1.3	1.5	1.9	2.3	3.2	3.8	4.6	5.7	6.9	8.3	10	10	10	10	10	10	10	10	10
		60Hz	0.63	0.76	1.1	1.3	1.6	1.9	2.6	3.2	3.8	4.7	5.7	6.8	8.6	10	10	10	10	10	10	10	10
5RK60GN-AJ 5RK60GN-CE	5GN□K	50Hz	1.1	1.4	1.9	2.3	2.9	3.4	4.8	5.7	6.8	8.6	10	10	10	10	10	10	10	10	10	10	10
		60Hz	0.92	1.1	1.5	1.8	2.3	2.8	3.8	4.6	5.5	6.9	8.3	10	10	10	10	10	10	10	10	10	10
5RK60GU-AJ 5RK60GU-CE	5GU□KB	50Hz	1.1	1.4	1.9	2.3	2.9	3.4	4.3	5.1	6.2	7.7	9.3	11.2	15.5	18.6	20	20	20	20	20	20	20
		60Hz	0.92	1.1	1.5	1.8	2.3	2.8	3.5	4.2	5.0	6.3	7.5	9.0	12.5	15.0	18.8	20	20	20	20	20	20
5RK90GU-AJ 5RK90GU-CE	5GU□KB	50Hz	1.7	2.0	2.8	3.4	4.3	5.1	6.4	7.7	9.2	11.6	13.6	16.6	20	20	20	20	20	20	20	20	20
		60Hz	1.4	1.7	2.5	2.8	3.5	4.2	5.2	6.2	7.5	9.4	11.3	13.5	18.8	20	20	20	20	20	20	20	20
5RK120GU-AJ 5RK120GU-CE	5GU□KB	50Hz	2.3	2.7	3.8	4.5	5.6	6.8	8.5	10.2	12.2	15.3	18.4	20	20	20	20	20	20	20	20	20	20
		60Hz	1.8	2.2	3.0	3.6	4.6	5.5	6.8	8.2	9.8	12.4	14.9	17.8	20	20	20	20	20	20	20	20	20

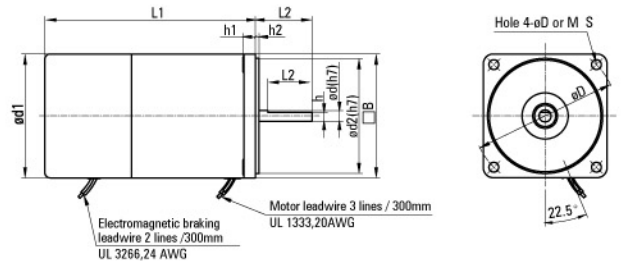
● “□” indicates the same rotating direction of the motor while the others rotate in the opposite direction.

● The speed is calculated by dividing the motor's synchronous speed (50Hz: 1500r/min; 60Hz: 1800r/min) by the gear ratio. The accurate speed is 2% ~20% less than the displayed value, depending on the size of the load.

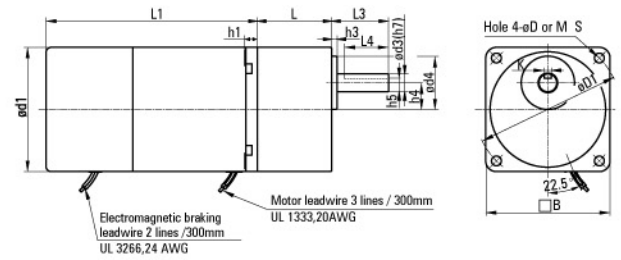
POWER OFF ACTIVATED TYPE ELECTROMAGNETIC BRAKE MOTORS



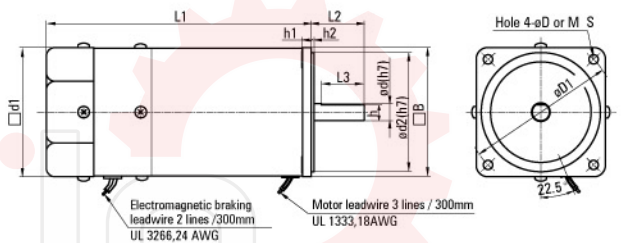
6-40W Power Off Activated Type Electromagnetic Brake Bare Motor Dimension



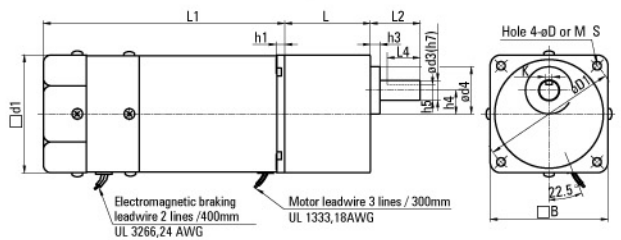
6-40W Power Off Activated Type Electromagnetic Brake Gear Motor Dimension



60-180W Power Off Activated Type Electromagnetic Brake Bare Motor Dimension



60-180W Power Off Activated Type Electromagnetic Brake Gear Motor Dimension



SIZE OF THE POWER OFF ACTIVATED TYPE ELECTROMAGNETIC BRAKE MOTOR

Series	Type Dimension Power	Power off activated type electromagnetic brake motor assembling dimension																					
		d	d1	d2	d3	d4	L	L1	L2	L3	L4	L5	h	h1	h2	h3	h4	h5	D	D1	S	B	K
2RK	6W	6	60	55	8	25	32/42	115	24	17	30	27	5	6.5	2	3	10	7	5	70	4	60	-
3RK	15W	6	70	65	10	25	32/42	119	32	25	33	25	5	7	2	3	15	7.5	6	82	5	70	4
4RK	25W	8	80	73	10	32	32/42.5	131.5	32	25	33	25	7	7	2	3	15	7.5	6	94	5	80	4
5RK	40W	10	89	83	12	36	42/60	151	37	30	32	25	9	8	2	5	18	9.5	6.5	104	6	90	4
	60W (GN)	12	90	83	12	36	42/60	169.5	37	30	32	25	11	8	2	5	18	9.5	6.5	104	6	90	4
	60W (GU)	12	90	83	15	36	65.5	169.5	37	30	38	25	11	8	2	7.5	18	12	6.5	104	6	90	5
	90W	12	90	83	15	36	65.5	184.5	37	30	38	25	11	8	2	7.5	18	12	6.5	104	6	90	5
6RK	120W	12	90	83	15	36	65.5	184.5	37	30	38	25	11	8	2	7.5	18	12	6.5	104	6	90	5
	140W	12	104	94	15	46	72	185	37	30	42	25	11	10	2	10	20	12	9	120	8	104	5
	180W	12	104	94	15	46	72	185	37	30	42	25	11	10	2	10	20	12	9	120	8	104	5

Note: L, the number before "/" represents the length of the gearbox with the reduction from 3 to 18, while the number after represents the length of the gearbox with the reduction from 15 to 200.

SPECS

This type of motor does not contain a built-in simple brake mechanism.

Model - Type Lead Wire Type		Rated	Output Power	Voltage	Frequency	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor
Pinion Shaft	Round Shaft									
2RK6GN-AMJ	2RK6A-AMJ	30min	6	1ph100	50	0.265	60	48	1200	4.0
					60	0.232	55	40	1450	
2RK6GN-CME	2RK6A-CME	30min	6	1ph220	50	0.145	55	48	1200	1.0
					1ph230	0.150				
2IK6GN-SM	2IK6A-SM	30min	6	3ph220	50	0.076	85	48	1200	-
					60	0.065	70	40	1450	
3RK15GN-AMJ	3RK15A-AMJ	30min	15	1ph100	50	0.40	110	125	1200	7.0
					60	0.56	105	105	1450	
3RK15GN-CME	3RK15A-CME	30min	15	1ph220	50	0.23	110	125	1200	1.5
					1ph230					
3IK15GN-SM	3IK15A-SM	30min	15	3ph220	50	0.14	220	125	1200	-
					60	0.12	180	105	1450	
4RK25GN-AMJ	4RK25A-AMJ	30min	25	1ph100	50	0.59	160	200	1250	10.0
					60	0.69	140	165	1550	
4RK25GN-CME	4RK25A-CME	30min	25	1ph220	50	0.29	140	200	1250	1.8
					1ph230	0.30				
4IK25GN-SM	4IK25A-SM	Cont	25	3ph220	50	0.185	350	200	1200	-
					60	0.170	250	165	1550	
5RK40GN-AMJ	5RK40A-AMJ	30min	40	1ph100	50	0.78	300	315	1250	15.0
					60	1.05	260	260	1550	
5RK40GN-CME	5RK40A-CME	30min	40	1ph220	50	0.45	270	315	1250	3.0
					1ph230					
5IK40GN-SM	5IK40A-SM	Cont	40	3ph220	50	0.30	800	315	1250	-
					60	0.25	660	250	1600	
5RK60GN-AFMJ	5RK60A-AFMJ	30min	60	1ph100	50	1.26	470	470	1250	25.0
					60	1.70	470	380	1550	
5RK60GN-CFME	5RK60A-CFME	30min	60	1ph220	50	0.55	420	470	1250	4.5
					1ph230	0.60				
5IK60GN-SFM	5IK60A-SFM	Cont	60	3ph220	50	0.45	1000	470	1250	-
					60	0.40	800	380	1550	
5RK60GU-AFMJ	—	30min	60	1ph100	50	1.26	470	470	1250	25.0
					60	1.70	470	380	1550	
5RK60GU-CFME	—	30min	60	1ph220	50	0.55	420	470	1250	4.5
					1ph230	0.60				
5IK60GU-SFM	—	Cont	60	3ph220	50	0.45	1000	470	1250	-
					60	0.40	800	380	1550	
5RK90GU-AFMJ	5RK90A-AFMJ	30min	90	1ph100	50	1.78	600	700	1250	30.0
					60	2.35	570	570	1550	
5RK90GU-CFME	5RK90A-CFME	30min	90	1ph220	50	0.82	560	700	1250	6.0
					1ph230	0.81				
5IK90GU-SFM	5IK90A-SFM	Cont	90	3ph220	50	0.60	1350	700	1200	-
					60	0.55	1100	570	1550	
5RK120GU-AFMJ	5RK120A-AFMJ	30min	120	1ph100	50	2.25	700	930	1250	35.0
					60	2.85	750	750	1550	
5RK120GU-CFME	5RK120A-CFME	30min	120	1ph220	50	1.15	720	930	1250	8.0
					1ph230					
5IK120GU-SFM	5IK120A-SFM	Cont	120	3ph220	50	0.70	1850	930	1250	-
					60	0.60	1600	750	1550	
6RK120GU-AMJ	6RK120A-AMJ	30min	120	1ph100	50	2.1	600	930	1250	35.0
					60	2.5	750	750	1550	
6RK120GU-CME	6RK120A-CME	30min	120	1ph220	50	0.95	750	930	1250	8.0
					1ph230					
6RK120GU-SM	6RK120A-SM	30min	120	3ph220	50	0.75	2200	890	1250	-
					60	0.70	2000	730	1550	
6RK140GU-AMJ	6RK140A-AMJ	30min	140	1ph100	50	2.7	700	1080	1250	35.0
					60	3.0	870	870	1550	
6RK140GU-CME	6RK140A-CME	30min	140	1ph220	50	1.05	850	1040	1250	10.0
					1ph230	1.15				
6RK140GU-SM	6RK140A-SM	30min	140	3ph220	50	0.85	2700	1080	1250	-
					60	0.75	2200	870	1550	
6RK180GU-AMJ	6RK180A-AMJ	30min	180	1ph100	50	3.2	900	1385	1250	45.0
					60	3.5	1120	1120	1550	
6RK180GU-CME	6RK180A-CME	30min	180	1ph220	50	1.40	1100	1385	1250	12.0
					1ph230					
6RK180GU-SM	6RK180A-SM	30min	180	3ph220	50	1.20	3400	1385	1250	-
					60	1.00	2700	1120	1550	

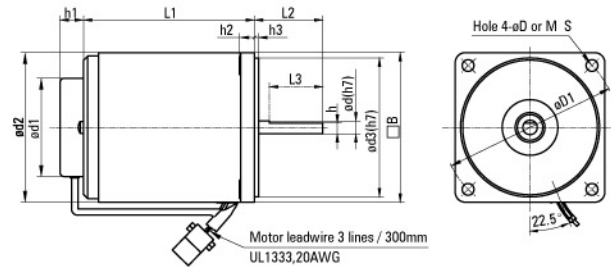
ALLOWABLE TORQUE WHEN BEING WITH GEARBOX

Allowance Torque Unit: Upside(N.M)/Belowside(kgf.cm)

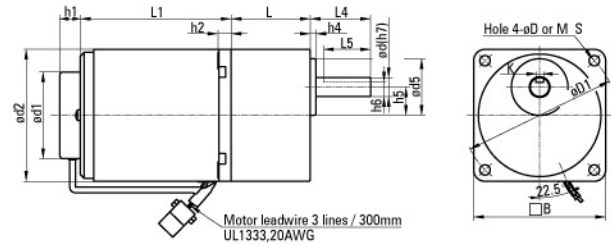
Type Motor Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	200	
	Speed r/min	50Hz	500	417	300	250	200	166	120	100	83	60	50	41	30	25	20	16	15	12.5	10	8.3	7.5	
		60Hz	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	9	
2RK6GN-AMJ 2RK6GN-CME 2RK6GN-SM	2GN□K	50Hz	0.12	0.14	0.19	0.23	0.29	0.35	0.49	0.58	0.70	0.88	1.1	1.3	1.6	1.9	2.4	2.9	3	13	3	3	3	
		60Hz	1.22	1.43	1.94	2.35	2.96	3.57	5.0	5.92	7.14	8.98	11.2	13.3	16.3	19.4	24.5	29.6	30	30	30	30	30	
	3RK15GN-AMJ 3RK15GN-CME 3RK15GN-SM	3GN□K	50Hz	0.30	0.36	0.51	0.61	0.76	0.91	1.3	1.5	1.8	2.3	2.7	3.3	4.1	5	5	5	5	5	5	5	5
60Hz	3.06		3.67	5.20	6.22	7.75	9.28	13.2	15.3	18.3	23.4	27.5	33.7	41.8	50	50	50	50	50	50	50	50		
4RK25GN-AMJ 4RK45GN-CME 4RK25GN-SM	4GN□K	50Hz	0.49	0.58	0.81	0.97	1.2	1.5	2.0	2.4	2.9	3.7	4.4	5.3	6.6	7.9	8	8	8	8	8	8	8	
		60Hz	5.00	5.91	8.26	9.89	12.2	15.3	20.4	24.4	29.6	37.7	44.9	54.1	67.3	80	80	80	80	80	80	80	80	
	5RK40GN-AMJ 5RK40GN-CME 5RK40GN-SM	5GN□K	50Hz	0.77	0.92	1.3	1.5	1.9	2.3	3.2	3.8	4.6	5.7	6.9	8.3	10	10	10	10	10	10	10	10	10
60Hz	7.85		9.38	13.2	15.3	19.4	23.4	32.6	38.7	46.9	58.1	70.4	84.7	100	100	100	100	100	100	100	100	100		
5RK60GN-AFMJ 5RK60GN-CFME 5RK60GN-SFM	5GN□K	50Hz	1.1	1.4	1.9	2.3	2.9	3.4	4.8	5.7	6.8	8.6	10	10	10	10	10	10	10	10	10	10	10	
		60Hz	11.2	14.2	19.3	23.4	29.6	34.7	48.9	58.1	69.3	87.7	100	100	100	100	100	100	100	100	100	100	100	
	5RK60GU-AFMJ 5RK60GU-CFME 5RK60GU-SFM	5GU□KB	50Hz	1.1	1.4	1.9	2.3	2.9	3.4	4.3	5.1	6.2	7.7	9.3	11.2	15.5	18.6	20	20	20	20	20	20	20
60Hz	11.2		14.2	19.3	23.4	29.6	34.7	43.9	52.0	63.2	78.6	95.0	114	158	190	200	200	200	200	200	200	200	200	
5RK90GU-AFMJ 5RK90GU-CFME 5RK90GU-SFM	5GU□KB	50Hz	1.7	2.0	2.8	3.4	4.3	5.1	6.4	7.7	9.2	11.6	13.9	16.6	20	20	20	20	20	20	20	20	20	
		60Hz	17.3	20.4	28.6	34.7	43.9	52.0	65.3	78.6	93.9	118	142	169	200	200	200	200	200	200	200	200	200	200
	5RK120GU-AFMJ 5RK120GU-CFME 5RK120GU-SFM	5GU□KB	50Hz	2.3	2.7	3.8	4.5	5.6	6.8	8.5	10.2	12.2	15.3	18.4	20	20	20	20	20	20	20	20	20	20
60Hz	23.4		27.5	38.7	45.9	57.1	69.3	86.7	104	124	156	187	200	200	200	200	200	200	200	200	200	200	200	
6RK120GU-AMJ 6RK120GU-CME 6RK120GU-SM	6GU□K	50Hz	2.3	2.7	3.8	4.5	5.6	6.8	8.5	10.2	12.2	15.3	18.4	22.1	30.7	36.8	40	40	40	40	40	40	40	40
		60Hz	23.4	27.5	38.7	45.9	57.1	69.3	86.7	104	124	156	187	225	313	375	400	400	400	400	400	400	400	400
	6RK140GU-AMJ 6RK140GU-CME 6RK140GU-SM	6GU□K	50Hz	2.6	3.1	4.4	5.2	6.6	7.9	9.9	11.8	14.2	17.8	21.4	25.7	35.6	40	40	40	40	40	40	40	40
60Hz	26.5		31.6	44.8	53.0	67.3	80.6	101	120	144	181	218	262	357	400	400	400	400	400	400	400	400	400	
6RK180GU-AMJ 6RK180GU-CME 6RK180GU-SM	6GU□K	50Hz	2.5	3.0	4.2	5.1	6.3	7.6	9.5	11.4	13.7	17.2	20.6	24.7	34.3	40	40	40	40	40	40	40	40	
		60Hz	25.5	30.6	42.8	52.0	63.2	77.5	96.9	116	139	175	210	252	349	400	400	400	400	400	400	400	400	400
	6RK180GU-AMJ 6RK180GU-CME 6RK180GU-SM	6GU□K	50Hz	2.7	3.3	4.5	5.4	6.8	8.2	10.2	12.3	14.7	18.5	22.2	26.6	37	40	40	40	40	40	40	40	40
60Hz	27.5		33.6	45.9	55.1	69.3	83.6	104	125	150	188	226	271	377	400	400	400	400	400	400	400	400	400	

- “□” indicates the same rotating direction of the motor while the others rotate in the opposite direction.
- The speed is calculated by dividing the motor’s synchronous speed (50Hz: 1500r/min; 60Hz: 1800r/min) by the gear ratio. The accurate speed is 2% ~20% less than the displayed value, depending on the size of the load.

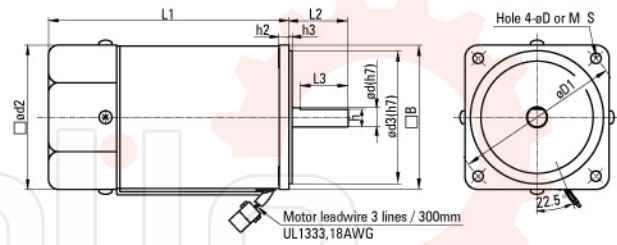
6-40W speed control bare motor dimension



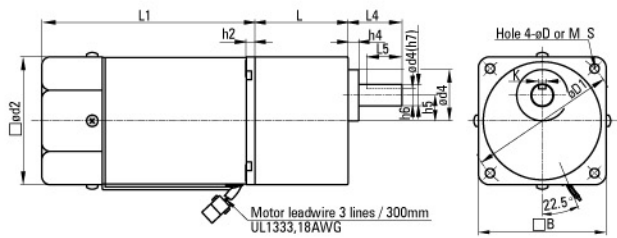
6-40W speed control gear motor dimension



60-180W speed control bare motor dimension



60-180W speed control gear motor dimension



SIZE OF THE POWER OFF ACTIVATED TYPE ELECTROMAGNETIC BRAKE MOTOR

Series	Type		Speed control motor assembling dimension																					
	Dimension	Power	d	d1	d2	d3	d4	L	L1	L2	L3	L4	L5	h	h1	h2	h3	h4	h5	h6	D	D1	S	B
2IK	6W	6	46	60	55	25	32/42	75	24	17	30	27	5	11	6.5	2	3	10	7	5	70	4	60	-
3IK	15W	6	46	69	65	25	32/42	80	32	25	33	25	5	11	7	2	3	15	7.5	6	82	5	70	4
4IK	25W	8	46	80	73	32	32/42.5	85	32	25	33	25	7	11	7	2	3	15	7.5	6	94	5	80	4
5IK	40W	10	46	89	83	36	42/60	105	37	30	32	25	9	11	8	2	5	18	9.5	6.5	104	6	90	4
	60W (GN)	12	-	90	83	36	42/60	137	37	30	32	25	11	-	8	2	5	18	9.5	6.5	104	6	90	4
	60W (GU)	12	-	90	83	36	65.5	137	37	30	38	25	11	-	8	2	7.5	18	12	6.5	104	6	90	5
	120W	12	-	90	83	36	65.5	152	37	30	38	25	11	-	8	2	7.5	18	12	6.5	104	6	90	5
6IK	120W	12	-	104	94	46	72	187	37	30	42	25	11	-	10	2	10	20	12	9	120	8	104	5
	140W	12	-	104	94	46	72	187	37	30	42	25	11	-	10	2	10	20	12	9	120	8	104	5
	180W	12	-	104	94	46	72	187	37	30	42	25	11	-	10	2	10	20	12	9	120	8	104	5

Note: L, the number before "/" represents the length of the gearbox with the reduction from 3 to 18, while the number after represents the length of the gearbox with the reduction from 25 to 200.

SPECS CONT-RATED

Model · Type Lead Wire Type		Output Power	Voltage	Frequency	Speed Control Range	Allowance Torque		Starting Torque	Current	Capacitor		
Pinion Shaft	Round Shaft					1200r/min	90r/min					
		W	V	Hz	r/min	mN.m	mN.m	mN.m	A	μF		
2IK6RGN-AJ	2IK6RA-AJ	6	11ph100	50	90~1400	50	30	35	0.260	3.5		
				60	90~1700	50	29	35	0.280			
2IK6RGN-CE	2IK6RA-CE		1ph220	1ph230	50	90~1400	55	29	35	0.150	0.8	
					50	90~1400	55	29	35	0.150		
3IK15RGN-AJ	3IK15RA-AJ		15	1ph100	50	90~1400	120	35	55	0.42	6.0	
					60	90~1700						
3IK15RGN-CE	3IK15RA-CE	1ph220		1ph230	50	90~1400	120	35	54	0.26	1.2	
					50	90~1400						
4IK25RGN-AJ	4IK25RA-AJ	25		1ph100	50	90~1400	190	47	88	0.75	8.0	
					60	90~1700						
4IK25RGN-CE	4IK25RA-CE		1ph220	1ph230	50	90~1400	190	47	88	0.35	1.8	
					50	90~1400						
5IK40RGN-AJ	5IK40RA-AJ		40	1ph100	50	90~1400	260	70	180	0.95	12.0	
					60	90~1700						
5IK40RGN-CE	5IK40RA-CE	1ph220		1ph230	50	90~1400	300	75	160	0.55	2.5	
					50	90~1400						
5IK60RGN-AFJ	5IK60RA-AFJ	60		1ph100	50	90~1400	460	140	265	2.00	20.0	
					60	90~1700	490	160				
5IK60RGN-CFE	5IK60RA-CFE		1ph220	1ph230	50	90~1400	490	140	265	0.80	4.0	
					50	90~1400						
5IK60RGU-AFJ	—		60	1ph100	50	90~1400	460	140	265	2.00	20.0	
					60	90~1700	490	160				
5IK60RGU-CFE	—	1ph220		1ph230	50	90~1400	490	140	265	0.80	4.0	
					50	90~1400						
5IK90RGN-AFJ	5IK90RA-AFJ	90		1ph100	50	90~1400	710	230	405	2.75	25.0	
					60	90~1700						
5IK90RGN-CFE	5IK90RA-CFE		1ph220	1ph230	50	90~1400	710	230	410	1.20	5.0	
					50	90~1400						
5IK120RGU-AFJ	5IK120RA-AFJ		120	1ph100	50	90~1400	750	330	530	3.50	30.0	
					60	90~1700						
5IK120RGU-CFE	5IK120RA-CFE	1ph220		1ph230	50	90~1400	750	330	530	1.50	7.0	
					50	90~1400						
6IK120RGU-AFJ	6IK120RA-AFJ	120		1ph100	50	90~1400	750	360	530	3.65	30.0	
					60	90~1700						
6IK120RGU-CFE	6IK120RA-CFE		1ph220	1ph230	50	90~1400	750	360	530	1.55	8.0	
					50	90~1400						
6IK140RGU-AFJ	6IK140RA-AFJ		140	1ph100	50	90~1400	830	420	620	4.2	35.0	
					60	90~1700						
6IK140RGU-CFE	6IK140RA-CFE	1ph220		1ph230	50	90~1400	830	420	620	1.85	10.0	
					50	90~1400						
6IK180RGU-CFE	6IK180RA-CFE	180		1ph220	1ph230	50	90~1400	920	500	700	1.40	12.0

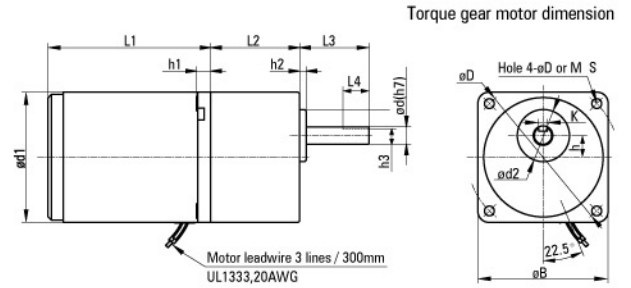
ALLOWABLE TORQUE WHEN BEING WITH GEARBOX

Allowance Torque Unit: Upside(N.M)/ Belowside(kgf.cm)

Type Motor Gearhead	Gear Ratio		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	200
	Speed r/min	50Hz	500	417	300	250	200	166	120	100	83	60	50	41	30	25	20	16	15	12.5	10	8.3	7.5
		60Hz	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10	9
2IK6RGN-AJ 2IK6RGN-CE	2GN□K	50Hz	0.12	0.14	0.19	0.23	0.29	0.35	0.49	0.58	0.70	0.88	1.1	1.3	1.6	1.9	2.4	2.9	3	3	3	3	3
		60Hz	0.10	0.12	0.16	0.19	0.24	0.29	0.41	0.49	0.58	0.73	0.88	1.1	1.3	1.6	2.0	2.4	2.6	3	3	3	3
3IK15RGN-AJ 3IK15RGN-CE	3GN□K	50Hz	0.30	0.36	0.51	0.61	0.76	0.91	1.3	1.5	1.8	2.3	2.7	3.3	4.1	5	5	5	5	5	5	5	5
		60Hz	0.26	0.31	0.43	0.51	0.64	0.77	1.1	1.3	1.5	1.9	2.3	2.8	3.5	4.2	5	5	5	5	5	5	5
4IK25RGN-AJ 4IK25RGN-CE	4GN□K	50Hz	0.49	0.58	0.81	0.97	1.2	1.5	2.0	2.4	2.9	3.7	4.4	5.3	6.6	7.9	8	8	8	8	8	8	8
		60Hz	0.40	0.48	0.67	0.80	1.0	1.2	1.7	2.0	2.4	3.0	3.6	4.3	5.4	6.5	8	8	8	8	8	8	8
5IK40RGN-AJ 5IK40RGN-CE	5GN□K	50Hz	0.77	0.92	1.3	1.5	1.9	2.3	3.2	3.8	4.6	5.7	6.9	8.3	10	10	10	10	10	10	10	10	10
		60Hz	0.63	0.76	1.1	1.3	1.6	1.9	2.6	3.2	3.8	4.7	5.7	6.8	8.6	10	10	10	10	10	10	10	10
5IK60RGN-AFJ 5IK60RGN-CFE	5GN□K	50Hz	1.1	1.4	1.9	2.3	2.9	3.4	4.8	5.7	6.8	8.6	10	10	10	10	10	10	10	10	10	10	10
		60Hz	0.92	1.1	1.5	1.8	2.3	2.8	3.8	4.6	5.5	6.9	8.3	10	10	10	10	10	10	10	10	10	10
5IK60RGU-AFJ 5IK60RGU-CFE	5GU□KB	50Hz	1.1	1.4	1.9	2.3	2.9	3.4	4.3	5.1	6.2	7.7	9.3	11.2	15.5	18.6	20	20	20	20	20	20	20
		60Hz	0.92	1.1	1.5	1.8	2.3	2.8	3.5	4.2	5.0	6.3	7.5	9.0	12.5	15.0	18.8	20	20	20	20	20	20
5IK90RGN-AFJ 5IK90RGN-CFE	5GU□KB	50Hz	1.7	2.0	2.8	3.4	4.3	5.1	6.4	7.7	9.2	11.6	13.6	16.6	20	20	20	20	20	20	20	20	20
		60Hz	1.4	1.7	2.5	2.8	3.5	4.2	5.2	6.2	7.5	9.4	11.3	13.5	18.8	20	20	20	20	20	20	20	20
5IK120RGN-AFJ 5IK120RGN-CFE	5GU□KB	50Hz	2.3	2.7	3.8	4.5	5.6	6.8	8.5	10.2	12.2	15.3	18.4	20	20	20	20	20	20	20	20	20	20
		60Hz	1.8	2.2	3.0	3.6	4.6	5.5	6.8	8.2	9.8	12.4	14.9	17.8	20	20	20	20	20	20	20	20	20
6IK120RGN-AFJ 6IK120RGN-CFE	6GU□K	50Hz	2.3	2.7	3.8	4.5	5.6	6.8	8.5	10.2	12.2	15.3	18.4	22.1	30.7	36.8	40	40	40	40	40	40	40
		60Hz	1.8	2.2	3.0	3.6	4.6	5.5	6.8	8.2	9.8	12.4	14.9	17.8	24.8	29.7	37.1	40	40	40	40	40	40
6IK140RGN-AFJ 6IK140RGN-CFE	6GU□K	50Hz	2.6	3.1	4.4	5.2	6.6	7.9	9.9	11.8	14.2	17.8	21.4	25.7	35.6	40	40	40	40	40	40	40	40
		60Hz	2.1	2.5	3.5	4.2	5.3	6.3	7.9	9.5	11.4	14.4	17.2	20.7	28.7	34.5	40	40	40	40	40	40	40
6IK180RGN-CFE	6GU□K	50Hz	3.4	4.0	5.6	6.7	8.4	10.1	12.6	15.2	18.2	22.8	27.4	32.9	40	40	40	40	40	40	40	40	40
		60Hz	2.7	3.3	4.5	5.4	6.8	8.2	10.2	12.3	14.7	18.5	22.2	22.6	37	40	40	40	40	40	40	40	40

- “□” indicates the same rotating direction of the motor while the others rotate in the opposite direction.
- The speed is calculated by dividing the motor's synchronous speed (50Hz: 1500r/min; 60Hz: 1800r/min) by the gear ratio. The accurate speed is 2% ~20% less than the displayed value, depending on the size of the load.

TORQUE MOTORS



SIZE OF THE TORQUE MOTOR

Series	Type Power	Dimension	Torque control motor assembling dimension															
			d1	d2	d	L1	L2	L3	L4	h1	h2	h3	h	D	D1	S	B	K
2TK	3W		60	25	8	75	32/42	30	17	6.5	3	7	10	4.5	70	5	60	-
3TK	6W		69	30	10	80	32/42	33	25	7	3	7.5	15	5.5	82	6	70	4
4TK	10W		80	32	10	85	32/42.5	33	25	7	3	7.5	15	5.5	94	6	80	4
5TK	20W		89	36	12	105	42/60	32	25	8	5	9.5	18	6.5	104	6.5	90	4

Note: L4, the number before "/" represents the length of the gearbox with the reduction from 3 to 18, while the number after represents the length of the gearbox with the reduction from 25 to 200.

SPECS

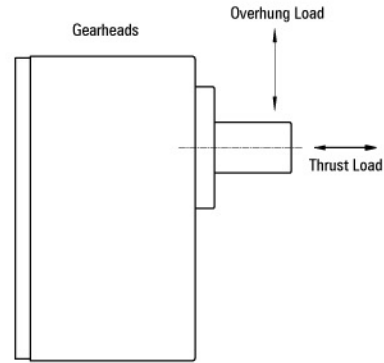
3W、6W、10W、20W、40W

Model of Motor		Rating at Locked Rotor	Voltage V	Frequency Hz	Starting Torque mN.m	Max.Output Power W	Speed at Max.Output Power mN.m	Torque at Max.Output Power mN.m	Capacitor μ F
Pinion Shaft	Round Shaft								
2TK3GN-AJ	2TK3A-AJ	5min	110	50	69	3.2	750	41	7.0
		Cont	60		25	1.3		16	
2TK3GN-CE	2TK3A-CE	5min	110	60	69	3.2	900	37	6.0
		Cont	60		25	1.3		11	
2TK3GN-AJ	2TK3A-AJ	5min	110	50	134	6.0	750	80	8.0
			Cont		60	68		2.5	
		5min	110	60	134	6.5	900	74	7.0
			Cont		60	68		2.8	
3TK6GN-CE	3TK6A-CE	5min	220	50	134	6.0	750	80	2.0
			Cont		140	68		2.5	
		5min	220	60	134	6.5	900	74	1.5
			Cont		140	68		2.8	
4TK10GN-AJ	4TK10A-AJ	5min	110	50	235	10	750	127	10.0
			Cont		60	74		3.0	
		5min	110	60	25	10	900	127	8.0
			Cont		60	69		3.0	
4TK10GN-CE	4TK10A-CE	5min	220	50	265	10	750	127	2.5
			Cont		140	98		3.0	
		5min	220	60	225	10	900	127	2.0
			Cont		140	90		3.0	
5TK20GN-AJ	5TK20A-AJ	5min	110	50	363	20	750	224	15.0
			Cont		60	137		6.0	
		5min	110	60	294	26	900	216	12.0
			Cont		60	108		6.0	
5TK20GN-CE	5TK20A-CE	5min	220	50	363	20	750	224	3.5
			Cont		140	137		6.0	
		5min	220	60	294	26	900	216	3.0
			Cont		140	108		6.0	

PERMISSIBLE OVERHUNG LOAD AND PERMISSIBLE THRUST LOAD OF MOTOR

Permissible Thrust Load

Motor		Permissible Overhung Load	
Motor Frame Size □(mm)	Output Shaft Diameter φ(mm)	Distance from Shaft End	
		10mm	20mm
42	5	40	-
60	6	50	110
70	6	40	60
80	8	90	140
	10	110	120
90	10	140	200
	12	240	270
100	14	320	350



Permissible Thrust Load

Avoid thrust loads as much as possible. If thrust load is unavoidable, keep it to half or less of the motor mass.

PERMISSIBLE OVERHUNG LOAD AND PERMISSIBLE THRUST LOAD OF MOTOR

Model	Gear Ratio	Maximum Permissible Torque N.m	Permissible Overhung Load		Permissible Thrust Load N
			10mm from Shaft End	20mm from Shaft End	
0GN□K	3~60	1.0	20	-	15
2GN□K	3~18	3.0	50	80	30
	25~200		120	180	
3GN□K	3~18	5.0	80	120	40
	25~200		150	250	
4GN□K	3~18	8.0	100	150	50
	25~200		200	300	
5GN□K	3~18	10	250	350	100
	25~200		300	450	
5GU□KB	3~9	20	400	500	150
5GU□K	12.5~18		450	600	
	25~200		500	700	
6GU□K	3~200	40	1100	1500	300

PERMISSIBLE LOAD INERTIA FOR GEARHEAD OUTPUT SHAFT

Gear ratio 1/3~1/50 $JG=JM \times i^2$

Gear ratio 1/60 or high $JG=JM \times i^2$

JG: Permissible load inertia gearhead output shaft $J(\times 10^{-4} \text{kg} \cdot \text{m}^2)$

JG: Permissible load inertia at the motor shaft $J(\times 10^{-4} \text{kg} \cdot \text{m}^2)$

i: Gear ratio (Example: i-3 means the gear ratio or 1/3)

DESCRIPTION OF ALLOWABLE TORQUE ON GEARBOX

- The speed reducer is fully closed and immersion lubricated so that grease is not easy to dry.
- □ in the type of gearbox indicates reduction ratio.
- A reliable state-of-the-art "integrated" speed reducer is used, which integrates bearing case and reducer case into one and full ball bearings are used.
- The gray color of the form indicates the same rotating direction of the motor while the rotating direction of others is opposite.
- The conditions of the testing data is under synchronous speed.
- The output shaft speed excludes the motor speed slip. The actual speed will be 2-20% lower than the above value depending upon the load.

PERMISSIBLE LOAD INERTIA AT THE MOTOR SHAFT

No. of Phase	Motor Frame Size	Output Power	Permissible Load Inertia at the Motor Shaft	
			$J(\times 10^{-4} \text{ kg} \cdot \text{m}^2)$	$GD^2 (\text{ kg} \cdot \text{m}^2)$
Single-phase	42	1W、3W	0.016	0.07
		3W※、6W	0.062	0.25
	60	6W※、15W	0.14	0.52
		10W※、25W	0.31	1.2
	70	20W※、40W	0.75	3
		60W	1.1	4.6
	80	90W	1.1	4.6
		120W	1.1	4.6
	90	120W	2	8
		140W	2	8
		180W	2	8
		180W	2	8
Three-phase	60	6W	0.062	0.25
		15W	0.14	0.52
	70	25W	0.31	1.2
		40W	0.75	3
	80	60W	1.1	4.6
		90W	1.1	4.6
	90	120W	1.1	4.6
		120W	2	8
	100	140W	2	8
		180W	2	8
		180W	2	8
		180W	2	8
DC Power	60	6W、10W、15W	0.062	0.25
		15W	0.14	0.52
	70	25W、40W	0.31	1.2
		40W	0.75	3
	80	60W	1.1	4.6
		90W	1.1	4.6
	90	120W	1.1	4.6
		250W	2	8

※Output power for torque motors

THE CALCULATION FOR THE PERMISSIBLE TORQUE OF GEARHEAD

Permissible torque for some products are omitted . In that case , use the equation below to calculate the permissible torque .

$$\text{Permissible Torque } TG = TM \times i \times \eta$$

TG: Permissible Torque of Gearhead TM: Motor Torque

i: Gear Ratio Gearhead η : Gearhead Efficiency

GEARHEAD EFFICIENCY

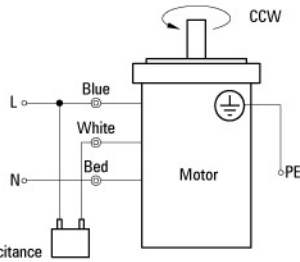
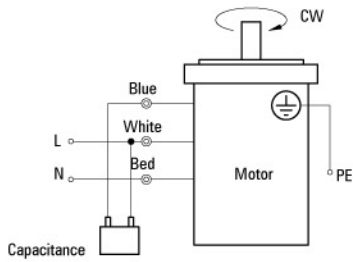
Ratio Model	Gear																					
	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	200	
0GN□K	81%			73%			66%			—												
2GN□K 3GN□K 4GN□K	81%						73%			66%			—									
5GN□K	81%			73%			66%			—												
5GU□KB(K)	81%			73%			66%			59%												
6GU□K	81%			73%			66%			66%												

CONNECTION DIAGRAMS

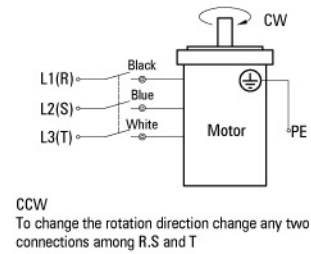
The direction of motor rotation is as viewed from the shaft end of motor. CW represents the clockwise direction, while CCW represents the counterclockwise direction. Connection diagrams are also valid for the equivalent round shaft type.

Induction/Reversible/Torque Motor Wiring Diagram

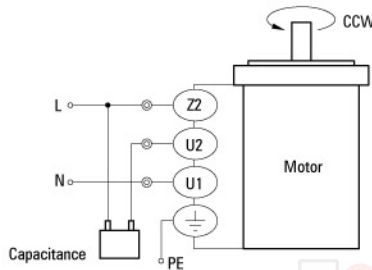
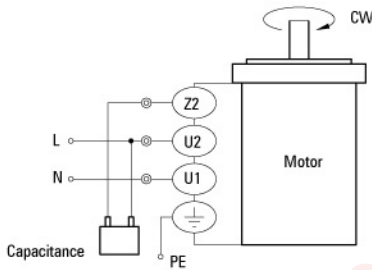
Lead Wire Type Single-phase Motor



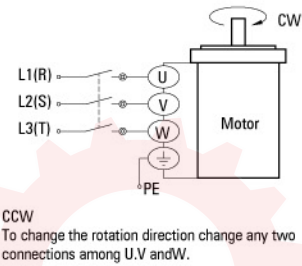
Lead Wire Type Three-phase Motor



Terminal Box Type Single-phase Motor

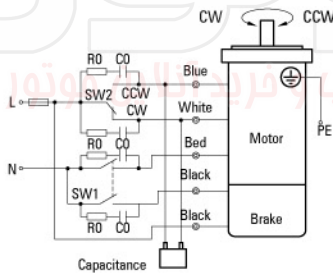


Terminal Box Type Three-phase Motor

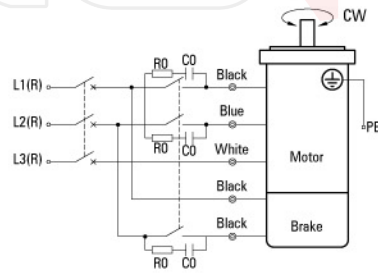


Power Off Activated Type Electromagnetic Brake Motor

Single-phase Motor

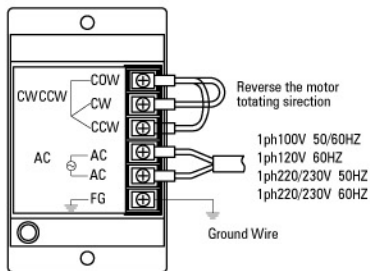


Three-phase Motor

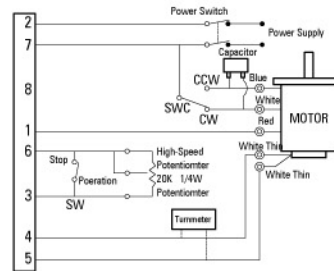


Speed Control Motors

US型/US Type



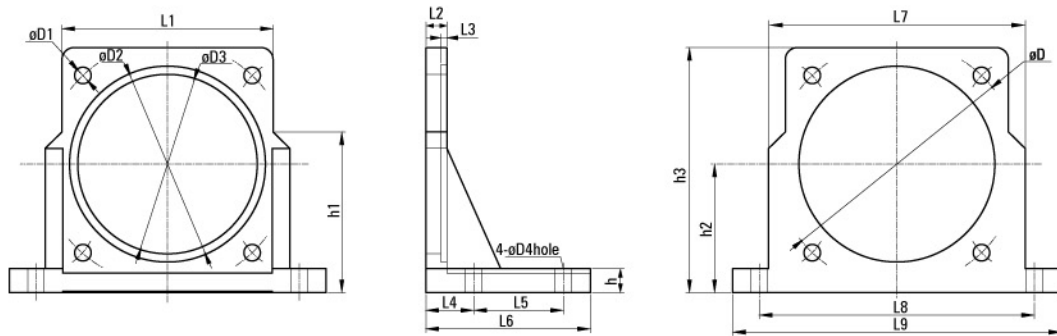
SS型/SS Type



MOTOR/GEARHEAD MOUNING BRACKETS

Mounting Brackets for attaching and securing a motor and gearhead .They are high-strength type ,Which can be used with high power motors /gearheads . These brackets come with tapped holes . To mount the motor and gearhead , simply fasten with screws provided to the gearhead . To mount the motor alone , mounting screws must be provided separately .

MOTOR FRAME SIZE

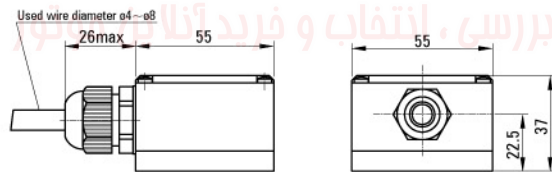


Model	Size	D1	D2	D3	D4	D	L1	L2	L3	L4	L5	L6	L7	L8	L9	h	h1	h2	h3
ZD3M5		5.5	65.5	60	5.5	84	70	7	2	16	30	55	78	92	110	8	52	43	78.5
ZD4M5		5.5	73	66	5.5	94	80	7	2	7.5	35	50	89	102	114	7.5	43	48	88.5
ZD5M5		6.5	83	73	6.5	104	90	7	2	10	40	60	100	114	130	8	50	50	95.5

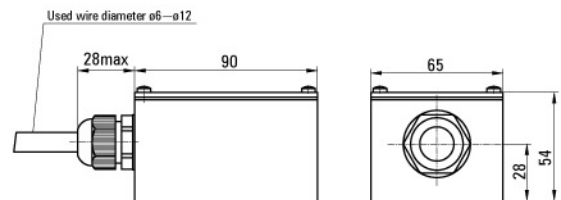
Note: material: aluminum, ZD3M5 for 3GN gearbox; ZD4M5 for 4GN gearbox; ZD5M5 for 5GN, 5GU gearbox.

TERMINAL BOX FOR MOTOR

You can select from following types of terminal boxes according to customer's request .



Model:ZDTX Motor with the flame size of $\square 80\text{mm}$ 、 $\square 90\text{mm}$ 、 $\square 104\text{mm}$



Model:ZDTC Motor with the flame size of $\square 80\text{mm}$ 、 $\square 90\text{mm}$ 、 $\square 104\text{mm}$

DESCRIPTION OF GOVERNOR MODEL

U

Speed Controller Type
U: Combination
S: Separation

S

Speed Controller Function
S: Speed Governor

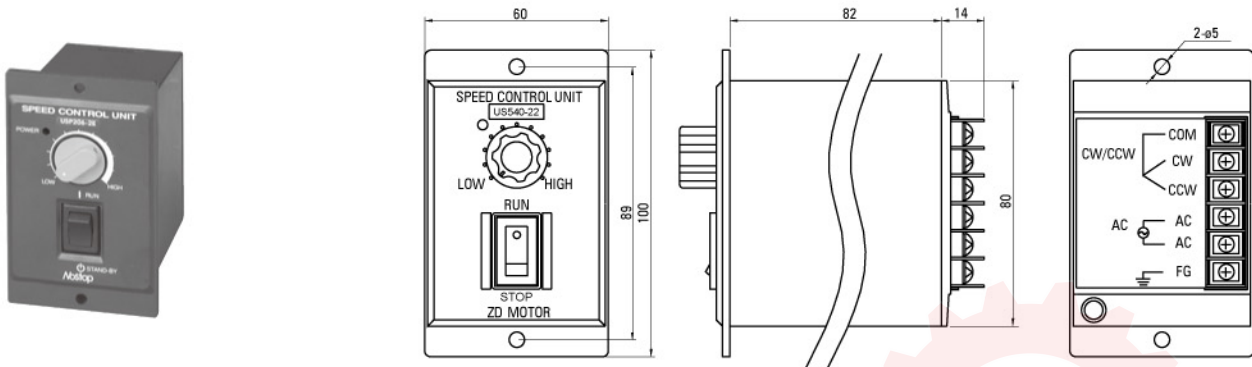
11

Voltage
11: Single Phase 110V50Hz
22: Single Phase 220V50Hz
33: Digital Display

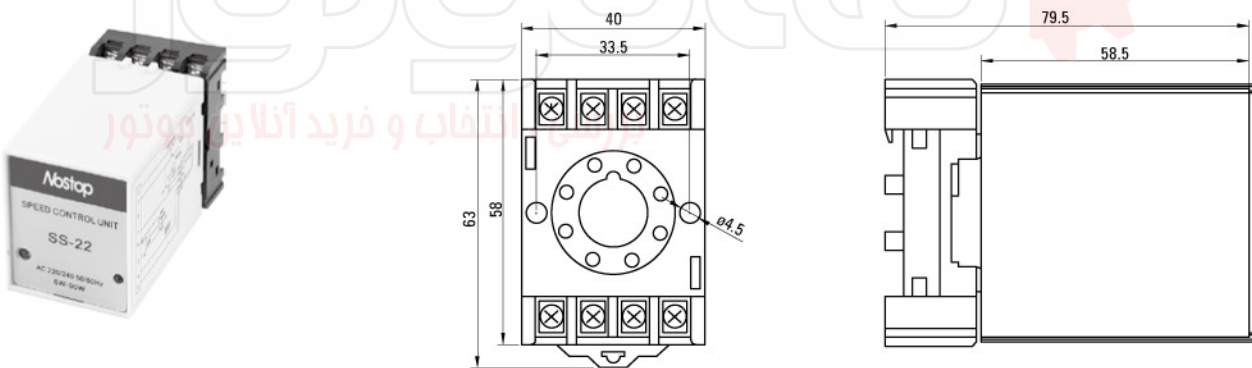
A

Capacitor Mounting Type
A: Built-in Capacitor
B: External Capacitor

COMBINATION US11、US22 CLOCKWISE AND ANTI-CLOCKWISE SPEED CHANGE



SEPARATION SS11、SS22 CLOCKWISE AND ANTI-CLOCKWISE SPEED CHANGE



LIST OF SPEED GOVERNOR CHARACTERISTICS

Parameter Model	Voltage(V)	Voltage(Hz)	Peak Current(A)	Motor Power(W)	Speed Range(r/min)	Speed Changer	Speed Responder	Speed Stability	Working Ambient Temperature
US11	110V±10%	50/60	5	6~140	90/1350	3%	(0.5)	Excellent	-10℃~+50℃
US22	220V±10%				90/1650				
SS11	110V±10%	50/60	5	6~140	90/1350	3%	(0.5)	Excellent	-10℃~+50℃
SS22	220V±10%				90/1650				
SS33	110V±10%	50/60	5	6~140	90/1350	3%	(0.5)	Excellent	-10℃~+50℃
	220V±10%				90/1650				

DESCRIPTION OF MOTOR MODEL

Z 5(5) D(W) 60 - 24 GU - 30S
 ① ② ③ ④ ⑤ ⑥ ⑦

①	Company	ZD MOTOR					
②	Model&Dimension						
	Code	2	3	4	5	55	6
	Mounting Flange mm	60×60	70×70	80×80	90×90	90×90	104×104
	Case Diameter mm	60	60	80	80	90	90
③	Motor Type	D:DC MOTOR DW: For 60,70 series motor, DW means external brush motor.					
④	Output Power	60:60W					
⑤	Voltage	24:24V					
⑥	Shape of Motor Shaft	GN: General Helical Gear		A1: Milling Keyway			
		GU: Reinforced Helical Gear		A: Flat type			
⑦	Speed	30S:3000RPM					

Note: we use M to symbolise the brake, such as Z5 (5) D 60-24 GU-30S-M, the brake voltage is the same as the rated voltage of the motor; Type of motor can be interpreted as a case diameter of 90mm, GU type, rated voltage 24VDC, rated power 60W, rated speed of 3000RPM, with brake-24VDC.

DESCRIPTION OF REDUCER MODEL

5 GN 50 K
 ① ② ③ ④

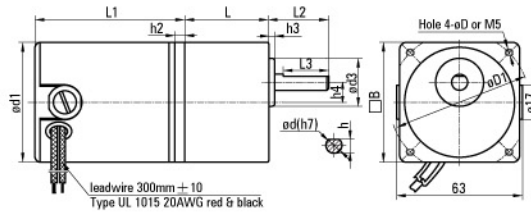
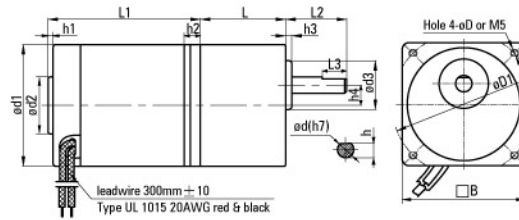
①	Model&Dimension	2: 60mm 3: 70mm 4: 80mm 5: 90mm 6: 104mm
②	Gear Type	GN: General Helical Gear GU: Reinforced Helical Gear
③	Reduction Ratio	50: Reduction Ratio 1:50 10X denotes the mid reduction ratio 1:10
④	Bearing Type	K: Ball Bearing(Mark KB for Type GU square case)

Note:The code of the non-standard split type is to add "V" before the model number of the motor or reducer(Please specify the detailed parameter requirement in the purchase order)

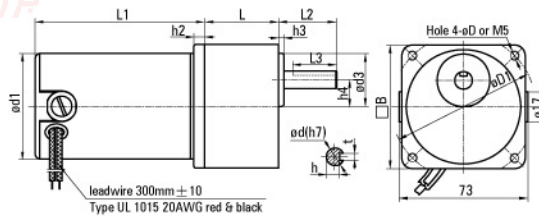
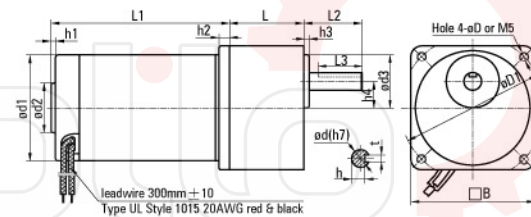
GENERAL SPECIFICATION OF DC MOTOR

Items	Specifications
Insulation resistance	In the circumstance of normal ambient temperature and humidity, the resistance can be up to 20M Ω or more when 500VDC megger is applied between the windings and the frame after rated motor operations
Insulation voltage	In the circumstance of normal temperature and humidity, there will be no problem to withstand 1.5kV(three phase400v:2kv) at 50/60Hz between the windings and the frame for 1 minute after rated motor operation
Temperature rise	The temperature rise should be lower than 80 $^{\circ}$ C measured by resistance method when the motor is working.
Insulation class	Class B(130 $^{\circ}$ C)
Using temperature	-10 \sim +40 $^{\circ}$ C (Nonfreezing)
Using temperature	\leq 85%(Place without dew)

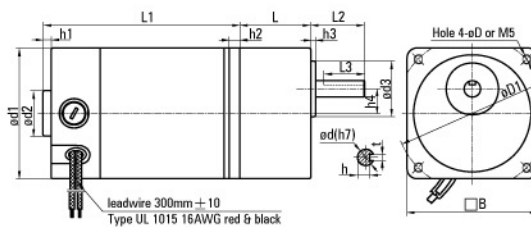
60 MOTOR DIMENSION



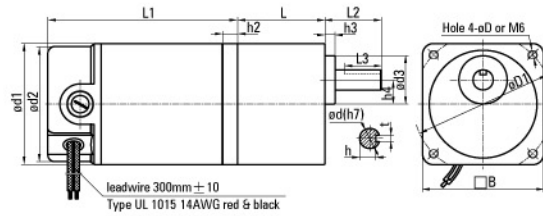
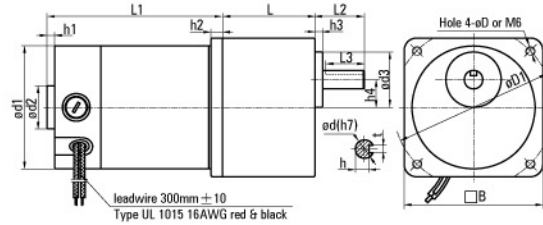
70 MOTOR DIMENSION



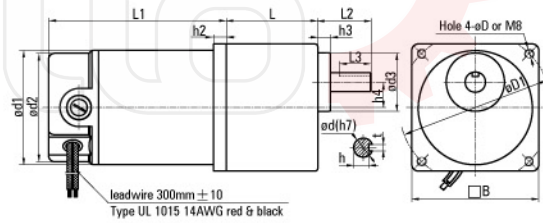
80 MOTOR DIMENSION



90 MOTOR DIMENSION



100 MOTOR DIMENSION



SIZE OF THE DC MOTOR

Series	Type Power	Dimension	DC gear motor assembling dimension															Unin(mm)	
			d	d1	d2	d3	D	D1	L	L1	L2	L3	h	h1	h2	h3	h4	t	B
Z2D	06/10		8	60	28	25	4.5	70	32/41	75	30	27	7	2.5	5	3	10	-	60
	15		8	60	28	25	4.5	70	32/41	89	30	27	7	2.5	5	3	10	-	60
Z3D	25		10	60	28	25	5.5	82	32/42	101	33	25	7.5	2.5	6	3	15	4	70
Z4D	40		10	80	28	32	5.5	94	32/42.5	120.5	33	25	7.5	5	6.5	3	15	4	80
Z5D	40		12	80	28	36	6.5	104	42/60	124	32	25	9.5	5	7.5	5	18	5	90
	60		15	80	28	36	6.5	104	65.5	143	38	25	12	5	7.5	7.5	18	5	90
	90		15	80	28	36	6.5	104	65.5	143	38	25	12	5	7.5	7.5	18	5	90
Z55D	120		15	80	28	36	104	5	65.5	143	38	25	12	5	7.5	7.5	18	5	90
	250		15	90	85.5	36	104	5	65.5	196	38	25	12	/	11	7.5	18	5	90
Z6D	250		15	90	85.5	46	120	5	72	194.5	42	25	12	/	10	10	20	5	104

Note: L, the number before "/" represents the length of the gearbox with the reduction from 3 to 18, while the number after represents the length of the gearbox with the reduction from 25 to 200.

MOTOR PERFORMANCE PARAMETERS

Typel	Power W	Voltage V	No-load Parameters		Load Parameters			Brush Life H	Motor Weight kg
			Speed r/min	Current A	Speed r/min	Torque mN.m	Current A		
Z2D (W)	6	12	3200	0.6 Max.	2950	19	0.8	2000	0.6
	6	24	3200	0.3 Max.	2950	19	0.5	2000	0.6
	6	90	3200	0.1 Max.	3000	19	0.2	2000	0.6
	15	12	3000	0.7 Max.	2800	51	2.0	2000	0.7
	15	24	3200	0.3 Max.	2950	48	1.0	2000	0.7
	15	90	3000	0.1 Max.	2900	49	0.3	2000	0.7
Z3D (W)	25	12	3300	1.0 Max.	3000	80	3.0	2000	1.0
	25	24	3200	0.6 Max.	2800	87	1.6	2000	1.0
	25	90	3200	0.2 Max.	3000	80	0.5	2000	1.0
Z4D	40	12	3200	2.0 Max.	3000	127	5.2	2000	1.8
	40	24	3200	0.8 Max.	3000	127	2.1	2000	1.8
	40	90	3100	0.3 Max.	2950	129	0.6	2000	1.8
Z5D	40	12	3200	2.0 Max.	3000	127	5.2	2000	1.9
	40	24	3000	1.0 Max.	2800	140	2.2	2000	1.9
	40	90	3100	0.3 Max.	2950	129	0.6	2000	1.98
	60	12	3200	2.0 Max.	2950	194	7.5	2000	2.2
	60	24	3100	1.5 Max.	2800	210	3.5	2000	2.2
	60	90	3200	0.3 Max.	3000	191	1.0	2000	2.2
	90	12	3300	3.0 Max.	2800	307	10.0	2000	2.2
	90	24	3100	1.5 Max.	2800	307	5.0	2000	2.2
	90	90	3100	0.5 Max.	2850	302	1.5	2000	2.2
	120	12	3400	3.0 Max.	3000	382	14.0	2000	2.2
	120	24	3100	1.5 Max.	2600	441	7.0	2000	2.2
	120	90	3300	0.3 Max.	3000	382	1.8	2000	2.2
Z55D	250	24	3600	4.0 Max.	3200	746	16.0	2000	3.2
	250	90	3300	2.0 Max.	3000	796	4.2	2000	3.2
	250	220	3100	0.2 Max.	2800	853	1.5	2000	3.2
Z6D	250	24	3600	4.0 Max.	3200	746	16.0	2000	5
	250	90	3300	2.0 Max.	3000	796	4.2	2000	5
	250	220	33100	0.2 Max.	2800	853	1.5	2000	5

Note: Motor voltage ,power and speed will be customized according to his requestment under the allowed circumstance or adoptable dimension

HOW TO CALCULATE THE TORQUE OF THE MOTOR BEING WITH GEARBOX

$$T = 9.55 * W * i * \eta / n$$

T: the torque of the gearbox shaft (N.m) If the data calculated is bigger than the max allowable torque, pls refer to the max allowable torque of the gearbox.

W: (w) Motor rated power

i : reduction ratio

η : transmission efficiency

n: (r/min) motor rated speed

TRANSMISSION EFFICIENCY η

Ratio Model	Gear																			
	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
2GN□K	81%										73%					66%				
3GN□K 4GN□K	81%										73%					66%				
5GN□K	81%										73%					66%				
5GU□KB (K)	81%										73%					66%				
6GU□K	81%										73%					66%				

THE MAX ALLOWABLE TORQUE OF THE GEARBOX

type	2GN□K	3GN□K	4GN□K	5GN□K	5GU□KB (K)	6GU□K
The max allowable torque N.m	2.94	4.90	7.84	9.80	19.6	39.2



■Product Characters

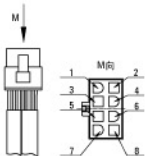
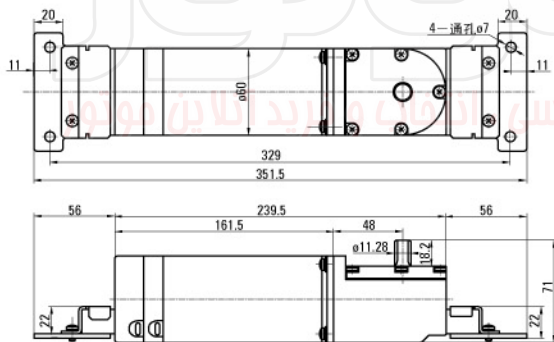
This product adopted PMDC brush motor as the main part of rotor. It can be matched with computer system of control. It can realise self-supervise through matching with computer, and you can set the best working model. It has characters of low noise, small volume, light, long life and wide use. Meanwhile, it can meet the customers' request of update.

■MOTOR PERFORMANCE PARAMETERS

Mode	Power W	Voltage V	No-load Parameters		Load Parameters			Allowable Torque Gear Motor		Motor Weight kg
			Speed r/min	Current A	Speed r/min	Torque mN.m	Current A	GK8.5 mN.m	GK13 mN.m	
ZDMJ-1	60	24	2300	0.4Max.	1800	318	4.0	1840	2650	1.2
ZDMJ-2	60	90	2300	0.3Max.	1800	318	1.1			1.0

■Dimensions (Unit: mm)

Mounting screws are included with gearhead.
Lead Wire Type (Motor: 1.8kg Gearhead: 0.8kg)



Meanings of pins							
1	2	3	4	5	6	7	8
HCW	HCCW	HVCC	HGND	/	MOTOR GND	MOTOR +	MOTOR -

Motor model	Gearhead model	Gear Ratio
ZDMJ-1	GK□	8.5
ZDMJ-2		13

Enter the gear ratio in the box (□) within the model name

Parameters of involute output shaft		
Module	m	0.6
Teeth	z	18
Pressure angle	α	45°
Tolerance class and matching sort	6h	6hGB/T3478.1-95
Big dia	Dee	$\phi 11.28 \frac{+0.016}{-0.005}$
Small dia	Die	$\phi 10.08 \frac{+0.005}{-0.005}$
Gear No of spanning measurement	K	4
Average length of common line	Wmin	6.34

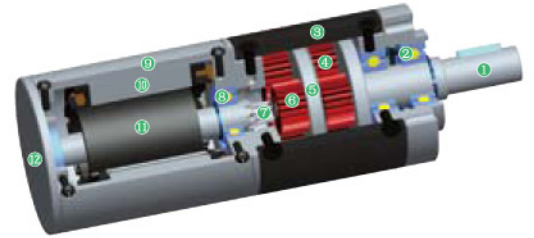
■MAIN DATA

- Basic specification: DC24V, 60W, 1800RPM S1, B CLASS, IP20
- Rated torque of bare motor: 318mN.m
- No-load noise of whole motor: < 50dB, L=50cm
- VE: AC660V, 1S, 5mA
- Insulation resistance: > 20MΩ 500V
- Life: 2500H
- Ambient request: ROHS

PRODUCT NUMBER CODE-PLANETARY GEAR MOTOR

Sectional Drawing

- ① Output shaft
- ② Bearing for the output shaft
- ③ Internal gear
- ④ The second stage planetary gear
- ⑤ Split planet carrier
- ⑥ The first stage planetary gear
- ⑦ Motor Shaft
- ⑧ Bearing for the motor shaft
- ⑨ Motor housing
- ⑩ BLDC motor stator
- ⑪ BLDC motor rotor
- ⑫ End cover



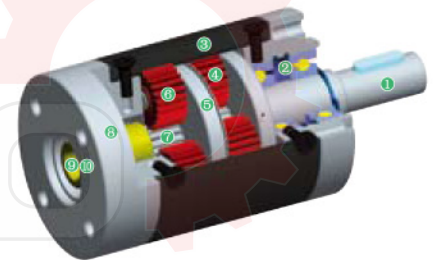
Z 62 BLDP 24 60 - 30S / 62 PM - 303 - 45
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①	ZD logo
②	Motor outline dimension: 22: Motor external diameter $\phi 22\text{mm}$ 32: Motor external diameter $\phi 32\text{mm}$ 42: Motor external diameter $\phi 42\text{mm}$ 52: Motor external diameter $\phi 52\text{mm}$ 62: Motor external diameter $\phi 62\text{mm}$
③	Motor pattern: BLDP: BLDC motor matched with planetary gearbox DP: Brush DC motor with inner brush (no brush replace from outside), matched with planetary gearbox
④	Rated voltage for the motor using: 12:12V 24:24V
⑤	Rated output power for the motor: 40:40W 60:60W
⑥	Rated output speed for the motor: 20S:2000RPM 30S:3000RPM
⑦	The outline dimension for the gearbox: transmission series: 22: External diameter $\phi 22\text{mm}$ 32: External diameter $\phi 32\text{mm}$ 42: External diameter $\phi 42\text{mm}$ 52: External diameter $\phi 52\text{mm}$ 62: External diameter $\phi 62\text{mm}$ 72: External diameter $\phi 72\text{mm}$
⑧	Planetary gearbox: PM: Transmission planetary (metal) PK: Transmission planetary (plastic)
⑨	Reduction ratio: 303; Reduction ratio 1:303
⑩	Rated torque for the gearbox: 45:45N.M

PRODUCT NUMBER CODE- PLANETARY GEARBOX TRANSMISSION SERIES

Sectional Drawing

- ① Output shaft
- ② Bearing for the output shaft
- ③ Internal gear
- ④ The second stage planetary gear
- ⑤ Split planet carrier
- ⑥ The first stage planetary gear
- ⑦ Sunwheel
- ⑧ Appropriate motor flange
- ⑨ Coupling
- ⑩ Clamping screw



Planetary Gearbox

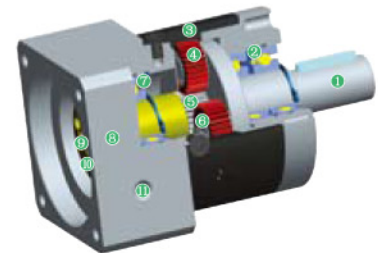
62 PM 303 K
 ① ② ③ ④

①	gearbox outline dimension: transmission series: 22: External diameter $\phi 22\text{mm}$ 32: External diameter $\phi 32\text{mm}$ 42: External diameter $\phi 42\text{mm}$ 52: External diameter $\phi 52\text{mm}$ 62: External diameter $\phi 62\text{mm}$ 72: External diameter $\phi 72\text{mm}$ 81: External diameter $\phi 82\text{mm}$ 105: External diameter $\phi 105\text{mm}$
②	Planetary gearbox: PM: Transmission planetary (metal) PK: Transmission planetary (plastic)
③	Reduction ratio: 303; Reduction ratio 303
④	Bearing type: K: Ball bearing

PRODUCT NUMBER CODE - PRECISION PLANETARY GEARBOX PL SERIES

Sectional Drawing

- ① Output shaft
- ② Bearing for the output shaft
- ③ Internal gear
- ④ Planetary gear
- ⑤ Sunwheel
- ⑥ Full complement needle bearing
- ⑦ Bearing for the sunwheel
- ⑧ Appropriate motor flange
- ⑨ Precision clamping system
- ⑩ Clamping ring
- ⑪ mounting hole



Planetary Gearbox

80 PLE 40 K
 ① ② ③ ④

①	Gearbox outline dimension: transmission series: 40: External diameter $\phi 40\text{mm}$ 60: External diameter $\phi 60\text{mm}$ 80: External diameter $\phi 80\text{mm}$ 120: External diameter $\phi 120\text{mm}$ 160: External diameter $\phi 160\text{mm}$
②	Planetary gearbox: PLE: Precision planetary-round flange output PLF: Precision planetary-square flange output PLS: Precision planetary-double output shaft reduction ratio
③	Reduction ratio: 40; Reduction ratio 1:40
④	Bearing type: K: Ball bearing



TECHNICAL DATA

Product type		PL40	PL60	PL80	PL120	PL160	Reduction ratio	Number of stage
Rated output torque	N.M	4.5	12	40	80	400	3	1
		6	16	50	100	450	4	
		6	16	50	110	450	5	
		5	15	45	120	450	8	
		16.5	44	110	210	-----	9	2
		18	44	120	260	800	12	
		18	40	110	230	700	15	
		20	44	120	260	800	16	
		20	44	120	260	800	20	
		18	40	110	230	700	25	
		20	44	120	260	800	32	
		18	40	110	230	700	40	
		7.5	18	50	120	450	64	3
		20	44	120	260	800	60	
		20	44	120	260	800	80	
		20	44	120	260	800	100	
		18	40	110	230	700	120	
		20	44	120	260	800	160	
		18	40	110	230	700	200	
		20	44	120	260	800	256	
18	40	110	230	700	320			
7.5	18	50	120	450	512			
Life	Hour	30,000						
Instant stop torque	N.M	Two times of rated output torque						

Product type	PL40	PL60	PL80	PL80	PL160	Unit	number of stage
Max radial torque	160	340	650	650	4200	N	
Max axial torque	160	450	900	900	6000	N	
Full load efficiency	96					%	1
	94						2
	90						3
Weight	0.4	0.9	2.1	2.1	18	Kg	1
	0.5	1.1	2.6	2.6	22		2
	0.6	1.3	3.1	3.1	29		3
Operating temperature	-25℃ 到 +90℃					℃	
IP	IP54						
Lubrication type	Lifetime lubrication						
Mounting type	Any						

The max radial and axial torque work in the location of the output shaft center when the out speed is 100RPM.



TECHNICAL DATA

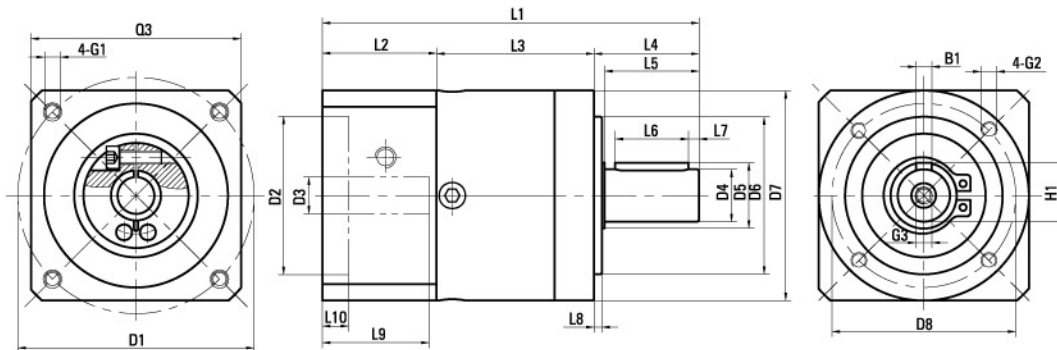
Product type		PL40	PL60	PL80	PL120	PL160	Reduction ratio
Moment of inertia	Kgcm ²	0.031	0.135	0.77	2.63	12.14	3
		0.022	0.093	0.52	1.79	7.78	4
		0.019	0.078	0.45	1.53	6.07	5
		0.017	0.065	0.39	1.32	4.63	8
		0.030	0.131	0.74	2.62	12.10	9
		0.029	0.127	0.72	2.56	12.37	12
		0.023	0.077	0.71	2.53	12.35	15
		0.022	0.088	0.50	1.75	7.47	16
		0.019	0.075	0.44	1.50	6.65	20
		0.019	0.075	0.44	1.49	5.81	25
		0.017	0.064	0.39	1.30	4.5	32
		0.016	0.064	0.39	1.30	4.5	40
		0.016	0.064	0.39	1.30	4.5	64
		0.029	0.130	0.70	2.57	12.10	60
		0.019	0.075	0.50	1.50	5.81	80
		0.019	0.075	0.44	1.49	5.80	100
		0.029	0.130	0.70	2.50	12.10	120
		0.016	0.064	0.39	1.30	4.5	160
		0.016	0.064	0.39	1.30	4.5	200
		0.016	0.064	0.39	1.30	4.5	256
0.016	0.064	0.39	1.30	4.5	320		
0.016	0.064	0.39	1.30	4.5	512		

Product type		PL40	PL60	PL80	PL120	PL160	Reduction ratio
Backlash	arcmin	Precision	<5	<3	<3	<3	Stage 1
		Standard	<10	<8	<8	<8	
	Stage 2	Precision	<8	<5	<5	<5	<5
		Standard	<12	<10	<10	<10	<10
	Stage 3	Precision	<10	<8	<8	<8	<8
		Standard	<15	<12	<12	<12	<12

Product type		PL40	PL60	PL80	PL120	PL160
Torsional stiffness	N.M/arcmin	0.7	1.8	4.5	12	38
Noise	dB(A)	55	58	60	65	70
Max output speed	min ⁻¹	10000	8000	6000	6000	6000
Recommend input speed	min ⁻¹	4500	4000	4000	4000	3000

1. The moment of inertia is related with input shaft. 2. Sound pressure level, distance 1m, measured on idle running with an input speed of 3000rpm.

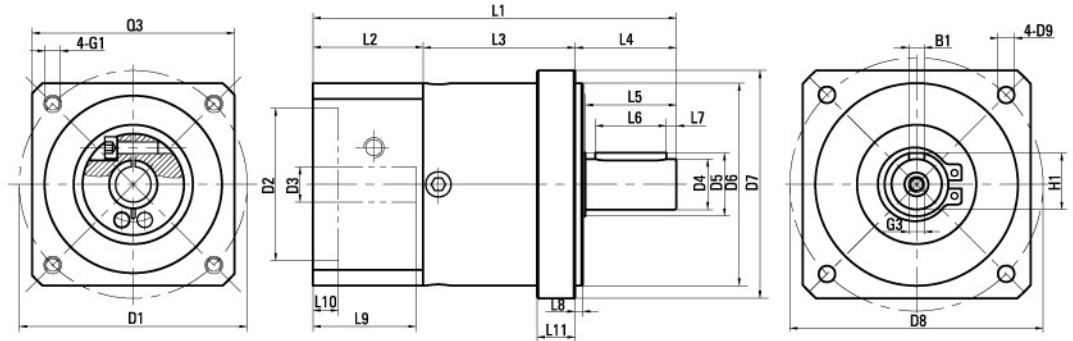
Dimensions



■ Unit: mm

Product type	PL40			PL60			PL80			PL120			PL160		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
L1 overall length	88.8	101.8	113.8	113	126	138.5	143.5	161.5	179	191.7	221.5	249	285.5	335	375.5
L3 body length	38.5	51.5	63.5	46.5	59.5	72	60	78	95.5	73.7	101.5	129	97	136.5	177
Output															
L4 output shaft length	26			35			40			55			87		
L5 output length from the shaft shoulder	24			30.5			36			50			82		
L6 key length	16			25			28			40			70		
L7 length from the key to the shaft end	2.5			2.5			4			5			5		
L8 spigot length	2			3			3			4			5		
D4 output shaft diameter	ø10 h7			ø14h7			ø20h7			ø25h7			ø40 h7		
D5 shaft shoulder diameter	ø12			ø17			ø25			ø35			ø55		
D6 spigot diameter	ø26			ø40			ø60			ø80			ø130		
D7 body diameter	ø40			ø60			ø80			ø115			ø160		
D8 hole circle	ø34			ø52			ø70			ø100			ø145		
B1 key width	3			5			6			8			12		
H1 key height	11.2			16			22.5			28			43		
G2 assembling screw hole	M4x6			M5x8			M6x10			M10x16			M12x20		
G3 center screw hole	M3x9			M5x12			M6x16			M10x22			M12x25		
Input															
L2 input flange length	24.3			31.5			43.5			63			25		
L9 motor shaft length	25			30			40			55			79		
L10 spigot depth	6			10			10			12			12		
D1 assembling hole distribution circle	46			ø70			ø90			ø145			ø200		
D2 spigot diameter	ø30 H7			ø50H7			ø70H7			ø110H7			ø114.3		
D3 input shaft diameter	ø8			ø9		ø14	ø14		ø19	ø19		ø24	ø30		ø35
G1 assembling screw hole	M4x10			M5x15			M6x15			M8x22			M12x25		
Q3 input flange	□40			□60			□80			□120			□160		

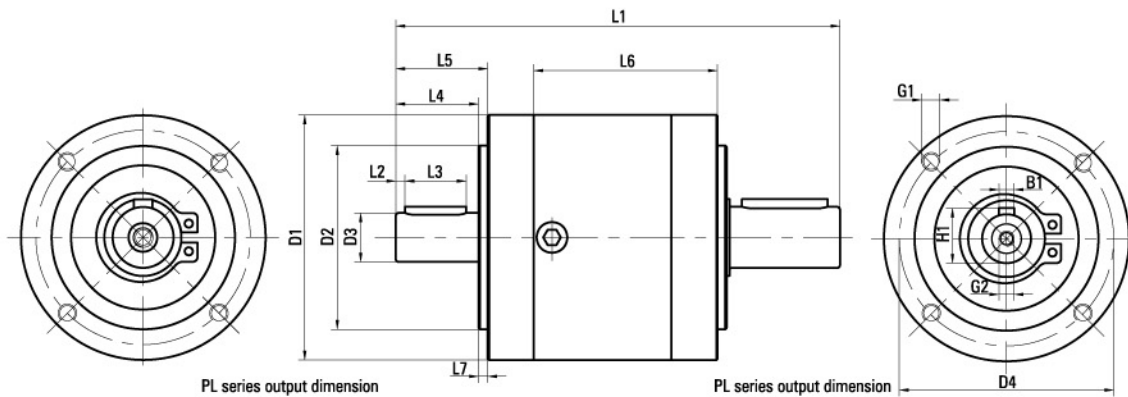
Dimensions



■Unit: mm

Product type	PL40			PL60			PL80			PL120			PL160		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Number of stage															
L1 overall length	138.5	138.5	138.5	113	126	138.5	143.5	161.5	179	191.7	221.5	249	138.5	138.5	138.5
L3 body length				46.5	59.5	72	60	78	95.5	73.7	101.5	129			
Output															
L4 output shaft length		26			35			40			55			87	
L5 output length from the shaft shoulder		24			30.5			36			50			82	
L6 key length		16			25			28			40			70	
L7 length from the key to the shaft end		2.5			2.5			4			5			5	
L8 spigot length		2			3			3			4			5	
L11 output flange thickness		6			8			10			15			15	
D4 output shaft diameter		φ10 h7			φ14h7			φ20h7			φ25h7			φ40 h7	
D5 shaft shoulder diameter		φ12			φ17			φ25			φ35			φ55	
D6 spigot diameter		φ26			φ50			φ80			φ110			φ130	
D7 output flange		□45			□60			□90			□120			□175	
D8 assembling hole distribution circle		φ50			φ70			φ100			φ130			φ185	
D9 mounting hole		φ3.5			φ5.5			φ6.5			φ8.5			φ11	
B1 key width		3			5			6			8			12	
H1 key height		11.2			16			22.5			28			43	
G3 center screw hole		M3x9			M5x12			M6x16			M10x22			M12x25	
Input															
L2 input flange length		24.3			31.5			43.5			63			25	
L9 motor shaft length		25			30			40			55			79	
L1 spigot depth		6			10			10			12			12	
D1 hole circle		46			φ70			φ90			φ145			φ200	
D2 spigot diameter		φ30 H7			φ50H7			φ70H7			φ110H7			φ114.3	
D3 input shaft diameter		φ8			φ9 φ14			φ14 φ19			φ8 φ9			φ14	
G1 mounting screw hole		M4x10			M5x15			M6x15			M8x22			M12x25	
Q3 input flange		□40			□60			□80			□120			□160	

Dimensions



Unit: mm

Product type	PL40			PL60			PL80			PL120			PL160		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
L1 overall length	94.5	107.5	119.5	119	132	144.5	145	163	180.5	204.7	232.5	260	299	348.5	389
L6 body length	38.5	51.5	63.5	46.5	59.5	72	60	78	95.5	73.7	101.5	129	97	136.5	177
Input															
L2 length from the key to the shaft end	3.5			3			3			5			7		
L3 key length	10			15			20			30			45		
L4 output length from the shaft shoulder	18			22			27			41			60		
L5 output shaft length	20			25			30			45			65		
L7 spigot length	2			3			3			4			5		
D1 body diameter	ø40			ø60			ø80			ø115			ø160		
D2 spigot diameter	ø26			ø40			ø60			ø80			ø130		
D3 output shaft diameter	ø8 h7			ø10h7			ø16h7			ø20 h7			ø35 h7		
D4 hole circle	ø34			ø52			ø70			ø100			ø145		
G1 mounting screw hole	M4x6			M5x8			M6x10			M0x16			M10x18		
G2 center screw hole	M3x9			M3x9			M5x12			M6x16			M12x25		
B1 key width	2			3			5			6			10		
H1 key height	8.8			11.2			18			22.5			38		

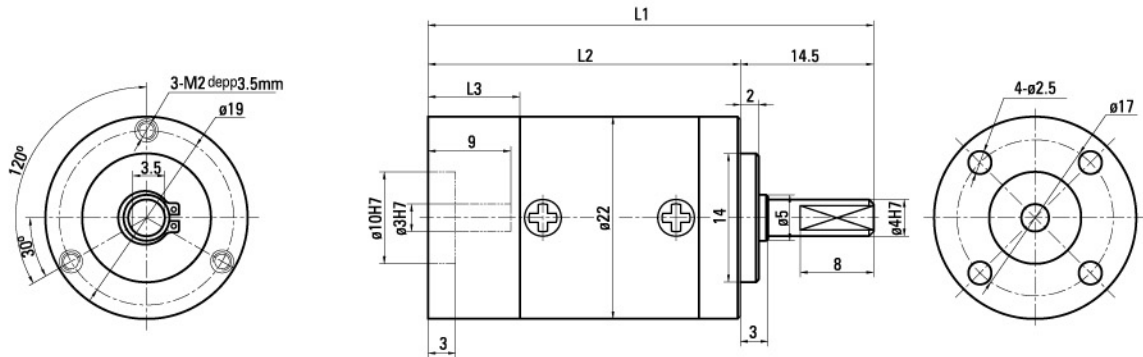
LOADED INPUT SHAFT

Product type	N	PL40	PL60	PL80	PL120	PL160
Axial		80	130	230	580	650
Radial		85	150	260	600	700

MOMENT OF INERTIA Unit: Kgcm²

Number of stage	Stage 1					Stage 2								Stage 3								
	3	4	5	8	9	12	15	16	20	25	32	40	64	60	80	100	120	160	200	256	320	512
PLS40	0.018	0.010	0.006	0.005	0.017	0.016	0.015	0.009	0.007	0.007	0.005	0.005	0.005	0.015	0.007	0.007	0.013	0.005	0.005	0.005	0.005	0.005
PLS60	0.080	0.048	0.037	0.027	0.087	0.085	0.039	0.049	0.039	0.038	0.027	0.027	0.024	0.039	0.039	0.039	0.016	0.016	0.016	0.016	0.016	0.016
PLS80	0.73	0.35	0.24	0.18	0.73	0.36	0.72	0.35	0.25	0.18	0.18	0.16	0.16	0.35	0.28	0.25	0.70	0.18	0.18	0.18	0.16	0.16
PLS120	2.30	1.85	1.42	1.40	2.50	2.40	2.40	1.65	1.60	1.40	1.40	1.30	1.30	2.20	1.60	1.40	2.20	1.50	1.30	1.30	1.20	1.20
PLS160	17	12.5	11	9.5	-----	17	17	12.3	11.7	11.8	11.4	11.3	9.5	-----	-----	-----	-----	-----	-----	-----	-----	-----

Dimensions



Technical Data

Transmission stage	Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission efficiency	90%	81%	73%
Max radial load	80N	80N	80N
Max axial load	30N	30N	30N
Instant beared torque	Three times of the rated torque		
Operating temperature	-10°C --- +80°C		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	3000RPM		
Input and output	Same direction		
L1 / Gearbox length	48.5mm	56.8mm	65.1mm
L2 / Body length	34mm	42.3mm	50.6mm
L3 / End-cover length		10mm	

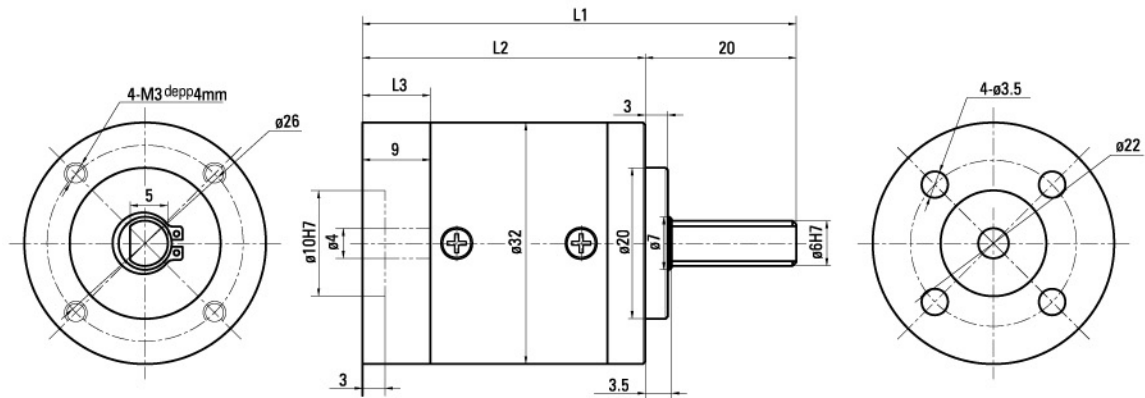
Stage 1 planetary material		Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission torque	Plastic POM	0.2N.M	0.7N.M	0.8N.M
	Metal 40Cr	0.6N.M	0.7N.M	0.8N.M
Noise	Plastic POM	45dB(A)		
	Metal 40Cr	60dB(A)		

Reduction ratio list

Stage 1 transmission	Stage 2 transmission	Stage 3 transmission	
3.7	14(13.8)	51(50.6)	168(168.5)
5.18	19(19.1)	71(70.9)	181(181.1)
6.75	25(24.9)	92(92.4)	236(236)
	27(26.8)	99(99.2)	307(307.5)
	35(34.9)	129(129.3)	
	45 (45.5)	139(139)	

- The lifetime of the two materials for the stage 1 planetary is the same under the circumstance of rated torque, plastic material is generally used for the motor with same diameter.
- The input end can be adjusted according to the motor dimension: 1. adjustable dimension: spigot diameter $\phi 20H7$, spigot depth 3. 2. motor shaft effective length 9 (it is proportional to the change of gear length) 3. djustable dimension: end-cover diameter.
- The output end can be decided by the customer: 1. the output diameter can not be exceed 4, assembling allocating convex can not be less than 14. 2. output flange can be square.

Dimensions



Technical Data

Transmission stage	Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission efficiency	90%	81%	73%
Max radial load	80N	115N	140N
Max axial load	30N	40N	50N
Instant beared torque	Three times of the rated torque		
Operating temperature	-10°C --- +80°C		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	3000RPM		
Input and output	Same direction		
L1 / Gearbox length	57.5mm	67.3mm	77.1mm
L2 / Body length	37.5mm	47.3mm	57.1mm
L3 / End-cover length		9mm	

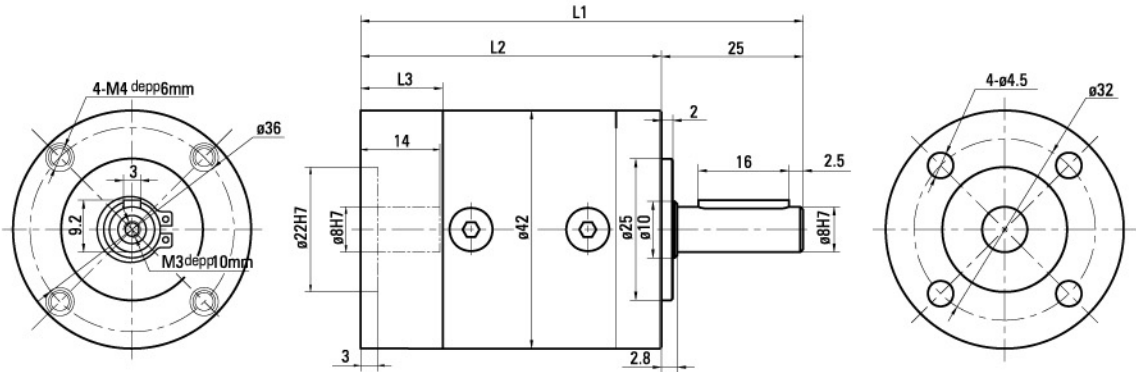
Stage 1 planetary material		Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission torque	Plastic POM	0.4N.M	1.5~2.25N.M	4N.M
	Metal 40Cr	1N.M	2.25N.M	4N.M
Noise	Plastic POM		45dB(A)	
	Metal 40Cr		60dB(A)	

Reduction ratio list

Stage 1 transmission	Stage 2 transmission	Stage 3 transmission	
3.7	14(13.8)	51(50.6)	168(168.5)
5.18	19(19.1)	71(70.9)	181(181.1)
6.75	25(24.9)	92(92.4)	236(236)
	27(26.8)	99(99.2)	307(307.5)
	35(34.9)	129(129.3)	
	45 (45.5)	139(139)	

● The lifetime of the two materials for the stage 1 planetary is the same under the circumstance of rated torque. plastic material is generally used for the motor with same diameter. ● The input end can be adjusted according to the motor dimension: 1. adjustable dimension: spigot diameter Ø20H7, spigot depth 3.2. 2. motor shaft effective length 9 (it is proportional to the change of gear length) 3. djustable dimension: end-cover diameter. ● The output end can be decided by the customer: 1. the output diameter can not be exceed 7, assembling allocating convex can not be less than 20. 2. output flange can be square.

Dimensions



TECHNICAL DATA

Transmission stage	Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission efficiency	90%	81%	73%
Max radial load	160N	230N	300N
Max axial load	50N	80N	100N
Instant beared torque	Three times of the rated torque		
Operating temperature	-10℃ --- +80℃		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	3000RPM		
Input and output	Same direction		
L1 / Gearbox length	78.1mm	96.4mm	114.7mm
L2 / Body length	53.1mm	71.4mm	89.7mm
L3 / End-cover length		14.5mm	

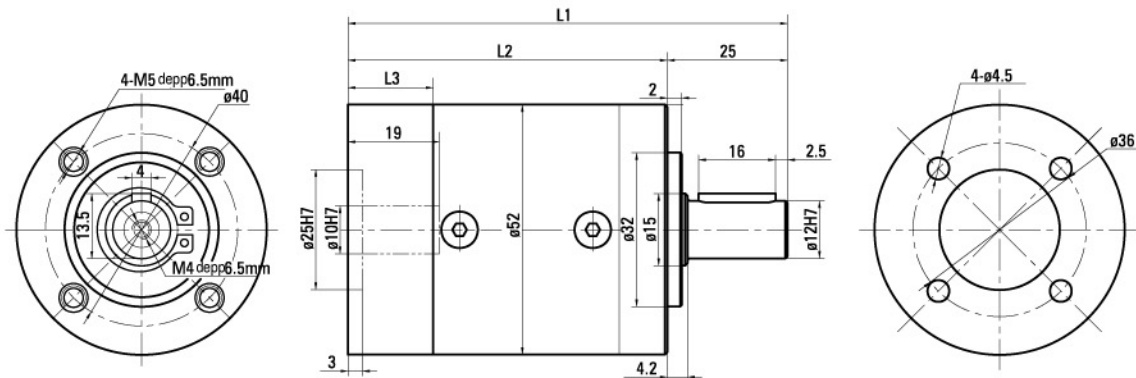
Stage 1 planetary material		Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission torque	Plastic POM	0.7N.M	2.5~6N.M	15N.M
	Metal 40Cr	3N.M	7.5N.M	15N.M
Noise	Plastic POM	45dB(A)		
	Metal 40Cr	60dB(A)		

Reduction ratio list

Stage 1 transmission	Stage 2 transmission	Stage 3 transmission	
3.65	13(13.3)	49(48.63)	188(188.2)
5.36	20(19.5)	71(71.4)	206(206.3)
6.55	24(23.9)	87(87.2)	248(247.9)
8.63	31(31.5)	105(104.8)	272(271.8)
	29(28.7)	115(114.9)	281(281)
	35(35.1)	128(128.1)	303(302.9)
	43(42.9)	154(154)	370(370.2)
	46(46.2)	157(156.6)	399(399.2)
	56(56.5)	169(168.8)	489(488.8)

● the lifetime of the two materials for the stage 1 planetary is the same under the circumstance of rated torque. plastic material is generally used for the motor with same diameter. ● the input end can be adjusted according to the motor dimension: 1. adjustable dimension: spigot diameter $\varnothing 22H7$, spigot depth 3. 2. motor shaft effective length 14 (it is proportional to the change of gear length) 3. adjustable dimension: end-cover diameter. ● the output end can be decided by the customer: 1. the output diameter can not be exceed 10, assembling allocating convex can not be less than 25. 2. output flange can be square.

Dimensions



TECHNICAL DATA

Transmission stage	Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission efficiency	90%	81%	73%
Max radial load	200N	320N	450N
Max axial load	60N	100N	150N
Instant beared torque	Three times of the rated torque		
Operating temperature	-10℃ --- +80℃		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	3000RPM		
Input and output	Same direction		
L1 / Gearbox length	91.4mm	107.8mm	124.2mm
L2 / Body length	66.4mm	82.8mm	99.2mm
L3 / End-cover length		17.7mm	

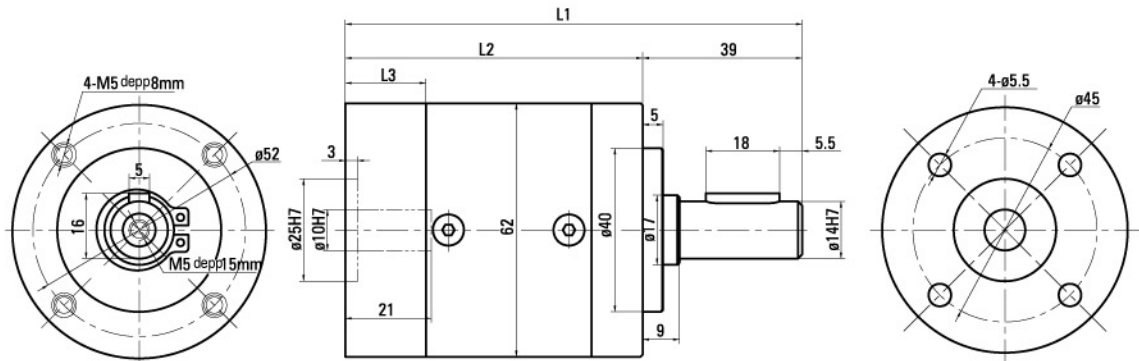
Stage 1 planetary material		Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission torque	Plastic POM	1.2N.M	4~10N.M	25N.M
	Metal 40Cr	4N.M	12N.M	25N.M
Noise	Plastic POM	45dB(A)		
	Metal 40Cr	60dB(A)		

Reduction ratio list

Stage 1 transmission	Stage 2 transmission	Stage 3 transmission	
3.65	13(13.3)	49(48.63)	188(188.2)
5.36	20(19.5)	71(71.4)	206(206.3)
6.55	24(23.9)	87(87.2)	248(247.9)
8.63	31(31.5)	105(104.8)	272(271.8)
	29(28.7)	115(114.9)	281(281)
	35(35.1)	128(128.1)	303(302.9)
	43(42.9)	154(154)	370(370.2)
	46(46.2)	157(156.6)	399(399.2)
	56(56.5)	169(168.8)	489(488.8)

● the lifetime of the two materials for the stage 1 planetary is the same under the circumstance of rated torque. plastic material is generally used for the motor with same diameter. ● the input end can be adjusted according to the motor dimension: 1. adjustable dimension: spigot diameter $\varnothing 25H7$, spigot depth 3. 2. motor shaft effective length 21 (it is proportional to the change of gear length) 3. djustable dimension: end-cover diameter. ● the output end can be decided by the customer: 1. the output diameter can not be exceed 15, assembling allocating convex can not be less than 32. 2. output flange can be square.

Dimensions



TECHNICAL DATA

Transmission stage	Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission efficiency	90%	81%	73%
Max radial load	240N	360N	520N
Max axial load	70N	100N	150N
Instant beared torque	Three times of the rated torque		
Operating temperature	-10℃ --- +80℃		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	3000RPM		
Input and output	Same direction		
L1 / Gearbox length	111.7mm	129.6mm	147.5mm
L2 / Body length	72.7mm	90.6mm	108.5mm
L3 / End-cover length		19.7mm	

Stage 1 planetary material		Stage 1 transmission	Stage 2 transmission	Stage 3 transmission
Transmission torque	Plastic POM	4.5N.M	15~25N.M	45N.M
	Metal 40Cr	8N.M	25N.M	45N.M
Noise	Plastic POM		45dB(A)	
	Metal 40Cr		60dB(A)	

Reduction ratio list

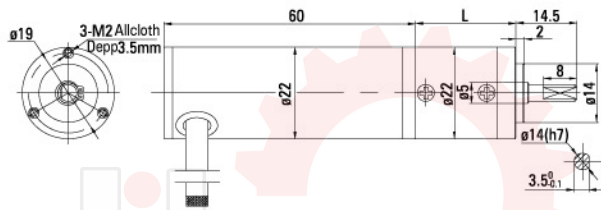
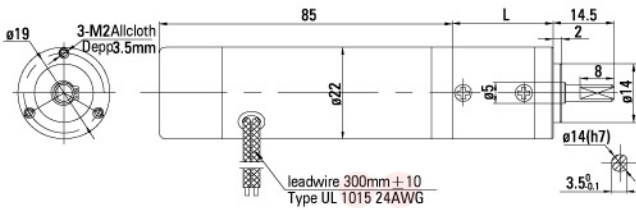
Stage 1 transmission	Stage 2 transmission	Stage 3 transmission	
3.65	13(13.3)	49(48.63)	188(188.2)
5.36	20(19.5)	71(71.4)	206(206.3)
6.55	24(23.9)	87(87.2)	248(247.9)
8.63	31(31.5)	105(104.8)	272(271.8)
	29(28.7)	115(114.9)	281(281)
	35(35.1)	128(128.1)	303(302.9)
	43(42.9)	154(154)	370(370.2)
	46(46.2)	157(156.6)	399(399.2)
	56(56.5)	169(168.8)	489(488.8)

- The lifetime of the two materials for the stage 1 planetary is the same under the circumstance of rated torque. plastic material is generally used for the motor with same diameter.
- The input end can be adjusted according to the motor dimension: 1. adjustable dimension: spigot diameter $\phi 25H7$, spigot depth 3. 2. motor shaft effective length 21 (it is proportional to the change of gear length) 3. adjustable dimension: end-cover diameter
- The output end can be decided by the customer: 1. the output diameter can not be exceed 17, assembling allocating convex can not be less than 40. 2. the output flange can be square.



Z22DP2410-60S/22PM □ DC brush planetary gear motor

Z22BLDP2410-60S/22PM □ DC brushless planetary gear motor

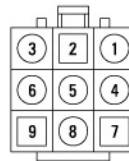
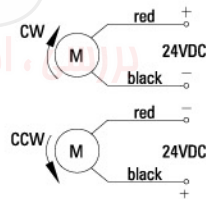


Z22D motor wiring diagram

Z22BLD plughole diagram

Z22BLD wiring plughole corresponding signal explanation

Motor type	Gearbox type	Reduction ratio	L-Dimension(mm)
Z22DP	22PM □	3.65~8.63	24
Z22BLDP		13~74	32.3
		87~643	40.6



1	2	2	4	5
U	V	W	+5V	/
6	7	8	9	
GND	Hu	Hv	Hw	

■ DC MOTOR TECHNICAL DATA

Motor type	Voltage	Power	No-load speed	No-load current	Rated speed	Rated current	Rated torque	Motor life	Motor weight
TYPE	V	W	RPM	A	RPM	A	N.M	H	Kg
Z22DP2410-60S	24	10	6500	0.3	6000	0.85	1.6	1000	0.5
Z22BLDP2410-60S	24	10	6500	0.3	6000	0.90	1.6	3000	0.5

■ DC PLANETARY GEAR MOTOR TECHNICAL DATA

Reduction ratio	i	3.65	5.36	6.55	8.63	13	20	24	29	35	43	57	74
No-load speed	RPM	1780	1212	922	753	500	325	271	244	186	151	114	88
Rated speed	RPM	1644	1119	916	695	461	300	250	207	171	139	105	81
Rated torque	N.M	0.052	0.077	0.094	0.12	0.18	0.29	0.34	0.4	0.4	0.4	0.4	0.4
Reduction stage		1	1	1	1	2	2	2	2	2	2	2	2

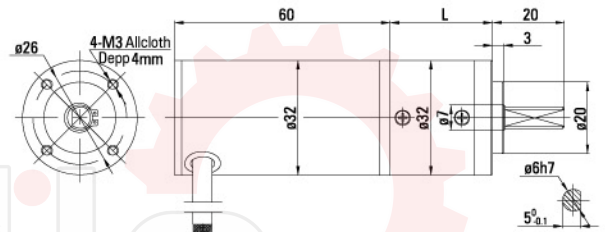
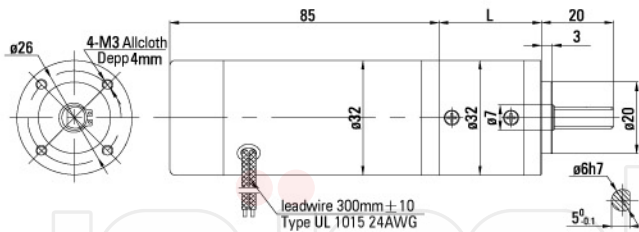
Reduction ratio	i	87	105	128	154	169	188	206	248	272	303	370	399	488	643
No-load speed	RPM	75	62	51	42	38	34	31	26	24	21	17	16	13	10
Rated speed	RPM	67	57	47	39	35	32	29	24	22	20	16	15	12	9
Rated torque	N.M	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6
Reduction stage		3	3	3	3	3	3	3	3	3	3	3	3	3	3

ø32 DC BRUSH (BRUSHLESS) PLANETARY GEAR MOTOR



Z32DP2415-30S/32PM □ DC brush planetary gear motor

Z32BLDP2415-30S/32PM □ DC brushless planetary gear motor

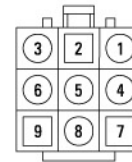
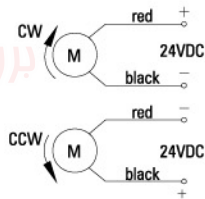


Z32D motor wiring diagram

Z32BLD plughole diagram

Z32BLD wiring plughole corresponding signal explanation

Motor type	Gearbox type	Reduction ratio	L-Dimension(mm)
Z32DP	32PM □	3.65~8.63	28.5
Z32BLDP		13~74	38.3
		87~643	48.1



1	2	2	4	5
U	V	W	+5V	/
6	7	8	9	
GND	Hu	Hv	Hw	

■ DC MOTOR TECHNICAL DATA

Motor type	Voltage	Power	No-load speed	No-load current	Rated speed	Rated current	Rated torque	Motor life	Motor weight
TYPE	V	W	RPM	A	RPM	A	N.M	H	Kg
Z32DP2415-30S	24	15	3500	0.5	3000	1.20	47.5	1000	0.8
Z32BLDP2415-30S	24	15	3500	0.5	3000	1.20	47.5	2000	0.8

■ DC PLANETARY GEAR MOTOR TECHNICAL DATA- Z32DP2415-30S

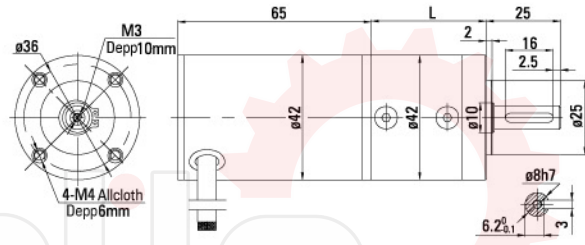
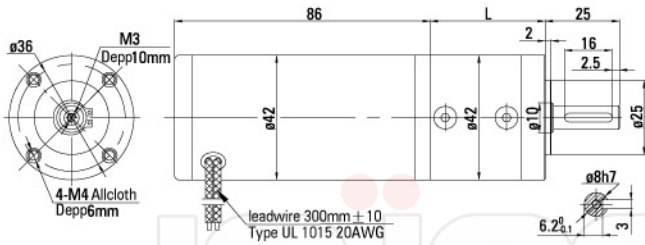
Reduction ratio	i	3.65	5.36	6.55	8.63	13	20	24	29	35	43	57	74
No-load speed	RPM	956	653	534	405	269	175	146	121	100	83	61	47
Rated speed	RPM	822	560	458	348	225	153	126	105	85	70	53	40
Rated torque	N.M	0.15	0.22	0.27	0.36	0.49	0.76	0.9	1.1	1.3	1.5	1.5	1.5
Reduction stage		1	1	1	1	2	2	2	2	2	2	2	2

Reduction ratio	i	87	105	128	154	169	188	206	248	272	303	370	399	488	643
No-load speed	RPM	40	33	27	23	21	19	17	14	13	11	9	8	7	6
Rated speed	RPM	34	29	23	19	18	16	14	12	11	10	8	7	6	5
Rated torque	N.M	3	3.6	4	4	4	4	4	4	4	4	4	4	4	2.5
Reduction stage		3	3	3	3	3	3	3	3	3	3	3	3	3	3



Z42DP2425-30S/42PM □ DC brush planetary gear motor

Z42BLDP2425-30S/42PM □ DC brushless planetary gear motor

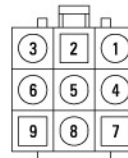
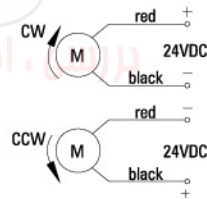


Z42D motor wiring diagram

Z42BLD plughole diagram

Z42BLD wiring plughole corresponding signal explanation

Motor type	Gearbox type	Reduction ratio	L-Dimension(mm)
Z42DP	42PM □	3.65~8.63	38.6
Z42BLDP		13~74	56.9
		87~643	75.2



1	2	2	4	5
U	V	W	+5V	/
6	7	8	9	
GND	Hu	Hv	Hw	

DC MOTOR TECHNICAL DATA

Motor type	Voltage	Power	No-load speed	No-load current	Rated speed	Rated current	Rated torque	Motor life	Motor weight
TYPE	V	W	RPM	A	RPM	A	N.M	H	Kg
Z42DP2425-30S	24	25	3500	0.7	3000	1.8	79.6	1000	1.0
Z42BLDP2425-30S	24	25	3500	0.7	3000	1.7	79.6	3000	1.2

DC PLANETARY GEAR MOTOR TECHNICAL DATA- Z42DP2425-30S

Reduction ratio	i	3.65	5.36	6.55	8.63	13	20	24	29	35	43	57	74
No-load speed	RPM	956	653	534	405	269	175	146	121	100	83	61	47
Rated speed	RPM	822	560	458	348	225	153	126	105	85	70	53	40
Rated torque	N.M	0.26	0.38	0.46	0.61	0.8	1.3	1.5	1.9	2.2	2.5	2.5	2.5
Reduction stage		1	1	1	1	2	2	2	2	2	2	2	2

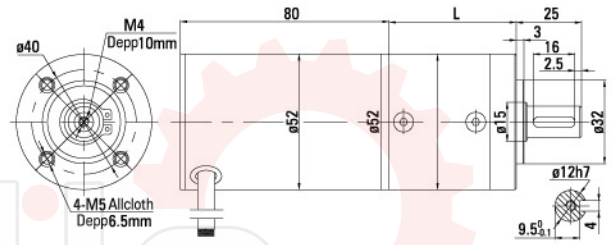
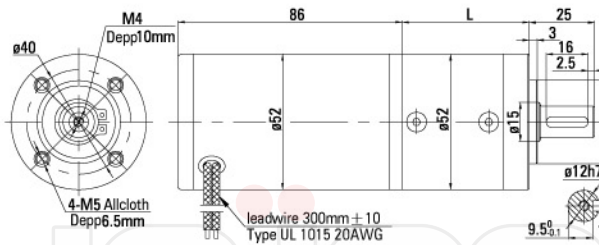
Reduction ratio	i	87	105	128	154	169	188	206	248	272	303	370	399	488	643
No-load speed	RPM	40	33	27	23	21	19	17	14	13	11	9	8	7	6
Rated speed	RPM	34	29	23	19	18	16	14	12	11	10	8	7	6	5
Rated torque	N.M	5	6	7.4	8.9	9.7	10.8	11.9	14.3	15	15	15	15	15	10
Reduction stage		3	3	3	3	3	3	3	3	3	3	3	3	3	3

ø52 DC BRUSH (BRUSHLESS) PLANETARY GEAR MOTOR



Z52DP2440-30S/52PM □ DC brush planetary gear motor

Z52BLDP2440-30S/52PM □ DC brushless planetary gear motor

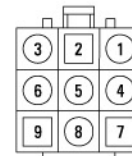
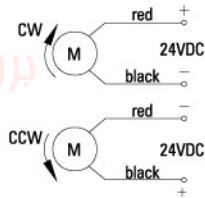


Z52D motor wiring diagram

Z52BLD plughole diagram

Z52BLD wiring plughole corresponding signal explanation

Motor type	Gearbox type	Reduction ratio	L-Dimension(mm)
Z52DP	52PM □	3.65~8.63	48.7
Z52BLDP		13~74	65.1
		87~643	81.5



1	2	2	4	5
U	V	W	+5V	/
6	7	8	9	
GND	Hu	Hv	Hw	

■ DC MOTOR TECHNICAL DATA

Motor type	Voltage	Power	No-load speed	No-load current	Rated speed	Rated current	Rated torque	Motor life	Motor weight
TYPE	V	W	RPM	A	RPM	A	N.M	H	Kg
Z52DP2440-30S	24	40	3300	0.8	3000	2.50	127.3	2000	1.5
Z52BLDP2440-30S	24	40	3300	0.8	3000	2.40	127.3	5000	1.8

■ DC PLANETARY GEAR MOTOR TECHNICAL DATA- Z52DP2440-30S

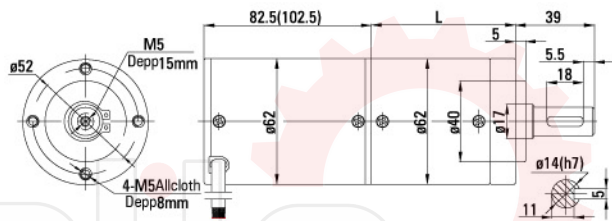
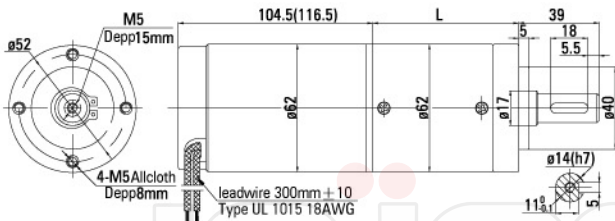
Reduction ratio	i	3.65	5.36	6.55	8.63	13	20	24	29	35	43	57	74
No-load speed	RPM	9.4	616	504	382	254	165	137	114	94	77	58	44
Rated speed	RPM	822	560	458	348	225	153	126	105	85	70	53	40
Rated torque	N.M	0.42	0.63	0.76	1	1.4	2.1	2.5	3	3.7	4	4	4
Reduction stage		1	1	1	1	2	2	2	2	2	2	2	2

Reduction ratio	i	87	105	128	154	169	188	206	248	272	303	370	399	488	643
No-load speed	RPM	38	31	26	21	19	17	16	13	12	11	9	8	7	5
Rated speed	RPM	34	29	23	19	18	16	14	12	11	10	8	7	6	5
Rated torque	N.M	8.3	9.9	12.1	14.6	16	17.8	19.5	23.5	25	25	25	25	25	20
Reduction stage		3	3	3	3	3	3	3	3	3	3	3	3	3	3



Z62(W)DP2460-30S/62M □ DC brush planetary gear motor

Z62BLDP2460-30S/62PM □ DC brushless planetary gear motor

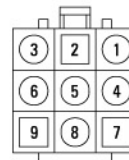
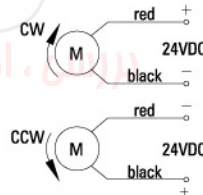


Z62D motor wiring diagram

Z62BLD plughole diagram

Z62BLD wiring plughole corresponding signal explanation

Motor type	Gearbox type	Reduction ratio	L-Dimension(mm)
Z62DP	62PM □	3.65~8.63	53
Z62BLDP		13~74	71
		87~643	89



1	2	2	4	5
U	V	W	+5V	/
6	7	8	9	
GND	Hu	Hv	Hw	

■ DC MOTOR TECHNICAL DATA (90W Motor length refers to the dimensions in the brackets)

Motor type	Voltage	Power	No-load speed	No-load current	Rated speed	Rated current	Rated torque	Motor life	Motor weight
TYPE	V	W	RPM	A	RPM	A	N.M	H	Kg
Z62DP2460-30S	24	60	3500	1.0	3000	4.0	0.19	2000	1.8
Z62BLDP2460-30S	24	60	3600	1.0	3000	4.0	0.19	5000	2.0
Z62DP2490-30S	24	90	3500	1.0	3000	5.5	0.29	2000	2.0
Z62BLDP2490-30S	24	90	3500	1.0	3000	5.5	0.29	5000	2.3

■ DC PLANETARY GEAR MOTOR TECHNICAL DATA- Z62(W)DP2460-30S

Reduction ratio	i	3.65	5.36	6.55	8.63	13	20	24	29	35	43	57	74
No-load speed	RPM	956	653	534	405	269	175	146	121	100	83	61	47
Rated speed	RPM	822	560	458	348	225	153	126	105	85	70	53	40
Rated torque	N.M	0.62	0.9	1.1	1.5	2	3	3.7	4.5	5.4	6.6	8.8	11.4
Reduction stage		1	1	1	1	2	2	2	2	2	2	2	2

Reduction ratio	i	87	105	128	154	169	188	206	248	272	303	370	399	488	643
No-load speed	RPM	40	33	27	23	21	19	17	14	13	11	9	8	7	6
Rated speed	RPM	34	29	23	19	18	16	14.5	12	11	10	8	7	6	5
Rated torque	N.M	12	14.5	17.7	21.3	23.4	26	28.5	34.4	37.7	42	45	45	45	30
Reduction stage		3	3	3	3	3	3	3	3	3	3	3	3	3	3

TECHNICAL DATA

ZH 100 50 SZ B G1 LB
 ① ② ③ ④ ⑤ ⑥ ⑦

①	Basic Structure: ZH(Horizontal) , ZV(Vertical)					
②	Output: 100W-2200W					
③	Ratio: 3, 5, 10...1800					
④	Motor Basic Data: S: 3-phase Motor, 220-240/380-415V, 50/60Hz		E: 1-Phase Motor, 110V, 60Hz		Q1: External Fan 110V	□: Aluminum Motor
	C: 1-Phase Motor, 220V, 50Hz		DV: Double Voltage Motor, 110V/220V		Q2: External Fan 220V	Z: Light Type Duty
⑤	Brake Unit: B: DC90V Brake Unit		YB: With Release Brake Unit		D: DC24V Brake	
⑥	Terminal Box Direction From Output Shaft: G1: Left(STD)		G2: Right	G3: Upper	G4: Down	
⑦	Lead Direction From Output Shaft: T: Upper		D: Down	F: Forward	B: Back	L: Left R: Right

terminal box direction

Type	G1-Left Side	G2-Right Side	G3-Upper Side	G4-Lower Side
ZH Type				
ZV Type				
Wire Inlet Direction				

TECHNICAL DATA

motor specification

Item	3-Phase Motor	1-Phase Motor
Protection	IP54 With Alum Alloy Terminal Box, And Other Is IP20	
Frame Material	Alum Alloy For 100W-2200W Frame, Alum Alloy For 1#, 2#, 3# Gear Case, 4#, 5# Cast Iron For Others	
Duty	Continuous running	
INS. Class	F, B Option	
Environment	Temp: -10°C ~ +40°C Humidity: ≤90%	
Voltage	220-240/380-415V, 50/60Hz	110V/50/60Hz, 220V/50/60Hz
Pole	4P (6P)	4P (6P)
Height	≤1000m	
Starting	Direct Start	0.1-0.2KW Capacitor 0.4-2.2KW Double Capacitors
Standard	IEC-60034	

RATED CURRENT OF 3-PHASE MOTOR / 4-POLES

Unit: A 50Hz

Output	220V	380V	415V	440V	460V
100W, 1/8 HP	0.60	0.40	0.30	0.30	0.30
200W, 1/4 HP	1.10	0.70	0.60	0.60	0.60
400W, 1/2 HP	2.60	1.50	1.30	1.30	1.20
750W, 1 HP	5.00	3.00	2.60	2.40	2.30
1500W, 2 HP	6.00	3.50	3.20	3.00	3.00
2200W, 3 HP	9.00	5.20	4.70	4.50	4.50

RATED CURRENT OF 1-PHASE MOTOR / 4-POLES

Unit: A 50Hz

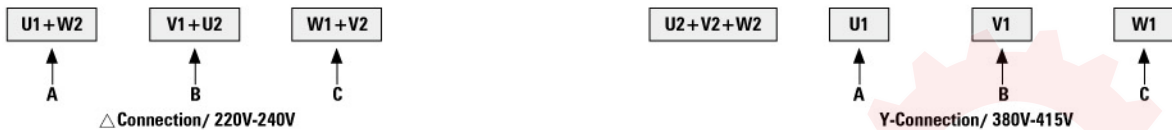
Output	100V	110V	115V	120V	220V	230V
100W, 1/8 HP	1.70	1.60	1.50	1.40	0.80	0.70
200W, 1/4 HP	3.50	3.00	3.00	3.00	1.60	1.60
400W, 1/2 HP	7.00	6.50	6.00	6.00	3.20	3.00
750W, 1 HP	12.00	11.00	10.00	10.00	5.40	5.00
1500W, 2 HP	21.00	19.00	18.00	17.00	9.50	9.00

CAPACITOR FOR 1-PHASE MOTOR, C-RUNNING TYPE

Output	Running Capacitor	Starting Capacitor	Running Capacitor+ Starting Capacitor
100W, 1/8 HP	6 μ F/450V	/	/
200W, 1/4 HP	15 μ F/450V	/	/
400W, 1/2 HP	/	/	15 μ F/450V + 125 μ F/300V
750W, 1 HP	/	/	25 μ F/450V + 200 μ F/300V
1500W, 2 HP	/	/	40 μ F/450V + 250 μ F/300V

WIRING DIAGRAM

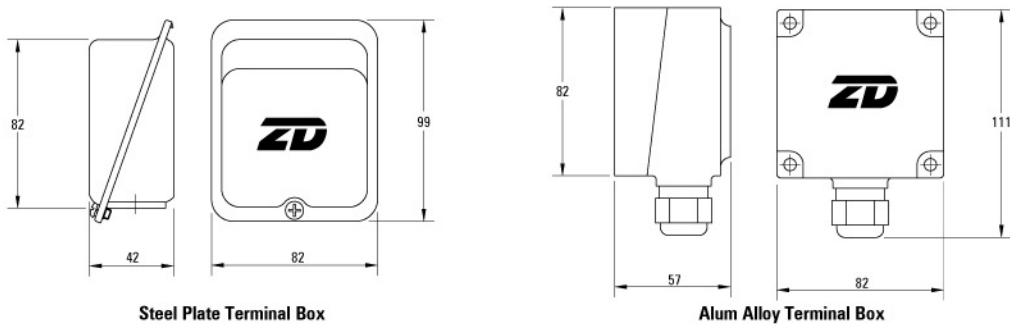
(1) For 3-phase Motor



(2) For 1-phase Motor



DIMENSION DIFFERENCE BETWEEN TWO TERMINAL BOXES



AVAILABLE MAX OUTPUT SHAFT DIAMETER

Gear Box	Standard Output Shaft Dia	Max Available Shaft Dia	Output End Bearing
1#	ø18	ø20	6004
2#	ø22	ø25	6205
3#	ø28	ø30	6206
4#	ø32	ø35	6207
5#	ø40	ø45	6209

OUTPUT TORQUE

Unit: KG-M

Ratio	Output R.P.M.		Output Torque											
			0.1KW		0.2KW		0.4KW		0.75KW		1.5KW		2.2KW	
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
3	500	600	0.19	0.16	0.37	0.31	0.70	0.60	1.30	1.10	2.60	2.20	3.80	3.20
5	300	360	0.31	0.26	0.62	0.52	1.20	1.00	2.20	1.90	4.50	3.80	6.72	5.60
10	150	180	0.62	0.52	1.24	1.04	2.40	2.00	4.50	3.80	9.10	7.60	13.7	11.2
15	100	120	0.91	0.76	1.82	1.50	3.60	3.00	6.80	5.70	13.5	11.3	20.1	16.8
20	75	90	1.20	1.00	2.40	2.00	4.80	4.00	9.00	7.50	18.1	15.1	26.8	22.4
25	60	72	1.40	1.20	3.00	2.50	6.00	5.00	11.2	9.40	22.6	18.9	33.6	28.0
30	50	60	1.80	1.50	3.60	3.00	7.20	6.00	13.5	11.3	27.1	22.6	40.3	33.6
40	37	45	2.20	1.90	4.60	3.90	9.30	7.80	17.5	14.6	34.9	29.1	52.0	43.4
45	33	40	2.70	2.20	5.40	4.40	10.9	9.10	20.6	17.0	41.1	34.0	59.8	49.6
50	30	36	2.80	2.40	5.70	4.80	11.6	9.70	21.9	18.3	43.6	36.4	65.1	54.3
60	25	30	3.40	2.90	6.90	5.80	13.9	11.6	26.2	21.9	52.4	43.7	78.1	65.1
70	21	25	4.30	3.60	8.00	6.80	16.2	13.5	31.5	26.3	62.4	52.0	92.5	77.1
80	19	23	4.80	4.00	9.20	7.70	18.4	15.4	35.5	29.6	70.8	59.0	105	87.5
90	17	20	5.20	4.40	10.3	8.60	20.7	17.3	39.3	32.8	77.1	64.3	113	94.3
100	15	18	5.80	4.90	11.5	9.60	23.0	19.2	43.2	36.0	83.7	69.8	126	105
120	12	15	6.90	5.80	13.8	11.5	27.7	23.1	51.8	43.2	101	83.7		
140	11	13	8.00	6.70	16.0	13.4	32.0	26.7	59.7	49.8	116	96.8		
160	9	11	9.10	7.60	18.3	15.3	36.3	30.3	68.0	56.7	132	110		
180	8	10	10.3	8.60	20.7	17.3	40.8	34.0	76.8	64.0	148	123		
200	7	9	11.6	9.70	22.9	19.1	43.2	36.0	82.8	69.0				

MAIN PARTS NOTES

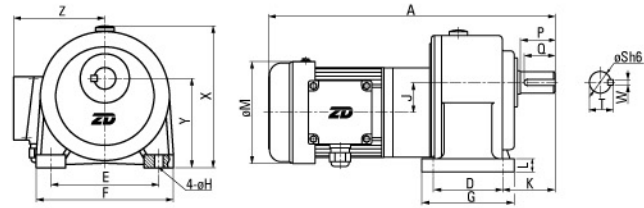
- Gearbox: The output shaft diameter of gearbox 1#, 2#, 3# are 18, 22, 28 separately. The material of gearbox is Al. alloy. 4#, 5# are 32、40 respectively. Gearbox is made of cast iron.
- Gear piece: The material 40Cr mixes to HB280, then dealt with high frequency quencher HRC50. Gear should be processed by milling with high precision. The class is 6.
- Gear shaft: The material 20CrMnTi will be changed into HRC60 through processing of cementite quencher. Gear shaft will be processed with gear hobbing. Precision class is 6.
- Motor shaft: The material 40Cr mixes to HB280, then dealt with high frequency quencher HRC54. Finally, Gear is cut for the second. Motor shaft will be processed with gear hobbing. Precision class is 5~6.
- Ball bearing: We adopt tight bearing with high precision, to make sure longterm running life.
- Oil seal: Gear shaft gives priority to enduring high temp, avoiding oil infiltration.
- Terminal box: Two type. One is Al alloy, which equips good capability of waterproof and dustproof. Protection grade is IP55. The other is steel case with deft structure. Protection grade is IP20.

OVERHUIING LOAD

Unit: KG-M

Ratio	Output R.P.M.		Hz											
			1/8HP(100W)		1/4HP(200W)		1/2HP(400W)		1HP(750W)		2HP(1500W)		3HP(2200W)	
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
3	500	600	30	25	30	25	54	45	60	50	145	130	165	150
5	300	360	36	30	36	30	78	70	85	75	165	150	210	180
10	150	180	70	60	70	60	150	130	180	150	280	250	430	360
15	100	120	110	90	110	100	175	160	165	160	355	348	490	450
20	75	90	150	125	135	125	190	170	175	170	369	365	540	500
25	60	72	155	140	150	140	210	180	185	180	450	430	650	630
30	50	60	160	150	170	165	235	220	415	400	480	450	690	650
40	38	45	160	160	180	180	270	260	430	420	580	550	710	670
45	33	40	170	170	180	180	335	328	440	430	590	570	820	780
50	30	36	170	170	180	180	350	335	450	440	600	580	850	820
60	25	30	180	180	180	180	350	350	450	450	630	610	900	900
70	21	25	180	180	180	180	350	350	460	460	670	650	1100	1100
80	18	22	180	180	180	180	350	350	460	460	680	680	1100	1100
90	16	20	180	180	180	180	350	350	500	500	850	850	1200	1200
100	15	18	200	200	250	250	380	380	590	590	900	900	1200	1200
120	12	15	200	200	320	320	390	390	640	640	920	920		
140	11	13	200	200	320	320	400	400	679	679	920	920		
150	10	12	220	220	330	300	420	420	679	679	920	920		
160	9	11	220	220	330	330	420	420	700	700	950	950		
180	8	10	240	240	350	350	430	430	720	720	980	980		
200	7	9	240	240	350	350	430	430	720	720				
1/250~1/1800			300	300	480	480	720	720	1400	1400				

ZH..S HORIZONTAL TYPE WITH ALUMINUM (BRAKE)-3-PHASE MOTOR



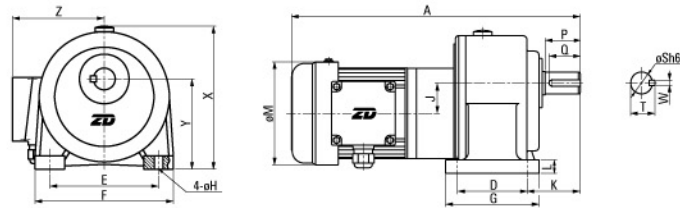
Output Shaft						
Shaft		Keyway			Key	
Sh6	P	W	T	Q	B x H x L	
ø18	30	5	20.2	27	5 x 5 x 27	
ø22	40	7	25	35	7 x 7 x 35	
ø28	45	7	31.1	40	7 x 7 x 40	
ø32	55	10	35.5	50	10 x 8 x 50	
ø40	65	10	43.5	60	10 x 8 x 60	

Unit (mm)

Power	Ratio	Code	Size	A	D	E	F	G	H	J	K	L	M	X	Y	Z
100W 1/8HP	3-50	1#	ø18	250	40	110	135	65	9	16	50	10.5	133	138	88.5	120
	60-200	2#	ø22	280	65	130	158	90	11	17.5	60	13	133	152	97.5	120
200W 1/4HP	3-10	1#	ø18	280	40	110	135	65	9	16	50	10.5	133	138	88.5	120
	15-90	2#	ø22	315	65	130	158	90	11	17.5	60	13	133	152	97.5	120
	100-200	3#	ø28	350	90	140	178	120	11	23	68	17	133	178	116	120
400W 1/2HP	3-10	2#	ø22	330	65	130	158	90	11	17.5	60	13	167	152	97.5	135
	15-90	3#	ø28	360	90	140	178	120	11	23	68	17	167	178	116	135
	100-200	4#	ø32	395	130	170	215	165	13	30	70	21	167	216	138.5	135
750W 1HP	3-25	3#	ø28	380	90	140	178	120	11	23	68	17	167	178	116	135
	30-120	4#	ø32	410	130	170	215	165	13	30	70	21	167	216	138.5	135
	125-200	5#	ø40	465	150	210	265	205	15	36	85	23	167	250	160	135
1500W 2HP	3-30	4#	ø32	450	130	170	215	165	13	30	70	21	192	216	138.5	146
	40-100	5#	ø40	510	150	210	265	205	15	36	85	23	192	250	160	146
2200W 3HP	3-40	5#	ø40	530	150	210	265	205	15	36	85	23	220	250	160	160

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ZH..S HORIZONTAL HIGH RATIO TYPE WITH ALUMINUM (BRAKE)-3-PHASE-MOTOR

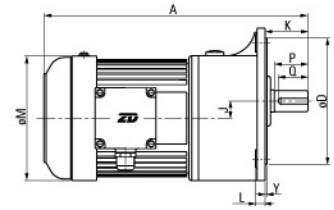
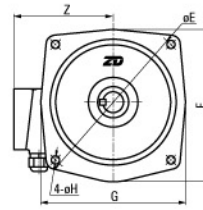
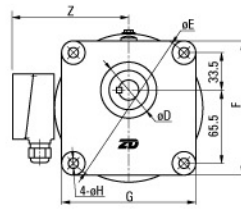


Output Shaft						
Shaft		Keyway			Key	
Sh6	P	W	T	Q	B x H x L	
ø28	45	7	31.1	40	7 x 7 x 40	
ø32	55	10	35.5	50	10 x 8 x 50	
ø40	65	10	43.5	60	10 x 8 x 60	

Unit (mm)

Power	Ratio	Code	Size	A	D	E	F	G	H	J	K	L	M	X	Y	Z
100W 1/8HP	250-1800	1#+3#	ø28	370	90	140	178	120	11	39	68	17	133	178	116	120
200W 1/4HP	250-1800	2#+4#	ø32	470	130	170	215	165	13	47.5	70	21	133	216	138.5	120
400W 1/2HP	250-1800	3#+5#	ø40	550	150	210	265	205	15	59	85	23	167	250	160	135

ZV..S VERTICAL TYPE WITH ALUMINUM (BRAKE)-3-PHASE MOTOR



B TYPE FLANGE

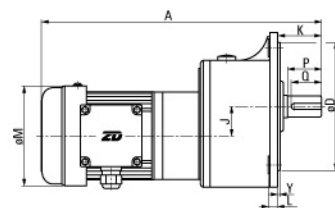
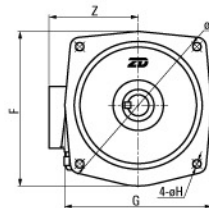
Output Shaft						
Shaft		Keyway			Key	
Sh6	P	W	T	Q	B x H x L	
ø18	30	5	20.2	27	5 x 5 x 27	
ø22	40	7	25	35	7 x 7 x 35	
ø28	45	7	31.1	40	7 x 7x 40	
ø32	55	10	35.5	50	10 x 8 x 50	
ø40	65	10	43.5	60	10 x 8 x 60	

Unit (mm)

Power	Ratio	Code	Size	A	D	E	F	G	H	J	K	L	M	Y	Z
100W 1/8HP	3-50	1#	*ø18	250	50	140	120	120	9	16	40	12	133	6	120
	60-200	2#	ø22	280	148	185	175	165	11	17.5	50	12	133	3	120
200W 1/4HP	3-10	1#	*ø18	280	50	140	120	120	9	16	40	12	133	6	120
	15-90	2#	ø22	315	148	185	175	165	11	17.5	50	12	133	3	120
	100-200	3#	ø28	350	170	220	205	195	11	23	60	13	133	3	120
400W 1/2HP	3-10	2#	ø22	330	148	185	175	165	11	17.5	50	12	167	3	135
	15-90	3#	ø28	360	170	220	205	195	11	23	60	13	167	3	135
	100-200	4#	ø32	395	185	255	248	225	13	30	70	16	167	3	135
750W 1HP	3-25	3#	ø28	380	170	220	205	195	11	23	60	13	167	3	135
	30-120	4#	ø32	410	185	255	248	225	13	30	70	16	167	3	135
	125-200	5#	ø40	465	230	310	290	268	15	36	85	21	167	5	135
1500W 2HP	3-30	4#	ø32	450	185	255	248	225	13	30	70	16	192	3	146
	40-100	5#	ø40	510	230	310	290	268	15	36	85	21	192	5	146
2200W 3HP	3-40	5#	ø40	520	230	310	290	268	15	36	85	21	220	5	160

Note: Belong To B Type Output Flange

ZV..S VERTICAL HIGH RATIO TYPE WITH ALUMINUM (BRAKE)-3-PHASE-MOTOR

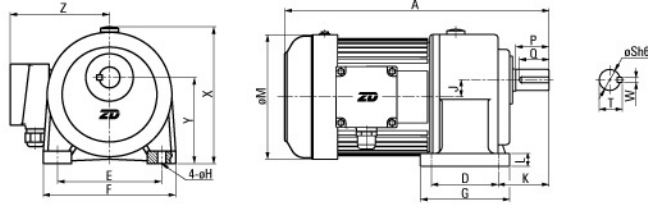


Output Shaft						
Shaft		Keyway			Key	
Sh6	P	W	T	Q	B x H x L	
ø28	45	7	31.1	40	7 x 7x 40	
ø32	55	10	35.5	50	10 x 8 x 50	
ø40	65	10	43.5	60	10 x 8 x 60	

Unit (mm)

Power	Ratio	Code	Size	A	D	E	F	G	H	J	K	L	M	Y	Z
100W 1/8HP	250-1800	1# + 3#	ø28	372	170	220	205	195	11	39	60	13	133	3	120
200W 1/4HP	250-1800	2# + 4#	ø32	470	185	255	248	225	13	47.5	70	16	133	3	120
400W 1/2HP	250-1800	3# + 5#	ø40	550	230	310	290	268	15	59	85	21	167	5	135

ZH..SZ HORIZONTAL LIGHT DUTY TYPE WITH ALUMINUM (BRAKE)-3-PHASE-MOTOR

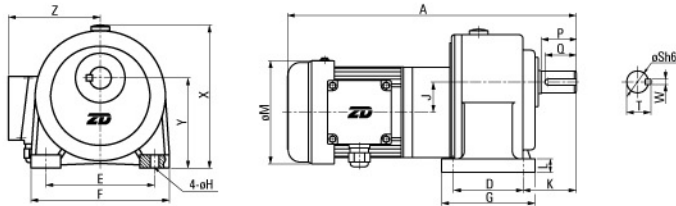


Output Shaft						
Shaft	Keyway				Key	
Sh6	P	W	T	Q	B x H x L	
ø18	30	5	20.2	27	5 x 5 x 27	
ø22	40	7	25	35	7 x 7 x 35	
ø28	45	7	31.1	40	7 x 7 x 40	
ø32	55	10	35.5	50	10 x 8 x 50	

Unit (mm)

Power	Ratio	Code	Size	A	D	E	F	G	H	J	K	L	M	X	Y	Z
100W 1/8HP	60-200	1#	ø18	250	40	110	135	65	9	16	50	10.5	133	138	88.5	120
200W 1/4HP	15-90	1#	ø18	285	40	110	135	65	9	16	50	10.5	133	138	88.5	120
	100-200	2#	ø22	315	65	130	158	90	11	17.5	60	13	133	152	97.5	120
400W 1/2HP	15-90	2#	ø22	330	65	130	158	90	11	17.5	60	13	167	152	97.5	135
	100-200	3#	ø28	360	90	140	178	120	11	23	68	17	167	178	116	135
750W 1HP	3-25	2#	ø22	350	65	130	158	90	11	17.5	60	13	167	152	97.5	135
	30-120	3#	ø28	380	90	140	178	120	11	23	68	17	167	178	116	135
	125-200	4#	ø32	410	130	170	215	165	13	30	70	21	167	216	138.5	135
1500W 2HP	3-30	3#	ø28	420	90	140	178	120	11	23	68	17	192	178	116	135
	40-100	4#	ø32	450	130	170	215	165	13	30	70	21	192	216	138.5	146
	110-150	5#	ø40	510	150	210	265	205	15	36	85	23	192	250	160	146
2200W 3HP	45-80	5#	ø40	530	150	210	265	205	15	36	85	23	220	250	160	180

ZH..SZ HORIZONTAL LIGHT DUTY TYPE WITH ALUMINUM (BRAKE)-3-PHASE-MOTOR

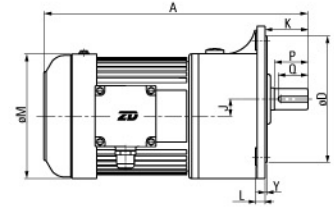
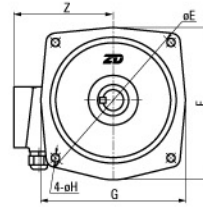
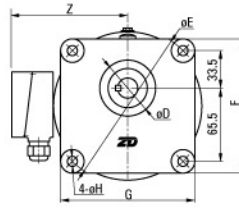


Output Shaft						
Shaft	Keyway				Key	
Sh6	P	W	T	Q	B x H x L	
ø22	40	7	25	30	7 x 7 x 35	
ø38	45	7	31.1	40	7 x 7 x 40	
ø32	55	10	35.5	50	10 x 8 x 50	

Unit (mm)

Power	Ratio	Code	Size	A	D	E	F	G	H	J	K	L	M	X	Y	Z
100W 1/8HP	250-1800	1#+3#	ø22	345	65	130	158	90	11	33.5	60	13	133	152	97.5	120
200W 1/4HP	250-1800	1#+3#	ø28	410	90	140	178	120	11	39	68	17	133	178	116	125
400W 1/2HP	250-1800	2#+4#	ø32	480	130	170	215	165	13	47.5	70	21	167	216	138.5	135
750W 1HP	250-1800	3#+5#	ø40	570	150	210	265	205	15	59	85	23	167	250	160	200

ZV..SZ VERITCAL LIGHT DUTY WITH ALUMINUM (BRAKE)-3-PHASE-MOTOR



B TYPE FLANGE

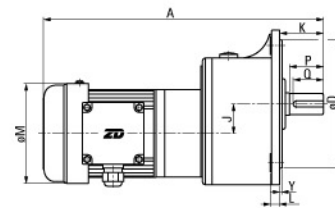
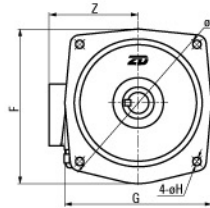
Shaft		Output Shaft				Key	
Sh6	P	W	T	Q	B x H x L		
ø18	30	5	20.2	27	5 x 5 x 27		
ø22	40	7	25	35	7 x 7 x 35		
ø28	45	7	31.1	40	7 x 7x 40		
ø32	55	10	35.5	50	10 x 8 x 50		

Unit (mm)

Power	Ratio	Code	Size	A	D	E	F	G	H	J	K	L	M	Y	Z
100W 1/8HP	60-200	1#	*ø18	250	50	140	120	120	9	16	40	12	133	6	120
200W 1/4HP	15-90	1#	*ø18	285	50	140	120	120	9	16	40	12	133	6	120
	100-200	2#	ø22	315	148	185	175	165	11	17.5	50	12	133	3	120
400W 1/2HP	15-90	2#	ø22	330	148	185	175	165	11	17.5	50	12	167	3	135
	100-200	3#	ø28	360	170	220	205	195	11	23	60	13	167	3	135
750W 1HP	3-25	2#	ø22	350	148	185	178	165	11	17.5	50	12	167	3	135
	30-120	3#	ø28	380	170	220	205	195	11	23	60	13	167	3	135
	125-200	4#	ø32	410	185	255	248	225	13	30	70	16	167	3	135
1500W 2HP	3-30	3#	ø28	420	170	220	205	195	11	23	60	13	192	3	146
	40-100	4#	ø32	450	185	255	248	225	13	30	70	16	192	3	146
	110-150	5#	ø40	510	230	310	290	268	15	36	85	21	192	5	146
2200W 3HP	45-80	5#	ø40	520	230	310	290	268	15	36	85	21	220	5	180

Note: Belong To B Type Output Flange

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Shaft		Output Shaft				Key	
Sh6	P	W	T	Q	B x H x L		
ø22	40	7	25	30	7 x 7x 35		
ø38	45	7	31.1	40	7 x 7x 40		
ø32	55	10	35.5	50	10 x 8 x 50		

Unit (mm)

Power	Ratio	Code	Size	A	D	E	F	G	H	J	K	L	M	Y	Z
100W 1/8HP	250-1800	1# + 3#	ø22	345	148	185	175	165	11	33.5	50	12	133	3	120
200W 1/4HP	250-1800	1# + 3#	ø28	410	170	220	205	195	11	39	60	13	133	3	125
400W 1/2HP	250-1800	2# + 4#	ø32	480	185	255	248	225	13	47.5	70	16	167	3	135
750W 1HP	250-1800	3# + 5#	ø40	570	230	310	290	268	15	59	85	21	167	5	200

The logo for Nostop Motor Group features a stylized 'N' composed of multiple parallel red lines on the left. To the right, the word 'nostop' is written in a lowercase, sans-serif font, with a dark red gear icon positioned behind the letter 'o'.

Nostop Motor Group

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E-mail: stony@nostop.cn

<http://www.nostop.cn>