

空心杯直流有刷电机

Coreless Brushed DC Motors

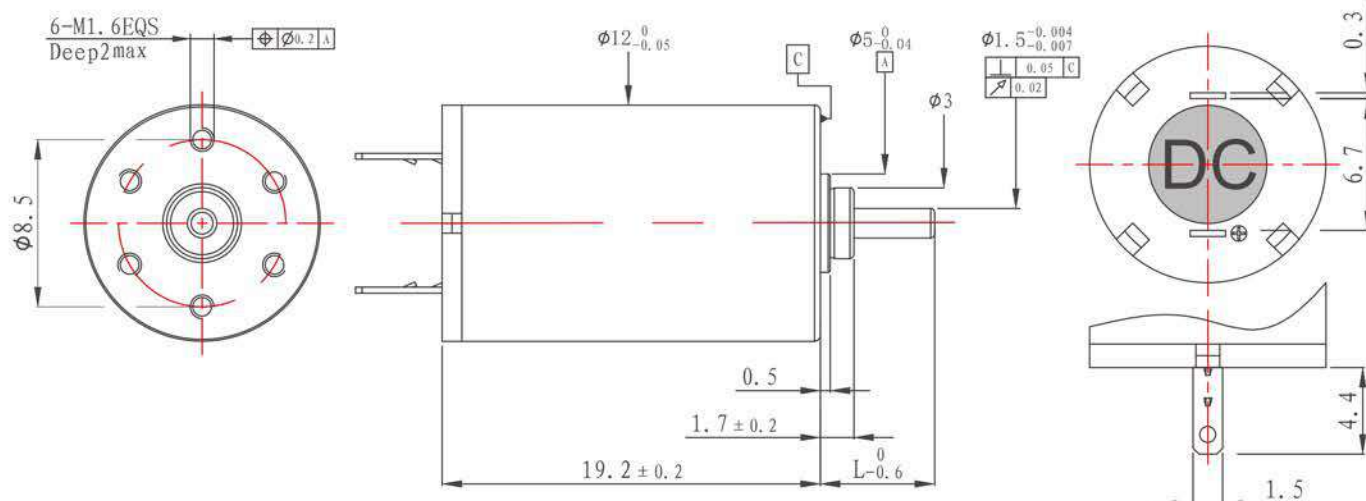


深圳市鑫宝达电机有限公司

SHENZHEN SINBAD MOTOR CO., LTD

Φ12*L19mm, 稀有金属刷直流电机, 1-1.8W

Φ12*L19mm, Precious Metal Brushed DC Motor, 1-1.8W



电机参数 Motor Data

电机型号 Motor Model				1219	1219	1219	1219
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	4.5	12	15	24
2	额定转速	Nominal speed	rpm	10800	9120	10800	12000
3	额定电流	Nominal current	A	0.4	0.2	0.2	0.2
4	额定转矩	Nominal torque	mNm	1.4	1.5	1.8	2.7
空载点 Free Load							
5	空载转速	No-load speed	rpm	15000	17000	17000	16000
6	空载电流	No-load current	mA	45.0	30.0	20.0	12.0
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	70.1	72.7	70.4	74.0
8	转速	Speed	rpm	12900	14790	14620	14080
9	电流	Current	A	0.3	0.2	0.1	0.1
10	转矩	Torque	mNm	0.6	0.5	0.5	0.4
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	1.8	1.7	1.7	1.5
12	转速	Speed	rpm	7500	8500	8500	8000
13	电流	Current	A	0.9	0.6	0.3	0.2
14	转矩	Torque	mNm	2.3	1.9	1.9	1.8
堵转点 At Stall							
15	堵转电流	Stall current	A	1.70	1.15	0.58	0.41
16	堵转转矩	Stall torque	mNm	4.6	3.7	3.7	3.5
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	2.65	5.22	20.69	36.59
18	电机感抗	Terminal inductance	mH	0.110	0.250	0.480	0.600
19	转矩常数	Torque constant	mNm/A	2.79	3.30	6.57	8.78
20	转速常数	Speed constant	rpm/V	3333.3	2833.3	1416.7	1066.7
21	转数/转矩常数	Speed/torque constant	rpm/mNm	3249.8	4583.2	4582.2	4534.3
22	机械时间常数	Mechanical time constant	ms	4.9	8.0	8.0	7.1
23	转子惯量	Rotor inertia	gcm ²	0.14	0.17	0.17	0.15
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	11.5			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

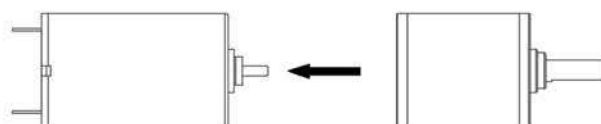
+ Vcc
- GND

技术说明 Technical specifications

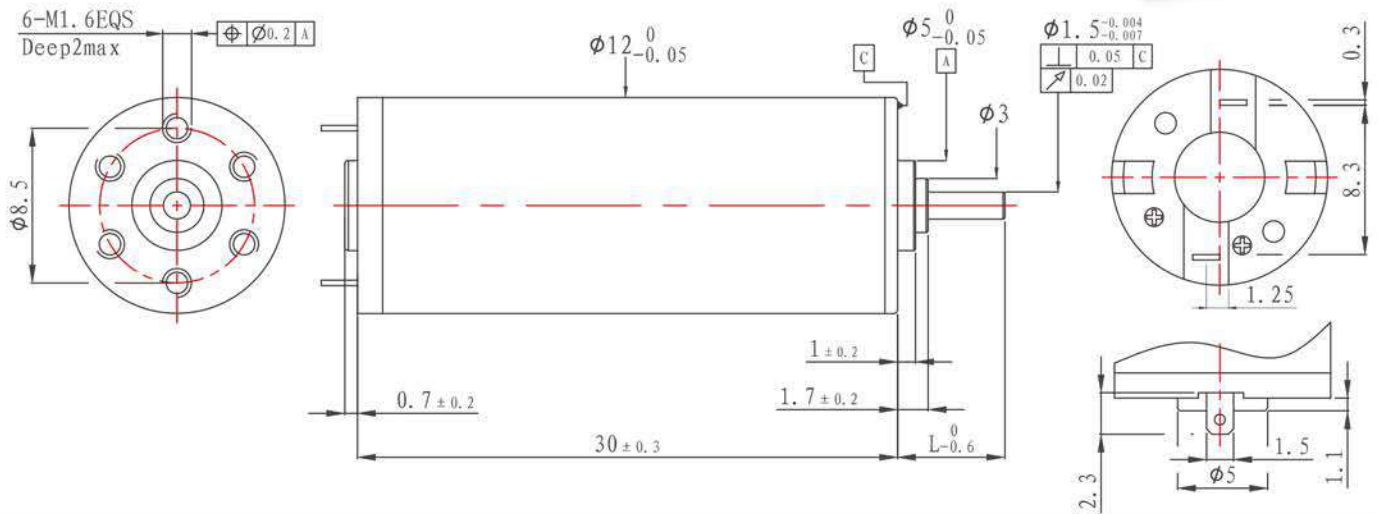
轴间间隙 Axial play: 0.05-0.15mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向 (动态) Max axial load (dynamic): 0.6N
 · 径向 (法兰外5mm) Max radial load (5mm from flange): 5N
 · 最大允许安装力 (静态) Max press fit force (static): 15N
 滑动轴承径向间隙 Radial play: ≤0.012mm
 环境温度范围 Ambient temperature range: -20~+65°C
 相对湿度范围 Relative humidity range: <90% (25°C)
 最高转子温度 Highest rotor temperature: 120°C
 表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts
 · 行星轮减速箱 Planetary gearbox



Φ12*L30mm, 稀有金属刷直流电机, 1-3W Φ12*L30mm, Precious Metal Brushed DC Motor, 1-3W



电机参数 Motor Data				1230	1230	1230	1230
电机型号 Motor Model				1230	1230	1230	1230
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	6	12	15	24
2	额定转速	Nominal speed	rpm	10800	9120	10800	12000
3	额定电流	Nominal current	A	0.4	0.2	0.2	0.2
4	额定转矩	Nominal torque	mNm	1.4	1.5	1.8	2.7
空载点 Free Load							
5	空载转速	No-load speed	rpm	13500	11400	13500	15000
6	空载电流	No-load current	mA	22.0	16.0	15.0	8.0
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	78.5	77.7	79.9	80.0
8	转速	Speed	rpm	12150	10203	12218	13575
9	电流	Current	A	0.189	0.092	0.089	0.090
10	转矩	Torque	mNm	0.7	0.8	0.9	1.3
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	2.5	2.3	3.3	5.3
12	转速	Speed	rpm	6750	5700	6750	7500
13	电流	Current	A	0.9	0.4	0.5	0.5
14	转矩	Torque	mNm	3.5	3.8	4.6	6.7
堵转点 At Stall							
15	堵转电流	Stall current	A	1.69	0.78	0.89	0.90
16	堵转转矩	Stall torque	mNm	7.0	7.6	9.2	13.4
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	3.55	15.38	16.85	26.67
18	电机感抗	Terminal inductance	mH	0.25	0.59	0.65	0.98
19	转矩常数	Torque constant	mNm/A	4.19	9.91	10.49	15.11
20	转速常数	Speed constant	rpm/V	2250.0	950.0	900.0	625.0
21	转速/转矩常数	Speed/torque constant	rpm/mNm	1932.1	1495.9	1462.3	1115.5
22	机械时间常数	Mechanical time constant	ms	5.7	4.3	4.5	3.2
23	转子惯量	Rotor inertia	gcm ²	0.28	0.27	0.29	0.27
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	17			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

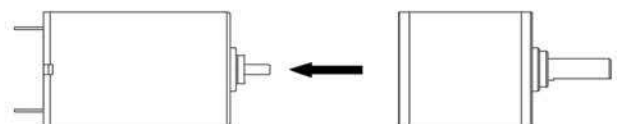
+ Vcc
- GND

技术说明 Technical specifications

轴间间隙 Axial play: 0.05-0.15mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.8N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 0.5N
· 最大允许安装力 (静态) Max press fit force (static): 35N
滑动轴承径向间隙 Radial play: ≤0.012mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 85°C
表中数据均为标称值 Values listed in the table are nominal

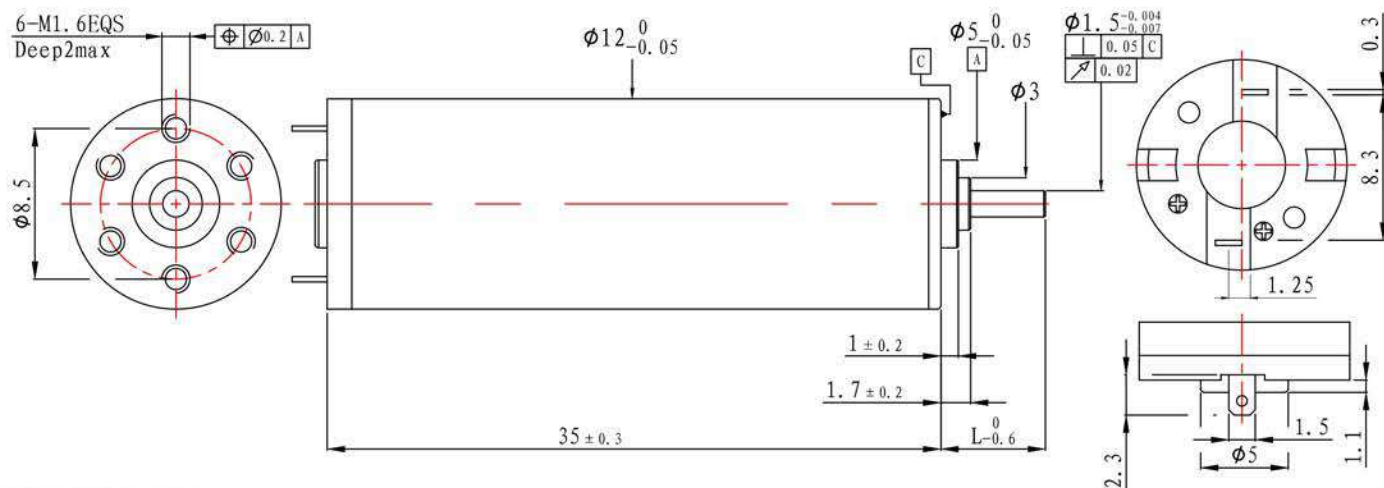
组合体系 System

适配部件 Optional Parts
· 行星轮减速箱 Planetary gearbox



Φ12*L35mm, 稀有金属刷直流电机, 1-3W

Φ12*L35mm, Precious Metal Brushed DC Motor, 1-3W



电机参数 Motor Data				1235	1235	1235	1235
电机型号 Motor Model				1235	1235	1235	1235
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	3.7	6	12	24
2	额定转速	Nominal speed	rpm	8500	9350	10350	10000
3	额定电流	Nominal current	A	0.56	0.4	0.15	0.08
4	额定转矩	Nominal torque	mNm	1.8	1.91	1.26	1.28
空载点 Free Load							
5	空载转速	No-load speed	rpm	10000	11000	11500	10000
6	空载电流	No-load current	mA	40	30	20	20
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	79.8	79.3	76.7	66.8
8	转速	Speed	rpm	8750	9625	10350	9000
9	电流	Current	A	0.473	0.339	0.148	0.078
10	转矩	Torque	mNm	1.5	1.6	1.3	1.3
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	3.2	3.7	3.8	3.4
12	转速	Speed	rpm	5000	5500	5750	5000
13	电流	Current	A	1.8	1.3	0.7	0.3
14	转矩	Torque	mNm	6.0	6.4	6.3	6.4
堵转点 At Stall							
15	堵转电流	Stall current	A	3.5	2.5	1.3	0.60
16	堵转转矩	Stall torque	mNm	12.1	12.7	12.6	12.8
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	1.06	2.4	9.23	40
18	电机感抗	Terminal inductance	mH	0.025	0.006	0.312	1.250
19	转矩常数	Torque constant	mNm/A	3.45	5.08	9.66	21.42
20	转速常数	Speed constant	rpm/V	2702.7	1883.3	958.3	416.7
21	转数/转矩常数	Speed/torque constant	rpm/mNm	827.5	865.4	915.7	778.2
22	机械时间常数	Mechanical time constant	ms	10.5	9.44	7.62	7.38
23	转子惯量	Rotor inertia	gcm ²	0.594	0.53	0.545	0.454
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	17			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

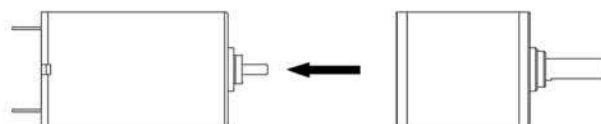
+ Vcc
- GND

技术说明 Technical specifications

轴间间隙 Axial play: 0.05-0.15mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向 (动态) Max axial load (dynamic): 0.8N
 · 径向 (法兰外5mm) Max radial load (5mm from flange): 0.5N
 · 最大允许安装力 (静态) Max press fit force (static): 35N
 滑动轴承径向间隙 Radial play: ≤0.012mm
 环境温度范围 Ambient temperature range: -20~+80°C
 相对湿度范围 Relative humidity range: <90% (25°C)
 最高转子温度 Highest rotor temperature: 85°C
 表中数据均为标称值 Values listed in the table are nominal

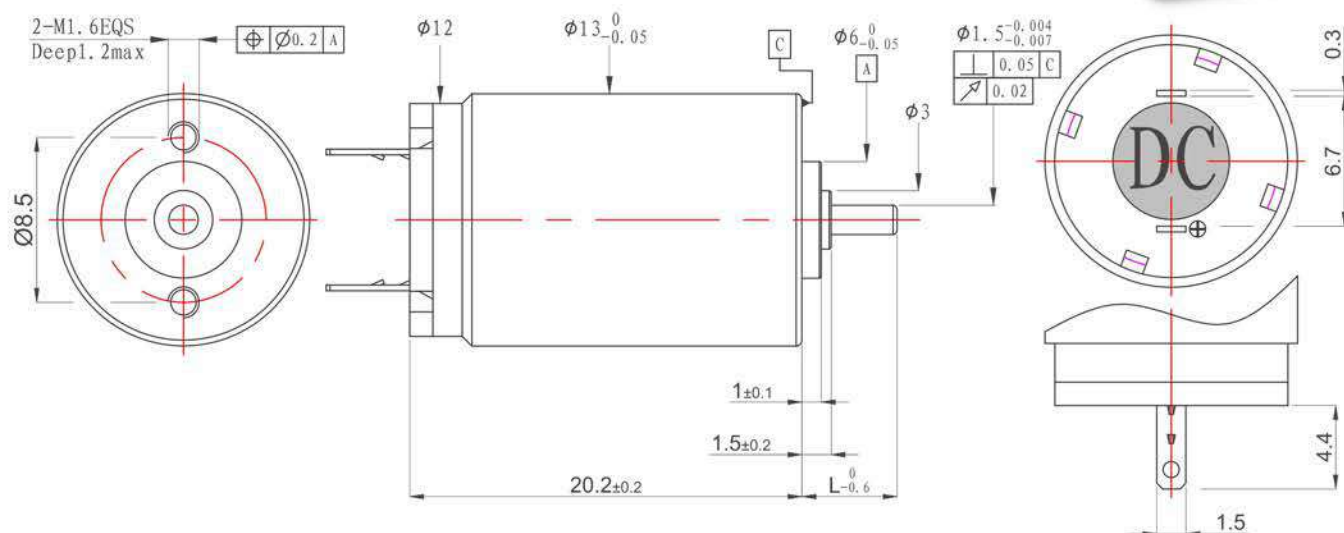
组合体系 System

适配部件 Optional Parts
 · 行星轮减速箱 Planetary gearbox



$\phi 13 \times L20\text{mm}$, 稀有金属刷直流电机, 1-2W

$\phi 13 \times L20\text{mm}$, Precious Metal Brushed DC Motor, 1-2W



电机参数 Motor Data				
电机型号 Motor Model				
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	3.7
2	额定转速	Nominal speed	rpm	7600
3	额定电流	Nominal current	A	0.288
4	额定转矩	Nominal torque	mNm	0.9
空载点 Free Load				
5	空载转速	No-load speed	rpm	9500
6	空载电流	No-load current	mA	35.0
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	69.9
8	转速	Speed	rpm	8170
9	电流	Current	A	0.212
10	转矩	Torque	mNm	0.64
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	1.1
12	转速	Speed	rpm	4750
13	电流	Current	A	0.7
14	转矩	Torque	mNm	2.3
堵转点 At Stall				
15	堵转电流	Stall current	A	1.30
16	堵转转矩	Stall torque	mNm	4.58
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	2.85
18	电机感抗	Terminal inductance	mH	0.09
19	转矩常数	Torque constant	mNm/A	3.62
20	转速常数	Speed constant	rpm/V	2567.6
21	转数/转矩常数	Speed/torque constant	rpm/mNm	2075.1
22	机械时间常数	Mechanical time constant	ms	5.3
23	转子惯量	Rotor inertia	gcm ²	0.25
24	极对数	Number of pole pairs		1
25	相数	Number of phase		5
26	重量	Weight of motor	g	13
27	噪音	Typical noise level	dB	≤ 38

电机端子定义 Motor terminal definition

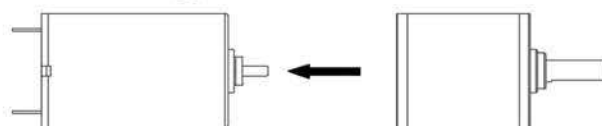
+ Vcc
 - GND

技术说明 Technical specifications

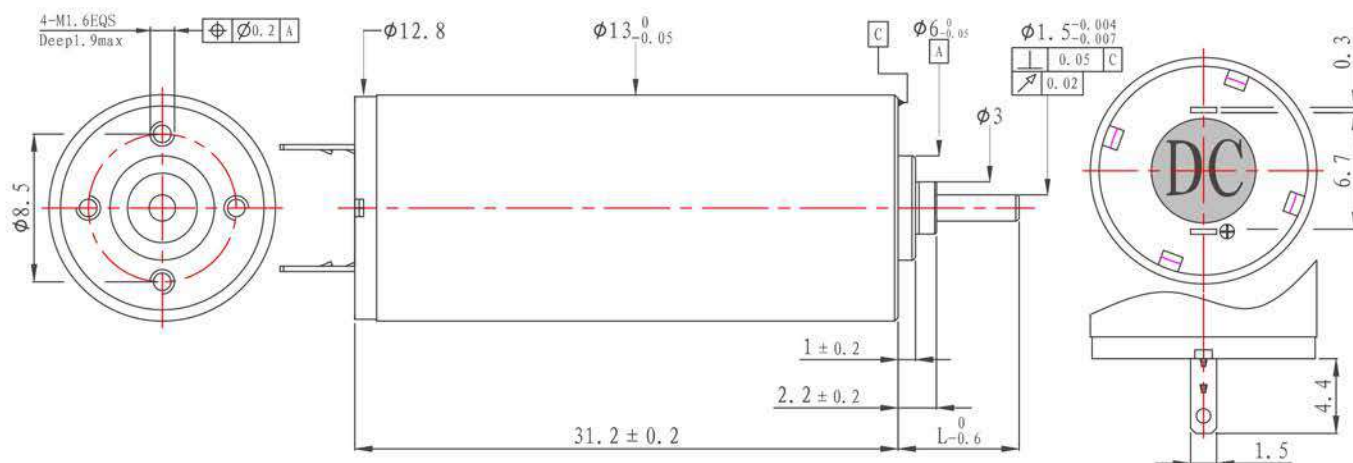
轴间间隙 Axial play: 0.05-0.15mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向 (动态) Max axial load (dynamic): 0.2N
 · 径向 (法兰外5mm) Max radial load (5mm from flange): 1.2N
 · 最大允许安装力 (静态) Max press fit force (static): 20N
 滑动轴承径向间隙 Radial play: $\leq 0.012\text{mm}$
 环境温度范围 Ambient temperature range: $-20 \sim +80^\circ\text{C}$
 相对湿度范围 Relative humidity range: $< 90\% (25^\circ\text{C})$
 最高转子温度 Highest rotor temperature: 85°C
 表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts
 · 行星轮减速箱 Planetary gearbox



Φ13*L31mm, Precious Metal Brushed DC Motor, 2.5-4.5W

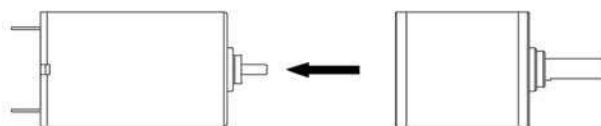


电机参数 Motor Data							
电机型号 Motor Model				1331	1331	1331	1331
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	3	6	12	24
2	额定转速	Nominal speed	rpm	9600	8800	9280	12960
3	额定电流	Nominal current	A	0.9	0.5	0.2	0.4
4	额定转矩	Nominal torque	mNm	2.1	2.4	2.0	4.1
空载点 Free Load							
5	空载转速	No-load speed	rpm	12000	11000	11600	16200
6	空载电流	No-load current	mA	45.0	30.0	18.0	12.0
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	80.8	75.8	69.4	70.5
8	转速	Speed	rpm	10920	9735	9918	13932
9	电流	Current	A	0.4	0.3	0.2	0.3
10	转矩	Torque	mNm	0.9	1.4	1.5	3.7
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	3.2	3.5	3.1	11.1
12	转速	Speed	rpm	6000	5500	5800	8100
13	电流	Current	A	2.22	1.22	0.56	0.77
14	转矩	Torque	mNm	5.1	6.0	5.0	10.5
堵转点 At Stall							
15	堵转电流	Stall current	A	4.40	2.40	1.08	1.57
16	堵转转矩	Stall torque	mNm	10.3	12.1	10.1	21.0
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	0.68	2.50	11.11	12.31
18	电机感抗	Terminal inductance	mH	0.05	0.12	0.27	0.75
19	转矩常数	Torque constant	mNm/A	2.36	5.12	9.60	13.78
20	转速常数	Speed constant	rpm/V	4000.0	1833.3	966.7	675.0
21	转数/转矩常数	Speed/torque constant	rpm/mNm	1166.1	910.0	1150.3	618.5
22	机械时间常数	Mechanical time constant	ms	8.0	6.2	7.9	4.2
23	转子惯量	Rotor inertia	gcm ²	0.65	0.65	0.65	0.65
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	20			
27	噪音	Typical noise level	dB	≤38			

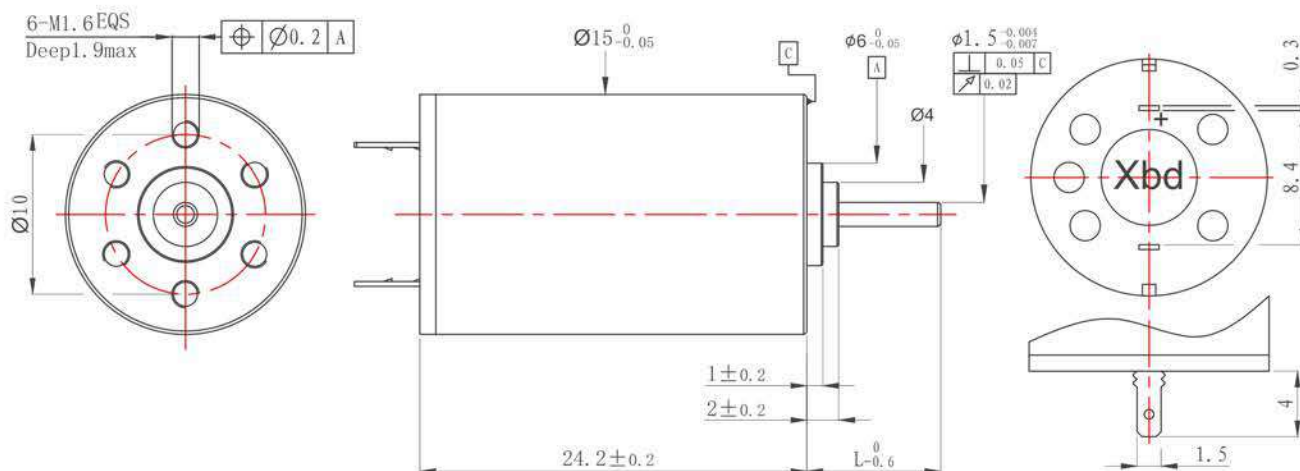
+	Vcc
-	GND

轴间间隙 Axial play: 0.05-0.15mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向 (动态) Max axial load (dynamic): 0.3N
 · 径向 (法兰外5mm) Max radial load (5mm from flange): 1.2N
 · 最大允许安装力 (静态) Max press fit force (static): 20N
 滑动轴承径向间隙 Radial play: ≤ 0.012 mm
 环境温度范围 Ambient temperature range: -20~+80°C
 相对湿度范围 Relative humidity range: $< 90\%$ (25°C)
 最高转子温度 Highest rotor temperature: 85°C
 表中数据均为标称值 Values listed in the table are nominal

·行星轮减速箱Planetary gearbox



Φ15*L24mm, 稀有金属刷直流电机, 2-4W Φ15*L24mm, Precious Metal Brushed DC Motor, 2-4W



电机参数 Motor Data

电机型号 Motor Model				1524	1524	1524	1524
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	3	6	12	24
2	额定转速	Nominal speed	rpm	8560	9840	9440	7600
3	额定电流	Nominal current	A	0.6	0.4	0.2	0.1
4	额定转矩	Nominal torque	mNm	1.6	1.8	1.7	1.4
空载点 Free Load							
5	空载转速	No-load speed	rpm	10700	12300	11800	9500
6	空载电流	No-load current	mA	40	20	11	4
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	78.2	81.0	79.3	78.2
8	转速	Speed	rpm	9577	11193	10561	8503
9	电流	Current	A	0.3	0.2	0.1	0.0
10	转矩	Torque	mNm	0.8	0.8	0.9	0.7
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	2.2	2.9	2.7	1.8
12	转速	Speed	rpm	5350	6150	5900	4750
13	电流	Current	A	1.5	1.0	0.5	0.2
14	转矩	Torque	mNm	3.9	4.6	4.4	3.5
堵转点 At Stall							
15	堵转电流	Stall current	A	3.0	2.0	0.9	0.3
16	堵转转矩	Stall torque	mNm	7.8	9.1	8.7	7.0
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	1.00	3.00	13.04	80.00
18	电机感抗	Terminal inductance	mH	0.02	0.05	0.23	1.05
19	转矩常数	Torque constant	mNm/A	2.64	4.61	9.60	23.80
20	转速常数	Speed constant	rpm/V	3566.7	2050.0	983.3	395.8
21	转数/转矩常数	Speed/torque constant	rpm/mNm	1368.4	1347.1	1352.9	1348.3
22	机械时间常数	Mechanical time constant	ms	11.0	10.1	11.9	11.9
23	转子惯量	Rotor inertia	gcm ²	0.77	0.72	0.84	0.84
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	22			
27	噪音	Typical noise level	dB	≤40			

电机端子定义 Motor terminal definition

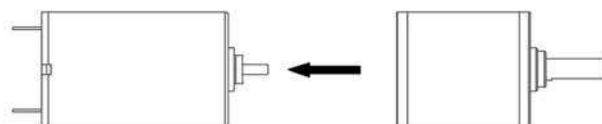
+ Vcc
- GND

技术说明 Technical specifications

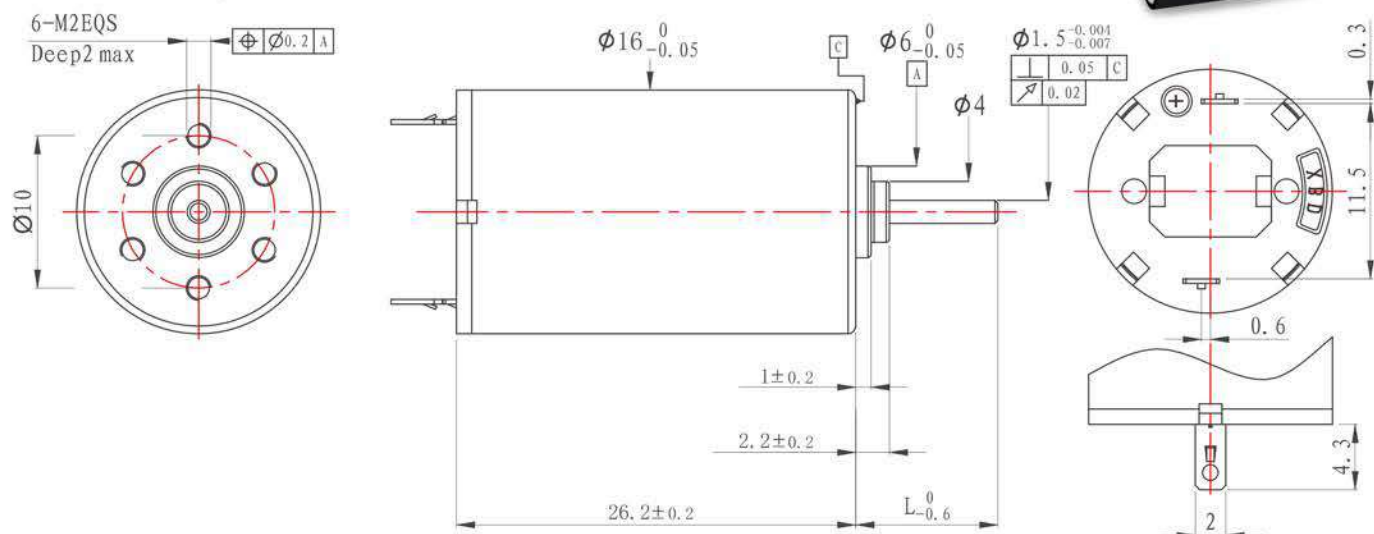
轴间间隙 Axial play: 0.05-0.15mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.3N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 1.2N
· 最大允许安装力 (静态) Max press fit force (static): 20N
滑动轴承径向间隙 Radial play: ≤0.012mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 85°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts
· 行星轮减速箱 Planetary gearbox



Φ16*L25mm, 稀有金属刷直流电机, 4-8W Φ16*L25mm, Precious Metal Brushed DC Motor, 4-8W



电机参数 Motor Data							
电机型号 Motor Model				1625	1625	1625	1625
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	3.7	6	12	24
2	额定转速	Nominal speed	rpm	6800	7840	8640	8800
3	额定电流	Nominal current	A	0.67	0.50	0.27	0.15
4	额定转矩	Nominal torque	mNm	2.5	2.8	2.7	3.0
空载点 Free Load							
5	空载转速	No-load speed	rpm	8500	9800	10800	11000
6	空载电流	No-load current	mA	50	20	15	6
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	76.4	82.7	79.7	82.8
8	转速	Speed	rpm	7565	8967	9774	10065
9	电流	Current	A	0.39	0.22	0.14	0.07
10	转矩	Torque	mNm	1.39	1.19	1.28	1.29
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	2.82	3.59	3.81	4.37
12	转速	Speed	rpm	4250	4900	5400	5500
13	电流	Current	A	1.60	1.23	0.66	0.37
14	转矩	Torque	mNm	6.34	6.99	6.74	7.58
堵转点 At Stall							
15	堵转电流	Stall current	A	3.15	2.43	1.30	0.74
16	堵转转矩	Stall torque	mNm	12.7	14.0	13.5	15.2
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	1.17	2.47	9.23	32.43
18	电机感抗	Terminal inductance	mH	0.105	0.210	0.510	1.320
19	转矩常数	Torque constant	mNm/A	4.09	5.80	10.49	20.67
20	转速常数	Speed constant	rpm/V	2297.3	1633.3	900.0	458.3
21	转数/转矩常数	Speed/torque constant	rpm/mNm	670.3	701.3	801.4	725.2
22	机械时间常数	Mechanical time constant	ms	6.3	6.6	7.5	6.8
23	转子惯量	Rotor inertia	gcm ²	0.90	0.90	0.90	0.90
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	24			
27	噪音	Typical noise level	dB	≤40			

电机端子定义 Motor terminal definition

+ Vcc
- GND

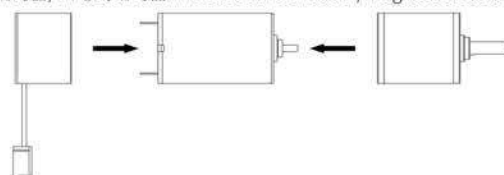
技术说明 Technical specifications

轴间间隙 Axial play: 0.05-0.15mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.5N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 1.5N
滑动轴承径向间隙 Radial play: ≤0.012mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 85°C
表中数据均为标称值 Values listed in the table are nominal

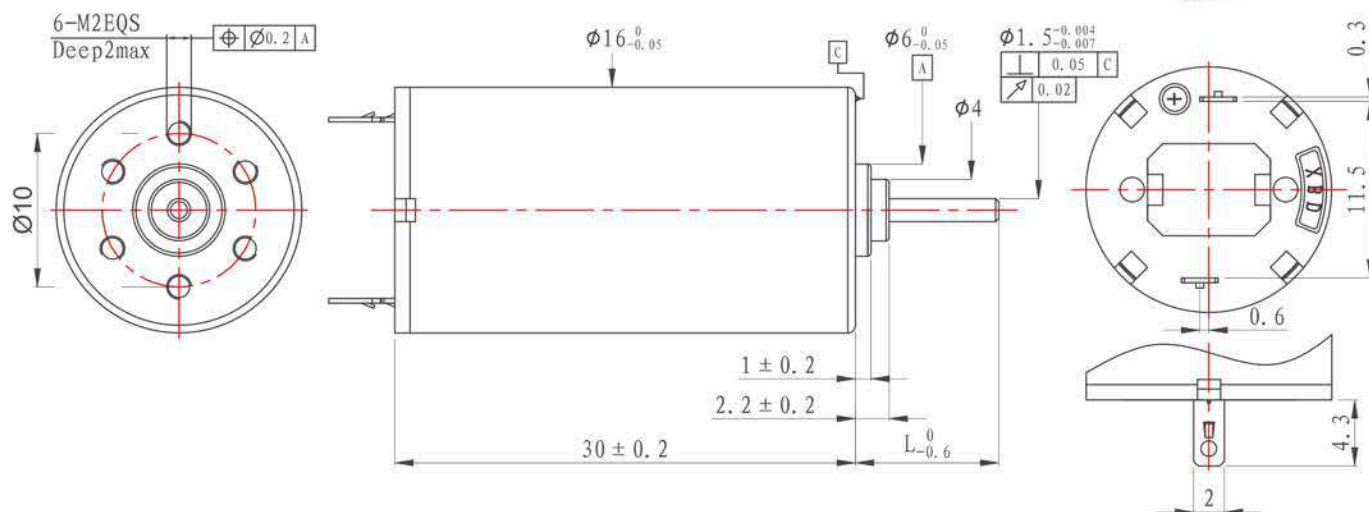
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器/磁电式编码器 Photoelectric encoder/magnetoelectric encoder



Φ16*L30mm, 稀有金属刷直流电机, 3-7W Φ16*L30mm, Precious Metal Brushed DC Motor, 3-7W



电机参数 Motor Data				1630	1630	1630	1630
电机型号 Motor Model				1630	1630	1630	1630
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	3	6	12	24
2	额定转速	Nominal speed	rpm	9600	7760	6240	6240
3	额定电流	Nominal current	A	1.9	0.8	0.3	0.1
4	额定转矩	Nominal torque	mNm	4.2	4.4	4.2	3.6
空载点 Free Load							
5	空载转速	No-load speed	rpm	12000	9700	7800	7800
6	空载电流	No-load current	mA	95	50	15	10
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	80.5	78.5	80.7	76.6
8	转速	Speed	rpm	10920	8730	7098	6942
9	电流	Current	A	0.9	0.4	0.1	0.1
10	转矩	Torque	mNm	1.9	2.2	1.9	2.0
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	6.6	5.6	4.3	3.7
12	转速	Speed	rpm	6000	4850	3900	3900
13	电流	Current	A	4.5	2.0	0.7	0.3
14	转矩	Torque	mNm	10.5	11.1	10.4	9.1
堵转点 At Stall							
15	堵转电流	Stall current	A	9.0	3.9	1.5	0.6
16	堵转转矩	Stall torque	mNm	21.0	22.2	20.9	18.2
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	0.33	1.56	8.28	37.50
18	电机感抗	Terminal inductance	mH	0.02	0.08	0.39	1.05
19	转矩常数	Torque constant	mNm/A	2.36	5.83	14.54	28.92
20	转速常数	Speed constant	rpm/V	4000.0	1616.7	650.0	325.0
21	转数/转矩常数	Speed/torque constant	rpm/mNm	570.5	437.8	373.9	428.1
22	机械时间常数	Mechanical time constant	ms	8.1	6.2	4.7	5.4
23	转子惯量	Rotor inertia	gcm ²	1.36	1.36	0.90	0.90
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	30			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

+ Vcc
- GND

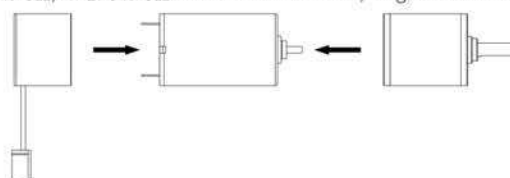
技术说明 Technical specifications

轴间间隙 Axial play: 0.05-0.15mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.5N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 5N
· 最大允许安装力 (静态) Max press fit force (static): 15N
滑动轴承径向间隙 Radial play: ≤0.012mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

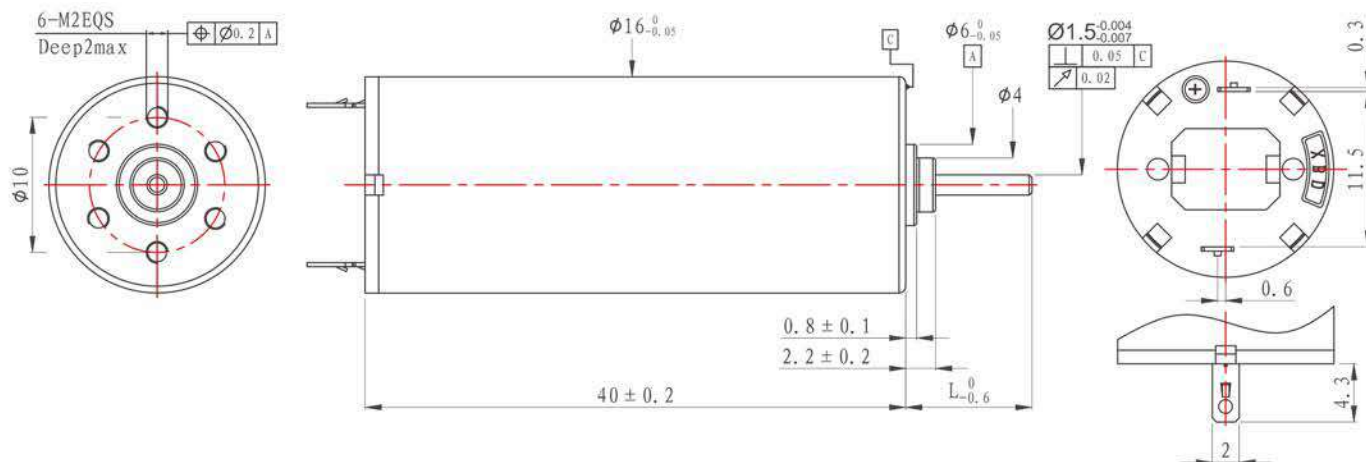
适配部件 Optional Parts

· 行星轮减速箱 Planetary gearbox
· 光电式编码器/磁电式编码器 Photoelectric encoder/magnetoelectric encoder



Φ16*L40mm, 稀有金属刷直流电机, 3-7W

Φ16*L40mm, Precious Metal Brushed DC Motor, 3-7W



电机参数 Motor Data

电机型号 Motor Model

额定电压参数值 Value at Rated voltage

额定点 At Nominal

1	额定电压	Nominal voltage	V/DC	6	9	12	24
2	额定转速	Nominal speed	rpm	9847	11635	6372	6489
3	额定电流	Nominal current	A	0.47	0.54	0.14	0.07
4	额定转矩	Nominal torque	mNm	2.20	3.19	1.92	1.87

空载点 Free Load

5	空载转速	No-load speed	rpm	11002	13000	7120	7250
6	空载电流	No-load current	mA	40	50	15	13

最大效率点 At Max. Efficiency

7	最大效率	Max. efficiency	%	81.2	80.3	78.6	72.5
8	转速	Speed	rpm	9902	11700	6408	6525
9	电流	Current	A	0.446	0.516	0.131	0.071
10	转矩	Torque	mNm	2.1	3.0	1.8	1.8

最大输出功率点 At Max. Output power

11	最大功率	Max. output power	W	6.0	10.3	3.4	3.4
12	转速	Speed	rpm	5501	6500	3560	3625
13	电流	Current	A	2.1	2.4	0.6	0.3
14	转矩	Torque	mNm	10.5	15.2	9.2	8.9

堵转点 At Stall

15	堵转电流	Stall current	A	4.10	4.70	1.17	0.59
16	堵转转矩	Stall torque	mNm	20.9	30.4	18.4	17.8

电机常数 Motor Constants

17	电机阻抗	Terminal resistance	Ω	1.46	1.91	10.26	40.68
18	电机感抗	Terminal inductance	mH	0.073	0.071	0.452	1.75
19	转矩常数	Torque constant	mNm/A	5.11	6.47	15.68	30.23
20	转速常数	Speed constant	rpm/V	1833.7	1444.4	593.3	302.1
21	转数/转矩常数	Speed/torque constant	rpm/mNm	525.5	427.6	388.0	406.1
22	机械时间常数	Mechanical time constant	ms	7.22	6.15	5.28	5.32
23	转子惯量	Rotor inertia	gcm ²	1.31	1.32	1.3	1.23
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	30			
27	噪音	Typical noise level	dB	≤ 38			

电机端子定义 Motor terminal definition

+	Vcc
-	GND

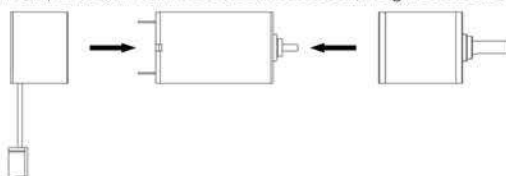
技术说明 Technical specifications

轴间间隙 Axial play: 0.05-0.15mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向(动态) Max axial load (dynamic): 0.5N
 · 径向(法兰外5mm) Max radial load (5mm from flange): 5N
 · 最大允许安装力(静态) Max press fit force (static): 15N
 滑动轴承径向间隙 Radial play: ≤ 0.012 mm
 环境温度范围 Ambient temperature range: -20~+80°C
 相对湿度范围 Relative humidity range: $< 90\%$ (25°C)
 最高转子温度 Highest rotor temperature: 125°C
 表中数据均为标称值 Values listed in the table are nominal

组合体系 System

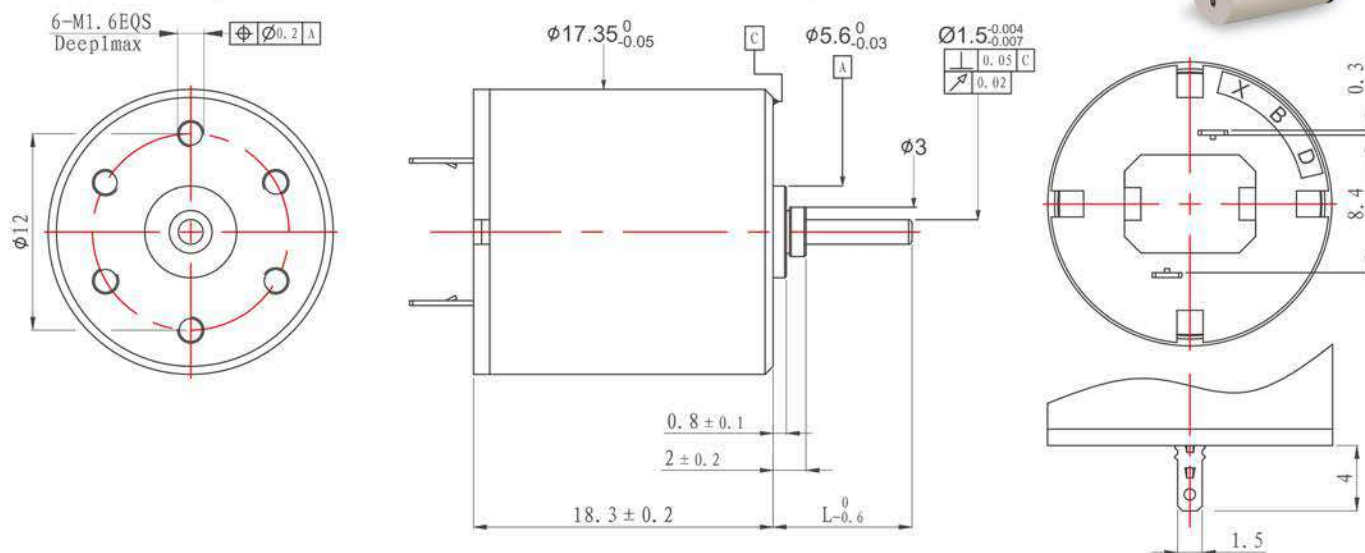
适配部件 Optional Parts

· 行星轮减速箱 Planetary gearbox
 · 光电式编码器/磁电式编码器 Photoelectric encoder/magnetolectric encoder



Φ17*L18mm, 稀有金属刷直流电机, 2.5-6W

Φ17*L18mm, Precious Metal Brushed DC Motor, 2.5-6W



电机参数 Motor Data

电机型号 Motor Model

额定电压参数值 Value at Rated voltage

额定点 At Nominal

				1718	1718	1718	1718
1	额定电压	Nominal voltage	V/DC	4.2	6	9	12
2	额定转速	Nominal speed	rpm	16240	16800	13600	17600
3	额定电流	Nominal current	A	1.36	0.86	0.74	0.53
4	额定转矩	Nominal torque	mNm	2.5	2.1	3.4	4.0

空载点 Free Load

5	空载转速	No-load speed	rpm	20300	21000	17000	22000
6	空载电流	No-load current	mA	80	88	60	40

最大效率点 At Max. Efficiency

7	最大效率	Max. efficiency	%	79.0	72.4	75.4	75.3
8	转速	Speed	rpm	18270	18270	15045	19360
9	电流	Current	A	0.72	0.59	0.45	0.31
10	转矩	Torque	mNm	1.25	1.34	1.94	1.49

最大输出功率点 At Max. Output power

11	最大功率	Max. output power	W	6.7	5.7	7.5	7.2
12	转速	Speed	rpm	10150	10500	8500	11000
13	电流	Current	A	3.29	2.02	1.76	1.21
14	转矩	Torque	mNm	6.26	5.16	8.42	6.50

堵转点 At Stall

15	堵转电流	Stall current	A	6.50	3.96	3.45	2.42
16	堵转转矩	Stall torque	mNm	12.5	10.3	16.8	12.5

电机常数 Motor Constants

17	电机阻抗	Terminal resistance	Ω	0.65	1.52	2.61	3.00
18	电机感抗	Terminal inductance	mH	0.09	0.16	0.32	0.65
19	转矩常数	Torque constant	mNm/A	1.95	2.67	4.97	5.12
20	转速常数	Speed constant	rpm/V	4833.3	3500.0	1888.9	1833.3
21	转数/转矩常数	Speed/torque constant	rpm/mNm	1620.4	2033.0	1009.5	1760.0
22	机械时间常数	Mechanical time constant	ms	18.0	25.2	14.0	15.1
23	转子惯量	Rotor inertia	gcm ²	1.06	1.18	0.90	1.32
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	21			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

+ Vcc
- GND

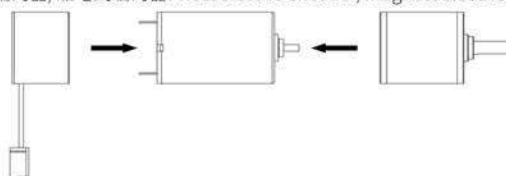
技术说明 Technical specifications

轴间间隙 Axial play: 0.05-0.15mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 1.2N
· 最大允许安装力 (静态) Max press fit force (static): 15N
滑动轴承径向间隙 Radial play: ≤0.012mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

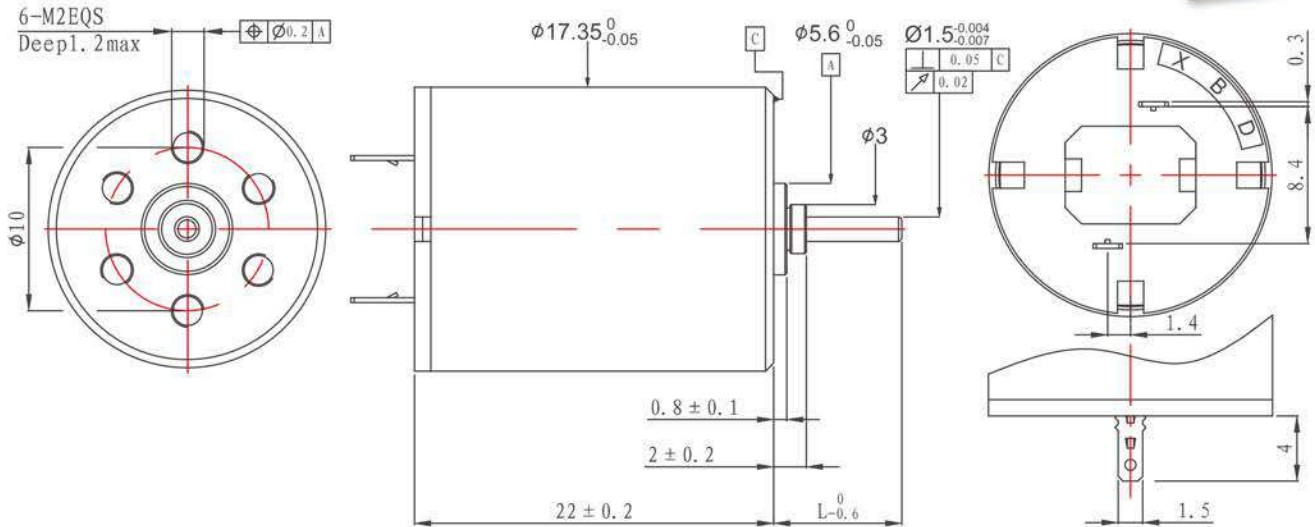
组合体系 System

适配部件 Optional Parts

· 行星轮减速箱 Planetary gearbox
· 光电式编码器/磁电式编码器 Photoelectric encoder/magnetoelectric encoder



Φ17*L22mm, 稀有金属刷直流电机, 2.5-6W Φ17*L22mm, Precious Metal Brushed DC Motor, 2.5-6W



电机参数 Motor Data

电机型号 Motor Model

额定电压参数值 Value at Rated voltage

额定点 At Nominal

				1722	1722	1722	1722
1	额定电压	Nominal voltage	V/DC	3	6	9	12
2	额定转速	Nominal speed	rpm	8800	10400	10400	10400
3	额定电流	Nominal current	A	0.89	0.58	0.37	0.18
4	额定转矩	Nominal torque	mNm	2.12	2.42	2.95	2.96

空载点 Free Load

5	空载转速	No-load speed	rpm	11000	13000	13000	13000
6	空载电流	No-load current	mA	65	30	30	10

最大效率点 At Max. Efficiency

7	最大效率	Max. efficiency	%	76.7	80.4	75.4	79.6
8	转速	Speed	rpm	0	11765	11505	19360
9	电流	Current	A	0.00	0.29	0.23	0.09
10	转矩	Torque	mNm	0.00	1.15	1.69	1.41

最大输出功率点 At Max. Output power

11	最大功率	Max. output power	W	3.05	4.11	5.01	5.04
12	转速	Speed	rpm	5500	6500	6500	6500
13	电流	Current	A	2.13	1.42	0.88	0.44
14	转矩	Torque	mNm	5.30	6.04	7.36	7.41

堵转点 At Stall

15	堵转电流	Stall current	A	4.20	2.80	1.73	0.86
16	堵转转矩	Stall torque	mNm	10.60	12.08	14.73	14.81

电机常数 Motor Constants

17	电机阻抗	Terminal resistance	Ω	0.71	2.14	6.94	27.91
18	电机感抗	Terminal inductance	mH	0.02	0.07	0.23	0.73
19	转矩常数	Torque constant	mNm/A	2.56	4.36	8.66	17.42
20	转速常数	Speed constant	rpm/V	3666.7	2166.7	1083.3	541.7
21	转速/转矩常数	Speed/torque constant	rpm/mNm	1037.5	1076.4	882.8	877.7
22	机械时间常数	Mechanical time constant	ms	8.5	9.7	8.3	7.9
23	转子惯量	Rotor inertia	gcm ²	0.78	0.86	0.90	0.86
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	24			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

+ Vcc
- GND

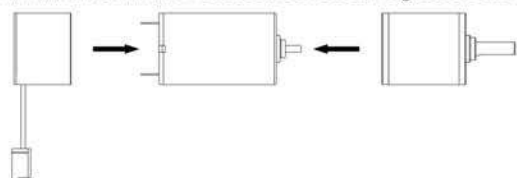
技术说明 Technical specifications

轴间间隙 Axial play: 0.05-0.15mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.5N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 1.2N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

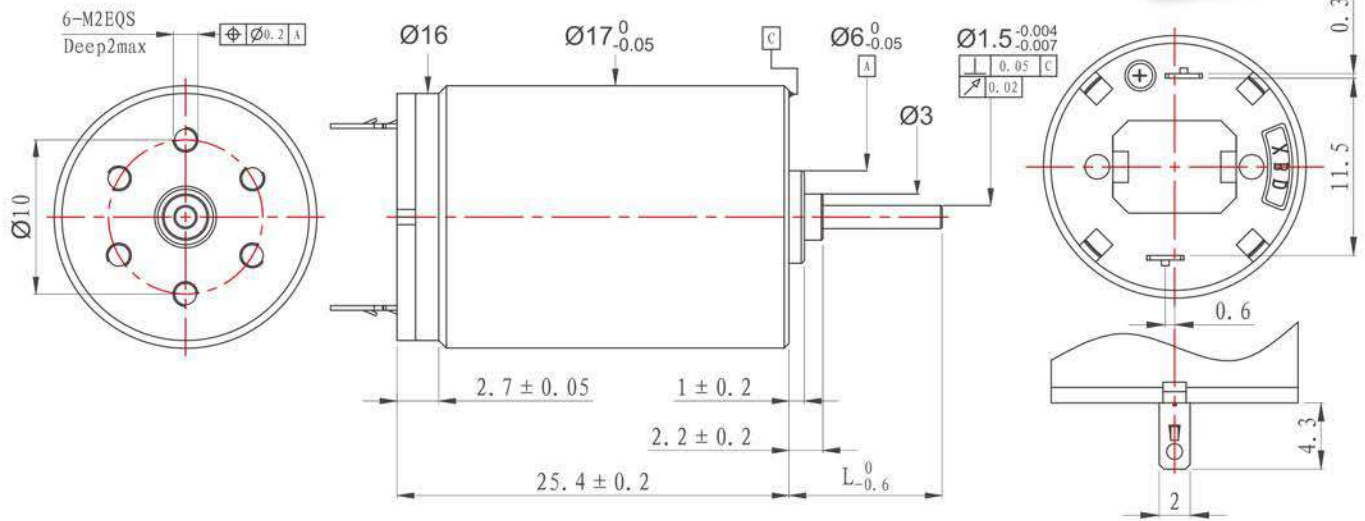
适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器/磁电式编码器 Photoelectric encoder/magnetoelectric encoder



Φ17*L25mm, 稀有金属刷直流电机, 4-8W

Φ17*L25mm, Precious Metal Brushed DC Motor, 4-8W



电机参数 Motor Data				
电机型号 Motor Model		1725	1725	1725
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	6
2	额定转速	Nominal speed	rpm	8000
3	额定电流	Nominal current	A	0.41
4	额定转矩	Nominal torque	mNm	2.19
空载点 Free Load				
5	空载转速	No-load speed	rpm	10000
6	空载电流	No-load current	mA	23
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	79.5
8	转速	Speed	rpm	9000
9	电流	Current	A	0.22
10	转矩	Torque	mNm	1.10
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	2.87
12	转速	Speed	rpm	5000
13	电流	Current	A	0.99
14	转矩	Torque	mNm	5.48
堵转点 At Stall				
15	堵转电流	Stall current	A	1.96
16	堵转转矩	Stall torque	mNm	11.0
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	3.06
18	电机感抗	Terminal inductance	mH	0.10
19	转矩常数	Torque constant	mNm/A	5.66
20	转速常数	Speed constant	rpm/V	1666.7
21	转速/转矩常数	Speed/torque constant	rpm/mNm	911.7
22	机械时间常数	Mechanical time constant	ms	7.4
23	转子惯量	Rotor inertia	gcm ²	0.78
24	极对数	Number of pole pairs		1
25	相数	Number of phase		5
26	重量	Weight of motor	g	28
27	噪音	Typical noise level	dB	≤38

电机端子定义 Motor terminal definition

+ Vcc
- GND

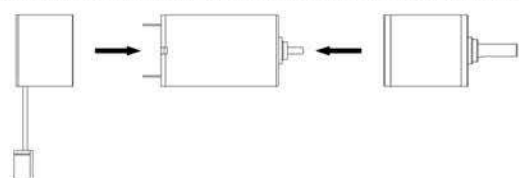
技术说明 Technical specifications

轴间间隙 Axial play: 0.05-0.15mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向 (动态) Max axial load (dynamic): 0.5N
 · 径向 (法兰外5mm) Max radial load (5mm from flange): 1.2N
 滑动轴承径向间隙 Radial play: ≤0.03mm
 滚动轴承径向间隙 Radial play: ≤0.015mm
 环境温度范围 Ambient temperature range: -20~+80°C
 相对湿度范围 Relative humidity range: <90% (25°C)
 最高转子温度 Highest rotor temperature: 125°C
 表中数据均为标称值 Values listed in the table are nominal

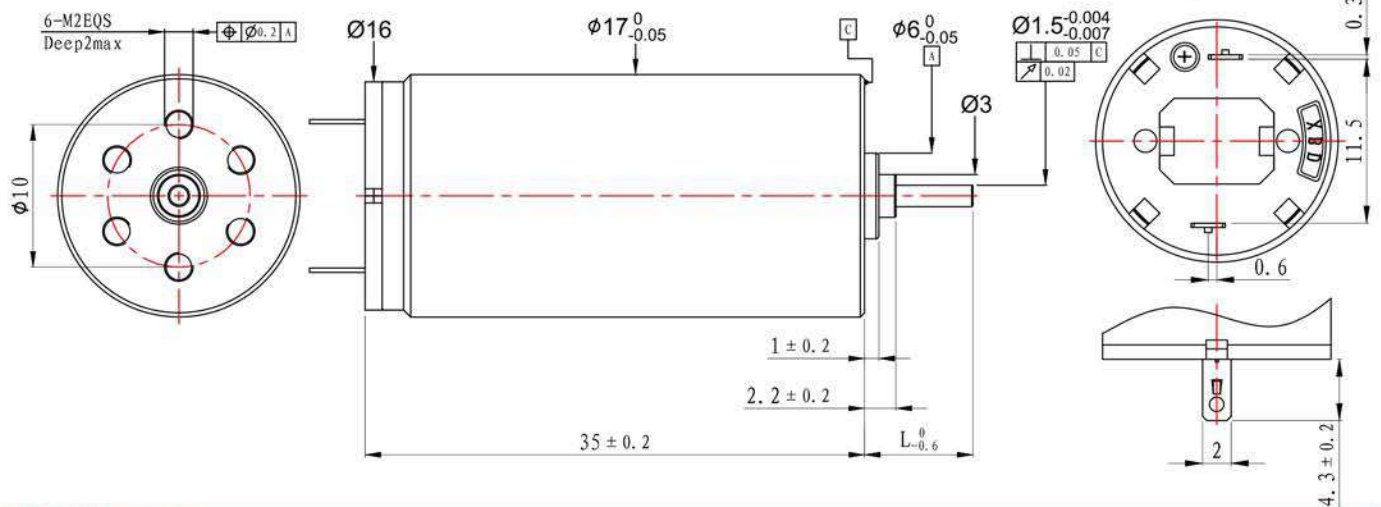
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电编码器/磁电编码器 Photoelectric encoder/magnetolectric encoder



Φ17*L35mm, 稀有金属刷直流电机, 4-15W Φ17*L35mm, Precious Metal Brushed DC Motor, 4-15W



电机参数 Motor Data				1735	1735	1735	1735
电机型号 Motor Model				1735	1735	1735	1735
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	3	6	12	24
2	额定转速	Nominal speed	rpm	7240	9412	10600	10000
3	额定电流	Nominal current	A	0.7	0.7	0.8	0.6
4	额定转矩	Nominal torque	mNm	2.1	3.6	8.1	10.9
空载点 Free Load							
5	空载转速	No-load speed	rpm	8000	10400	12000	12500
6	空载电流	No-load current	mA	60	50	40	20
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	81.4	83.8	83.8	84.3
8	转速	Speed	rpm	7280	9568	10860	11313
9	电流	Current	A	0.6	0.6	0.6	0.3
10	转矩	Torque	mNm	2.0	3.0	5.0	5.2
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	4.6	10.4	16.6	17.8
12	转速	Speed	rpm	4000	5200	6000	6250
13	电流	Current	A	3.2	3.5	2.8	1.5
14	转矩	Torque	mNm	11.1	19.0	26.4	27.1
堵转点 At Stall							
15	堵转电流	Stall current	A	6.3	7.0	5.6	3.0
16	堵转转矩	Stall torque	mNm	22.1	38.0	52.7	54.3
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	0.48	0.86	2.14	8.00
18	电机感抗	Terminal inductance	mH	0.020	0.053	0.160	0.550
19	转矩常数	Torque constant	mNm/A	3.55	5.47	9.48	18.21
20	转速常数	Speed constant	rpm/V	2666.7	1733.3	1000.0	520.8
21	转数/转矩常数	Speed/torque constant	rpm/mNm	361.5	273.6	227.6	230.3
22	机械时间常数	Mechanical time constant	ms	6.8	4.8	4.0	4.1
23	转子惯量	Rotor inertia	gcm ²	1.81	1.69	1.69	1.69
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	40			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

+ Vcc
- GND

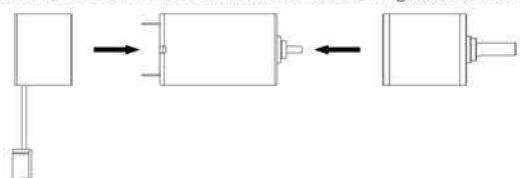
技术说明 Technical specifications

轴间间隙 Axial play: 0.05-0.15mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向(动态) Max axial load (dynamic): 0.2N
· 径向(法兰外5mm) Max radial load (5mm from flange): 1.2N
最大允许安装力(静态) Max press fit force (static): 15N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

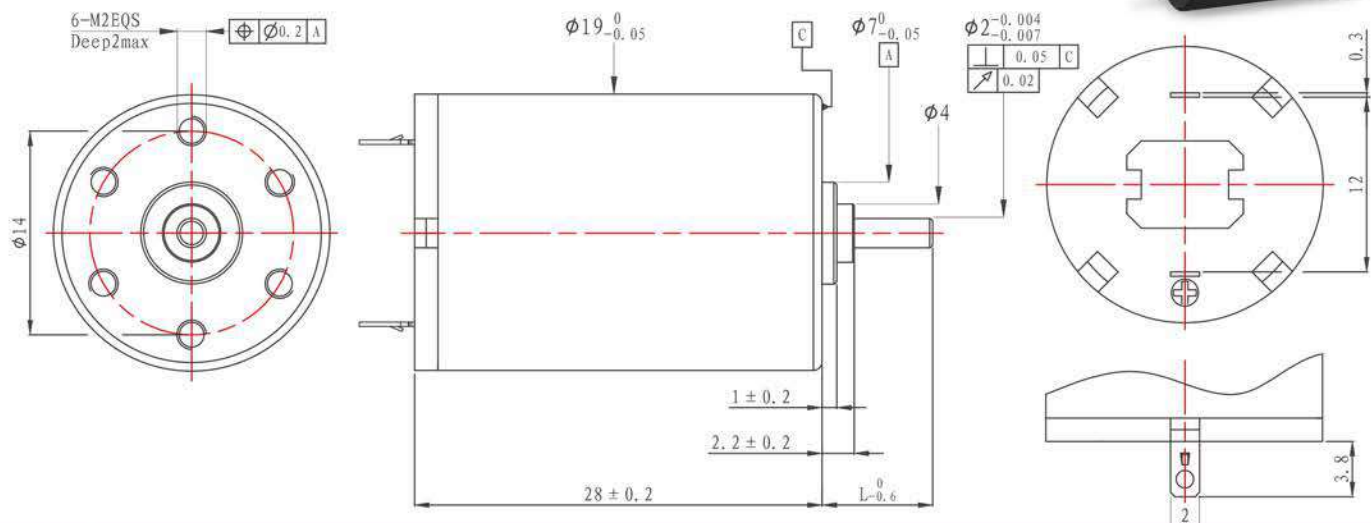
组合体系 System

适配部件 Optional Parts

· 行星轮减速箱 Planetary gearbox
· 光电式编码器/磁电式编码器 Photoelectric encoder/magnetolectric encoder

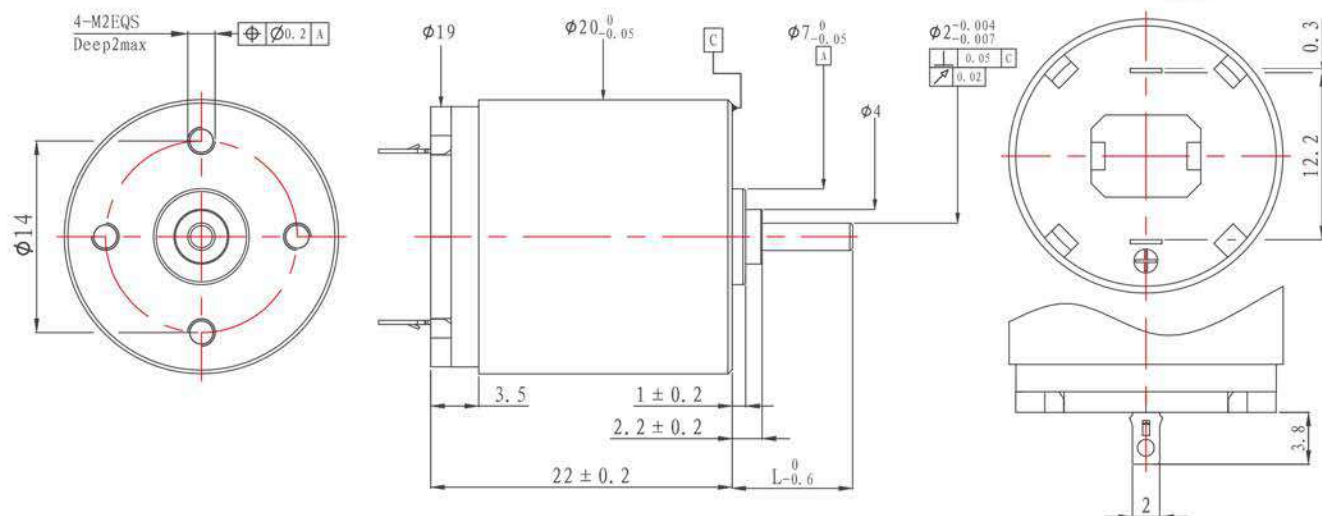


Φ19*L28mm, Precious Metal Brushed DC Motor, 2.5-6W



+	Vcc
-	GND

Φ20*L22mm, 稀有金属刷直流电机, 2.5-6W Φ20*L22mm, Precious Metal Brushed DC Motor, 2.5-6W



电机参数 Motor Data					2022	2022	2022	2022
电机型号 Motor Model					2022	2022	2022	2022
额定电压参数值 Value at Rated voltage					2022	2022	2022	2022
额定点 At Nominal					2022	2022	2022	2022
1	额定电压	Nominal voltage	V/DC	6	9	12	24	
2	额定转速	Nominal speed	rpm	8892	8550	9000	9900	
3	额定电流	Nominal current	A	0.7	0.33	0.20	0.11	
4	额定转矩	Nominal torque	mNm	3.3	2.66	1.88	1.79	
空载点 Free Load					2022	2022	2022	2022
5	空载转速	No-load speed	rpm	10400	9500	10000	11025	
6	空载电流	No-load current	mA	55	30	35	22	
最大效率点 At Max. Efficiency					2022	2022	2022	2022
7	最大效率	Max. efficiency	%	78.4	81.0	75.2	72.4	
8	转速	Speed	rpm	9308	8883	9350	10285	
9	电流	Current	A	0.5	0.223	0.139	0.077	
10	转矩	Torque	mNm	2.4	1.7	1.2	1.2	
最大输出功率点 At Max. Output power					2022	2022	2022	2022
11	最大功率	Max. output power	W	6.1	6.6	4.9	5.2	
12	转速	Speed	rpm	5200	4750	5000	5500	
13	电流	Current	A	2.1	1.5	0.9	0.5	
14	转矩	Torque	mNm	11.3	13.3	9.4	9.0	
堵转点 At Stall					2022	2022	2022	2022
15	堵转电流	Stall current	A	4.20	3.00	1.70	0.90	
16	堵转转矩	Stall torque	mNm	22.5	26.6	18.8	17.9	
电机常数 Motor Constants					2022	2022	2022	2022
17	电机阻抗	Terminal resistance	Ω	1.43	3.00	7.06	26.67	
18	电机感抗	Terminal inductance	mH	0.06	0.149	0.282	1.022	
19	转矩常数	Torque constant	mNm/A	5.44	8.87	11.06	19.92	
20	转速常数	Speed constant	rpm/V	1733.3	1055.6	8333.3	458.3	
21	转数/转矩常数	Speed/torque constant	rpm/mNm	461.5	357.1	531.9	613.6	
22	机械时间常数	Mechanical time constant	ms	9.9	10.2	10.5	12.5	
23	转子惯量	Rotor inertia	gcm ²	2.05	2.20	2.50	2.56	
24	极对数	Number of pole pairs		1				
25	相数	Number of phase		5				
26	重量	Weight of motor	g	40				
27	噪音	Typical noise level	dB	≤38				

电机端子定义 Motor terminal definition

+ Vcc
- GND

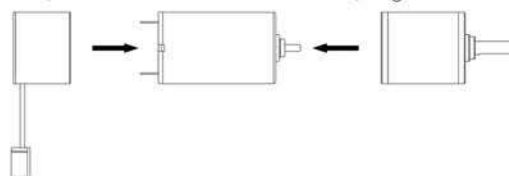
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 5N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
滚动轴承径向间隙 Radial play: ≤0.02mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

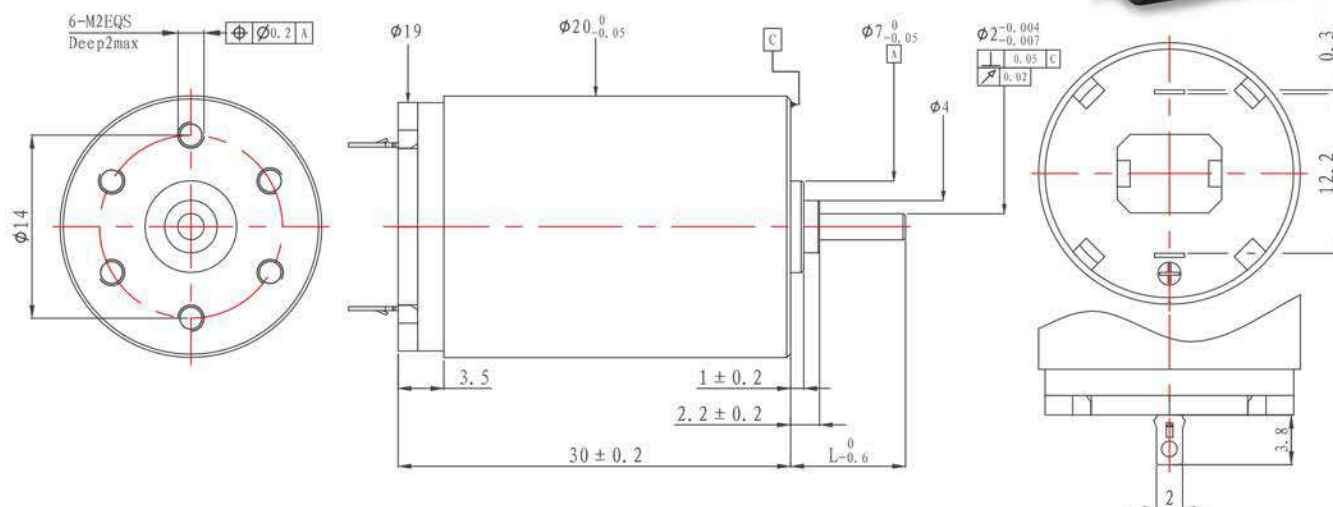
组合体系 System

适配部件 Optional Parts

· 行星轮减速箱 Planetary gearbox
· 光电式编码器/磁电式编码器 Photoelectric encoder/magnetolectric encoder



Φ20*L30mm, 稀有金属刷直流电机, 6-13W Φ20*L30mm, Precious Metal Brushed DC Motor, 6-13W



电机参数 Motor Data

电机型号 Motor Model				2030	2030	2030	2030	2030
额定电压参数值 Value at Rated voltage								
额定点 At Nominal								
1	额定电压	Nominal voltage	V/DC	6	9	12	24	24
2	额定转速	Nominal speed	rpm	8100	7650	10260	8550	7781
3	额定电流	Nominal current	A	0.73	0.48	0.64	0.29	0.16
4	额定转矩	Nominal torque	mNm	4.41	4.48	5.71	3.76	3.78
空载点 Free Load								
5	空载转速	No-load speed	rpm	9000	8500	12000	10000	9100
6	空载电流	No-load current	mA	35	35	40	20	8
最大效率点 At Max. Efficiency								
7	最大效率	Max. efficiency	%	86.4	83.1	81.4	80.3	83.3
8	转速	Speed	rpm	8100	7650	10920	9050	8372
9	电流	Current	A	0.732	0.482	0.414	0.194	0.091
10	转矩	Torque	mNm	10.4	4.5	3.54	2.46	2.08
最大输出功率点 At Max. Output power								
11	最大功率	Max. output power	W	7.00	10	12.36	6.79	6.20
12	转速	Speed	rpm	4500	4250	6000	5000	4550
13	电流	Current	A	0.86	2.3	2.12	0.94	0.53
14	转矩	Torque	mNm	22.1	22.4	19.67	12.96	13.02
堵转点 At Stall								
15	堵转电流	Stall current	A	7.00	4.50	4.20	1.85	1.05
16	堵转转矩	Stall torque	mNm	44.1	44.8	39.3	25.9	26.0
电机常数 Motor Constants								
17	电机阻抗	Terminal resistance	Ω	0.86	2.00	2.86	8.11	22.9
18	电机感抗	Terminal inductance	mH	0.168	0.38	0.51	0.86	1.9
19	转矩常数	Torque constant	mNm/A	6.30	9.95	9.46	14.17	25.0
20	转速常数	Speed constant	rpm/V	1500.0	9444.4	1000.0	666.7	379.2
21	转速/转矩常数	Speed/torque constant	rpm/mNm	204.0	189.8	305.0	385.7	349.4
22	机械时间常数	Mechanical time constant	ms	6.2	6.45	7.63	9.65	8.74
23	转子惯量	Rotor inertia	gcm ²	2.8	3.2	2.39	2.39	2.42
24	极对数	Number of pole pairs		1				
25	相数	Number of phase		5				
26	重量	Weight of motor	g	48				
27	噪音	Typical noise level	dB	≤38				

电机端子定义 Motor terminal definition

+ Vcc
- GND

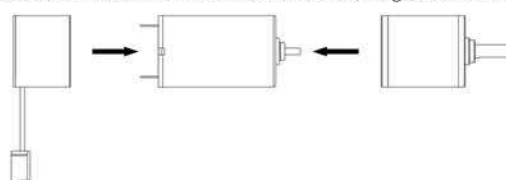
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 5N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
滚动轴承径向间隙 Radial play: ≤0.012mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

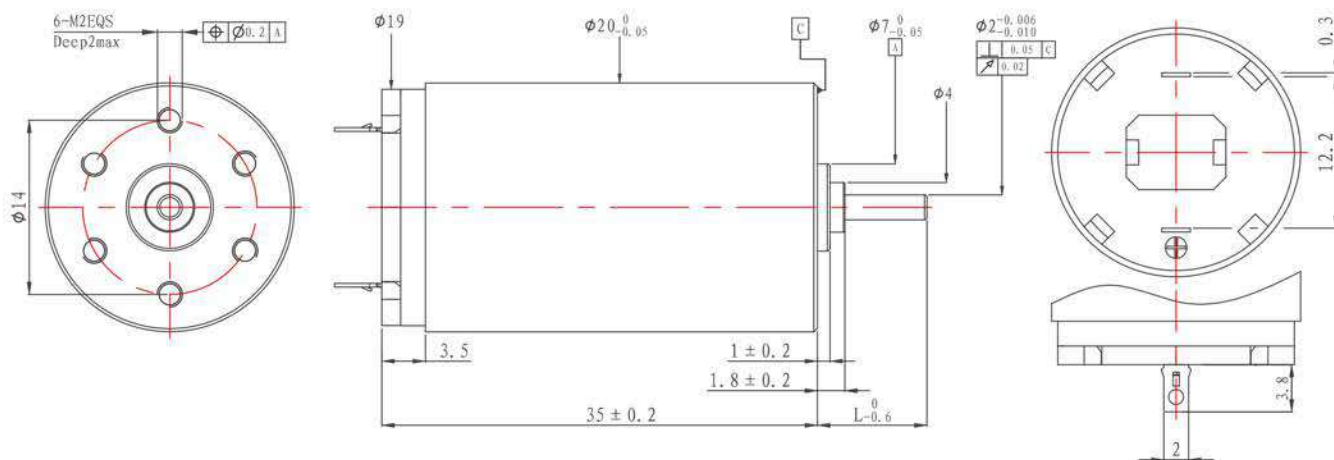
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器/磁电式编码器 Photoelectric encoder/magnetoelectric encoder



Φ20*L35mm, 稀有金属刷直流电机, 6-12W Φ20*L35mm, Precious Metal Brushed DC Motor, 6-12W



电机参数 Motor Data				2035	2035	2035	2035	2035
电机型号 Motor Model				2035	2035	2035	2035	2035
额定电压参数值 Value at Rated voltage								
额定点 At Nominal								
1	额定电压	Nominal voltage	V/DC	6	9	12	24	24
2	额定转速	Nominal speed	rpm	8379	8550	10260	8550	7781
3	额定电流	Nominal current	A	1.05	0.77	0.64	0.29	0.16
4	额定转矩	Nominal torque	mNm	5.75	6.29	5.71	3.76	3.78
空载点 Free Load								
5	空载转速	No-load speed	rpm	9800	10000	12000	10000	9100
6	空载电流	No-load current	mA	60	38	40	20	8
最大效率点 At Max. Efficiency								
7	最大效率	Max. efficiency	%	82.2	83.5	81.4	80.3	83.3
8	转速	Speed	rpm	8967	9200	10920	9050	8372
9	电流	Current	A	0.607	0.445	0.414	0.194	0.091
10	转矩	Torque	mNm	3.17	3.47	3.54	2.46	2.08
最大输出功率点 At Max. Output power								
11	最大功率	Max. output power	W	10.17	11.35	12.36	6.79	6.20
12	转速	Speed	rpm	4900	5000	6000	5000	4550
13	电流	Current	A	3.48	2.58	2.12	0.94	0.53
14	转矩	Torque	mNm	19.82	21.68	19.67	12.96	13.02
堵转点 At Stall								
15	堵转电流	Stall current	A	6.90	5.12	4.20	1.85	1.05
16	堵转转矩	Stall torque	mNm	39.6	43.4	39.3	25.9	26.0
电机常数 Motor Constants								
17	电机阻抗	Terminal resistance	Ω	0.87	1.76	2.86	8.11	22.9
18	电机感抗	Terminal inductance	mH	0.14	0.29	0.51	0.86	1.9
19	转矩常数	Torque constant	mNm/A	5.80	8.53	9.46	14.17	25.0
20	转速常数	Speed constant	rpm/V	1633.3	1111.1	1000.0	666.7	379.2
21	转速/转矩常数	Speed/torque constant	rpm/mNm	247.2	230.7	305.0	385.7	349.4
22	机械时间常数	Mechanical time constant	ms	6.51	6.08	7.63	9.65	8.74
23	转子惯量	Rotor inertia	gcm ²	2.52	2.52	2.39	2.39	2.42
24	极对数	Number of pole pairs		1				
25	相数	Weight of motor	g	48				
26	重量	Typical noise level	dB	≤38				
27	噪音							

电机端子定义 Motor terminal definition

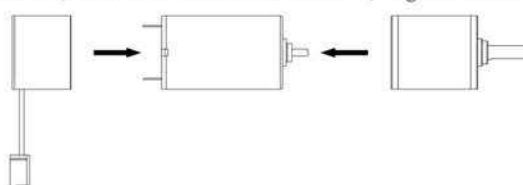
+ Vcc
- GND

技术说明 Technical specifications

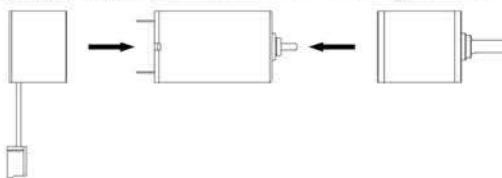
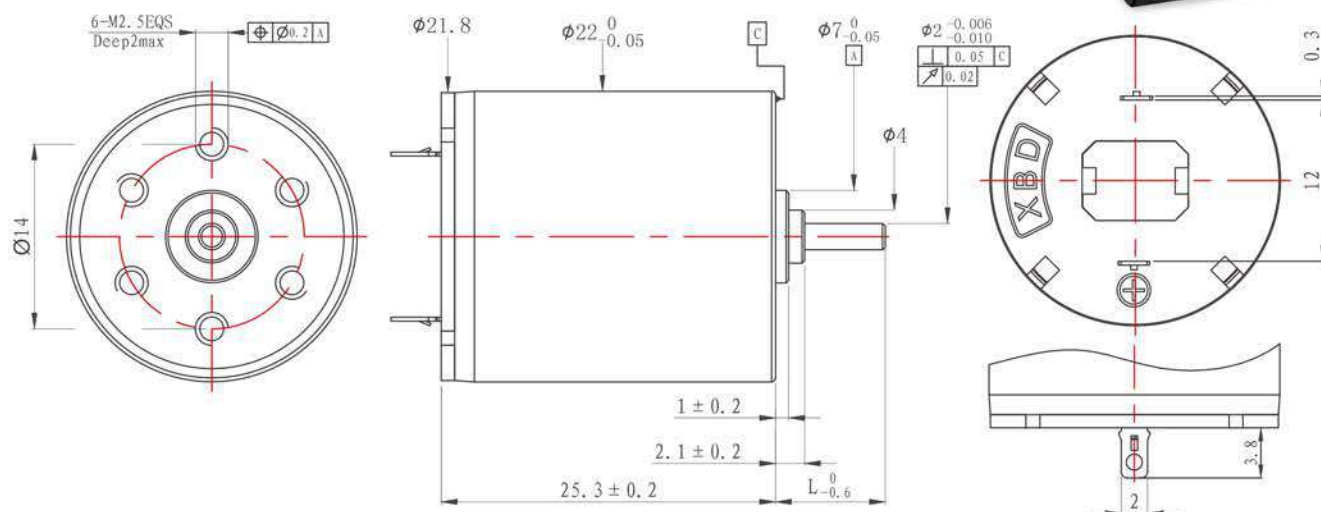
轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向(动态) Max axial load (dynamic): 5N
· 径向(法兰外5mm) Max radial load (5mm from flange): 20N
滚动轴承径向间隙 Radial play: ≤0.02mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

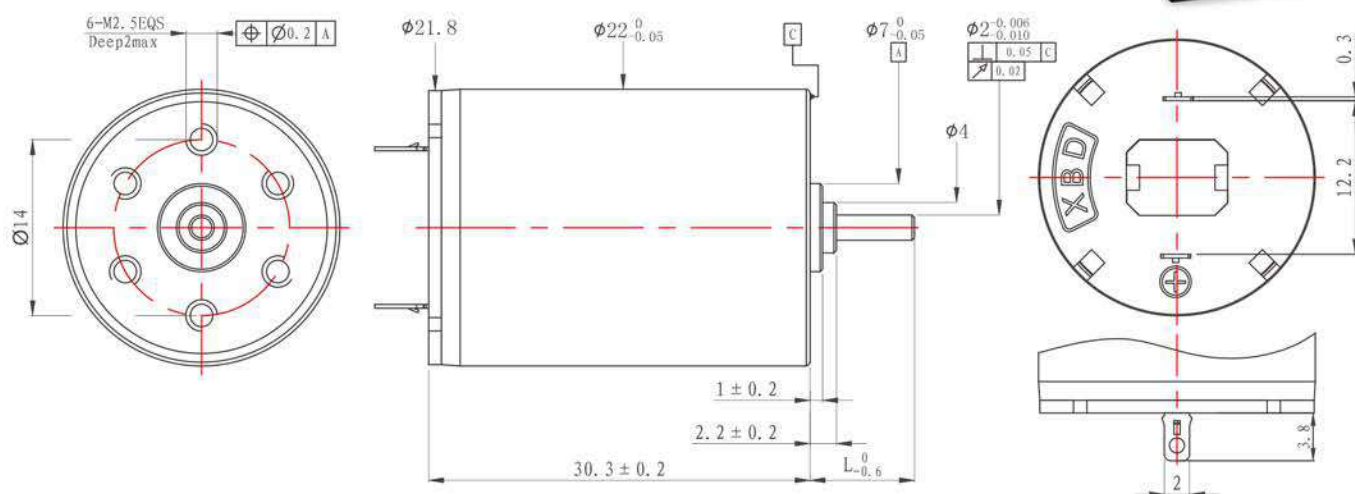
适配部件 Optional Parts
· 行星轮减速箱 Planetary gearbox
· 光电式编码器/磁电式编码器 Photoelectric encoder/magnetolectric encoder



Φ22*L25mm, Precious Metal Brushed DC Motor, 4-12W



Φ22*L30mm, 稀有金属刷直流电机, 2.5-6W Φ22*L30mm, Precious Metal Brushed DC Motor, 2.5-6W



电机参数 Motor Data				
电机型号 Motor Model		2230	2230	2230
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	6
2	额定转速	Nominal speed	rpm	7387
3	额定电流	Nominal current	A	0.46
4	额定转矩	Nominal torque	mNm	2.81
空载点 Free Load				
5	空载转速	No-load speed	rpm	8300
6	空载电流	No-load current	mA	8300
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	78.8
8	转速	Speed	rpm	7470
9	电流	Current	A	0.423
10	转矩	Torque	mNm	2.6
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	5.6
12	转速	Speed	rpm	41
13	电流	Current	A	1.92
14	转矩	Torque	mNm	12.8
堵转点 At Stall				
15	堵转电流	Stall current	A	3.80
16	堵转转矩	Stall torque	mNm	25.6
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	1.58
18	电机感抗	Terminal inductance	mH	0.095
19	转矩常数	Torque constant	mNm/A	6.82
20	转速常数	Speed constant	rpm/V	1383.3
21	转数/转矩常数	Speed/torque constant	rpm/mNm	324.6
22	机械时间常数	Mechanical time constant	ms	8.94
23	转子惯量	Rotor inertia	gcm ²	2.63
24	极对数	Number of pole pairs		1
25	相数	Number of phase		5
26	重量	Weight of motor	g	54
27	噪音	Typical noise level	dB	≤38

电机端子定义 Motor terminal definition

+ Vcc
- GND

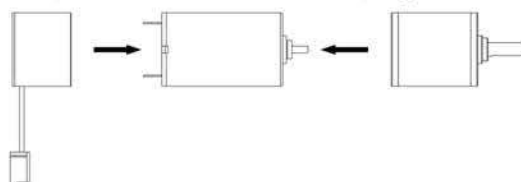
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.8N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 8N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

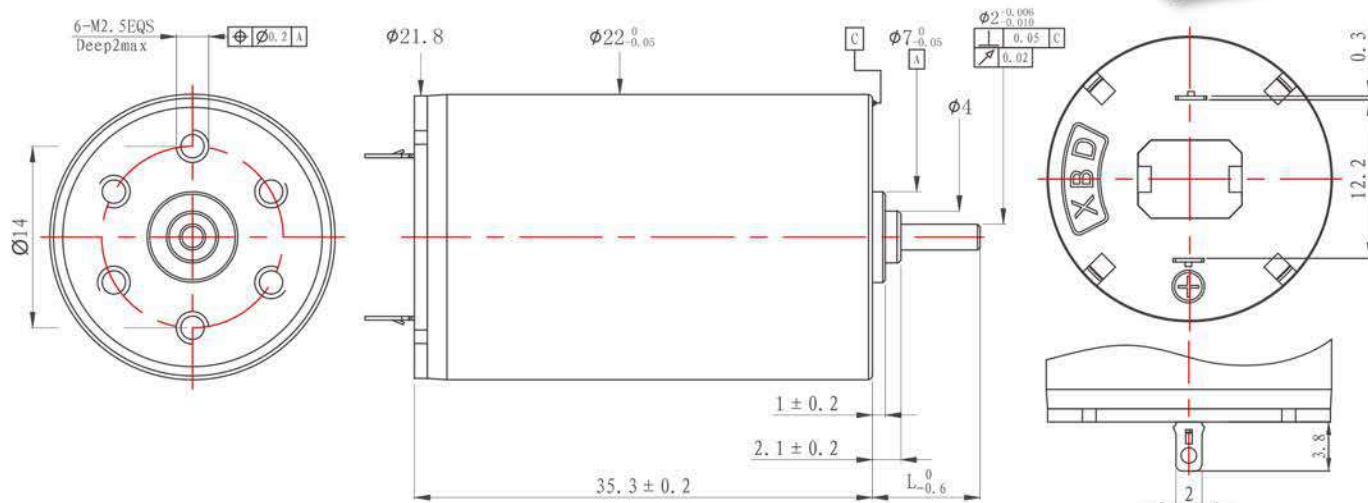
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器/磁电式编码器 Photoelectric encoder/magnetolectric encoder



Φ22*L35mm, 稀有金属刷直流电机, 4-20W Φ22*L35mm, Precious Metal Brushed DC Motor, 4-20W



电机参数 Motor Data				2235	2235	2235	2235	2235
电机型号 Motor Model				2235	2235	2235	2235	2235
额定电压参数值 Value at Rated voltage								
额定点 At Nominal								
1	额定电压	Nominal voltage	V/DC	6	9	12	24	36
2	额定转速	Nominal speed	rpm	10324	7743	7120	7298	9078
3	额定电流	Nominal current	A	0.98	1.08	0.39	0.43	0.21
4	额定转矩	Nominal torque	mNm	4.50	10.37	5.31	11.61	6.61
空载点 Free Load								
5	空载转速	No-load speed	rpm	11600	8700	8000	8200	10200
6	空载电流	No-load current	mA	60	28	14	12	8
最大效率点 At Max. Efficiency								
7	最大效率	Max. efficiency	%	83.8	89.5	87.6	89.1	87.1
8	转速	Speed	rpm	10672	8265	7520	7749	9537
9	电流	Current	A	0.727	0.507	0.217	0.220	0.124
10	转矩	Torque	mNm	3.27	4.71	2.90	5.80	3.91
最大输出功率点 At Max. Output power								
11	最大功率	Max. output power	W	12.42	21.47	10.12	22.66	16.06
12	转速	Speed	rpm	5800	4350	4000	4100	5100
13	电流	Current	A	4.23	4.81	1.71	1.91	0.90
14	转矩	Torque	mNm	20.45	47.14	24.15	52.77	30.06
堵转点 At Stall								
15	堵转电流	Stall current	A	8.40	9.60	3.40	3.80	1.80
16	堵转转矩	Stall torque	mNm	40.90	94.28	48.30	105.54	60.13
电机常数 Motor Constants								
17	电机阻抗	Terminal resistance	Ω	0.71	0.94	3.53	6.32	20.0
18	电机感抗	Terminal inductance	mH	0.022	0.070	0.130	0.420	0.9
19	转矩常数	Torque constant	mNm/A	4.90	9.85	14.26	27.86	33.6
20	转速常数	Speed constant	rpm/V	1933.3	966.7	666.7	341.7	283.3
21	转速/转矩常数	Speed/torque constant	rpm/mNm	283.6	92.3	165.6	77.7	169.6
22	机械时间常数	Mechanical time constant	ms	11.02	4.95	9.10	3.96	9.32
23	转子惯量	Rotor inertia	gcm ²	3.71	5.13	5.25	4.87	5.25
24	极对数	Number of pole pairs		1				
25	相数	Number of phase		5				
26	重量	Weight of motor	g	68				
27	噪音	Typical noise level	dB	≤38				

电机端子定义 Motor terminal definition

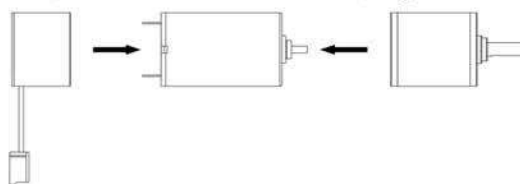
+ Vcc
- GND

技术说明 Technical specifications

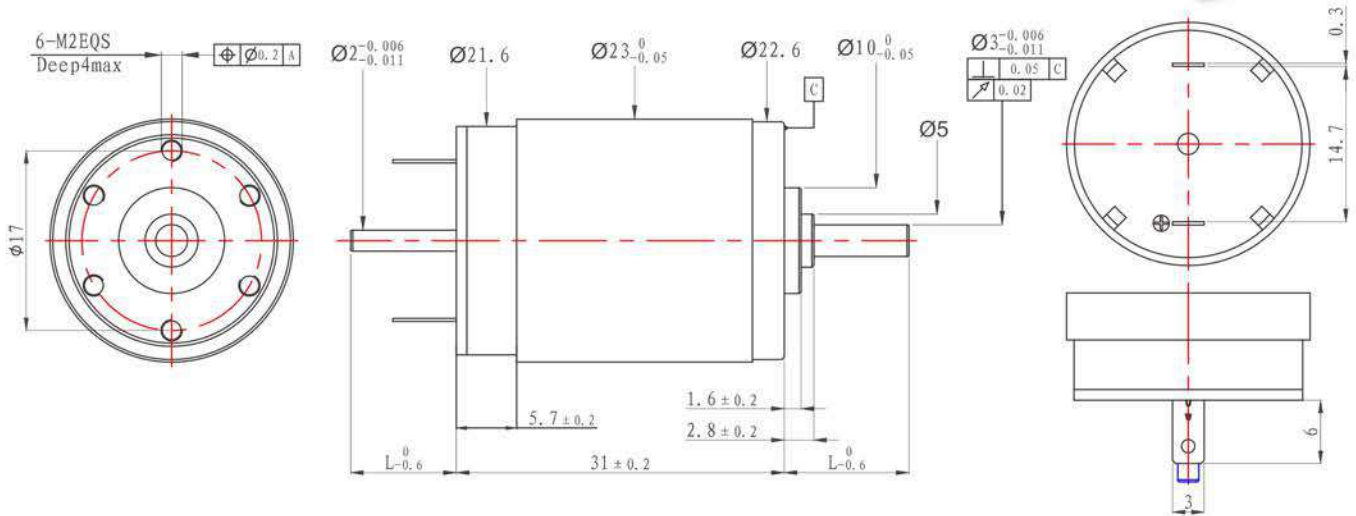
轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 15N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

适配部件 Optional Parts

· 行星轮减速箱 Planetary gearbox
· 光电式编码器/磁电式编码器 Photoelectric encoder/magnetoelectric encoder



Φ23*L30mm, 稀有金属刷直流电机, 4-15W Φ23*L30mm, Precious Metal Brushed DC Motor, 4-15W



电机参数 Motor Data				
电机型号 Motor Model				
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	6
2	额定转速	Nominal speed	rpm	7298
3	额定电流	Nominal current	A	0.82
4	额定转矩	Nominal torque	mNm	5.10
空载点 Free Load				
5	空载转速	No-load speed	rpm	8200
6	空载电流	No-load current	mA	80
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	79.5
8	转速	Speed	rpm	7380
9	电流	Current	A	0.752
10	转矩	Torque	mNm	4.6
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	10.0
12	转速	Speed	rpm	4100
13	电流	Current	A	3.4
14	转矩	Torque	mNm	23.2
堵转点 At Stall				
15	堵转电流	Stall current	A	6.80
16	堵转转矩	Stall torque	mNm	46.4
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	0.88
18	电机感抗	Terminal inductance	mH	0.140
19	转矩常数	Torque constant	mNm/A	6.91
20	转速常数	Speed constant	rpm/V	1366.7
21	转数/转矩常数	Speed/torque constant	rpm/mNm	176.7
22	机械时间常数	Mechanical time constant	ms	9.65
23	转子惯量	Rotor inertia	gcm ²	5.22
24	极对数	Number of pole pairs		1
25	相数	Number of phase		5
26	重量	Weight of motor	g	86
27	噪音	Typical noise level	dB	≤38

电机端子定义 Motor terminal definition

+ Vcc
- GND

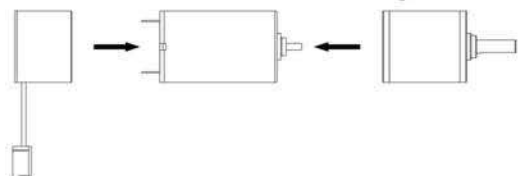
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

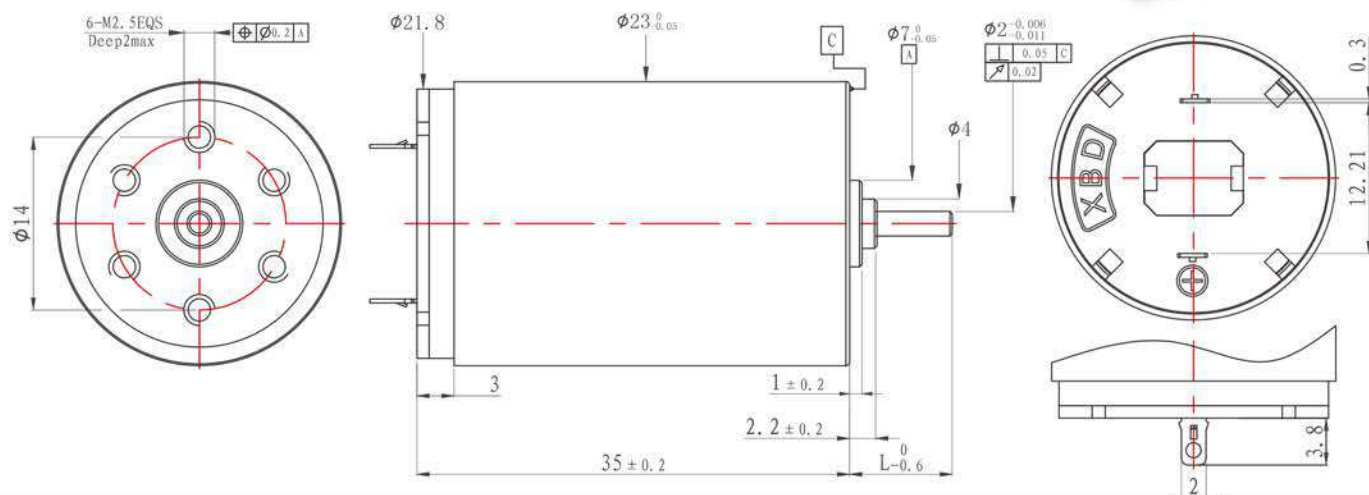
组合体系 System

适配部件 Optional Parts

· 行星轮减速箱 Planetary gearbox
· 光电式编码器/磁电式编码器 Photoelectric encoder/magnetolectric encoder



Φ23*L35mm, 稀有金属刷直流电机, 4-17W Φ23*L35mm, Precious Metal Brushed DC Motor, 4-17W



电机参数 Motor Data				2335	2335	2335	2335
电机型号 Motor Model				2335	2335	2335	2335
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	6	12	18	24
2	额定转速	Nominal speed	rpm	7200	7650	7790	9900
3	额定电流	Nominal current	A	0.74	0.48	0.31	0.33
4	额定转矩	Nominal torque	mNm	4.96	5.99	5.66	6.10
空载点 Free Load							
5	空载转速	No-load speed	rpm	8000	8500	8655	11000
6	空载电流	No-load current	mA	40	30	25	37
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	85.5	84.3	82.3	79.0
8	转速	Speed	rpm	7200	7650	7790	9900
9	电流	Current	A	0.736	0.477	0.313	0.333
10	转矩	Torque	mNm	5.0	6.0	5.7	6.1
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	10.4	13.3	12.8	17.6
12	转速	Speed	rpm	4000	4250	4327.5	5500
13	电流	Current	A	3.5	2.3	1.5	1.5
14	转矩	Torque	mNm	24.8	29.9	28.3	30.5
堵转点 At Stall							
15	堵转电流	Stall current	A	7.00	4.50	2.90	3.00
16	堵转转矩	Stall torque	mNm	49.6	59.9	56.6	61.0
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	0.86	2.67	6.21	8.00
18	电机感抗	Terminal inductance	mH	0.140	0.620	0.140	0.152
19	转矩常数	Torque constant	mNm/A	7.08	13.30	19.52	20.32
20	转速常数	Speed constant	rpm/V	1333.3	708.3	480.8	458.3
21	转数/转矩常数	Speed/torque constant	rpm/mNm	161.4	142.0	152.9	180.4
22	机械时间常数	Mechanical time constant	ms	5.07	5.88	5.95	6.01
23	转子惯量	Rotor inertia	gcm ²	5.01	5.05	5.11	5.14
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	86			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

+ Vcc
- GND

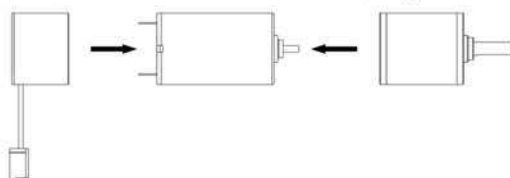
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

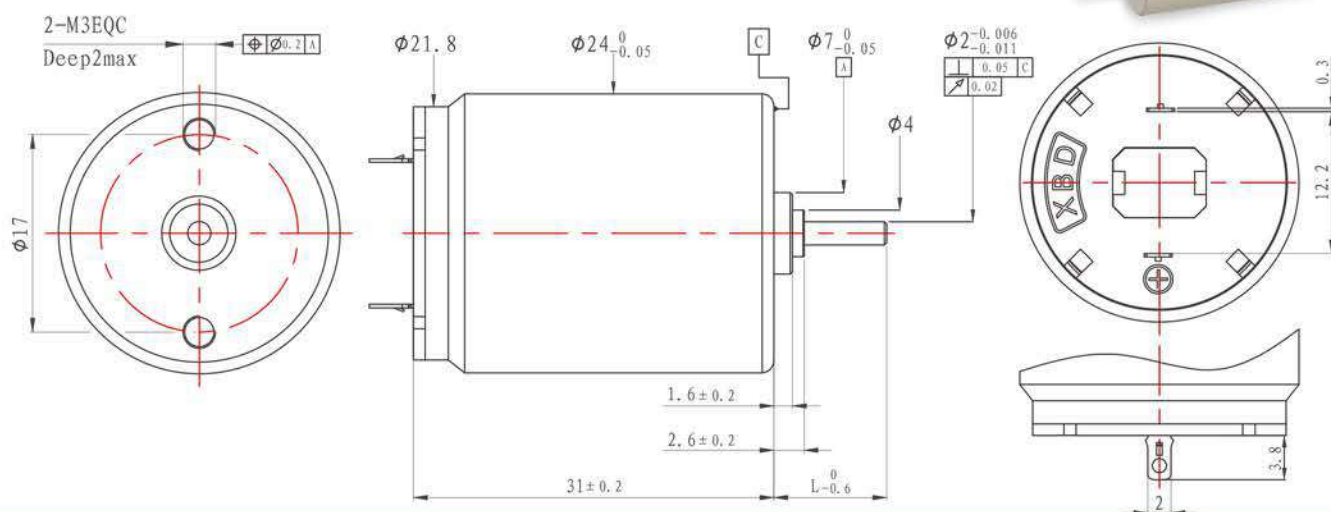
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器/磁电式编码器 Photoelectric encoder/magnetoelectric encoder



Φ24*L31mm, 稀有金属刷直流电机, 1.7-8W Φ24*L31mm, Precious Metal Brushed DC Motor, 1.7-8W



电机参数 Motor Data				2431	2431	2431	2431
电机型号 Motor Model				2431	2431	2431	2431
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	6	9	12	24
2	额定转速	Nominal speed	rpm	7298	9078	8900	8811
3	额定电流	Nominal current	A	0.50	0.24	0.46	0.16
4	额定转矩	Nominal torque	mNm	3.09	1.81	4.82	3.39
空载点 Free Load							
5	空载转速	No-load speed	rpm	8200	10200	10000	9900
6	空载电流	No-load current	mA	50	25	40	14
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	79.2	78.9	80.8	80.7
8	转速	Speed	rpm	7380	9180	9100	9009
9	电流	Current	A	0.457	0.223	0.387	0.135
10	转矩	Torque	mNm	2.8	1.6	3.9	2.8
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	6.0	4.4	11.5	8.0
12	转速	Speed	rpm	4100	5100	5000	4950
13	电流	Current	A	2.1	1.0	2.0	0.7
14	转矩	Torque	mNm	14.0	8.2	21.9	15.4
堵转点 At Stall							
15	堵转电流	Stall current	A	4.12	2.00	3.90	1.36
16	堵转转矩	Stall torque	mNm	28.1	16.4	43.8	30.8
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	1.46	4.50	3.08	17.65
18	电机感抗	Terminal inductance	mH	0.160	0.530	0.450	1.700
19	转矩常数	Torque constant	mNm/A	6.90	8.32	11.34	22.91
20	转速常数	Speed constant	rpm/V	1366.7	1133.3	833.3	412.5
21	转速/转矩常数	Speed/torque constant	rpm/mNm	291.9	620.7	228.4	321.0
22	机械时间常数	Mechanical time constant	ms	14.22	30.23	12.27	16.01
23	转子惯量	Rotor inertia	gcm ²	4.65	4.65	5.13	4.76
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	68			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

+ Vcc
- GND

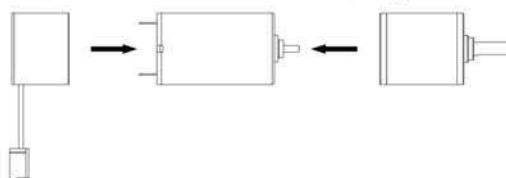
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 15N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

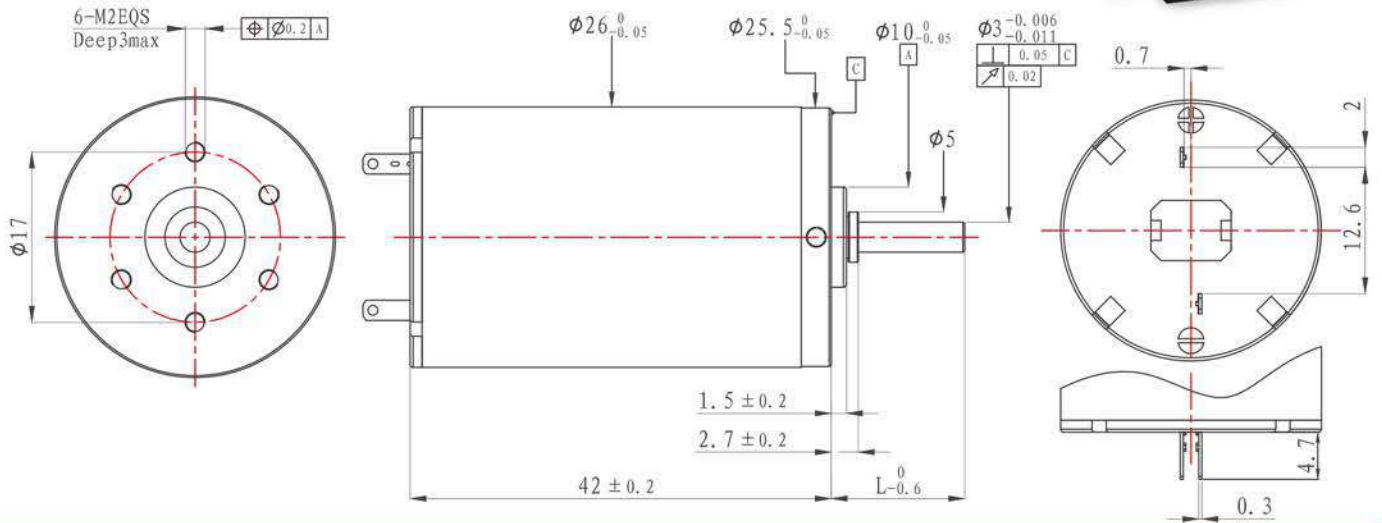
适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器/磁电式编码器 Photoelectric encoder/magnetolectric encoder



Φ26*L42mm, 稀有金属刷直流电机, 2-17W

Φ26*L42mm, Precious Metal Brushed DC Motor, 2-17W



电机参数 Motor Data				2642	2642	2642	2642
电机型号 Motor Model				2642	2642	2642	2642
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	6	9	12	24
2	额定转速	Nominal speed	rpm	4895	7476	7452	7700
3	额定电流	Nominal current	A	0.44	0.64	0.43	0.39
4	额定转矩	Nominal torque	mNm	4.01	5.97	5.44	9.25
空载点 Free Load							
5	空载转速	No-load speed	rpm	5500	8400	8100	8800
6	空载电流	No-load current	mA	50	50	45	30
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	77.8	81.7	81.7	80.7
8	转速	Speed	rpm	5033	7686	7412	8008
9	电流	Current	A	0.352	0.505	0.458	0.288
10	转矩	Torque	mNm	3.1	4.6	5.8	6.7
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	5.3	11.9	14.4	17.0
12	转速	Speed	rpm	2750	4200	4050	4400
13	电流	Current	A	1.8	2.7	2.5	1.5
14	转矩	Torque	mNm	18.2	27.1	34.0	37.0
堵转点 At Stall							
15	堵转电流	Stall current	A	3.60	5.40	4.90	2.90
16	堵转转矩	Stall torque	mNm	36.5	54.2	68.1	74.0
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	1.67	1.67	2.45	8.28
18	电机感抗	Terminal inductance	mH	0.062	0.070	0.160	0.290
19	转矩常数	Torque constant	mNm/A	10.27	10.14	14.02	25.77
20	转速常数	Speed constant	rpm/V	916.7	933.3	675.0	366.7
21	转速/转矩常数	Speed/torque constant	rpm/mNm	150.8	154.9	119.0	119.0
22	机械时间常数	Mechanical time constant	ms	9.11	7.68	5.90	5.79
23	转子惯量	Rotor inertia	gcm ²	5.77	4.73	4.73	4.65
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		7			
26	重量	Weight of motor	g	105			
27	噪音	Typical noise level	dB	≤40			

电机端子定义 Motor terminal definition

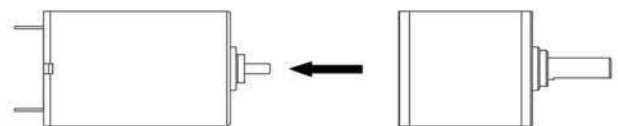
+ Vcc
- GND

技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

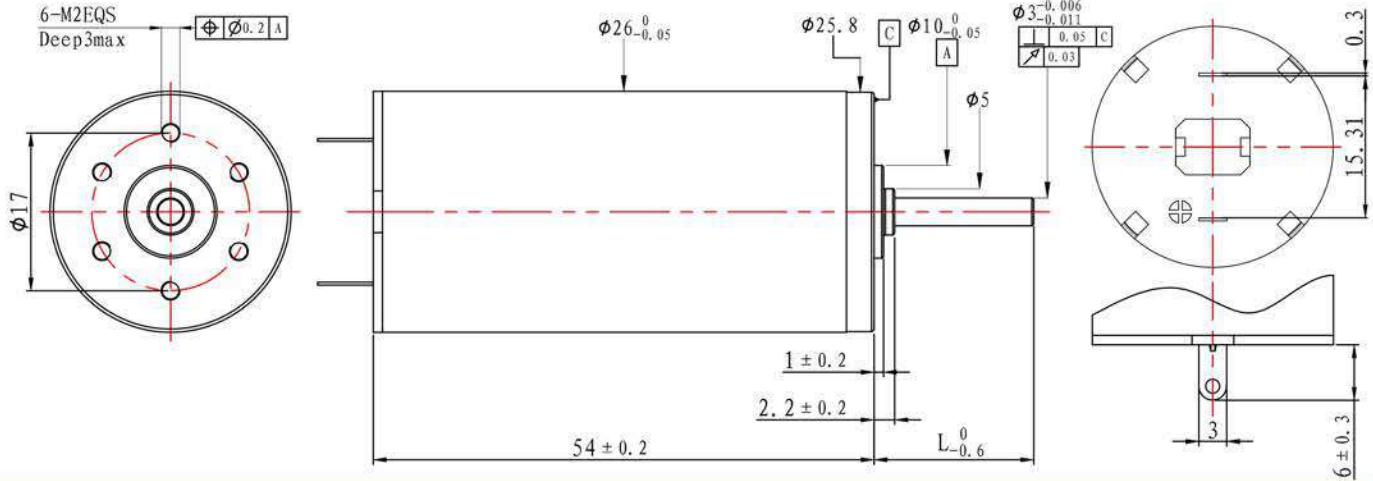
组合体系 System

适配部件 Optional Parts
· 行星轮减速箱 Planetary gearbox



Φ26*L54mm, 稀有金属刷直流电机, 15-35W

Φ26*L54mm, Precious Metal Brushed DC Motor, 15-35W



电机参数 Motor Data			
电机型号 Motor Model			
		2654	2654
额定电压参数值 Value at Rated voltage			
额定点 At Nominal			
1	额定电压	Nominal voltage	V/DC
2	额定转速	Nominal speed	rpm
3	额定电流	Nominal current	A
4	额定转矩	Nominal torque	mNm
空载点 Free Load			
5	空载转速	No-load speed	rpm
6	空载电流	No-load current	mA
最大效率点 At Max. Efficiency			
7	最大效率	Max. efficiency	%
8	转速	Speed	rpm
9	电流	Current	A
10	转矩	Torque	mNm
最大输出功率点 At Max. Output power			
11	最大功率	Max. output power	W
12	转速	Speed	rpm
13	电流	Current	A
14	转矩	Torque	mNm
堵转点 At Stall			
15	堵转电流	Stall current	A
16	堵转转矩	Stall torque	mNm
电机常数 Motor Constants			
17	电机阻抗	Terminal resistance	Ω
18	电机感抗	Terminal inductance	mH
19	转矩常数	Torque constant	mNm/A
20	转速常数	Speed constant	rpm/V
21	转速/转矩常数	Speed/torque constant	rpm/mNm
22	机械时间常数	Mechanical time constant	ms
23	转子惯量	Rotor inertia	gcm ²
24	极对数	Number of pole pairs	1
25	相数	Number of phase	7
26	重量	Weight of motor	g
27	噪音	Typical noise level	dB

电机端子定义 Motor terminal definition

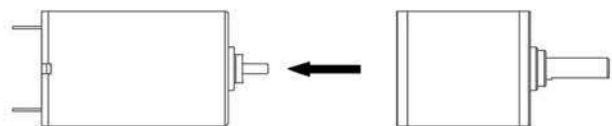
+ Vcc
- GND

技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向 (动态) Max axial load (dynamic): 2N
 · 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
 滑动轴承径向间隙 Radial play: ≤0.03mm
 滚动轴承径向间隙 Radial play: ≤0.015mm
 环境温度范围 Ambient temperature range: -20~+80°C
 相对湿度范围 Relative humidity range: <90% (25°C)
 最高转子温度 Highest rotor temperature: 125°C
 表中数据均为标称值 Values listed in the table are nominal

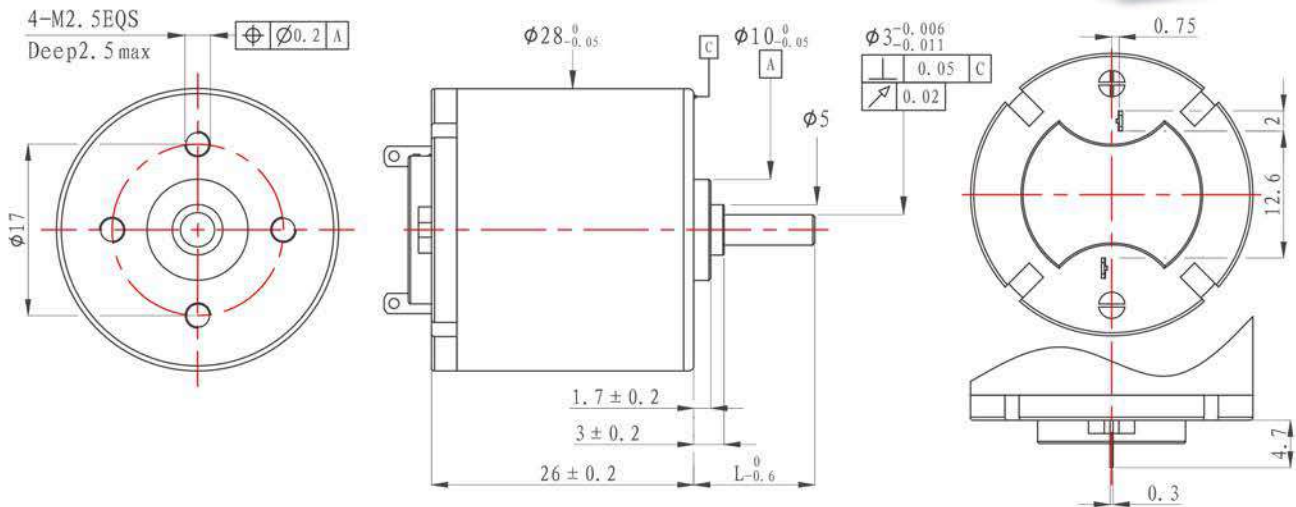
组合体系 System

适配部件 Optional Parts
 · 行星轮减速箱 Planetary gearbox



Φ28*L26mm, 稀有金属刷直流电机, 0.3-4W

Φ28*L26mm, Precious Metal Brushed DC Motor, 0.3-4W



电机参数 Motor Data

电机型号 Motor Model

额定电压参数值 Value at Rated voltage

额定点 At Nominal

1	额定电压	Nominal voltage	V/DC	6	12	24
2	额定转速	Nominal speed	rpm	3827	5429	5251
3	额定电流	Nominal current	A	0.08	0.18	0.09
4	额定转矩	Nominal torque	mNm	0.91	3.04	3.26

空载点 Free Load

5	空载转速	No-load speed	rpm	4300	6100	5900
6	空载电流	No-load current	mA	10	14	8

最大效率点 At Max. Efficiency

7	最大效率	Max. efficiency	%	76.6	81.6	80.8
8	转速	Speed	rpm	3827	5551	5369
9	电流	Current	A	0.079	0.148	0.077
10	转矩	Torque	mNm	0.9	2.5	2.7

最大输出功率点 At Max. Output power

11	最大功率	Max. output power	W	0.9	4.4	4.6
12	转速	Speed	rpm	2150	3050	2950
13	电流	Current	A	0.3	0.8	0.4
14	转矩	Torque	mNm	4.1	13.8	14.8

堵转点 At Stall

15	堵转电流	Stall current	A	0.64	1.50	0.78
16	堵转转矩	Stall torque	mNm	8.3	27.7	29.7

电机常数 Motor Constants

17	电机阻抗	Terminal resistance	Ω	9.38	8.00	30.77
18	电机感抗	Terminal inductance	mH	0.150	0.430	1.600
19	转矩常数	Torque constant	mNm/A	13.12	18.61	38.45
20	转速常数	Speed constant	rpm/V	716.7	508.3	245.8
21	转速/转矩常数	Speed/torque constant	rpm/mNm	520.4	220.6	198.8
22	机械时间常数	Mechanical time constant	ms	22.29	19.22	16.39
23	转子惯量	Rotor inertia	gcm ²	4.09	8.32	7.88
24	极对数	Number of pole pairs		1		
25	相数	Number of phase		7		
26	重量	Weight of motor	g	78		
27	噪音	Typical noise level	dB	≤38		

电机端子定义 Motor terminal definition

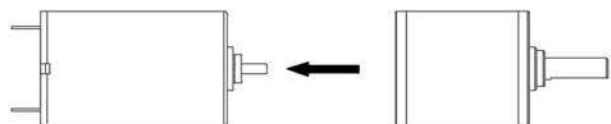
+ Vcc
- GND

技术说明 Technical specifications

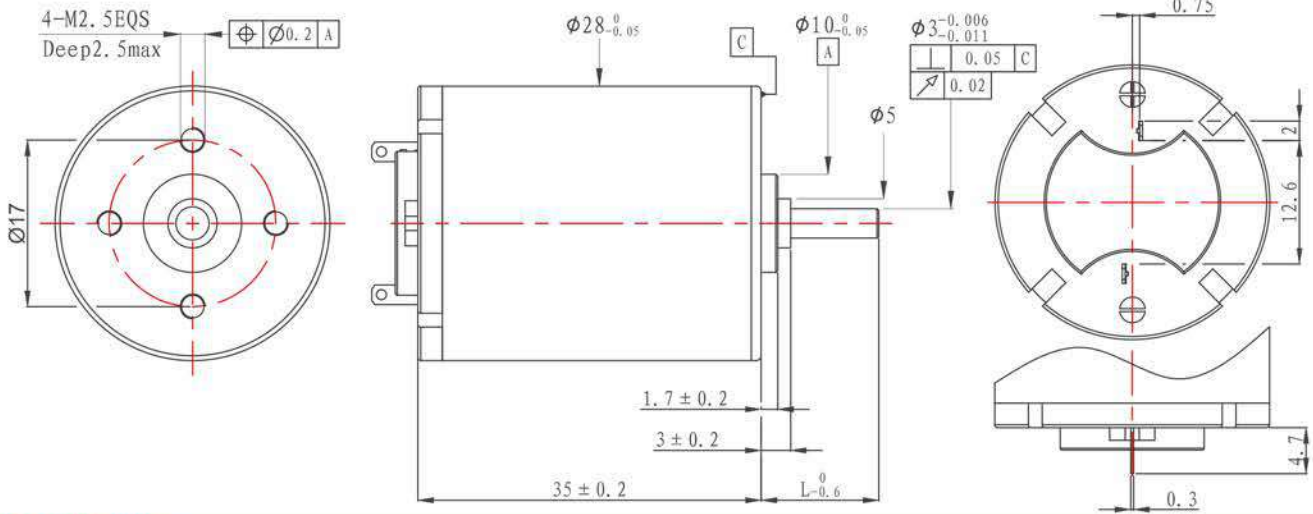
轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts
· 行星轮减速箱 Planetary gearbox



Φ28*L35mm, 稀有金属刷直流电机, 4-20W Φ28*L35mm, Precious Metal Brushed DC Motor, 4-20W



电机参数 Motor Data

电机型号 Motor Model				2835	2835	2835	2835
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	6	12	24	36
2	额定转速	Nominal speed	rpm	7218	8123	5421	6350
3	额定电流	Nominal current	A	0.78	0.52	0.20	0.14
4	额定转矩	Nominal torque	mNm	5.31	6.29	6.70	6.19
空载点 Free Load							
5	空载转速	No-load speed	rpm	8020	9025	6023	7056
6	空载电流	No-load current	mA	32	25	20	15
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	87.4	86.4	80.0	79.7
8	转速	Speed	rpm	7218	8123	5421	6350
9	电流	Current	A	0.779	0.523	0.198	0.144
10	转矩	Torque	mNm	5.3	6.3	6.7	6.2
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	11.2	14.9	10.6	11.4
12	转速	Speed	rpm	4010	4512.5	3011.5	3528
13	电流	Current	A	3.8	2.5	0.9	0.7
14	转矩	Torque	mNm	26.6	31.4	33.5	30.9
堵转点 At Stall							
15	堵转电流	Stall current	A	7.50	5.00	1.80	1.30
16	堵转转矩	Stall torque	mNm	53.1	62.9	67.0	61.9
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	0.80	2.40	13.33	27.69
18	电机感抗	Terminal inductance	mH	0.023	0.075	0.441	0.845
19	转矩常数	Torque constant	mNm/A	7.08	12.57	37.21	47.60
20	转速常数	Speed constant	rpm/V	1336	752.1	251.0	196.0
21	转数/转矩常数	Speed/torque constant	rpm/mNm	151.0	143.6	89.9	114.0
22	机械时间常数	Mechanical time constant	ms	8.89	9.30	6.89	9.07
23	转子惯量	Rotor inertia	gcm ²	5.63	6.19	7.31	7.59
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		7			
26	重量	Weight of motor	g	145			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

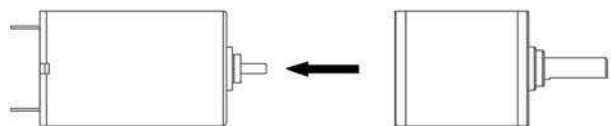
+ Vcc
- GND

技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

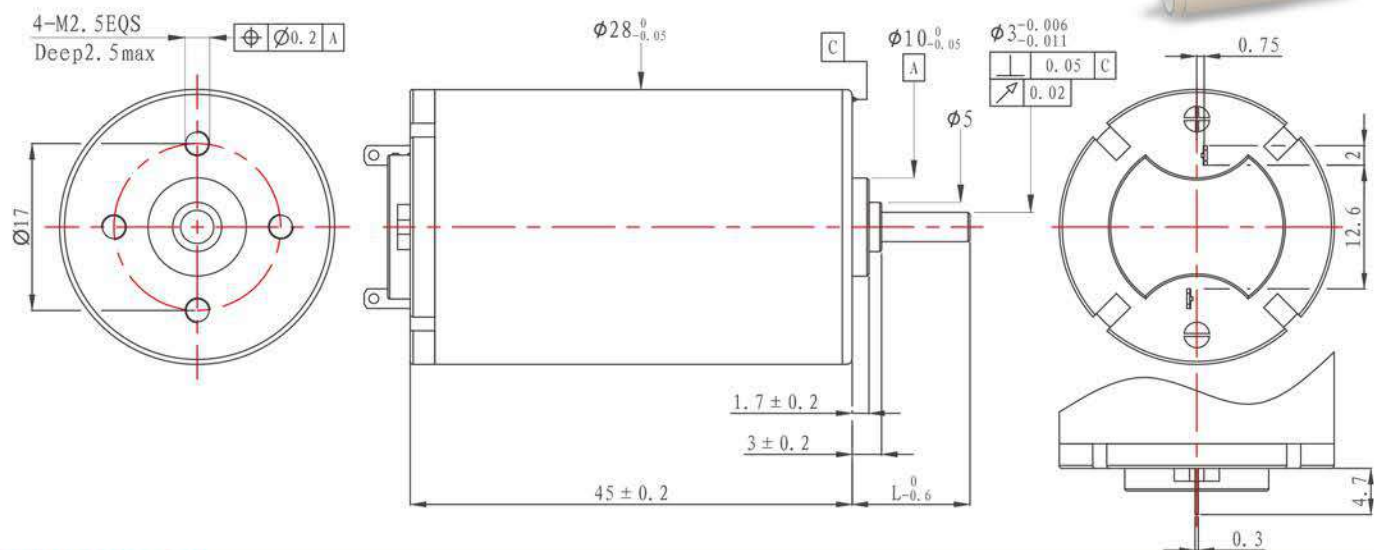
组合体系 System

适配部件 Optional Parts
· 行星轮减速箱 Planetary gearbox



$\phi 28 \times L45\text{mm}$, 稀有金属刷直流电机, 4-20W

$\phi 28 \times L45\text{mm}$, Precious Metal Brushes DC Motor, 4-20W



电机参数 Motor Data

电机型号 Motor Model				2845	2845	2845	2845
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	6	12	24	48
2	额定转速	Nominal speed	rpm	5336	5394	5568	6090
3	额定电流	Nominal current	A	0.67	0.80	0.59	0.29
4	额定转矩	Nominal torque	mNm	6.09	14.30	20.33	18.56
空载点 Free Load							
5	空载转速	No-load speed	rpm	5800	6200	6400	7000
6	空载电流	No-load current	mA	45	25	16	10
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	85.4	87.5	88.3	87.0
8	转速	Speed	rpm	5394	5828	5984	6545
9	电流	Current	A	0.588	0.384	0.301	0.152
10	转矩	Torque	mNm	5.3	6.6	10.2	9.3
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	11.6	17.9	26.2	26.2
12	转速	Speed	rpm	2900	3100	3200	3500
13	电流	Current	A	3.9	3.0	2.2	1.1
14	转矩	Torque	mNm	38.1	55.0	78.2	71.4
堵转点 At Stall							
15	堵转电流	Stall current	A	7.80	6.00	4.40	2.20
16	堵转转矩	Stall torque	mNm	76.2	110.0	156.4	142.8
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	0.77	2.00	5.45	21.82
18	电机感抗	Terminal inductance	mH	0.053	0.160	0.550	2.100
19	转矩常数	Torque constant	mNm/A	9.82	18.41	35.68	65.18
20	转速常数	Speed constant	rpm/V	966.7	516.7	266.7	145.8
21	转数/转矩常数	Speed/torque constant	rpm/mNm	76.1	56.4	40.9	49.0
22	机械时间常数	Mechanical time constant	ms	6.66	6.28	4.78	6.00
23	转子惯量	Rotor inertia	gcm ²	8.35	11.47	11.16	11.69
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		7			
26	重量	Weight of motor	g	145			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

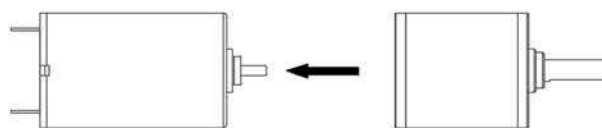
+ Vcc
- GND

技术说明 Technical specifications

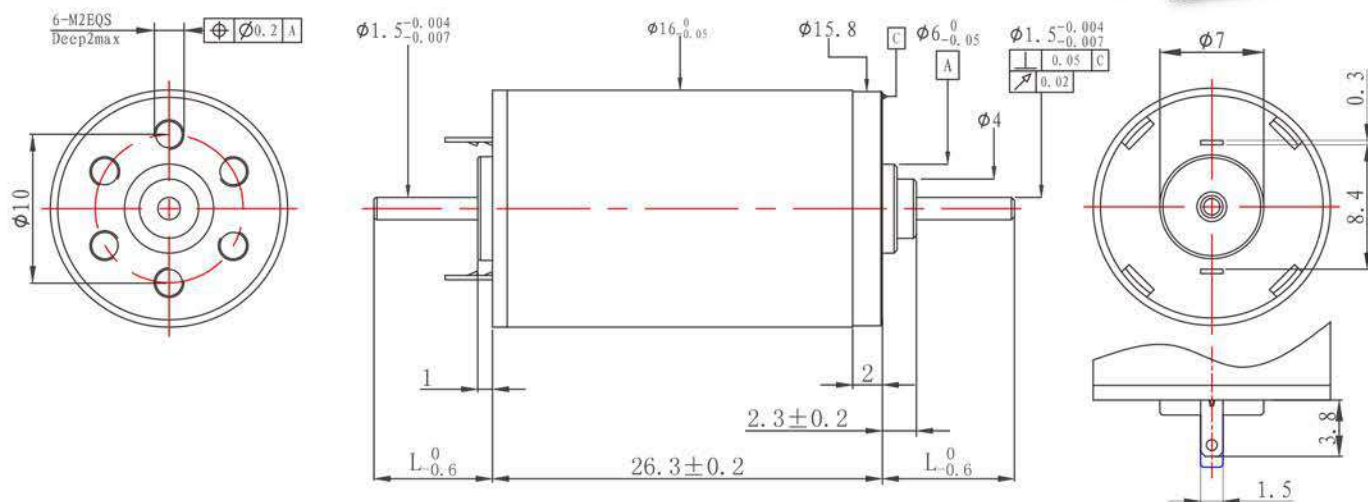
轴间间隙 Axial play: 0-0.1mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向 (动态) Max axial load (dynamic): 2N
 · 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
 滑动轴承径向间隙 Radial play: $\leq 0.03\text{mm}$
 滚动轴承径向间隙 Radial play: $\leq 0.015\text{mm}$
 环境温度范围 Ambient temperature range: $-20 \sim +80^\circ\text{C}$
 相对湿度范围 Relative humidity range: $< 90\%$ (25°C)
 最高转子温度 Highest rotor temperature: 125°C
 表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts
 · 行星轮减速箱 Planetary gearbox



Φ16*L25mm, 碳刷直流电机, 1.5-4W Φ16*L25mm, Graphite Brushed DC Motor, 1.5-4W



电机参数 Motor Data				
电机型号 Motor Model				
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	6
2	额定转速	Nominal speed	rpm	8108
3	额定电流	Nominal current	A	0.65
4	额定转矩	Nominal torque	mNm	2.71
空载点 Free Load				
5	空载转速	No-load speed	rpm	11500
6	空载电流	No-load current	mA	80
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	64.0
8	转速	Speed	rpm	9603
9	电流	Current	A	0.40
10	转矩	Torque	mNm	1.52
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	2.8
12	转速	Speed	rpm	5750
13	电流	Current	A	1.04
14	转矩	Torque	mNm	4.59
堵转点 At Stall				
15	堵转电流	Stall current	A	2.00
16	堵转转矩	Stall torque	mNm	9.2
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	3.00
18	电机感抗	Terminal inductance	mH	0.10
19	转矩常数	Torque constant	mNm/A	4.78
20	转速常数	Speed constant	rpm/V	1916.7
21	转数/转矩常数	Speed/torque constant	rpm/mNm	1252.3
22	机械时间常数	Mechanical time constant	ms	12.6
23	转子惯量	Rotor inertia	gcm ²	0.96
24	极对数	Number of pole pairs		1
25	相数	Number of phase		5
26	重量	Weight of motor	g	24
27	噪音	Typical noise level	dB	≤45

电机端子定义 Motor terminal definition

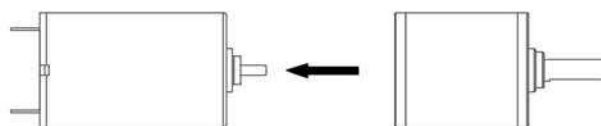
+ Vcc
- GND

技术说明 Technical specifications

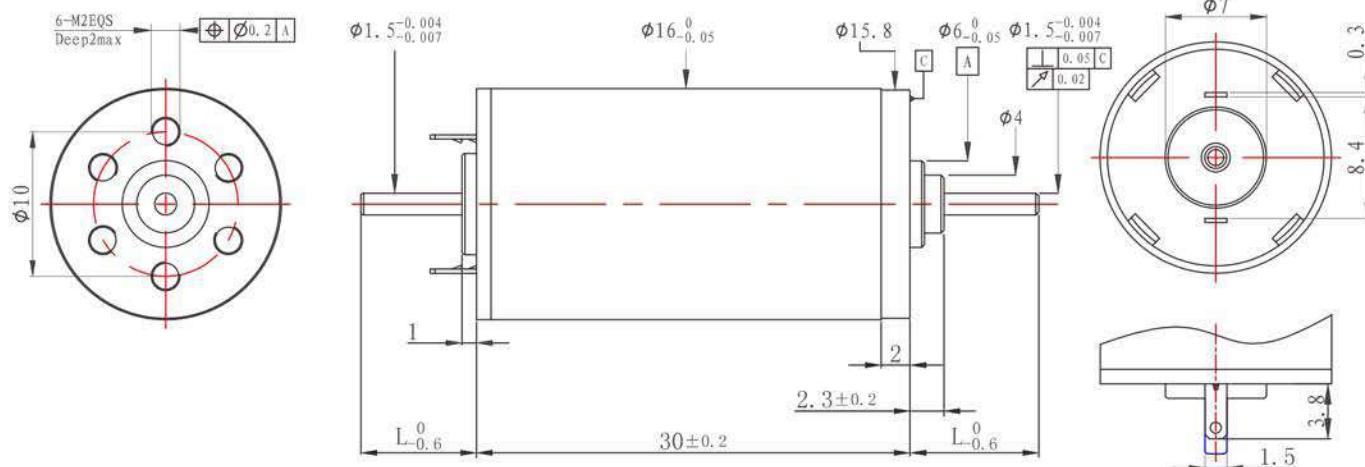
轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.5N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 15N
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts:
· 行星轮减速箱 Planetary gearbox



Φ16*L30mm, 碳刷直流电机, 2-4.5W Φ16*L30mm, Graphite Brushed DC Motor, 2-4.5W



电机参数 Motor Data						
电机型号 Motor Model				1630	1630	1630
额定电压参数值 Value at Rated voltage						
额定点 At Nominal						
1	额定电压	Nominal voltage	V/DC	6	12	24
2	额定转速	Nominal speed	rpm	8850	10880	10240
3	额定电流	Nominal current	A	0.8	0.5	0.3
4	额定转矩	Nominal torque	mNm	3.5	3.5	4.2
空载点 Free Load						
5	空载转速	No-load speed	rpm	11800	13600	12800
6	空载电流	No-load current	mA	80	60	35
最大效率点 At Max. Efficiency						
7	最大效率	Max. efficiency	%	70.0	69.7	69.3
8	转速	Speed	rpm	10148	12376	11648
9	电流	Current	A	0.5	0.3	0.1
10	转矩	Torque	mNm	1.9	1.6	1.9
最大输出功率点 At Max. Output power						
11	最大功率	Max. output power	W	4.3	6.2	7.1
12	转速	Speed	rpm	5900	6800	6400
13	电流	Current	A	1.5	1.1	0.6
14	转矩	Torque	mNm	6.9	8.8	10.6
堵转点 At Stall						
15	堵转电流	Stall current	A	3.0	2.2	1.3
16	堵转转矩	Stall torque	mNm	13.8	17.5	21.1
电机常数 Motor Constants						
17	电机阻抗	Terminal resistance	Ω	2.00	5.45	19.20
18	电机感抗	Terminal inductance	mH	0.05	0.22	0.96
19	转矩常数	Torque constant	mNm/A	4.73	8.20	17.40
20	转速常数	Speed constant	rpm/V	1966.7	1133.3	533.3
21	转数/转矩常数	Speed/torque constant	rpm/mNm	855.1	775.4	605.3
22	机械时间常数	Mechanical time constant	ms	12.0	10.9	8.9
23	转子惯量	Rotor inertia	gcm ²	1.34	1.34	1.40
24	极对数	Number of pole pairs		1		
25	相数	Number of phase		5		
26	重量	Weight of motor	g	31		
27	噪音	Typical noise level	dB	≤42		

电机端子定义 Motor terminal definition

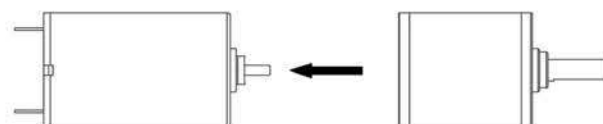
+ Vcc
- GND

技术说明 Technical specifications

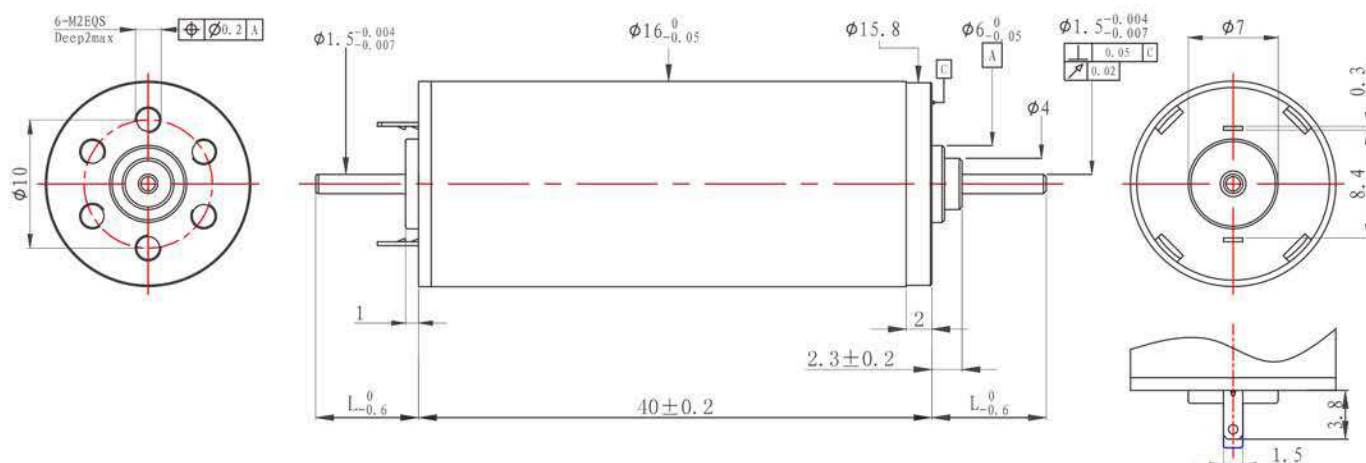
轴间间隙 Axial play: 0-0.1mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向 (动态) Max axial load (dynamic): 0.5N
 · 径向 (法兰外5mm) Max radial load (5mm from flange): 5N
 滑动轴承径向间隙 Radial play: ≤0.03mm
 滚动轴承径向间隙 Radial play: ≤0.015mm
 环境温度范围 Ambient temperature range: -20~+80°C
 相对湿度范围 Relative humidity range: <90% (25°C)
 最高转子温度 Highest rotor temperature: 125°C
 表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts:
 · 行星轮减速箱 Planetary gearbox



Φ16*L40mm, 碳刷直流电机, 3-9W Φ16*L40mm, Graphite Brushed DC Motor, 3-9W



电机参数 Motor Data

电机型号 Motor Model				1640	1640	1640
额定电压参数值 Value at Rated voltage						
额定点 At Nominal						
1	额定电压	Nominal voltage	V/DC	6	12	24
2	额定转速	Nominal speed	rpm	9516	8112	7550
3	额定电流	Nominal current	A	1.04	0.65	0.41
4	额定转矩	Nominal torque	mNm	4.5	6.6	8.7
空载点 Free Load						
5	空载转速	No-load speed	rpm	12200	10400	10000
6	空载电流	No-load current	mA	70	45	30
最大效率点 At Max. Efficiency						
7	最大效率	Max. efficiency	%	76.6	76.2	74.5
8	转速	Speed	rpm	10797	9204	8800
9	电流	Current	A	0.58	0.36	0.22
10	转矩	Torque	mNm	2.4	3.4	4.2
最大输出功率点 At Max. Output power						
11	最大功率	Max. output power	W	6.54	8.13	9.24
12	转速	Speed	rpm	6100	5200	5000
13	电流	Current	A	2.29	1.42	0.82
14	转矩	Torque	mNm	10.2	14.9	17.7
堵转点 At Stall						
15	堵转电流	Stall current	A	4.50	2.80	1.60
16	堵转转矩	Stall torque	mNm	20.5	29.9	35.3
电机常数 Motor Constants						
17	电机阻抗	Terminal resistance	Ω	1.33	4.29	15.00
18	电机感抗	Terminal inductance	mH	0.029	0.141	0.506
19	转矩常数	Torque constant	mNm/A	4.62	10.84	22.49
20	转速常数	Speed constant	rpm/V	2033.3	866.7	416.7
21	转数/转矩常数	Speed/torque constant	rpm/mNm	595.7	348.2	283.2
22	机械时间常数	Mechanical time constant	ms	10.4	6.1	5.0
23	转子惯量	Rotor inertia	gcm ²	1.67	1.67	1.69
24	极对数	Number of pole pairs		1		
25	相数	Number of phase		5		
26	重量	Weight of motor	g	42		
27	噪音	Typical noise level	dB	≤45		

电机端子定义 Motor terminal definition

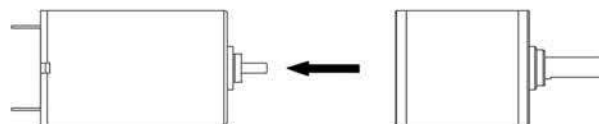
+ Vcc
- GND

技术说明 Technical specifications

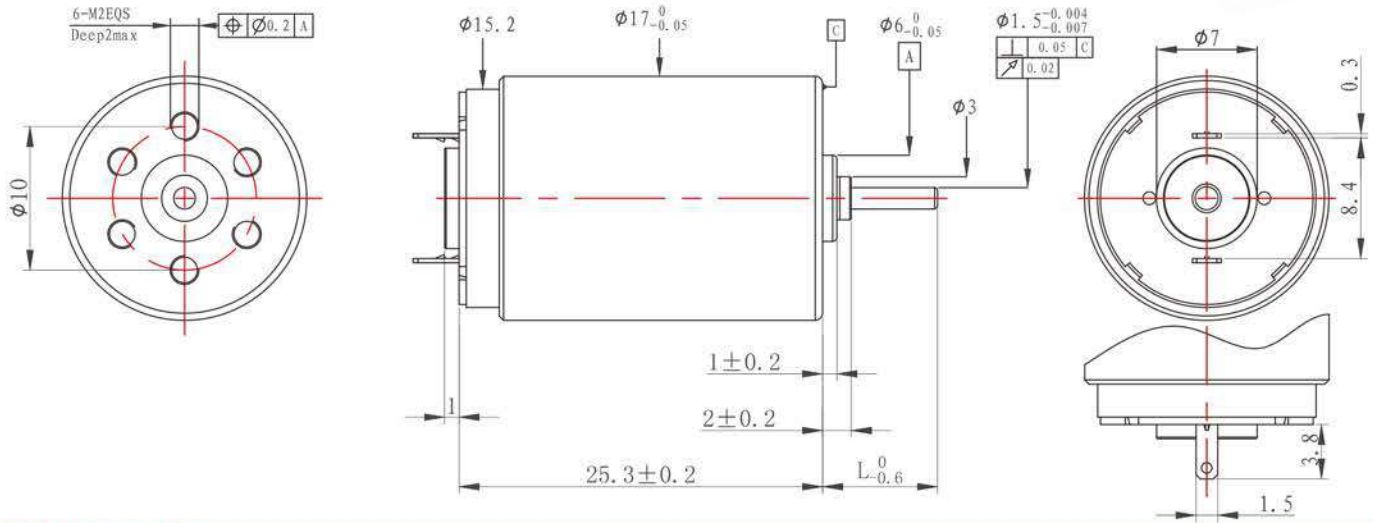
轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.5N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 5N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts:
· 行星轮减速箱 Planetary gearbox



Φ17*L25mm, 碳刷直流电机, 1.5-3W Φ17*L25mm, Graphite Brushed DC Motor, 1.5-3W



电机参数 Motor Data				
电机型号 Motor Model		1725	1725	1725
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	6
2	额定转速	Nominal speed	rpm	8140
3	额定电流	Nominal current	A	0.79
4	额定转矩	Nominal torque	mNm	3.55
空载点 Free Load				
5	空载转速	No-load speed	rpm	11000
6	空载电流	No-load current	mA	90
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	67.4
8	转速	Speed	rpm	9350
9	电流	Current	A	0.50
10	转矩	Torque	mNm	2.05
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	3.93
12	转速	Speed	rpm	5500
13	电流	Current	A	1.45
14	转矩	Torque	mNm	6.83
堵转点 At Stall				
15	堵转电流	Stall current	A	2.80
16	堵转转矩	Stall torque	mNm	13.66
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	2.14
18	电机感抗	Terminal inductance	mH	0.08
19	转矩常数	Torque constant	mNm/A	5.04
20	转速常数	Speed constant	rpm/V	1833.3
21	转数/转矩常数	Speed/torque constant	rpm/mNm	805.2
22	机械时间常数	Mechanical time constant	ms	7.6
23	转子惯量	Rotor inertia	gcm ²	0.90
24	极对数	Number of pole pairs		1
25	相数	Number of phase		5
26	重量	Weight of motor	g	28
27	噪音	Typical noise level	dB	≤40

电机端子定义 Motor terminal definition

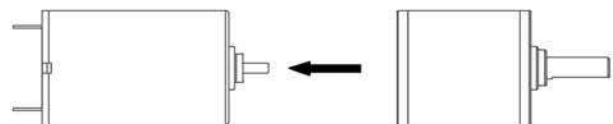
+ Vcc
- GND

技术说明 Technical specifications

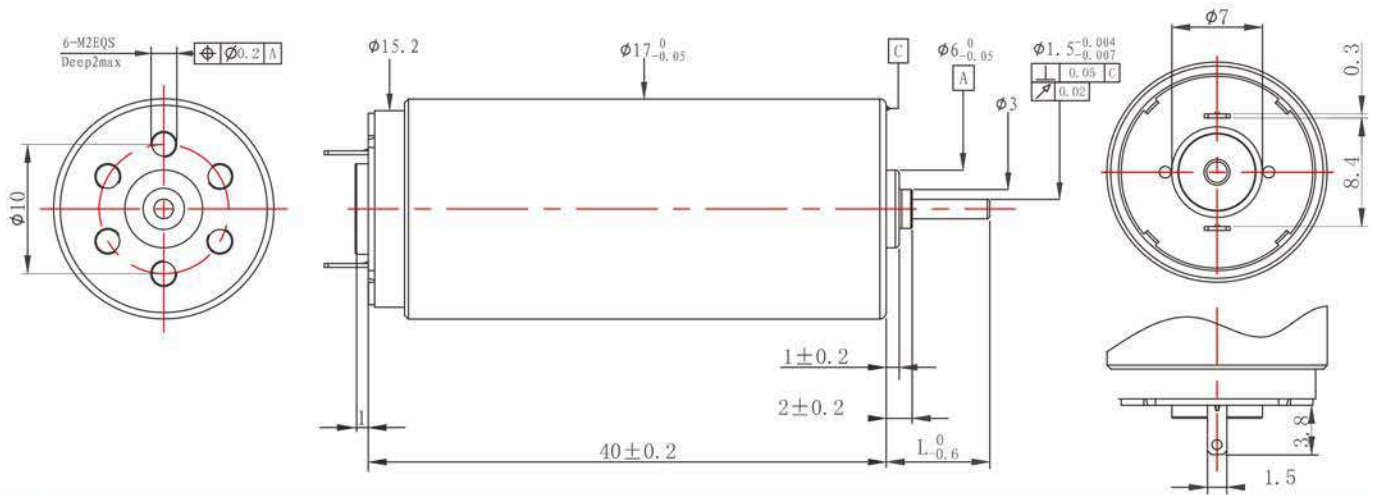
轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.5N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 5N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90%(25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts:
· 行星轮减速箱 Planetary gearbox



Φ17*L40mm, 碳刷直流电机, 10-30W Φ17*L40mm, Graphite Brushed DC Motor, 10-30W



电机参数 Motor Data				
电机型号 Motor Model		1740	1740	1740
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	6
2	额定转速	Nominal speed	rpm	11408
3	额定电流	Nominal current	A	1.54
4	额定转矩	Nominal torque	mNm	6.0
空载点 Free Load				
5	空载转速	No-load speed	rpm	13500
6	空载电流	No-load current	mA	120
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	78.6
8	转速	Speed	rpm	12218
9	电流	Current	A	0.99
10	转矩	Torque	mNm	3.7
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	13.59
12	转速	Speed	rpm	6750
13	电流	Current	A	4.71
14	转矩	Torque	mNm	19.2
堵转点 At Stall				
15	堵转电流	Stall current	A	9.30
16	堵转转矩	Stall torque	mNm	38.5
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	0.65
18	电机感抗	Terminal inductance	mH	0.028
19	转矩常数	Torque constant	mNm/A	4.19
20	转速常数	Speed constant	rpm/V	2250.0
21	转速/转矩常数	Speed/torque constant	rpm/mNm	351.0
22	机械时间常数	Mechanical time constant	ms	6.2
23	转子惯量	Rotor inertia	gcm ²	1.69
24	极对数	Number of pole pairs		1
25	相数	Number of phase		5
26	重量	Weight of motor	g	48
27	噪音	Typical noise level	dB	≤42

电机端子定义 Motor terminal definition

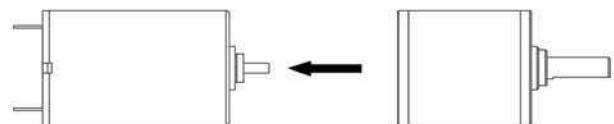
+ Vcc
- GND

技术说明 Technical specifications

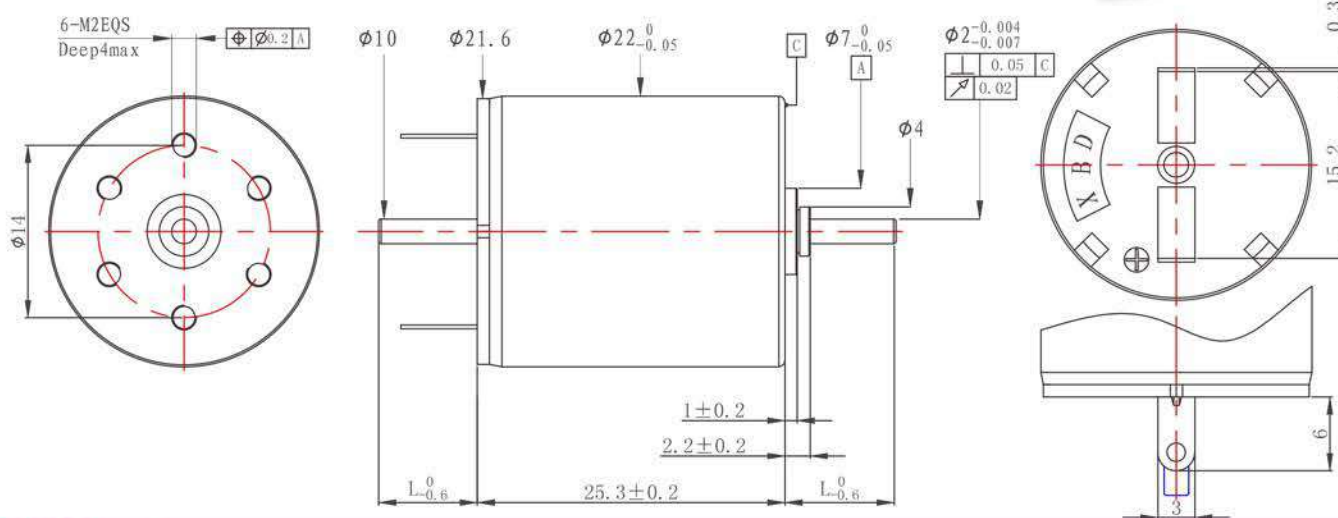
轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.8N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 8N
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts:
· 行星轮减速箱 Planetary gearbox



Φ22*L25mm, 碳刷直流电机, 4-10W Φ22*L25mm, Graphite Brushed DC Motor, 4-10W



电机参数 Motor Data							
电机型号 Motor Model				2225	2225	2225	2225
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	6	12	18	24
2	额定转速	Nominal speed	rpm	11340	13272	9676	9960
3	额定电流	Nominal current	A	0.98	0.81	0.50	0.34
4	额定转矩	Nominal torque	mNm	3.67	5.13	6.24	5.56
空载点 Free Load							
5	空载转速	No-load speed	rpm	13500	15800	11800	12000
6	空载电流	No-load current	mA	100	90	60	45
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	75.1	74.0	71.4	70.9
8	转速	Speed	rpm	11880	13825	10207	10380
9	电流	Current	A	0.760	0.654	0.389	0.282
10	转矩	Torque	mNm	2.8	4.0	4.7	4.4
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	8.1	13.3	10.7	10.3
12	转速	Speed	rpm	6750	7900	5900	6000
13	电流	Current	A	2.9	2.3	1.3	0.9
14	转矩	Torque	mNm	11.5	16.0	17.3	16.3
堵转点 At Stall							
15	堵转电流	Stall current	A	5.60	4.60	2.50	1.80
16	堵转转矩	Stall torque	mNm	22.9	32.1	34.7	32.7
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	1.07	2.61	7.20	13.33
18	电机感抗	Terminal inductance	mH	0.025	0.090	0.265	0.550
19	转矩常数	Torque constant	mNm/A	4.17	7.11	14.22	18.62
20	转速常数	Speed constant	rpm/V	2250.0	1316.7	655.6	500.0
21	转数/转矩常数	Speed/torque constant	rpm/mNm	588.9	492.7	340.2	367.2
22	机械时间常数	Mechanical time constant	ms	18.07	15.12	10.44	11.27
23	转子惯量	Rotor inertia	gcm ²	2.93	2.93	2.97	2.93
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	48			
27	噪音	Typical noise level	dB	≤42			

电机端子定义 Motor terminal definition

+ Vcc
- GND

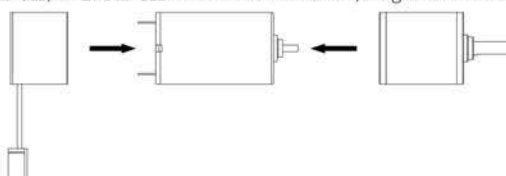
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 15N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

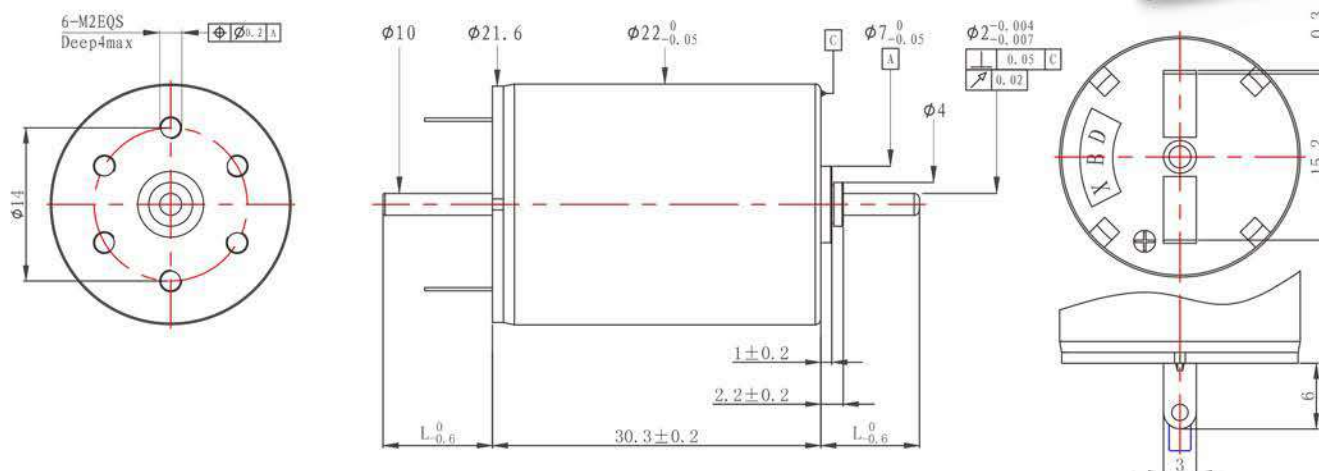
组合体系 System

适配部件 Optional Parts:

- 行星轮减速箱 Planetary gearbox
- 光电式编码器/磁电式编码器 Photoelectric encoder/magnetoelectric encoder



Φ22*L30mm, 碳刷直流电机, 3-10W Φ22*L30mm, Graphite Brushed DC Motor, 3-10W



电机参数 Motor Data				
电机型号 Motor Model		2230	2230	2230
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	6
2	额定转速	Nominal speed	rpm	9492
3	额定电流	Nominal current	A	0.88
4	额定转矩	Nominal torque	mNm	3.91
空载点 Free Load				
5	空载转速	No-load speed	rpm	11300
6	空载电流	No-load current	mA	90
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	74.97
8	转速	Speed	rpm	9944
9	电流	Current	A	0.679
10	转矩	Torque	mNm	2.93
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	7.23
12	转速	Speed	rpm	5650
13	电流	Current	A	2.55
14	转矩	Torque	mNm	12.22
堵转点 At Stall				
15	堵转电流	Stall current	A	5.00
16	堵转转矩	Stall torque	mNm	24.45
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	1.20
18	电机感抗	Terminal inductance	mH	0.190
19	转矩常数	Torque constant	mNm/A	4.98
20	转速常数	Speed constant	rpm/V	1883.3
21	转速/转矩常数	Speed/torque constant	rpm/mNm	462.2
22	机械时间常数	Mechanical time constant	ms	13.05
23	转子惯量	Rotor inertia	gcm ²	2.70
24	极对数	Number of pole pairs		1
25	相数	Number of phase		5
26	重量	Weight of motor	g	54
27	噪音	Typical noise level	dB	≤42

电机端子定义 Motor terminal definition

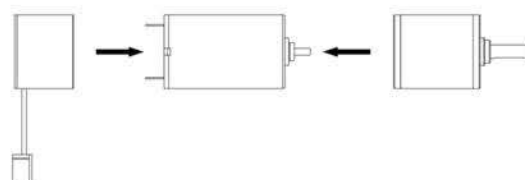
+ Vcc
- GND

技术说明 Technical specifications

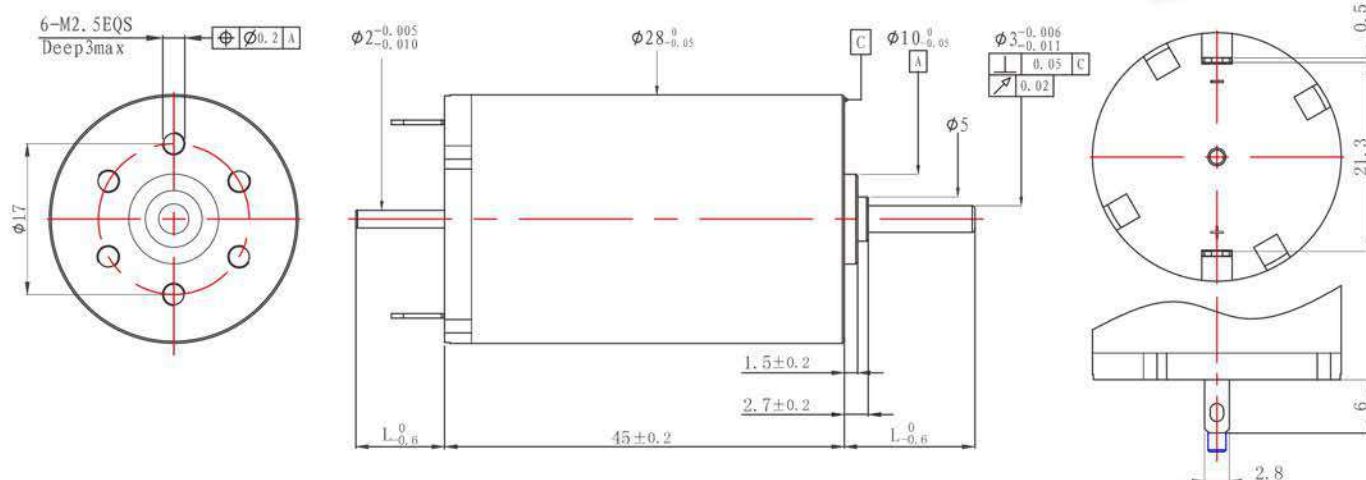
轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 0.8N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 8N
滑动轴承径向间隙 Radial play: ≤0.03mm
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts:
· 行星轮减速箱 Planetary gearbox
· 光电编码器/磁电式编码器 Photoelectric encoder/magnetolectric encoder



Φ28*L45mm, 碳刷直流电机, 9-35W Φ28*L45mm, Graphite Brushed DC Motor, 9-35W



电机参数 Motor Data							
电机型号 Motor Model				2845	2845	2845	2845
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	6	12	24	48
2	额定转速	Nominal speed	rpm	6942	7476	7565	7298
3	额定电流	Nominal current	A	1.89	1.29	0.74	0.37
4	额定转矩	Nominal torque	mNm	12.69	15.85	17.65	17.90
空载点 Free Load							
5	空载转速	No-load speed	rpm	7800	8400	8500	8200
6	空载电流	No-load current	mA	150	120	75	45
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	81.6	80.0	79.1	77.0
8	转速	Speed	rpm	7098	7602	7650	7298
9	电流	Current	A	1.577	1.135	0.678	0.370
10	转矩	Torque	mNm	10.38	13.69	16.05	17.90
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	23.55	31.68	35.71	34.93
12	转速	Speed	rpm	3900	4200	4250	4100
13	电流	Current	A	8.075	5.460	3.088	1.523
14	转矩	Torque	mNm	57.668	72.038	80.227	81.351
堵转点 At Stall							
15	堵转电流	Stall current	A	16.00	10.80	6.10	3.00
16	堵转转矩	Stall torque	mNm	115.3	144.1	160.5	162.7
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	0.38	1.11	3.93	16.00
18	电机感抗	Terminal inductance	mH	0.030	0.120	0.420	1.800
19	转矩常数	Torque constant	mNm/A	7.28	13.49	26.63	55.06
20	转速常数	Speed constant	rpm/V	1300.0	700.0	354.2	170.8
21	转数/转矩常数	Speed/torque constant	rpm/mNm	67.6	58.3	53.0	50.4
22	机械时间常数	Mechanical time constant	ms	7.53	7.00	6.49	6.73
23	转子惯量	Rotor inertia	gcm ²	10.63	11.47	11.69	12.75
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	145			
27	噪音	Typical noise level	dB	≤40			

电机端子定义 Motor terminal definition

+ Vcc
- GND

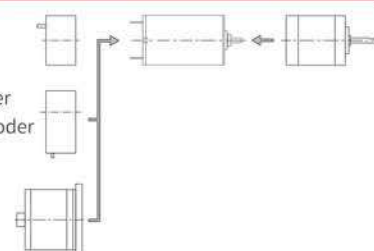
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

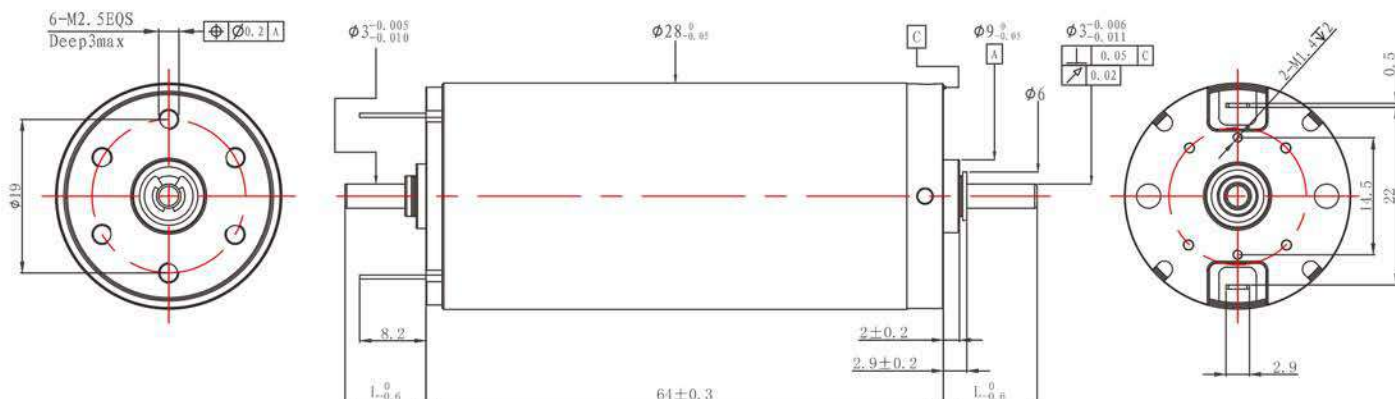
适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetoelectric encoder
- 刹车 Brake



Φ28*L64mm, 碳刷直流电机, 13-55W

Φ28*L64mm, Graphite Brushed DC Motor, 13-55W



电机参数 Motor Data

电机型号 Motor Model				2864	2864	2864
额定电压参数值 Value at Rated voltage						
额定点 At Nominal						
1	额定电压	Nominal voltage	V/DC	6	12	24
2	额定转速	Nominal speed	rpm	6675	6497	6497
3	额定电流	Nominal current	A	2.92	1.95	1.11
4	额定转矩	Nominal torque	mNm	19.63	26.46	32.71
空载点 Free Load						
5	空载转速	No-load speed	rpm	7500	7300	7300
6	空载电流	No-load current	mA	320	240	64
最大效率点 At Max. Efficiency						
7	最大效率	Max. efficiency	%	78.2	76.9	84.3
8	转速	Speed	rpm	6713	6497	6753
9	电流	Current	A	2.806	1.952	0.779
10	转矩	Torque	mNm	18.74	26.46	22.30
最大输出功率点 At Max. Output power						
11	最大功率	Max. output power	W	35.05	45.97	56.83
12	转速	Speed	rpm	3750	3650	3650
13	电流	Current	A	12.16	8.02	4.83
14	转矩	Torque	mNm	89.2	120.3	148.7
堵转点 At Stall						
15	堵转电流	Stall current	A	24.00	15.80	9.60
16	堵转转矩	Stall torque	mNm	178.5	240.5	297.4
电机常数 Motor Constants						
17	电机阻抗	Terminal resistance	Ω	0.25	0.76	2.50
18	电机感抗	Terminal inductance	mH	0.030	0.090	0.280
19	转矩常数	Torque constant	mNm/A	7.54	15.46	31.19
20	转速常数	Speed constant	rpm/V	1250.0	608.3	304.2
21	转数/转矩常数	Speed/torque constant	rpm/mNm	42.0	30.3	24.5
22	机械时间常数	Mechanical time constant	ms	7.02	6.56	4.97
23	转子惯量	Rotor inertia	gcm ²	15.94	20.63	19.32
24	极对数	Number of pole pairs		1		
25	相数	Number of phase		7		
26	重量	Weight of motor	g	200		
27	噪音	Typical noise level	dB	≤45		

电机端子定义 Motor terminal definition

+ Vcc
- GND

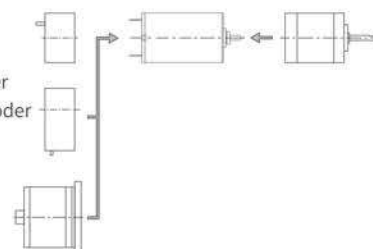
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 2N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 20N
滚动轴承径向间隙 Radial play: ≤0.015mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

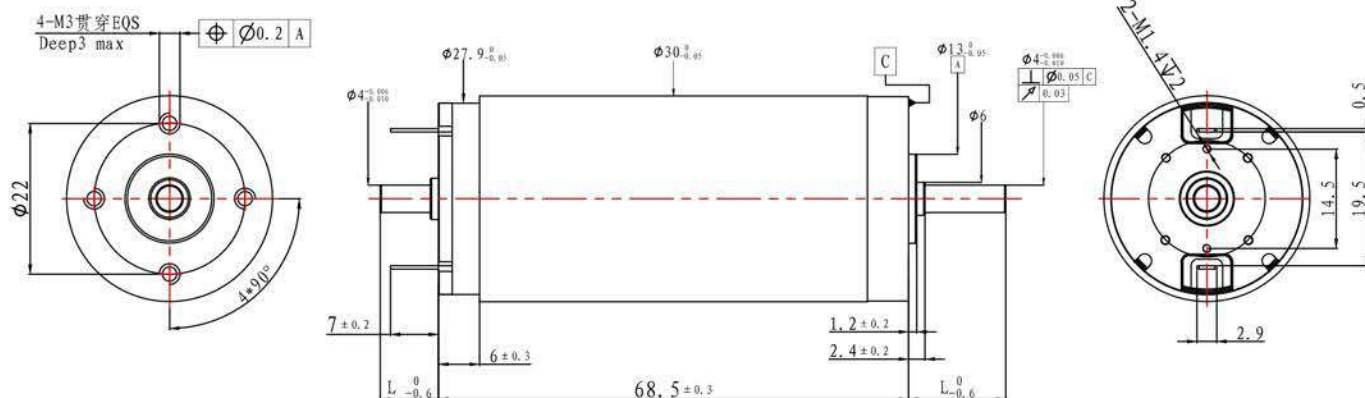
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetolectric encoder
- 刹车 Brake



Φ30*L68mm, 碳刷直流电机, 80-210W Φ30*L68mm, Graphite Brushed DC Motor, 80-210W



电机参数 Motor Data

电机型号 Motor Model				3068	3068	3068	3068
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	12	18	24	48
2	额定转速	Nominal speed	rpm	7667	7820	7560	7920
3	额定电流	Nominal current	A	4.10	3.90	3.54	1.87
4	额定转矩	Nominal torque	mNm	52.04	73.64	92.60	92.93
空载点 Free Load							
5	空载转速	No-load speed	rpm	8200	8500	8400	8800
6	空载电流	No-load current	mA	353	240	130	80
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	85.0	86.1	88.0	87.1
8	转速	Speed	rpm	7626	7948	7896	8228
9	电流	Current	A	4.388	3.214	2.174	1.245
10	转矩	Torque	mNm	56.0	59.8	55.6	60.4
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	171.9	204.8	203.6	214.1
12	转速	Speed	rpm	4100	4250	4200	4400
13	电流	Current	A	29.2	23.1	17.2	9.0
14	转矩	Torque	mNm	400.3	460.3	463.0	464.6
堵转点 At Stall							
15	堵转电流	Stall current	A	58.00	46.00	34.20	18.00
16	堵转转矩	Stall torque	mNm	800.7	920.5	926.0	929.3
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	0.21	0.39	0.70	2.67
18	电机感抗	Terminal inductance	mH	0.036	0.071	0.126	0.506
19	转矩常数	Torque constant	mNm/A	13.89	20.12	27.18	51.86
20	转速常数	Speed constant	rpm/V	683.3	472.2	350.0	183.3
21	转数/转矩常数	Speed/torque constant	rpm/mNm	10.2	9.2	9.1	9.5
22	机械时间常数	Mechanical time constant	ms	3.75	3.38	3.32	3.47
23	转子惯量	Rotor inertia	gcm ²	35.00	35.00	35.00	35.00
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		13			
26	重量	Weight of motor	g	265			
27	噪音	Typical noise level	dB	≤55			

电机端子定义 Motor terminal definition

+ Vcc
- GND

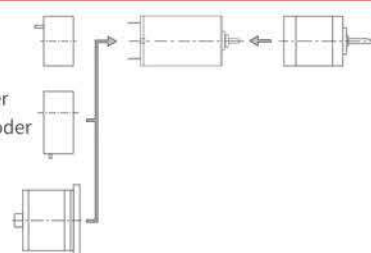
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 7N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 65N
· 最大允许安装力 (静态) Max press fit force (static): 10N
滚动轴承径向间隙 Radial play: ≤0.02mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

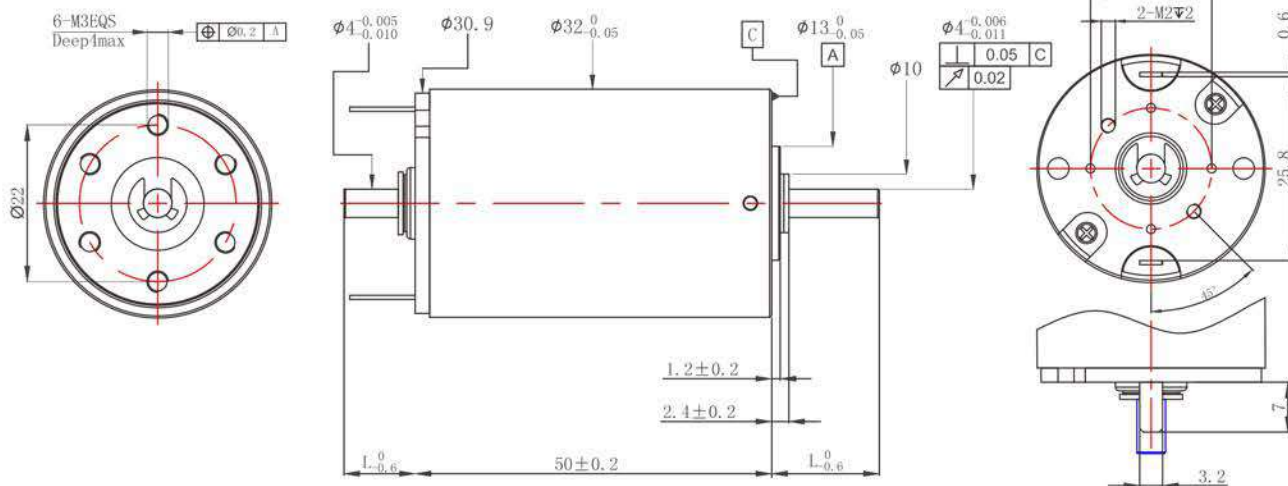
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetoelectric encoder
- 刹车 Brake



Φ32*L50mm, 碳刷直流电机, 10-25W Φ32*L50mm, Graphite Brushed DC Motor, 10-25W



电机参数 Motor Data				
电机型号 Motor Model		3250	3250	3250
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	12
2	额定转速	Nominal speed	rpm	4984
3	额定电流	Nominal current	A	1.10
4	额定转矩	Nominal torque	mNm	19.72
空载点 Free Load				
5	空载转速	No-load speed	rpm	5600
6	空载电流	No-load current	mA	120
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	78.2
8	转速	Speed	rpm	5012
9	电流	Current	A	1.052
10	转矩	Torque	mNm	18.8
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	26.3
12	转速	Speed	rpm	2800
13	电流	Current	A	4.6
14	转矩	Torque	mNm	89.6
堵转点 At Stall				
15	堵转电流	Stall current	A	9.00
16	堵转转矩	Stall torque	mNm	179.3
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	1.33
18	电机感抗	Terminal inductance	mH	0.120
19	转矩常数	Torque constant	mNm/A	20.19
20	转速常数	Speed constant	rpm/V	466.7
21	转数/转矩常数	Speed/torque constant	rpm/mNm	31.2
22	机械时间常数	Mechanical time constant	ms	9.05
23	转子惯量	Rotor inertia	gcm ²	27.68
24	极对数	Number of pole pairs		1
25	相数	Number of phase		7
26	重量	Weight of motor	g	225
27	噪音	Typical noise level	dB	≤40

电机端子定义 Motor terminal definition

+ Vcc
- GND

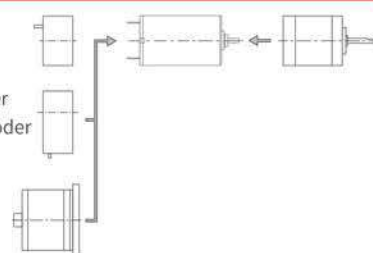
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向(动态) Max axial load (dynamic): 8N
· 径向(法兰外5mm) Max radial load (5mm from flange): 16N
· 最大允许安装力(静态) Max press fit force (static): 98N
滚动轴承径向间隙 Radial play: ≤0.14mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90%(25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

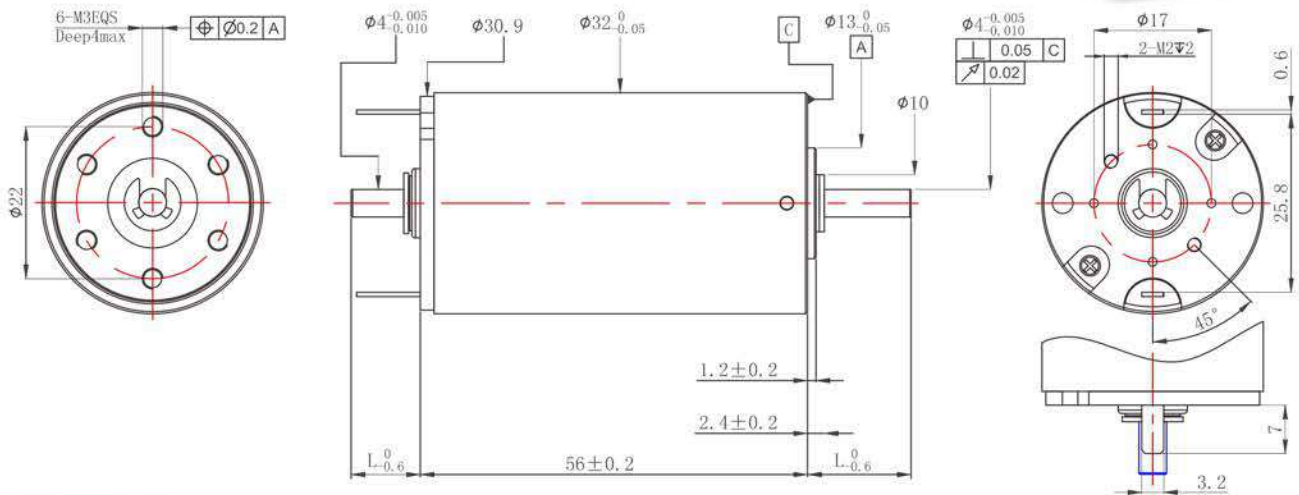
适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetolectric encoder
- 刹车 Brake



Φ32*L56mm, 碳刷直流电机, 30-90W

Φ32*L56mm, Graphite Brushed DC Motor, 30-90W



电机参数 Motor Data				
电机型号 Motor Model		3256	3256	3256
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	12
2	额定转速	Nominal speed	rpm	5696
3	额定电流	Nominal current	A	3.07
4	额定转矩	Nominal torque	mNm	50.27
空载点 Free Load				
5	空载转速	No-load speed	rpm	6400
6	空载电流	No-load current	mA	240
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	81.7
8	转速	Speed	rpm	5824
9	电流	Current	A	2.558
10	转矩	Torque	mNm	41.1
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	76.6
12	转速	Speed	rpm	3200
13	电流	Current	A	13.1
14	转矩	Torque	mNm	228.5
堵转点 At Stall				
15	堵转电流	Stall current	A	26.00
16	堵转转矩	Stall torque	mNm	457.0
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	0.46
18	电机感抗	Terminal inductance	mH	0.075
19	转矩常数	Torque constant	mNm/A	17.74
20	转速常数	Speed constant	rpm/V	533.3
21	转数/转矩常数	Speed/torque constant	rpm/mNm	14.0
22	机械时间常数	Mechanical time constant	ms	4.06
23	转子惯量	Rotor inertia	gcm ²	27.68
24	极对数	Number of pole pairs		1
25	相数	Number of phase		7
26	重量	Weight of motor	g	225
27	噪音	Typical noise level	dB	≤45

电机端子定义 Motor terminal definition

+ Vcc
- GND

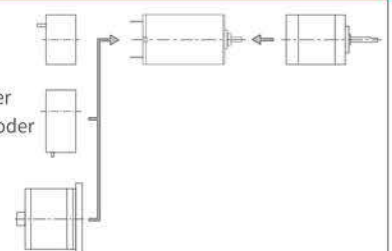
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
 滑动轴承最大载荷 sintered metal bearing load max:
 · 轴向 (动态) Max axial load (dynamic): 8N
 · 径向 (法兰外5mm) Max radial load (5mm from flange): 16N
 · 最大允许安装力 (静态) Max press fit force (static): 98N
 滚动轴承径向间隙 Radial play: ≤0.14mm
 环境温度范围 Ambient temperature range: -20~+80°C
 相对湿度范围 Relative humidity range: <90% (25°C)
 最高转子温度 Highest rotor temperature: 125°C
 表中数据均为标称值 Values listed in the table are nominal

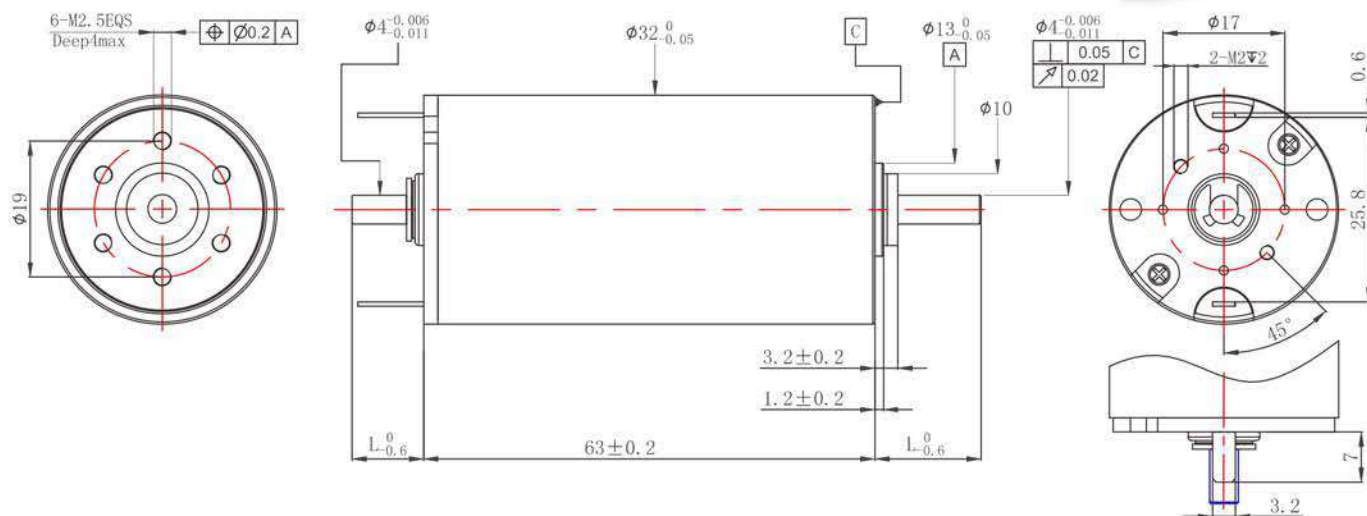
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetoelectric encoder
- 刹车 Brake



Φ32*L63mm, 碳刷直流电机, 37-105W Φ32*L63mm, Graphite Brushed DC Motor, 37-105W



电机参数 Motor Data

电机型号 Motor Model				3263	3263	3263
额定电压参数值 Value at Rated voltage						
额定点 At Nominal						
1	额定电压	Nominal voltage	V/DC	12	24	48
2	额定转速	Nominal speed rpm	rpm	6942	6764	5696
3	额定电流	Nominal current	A	3.79	2.09	0.92
4	额定转矩	Nominal torque	mNm	50.70	58.91	62.24
空载点 Free Load						
5	空载转速	No-load speed	rpm	7800	7600	6400
6	空载电流	No-load current	mA	300	120	50
最大效率点 At Max. Efficiency						
7	最大效率	Max. efficiency	%	81.6	84.3	84.8
8	转速	Speed	rpm	7098	7030	5920
9	电流	Current	A	3.150	1.461	0.646
10	转矩	Torque	mNm	41.5	40.2	42.4
最大输出功率点 At Max. Output power						
11	最大功率	Max. output power	W	94.2	106.6	94.8
12	转速	Speed	rpm	3900	3800	3200
13	电流	Current	A	16.2	9.1	4.0
14	转矩	Torque	mNm	230.7	267.8	282.9
堵转点 At Stall						
15	堵转电流	Stall current	A	32.00	18.00	8.00
16	堵转转矩	Stall torque	mNm	461.3	535.6	565.8
电机常数 Motor Constants						
17	电机阻抗	Terminal resistance	Ω	0.38	1.33	6.00
18	电机感抗	Terminal inductance	mH	0.192	0.750	2.580
19	转矩常数	Torque constant	mNm/A	14.55	29.95	71.17
20	转速常数	Speed constant	rpm/V	650.0	316.7	11.3
21	转数/转矩常数	Speed/torque constant	rpm/mNm	16.9	14.2	584.2
22	机械时间常数	Mechanical time constant	ms	5.24	4.40	3.51
23	转子惯量	Rotor inertia	gcm ²	30.10	29.80	29.60
24	极对数	Number of pole pairs		1		
25	相数	Number of phase		7		
26	重量	Weight of motor	g	280		
27	噪音	Typical noise level	dB	≤43		

电机端子定义 Motor terminal definition

+ Vcc
- GND

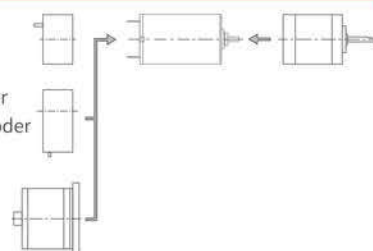
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向(动态) Max axial load (dynamic): 8N
· 径向(法兰外5mm) Max radial load (5mm from flange): 16N
· 最大允许安装力(静态) Max press fit force (static): 98N
滚动轴承径向间隙 Radial play: ≤0.14mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90%(25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

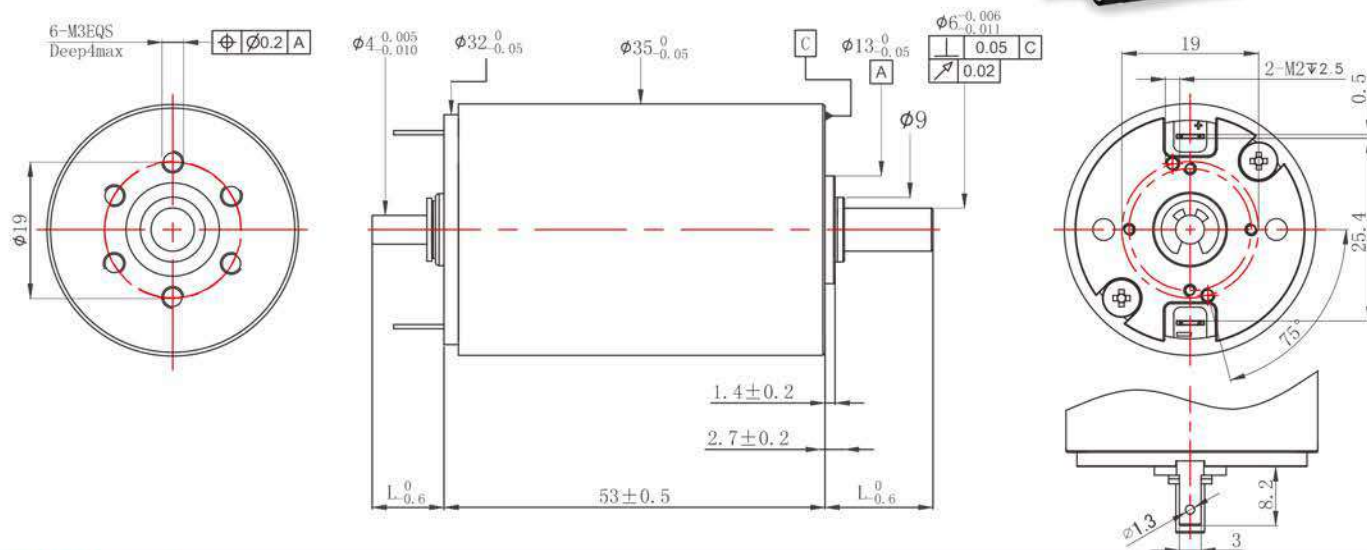
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetolectric encoder
- 刹车 Brake



Φ35*L53mm, 碳刷直流电机, 30-70W Φ35*L53mm, Graphite Brushed DC Motor, 30-70W



电机参数 Motor Data				
电机型号 Motor Model				
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	12
2	额定转速	Nominal speed	rpm	10736
3	额定电流	Nominal current	A	3.55
4	额定转矩	Nominal torque	mNm	29.65
空载点 Free Load				
5	空载转速	No-load speed	rpm	12200
6	空载电流	No-load current	mA	350
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	78.5
8	转速	Speed	rpm	10980
9	电流	Current	A	3.015
10	转矩	Torque	mNm	24.7
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	78.9
12	转速	Speed	rpm	6100
13	电流	Current	A	13.7
14	转矩	Torque	mNm	123.5
堵转点 At Stall				
15	堵转电流	Stall current	A	27.00
16	堵转转矩	Stall torque	mNm	247.1
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	0.44
18	电机感抗	Terminal inductance	mH	0.084
19	转矩常数	Torque constant	mNm/A	9.27
20	转速常数	Speed constant	rpm/V	1016.7
21	转数/转矩常数	Speed/torque constant	rpm/mNm	49.4
22	机械时间常数	Mechanical time constant	ms	16.57
23	转子惯量	Rotor inertia	gcm ²	32.04
24	极对数	Number of pole pairs		1
25	相数	Number of phase		13
26	重量	Weight of motor	g	252
27	噪音	Typical noise level	dB	≤48

电机端子定义 Motor terminal definition

+ Vcc
- GND

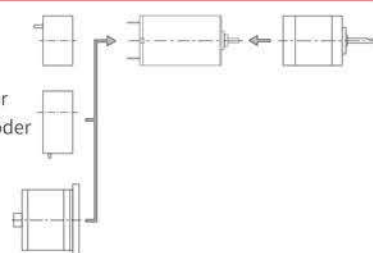
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 23N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 75N
· 最大允许安装力 (静态) Max press fit force (static): 106N
滚动轴承径向间隙 Radial play: ≤0.14mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

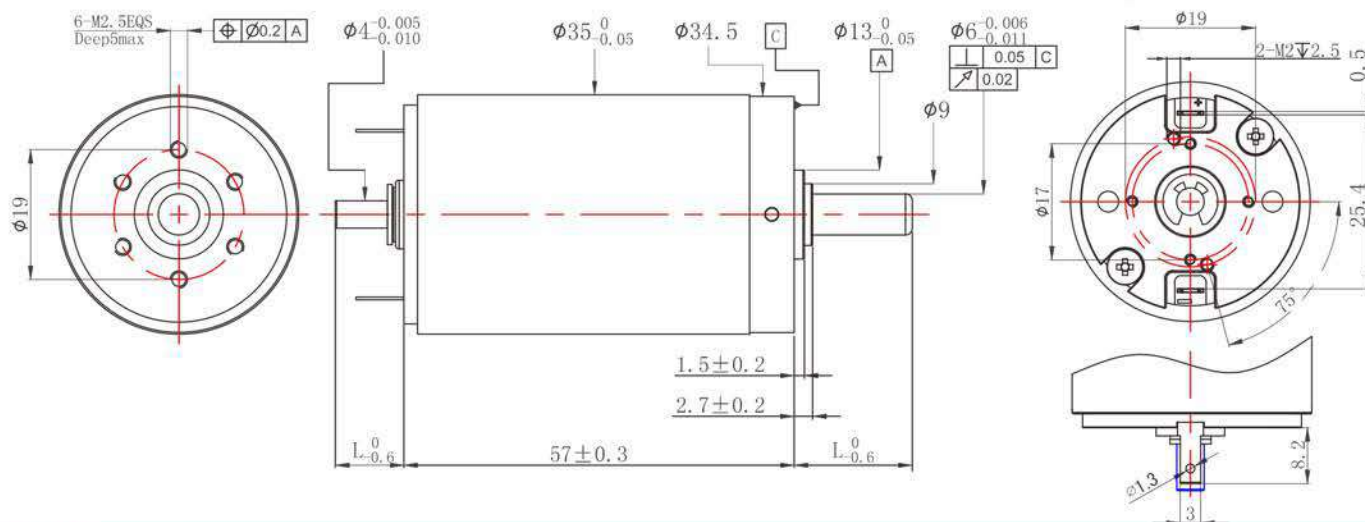
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetolectric encoder
- 刹车 Brake



Φ35*L57mm, 碳刷直流电机, 10-105W Φ35*L57mm, Graphite Brushed DC Motor, 10-105W



电机参数 Motor Data				
电机型号 Motor Model				
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	12
2	额定转速	Nominal speed	rpm	5558
3	额定电流	Nominal current	A	1.52
4	额定转矩	Nominal torque	mNm	23.78
空载点 Free Load				
5	空载转速	No-load speed	rpm	6500
6	空载电流	No-load current	mA	150
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	76.6
8	转速	Speed	rpm	5785
9	电流	Current	A	1.190
10	转矩	Torque	mNm	18.0
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	27.9
12	转速	Speed	rpm	3250
13	电流	Current	A	4.9
14	转矩	Torque	mNm	82.0
堵转点 At Stall				
15	堵转电流	Stall current	A	9.60
16	堵转转矩	Stall torque	mNm	164.0
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	1.25
18	电机感抗	Terminal inductance	mH	0.170
19	转矩常数	Torque constant	mNm/A	17.35
20	转速常数	Speed constant	rpm/V	541.7
21	转速/转矩常数	Speed/torque constant	rpm/mNm	39.6
22	机械时间常数	Mechanical time constant	ms	16.16
23	转子惯量	Rotor inertia	gcm ²	38.93
24	极对数	Number of pole pairs		1
25	相数	Number of phase		7
26	重量	Weight of motor	g	278
27	噪音	Typical noise level	dB	≤43

电机端子定义 Motor terminal definition

+ Vcc
- GND

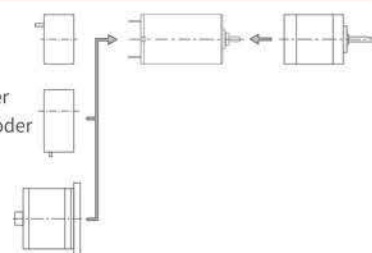
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 23N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 75N
· 最大允许安装力 (静态) Max press fit force (static): 106N
滚动轴承径向间隙 Radial play: ≤0.14mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

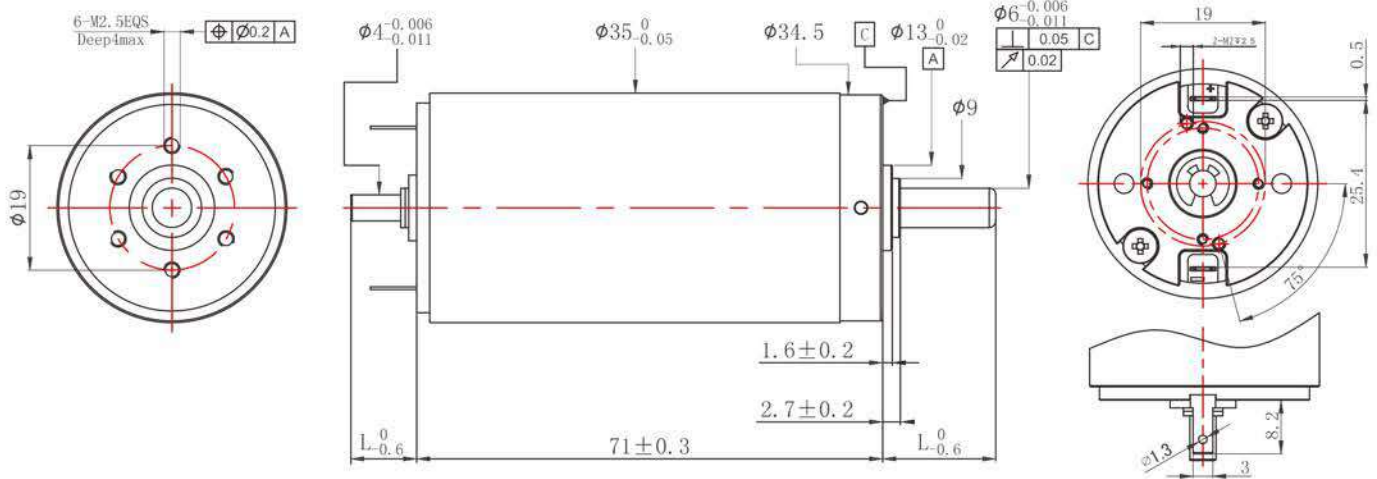
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetolectric encoder
- 刹车 Brake



Φ35*L71mm, 碳刷直流电机, 52-280W Φ35*L71mm, Graphite Brushed DC Motor, 52-280W



电机参数 Motor Data				
电机型号 Motor Model		3571	3571	3571
额定电压参数值 Value at Rated voltage				
额定点 At Nominal				
1	额定电压	Nominal voltage	V/DC	12
2	额定转速	Nominal speed	rpm	6697
3	额定电流	Nominal current	A	7.47
4	额定转矩	Nominal torque	mNm	110.98
空载点 Free Load				
5	空载转速	No-load speed	rpm	7400
6	空载电流	No-load current	mA	280
最大效率点 At Max. Efficiency				
7	最大效率	Max. efficiency	%	88.2
8	转速	Speed	rpm	6993
9	电流	Current	A	4.445
10	转矩	Torque	mNm	64.3
最大输出功率点 At Max. Output power				
11	最大功率	Max. output power	W	226.3
12	转速	Speed	rpm	3700
13	电流	Current	A	38.1
14	转矩	Torque	mNm	584.1
堵转点 At Stall				
15	堵转电流	Stall current	A	76.00
16	堵转转矩	Stall torque	mNm	1168.2
电机常数 Motor Constants				
17	电机阻抗	Terminal resistance	Ω	0.16
18	电机感抗	Terminal inductance	mH	0.050
19	转矩常数	Torque constant	mNm/A	15.43
20	转速常数	Speed constant	rpm/V	616.7
21	转数/转矩常数	Speed/torque constant	rpm/mNm	6.3
22	机械时间常数	Mechanical time constant	ms	5.31
23	转子惯量	Rotor inertia	gcm ²	79.98
24	极对数	Number of pole pairs		1
25	相数	Number of phase		13
26	重量	Weight of motor	g	360
27	噪音	Typical noise level	dB	≤45

电机端子定义 Motor terminal definition

+ Vcc
- GND

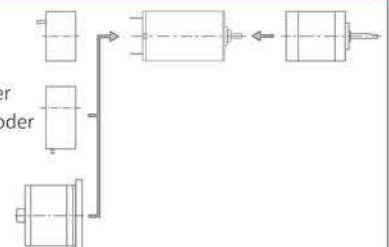
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 23N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 75N
· 最大允许安装力 (静态) Max press fit force (static): 106N
滚动轴承径向间隙 Radial play: ≤0.14mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

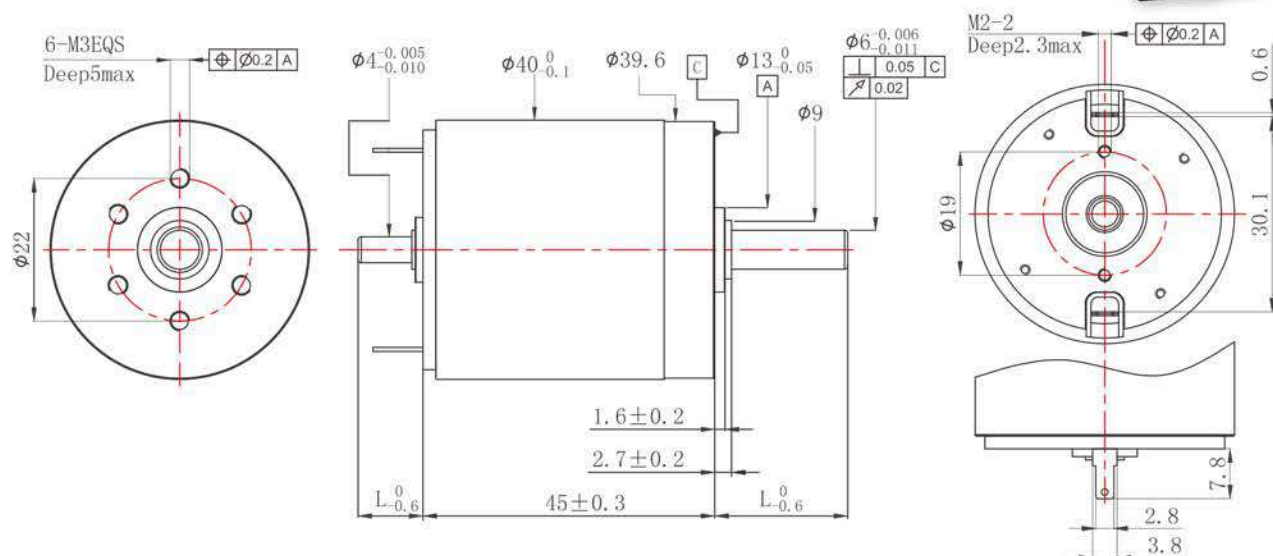
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetolectric encoder
- 刹车 Brake



Φ40*L45mm, 碳刷直流电机, 4-20W Φ40*L45mm, Graphite Brushed DC Motor, 4-20W



电机参数 Motor Data				4045	4045	4045	4045
电机型号 Motor Model				4045	4045	4045	4045
额定电压参数值 Value at Rated voltage							
额定点 At Nominal							
1	额定电压	Nominal voltage	V/DC	6	12	24	36
2	额定转速	Nominal speed	rpm	3400	5525	5270	4980
3	额定电流	Nominal current	A	0.83	1.23	0.58	0.49
4	额定转矩	Nominal torque	mNm	10.64	19.57	19.41	25.62
空载点 Free Load							
5	空载转速	No-load speed	rpm	4000	6500	6200	6000
6	空载电流	No-load current	mA	75	100	50	35
最大效率点 At Max. Efficiency							
7	最大效率	Max. efficiency	%	77.2	78.4	77.8	78.5
8	转速	Speed	rpm	3560	5818	5549	5400
9	电流	Current	A	0.628	0.888	0.423	0.302
10	转矩	Torque	mNm	7.8	13.7	13.6	15.1
最大输出功率点 At Max. Output power							
11	最大功率	Max. output power	W	7.4	22.2	21.0	23.7
12	转速	Speed	rpm	2000	3250	3100	3000
13	电流	Current	A	2.6	3.9	1.8	1.4
14	转矩	Torque	mNm	35.5	65.2	64.7	75.4
堵转点 At Stall							
15	堵转电流	Stall current	A	5.10	7.60	3.60	2.70
16	堵转转矩	Stall torque	mNm	70.9	130.5	129.4	150.7
电机常数 Motor Constants							
17	电机阻抗	Terminal resistance	Ω	1.18	1.58	6.67	13.33
18	电机感抗	Terminal inductance	mH	0.048	0.120	0.500	0.960
19	转矩常数	Torque constant	mNm/A	14.11	17.40	36.45	56.55
20	转速常数	Speed constant	rpm/V	666.7	541.7	258.3	166.7
21	转速/转矩常数	Speed/torque constant	rpm/mNm	56.4	49.8	47.9	39.8
22	机械时间常数	Mechanical time constant	ms	13.92	9.50	10.21	8.04
23	转子惯量	Rotor inertia	gcm ²	23.57	18.21	20.35	19.28
24	极对数	Number of pole pairs		1			
25	相数	Number of phase		5			
26	重量	Weight of motor	g	250			
27	噪音	Typical noise level	dB	≤38			

电机端子定义 Motor terminal definition

+ Vcc
- GND

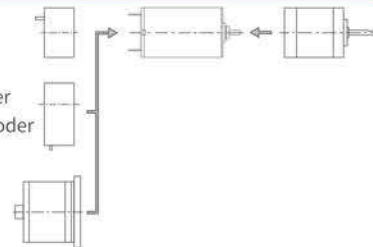
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
·轴向(动态) Max axial load (dynamic): 5.6N
·径向(法兰外5mm) Max radial load (5mm from flange): 28N
·最大允许安装力(静态) Max press fit force (static): 98N
滚动轴承径向间隙 Radial play: ≤0.14mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

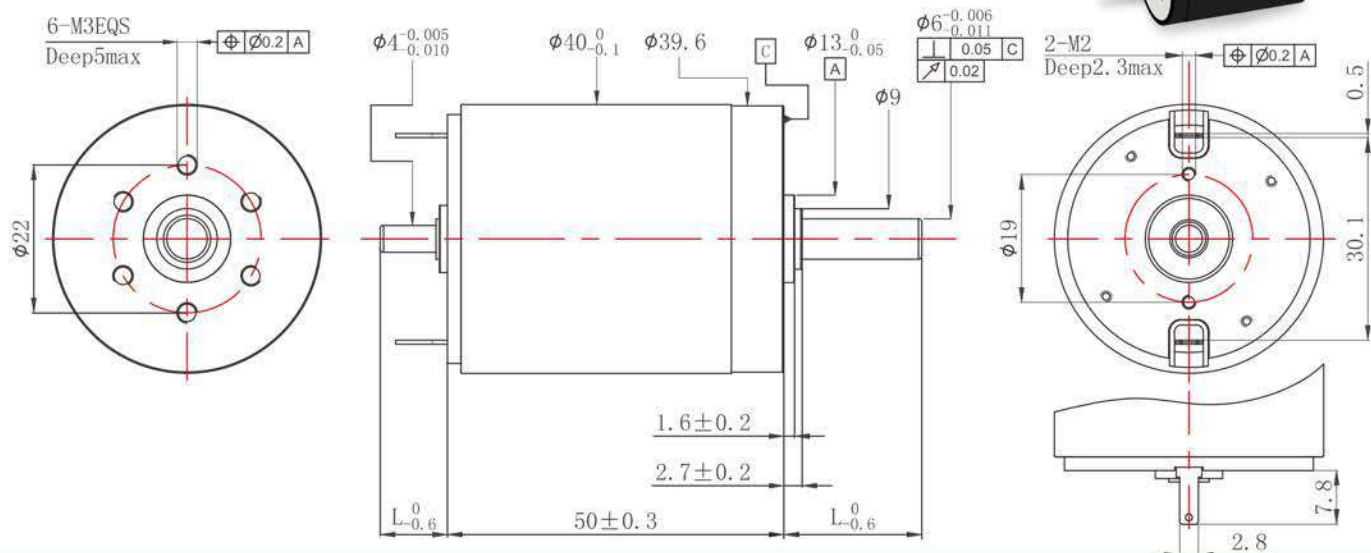
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetoelectric encoder
- 刹车 Brake



Φ40*L50mm, 碳刷直流电机, 40-100W Φ40*L50mm, Graphite Brushed DC Motor, 40-100W



电机参数 Motor Data					4050	4050	4050	4050	4050
电机型号 Motor Model					4050	4050	4050	4050	4050
额定电压参数值 Value at Rated voltage									
额定点 At Nominal									
1	额定电压	Nominal voltage	V/DC		12	15	24	36	48
2	额定转速	Nominal speed	rpm		6612	6612	6712	6640	8075
3	额定电流	Nominal current	A		4.13	3.29	2.81	1.75	1.61
4	额定转矩	Nominal torque	mNm		57.79	57.83	77.05	72.18	75.41
空载点 Free Load									
5	空载转速	No-load speed	rpm		7400	7600	7600	7850	8000
6	空载电流	No-load current	mA		250	260	200	150	60
最大效率点 At Max. Efficiency									
7	最大效率	Max. efficiency	%		82.2	82.6	82.8	85.1	88.0
8	转速	Speed	rpm		6954	6954	7183	7440	8455
9	电流	Current	A		2.788	2.223	1.710	0.756	1.191
10	转矩	Torque	mNm		37.8	37.8	45.2	29.7	55.3
最大输出功率点 At Max. Output power									
11	最大功率	Max. output power	W		88.4	88.5	109.2	88.9	125
12	转速	Speed	rpm		3800	3800	3925	4000	4750
13	电流	Current	A		15.1	12.1	9.3	5.0	5.0
14	转矩	Torque	mNm		222.3	222.4	265.7	212.3	251.4
堵转点 At Stall									
15	堵转电流	Stall current	A		30.00	24.00	18.50	10.00	10.50
16	堵转转矩	Stall torque	mNm		444.5	444.8	531.4	424.6	502.8
电机常数 Motor Constants									
17	电机阻抗	Terminal resistance	Ω		0.40	0.63	1.30	3.60	4.6
18	电机感抗	Terminal inductance	mH		0.043	0.087	0.180	0.320	0.510
19	转矩常数	Torque constant	mNm/A		14.95	18.69	28.96	42.71	48.1
20	转速常数	Speed constant	rpm/V		633.3	506.7	327.1	222.2	197.9
21	转数/转矩常数	Speed/torque constant	rpm/mNm		17.1	17.1	14.8	18.8	18.9
22	机械时间常数	Mechanical time constant	ms		6.00	6.56	5.75	6.92	6.94
23	转子惯量	Rotor inertia	gcm ²		33.54	36.66	37.14	35.08	35.08
24	极对数	Number of pole pairs			1				
25	相数	Number of phase			5				
26	重量	Weight of motor	g		290				
27	噪音	Typical noise level	dB		≤45				

电机端子定义 Motor terminal definition

+ Vcc
- GND

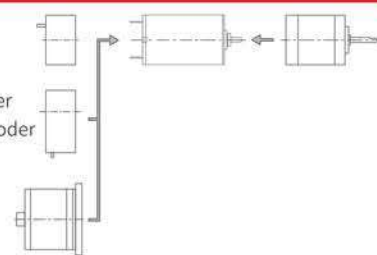
技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 23N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 75N
· 最大允许安装力 (静态) Max press fit force (static): 106N
滚动轴承径向间隙 Radial play: ≤0.14mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

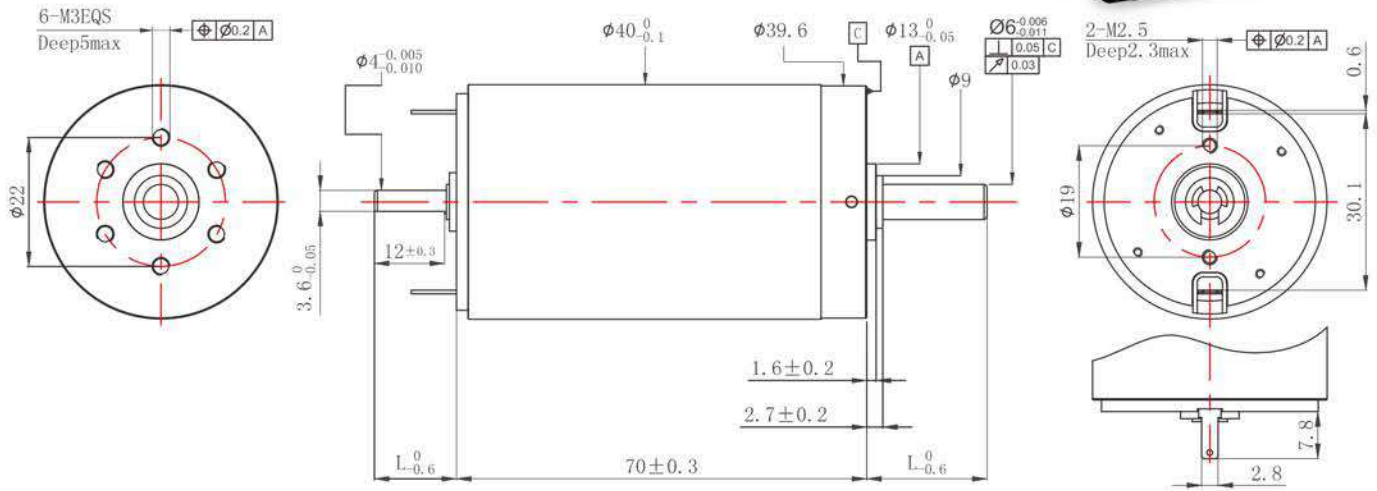
组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetoelectric encoder
- 刹车 Brake



Φ40*L70mm, 碳刷直流电机, 130-480W Φ40*L70mm, Graphite Brushed DC Motor, 130-480W



电机参数 Motor Data				
电机型号 Motor Model		4070	4070	4070
额定电压参数值 Value at Rated voltage		4070	4070	4070
额定点 At Nominal				
1	额定电压 Nominal voltage	V/DC	12	24
2	额定转速 Nominal speed	rpm	7585	7030
3	额定电流 Nominal current	A	12.09	6.20
4	额定转矩 Nominal torque	mNm	161.41	181.25
空载点 Free Load				
5	空载转速	rpm	8200	7600
6	空载电流	mA	500	180
最大效率点 At Max. Efficiency				
7	最大效率 Max. efficiency	%	89.0	90.8
8	转速 Speed	rpm	7749	7258
9	电流 Current	A	8.998	3.794
10	转矩 Torque	mNm	118.4	108.8
最大输出功率点 At Max. Output power				
11	最大功率 Max. output power	W	462.0	480.8
12	转速 Speed	rpm	4100	3800
13	电流 Current	A	77.8	40.3
14	转矩 Torque	mNm	1076.1	1208.3
堵转点 At Stall				
15	堵转电流 Stall current	A	155.00	80.50
16	堵转转矩 Stall torque	mNm	2152.1	2416.7
电机常数 Motor Constants				
17	电机阻抗 Terminal resistance	Ω	0.08	0.30
18	电机感抗 Terminal inductance	mH	0.016	0.083
19	转矩常数 Torque constant	mNm/A	13.93	30.09
20	转速常数 Speed constant	rpm/V	683.3	316.7
21	转数/转矩常数 Speed/torque constant	rpm/mNm	3.8	3.1
22	机械时间常数 Mechanical time constant	ms	5.60	4.42
23	转子惯量 Rotor inertia	gcm ²	140.23	134.10
24	极对数 Number of pole pairs		1	
25	相数 Number of phase		13	
26	重量 Weight of motor	g	485	
27	噪音 Typical noise level	dB	≤45	

电机端子定义 Motor terminal definition

+ Vcc
- GND

技术说明 Technical specifications

轴间间隙 Axial play: 0-0.1mm
滑动轴承最大载荷 sintered metal bearing load max:
· 轴向 (动态) Max axial load (dynamic): 23N
· 径向 (法兰外5mm) Max radial load (5mm from flange): 75N
· 最大允许安装力 (静态) Max press fit force (static): 106N
滚动轴承径向间隙 Radial play: ≤0.14mm
环境温度范围 Ambient temperature range: -20~+80°C
相对湿度范围 Relative humidity range: <90% (25°C)
最高转子温度 Highest rotor temperature: 125°C
表中数据均为标称值 Values listed in the table are nominal

组合体系 System

适配部件 Optional Parts

- 行星轮减速箱 Planetary gearbox
- 光电式编码器 Photoelectric encoder
- 磁电式编码器 Magnetolectric encoder
- 刹车 Brake

