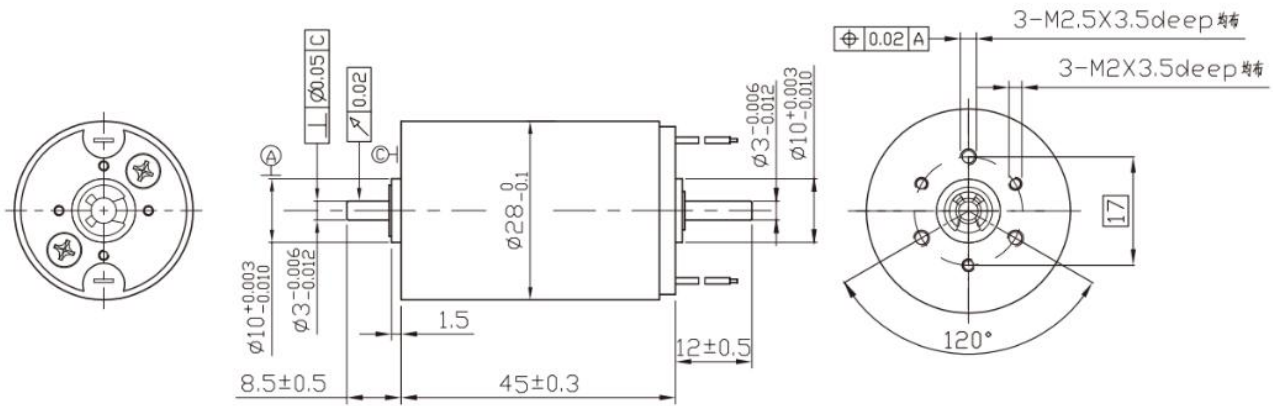




# Φ28mm Coreless Brushed DC Motor (Φ28 L45mm) 9-35watt



## Motor Data

### Values at Nominal

		28450678	28451284	28452485	28454882
1 Nominal voltage	V	6	12	24	48
2 Nominal speed	rpm	6942	7476	7565	7298
3 Nominal current(Max.continuous current)	A	1.89	1.29	0.74	0.37
4 Nominal torque(Max.continuous torque)	mNm	12.69	15.85	17.65	17.90

### At No Load

5 No-load speed	rpm	7800	8400	8500	8200
6 No-load current	mA	150	120	75	45

### At Max.Efficiency

7 Max. efficiency	%	81.6	80	79.1	77.0
8 Speed	rpm	7098	7602	7650	7298
9 Current	A	1.577	1.135	0.678	0.370
10 Torque	mNm	10.38	13.69	16.05	17.90

### At Max.Output Power

11 Max. output power	W	23.55	31.68	35.71	34.93
12 Speed	rpm	3900	4200	4250	4100
13 Current	A	8.075	5.46	3.088	1.523
14 Torque	mNm	57.668	72.038	80.227	81.351

### At Stall

15 Stall current	A	16.0	10.8	6.1	3.0
16 Stall torque	mNm	115.3	144.1	160.5	162.7

### Characteristics

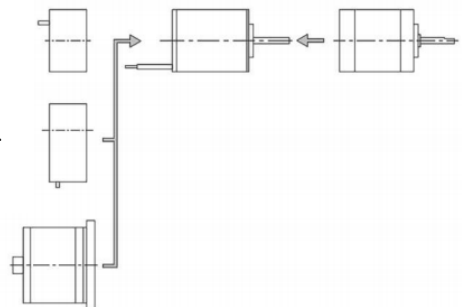
17 Terminal resistance	Ω	0.38	1.11	3.93	16.00
18 Terminal inductance	mH	0.030	0.120	0.420	1.800
19 Torque constant	mNm/A	7.28	13.49	26.63	55.06
20 Speed constant	rpm/V	1300.0	700.0	354.2	170.8
21 Speed / torque gradient	rpm/mNm	67.6	58.3	53.0	50.4
22 Mechanical time constant	ms	7.53	7.00	6.49	6.73
23 Rotor inertia	gcm <sup>2</sup>	10.63	11.47	11.69	12.75

### Mechanical Data

24 Bearing type	Ball bearing
25 Axial clearance under axial load	0-0.1mm
26 Radial clearance	≤0.015mm
27 Number of pole pairs	1
28 Number of phases	5
29 Typical noise level	≤40dB
30 Weight	145g

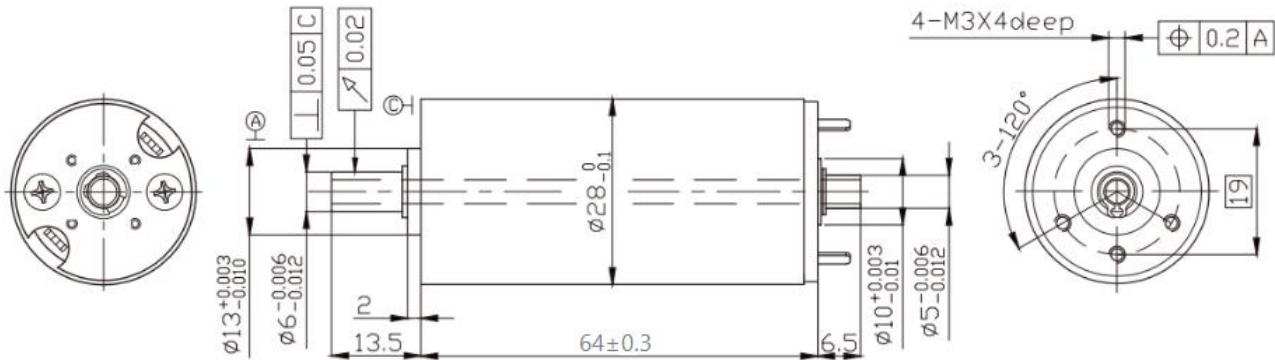
### System

- Optional Parts:
- Planetary gearhead
  - Photoelectric encoder
  - Magnetolectric encoder
  - Brake





# Φ28mm Coreless Brushed DC Motor (Φ28 L64mm) 13-55watt



### Motor Data

### Order number

#### Values at Nominal

		28640675	28641273	28642473
1 Nominal voltage	V	6	12	24
2 Nominal speed	rpm	6675	6497	6497
3 Nominal current(Max.continuous current)	A	2.92	1.95	1.11
4 Nominal torque(Max.continuous torque)	mNm	19.63	26.46	32.71

#### At No Load

5 No-load speed	rpm	7500	7300	7300
6 No-load current	mA	320	240	64

#### At Max.Efficiency

7 Max. efficiency	%	78.2	76.9	84.3
8 Speed	rpm	6713	6497	6753
9 Current	A	2.806	1.952	0.779
10 Torque	mNm	18.74	26.46	22.3

#### At Max.Output Power

11 Max. output power	W	35.05	45.97	56.83
12 Speed	rpm	3750	3650	3650
13 Current	A	12.16	8.02	4.83
14 Torque	mNm	89.2	120.3	148.7

#### At Stall

15 Stall current	A	24.0	15.8	9.6
16 Stall torque	mNm	178.5	240.5	297.4

#### Characteristics

17 Terminal resistance	Ω	0.25	0.76	2.50
18 Terminal inductance	mH	0.030	0.090	0.280
19 Torque constant	mNm/A	7.54	15.46	31.19
20 Speed constant	rpm/V	1250.0	608.3	304.2
21 Speed / torque gradient	rpm/mNm	42.0	30.3	24.5
22 Mechanical time constant	ms	7.02	6.56	4.97
23 Rotor inertia	gcm <sup>2</sup>	15.94	20.63	19.32

#### Mechanical Data

24 Bearing type	Ball bearing
25 Axial clearance under axial load	0-0.1mm
26 Radial clearance	≤0.015mm
27 Number of pole pairs	1
28 Number of phases	7
29 Typical noise level	≤45dB
30 Weight	200g

#### System

- Optional Parts:
- Planetary gearhead
  - Photoelectric encoder
  - Magnetoelectric encoder
  - Brake

