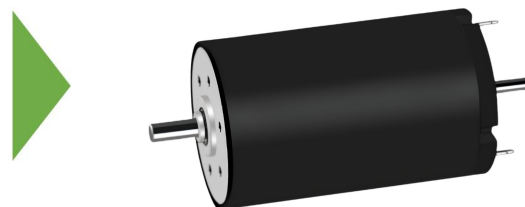


BDCB Series

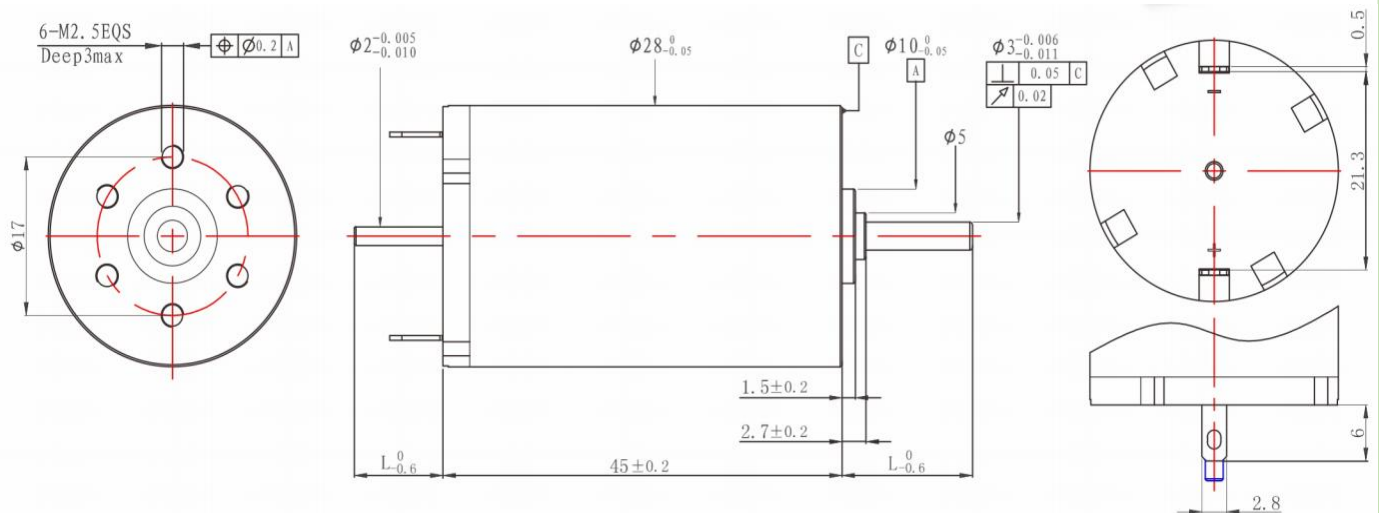
Coreless Graphite Brushed DC Motor



BDCB2845 Motor Data

9-35W

Motor Model	Unit	BDCB2845-01	BDCB2845-02	BDCB2845-03	BDCB2845-04
Value at Rated voltage					
At Nominal					
1. Nominal voltage	V/DC	6	12	24	48
2. Nominal speed	rpm	6942	7476	7565	7298
3. Nominal current	A	1.89	1.29	0.74	0.37
4. Nominal torque	mNm	12.69	15.85	17.65	17.90
Free 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	80.0	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	5.460	3.088	1.523
14. Torque	mNm	57.668	72.038	80.227	81.351
At Stall					
15. Stall current	A	16.00	10.80	6.10	3.00
16. Stall torque	mNm	115.3	144.1	160.5	162.7
Motor Constants					
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 constant	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 ²	10.63	11.47	11.69	12.75
24. Number of pole pairs		1			
25. Number of phase		5			
26. Weight of motor	g	145			
27. Typical noise level	dB	≤40			

Motor Drawing (mm)**Φ28*L45mm****Technical Specifications**

1. Axial play: 0–0.1 mm
2. Sintered metal bearing load limits:
 - Max. axial load (dynamic): 2 N
 - Max. radial load (5 mm from flange): 20 N
3. Radial play: ≤ 0.015 mm
4. Ambient temperature range: -20 to +80°C
5. Relative humidity: <90% RH at 25°C
6. Highest rotor temperature: 125°C

Values listed in the table are nominal.

Motor terminal definition

1. + Vcc
2. - GND

Optional Parts

1. Planetary gearbox
2. Photoelectric encoder
3. Magnetoelectric encoder
4. Brake

