

BDCB Series

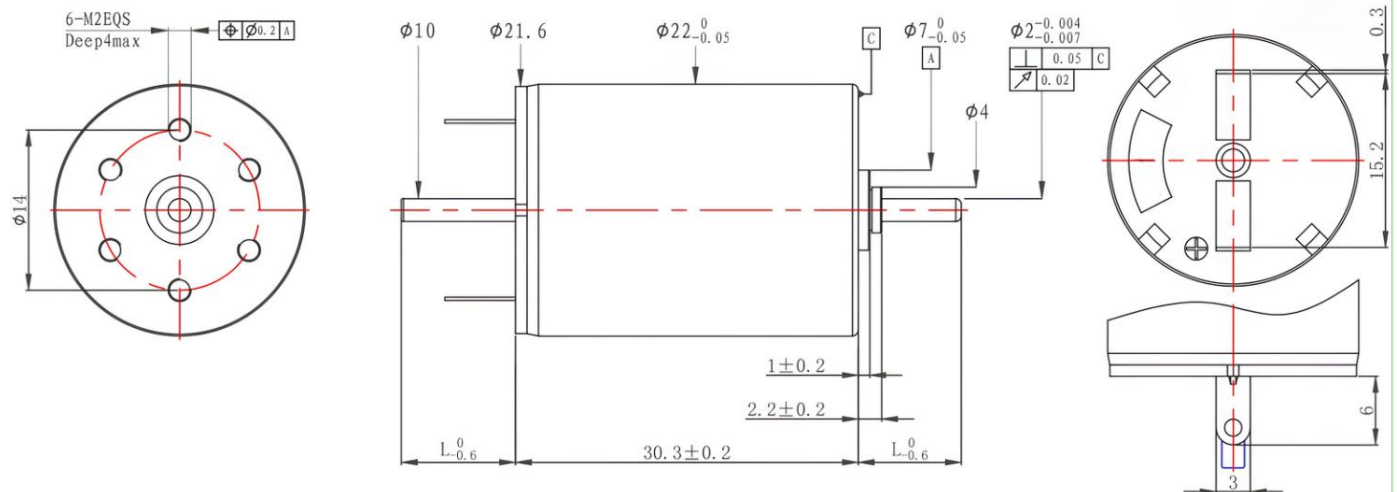
Coreless Graphite Brushed DC Motor



BDCB2230 Motor Data

3-10W

Motor Model	Unit	BDCB2230-01	BDCB2230-02	BDCB2230-03	BDCB2230-04
Value at Rated voltage					
At Nominal					
1. Nominal voltage	V/DC	6	12	18	24
2. Nominal speed	rpm	9492	10248	9234	9405
3. Nominal current	A	0.88	0.63	0.42	0.29
4. Nominal torque	mNm	3.91	5.22	5.79	5.26
Free Load					
5. No-load speed	rpm	11300	12200	10800	11000
6. No-load current	mA	90	65	45	30
At Max. Efficiency					
7. Max. efficiency	%	74.97	74.93	75.42	75.85
8. Speed	rpm	9944	10736	9558	9735
9. Current	A	0.679	0.489	0.339	0.234
10. Torque	mNm	2.93	3.91	4.60	4.17
At Max. Output power					
11. Max.output power	W	7.23	10.41	11.30	10.44
12. Speed	rpm	5650	6100	5400	5500
13. Current	A	2.55	1.83	1.32	0.92
14. Torque	mNm	12.22	16.30	19.98	18.13
At Stall					
15. Stall current	A	5.00	3.60	2.60	1.80
16. Stall torque	mNm	24.45	32.60	39.96	36.26
Motor Constants					
17. Terminal resistance	Ω	1.20	3.33	6.92	13.33
18. Terminal inductance	mH	0.190	0.403	0.850	1.600
19. Torque constant	mNm/A	4.98	9.22	15.64	20.49
20. Speed constant	rpm/V	1883.3	1016.7	600.0	458.3
21. Speed/torque constant	rpm/mNm	462.2	374.2	270.3	303.3
22. Mechanical time constant	ms	13.05	11.08	7.90	9.09
23. Rotor inertia	gcm ²	2.70	2.83	2.79	2.54
24. Number of pole pairs		1			
25. Number of phase		5			
26. Weight of motor	g	54			
27. Typical noise level	dB	≤42			

Motor Drawing (mm)**Φ22*L30mm****Technical Specifications**

1. Axial play: 0–0.1 mm
2. Sintered metal bearing load limits:
 - Max. axial load (dynamic): 0.8 N
 - Max. radial load (5 mm from flange): 8 N
3. Sintered metal bearing radial play: ≤ 0.03 mm
4. Ball bearing radial play: ≤ 0.015 mm
5. Ambient temperature range: -20 to +80°C
6. Relative humidity: <90% RH at 25°C
7. 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/magnetoelectric encoder

