

BDCB Series

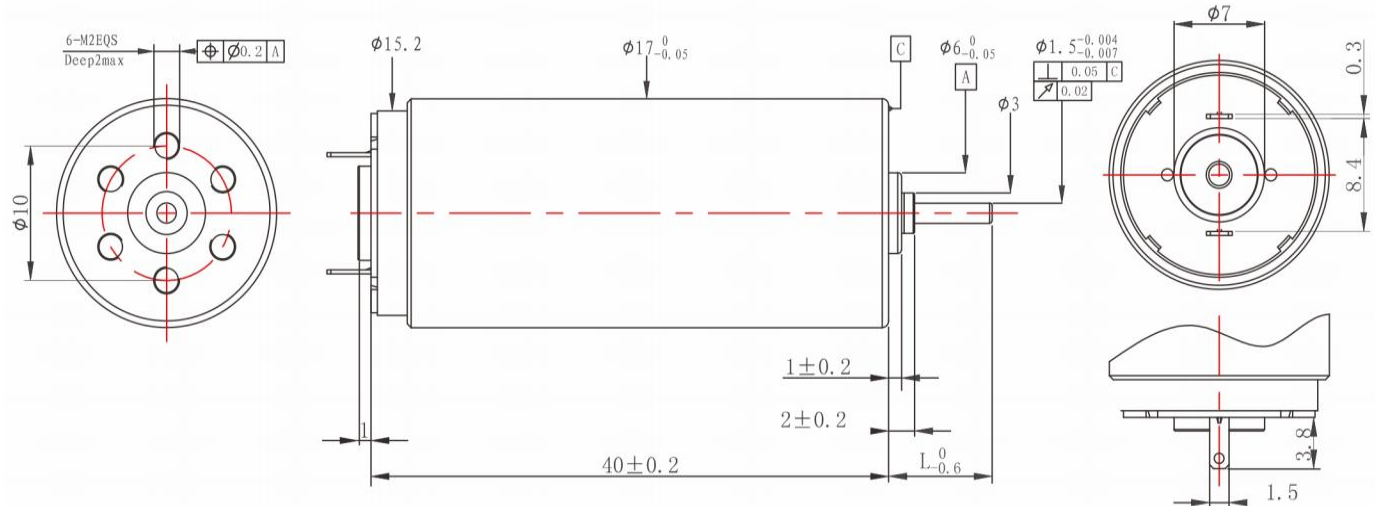
Coreless Graphite Brushed DC Motor



BDCB1740 Motor Data

10-30W

Motor Model	Unit	BDCB1740-01	BDCB1740-02	BDCB1740-03
Value at Rated voltage				
At Nominal				
1. Nominal voltage	V/DC	6	12	24
2. Nominal speed	rpm	11408	18590	13520
3. Nominal current	A	1.54	1.97	0.74
4. Nominal torque	mNm	6.0	9.5	9.8
Free Load				
5. No-load speed	rpm	13500	22000	16000
6. No-load current	mA	120	130	48
At Max. Efficiency				
7. Max. efficiency	%	78.6	80.3	80.4
8. Speed	rpm	12218	19910	14480
9. Current	A	0.99	1.26	0.47
10. Torque	mNm	3.7	5.8	6.0
At Max. Output power				
11. Max.output power	W	13.59	35.22	26.43
12. Speed	rpm	6750	11000	8000
13. Current	A	4.71	6.07	2.27
14. Torque	mNm	19.2	30.6	31.5
At Stall				
15. Stall current	A	9.30	12.00	4.50
16. Stall torque	mNm	38.5	61.2	63.1
Motor Constants				
17. Terminal resistance	Ω	0.65	1.00	5.33
18. Terminal inductance	mH	0.028	0.075	0.290
19. Torque constant	mNm/A	4.19	5.15	14.17
20. Speed constant	rpm/V	2250.0	1833.3	666.7
21. Speed/torque constant	rpm/mNm	351.0	359.7	253.6
22. Mechanical time constant	ms	6.2	6.4	4.5
23. Rotor inertia	gcm ²	1.69	1.69	1.69
24. Number of pole pairs		1		
25. Number of phase		5		
26. Weight of motor	g	48		
27. Typical noise level	dB	≤42		

Motor Drawing (mm)**Φ17*L40mm****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. Radial play: ≤ 0.015 mm
4. Ambient temperature range: -20 to $+80^{\circ}$ 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

