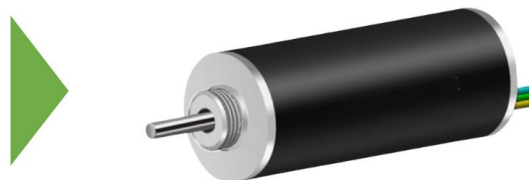


BDCL Series

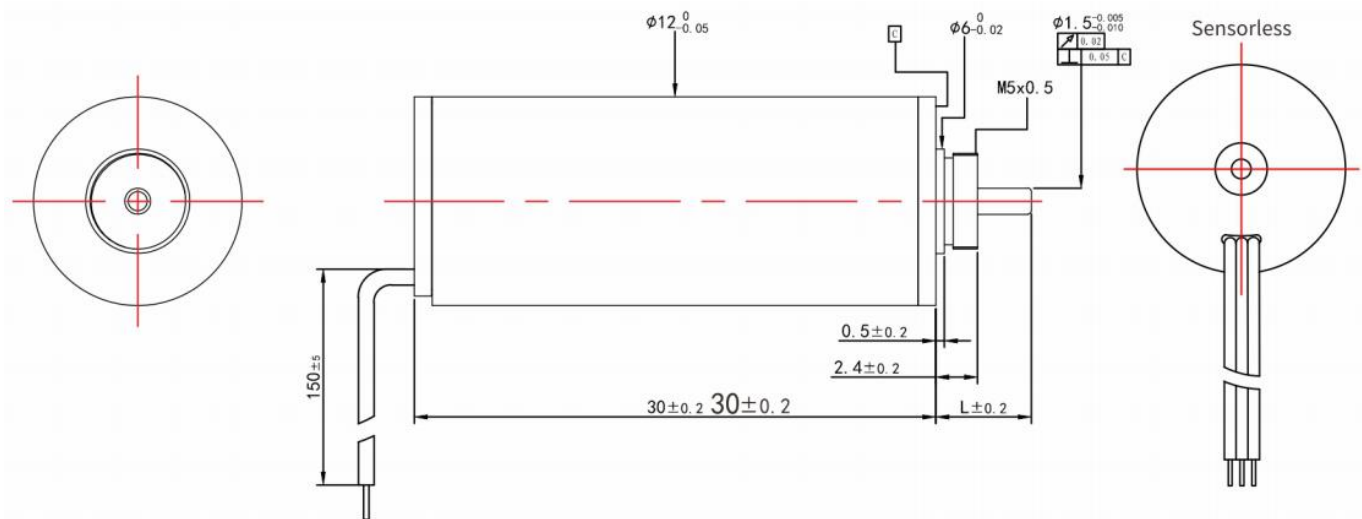
Coreless Brushless DC Motor



BDCL1230 Motor Data

3-6W

Motor Model	Unit	BDCL1230-01	BDCL1230-02	BDCL1230-03
Value at Rated voltage				
At Nominal				
1. Nominal voltage	V/DC	12	18	24
2. Nominal speed	rpm	13685	14025	13600
3. Nominal current	A	0.45	0.32	0.24
4. Nominal torque	mNm	2.40	2.38	2.43
Free Load				
5. No-load speed	rpm	16100	16500	16000
6. No-load current	mA	100	80	60
At Max. Efficiency				
7. Max. efficiency	%	63.6	61.1	61.0
8. Speed	rpm	13363	13530	13120
9. Current	A	0.498	0.368	0.274
10. Torque	mNm	2.7	2.86	2.92
At Max. Output power				
11. Max.output power	W	6.7	6.9	6.8
12. Speed	rpm	8050	8250	8000
13. Current	A	1.3	0.9	0.7
14. Torque	mNm	8.0	7.94	8.11
At Stall				
15. Stall current	A	2.44	1.68	1.25
16. Stall torque	mNm	16.0	15.87	16.23
Motor Constants				
17. Terminal resistance	Ω	4.92	10.71	19.20
18. Terminal inductance	mH	0.155	0.350	0.620
19. Torque constant	mNm/A	6.83	9.92	13.64
20. Speed constant	rpm/V	1342	917	667
21. Speed/torque constant	rpm/mNm	1008	1039	986
22. Mechanical time constant	ms	3.60	3.71	3.52
23. Rotor inertia	gcm ²	0.34	0.34	0.34
24. Number of pole pairs		1		
25. Number of phase		3		
26. Weight of motor	g	14		
27. Typical noise level	dB	≤45		

Motor Drawing (mm)**Φ 12*L30mm****Technical Specifications**

- Axial play:** 0.05 – 0.15 mm
- Sintered metal bearing load limits:**
 - Max. axial load (dynamic): 0.8 N
 - Max. radial load (5 mm from flange): 8 N
 - Max. press-fit force (static): 10 N
- Radial play:** ≤ 0.015 mm
- Ambient temperature range:** -20 to +80° C
- Relative humidity:** <90% RH (25° C)
- Maximum rotor temperature:** 85° C
- Bearing optional:** ball / sleeve

Values listed in the table are nominal

Motor terminal definition

- Motor wire sequence(Without sensor):

- 1 — Motor Phase A
- 2 — Motor Phase B
- 3 — Motor Phase C

- Customization notice:

Cables, connectors, and wire sequence can be customized. The information above is for reference only; the final output terminal is subject to the actual product.

Optional Parts

- Planetary gearbox

