



Brushless DC Motor

42RBL SERIES

● INDICATIONS OF THE MODELS

42 RBL 60 – 24V – 42 25 A

Single shaft (B:double shaft)
 Output power : 25W
 Rated speed/100 :4200rpm
 Rated voltage :24VDC
 Body length 60mm
 Round Brushless motor
 Motor frame size: Metric (mm) 42mm



● GENERAL SPECIFICATIONS

Winding type	Star
Hall effect angle	120 degree electrical angle
Shaft run out	0.025mm
Radial play	0.02mm@450g
End play	0.08mm@450g
Max. radial force	15N @ 10mm from the flange
Max. axial force	10N
Insulation class	Class B
Dielectric strength	500VAC@1min.
Insulation resistance	100MΩ Min, 500VDC

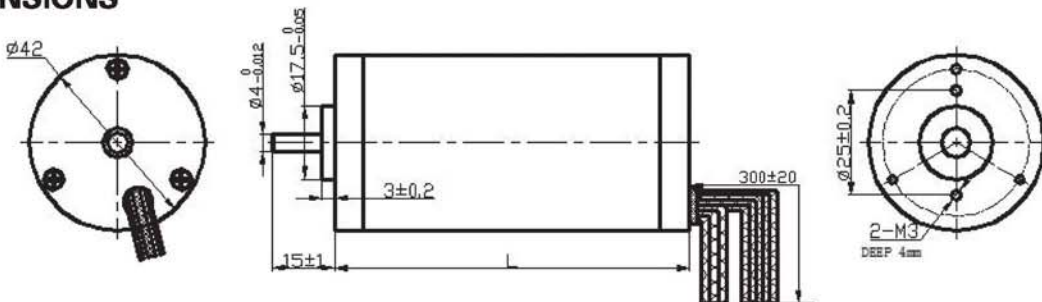
● ELECTRIC CONNECTION

Lead No.	Lead Color	Lead Gauge	FUNCTION	DESCRIPTION
1	Blue	UL1007 26AWG	Vcc	Power supply positive of Hall: +5VDC → +24VDC
2	Yellow		Hall A	
3	Brown		Hall B	
4	Red		Hall C	
5	Green	UL1007 22AWG	GND	Power supply negative of Hall
6	Red		Phase U	
7	Brown		Phase V	
8	Black		Phase W	

● ELECTRICAL SPECIFICATIONS

Model	42RBL30-24V -4009A-P	42RBL60-24V -4030A-P	42RBL85-24V -4060A-P	42RBL93-24V -6375A-P
Number of poles	8			
Number of phase	3			
Rated voltage	VDC 24			
Rated speed	RPM 4000	RPM 4200	RPM 4000	RPM 6300
Continuous stall torque	mN.m 24	mN.m 68	mN.m 180	mN.m 138
Rated torque	mN.m 20	mN.m 56	mN.m 150	mN.m 115
Rated power	W 8.4	W 25	W 62	W 76
Peak torque	mN.m 60	mN.m 170	mN.m 450	mN.m 350
Peak current	A 1.7	A 4.4	A 11.4	A 11.8
Resistance	Ohms 5.9	Ohms 1.6	Ohms 0.71	Ohms 0.325
Inductance	mH 5.1	mH 1.94	mH 0.86	mH 0.36
Torque constant	mNm/A 39.4	mNm/A 40.6	mNm/A 40.1	mNm/A 30.3
Back EMF	Vrms/Krpm 2.95	Vrms/Krpm 3.04	Vrms/Krpm 3.0	Vrms/Krpm 2.27
Rotor inertia	g.cm ² 15.6	g.cm ² 33	g.cm ² 84	g.cm ² 94
Body length	mm 30	mm 60	mm 85	mm 93
Mass	Kg 0.25	Kg 0.4	Kg 0.7	Kg 0.8

● DIMENSIONS



*This motor can be designed & manufactured with customized request.