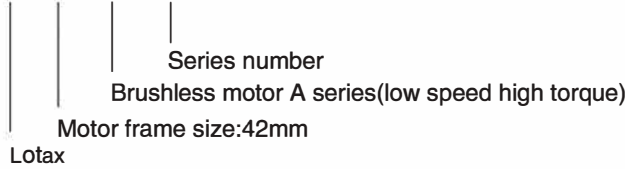


Brushless DC Motor

FL42BLA SERIES

● INDICATIONS OF THE MODELS

FL 42 BLA 01



● 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	28N @ 20mm from the flange
Max. axial force	10N
Insulation class	Class B
Dielectric strength	500VAC for one minute
Insulation resistance	100MΩ Min., 500VDC

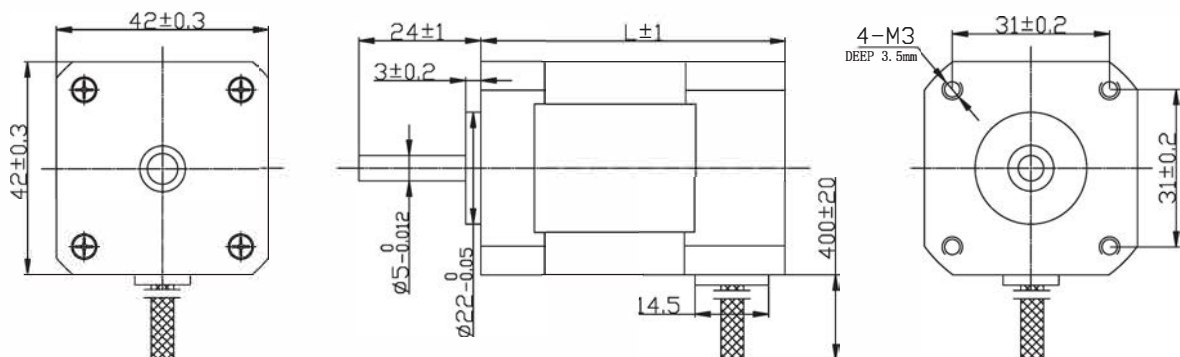
● ELECTRIC CONNECTION

Lead No.	Lead Color	Lead Gauge	FUNCTION	DESCRIPTION
1	Red	UL1430 26AWG	Vcc	Power supply positive of Hall:+5VDC---+24VDC
2	Blue		Hall A	
3	Green		Hall B	
4	White		Hall C	
5	Black	UL1430 20AWG	GND	Power supply negative of Hall
6	Yellow		Phase U	
7	Red		Phase V	
8	Black		Phase W	

● ELECTRICAL SPECIFICATIONS

Model		FL42BLA01	FL42BLA02	FL42BLA03	FL42BLA04
Number of poles		10			
Number of phase		3			
Rated voltage	VDC	24			
Rated speed	RPM	3000			
Continuous stall torque	N.m	0.081	0.19	0.30	0.41
Rated torque	N.m	0.07	0.16	0.26	0.36
Rated power	W	22	50	81	113
Peak torque	N.m	0.21	0.48	0.78	1.08
Peak current	A	4	8.3	13.5	19
Line to line resistance	ohms	2.6	1.1	0.7	0.48
Line to line inductance	mH	1.83	0.96	0.58	0.44
Torque constant	N.m/A	0.055	0.059	0.058	0.057
Back E.M.F	Vrms/Krpm	4.06	4.35	4.25	4.2
Rotor inertia	g.cm ²	60	80	100	120
Body length (L)	mm	40.3	60.3	80.3	100.3
Mass	Kg	0.26	0.46	0.65	0.85

● DIMENSIONS



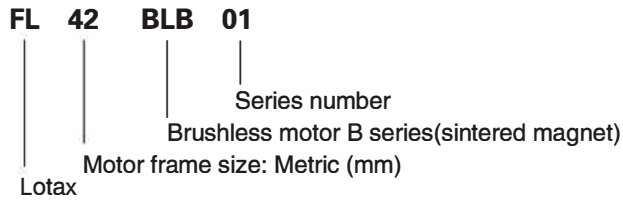
*This motor can be designed & manufactured with customized request.



Brushless DC Motor

FL42BLB SERIES

● INDICATIONS OF THE MODELS



● 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	28N @ 20mm from the flange
Max. axial force	10N
Insulation class	Class B
Dielectric strength	500VAC for one minute
Insulation resistance	100MΩ Min., 500VDC

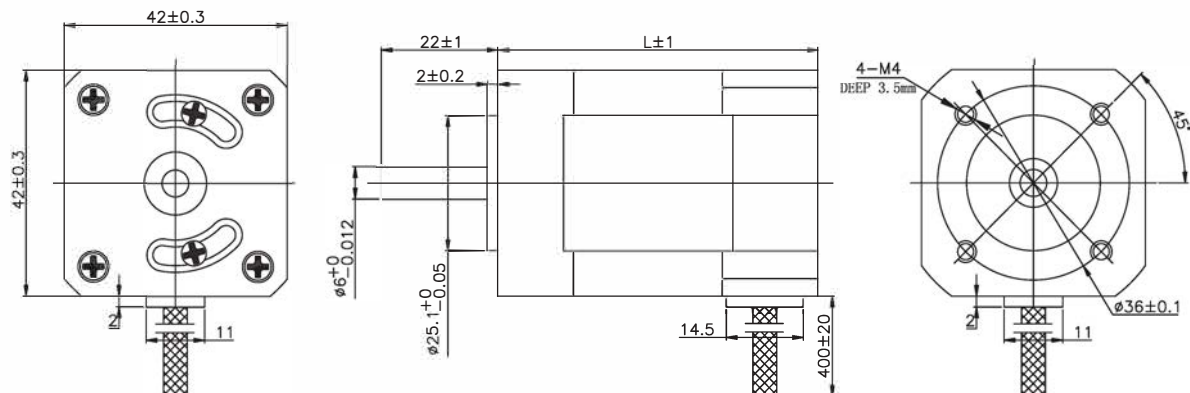
● ELECTRIC CONNECTION

Lead No.	Lead Color	Lead Gauge	FUNCTION	DESCRIPTION
1	Red	UL1430 26AWG	Vcc	Power supply positive of Hall:+5VDC---+24VDC
2	Blue		Hall A	
3	Green		Hall B	
4	White		Hall C	
5	Black	UL1430 20AWG	GND	Power supply negative of Hall
6	Yellow		Phase U	
7	Red		Phase V	
8	Black		Phase W	

● ELECTRICAL SPECIFICATIONS

Model	FL42BLB01	FL42BLB02	FL42BLB03	FL42BLB04
Number of poles	6			
Number of phase	3			
Rated voltage	VDC 24			
Rated speed	RPM 3000			
Continuous stall torque	N.m 0.074	N.m 0.20	N.m 0.35	N.m 0.49
Rated torque	N.m 0.064	N.m 0.17	N.m 0.3	N.m 0.43
Rated power	W 20	W 53.5	W 94	W 135
Peak torque	N.m 0.19	N.m 0.51	N.m 0.9	N.m 1.29
Peak current	A 3.5	A 9	A 14.5	A 20.8
Line to line resistance	ohms 3.6	ohms 1.05	ohms 0.54	ohms 0.4
Line to line inductance	mH 1.8	mH 0.75	mH 0.45	mH 0.3
Torque constant	N.m/A 0.057	N.m/A 0.058	N.m/A 0.062	N.m/A 0.0624
Back E.M.F	Vrms/Krpm 4.2	Vrms/Krpm 4.3	Vrms/Krpm 4.57	Vrms/Krpm 4.6
Rotor inertia	g.cm ² 80	g.cm ² 100	g.cm ² 120	g.cm ² 140
Body length	mm 40.3	mm 60.3	mm 80.3	mm 100.3
Mass	Kg 0.4	Kg 0.6	Kg 0.8	Kg 1.0

● DIMENSIONS



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