

Brushless DC Motor

57BL(S) SERIES

● INDICATIONS OF THE MODELS

57 BL(S) 01

Series number

BL: Brushless motor with round front end bell

BLS: Brushless motor with square front end bell

Frame: 57mm



● GENERAL SPECIFICATIONS

Winding type	Delta
Hall effect angle	120 degree electrical angle
Shaft run out	0.025mm
Radial play	0.025mm@460g
End play	0.025mm@4000g
Max. radial force	75N @ 20mm from the flange
Max. axial force	15N
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 AWG26	Vcc	Power supply positive of hall +5VDC--+24VDC
2	Blue		Hall U	
3	Green		Hall V	
4	White		Hall W	
5	Black	UL1430 AWG20	GND	POWER SUPPLY NEGATIVE OF HALL
6	Yellow		Phase U	
7	Red		Phase V	
8	Black		Phase W	

● ELECTRICAL SPECIFICATION

Model		57BL(S)005	57BL(S)01	57BL(S)02	57BL(S)03	57BL(S)04
Number of poles		4				
Number of phase		3				
Rated voltage	VDC	36				
Rated speed	RPM	4000				
Rated torque	N.m	0.055	0.11	0.22	0.33	0.44
Rated power	W	23	46	99	138	184
Peak torque	N.m	0.16	0.39	0.7	1	1.27
Peak current	A	3.5	6.8	12	16	21
Line to line resistance	ohms	4.3	1.63	0.64	0.45	0.33
Line to line inductance	mH	10	4.4	2.0	1.5	0.95
Torque constant	Nm/A	0.052	0.061	0.060	0.065	0.062
BackE.M.F	Vrms/KRPM	3.8	4.5	4.45	4.8	4.6
Rotor inertia	g.cm ²	30	75	119	173	230
Body length(L)	mm	43.6	53.6	73.6	93.6	113.6
Mass	Kg	0.33	0.44	0.72	0.95	1.2