Brushless DC Motor

FL80BLS SERIES

● INDICATIONS OF THE MODELS

FL 80 BLS XX

- FL — Lotax
- 80 — Motor frame size: 80mm
- BLS — Square BLDC motor
- XX — Body length

● GENERAL SPECIFICATIONS

Winding type	Delta
Hall effect angle	120 degree electrical angle
Shaft run out	0.05mm
Radial play	0.02mm@450g
End play	0.08mm@450g
Max. radial force	115N@20mm from the flange
Max. axial force	45N
Insulation class	Class F
Dielectric strength	500VAC for one minute
Insulation resistance	100MΩMin., 500VDC

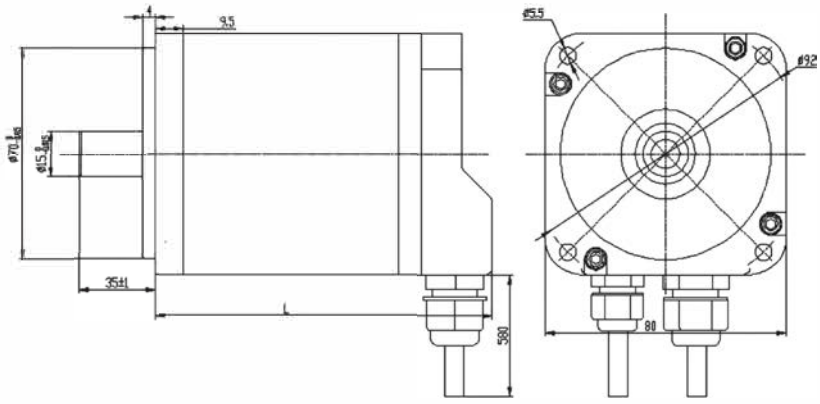
● ELECTRIC CONNECTION

Lead No.	Lead Color	Lead Gauge	Function	Description
1	Red	UL1332 AWG22	Vcc	POWER SUPPLY POSITIVE OF HALL: +5VDC—+24VDC
2	Blue		Hall A	
3	Green		Hall B	
4	White		Hall C	
5	Black		GND	POWER SUPPLY NEGATIVE OF HALL
6	Yellow	UL3135 AWG14	Phase A	
7	Red		Phase B	
8	Black		Phase C	

● ELECTRICAL SPECIFICATIONS

Model		FL80BLS84	FL80BLS105	FL80BLS120	FL80BLS140
Number of poles		8			
Number of phase		3			
Rated voltage	VDC	48			
Rated speed	RPM	3000			
Rated torque	N.m	0.9	1.7	2.2	3
Rated power	W	280	530	700	950
Peak torque	N.m	2.5	5	6.5	8.5
Peak current	A	22	45	61	78
Resistance	ohms	0.25	0.10	0.07	0.057
Inductance	mH	1.3	0.6	0.4	0.3
Torque constant	Nm/A	0.118	0.113	0.109	0.111
Back E.M.F	Vrms/KRPM	8.7	8.4	8.1	8.2
Rotor inertia	$g.cm^2$	544	1020	1360	1900
Body length(L)	mm	84	105	120	140
Weight	Kg	1.6	2	2.5	2.9

● DIMENSIONS



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

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