

90mm NEMA 34, GM90S Series Brushless DC Motors

● General Specification

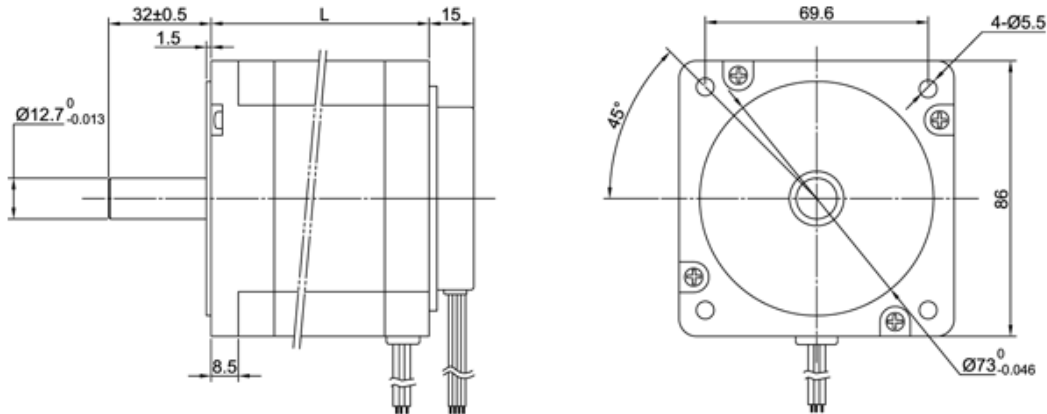
Item	Specifications
Winding type	WYE
Hall effect angle	120 degree electrical angle
Shaft run out	0.05mm
Radial play	0.02mm@460g
End play	0.08mm@400g
Max. radial force	220N @ 20mm from the flange
Max. axial force	60N
Insulation class	Class B
Dielectric strength	500VDC for one minute
Insulation resistance	100MΩMin., 500VDC



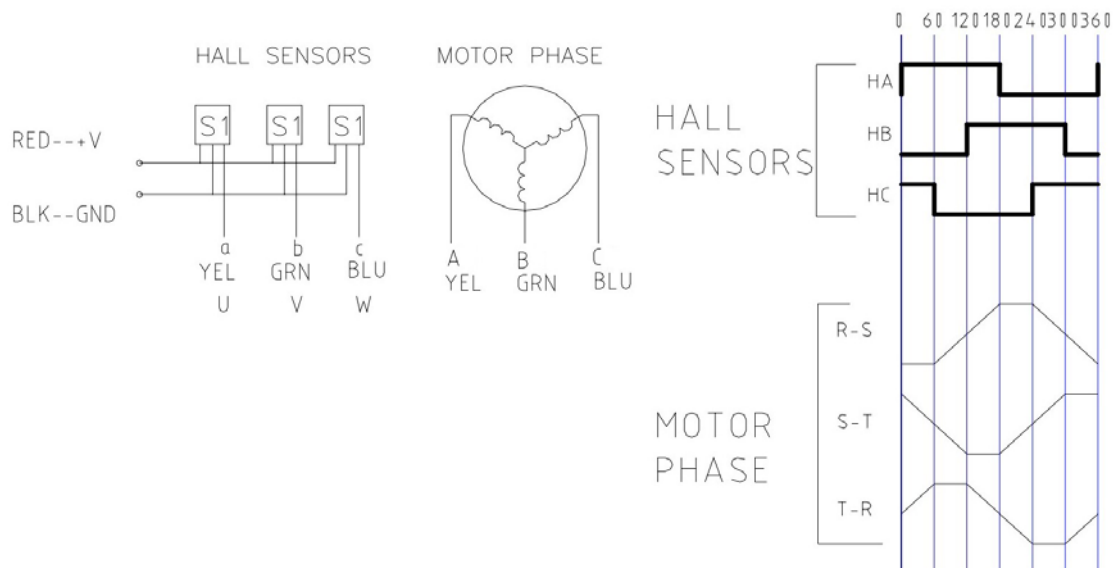
● Technique Specifications

Model		GM90S-681230	GM90S-75A30	GM90S-88C10	GM90S-88C30	GM90S-108C10	GM90S-108C30	GM90S-136E10	GM90S-136E30
Number of poles	8								
Number of phase	3								
Rated voltage	VDC	12	24	48	48	48	48	310	310
Rated speed	RPM	3000	3000	1000	3000	1000	3000	1000	3000
Continuous stall torque	Oz-in	85	114	142	142	270	270	425	425
	N.m	0.6	0.8	1	1	1.9	1.9	3	3
Rated torque	Oz-in	71	100	121	121	241	241	355	355
	N.m	0.5	0.7	0.85	0.85	1.7	1.7	2.5	2.5
Rotor power	W	157	220	89	267	178	534	262	785
Peak torque	Oz-in	213	300	361	361	722	722	1062	1062
	N.m	1.5	2.1	2.55	2.55	5.1	5.1	7.5	7.5
Peak current	A	50.4	70.5	7.9	21.4	16.9	42.8	4	9.7
Torque constant	Oz-in/A	4.3	4.3	4.6	16.9	42.8	16.9	267.7	109.1
	Nm/A	0.03	0.03	0.324	0.119	0.302	0.119	1.89	0.77
Back E.M.F	V/KRPM	3.15	3.15	34.3	12.6	32	12.6	200	81.5
Rotor inertia	kg.c m²	0.6	0.8	1.2	1.2	1.8	1.8	2.65	2.65
Body length	mm	68	75	88	88	108	108	136	136
Voltage range	VDC	12~90	12~170	24~325					
Speed Range	rpm	1000~3000							
Weight	Kg	1.4	1.7	2.1	2.1	2.6	2.6	4.1	4.1

- **Dimensions (mm)**



- **Wiring Diagram**



- **Custom Motor Options**

Custom housing to meet your dimensional requirements

Custom shaft options: extended, slotted, cross drilled, hollow shaft etc

Custom winding to meet your specific application needs

Lead wire options: special lengths, heat shrink, Teflon leads, pins, connectors, cable harnesses etc

Bearing & lubricant options for high temperature/humid operations

Encoders, gearboxes, sprockets and pulleys installation