

General purpose brushless motors

BM05/SQ series

Description

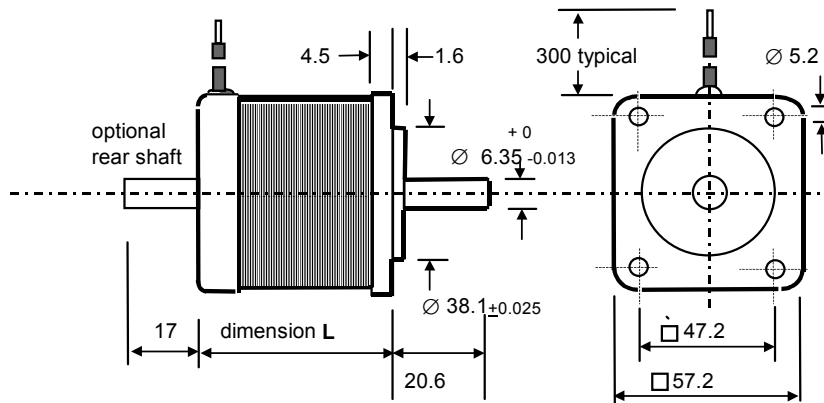
The BM05 series brushless servo motors provide a choice of size and performance with output power ratings up to 130 watts.

The brushless construction combined with high grade ball bearings provide a very long life in applications requiring a variable speed drive at high continuous torque. The units utilise a 3 phase design with hall effect commutation combined with an internal rotor incorporating a high energy magnets to provide optimum power transmission. Furthermore, the provision of a rear shaft enables a choice of encoders to be readily fitted to provide a position reference as well as commutation signals for a use with more sophisticated servo drive system if required.



The BM05/SQ series are equipped with a mounting flange and shaft design compatible with the NEMA size 23 standard and therefore are physically interchangeable with hybrid stepper motors. Using the standard B5 brushless drive the motors provide a bi-directional variable speed capability up to 3000 rpm with peak torque ratings in excess of 0.9 Nm for rapid acceleration. In this form they are ideally suited to small conveyor drives, pump drives, printing and paper handling equipment as well as general purpose industrial drives requiring variable speed and long life.

Dimensions: mm



Performance & specifications

		Brushless motor options		
		BM05-1 SQ	BM05-2 SQ	BM05-3 SQ
Motor body length 'Dimension L'	mm	55	75	95
Maximum output power	Watts	46	92	133
Max no Load speed	rpm	6000	6000	6000
Max continuous speed	rpm	4000	4000	4000
Max torque @ continuous speed	Nm	0.11	0.22	0.32
Max continuous stall torque	Nm	0.14	0.27	0.39
Current @ stall	A	1.75	3.2	4.7
Maximum peak torque for 10% duty cycle	Nm	0.35	0.68	0.98
Back emf @ nominal speed	V rms	27	28	28
Torque constant	Nm/A dc	0.08	0.084	0.084
Rotor inertia	Kgcm ²	0.075	0.119	0.173
Terminal resistance	Ohms	2.8	1.3	0.78
Performance using BC10 drive @ 24V				
No load speed	rpm	3,500	3,300	3,300
Speed @ rated torque	rpm	2,200	2,200	2,200
Continuous torque @ rated speed	Nm	0.11	0.22	0.32
Peak torque for 10% duty cycle	Nm	0.35	0.68	0.98
Output power using BC10 drive	Watts	25	51	73