

BL090-H03-G

42mm Brushless DC Motor, 90W

1pc. - \$200.00
50pc. - \$150.00



Product Features

- Brushless design for long life
- Low maintenance
- 42 mm frame size
- Peak torque to 4.0 in-lb
- Hall signals for velocity feedback
- Compatible with BD5 brushless drive



Description

The BL090-H03-G is a three-phase brushless DC motor for use in velocity control applications. Paired with a [BD5-G3-AH](#) brushless DC drive this motor provides excellent performance over a wide speed range.

Specifications

Part Number	BL090-H03-G
Frame Size	42 mm
Rated Torque	1.90 in-lb
Peak Torque	3.98 in-lb
Rated Power	90 watts
Rated Voltage	24 volts
Rated Speed	4500 rpm
Peak Speed	5000 rpm
Rated Current	4.92 A rms
Peak Current	12.5 A rms
Torque Constant	0.33 in-lb/A
Voltage Constant	3.00 V/krpm
Armature Resistance	0.40 ohms
Armature Inductance	0.37 mH
Motor Length	3.94 inch
Rotor Inertia	1.61E-03 oz-in-sec ²
Integral Gearhead	No
Weight	1.8 lbs
Integral Holding Brake	No
Storage Temperature	-20 to 70 °C
Operating Temperature	0 to 40 °C
Insulation Class	Class E (120 °C)
Maximum Radial Load	0.4 inch from end of shaft, 11 lbs
Maximum Thrust Load	0.9 lbs
Shaft Run Out	0.0012 inch T.I.R. max
Radial Play	0.0008 inch max w/ 1.1 lb load
End Play	0.003 inch max w/ 1.1 lb load
Perpendicularity	0.004 inches
Concentricity	0.002 inches

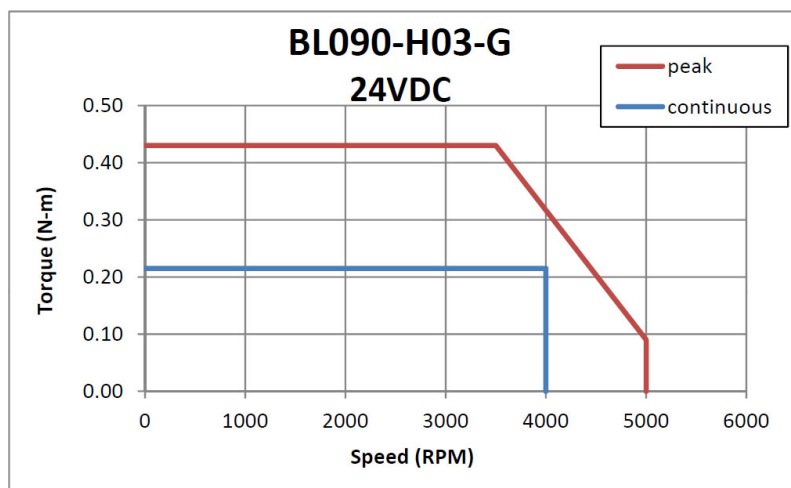
Downloads

Datasheet	 BLDC Datasheet 925-0013A.pdf
2D Drawing	 BL090-H03-G_RevC.pdf
3D Drawing	 BL090-H03-G.igs
Speed-Torque Curves	 speed torque curves 42mm BL090-H03-G updated 1-21-14.pdf
Agency Approvals	There are no related agency approval documents at this time.
Application Notes	There are currently no Application Notes available for this product.

Pricing

BL090-H03-G Part No. BL090-H03-G	
1pc.	\$200.00
25pc.	\$172.00
50pc.	\$150.00
100pc.	Contact us for 100+ piece pricing.

Torque Curves



Products in the Series *Brushless DC Motors and Drives*

* Closeout priced products are highlighted in green.

* Items with web only pricing are highlighted in yellow.

Part Number	Frame Size	Continuous Torque (in-lb)	Peak Torque (in-lb)	Motor Length (inch)	Rated Power (W)	Rotor Inertia (oz-in-sec ²)	1pc./50pc.
5000-255-001	NA	NA	NA	NA	NA	NA	\$186.00
5000-255-002	NA	NA	NA	NA	NA	NA	\$186.00
5000-255-003	NA	NA	NA	NA	NA	NA	\$186.00
5000-255-004	NA	NA	NA	NA	NA	NA	\$186.00
5000-255-005	NA	NA	NA	NA	NA	NA	\$186.00
5000-260-001	NA	NA	NA	NA	NA	NA	\$223.00
5000-260-002	NA	NA	NA	NA	NA	NA	\$223.00
5000-260-003	NA	NA	NA	NA	NA	NA	\$223.00
5000-260-004	NA	NA	NA	NA	NA	NA	\$223.00
BL030-H03-G	42 mm	0.58	1.15	1.81	30	5.49E-04	\$120.00
BL030-H03-GP005	42 mm	2.38	4.77	4.41	30	0.00055	\$269.00 / \$ 269.00
BL030-H03-GP014	42 mm	5.92	11.8	4.93	30	0.00055	\$296.00 / \$ 296.00
BL030-H03-GP019	42 mm	8.28	16.6	4.93	30	0.00055	\$296.00 / \$ 296.00
BL030-H03-GP029	42 mm	12.5	25.0	4.93	30	0.00055	\$296.00 / \$ 296.00
BL030-H03-GP051	42 mm	20.5	41.0	5.45	30	0.00055	\$324.00 / \$ 324.00
BL030-H03-GP100	42 mm	40.1	80.1	5.45	30	0.00055	\$324.00 / \$ 324.00
BL060-H03-G	42 mm	1.15	2.30	2.76	60	1.02E-03	\$160.00
BL060-H03-GP005	42 mm	4.77	9.56	5.36	60	0.001	\$309.00 / \$ 309.00
BL060-H03-GP014	42 mm	11.8	23.7	5.87	60	0.001	\$336.00 / \$ 336.00
BL060-H03-GP019	42 mm	16.6	33.1	5.87	60	0.001	\$336.00 / \$ 336.00
BL060-H03-GP051	42 mm	41.0	82.0	6.39	60	0.001	\$364.00 / \$ 364.00
BL060-H03-H	57 mm	1.28	2.56	2.15	60	2.09E-03	\$160.00
BL090-H03-G	42 mm	1.90	3.98	3.94	90	1.61E-03	\$200.00
BL090-H03-GP005	42 mm	8.25	16.4	6.54	90	0.0016	\$344.00 / \$ 344.00
BL090-H03-GP014	42 mm	20.5	41.1	7.05	90	0.0016	\$374.00 / \$ 374.00
BL100-H03-I	80 mm	2.12	4.24	1.97	100	5.38E-03	\$200.00
BL120-H03-H	57 mm	2.56	5.13	3.25	120	3.95E-03	\$200.00
BL180-H04-H	57 mm	3.80	7.61	4.74	180	6.46E-03	\$240.00
BL200-H04-I	80 mm	4.24	8.49	2.67	200	0.74	\$250.00
BL300-H04-I	80 mm	6.37	12.75	3.31	300	1.53E-02	\$300.00