

BN34 IP SPECIFICATIONS -

Continuous Stall Torque 83 - 309 oz-in (0.587 - 2.19 Nm)
Peak Torque 326 - 1445 oz-in (2.31 - 10.21 Nm)

Part Number*	BN34-25IP - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			BN34-35IP - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			BN34-45IP - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			BN34-55IP - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	Winding Code**	01	02	03	01	02	03	01	02	03	01	02	03
L = Length	inches	2.50			3.50			4.50			5.50		
	millimeters	63.5			88.9			114.3			139.7		
Terminal Voltage	volts DC	24.0	50.0	100.0	24.0	50.0	100.0	24.0	50.0	100.0	24.0	50.0	100.0
Peak Torque	oz-in	326.0	326.0	326.0	566.0	643.0	697.0	1070.0	1070.0	1070.0	1445.0	1445.0	1445.0
	Nm	2.3020	2.3020	2.3020	3.9968	4.5405	4.9219	7.5558	7.5558	7.5558	10.2039	10.2039	10.2039
Continuous Stall Torque	oz-in	83.0	93.0	93.0	133.0	162.0	159.0	220.0	224.0	231.0	287.0	306.0	309.0
	Nm	0.5861	0.6567	0.6567	0.9392	1.144	1.1228	1.5535	1.5818	1.6312	2.0267	2.1608	2.1820
Rated Speed	RPM	7400.0	7330.0	7550.0	5916.0	6400.0	6240.0	3300.0	4710.0	4710.0	2410.0	3910.0	3920.0
	rad/sec	775	768	791	620	670	653	346	493	493	252	409	411
Rated Torque	oz-in	60.0	67.0	66.0	93.0	106.0	106.0	188.0	165.0	170.0	258.0	240.0	240.0
	Nm	0.4237	0.4731	0.4661	0.6567	0.749	0.7485	1.3276	1.1651	1.2005	1.8219	1.6948	1.6948
Rated Current	Amps	16.40	8.70	4.40	18.74	11.0	5.80	23.0	13.70	7.00	23.30	16.50	8.20
Rated Power	watts	328.0	363.0	368.0	407.0	502.0	489.0	459.0	575.0	592.0	460.0	694.0	696.0
Torque Sensitivity	oz-in/amp	4.19	8.90	17.20	5.24	9.92	21.0	9.20	13.80	27.70	12.40	16.60	33.20
	Nm/amp	0.0296	0.0628	0.1215	0.0370	0.0701	0.1483	0.0650	0.0974	0.1956	0.0876	0.1172	0.2344
Back EMF	volts/KRPM	3.10	6.50	12.80	3.88	7.34	15.50	6.83	10.20	20.50	9.20	12.30	24.50
	volts/rad/sec	0.0296	0.0628	0.1215	0.0370	0.070	0.1483	0.0650	0.0974	0.1956	0.0876	0.1172	0.2344
Terminal Resistance	ohms	0.069	0.251	0.941	0.057	0.147	0.575	0.069	0.147	0.552	0.086	0.135	0.504
Terminal Inductance	mH	0.129	0.575	2.180	0.143	0.430	1.570	0.200	0.450	1.800	0.271	0.482	1.930
Motor Constant	oz-in/sq.rt.watt	15.95	17.76	17.73	21.95	25.87	27.69	35.02	35.99	37.28	42.28	45.18	46.77
	Nm/sq.rt.watt	0.11264	0.12544	0.12521	0.15499	0.183	0.19556	0.24732	0.25417	0.26328	0.29859	0.31904	0.33023
Rotor Inertia	oz-in-sec ² x10 ⁻³	6.00	6.00	6.00	12.00	12.00	12.00	18.00	18.00	18.00	24.00	24.00	24.00
	g-cm ²	423.4	423.4	423.4	846.8	846.8	846.8	1270.3	1270.3	1270.3	1693.7	1693.7	1693.7
Weight	oz	37.0	37.0	37.0	62.0	62.0	62.0	88.0	88.0	88.0	115.0	115.0	115.0
	g	1050.8	1050.8	1050.8	1760.8	1760.8	1760.8	2499.2	2499.2	2499.2	3266.0	3266.0	3266.0
# of Poles		8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Timing		120°	120°	120°	120°	120°	120°	120°	120°	120°	120°	120°	120°
Mech. Time Constant	ms	3.3	2.7	2.7	3.5	2.5	2.2	2.1	2.0	1.8	1.9	1.7	1.6
Electrical Time Constant	ms	1.87	2.29	2.32	2.51	2.90	2.73	2.90	3.06	3.26	3.15	3.57	3.83
Thermal Resistivity	deg. C/watt	1.6	1.5	1.5	2.5	1.84	1.2	1.1	1.0	1.0	1.1	0.8	0.8
Speed/Torque Gradient	rpm/oz-in	5.3	4.3	4.3	2.8	2.8	1.8	1.1	1.0	1.0	0.8	0.7	0.6

Notes:

- Motor mounted to a 10" x 10" x 1/4" aluminum plate, still air.
- Maximum winding temperature of 155°C.
- Typical electrical specifications at 25°C.
- Motor Terminal Voltages are representative only; motors may be operated at voltages other than those listed in the table. For assistance please contact our applications engineer.
- Calculated (theoretical) speed/torque gradient.
- For MS (military style) connector, please specify connector housing and terminal.
- Data for informational purposes only. Should not be considered a binding performance agreement. For specific applications, please contact the factory.

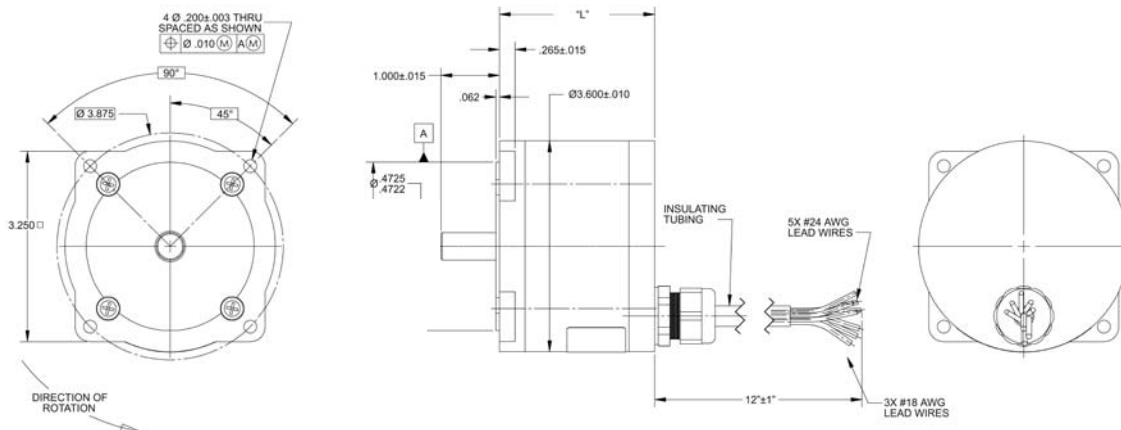
*Many other custom mechanical options are available – consult factory.

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Select your options below and place their code in its corresponding block as shown on page 6.

- | | | |
|---|--|---|
| <input type="checkbox"/> TERMINATION | <input type="checkbox"/> FEEDBACK OPTIONS | <input type="checkbox"/> OTHER OPTIONS |
| L – Leads (std) | H – Hall Effect (std) | D – Drive |
| C – Connector | R – Resolver | E – Encoder |
| M – MS connector | S – Sensorless | G – Gearhead |

BN34 IP Typical Outline



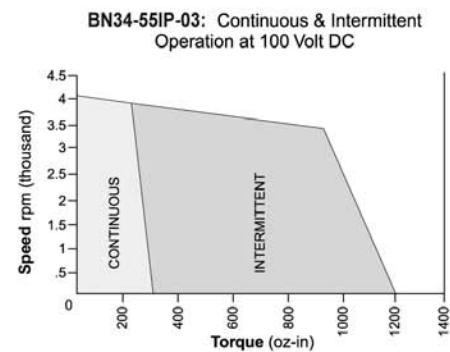
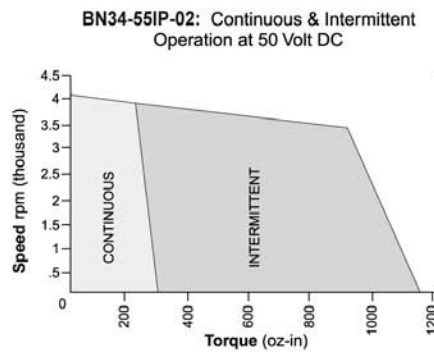
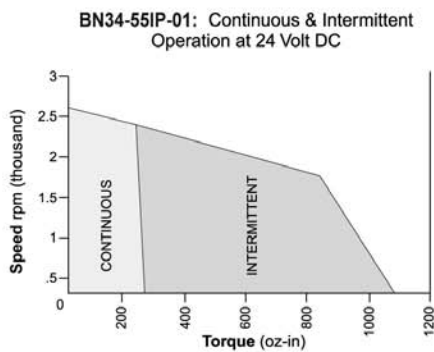
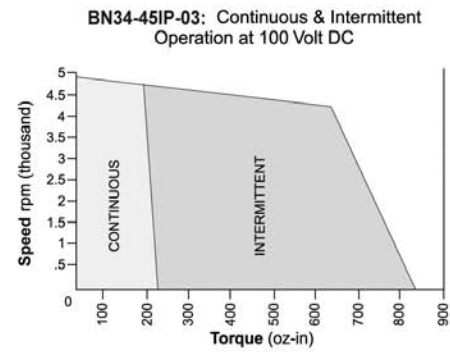
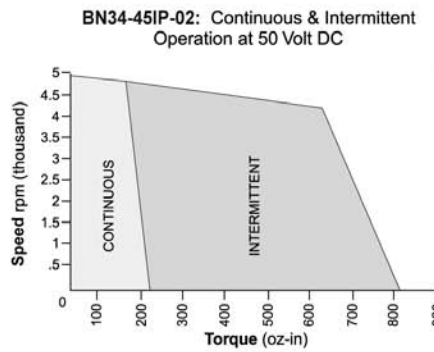
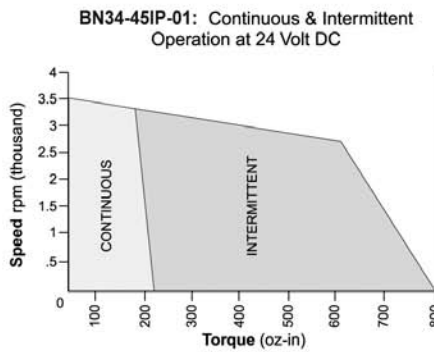
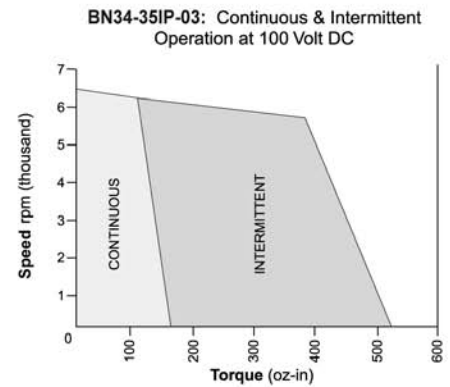
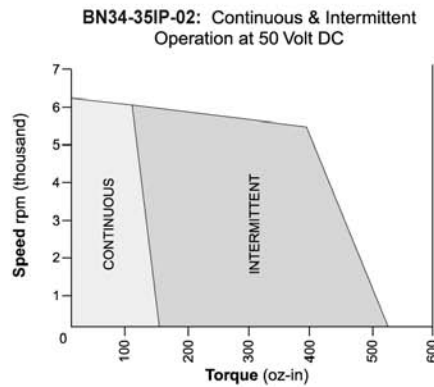
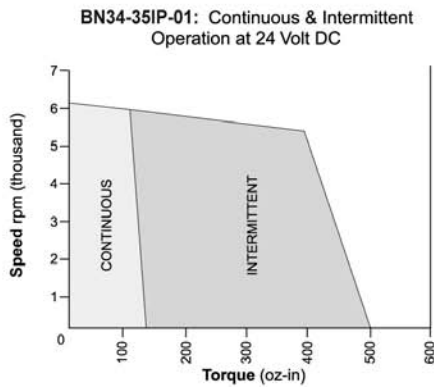
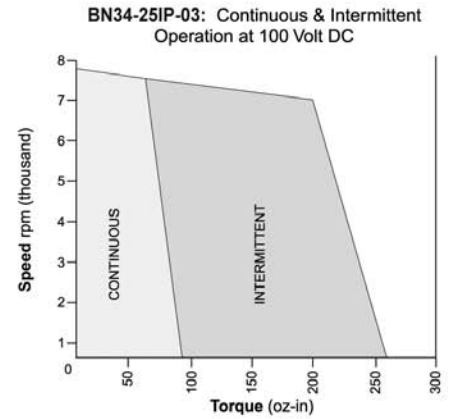
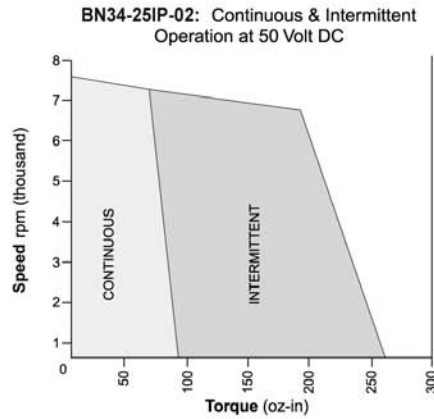
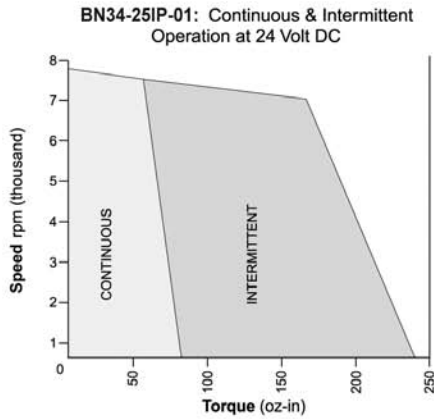
Termination Table

PIN COLOR	CONNECTION
YELLOW	V _{CC}
GRAY	GROUND
RED	A COIL
BLACK	B COIL
GREEN	C COIL
BLUE	S2 OUT
BROWN	S1 OUT
ORANGE	S3 OUT

Dimensions are in inches

Brushless Motors

BN34 IP Performance Curves



Note: Intermittent operation is based on a 20% duty cycle of one minute on, four minutes off. Please contact the factory regarding the duty cycle of your application.