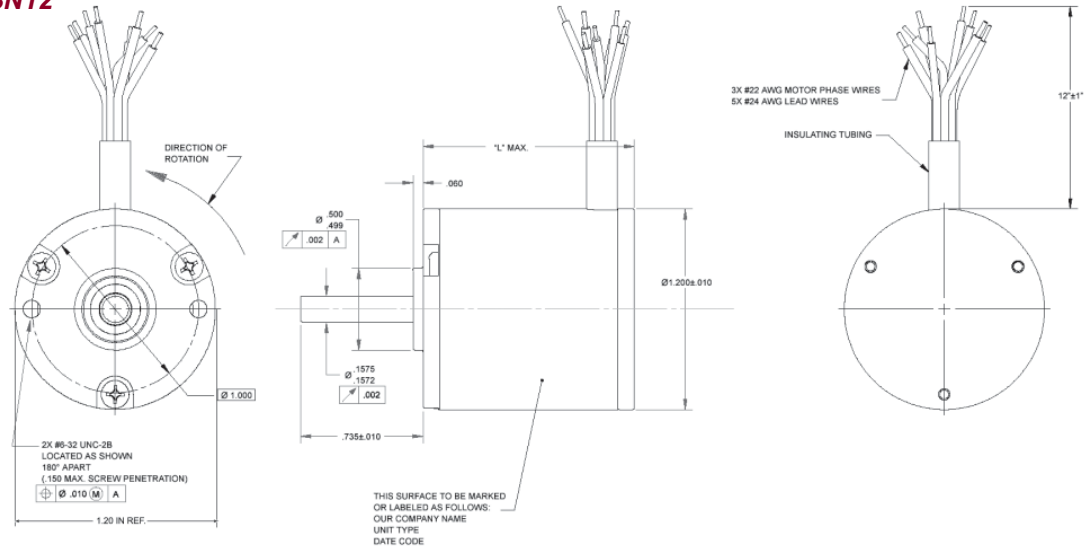


Brushless Motors

Typical Outline Drawing - BN12



Dimensions are in millimeters

BN23HS SPECIFICATIONS - Continuous Stall Torque 6 - 32 oz-in (0.042 - 0.226 Nm) Peak Torque 41 - 222 oz-in (0.2895 - 1.5677 Nm)

Part Number*		BN23HS-13HS <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			BN23HS-18HS <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			BN23HS-23HS <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			BN23HS-28HS <input type="checkbox"/> <input type="checkbox"/> <input checked="" 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	1.41			1.91			2.41			2.91		
	millimeters	35.8			48.5			61.2			73.9		
Terminal Voltage	volts DC	24	36	48	24	36	48	24	36	48	24	36	48
Peak Torque	oz-in	41	41	41	101	101	101	162	162	162	222	222	222
	Nm	0.2895	0.2895	0.2895	0.7132	0.7132	0.7132	1.1440	1.1440	1.1440	1.5677	1.5677	1.5677
Continuous Stall Torque	oz-in	6	6	6	16	16	16	23	25	24	27	32	32
	Nm	0.042	0.042	0.042	0.113	0.113	0.113	0.162	0.177	0.169	0.191	0.226	0.226
Rated Speed	RPM	18991	19048	19531	19644	19818	19225	14702	14875	14908	13285	14917	14629
	rad/sec	1989	1995	2045	2057	2075	2013	1540	1558	1561	1391	1562	1532
Rated Torque	oz-in	3.5	3.5	3.5	8.0	8.0	8.0	16.0	16.0	16.0	21.0	21.0	21.0
	Nm	0.025	0.025	0.025	0.056	0.056	0.056	0.113	0.113	0.113	0.148	0.148	0.148
Rated Current	Amps	2.7	1.8	1.4	5.8	3.9	2.9	8.3	5.6	4.2	9.9	7.3	5.3
Rated Power	watts	49	49	51	116	117	114	174	176	176	206	232	227
Torque Sensitivity	oz-in/amp	1.54	2.31	3.03	1.56	2.34	3.13	2.06	3.09	4.12	2.25	3.10	4.22
	Nm/amp	0.0109	0.0163	0.0214	0.0110	0.0165	0.0221	0.0145	0.0218	0.0291	0.0159	0.0219	0.0298
Back EMF	volts/KRPM	1.14	1.71	2.24	1.15	1.73	2.31	1.52	2.28	3.04	1.66	2.29	3.12
	volts/rad/sec	0.011	0.016	0.021	0.011	0.017	0.022	0.015	0.022	0.029	0.016	0.022	0.030
Terminal Resistance	ohms	0.70	1.65	2.72	0.14	0.30	0.50	0.14	0.28	0.51	0.14	0.19	0.35
Terminal Inductance	mH	0.48	1.08	1.86	0.23	0.52	0.93	0.26	0.59	1.04	0.23	0.44	0.81
Motor Constant	oz-in/sq.rt.watt	1.84	1.80	1.84	4.17	4.27	4.43	5.51	5.84	5.77	6.01	7.11	7.13
	Nm/sq.rt.watt	0.13	0.13	0.013	0.029	0.030	0.031	0.039	0.041	0.041	0.042	0.050	0.050
Rotor Inertia	oz-in-sec ² x10 ⁻³	0.51	0.51	0.51	0.99	0.99	0.99	1.50	1.50	1.50	1.90	1.90	1.90
	g-cm ²	36.0	36.0	36.0	69.9	69.9	69.9	105.9	105.9	105.9	134.1	134.1	134.1
Weight	oz	10.0	10.0	10.0	15.0	15.0	15.0	21.0	21.0	21.0	26.0	26.0	26.0
	g	284.0	284.0	284.0	426.0	426.0	426.0	596.4	596.4	596.4	738.4	738.4	738.4
# of Poles		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Timing		120°	120°	120°	120°	120°	120°	120°	120°	120°	120°	120°	120°
Mech. Time Constant	ms	21.3	22.3	21.4	8.1	7.7	7.2	7.0	6.2	6.4	7.4	5.3	5.3
Electrical Time Constant	ms	0.69	0.65	0.68	1.64	1.73	1.86	1.86	2.11	2.04	1.64	2.32	2.31
Thermal Resistivity	deg. C/watt	6.7	6.8	6.3	4.6	4.5	4.1	4.2	4.1	4.2	3.4	3.4	3.9
Speed/Torque Gradient	rpm/oz-in	398.7	417.7	400.8	78.0	74.1	69.2	44.7	39.7	40.7	37.5	26.8	26.6

Notes:

- Motor mounted to a 4" x 4" 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 an applications engineer.

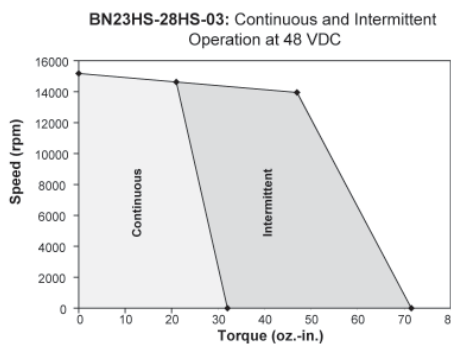
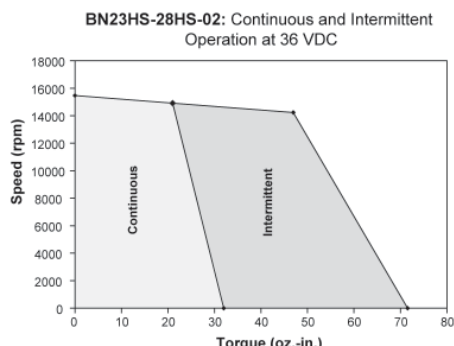
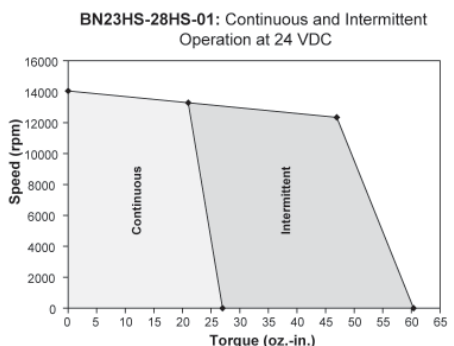
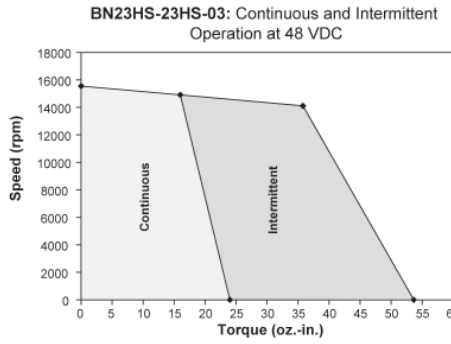
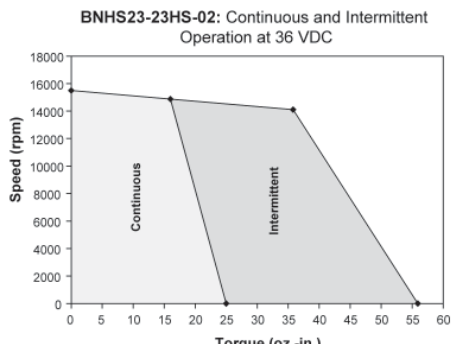
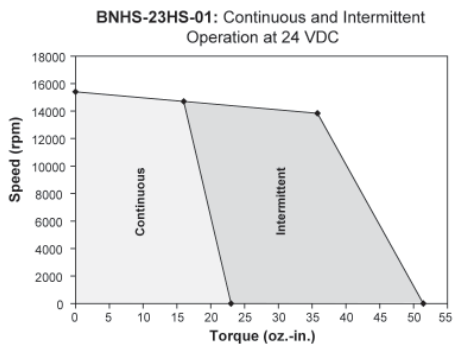
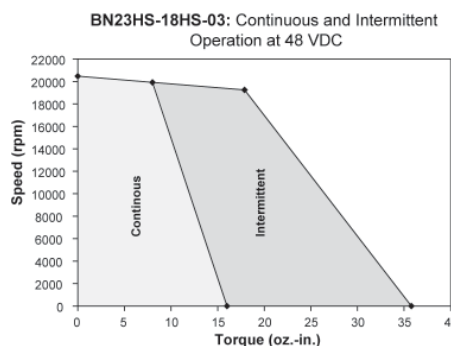
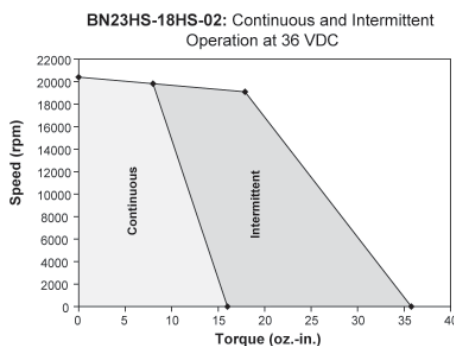
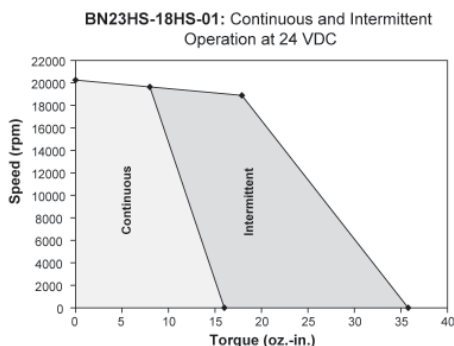
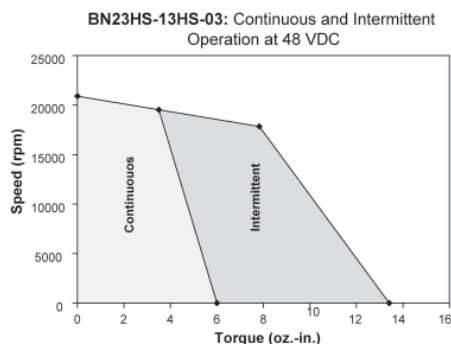
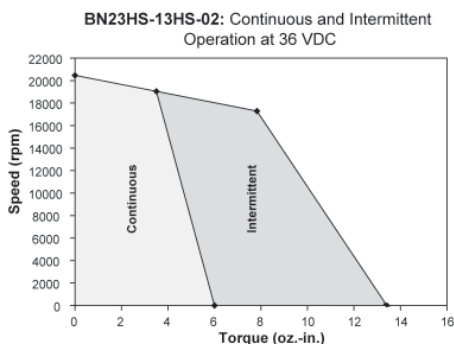
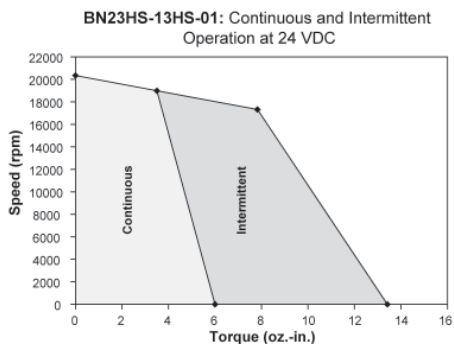
*Many other custom mechanical options are available – consult factory.

**Many other winding options are available – consult factory.

Select your options below and place their code in its corresponding block as shown on page 32.

<input checked="" type="checkbox"/> TERMINATION	<input checked="" 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

BN23 Performance Curves



Note: Intermittent region based upon 20% duty cycle - 1 minute on, 4 minutes off.

Peromatic GmbH
Gubelstrasse 28
rue Confédération 29
info@peromatic.ch

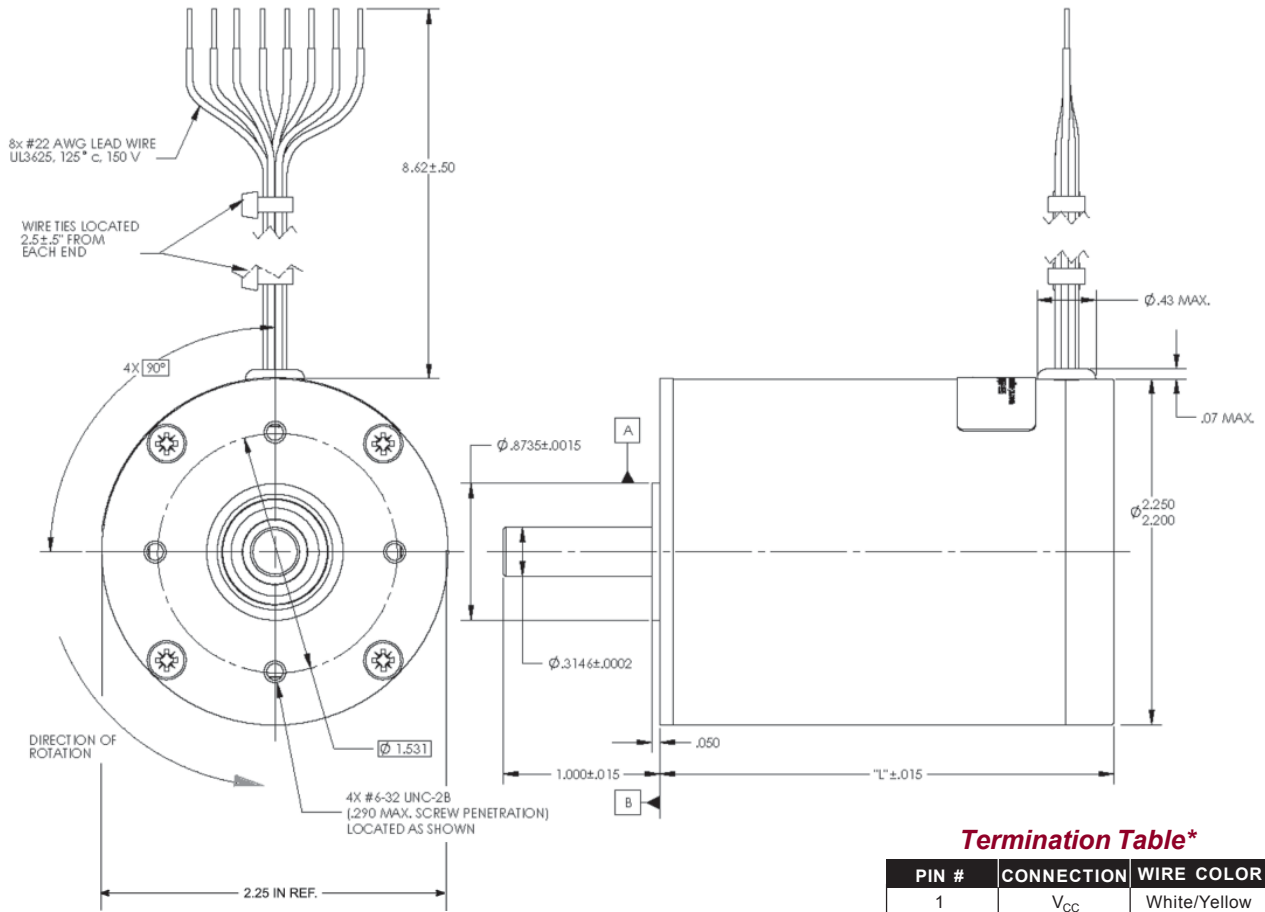
CH-8050 Zürich
CH-2300 La Chaux-de-Fonds
www.peromatic.ch

Fon +41-(0)43 300 60 60
Fon +41-(0)32 927 37 20

Fax +41-(0)43 300 60 79
Fax +41-(0)32 927 37 22

Brushless Motors

Typical Outline Drawing - BN23



Termination Table*

PIN #	CONNECTION	WIRE COLOR
1	V _{CC}	White/Yellow
2	GROUND	White/Gray
3	A COIL	White/Violet
4	B COIL	White/Black
5	C COIL	Green
6	S2 OUT	White/Blue
7	S1 OUT	White/Brown
8	S3 OUT	White

*We reserve the right to use solid color wires or white wires with color trace.

Peromatic GmbH
Gubelstrasse 28
rue Confédération 29
info@peromatic.ch

CH-8050 Zürich
CH-2300 La Chaux-de-Fonds
www.peromatic.ch

Fon +41-(0)43 300 60 60
Fon +41-(0)32 927 37 20

Fax +41-(0)43 300 60 79
Fax +41-(0)32 927 37 22