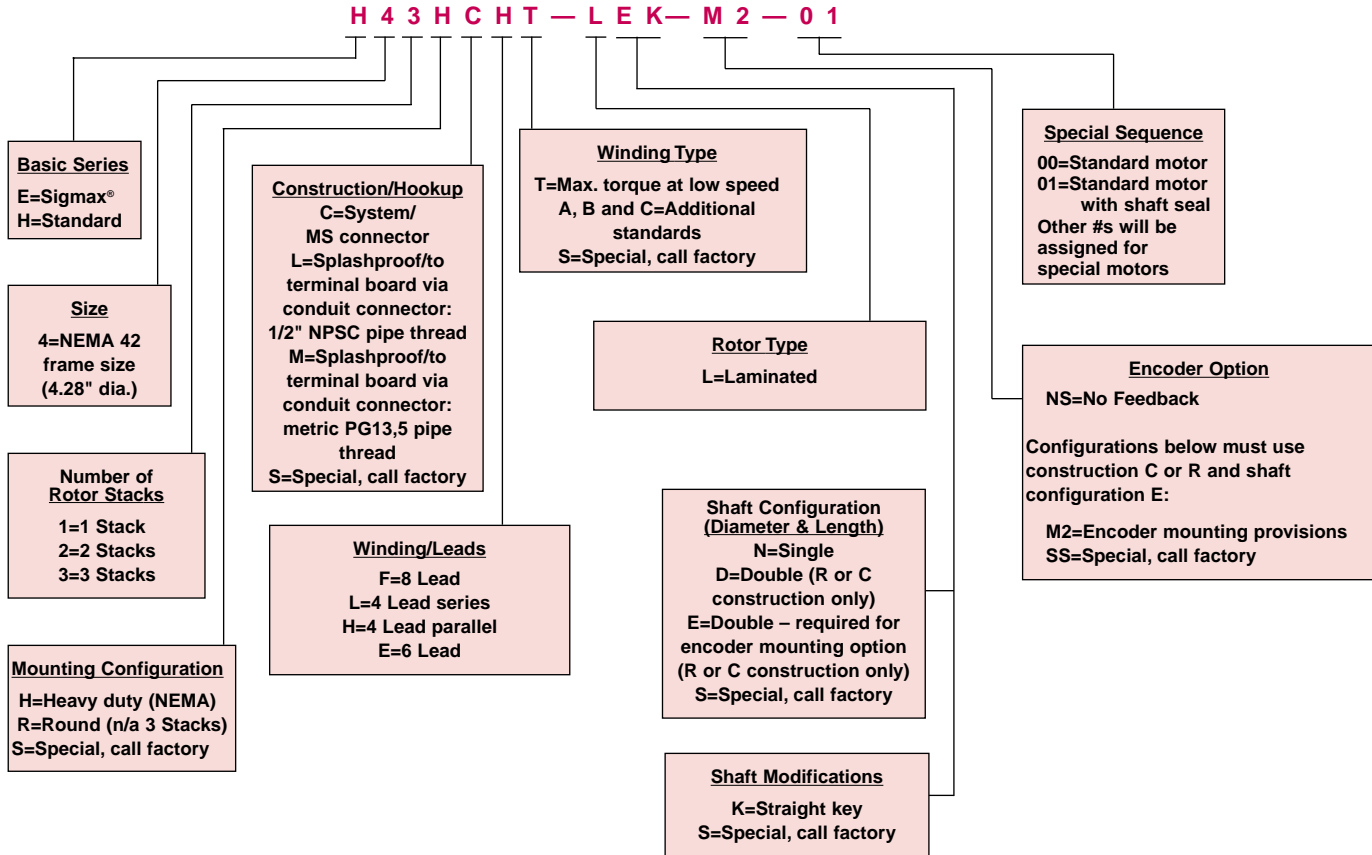


GENERAL PURPOSE— CONVENTIONAL HYBRIDS NEMA 42 FRAME (4.2" Dia.)

MODEL NUMBER CODE



The example model number above indicates a standard NEMA 42 frame motor with a three stack rotor. This motor is equipped with the standard heavy duty NEMA front end bell and shaft, and a sealed system rear end bell with MS connectors. It also has a bipolar parallel connection, a maximum torque at low speed winding, shaft seal, straight keyway and encoder mounting provisions.

HOW TO ORDER

Review the Motor Model Number Code to assure that all options are designated. Connections, encoders and phasing diagrams start on page 76. Motor dimensions are on page 72.

GENERAL PURPOSE—CONVENTIONAL HYBRIDS

NEMA 42 FRAME (4.2" Dia.)—Ratings and Characteristics

Review the Model Number Code, page 68, to assure that all options are designated. Connections, encoders and phasing diagrams start on page 76. Motor dimensions are on page 72. In addition to those below, motors with characteristics for specific performance requirements are offered. Contact factory for more details.

Rated currents are in descending order	Motor Model Number \triangle	Connection \triangle		Holding Torque \triangle (2 phases on oz-in (Nm) $\pm 10\%$)	Rated Current/Phase \triangle (amps DC)	Phase Resistance (ohms) $\pm 10\%$	Phase Inductance \triangle (mH) Typical	Detent Torque oz-in (Nm)	Thermal Resistance \triangle ($^{\circ}\text{C}/\text{watt}$)	Rotor Inertia oz-in-S ² (kgm ² x 10 ⁻³)	Weight lbs (kg)		
		Parallel	Series									Unipolar	
Torque range: 957-1378 oz-in. 6.76-9.73 Nm	E41HXHA-LXX-XX-00	•		1378 (9.73)	10.6	0.16	2.5	↑	↑	↑	↑		
	E41HXLA-LXX-XX-00	•		1378 (9.73)	5.3	0.64	10.0						
	E41HXEA-LXX-XX-00		•	974 (6.88)	7.5	0.32	2.5						
	SIGMAX[®] E41 Series 1 rotor stack	E41HXHT-LXX-XX-00	•		1353 (9.55)	5.4	0.61	9.0	58 (0.41)	1.8	0.0800 (0.565)	10.9 (4.94)	
		E41HXLT-LXX-XX-00	•		1353 (9.55)	2.7	2.41	36.1					
		E41HXET-LXX-XX-00		•	957 (6.76)	3.8	1.21	9.0					
		E41HXHB-LXX-XX-00	•		1377 (9.72)	5.3	0.64	10.0	↓	↓	↓	↓	
			E41HXLB-LXX-XX-00	•		1377 (9.72)	2.7	2.54					40.0
			E41HXEB-LXX-XX-00		•	974 (6.88)	3.7	1.27					10.0
Torque range: 585-839 oz-in. 4.13-5.93 Nm		H41HXHA-LXX-XX-00	•		839 (5.93)	10.6	0.16	3.1	↑	↑	↑	↑	
		H41HXLA-LXX-XX-00	•		839 (5.93)	5.3	0.64	12.4					
		H41HXEA-LXX-XX-00		•	593 (4.19)	7.5	0.32	3.1					
	STANDARD H41 Series 1 rotor stack	H41HXHT-LXX-XX-00	•		828 (5.84)	5.4	0.61	11.2	31 (0.22)	1.8	0.0800 (0.565)	10.9 (4.94)	
		H41HXLT-LXX-XX-00	•		828 (5.84)	2.7	2.41	44.6					
		H41HXET-LXX-XX-00		•	585 (4.13)	3.8	1.21	11.2					
		H41HXHB-LXX-XX-00	•		839 (5.92)	5.3	0.64	12.4	↓	↓	↓	↓	
			H41HXLB-LXX-XX-00	•		839 (5.92)	2.7	2.54					49.4
			H41HXEB-LXX-XX-00		•	593 (4.19)	3.7	1.27					12.4

All ratings typical and at 25°C unless otherwise noted.

- \triangle An "X" in the Model Number Code indicates an undefined option. Colored letter indicates winding. See How to Order and Model Number Code on page 68.
- \triangle Motor connections are determined by the Windings/Leads designation in the model Number Code on page 68. Note that the F designation, although not shown in the above tables, is an 8-lead option...see Terminations, page 76. In addition to the lead wire termination, terminal board and MS connector hookup for parallel, series or unipolar operation is also available.

- \triangle With rated current applied. Windings at 130°C and motor unmounted and in still air at 40°C (without heat sink).
- \triangle Windings at 130°C and motor in still air at 40°C (without heat sink). Operation of these motors above rated current may cause demagnetization. Contact factory.
- \triangle Small signal inductance as measured with impedance bridge at 1kHz, 1 amp.
- \triangle Thermal resistance measured with motor hanging in still air (unmounted).

GENERAL PURPOSE—CONVENTIONAL HYBRIDS

NEMA 42 FRAME (4.2" Dia.)—Ratings and Characteristics (Con't.)

Review the Model Number Code, page 68, to assure that all options are designated. Connections, encoders and phasing diagrams start on page 76. Motor dimensions are on page 72. In addition to those below, motors with characteristics for specific performance requirements are offered. Contact factory for more details.

Rated currents are in descending order	Motor Model Number Δ	Connection Δ			Holding Torque Δ (2 phases on) oz-in (Nm) $\pm 10\%$	Rated Current/Phase Δ (amps DC)	Phase Resistance (ohms) $\pm 10\%$	Phase Inductance Δ (mH) Typical	Detent Torque oz-in (Nm)	Thermal Resistance Δ (°C/watt)	Rotor Inertia oz-in-S ² (kgm ² x 10 ⁻³)	Weight lbs (kg)					
		Parallel	Series	Unipolar													
Torque range: 1805-2698 oz-in. 12.75-19.06 Nm	E42HXHC-LXX-XX-00	•			2698 (19.06)	14.7	0.12	2.7	↑	↑	↑	↑					
	E42HXL C-LXX-XX-00		•		2698 (19.06)	7.4	0.47	10.6									
	E42HXEC-LXX-XX-00			•	1908 (13.48)	10.4	0.24	2.7									
SIGMAX® E42 Series 2 rotor stacks	E42HXHB-LXX-XX-00	•			2598 (18.34)	9.8	0.27	5.4	81 (0.57)	1.3	0.1600 (1.129)	18.2 (8.26)					
	E42HXL B-LXX-XX-00		•		2598 (18.34)	4.9	1.07	21.7									
	E42HXEB-LXX-XX-00			•	1837 (12.97)	6.9	0.54	5.4									
	E42HXHT-LXX-XX-00	•			2552 (18.02)	7.9	0.41	7.8									
	E42HXLT-LXX-XX-00		•		2552 (18.02)	4.0	1.62	31.3									
	E42HXET-LXX-XX-00			•	1805 (12.75)	5.6	0.81	7.8									
	E42HXHA-LXX-XX-00	•			2693 (19.02)	5.9	0.74	16.6									
	E42HXLA-LXX-XX-00		•		2693 (19.02)	2.9	2.96	66.5									
	E42HXEA-LXX-XX-00			•	1904 (13.45)	4.1	1.48	16.6									
	Torque range: 1118-1652 oz-in. 7.90-11.66 Nm	H42HXHC-LXX-XX-00	•			1652 (11.66)	14.7	0.12					3.3	↑	↑	↑	↑
		H42HXL C-LXX-XX-00		•		1652 (11.66)	7.4	0.47					13.3				
		H42HXEC-LXX-XX-00			•	1168 (8.25)	10.4	0.24					3.3				
H42HXHB-LXX-XX-00		•			1604 (11.32)	9.8	0.27	6.8									
H42HXL B-LXX-XX-00			•		1604 (11.32)	4.9	1.07	27.2									
H42HXEB-LXX-XX-00				•	1134 (8.01)	6.9	0.54	6.8									
H42HXHT-LXX-XX-00		•			1581 (11.17)	7.9	0.41	9.8									
H42HXLT-LXX-XX-00			•		1581 (11.17)	4.0	1.62	39.2									
H42HXET-LXX-XX-00				•	1118 (7.90)	5.6	0.81	9.8									
H42HXHA-LXX-XX-00		•			1649 (11.65)	5.9	0.74	20.8									
H42HXLA-LXX-XX-00			•		1649 (11.65)	2.9	2.96	83.4									
H42HXEA-LXX-XX-00				•	1166 (8.24)	4.1	1.48	20.8									

- All ratings typical and at 25°C unless otherwise noted.
- Δ An "X" in the Model Number Code indicates an undefined option. Colored letter indicates winding. See How to Order and Model Number Code on page 68.
 - Δ Motor connections are determined by the Windings/Leads designation in the Model Number Code on page 68. Note that the F designation, although not shown in the above tables, is an 8-lead option...see Terminations, page 76. In addition to the lead wire termination, terminal board and MS connector hookup for parallel, series or unipolar operation is also available.

- Δ With rated current applied. Windings at 130°C and motor unmounted and in still air at 40°C (without heat sink).
- Δ Windings at 130°C and motor in still air at 40°C (without heat sink). Operation of these motors above rated current may cause demagnetization. Contact factory.
- Δ Small signal inductance as measured with impedance bridge at 1kHz, 1 amp.
- Δ Thermal resistance measured with motor hanging in still air (unmounted).

GENERAL PURPOSE—CONVENTIONAL HYBRIDS

NEMA 42 FRAME (4.2" Dia.)—Ratings and Characteristics (Con't.)

Review the Model Number Code, page 68, to assure that all options are designated. Connections, encoders and phasing diagrams start on page 76. Motor dimensions are on page 72. In addition to those below, motors with characteristics for specific performance requirements are offered. Contact factory for more details.

Rated currents are in descending order	Motor Model Number [△]	Connection [△]		Holding Torque [△] (2 phases on) oz-in (Nm) ±10%	Rated Current/Phase [△] (amps DC)	Phase Resistance (ohms) ±10%	Phase Inductance [△] (mH) Typical	Detent Torque oz-in (Nm)	Thermal Resistance [△] (°C/watt)	Rotor Inertia oz-in-S ² (kgm ² x 10 ⁻³)	Weight lbs (kg)										
		Parallel Series	Unipolar																		
Torque range: 2667-3958 oz-in. 18.84-27.95 Nm	E43HXHC-LXX-XX-00	•		3722 (26.64)	13.3	0.21	3.7	↑	↑	↑	↑										
	E43HXL C-LXX-XX-00	•		3722 (26.64)	6.7	0.84	14.7														
	E43HXEC-LXX-XX-00		•	2667 (18.84)	9.4	0.42	3.7														
	<hr/>																				
	SIGMAX® E43 Series 3 rotor stacks	E43HXHB-LXX-XX-00	•		3958 (27.95)	12.5	0.24					4.8	↑	↑	↑	↑					
		E43HXL B-LXX-XX-00	•		3958 (27.95)	6.2	0.96					19.3									
		E43HXEB-LXX-XX-00		•	2799 (19.77)	8.8	0.48					4.8									
		<hr/>																			
		E43HXHT-LXX-XX-00	•		3931 (27.76)	7.9	0.60					11.8					106 (0.75)	0.9	0.2400 (1.694)	25.7 (11.66)	
E43HXL T-LXX-XX-00		•		3931 (27.76)	4.0	2.38	47.0														
E43HXET-LXX-XX-00			•	2780 (19.63)	5.6	1.19	11.8														
<hr/>																					
E43HXHA-LXX-XX-00		•		3905 (27.58)	5.0	1.48	28.6	↓	↓	↓	↓										
E43HXL A-LXX-XX-00	•		3905 (27.58)	2.5	5.9	114															
E43HXEA-LXX-XX-00		•	2761 (19.50)	3.5	2.95	28.6															
<hr/>																					
Torque range: 1529-2651 oz-in. 10.80-18.72 Nm	H43HXHC-LXX-XX-00	•		2163 (15.27)	13.3	0.21	1.3					↑	↑	↑	↑						
	H43HXL C-LXX-XX-00	•		2163 (15.27)	6.7	0.84	5.4														
	H43HXEC-LXX-XX-00		•	1529 (10.80)	9.4	0.42	1.3														
	<hr/>																				
	STANDARD H43 Series 3 rotor stacks	H43HXHB-LXX-XX-00	•		2256 (15.93)	12.5	0.24									1.8	↑	↑	↑	↑	
		H43HXL B-LXX-XX-00	•		2256 (15.93)	6.2	0.96	7.0													
		H43HXEB-LXX-XX-00		•	1595 (11.26)	8.8	0.48	1.8													
		<hr/>																			
		H43HXHT-LXX-XX-00	•		2651 (18.72)	7.9	0.60	16.8	70 (0.49)	0.9	0.2400 (1.694)					25.7 (11.66)					
H43HXL T-LXX-XX-00		•		2651 (18.72)	4.0	2.38	67.1														
H43HXET-LXX-XX-00			•	1874 (13.24)	5.6	1.19	16.8														
<hr/>																					
H43HXHA-LXX-XX-00		•		2336 (16.50)	5.0	1.48	40.8	↓				↓	↓	↓							
H43HXL A-LXX-XX-00	•		2336 (16.50)	2.5	5.9	163															
H43HXEA-LXX-XX-00		•	1864 (13.16)	3.5	2.95	40.8															

All ratings typical and at 25°C unless otherwise noted.

- [△] An "X" in the Model Number Code indicates an undefined option. Colored letter indicates winding. See How to Order and Model Number Code on page 68.
- [△] Motor connections are determined by the Windings/Leads designation in the Model Number Code on page 68. Note that the F designation, although not shown in the above tables, is an 8-lead option...see Terminations, page 76. In addition to the lead wire termination, terminal board and MS connector hookup for parallel, series or unipolar operation is also available.

- [△] With rated current applied. Windings at 130°C and motor unmounted and in still air at 40°C (without heat sink).
- [△] Windings at 130°C and motor in still air at 40°C (without heat sink). Operation of these motors above rated current may cause demagnetization. Contact factory.
- [△] Small signal inductance as measured with impedance bridge at 1kHz, 1 amp.
- [△] Thermal resistance measured with motor hanging in still air (unmounted).

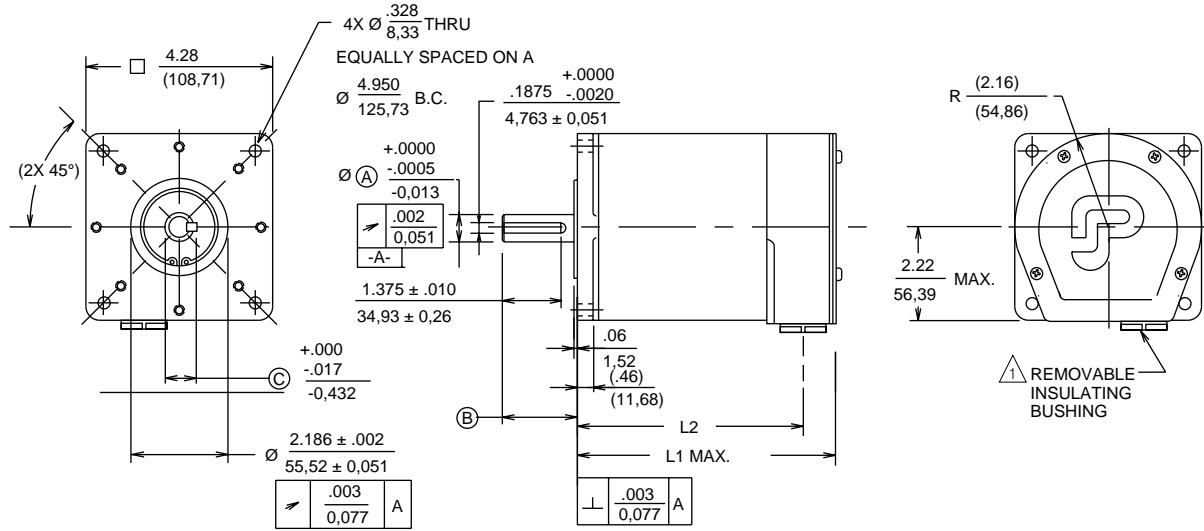
DIMENSIONS . . . GENERAL PURPOSE—CONVENTIONAL HYBRIDS

$\frac{\text{in.}}{\text{mm}}$ (metric dimensions for ref. only)

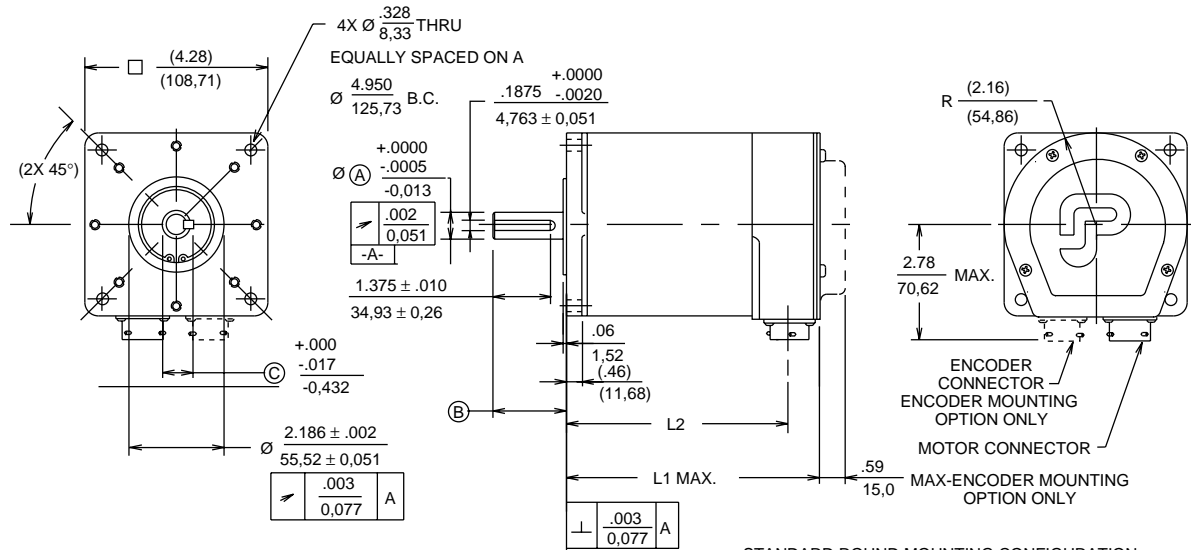
NEMA 42 FRAME

(See page 76 for Technical Data)

SPLASHPROOF CONSTRUCTION/TERMINAL BOARD CONNECTIONS=L or M

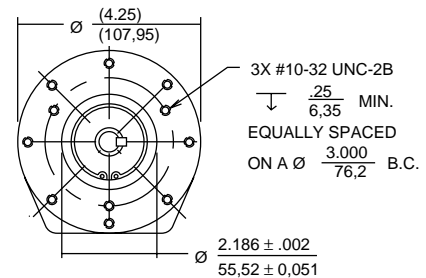


SYSTEM CONSTRUCTION/MS CONNECTOR=C and ENCODER OPTION



STANDARD ROUND MOUNTING CONFIGURATION
NOTE: NOT AVAILABLE ON 3 STACK MOTOR

MODEL NUMBER	L1 MAX.	L2	A	B	C
41H(C, L, OR M)	$\frac{5.61}{142,5}$	$\frac{(4.85)}{(123,19)}$	$\frac{.6250}{15,875}$	$\frac{1.75}{44,45}$	$\frac{.705}{17,91}$
42H(C, L, OR M)	$\frac{8.04}{204,22}$	$\frac{(7.29)}{(185,17)}$	$\frac{.6250}{15,875}$	$\frac{2.19}{55,63}$	$\frac{.705}{17,91}$
43H(C, L, OR M)	$\frac{10.56}{268,23}$	$\frac{(9.81)}{(249,18)}$	$\frac{.7500}{19,05}$	$\frac{2.19}{55,63}$	$\frac{.830}{21,09}$



ROUND MOUNTING CONFIGURATION = R

NOTE:

△ L Construction = Conduit Connection (1/2 NPSC TAP)
with .56 I.D. removable insulating bushing

M Construction = Conduit Connection (PG 13,5 TAP)
(No insulating bushing supplied)