

## Dual Motion Size 14 Linear/Rotary Actuators

**Axially move components to their insertion positions and then rotate them.**

Based on unique, patented designs and incorporate proven motor technology. Units simplify product development by replacing what would otherwise be far more bulky and complex mechanisms.

Another feature of this design is to provide an electric motor in which linear and rotary motions are controllable independently of one another.

For a rotary/linear motor, it is desirable that the linear and rotary motions be controllable independently of one another. These devices can be run using a standard two axis stepper motor driver. Performance can be enhanced using chopper and/or microstepping drives.



35000 Series Dual Motion  
with 47 mm NEMA

35000 Series: 1.8° Step Angle

Linear Travel / Step		Load Limit		Order Code I.D.
inches	mm	lbs	N	
0.00006	0.0015*	10	44.4	U
0.000098*	0.0025	10	44.4	AA
0.00012	0.0030*	15	67	N
0.00019*	0.005	15	67	AB
0.00024	0.0061*	15	67	K
0.00039*	0.01	15	67	AC
0.00048	0.0121*	15	67	J
0.00078*	0.02	15	67	AD
0.00157*	0.04	15	67	AE

\*Values truncated. Standard motors are Class B rated for maximum temperature of 130°C.

35000 Series: 0.9° Step Angle

Linear Travel / Step		Load Limit		Order Code I.D.
inches	mm	lbs	N	
0.00003	0.00076*	10	44.4	BP
0.00005*	0.00125	10	44.4	AY
0.00006	0.0015*	15	67	U
0.000098*	0.0025	15	67	AA
0.00012	0.0030*	15	67	N
0.00019*	0.005	15	67	AB
0.00024	0.0061*	15	67	K
0.00039*	0.01	15	67	AC
0.00079*	0.02	15	67	AD

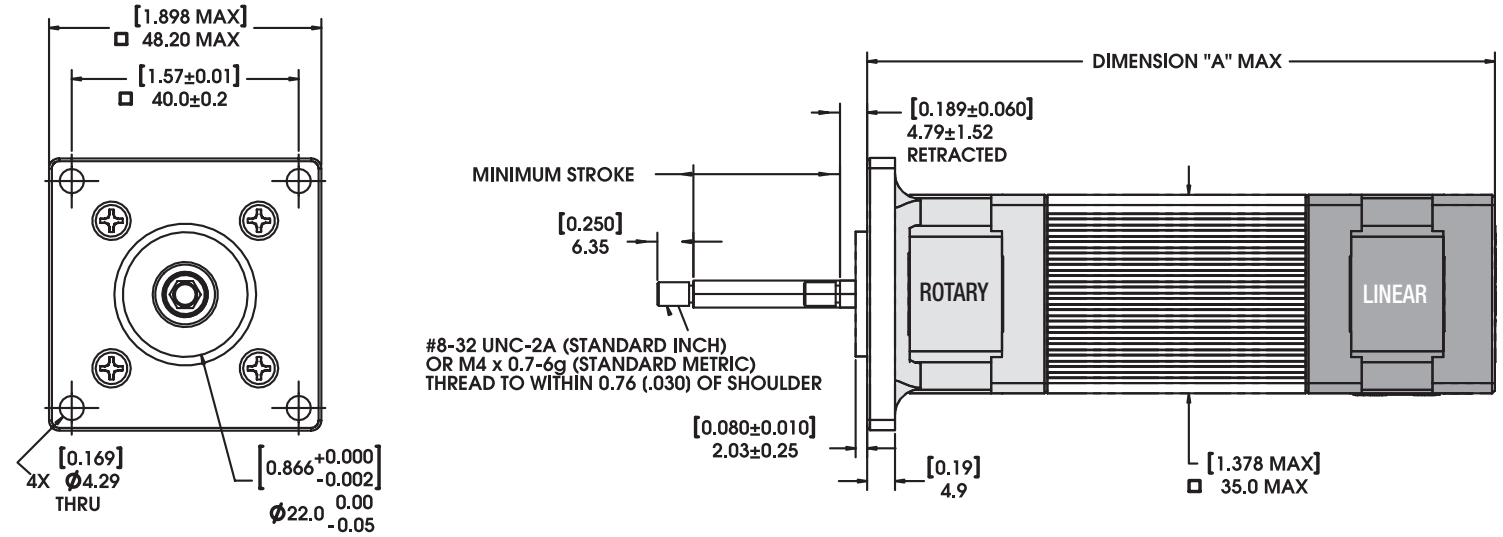
\*Values truncated. Standard motors are Class B rated for maximum temperature of 130°C.

### Identifying the Series 35000 Series Dual Motion Part Number Codes when Ordering

LR	35	H	H	4	J		05	910
Prefix LR = Linear/Rotary	Series Number Designation 35 = 35000	Rotary Step Angle H = 1.8° K = 0.9° M = 1.8° Double Stack P = 0.9° Double Stack	Linear Step Angle H = 1.8° K = 0.9°	Coils 4 = Bipolar (4 wire) 6 = Unipolar (6 wire)	1.8° Step Angle Code ID Resolution Travel/Step U = .00006-in (.0015) AA = .000098-in (.0025) N = .00012-in (.0030) AB = .00019-in (.005) K = .00024-in (.0061) AC = .00039-in (.01) J = .00048-in (.0121) AD = .00078-in (.02) AE = .00157-in (.04)	0.9° Step Angle Code ID Resolution Travel/Step BP = .00003-in (.00076) AY = .00005-in (.00125) U = .00006-in (.0015) AA = .000098-in (.0025) N = .00012-in (.0030) AB = .00019-in (.005) K = .00024-in (.0061) AC = .00039-in (.01) AD = .00078-in (.02)	Voltage 05 = 5 VDC 12 = 12 VDC SP = Mixed Voltages  Custom V available	Suffix Stroke Example: -910 = 1-in (26 mm) -XXX = Proprietary suffix assigned to a specific customer application. The identifier can apply to either a standard or custom part.

NOTE: Dashes must be included in Part Number (–) as shown above. For assistance call our Engineering Team at 203 756 7441.  
See 35000 Series Hybrid Linear Data Sheet for More Detailed Motor Information.

Dimensions = (mm) inches



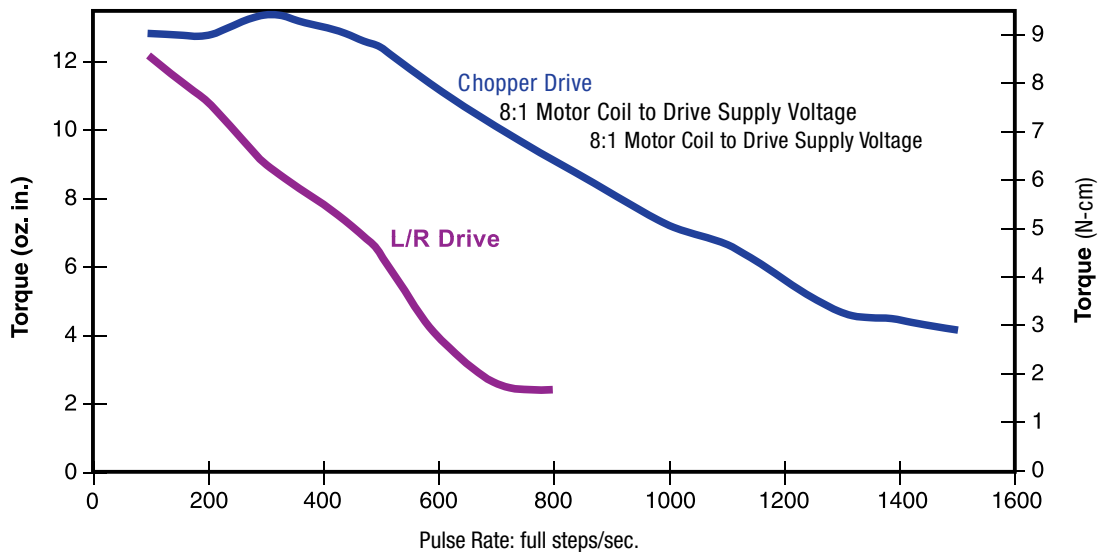
Stroke	Dim. "A"	Suffix #	M4x0.7 Thread
0.500 (12.7)	3.9 (99.3)	-905	-805
1.00 (25.4)	4.409 (112.0)	-910	-810
2.00 (50.8)	5.409 (137.4)	-920	-820
4.00 (101.6)	7.409 (188.2)	-925	-825

Standard strokes available:

1-in. (26 mm), 2-in. (51 mm) and 4-in. (102 mm).

Customized strokes available to 6-in. (152 mm)

## TORQUE vs. PULSE RATE: ROTARY FUNCTION – Bipolar – 100% Duty Cycle



NOTE: All chopper drive curves were created with a 5 volt motor and a 40 volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

With L/R drives peak force and speeds are reduced, using a unipolar drive will yield a further 30% force reduction.