

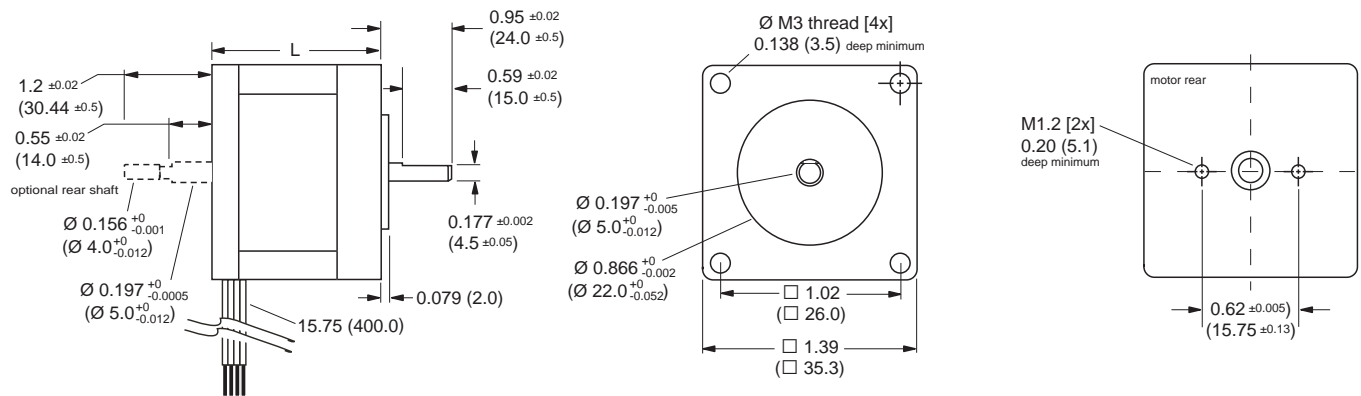
# NEMA14 stepper motors

1.8° 2-phase stepper motors



## Dimensions — NEMA14

Dimensions in inches (mm)



L

M-1410-0.75• 1.02 (26)

## Ambient conditions

Ambient temperature	°C	-25 ... +40
Max. installation height over m.s.l. without power loss	m	< 1000
Transport and storage temperature	°C	-25 ... +70
Relative humidity	%	15 ... 85, no condensation allowed
Thermal class		130 (B)

## Electrical and mechanical data

NEMA14		M-1410-0.75•
Stack length		single
Phase current	amps	0.75
Holding torque	oz-in	10
	N-cm	7
Rotor inertia	oz-in-sec <sup>2</sup>	0.00017
	kg-cm <sup>2</sup>	0.012
Phase inductance	mH	4.0
Phase resistance	Ω	4.3
Weight	oz	4.2
	grams	120

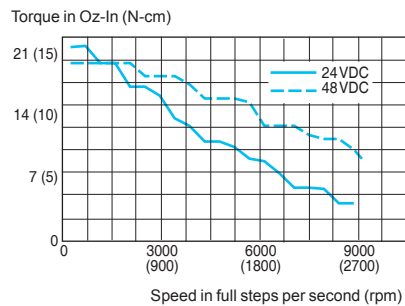
# NEMA14 stepper motors






## 1.8° 2-phase

References							
<b>Example:</b>	<b>M</b>	<b>-</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>- 0.75 S</b>
<b>Motor type</b> M = stepper motor	M	-	1	4	1	0	- 0.75 S
<b>Flange size</b> 14 = NEMA14 (36 mm)	M	-	1	4	1	0	- 0.75 S
<b>Motor length</b> 10 = single stack	M	-	1	4	1	0	- 0.75 S
<b>Phase current</b> 0.75 = 0.75 amp	M	-	1	4	1	0	- 0.75 S
<b>Shaft</b> S = single shaft D = double shaft							S

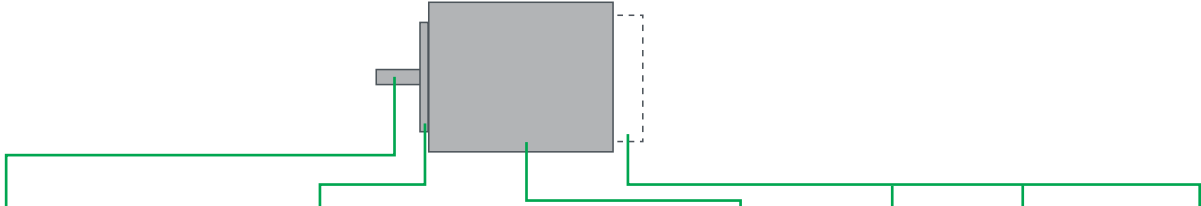
### Speed-torque curves

#### M-1410-0.75•



Complete product offer		M-11•	M-14•	M-17•	M-22•	M-34•
2-phase stepper motors						
Size	NEMA	11	14	17	23	34
Holding torque	oz-in	13 ... 24	10	32 ... 75	90 ... 239	408 ... 1090
	N-cm	9 ... 17	7	23 ... 53	64 ... 169	288 ... 770
Number of full steps per revolution		200				
Step angle $\alpha$		1.8				
Motor connection		pluggable connector		4 flying leads		

### Motor types



Shaft version	Centering collar		Flange size		Lengths without shaft		Winding	Motor connection	Optional rear shaft (1)	Optional encoder		
	inches	mm	inches	mm	inches	mm						
<b>M-11•</b>												
Round shaft with single flat feature	Ø 0.197	Ø 5.0	Ø 0.866	Ø 22	0.65	16.5	1.22 1.57 2.01	31 40 51	2-phase full coil for bi-polar operation	pluggable connector	Round shaft	1000-line differential
<b>M-14•</b>												
Round shaft with single flat feature	Ø 0.197	Ø 5.0	Ø 0.866	Ø 22	1.39	35.3	1.02	26	2-phase full coil for bi-polar operation	4 flying leads	Round shaft	Single-end or differential
<b>M-17•</b>												
Round shaft with single flat feature	Ø 0.197	Ø 5.0	Ø 0.866	Ø 22	1.67	42.3	1.34 1.57 1.89	34 40 48	2-phase full coil for bi-polar operation	4 flying leads	Flat feature extending to rear end bell	Single-end or differential
<b>M-22•</b>												
Round shaft with single flat feature	Ø 0.25	Ø 6.35	Ø 1.50	Ø 38	2.22	56.4	1.77 2.13 2.99	45 54 76	2-phase full coil for bi-polar operation	4 flying leads	Flat feature extending to rear end bell (2)	Single-end or differential
<b>M-34•</b>												
Round shaft with single flat feature	Ø 0.554	Ø 14.0	Ø 2.874	Ø 73	3.386	86.0	2.48 3.15 4.72	63 80 120	2-phase full coil for bi-polar operation	4 flying leads	Flat feature on round shaft	Single-end or differential

(1) Optional rear shaft available except for NEMA23 2.4amp motors.  
 (2) Optional rear shaft on NEMA23 6.0amp motors is round without a flat feature.