



2-phase stepping motor

# 56mm sq. (2.20inch sq.)

103H712 □  
1.8° /step

Unipolar winding • Lead wire type

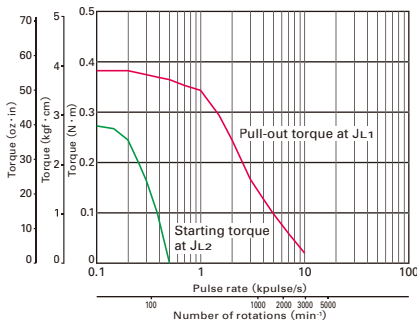
Model		Holding torque at 2-phase energization [N · m (oz · in) MIN.]	Rated current A/phase	Wiring resistance Ω /phase	Winding inductance mH/phase	Rotor inertia [×10 <sup>-4</sup> kg · m <sup>2</sup> (oz · in <sup>2</sup> )]	Mass (Weight) [kg (lbs) ]
Single shaft	Double shafts						
103H7121-0140	-0110	0.39 (55.2)	1	4.8	8	0.1 (0.55)	0.47 (1.04)
103H7121-0440	-0410	0.39 (55.2)	2	1.25	1.9	0.1 (0.55)	0.47 (1.04)
103H7121-0740	-0710	0.39 (55.2)	3	0.6	0.8	0.1 (0.55)	0.47 (1.04)
103H7123-0140	-0110	0.83 (117.)	1	6.7	15	0.21 (1.15)	0.65 (1.43)
103H7123-0440	-0410	0.83 (117.5)	2	1.6	3.8	0.21 (1.15)	0.65 (1.43)
103H7123-0740	-0710	0.78 (110.5)	3	0.77	1.58	0.21 (1.15)	0.65 (1.43)
103H7124-0140	-0110	0.98 (138.8)	1	7	14.5	0.245 (1.34)	0.8 (1.76)
103H7124-0440	-0410	0.98 (138.8)	2	1.7	3.1	0.245 (1.34)	0.8 (1.76)
103H7124-0740	-0710	0.98 (138.8)	3	0.74	1.4	0.245 (1.34)	0.8 (1.76)
103H7126-0140	-0110	1.27 (179.8)	1	8.6	19	0.36 (1.97)	0.98 (2.16)
103H7126-0440	-0410	1.27 (179.8)	2	2	4.5	0.36 (1.97)	0.98 (2.16)
103H7126-0740	-0710	1.27 (179.8)	3	0.9	2.2	0.36 (1.97)	0.98 (2.16)

Bipolar winding • Lead wire type

Model		Holding torque at 2-phase energization [N · m (oz · in) MIN.]	Rated current A/phase	Wiring resistance Ω /phase	Winding inductance mH/phase	Rotor inertia [×10 <sup>-4</sup> kg · m <sup>2</sup> (oz · in <sup>2</sup> )]	Mass (Weight) [kg (lbs) ]
Single shaft	Double shafts						
103H7121-5640	-5610	0.55 (77.9)	1	4.3	14.5	0.1 (0.55)	0.47 (1.04)
103H7121-5740	-5710	0.55 (77.9)	2	1.1	3.7	0.1 (0.55)	0.47 (1.04)
103H7121-5840	-5810	0.55 (77.9)	3	0.54	1.74	0.1 (0.55)	0.47 (1.04)
103H7123-5640	-5610	1.0 (141.6)	1	5.7	29.4	0.21 (1.15)	0.65 (1.43)
103H7123-5740	-5710	1.0 (141.6)	2	1.5	7.5	0.21 (1.15)	0.65 (1.43)
103H7123-5840	-5810	1.0 (141.6)	3	0.7	3.5	0.21 (1.15)	0.65 (1.43)
103H7126-5640	-5610	1.6 (226.6)	1	7.7	34.6	0.36 (1.97)	0.98 (2.16)
103H7126-5740	-5710	1.6 (226.6)	2	2	9.1	0.36 (1.97)	0.98 (2.16)
103H7126-5840	-5810	1.6 (226.6)	3	0.94	4	0.36 (1.97)	0.98 (2.16)
103H7128-5640	-5610	2.0 (283.2)	1	8.9	40.1	0.49 (2.68)	1.3 (2.87)
103H7128-5740	-5710	2.0 (283.2)	2	2.3	10.4	0.49 (2.68)	1.3 (2.87)
103H7128-5840	-5810	2.0 (283.2)	3	1.03	4.3	0.49 (2.68)	1.3 (2.87)

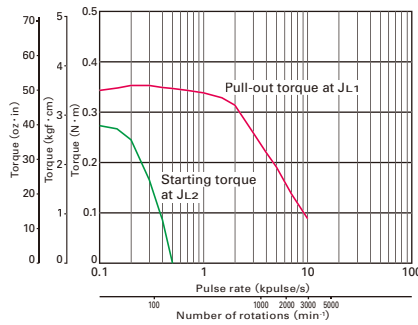
## Pulse rate-torque characteristics

### ● 103H7121-01 □□



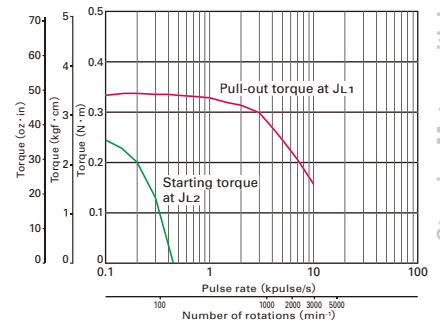
Constant current circuit  
Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7121-04 □□



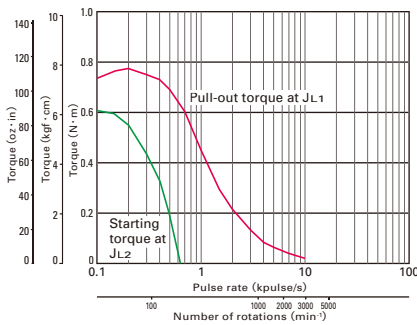
Constant current circuit  
Source voltage : DC24V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7121-07 □□



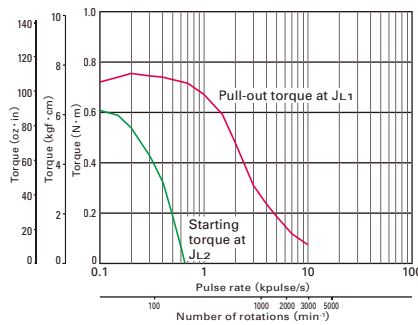
Constant current circuit  
Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7123-01 □□



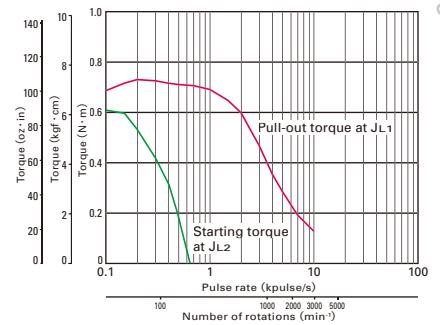
Constant current circuit  
Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7123-04 □□



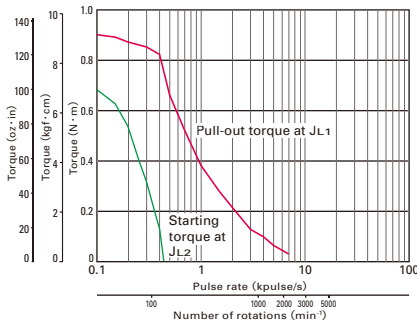
Constant current circuit  
Source voltage : DC24V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7123-07 □□



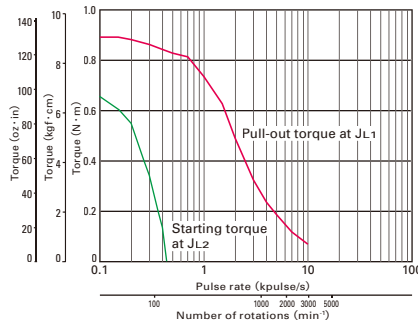
Constant current circuit  
Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7124-01 □□



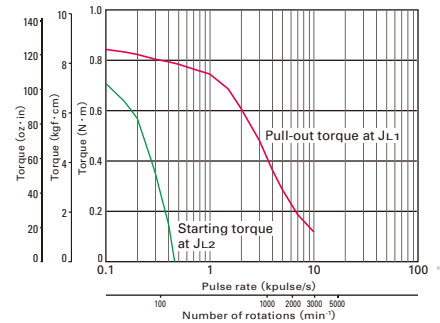
Constant current circuit  
Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7124-04 □□



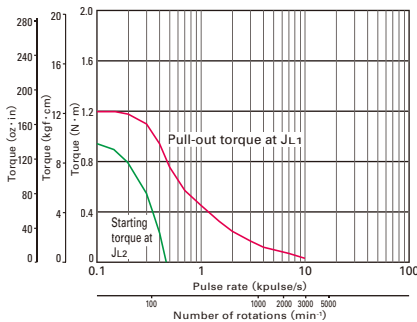
Constant current circuit  
Source voltage : DC24V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7124-07 □□



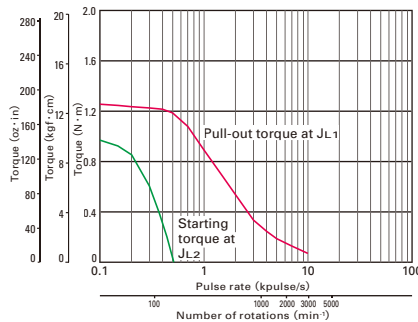
Constant current circuit  
Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7126-01 □□



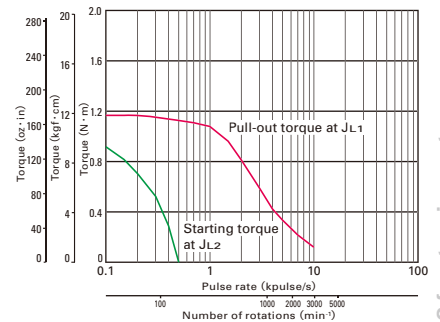
Constant current circuit  
Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7126-04 □□



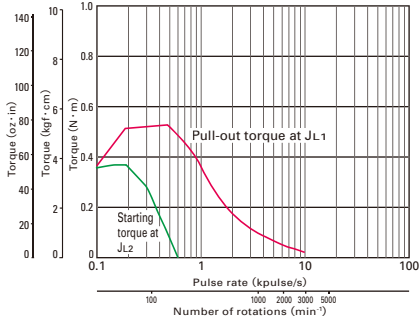
Constant current circuit  
Source voltage : DC24V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

### ● 103H7126-07 □□



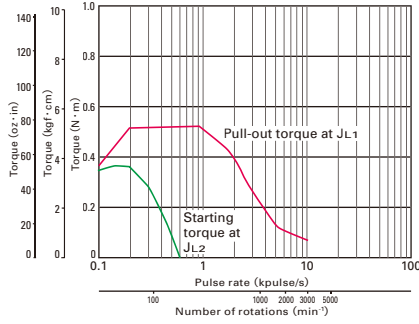
Constant current circuit  
Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7121-56 □□



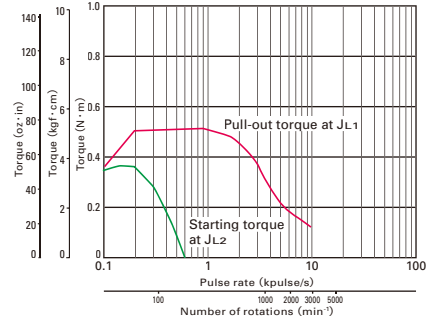
Constant current circuit  
Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7121-57 □□



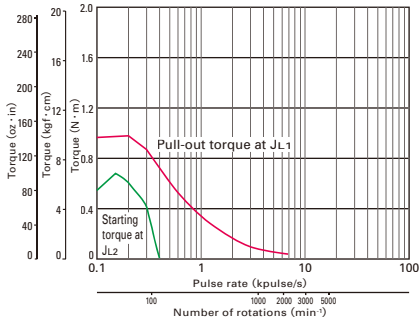
Constant current circuit  
Source voltage : DC24V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7121-58 □□



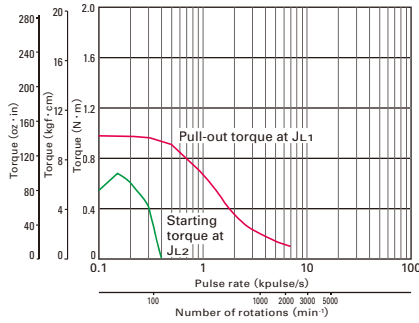
Constant current circuit  
Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7123-56 □□



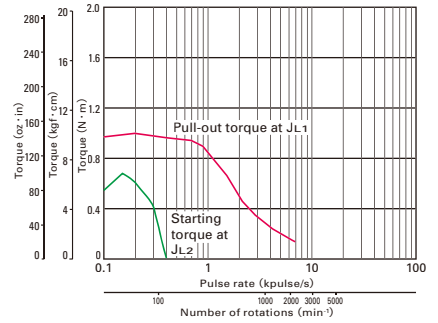
Constant current circuit  
Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7123-57 □□



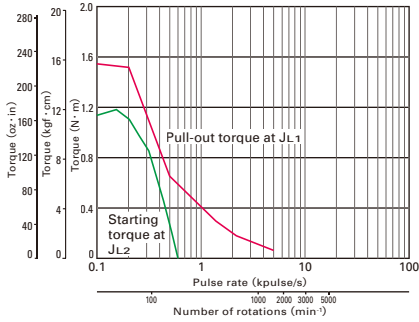
Constant current circuit  
Source voltage : DC24V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7123-58 □□



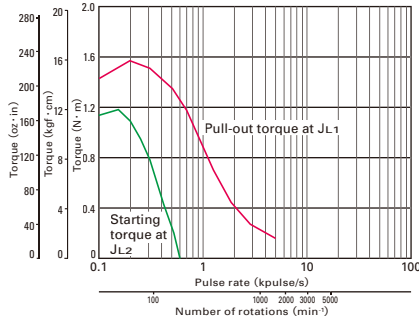
Constant current circuit  
Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7126-56 □□



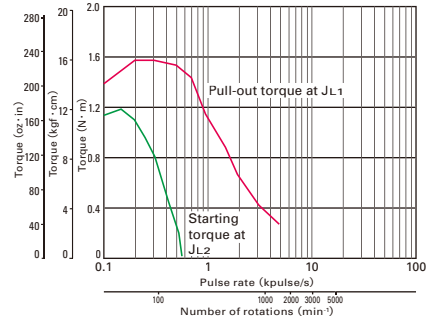
Constant current circuit  
Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7126-57 □□



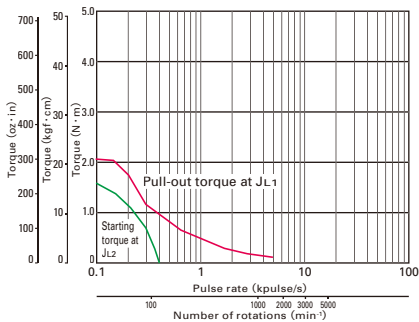
Constant current circuit  
Source voltage : DC24V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7126-58 □□



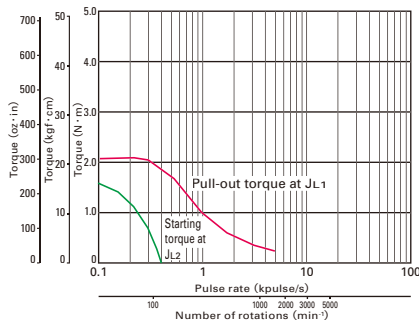
Constant current circuit  
Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7128-56 □□



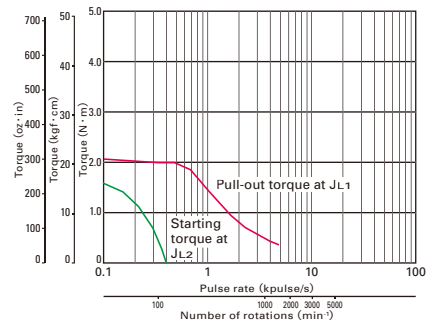
Constant current circuit  
Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7128-57 □□



Constant current circuit  
Source voltage : DC24V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)$  use the direct coupling]

● 103H7128-58 □□



Constant current circuit  
Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)$  use the rubber coupling]  
 $J_{L2} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)$  use the direct coupling]



## 2-phase stepping motor

# 56mm sq. (2.20inch sq.)

103H712 □  
CE marking  
1.8° /step

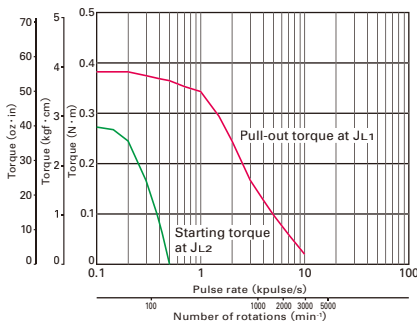


## Unipolar winding

Model		Holding torque at 2-phase energization		Rated current	Wiring resistance	Winding inductance	Rotor inertia	Mass (Weight)
Single shaft	Double shafts	[N · m (oz · in) MIN.]		A/phase	Ω /phase	mH/phase	[×10 <sup>-4</sup> kg · m <sup>2</sup> (oz · in <sup>2</sup> )]	[kg (lbs) ]
103H7121-6140	-6110	0.39 (55.2)		1	4.8	8	0.1 (0.55)	0.47 (1.04)
103H7121-6740	-6710	0.39 (55.2)		3	0.6	0.8	0.1 (0.55)	0.47 (1.04)
103H7123-6140	-6110	0.83 (117.5)		1	6.7	15	0.21 (1.15)	0.65 (1.43)
103H7123-6740	-6710	0.78 (110.5)		3	0.77	1.58	0.21 (1.15)	0.65 (1.43)
103H7126-6140	-6110	1.27 (179.8)		1	8.6	19	0.36 (1.97)	0.98 (2.16)
103H7126-6740	-6710	1.27 (179.8)		3	0.9	2.2	0.36 (1.97)	0.98 (2.16)

## Pulse rate-torque characteristics

## ● 103H7121-61 □□

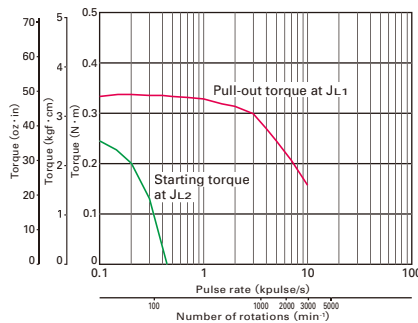


## Constant current circuit

Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)

$J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)]$  use the direct coupling]

## ● 103H7121-67 □□

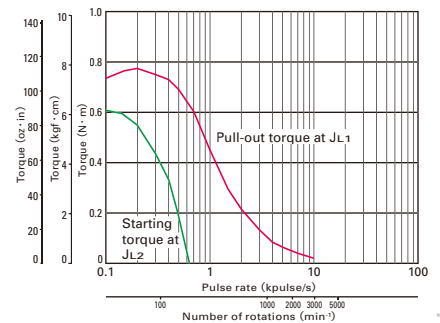


## Constant current circuit

Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)

$J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)]$  use the direct coupling]

## ● 103H7123-61 □□

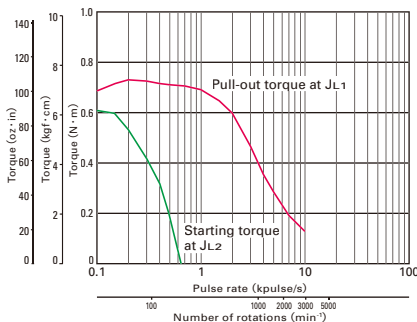


## Constant current circuit

Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)

$J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)]$  use the direct coupling]

## ● 103H7123-67 □□

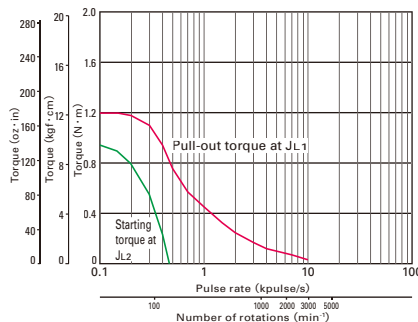


## Constant current circuit

Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)

$J_{L1} = [0.94 \times 10^{-4} \text{kg} \cdot \text{m}^2 (5.14 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]  
 $J_{L2} = [0.8 \times 10^{-4} \text{kg} \cdot \text{m}^2 (4.37 \text{oz} \cdot \text{in}^2)]$  use the direct coupling]

## ● 103H7126-61 □□

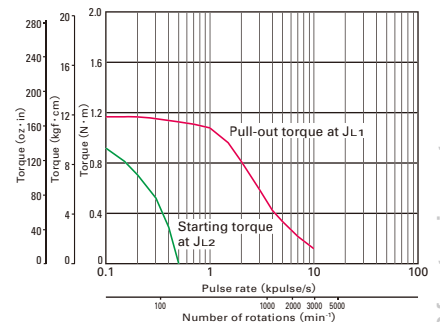


## Constant current circuit

Source voltage : DC24V · operating current : 1A/phase,  
2-phase energization (full-step)

$J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)]$  use the direct coupling]

## ● 103H7126-67 □□



## Constant current circuit

Source voltage : DC24V · operating current : 3A/phase,  
2-phase energization (full-step)

$J_{L1} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]  
 $J_{L2} = [2.6 \times 10^{-4} \text{kg} \cdot \text{m}^2 (14.22 \text{oz} \cdot \text{in}^2)]$  use the direct coupling]