



2-phase Stepping Motor

86mm cir. 103H822□
1.8°/step

- For information on the applicable driver, contact our sales department.

Specifications

Unipolar winding

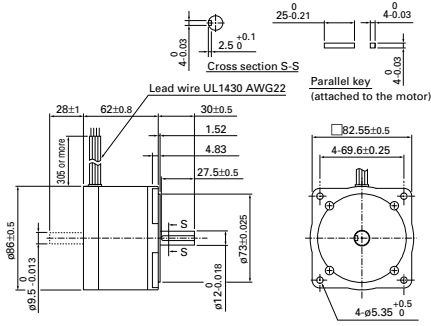
Model		Holding torque at 2-phase energization N.m or more	Rated current A/phase	Wiring resistance Ω/phase	Wiring inductance mH/phase	Rotor inertia ×10 ⁻⁴ kg·m ²	Weight kg
One shaft	Two shafts						
103H8221-0441	-0411	2.15	2	2.5	7.2	1.45	1.5
103H8221-0941	-0911	2.15	4	0.62	1.8	1.45	1.5
103H8222-0441	-0411	4.13	2	4.0	15	2.9	2.5
103H8222-0941	-0911	4.13	4	0.97	3.6	2.9	2.5
103H8223-0441	-0411	6.27	2	5.6	24	4.4	3.5
103H8223-0941	-0911	6.27	4	1.35	5.6	4.4	3.5

Bipolar winding

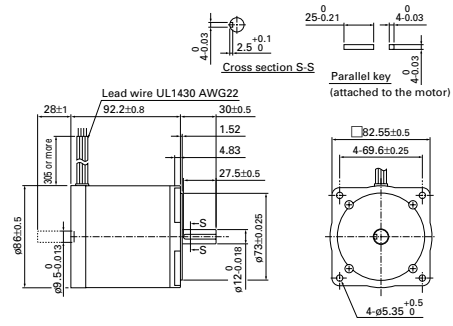
Model		Holding torque at 2-phase energization N.m or more	Rated current A/phase	Wiring resistance Ω/phase	Wiring inductance mH/phase	Rotor inertia ×10 ⁻⁴ kg·m ²	Weight kg
One shaft	Two shafts						
103H8221-5041	-5011	2.74	2	2.3	14	1.45	1.5
103H8221-5141	-5111	2.74	4	0.6	3.5	1.45	1.5
103H8221-5241	-5211	2.74	6	0.3	1.65	1.45	1.5
103H8222-5041	-5011	5.09	2	2.7	23	2.9	2.5
103H8222-5141	-5111	5.09	4	0.7	5.7	2.9	2.5
103H8222-5241	-5241	5.09	6	0.35	2.7	2.9	2.5
103H8223-5041	-5011	7.44	2	3.6	32.5	4.4	3.5
103H8223-5141	-5111	7.44	4	0.9	8.1	4.4	3.5
103H8223-5241	-5211	7.44	6	0.45	3.4	4.4	3.5

Dimensions (Unit: mm)

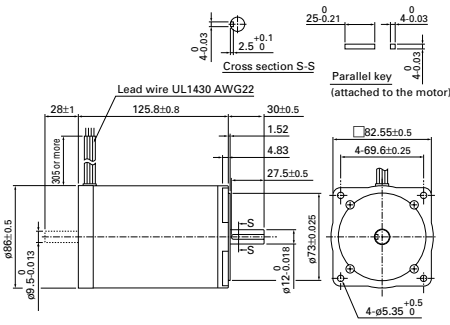
103H8221-0441/0941/5041/5141/5241 (Single shaft)
103H8221-0411/0911/5011/5111/5211 (Double shaft)



103H8222-0441/0941/5041/5141/5241 (Single shaft)
103H8222-0411/0911/5011/5111/5211 (Double shaft)



103H8223-0441/0941/5041/5141/5241 (Single shaft)
103H8223-0411/0911/5011/5111/5211 (Double shaft)



□ 39mm(0.9")
□ 42mm(0.9")

□ 56mm(0.9")

□ 28mm(1.8")

□ 42mm(1.8")

□ 50mm(1.8")

□ 56mm(1.8")

□ 60mm(1.8")

□ 86mm(1.8")

□ 106mm(1.8")

□ 56mm(CE)

□ 86mm(CE)

□ 106mm(CE)

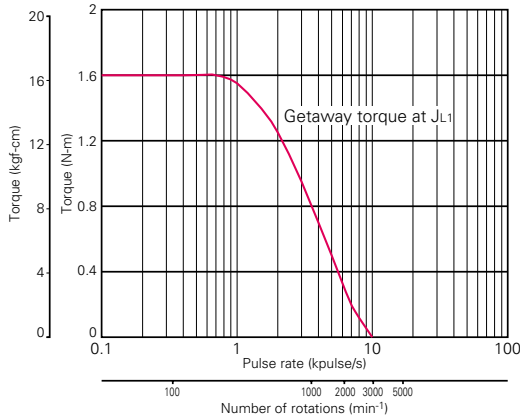
Specifications of 2-phase stepping motor

In-vacuum stepping motor

2-phase synchronous motor

Pulse Rate - Torque Characteristics

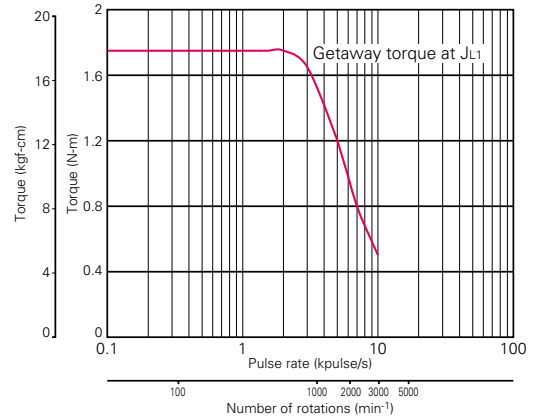
●103H8221-0441



Sanyo constant current circuit

Source voltage: AC100V Wiring current: 2A/phase, 2-phase energization (full-step)
 $J_{L1}=0.94 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

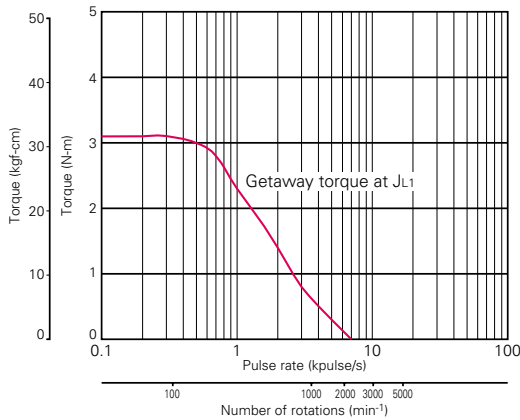
●103H8221-0941



Sanyo constant current circuit

Source voltage: AC100V Wiring current: 4A/phase, 2-phase energization (full-step)
 $J_{L1}=15.1 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

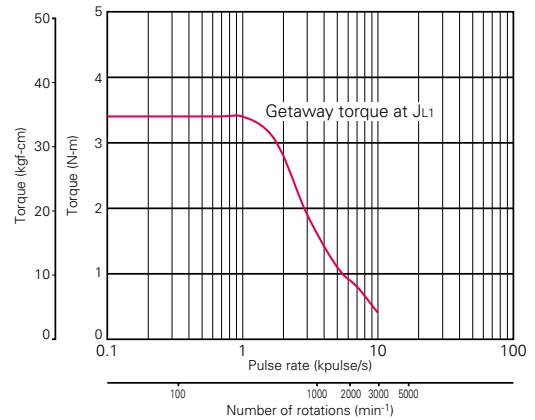
●103H8222-0441



Sanyo constant current circuit

Source voltage: AC100V Wiring current: 2A/phase, 2-phase energization (full-step)
 $J_{L1}=2.6 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

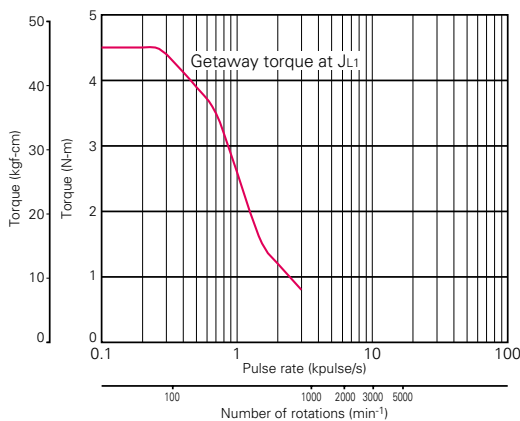
●103H8222-0941



Sanyo constant current circuit

Source voltage: AC100V Wiring current: 4A/phase, 2-phase energization (full-step)
 $J_{L1}=15.1 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

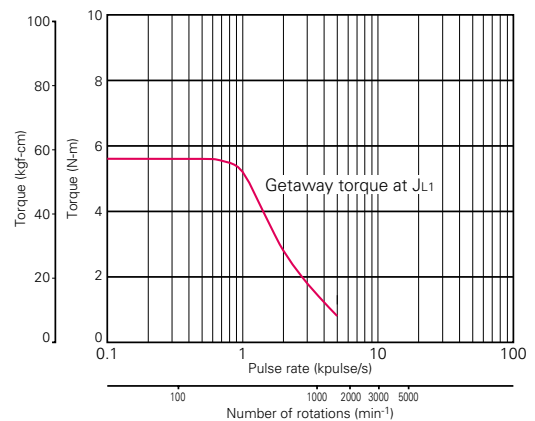
●103H8223-0441



Sanyo constant current circuit

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 $J_{L1}=2.6 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

●103H8223-0941

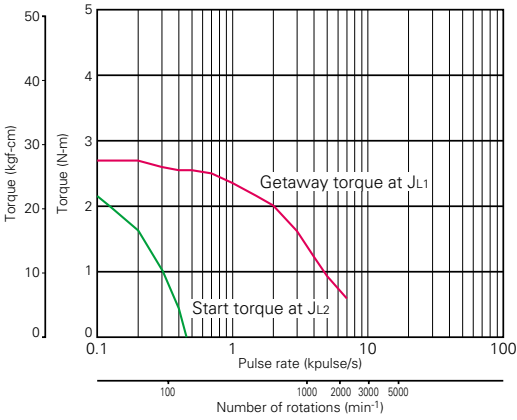


Sanyo constant current circuit

Source voltage: AC100V Wiring current: 4A/phase, 2-phase energization (full-step)
 $J_{L1}=15.1 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)
 $J_{L2}=0.8 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

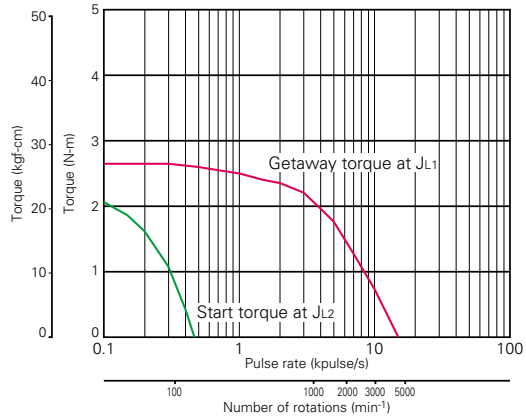
Pulse Rate - Torque Characteristics

●103H8221-5041



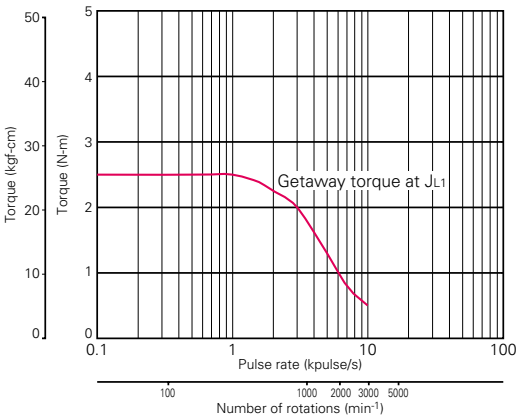
Sanyo constant current circuit
 Source voltage: AC100V Wiring current: 2A/phase, 2-phase energization (full-step)
 $J_{L1}=7.4 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)
 $J_{L2}=7.4 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

●103H8221-5141



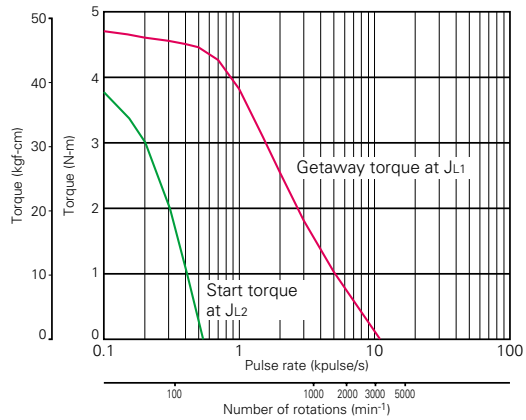
Sanyo constant current circuit
 Source voltage: AC100V Wiring current: 4A/phase, 2-phase energization (full-step)
 $J_{L1}=7.4 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)
 $J_{L2}=7.4 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

●103H8221-5241



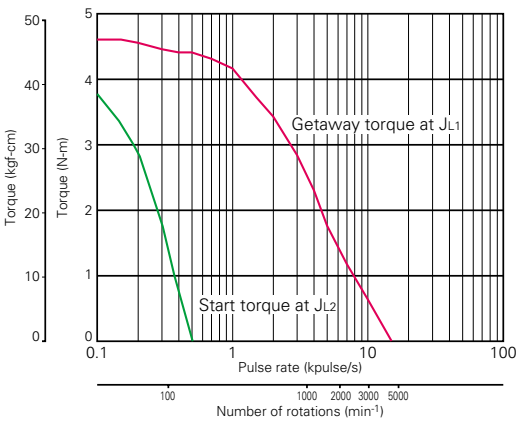
Sanyo constant current circuit
 Source voltage: AC100V Wiring current: 6A/phase, 2-phase energization (full-step)
 $J_{L1}=15.1 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

●103H8222-5041



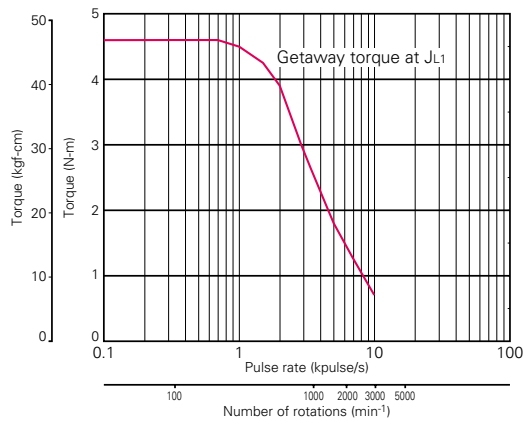
Sanyo constant current circuit
 Source voltage: AC100V Wiring current: 2A/phase, 2-phase energization (full-step)
 $J_{L1}=15.3 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)
 $J_{L2}=15.3 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

●103H8222-5141



Sanyo constant current circuit
 Source voltage: AC100V Wiring current: 4A/phase, 2-phase energization (full-step)
 $J_{L1}=15.3 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)
 $J_{L2}=15.3 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

●103H8222-5241

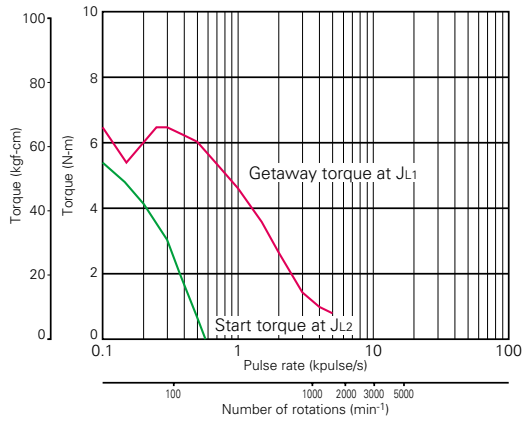


Sanyo constant current circuit
 Source voltage: AC100V Wiring current: 6A/phase, 2-phase energization (full-step)
 $J_{L1}=15.1 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

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- 56mm(CE)
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- Specifications of 2-phase stepping motor
- In-vacuum stepping motor
- 2-phase synchronous motor

Pulse Rate - Torque Characteristics

●103H8223-5041



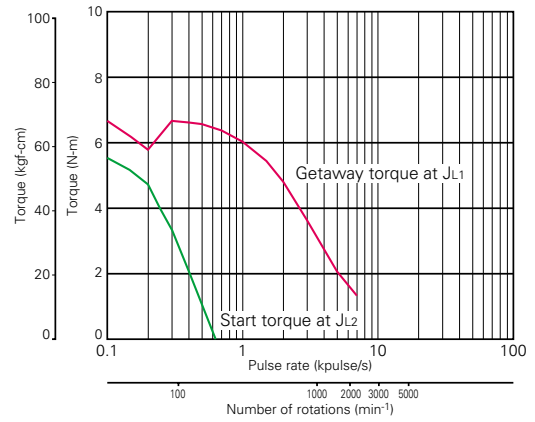
Sanyo constant current circuit

Source voltage: AC100V Wiring current: 2A/phase, 2-phase energization (full-step)

$J_{L1}=15.3 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

$J_{L2}=15.3 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

●103H8223-5141



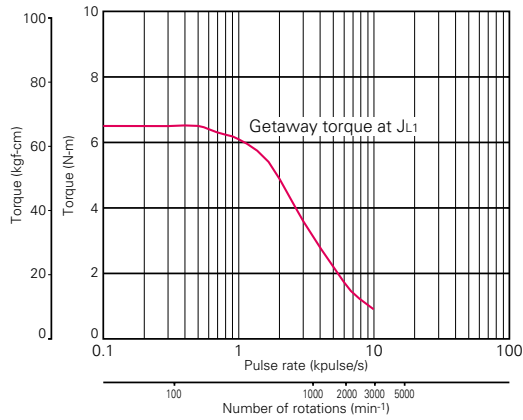
Sanyo constant current circuit

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$J_{L1}=15.3 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

$J_{L2}=15.3 \times 10^{-4} \text{kg}\cdot\text{m}^2$ (Uses rubber coupling)

●103H8223-5241



Sanyo constant current circuit

Source voltage: AC100V Wiring current: 6A/phase, 2-phase energization (full-step)

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