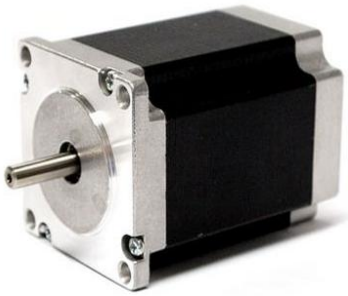
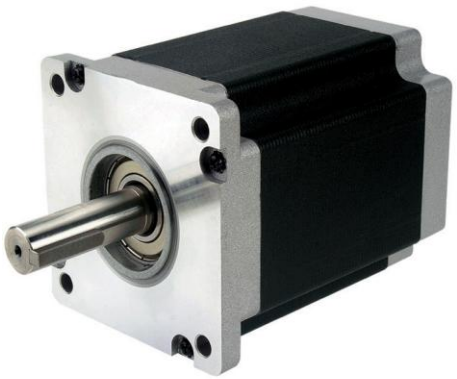
ModuSystems

Stepper Motors





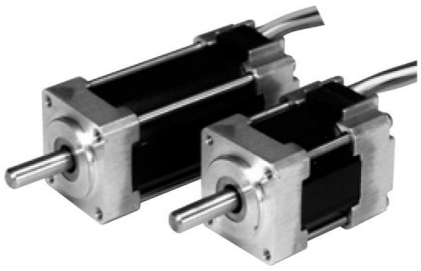
Motor P/N	Frame Size	Step Angle (deg)	Rated Current (A/phase)	Holding Torque (oz-in)	Motor Length (in)	Mass (lbs)
N08-1D	NEMA 8	1.8	0.2	2.5	1.1	0.11
N08-2D	NEMA 8	1.8	0.6	2.5	1.2	0.132
N08-3D	NEMA 8	1.8	0.6	2.8	1.3	0.154
N08-4D	NEMA 8	1.8	0.35	4.5	1.78	0.187
N11-1D	NEMA 11	1.8	0.67	8.3	1.26	0.242
N11-2D	NEMA 11	1.8	0.67	13.2	1.56	0.309
N11-3D	NEMA 11	1.8	0.67	16.7	2.03	0.441
N14-1D	NEMA 14	1.8	1.32	6.94	1	0.198
N14-2D	NEMA 14	1.8	0.47	13.88	1.1	0.265
N14-3D	NEMA 14	1.8	0.5	18.04	1.3	0.309
N1509	PANCAKE	0.9	0.35	5.66	0.551	0.128
N17-1D	NEMA 17	1.8	0.91	21.5	1	0.419
N1709-1D	NEMA 17	0.9	0.91	21.5	1	0.419
N17-2D	NEMA 17	1.8	1.33	30	1.3	0.485
N1709-2D	NEMA 17	0.9	1.33	30	1.3	0.485
N17-3D	NEMA 17	1.8	1.68	50	1.5	0.617
N1709-3D	NEMA 17	0.9	1.68	50	1.5	0.617
N17-4D	NEMA 17	1.8	1.68	62	1.85	0.772
N1709-4D	NEMA 17	0.9	1.68	62	1.85	0.772
N1809	PANCAKE	0.9	0.25	6.372	0.512	0.22
N23-1D	NEMA 23	1.8	2.8	75	1.6	0.992
N2309-1D	NEMA 23	0.9	2.8	75	1.6	0.992
N23-2D	NEMA 23	1.8	2.8	140	2	1.433
N2309-2D	NEMA 23	0.9	2.8	140	2	1.433
N23-3D	NEMA 23	1.8	2.8	175	2.2	1.543
N2309-3D	NEMA 23	0.9	2.8	175	2.2	1.543
N23-4D	NEMA 23	1.8	2.8	262	3	2.205
N2309-4D	NEMA 23	0.9	2.8	262	3	2.205
N34-1D	NEMA 34	1.8	4.2	397	2.36	3.748
N34-2D	NEMA 34	1.8	4.2	634	3.07	5.291
N34-3D	NEMA 34	1.8	4.2	1150	4.6	8.818
N34-4D	NEMA 34	1.8	6	1685	6.14	12.125
N42-1D	NEMA 42	1.8	5.9	1388	3.86	11.023
N42-2D	NEMA 42	1.8	5.9	2776	5.75	18.519

Normally Stocked Items

ModuSystems

Size 8 Stepper Motors

1.8° Size 08 （20mm） Hybrid Motors



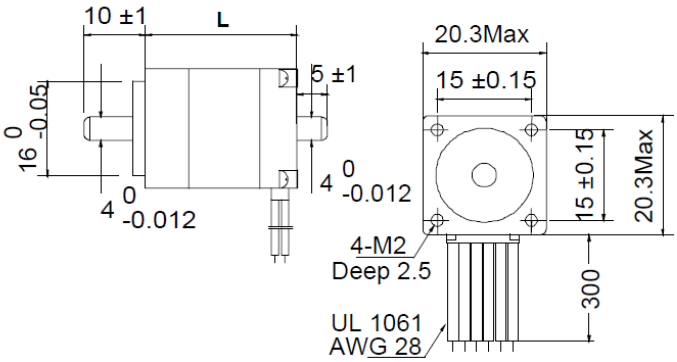
- **General Specification for Hybrid Step Motors**

Item	Specifications
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80°C Max. (rated current, 2 phase on)
Ambient Temperature	- 10°C ~ +50°C
Insulation Resistance	100 MΩ Min., 500 VDC
Dielectric Strength	500 VAC for one minute
Shaft Radial Play	0.06 Max. (450 g-load)
Shaft Axial Play	0.08 Max. (450 g-load)

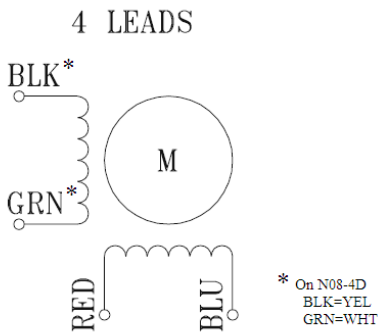
Motor P/N	Step Angle (deg)	Rated Current (A/phase)	Winding Resistance (ohm/phase)	Inductance (mh/phase)	Holding Torque (oz-in)	Motor Length (in)	Rotor Inertia (oz-in^2)	Mass (lbs)
N08-1D	1.8	0.2	24	8.02	2.5	1.1	0.015	0.11
N08-2D	1.8	0.6	6.5	1.7	2.5	1.2	0.016	0.132
N08-3D	1.8	0.6	6.5	1.7	2.8	1.3	0.018	0.154
N08-4D	1.8	0.35	16	7	4.5	1.78	0.022	0.187

Stocked Item

- **Motor Dimensions**



- **Wiring Diagram**



ModuSystems

Size 11 Stepper Motors

1.8° Size 11 High Torque Hybrid Motors

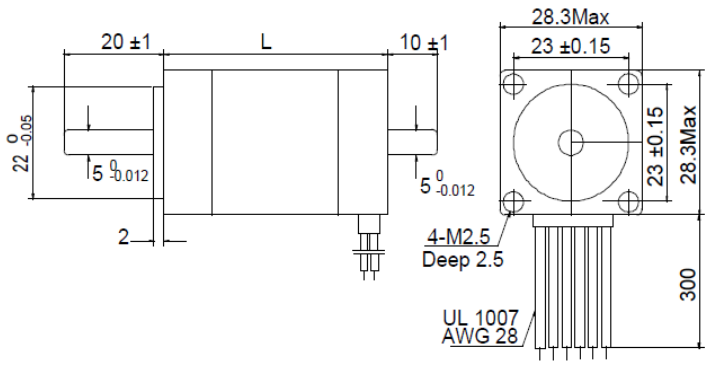
- **General Specification for Hybrid Step Motors**

Item	Specifications
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80°C Max. (rated current, 2 phase on)
Ambient Temperature	- 10°C ~ +50°C
Insulation Resistance	100 MΩ Min., 500 VDC
Dielectric Strength	500 VAC for one minute
Shaft Radial Play	0.06 Max. (450 g-load)
Shaft Axial Play	0.08 Max. (450 g-load)

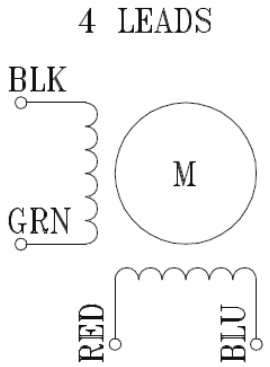
Motor P/N	Step Angle (deg)	Rated Current (A/phase)	Winding Resistance (ohm/phase)	Inductance (mh/phase)	Holding Torque (oz-in)	Motor Length (in)	Rotor Inertia (oz-in^2)	Mass (lbs)
N11-1D	1.8	0.67	5.6	4.2	8.3	1.26	0.049	0.242
N11-2D	1.8	0.67	6.8	4.9	13.2	1.56	0.066	0.309
N11-3D	1.8	0.67	9.2	5.7	16.7	2.03	0.098	0.441

Stocked Item

- **Dimensions:**



- **Wiring Diagram:**



ModuSystems

Size 14 Stepper Motors

1.8° Size 14 Hybrid Motors

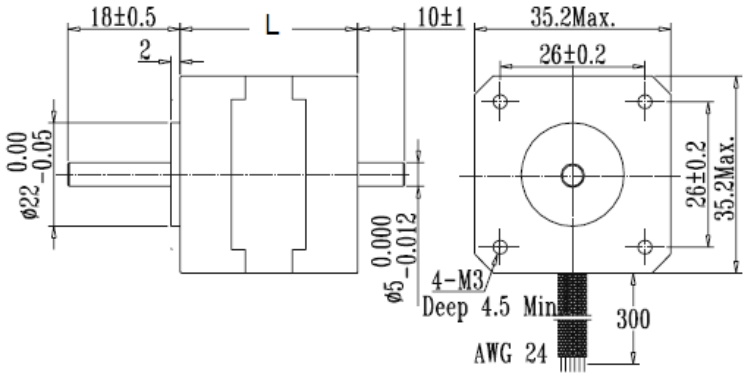
- **General Specification for Hybrid Step Motors**

Item	Specifications
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80°C Max. (rated current, 2 phase on)
Ambient Temperature	- 10°C ~ +50°C
Insulation Resistance	100 MΩ Min., 500 VDC
Dielectric Strength	500 VAC for one minute
Shaft Radial Play	0.06 Max. (450 g-load)
Shaft Axial Play	0.08 Max. (450 g-load)

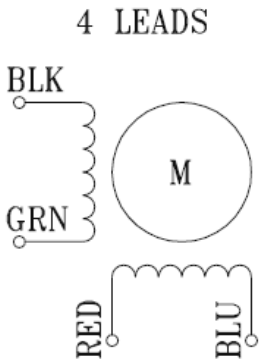
Motor P/N	Step Angle (deg)	Rated Current (A/phase)	Winding Resistance (ohm/phase)	Inductance (mh/phase)	Holding Torque (oz-in)	Motor Length (in)	Rotor Inertia (oz-in^2)	Mass (lbs)
N14-1D	1.8	1.32	1.75	1.2	6.94	1	0.055	0.198
N14-2D	1.8	0.47	20	19	13.88	1.1	0.066	0.265
N14-3D	1.8	0.5	18.5	26	18.04	1.3	0.077	0.309

Stocked Item

- **Motor Dimensions**



- **Wiring Diagram**



ModuSystems

Size 17 Stepper Motors

1.8° Size 17 High Torque Hybrid Motors

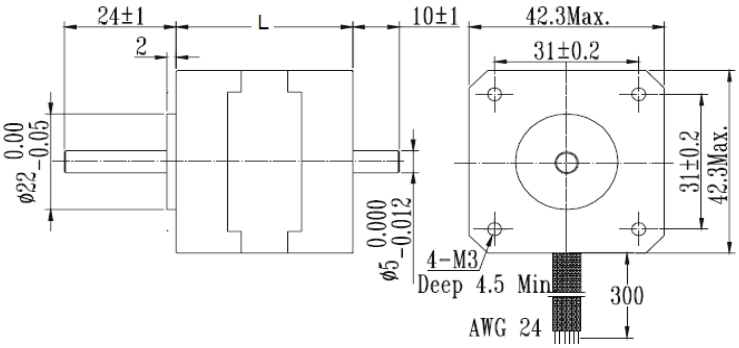
- **General Specification for Hybrid Step Motors**

Item	Specifications
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80°C Max. (rated current, 2 phase on)
Ambient Temperature	- 10°C ~ +50°C
Insulation Resistance	100 MΩ Min., 500 VDC
Dielectric Strength	500 VAC for one minute
Shaft Radial Play	0.06 Max. (450 g-load)
Shaft Axial Play	0.08 Max. (450 g-load)

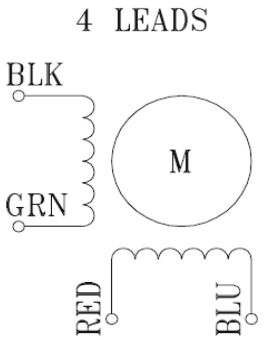
Motor P/N	Step Angle (deg)	Rated Current (A/phase)	Winding Resistance (ohm/phase)	Inductance (mh/phase)	Holding Torque (oz-in)	Motor Length (in)	Rotor Inertia (oz-in^2)	Mass (lbs)
N17-1D	1.8	0.91	3.3	8	21.5	1	0.153	0.419
N1709-1D	0.9	0.91	3.3	8	21.5	1	0.153	0.419
N17-2D	1.8	1.33	2.1	2.5	30	1.3	0.191	0.485
N1709-2D	0.9	1.33	2.1	2.5	30	1.3	0.191	0.485
N17-3D	1.8	1.68	1.65	3.2	50	1.5	0.295	0.617
N1709-3D	0.9	1.68	1.65	3.2	50	1.5	0.295	0.617
N17-4D	1.8	1.68	1.65	2.5	62	1.85	0.372	0.772
N1709-4D	0.9	1.68	1.65	2.8	62	1.85	0.372	0.772

Stocked Item

- **Dimensions:**



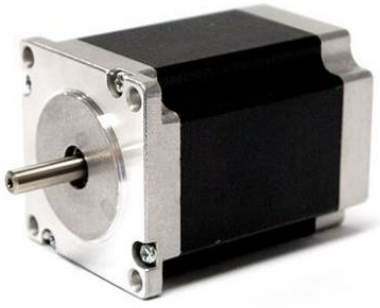
- **Wiring Diagram**



ModuSystems

Size 23 Stepper Motors

1.8° Size 23 High Torque Hybrid Motor



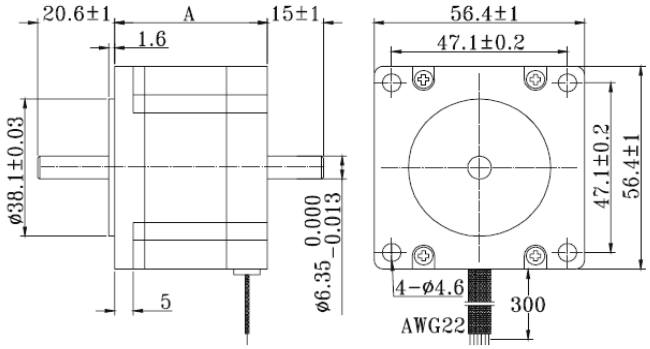
- **General Specification for Hybrid Step Motors**

Item	Specifications
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80°C Max. (rated current, 2 phase on)
Ambient Temperature	- 10°C ~ +50°C
Insulation Resistance	100 MΩ Min., 500 VDC
Dielectric Strength	500 VAC for one minute
Shaft Radial Play	0.06 Max. (450 g-load)
Shaft Axial Play	0.08 Max. (450 g-load)

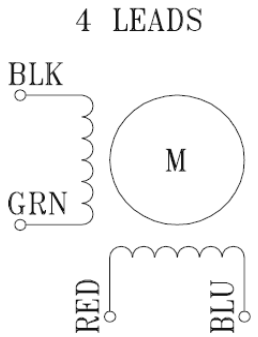
Motor P/N	Step Angle (deg)	Rated Current (A/phase)	Winding Resistance (ohm/phase)	Inductance (mh/phase)	Holding Torque (oz-in)	Motor Length (in)	Rotor Inertia (oz-in^2)	Mass (lbs)
N23-1D	1.8	2.8	0.7	1.4	75	1.6	0.656	0.992
N2309-1D	0.9	2.8	0.7	1.4	75	1.6	0.656	0.992
N23-2D	1.8	2.8	0.83	2.2	140	2	1.503	1.433
N2309-2D	0.9	2.8	0.83	2.2	140	2	1.503	1.433
N23-3D	1.8	2.8	0.9	2.5	175	2.2	1.64	1.543
N2309-3D	0.9	2.8	0.9	2.5	175	2.2	1.64	1.543
N23-4D	1.8	2.8	1.13	3.6	262	3	2.624	2.205
N2309-4D	0.9	2.8	1.13	3.6	262	3	2.624	2.205

Stocked Item

- **Dimensions:**



- **Wiring Diagram**



ModuSystems

Size 34 Stepper Motors

1.8° Size 34 High Torque Hybrid Motors

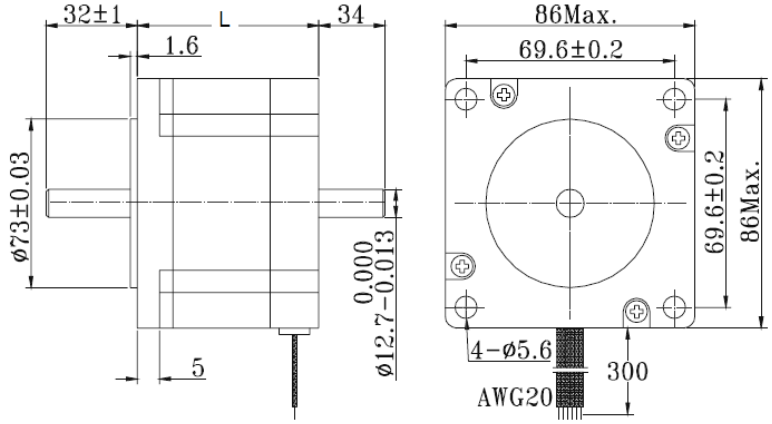
- **General Specification for Hybrid Step Motors**

Item	Specifications
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80°C Max. (rated current, 2 phase on)
Ambient Temperature	- 10°C ~ +50°C
Insulation Resistance	100 MΩ Min., 500 VDC
Dielectric Strength	500 VAC for one minute
Shaft Radial Play	0.06 Max. (450 g-load)
Shaft Axial Play	0.08 Max. (450 g-load)

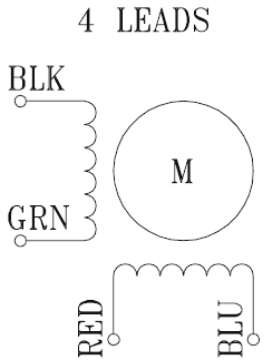
Motor P/N	Step Angle (deg)	Rated Current (A/phase)	Winding Resistance (ohm/phase)	Inductance (mh/phase)	Holding Torque (oz-in)	Motor Length (in)	Rotor Inertia (oz-in^2)	Mass (lbs)
N34-1D	1.8	4.2	0.57	3.1	397	2.36	5.467	3.748
N34-2D	1.8	4.2	0.8	13.6	634	3.07	7.654	5.291
N34-3D	1.8	4.2	1.04	12.2	1150	4.6	14.761	8.818
N34-4D	1.8	6	0.75	9.5	1685	6.14	21.868	12.125

Stocked Item

- **Dimensions:**

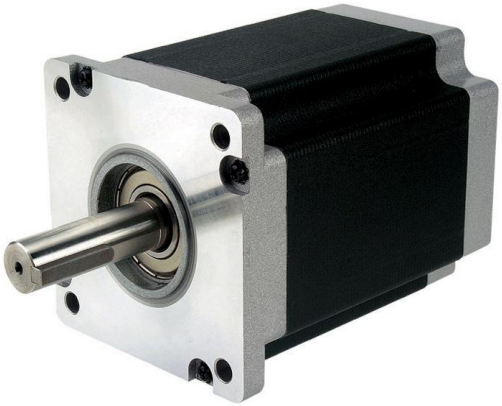


- **Wiring Diagram**



ModuSystems

Size 42 Stepper Motors



1.8° Size 42 High Torque Hybrid Motors

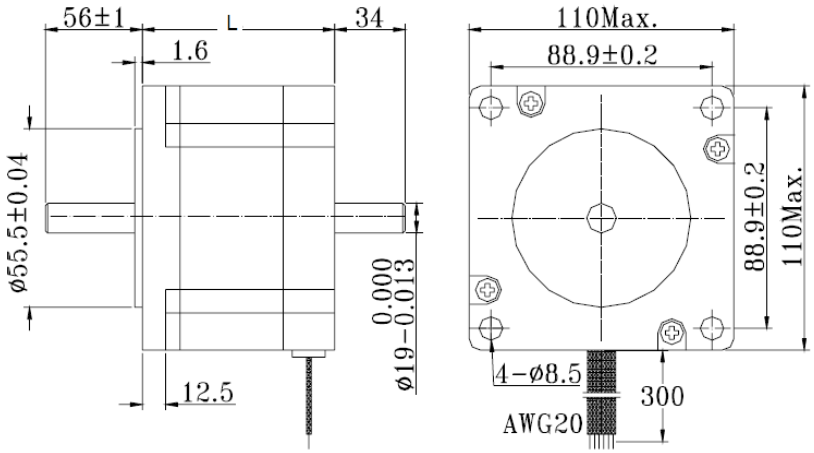
- **General Specification for Hybrid Step Motors**

Item	Specifications
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80°C Max. (rated current, 2 phase on)
Ambient Temperature	- 10°C ~ +50°C
Insulation Resistance	100 MΩ Min., 500 VDC
Dielectric Strength	500 VAC for one minute
Shaft Radial Play	0.06 Max. (450 g-load)
Shaft Axial Play	0.08 Max. (450 g-load)

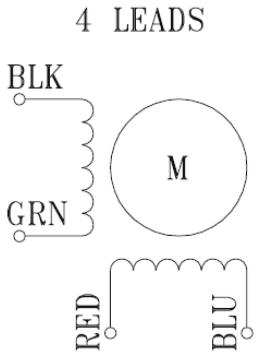
Motor P/N	Step Angle (deg)	Rated Current (A/phase)	Winding Resistance (ohm/phase)	Inductance (mh/phase)	Holding Torque (oz-in)	Motor Length (in)	Rotor Inertia (oz-in^2)	Mass (lbs)
N42-1D	1.8	5.9	0.88	13.2	1388	3.86	30.069	11.023
N42-2D	1.8	5.9	1.35	26.5	2776	5.75	60.137	18.519

Stocked Item

- **Dimensions:**



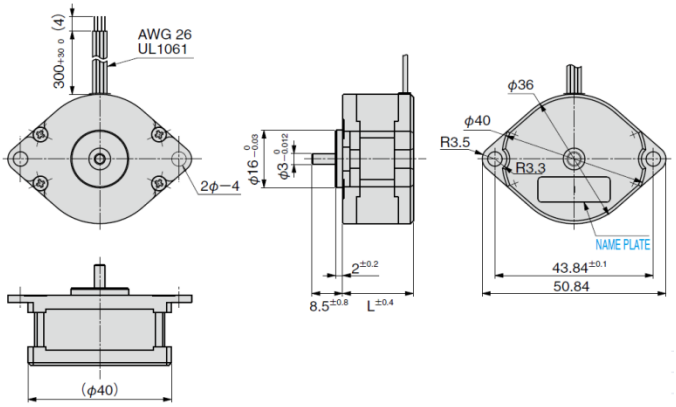
- **Wiring Diagram**



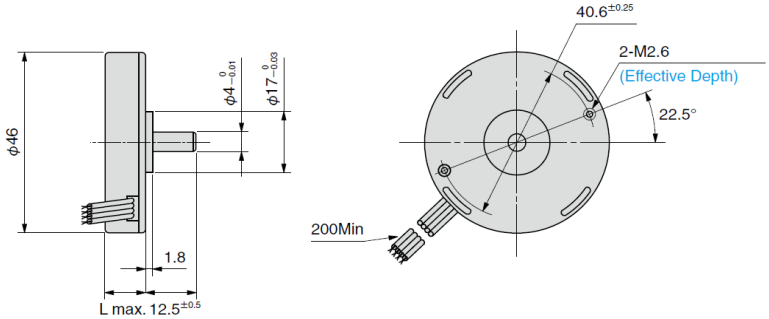
ModuSystems

Specialty Stepper Motors

N1509



N1809



Motor P/N	Step Angle (deg)	Rated Current (A/phase)	Winding Resistance (ohm/phase)	Inductance (mh/phase)	Holding Torque (oz-in)	Motor Length (in)	Rotor Inertia (oz-in^2)	Mass (lbs)
N1509	0.9	0.35	17.5	13	5.66	0.551	0.052	0.128
N1809	0.9	0.25	20	16.5	6.372	0.512	0.049	0.22

Stocked Item

ModuSystems