

STEPPING MOTOR FAMILY

Series 57mm (SAS) Direct Drive Stepping Motor



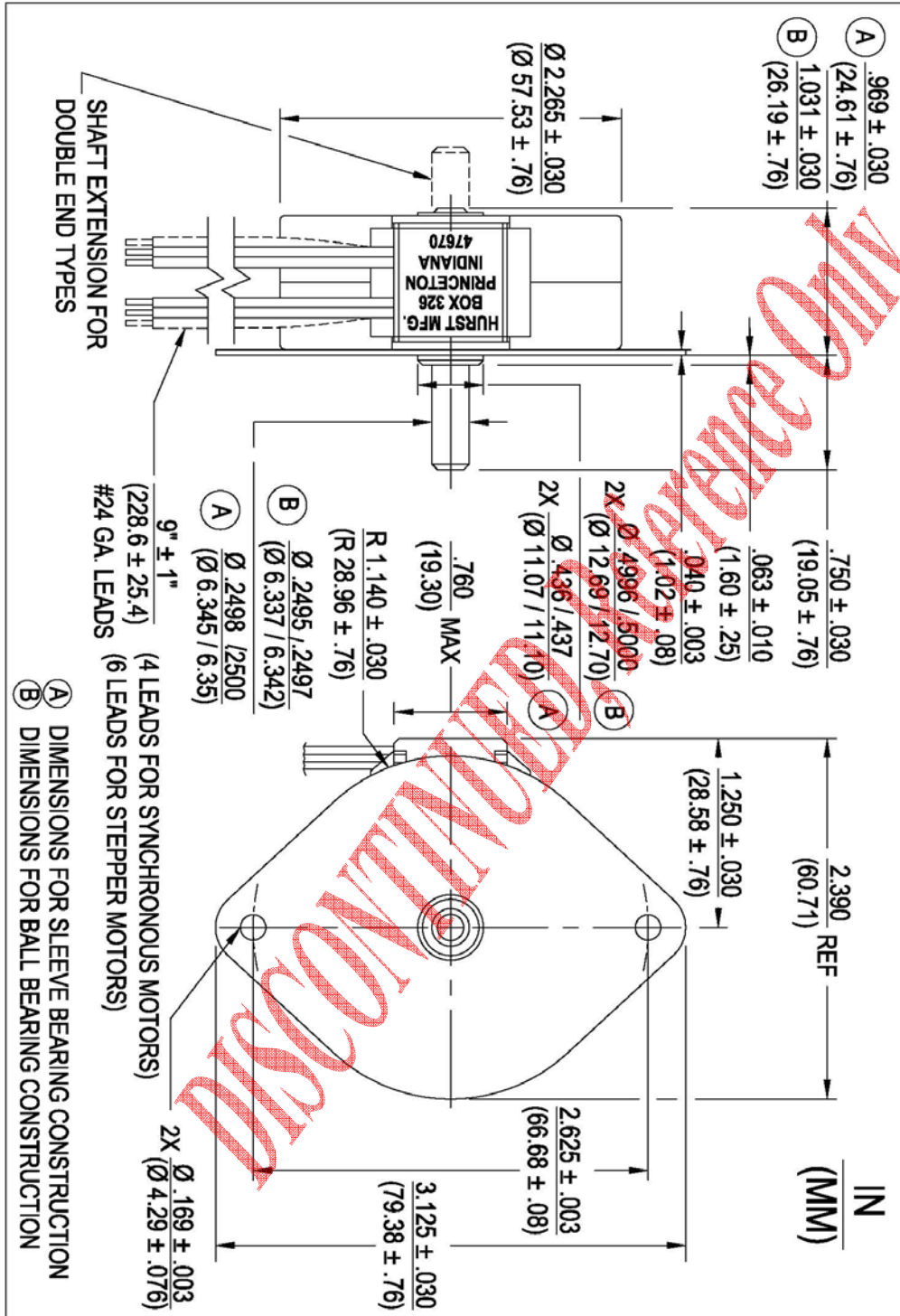
Step Angle:	7.5° & 15°
Position Accuracy:	+/- 5% max.
Number of Phases:	4 phase bifilar
Insulation Class:	Class A (105°C)
Lead Wire:	6 leads 24AWG (approx. 9 inches [228.6 mm])
Operation Ambient Temp:	-10°C to +40°C (approx.)
Temperature Rise:	65°C max
Shaft Bearing:	Sleeve Bearing
Note: Typical data subject to change without notification	

These compact direct drive stepping motors are designed for applications where space is limited and precise performance is required. Motors are available for 6, 12, or 24 VDC operation and provide a choice of 7.5° or 15° step angle. Standard windings are unipolar. Bi-polar windings may be specified.

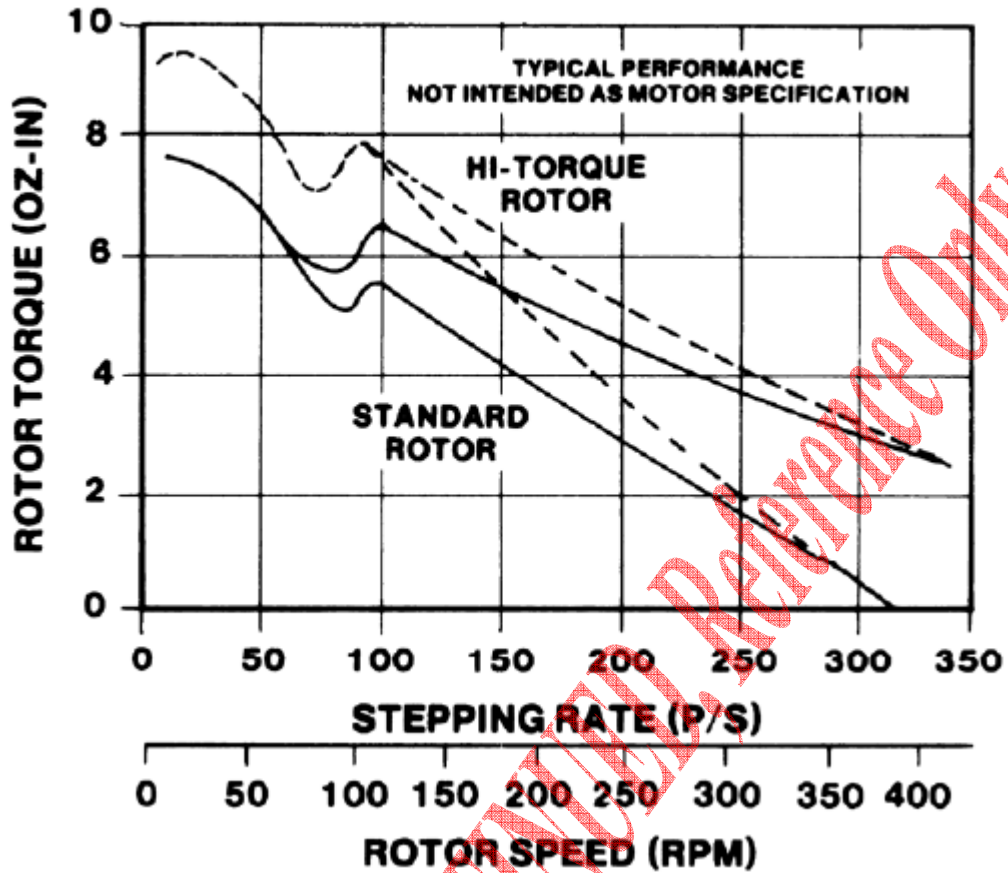
Notes:

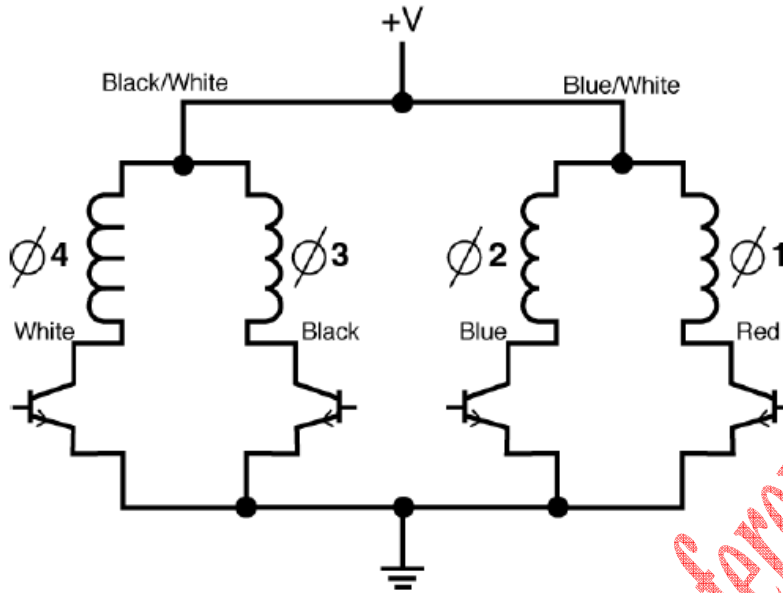
- Sleeve bearings are standard. Ball bearings may be specified as well as double ended shafts.

Model	Part Number	Step Angle (deg.)	Steps per Rev.	Rated Torque @ 175 p/s (oz-in)	Rated Torque @ 175 p/s (mN-m)	Rated Torque @ 4-5 p/s (oz-in)	Rated Torque @ 4-5 p/s (mN-m)	Holding Torque (oz-in) (2 Phase Energized)	Holding Torque (mN-m) (2 Phase Energized)	Output Speed (RPM)	Input Power (watts)	Nominal Voltage (VDC)	Winding Res. (ohms)	Rotor Inertia (oz-in ²)	Rotor Inertia (g-cm ²)	Weight (oz)	Weight (g)	Hi-Torque Rotor
SAS	4003-001	7.5	48	4.8	33.9	7.5	53	10.5	74.1	250	8	6	9	0.17	31.1	8	226.8	
SAS	4003-002	7.5	48	4.8	33.9	7.5	53	10.5	74.1	250	8	12	36	0.17	31.1	8	226.8	
SAS	4003-003	7.5	48	4.8	33.9	7.5	53	10.5	74.1	250	8	24	144	0.17	31.1	8	226.8	
SAS	4003-004	7.5	48	4.8	33.9	7.5	53	10.5	74.1	250	8	5	144	0.17	31.1	8	226.8	
SAS	4019-001	7.5	48	4.9	34.6	9	63.6	11.9	74.1	250	8	12	36	0.17	31.1	8	226.8	X
SAS	4019-004	7.5	48	4.9	34.6	9	63.6	11.9	74.1	250	8	5	144	0.17	31.1	8	226.8	
SAS	4020-002	7.5	48	4.9	34.6	9	63.6	11.9	74.1	250	8	12	144	0.17	31.1	8	226.8	



**MODELS SAS 4003-002 and SAS 4019-001
UNIPOLAR L/R DRIVE**





	Ø4 White	Ø3 Black	Ø2 Blue	Ø1 Red	
CCW ROTATION ↑	1	0	1	0	CW ROTATION ↓
	1	0	0	1	
	0	1	0	1	
	0	1	1	0	

1 = ON, 0 = OFF
SWITCHING SEQUENCE