THOMSON INDUSTRIES, INC.™
2 Channel Drive
Port Washington, NY 11050 USA

All Thomson Industries Manufacturing Locations are ISO 9000 Certified and Automotive Facilities Operate to QS-9000 Standards
Three-time Winner General Motors Supplier of the Year

ISO 9000

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Thomson Airpax Mechatronics Motors

OVERVIEW AND CAPABILITIES:

- Large selection of permanent magnet stepper motors – from 15mm to 60mm
- Step angle range from 1.8˚ to 18˚
- Pioneers in stepping motors, A.C. synchronous motors, brushless DC motors, gear motors, and digital linear actuators
- Fast, powerful, precise positioning
- Customization to meet your application requirements

For technical assistance or to place an order:

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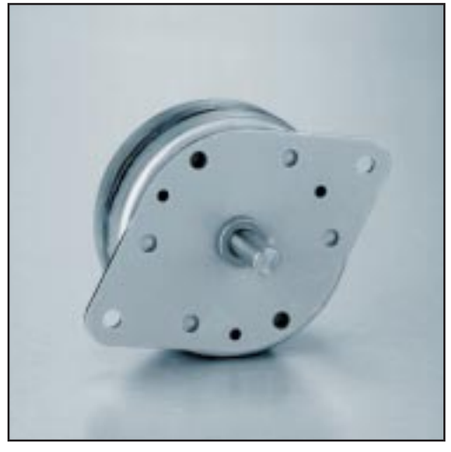
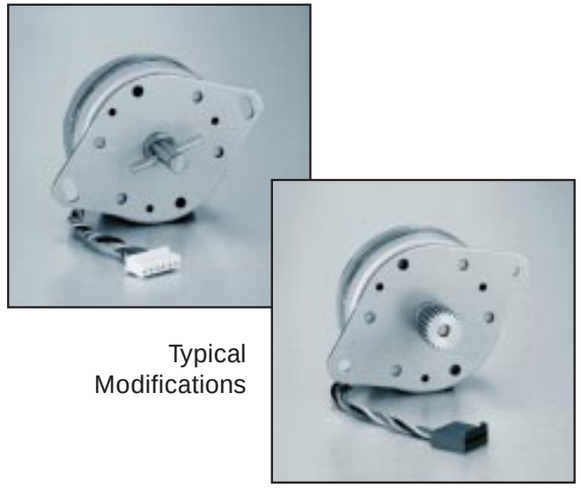
55M048D Series Stepper Motors





Typical Modifications

Standard Motor

Stepper Motor Features:

- 7.5° Step Angle (or 48 Steps per Revolution)
- 4.8 Watts Input Power per Winding
- Permanently Lubricated Sintered Bearings
- Available in Unipolar or Bipolar Construction
- Superior Torque Performance
- Excellent for Open-Loop Systems
- Widely Used Frame size in Various Industries

Specifications

	UNIPOLAR		BIPOLAR	
Part Number	55M048D1U	55M048D2U	55M048D1B	55M048D2B
DC Operating Voltage (V)	5	12	5	12
Resistance per Winding (ohms) ±10%	5.2	30.0	5.2	30.0
Inductance per Winding (mH) ± 20%	4.7	31.1	9.6	62.7
Holding Torque* (min, mNm/oz-in)	180/25.5	198/28	236/33.5	247/35
Detent Torque (max, mNm/oz-in)	38.8/5.5			
Step Angle*	7.5° ± .5°			
Steps per Revolution	48 Steps			
Rotor, Moment of Inertia (gm^2)	5.56×10^{-3}			
Insulation Resistance at 500 Vdc	100 megohms, min.			
Lead Wire Type	AWG #26, UL1430 (105°C, 300V)			
Bearing Type	Sintered Bronze Sleeve			
Max Operating Temperature	100°C			
Ambient Temperature Range	OPERATION: -0°C TO 60°C STORAGE: -40°C TO 85°C			
Dielectric Strength	650 ±50 Vrms, 50 Hz, for 1 to 2 seconds			
Weight (g/oz)	270/9.5			

*Measured with Two Phases Energized

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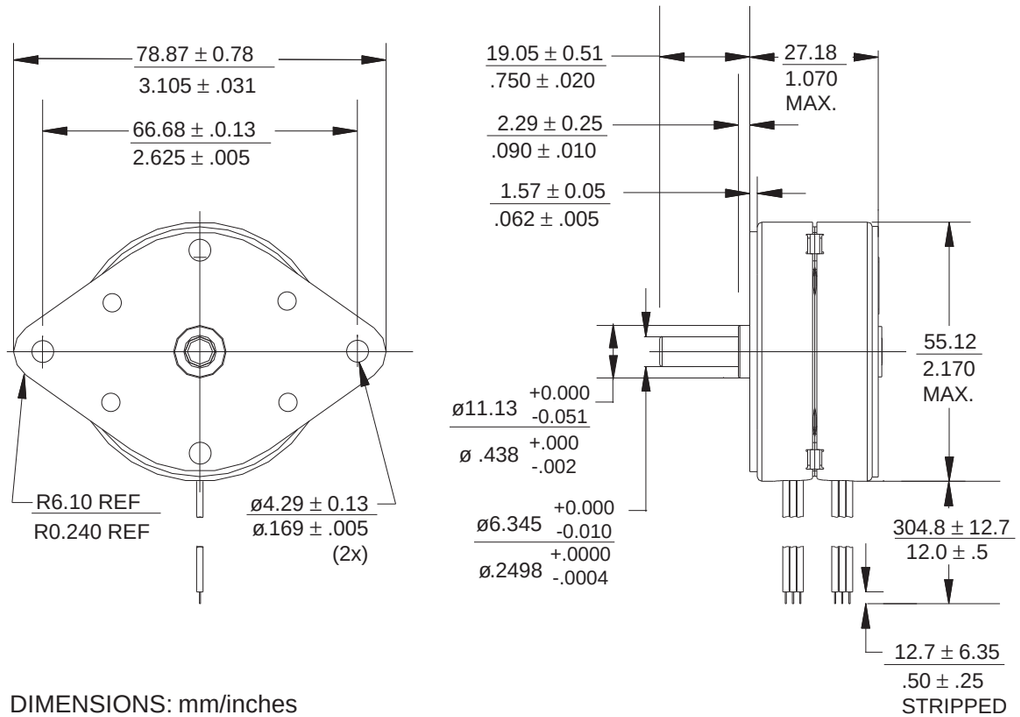
Overall Dimensions

Series 55M048D Stepper Motors



DIMENSIONS: mm/inches

The above outline drawing represents standard construction as illustrated in photo on cover. Modifications to this design are possible to better satisfy specific application needs. They include, but are not limited to, changes of output shaft and mounting plate dimensions, lead egress position, bearing system, electrical windings, as well as adding transmission devices (mounted pinion or pulley) and connecting system (terminals and housing). Photos on cover show two typical modifications. Contact a THOMSON AIRPAX MECHATRONICS technical specialist to discuss your application.

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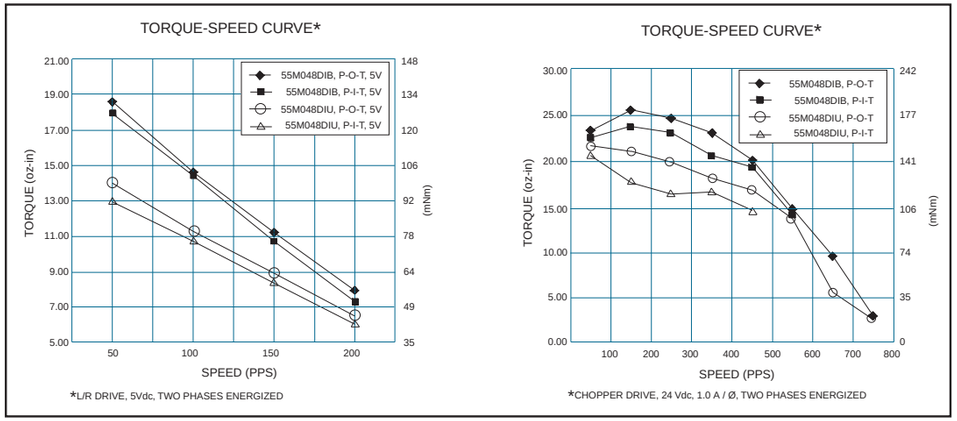

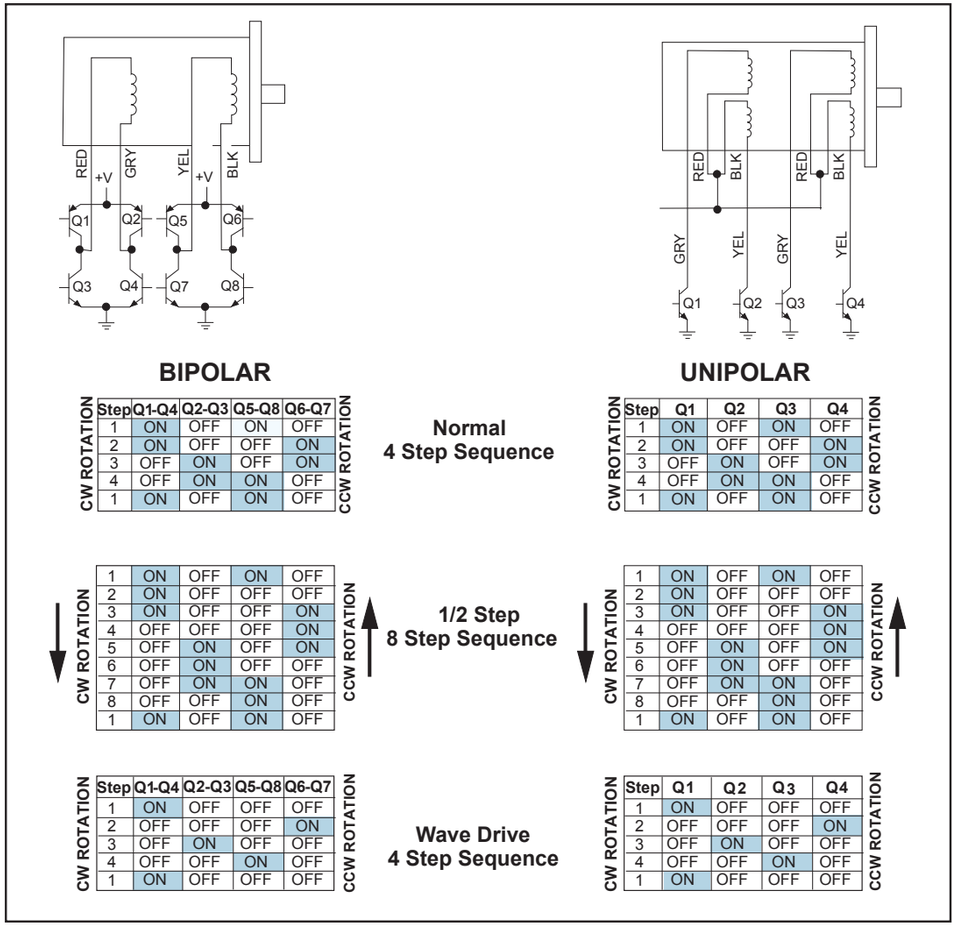

Schematic Bipolar and Unipolar Switching Sequence. Direction of Rotation Viewed from Shaft End.

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It is the responsibility of the product user to determine the suitability of Thomson components for a specific application. Defective products will be replaced without charge if promptly returned. No liability will be assumed beyond such replacement.