

TSM20-180 - Permanent Magnet Stepper Motor



FEATURES

- **Permanent Magnet Stepper Motor**
- **20mm Diameter**
- **18 Degree Step Angle**
- **Up to 1.11 oz-in of Bipolar Holding Torque**
- **Customization Available for:**
 - **Winding Current to Optimize Torque**
 - **Shaft Options**
 - **Cables or Connectors**
- **RoHS Compliant and CE Certified**



See page 2 for additional model types

DESCRIPTION

These miniature Permanent Magnet DC Stepper Motors measure 20mm in diameter and provide up to 1.11 ounce-inches of bipolar holding torque. These motors come standard in 18° step angles with a four or six-lead wire connection, and are offered in 5V, 12V, or 24V voltage ratings. Customization is available for larger quantities.

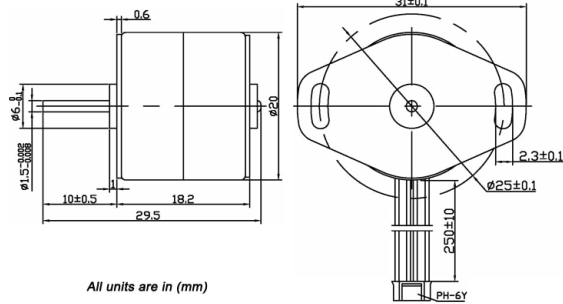
SPECIFICATIONS

Item	# of Wires	# of Phases	Bipolar Holding Torque (oz-in)	Detent Torque (oz-in)	Bipolar Series RMS Voltage (V)	Current Per Phase (A)	Resistance Per Phase (ohms)	Rotor Inertia (oz-in-sec ²)	Weight (lbs)	Length (mm)
TSM20-180-19-5V-050A-LW4	4	2	0.83	0.28	5	0.5	10	0.000014	0.06	18.2
TSM20-180-19-12V-024A-LW6	6	4	1.11	0.35	12	0.24	50	0.000014	0.06	18.2
TSM20-180-19-24V-020A-LW6	6	4	0.69	0.14	24	0.20	120	0.000014	0.06	18.2

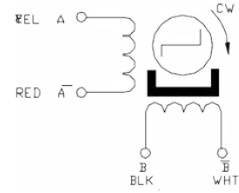
Step Angle Accuracy	±8% (Full Step, No Load)	Insulation Resistance	100ΩMin. 500 VDC
Resistance Accuracy	±10%	Dielectric Strength	500VAC for One Minute
Inductance Accuracy	±20%	Shaft Radial Play	0.06Max (450 g-load)
Temperature Rise	80°C Max	Shaft Axial Play	+/- 0.5mm (450 g-load)
Ambient Temperature	-10°C to +40°C		

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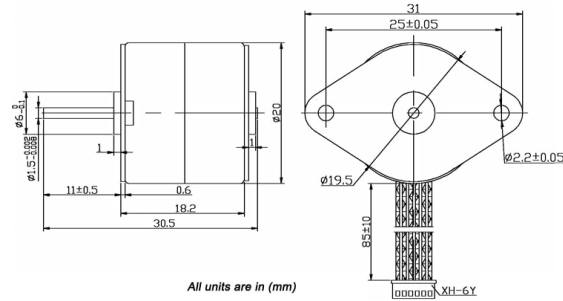
TSM20-180-19-5V-050A-LW4



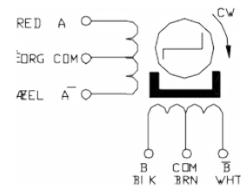
All units are in (mm)



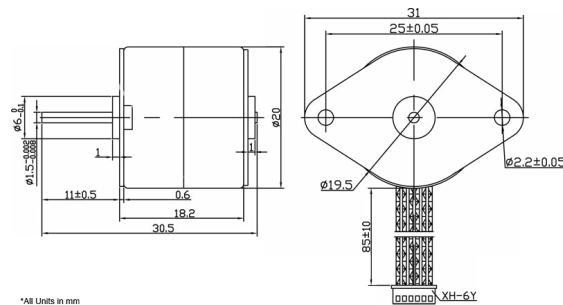
TSM20-180-19-12V-024A-LW6



All units are in (mm)



TSM20-180-19-24V-020A-LW6



*All Units in mm

