Description
The TSM14POE StepSERVO™ Integrated Motor with Power over Ethernet (PoE) is a unique, single-cable solution for motion control applications requiring minimal wiring and a small footprint. By combining power and Ethernet communications into a single connector, wiring to the integrated motor is greatly simplified and the motor can be mounted almost anywhere.

Built upon Applied Motion Products’ StepSERVO™ closed loop stepper technology, TSM14POE integrated motors provide numerous performance benefits over conventional, open-loop step motor systems including higher torque and greater efficiency.

Benefits
- Simplified installation using single-cable connection for power and Ethernet. No other connections to the motor are required.
- Compact size and integrated control electronics allow the motor to be mounted almost anywhere.
- StepSERVO technology provides greater torque, higher acceleration rates, better efficiency, decreased motor heating, and less audible noise than traditional, open-loop step motor systems.
- Easily adapt to your existing industrial Ethernet network with support for common protocols.
- Compatible with readily available PoE+ switches and injectors.

Applications
The TSM14POE integrated motor is ideally suited for applications where compact, accurate motion control is required and minimal wiring is a plus. The single-cable PoE solution makes the motor particularly useful for...

- Building automation
- Electric grippers
- Robotic pipe inspection systems
- Medical devices
- End-of-arm tooling
- Small linear actuators
- Mobile robots
- and much more...

Details
For all inquiries contact your local sales rep or contact Applied Motion Products directly at applied-motion.com/contact.

- NEMA 14 frame size motor with integral 4096-count magnetic encoder and on-board closed-loop motor controller.
- High position and velocity accuracy, excellent control characteristics.
- Compatible with IEEE 802.3at Type 2 specifications for PoE+.
- Network compatible with Ethernet TCP/IP, EtherNet/IP and Modbus TCP industrial Ethernet protocols.
- Two connector options, X-coded M12 or modular RJ-45, allow the use of standard, widely available Ethernet cables.
TSM14POE Integrated Motor
Preliminary Datasheet

- PC-based software tools for setup, configuration and tuning.
- On-board motion control with Q Programming.

<table>
<thead>
<tr>
<th>Part Numbers</th>
<th>Frame Size</th>
<th>IP Rating</th>
<th>Holding Torque</th>
<th>Connector Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSM14POE-3IPMJ</td>
<td>NEMA 14</td>
<td>IP40</td>
<td>57 oz-in</td>
<td>RJ-45</td>
</tr>
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<td>TSM14POE-3IPMM</td>
<td>NEMA 14</td>
<td>IP40</td>
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<td>M12</td>
</tr>
</tbody>
</table>

**Dimensions (mm)**

**Planetary Gearheads**

TSM14POE integrated motors are available pre-assembled with PH Mini Planetary Gearheads. These planetary gearboxes come in a wide range of ratios and significantly increase output torque for applications that require greater torque.

Standard ratios available:

- 4.62:1
- 5.70:1
- 12.07:1
- 32.50:1
- Additional ratios available upon request.