

STEPPER DRIVE

Integrated CANopen motors in Nema 34

Applied Motion Products (US) has added the Nema 34 frame size to its Step-Servo integrated motor family. The TSM34 and TXM34 stepper motors both comply with CiA 301 and CiA 402.

Applied Motion Products has announced the release of Nema 34 frame (86 mm x 86 mm, 6,0 Nm) Step-Servo integrated motors. The addition of these larger frame sizes to the motor family represents a widening of the product range, which already included smaller frame sizes Nema 11, Nema 17, Nema 23, and Nema 24. With the larger Nema 34 frame size, the motors can be installed in more demanding applications where greater torque is required.



CANopen is available as communication protocol (Photo: Applied Motion Products)

TSM34 and TXM34 integrated motors support a variety of control options, including step-and-direction, velocity, and streaming command modes. They also support stored program execution using Applied Motion's Q programming language. Communication options include CAN, dual-port Ethernet, EIA-232, and EIA-485.

Communication protocols include CANopen, Serial Command Language (SCL) over EIA-232, EIA-485, Ethernet UDP and TCP/IP; Ethernet/IP; Modbus RTU and TCP. The integrated motors are designed to operate on a CANopen communication network and conform to the CiA 301 and CiA 402 specifications.

TSM34 and TXM34 come in four lengths, offering machine designers a range of torque values to choose from. The longest motors (-6) offer holding torque values of 8,2 Nm and peak torque values over 9,2 Nm. TXM34 integrated motors are IP65-rated with M12 connectors for all connections and a shaft seal at the front shaft. TSM34 integrated motors are IP40-rated with screw terminals and pluggable connectors for power, communication, and I/O connections.

The motors include two power supply connections, main and auxiliary, so that motor power can be removed while maintaining power to the controller and communications. This feature eliminates the need to re-home the system after an emergency stop event, and for many applications this can provide the same end result as using a motor with an absolute encoder. The motors can be connected in a line network topology (daisy-chained) in addition to the traditional star network topology.

[CW](#)