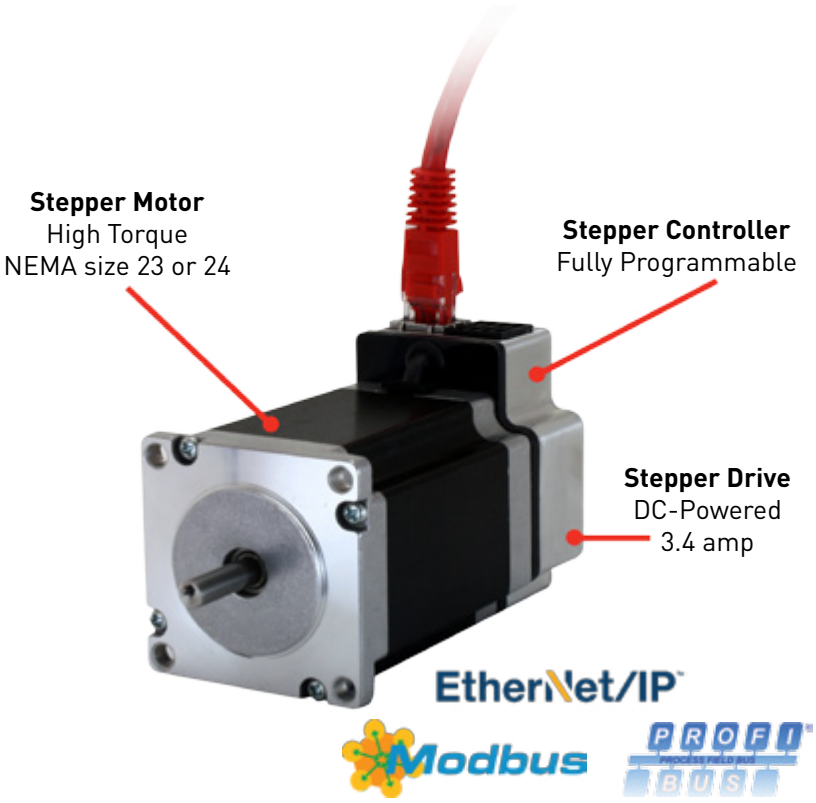
SMD Series Integrated Motion

Integrated Stepper Motor Package

Advances in motor and drive technology have enabled smarter, more affordable PLC-based automation. AMCI's SMD Series integrated stepper motors provide a motion control solution that is designed to streamline the proposal, installation, and commissioning of your motion axis. Choose between an integrated drive and motor for simple PTO-based motion or the integrated all in one motor/drive/controller for more sophisticated applications.

Designed for PLCs/PACs, these cost-effective integrated stepper motors are programmed directly from the PLC so there is no other software to learn or buy. The SMD Series offers a wide variety of mechanical and electrical options to meet your specific application needs. For over 10 years, AMCI has been engineering integrated motion technologies that fill a gap in the market like no other product.



Practical Applications

Automated Storage

PLCs are the heart of Automated Storage and Retrieval Systems. The SMD2XX network connection provides seamless integration into the main program.

Set-up Axis

The low cost of the SMD2XX provides a path for automating manual operations without the high cost of other motion solutions.

Vision Systems

The SMD2XX's microstepping delivers precise positioning and full torque at rest. This eliminates the dither present in other motion solutions for crisp, repeatable imaging.

Metering Pumps

The SMD2XX supplies loads of power for tight spaces. The compact design eliminates the separate drive and controller, reducing the overall footprint.

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SMD Series At-A-Glance

Specifications	SMD23	SMD2XX *(RJ45 version)*	SMD2XX *(M12 version)*
			
Product Integration	Stepper Motor Stepper Drive	Stepper Motor Stepper Drive Controller	Stepper Motor Stepper Drive Controller
Input Voltage	24 to 48 Vdc	24 to 48 Vdc	24 to 48 Vdc
Motor Current	3.4 Amp/phase	3.4 Amp/phase	3.4 Amp/phase
Package Size	NEMA 23 NEMA 24	NEMA 23 NEMA 24	NEMA 23 NEMA 24
Holding Torque	130 oz-in torque 240 oz-in torque	130 oz-in torque 240 oz-in torque 350 oz-in torque	130 oz-in torque 240 oz-in torque 350 oz-in torque
Encoder	N/A	Incremental Absolute	Incremental Absolute
Connector	8 pins	RJ45	M12
Protection Class	IP50	IP50	IP67
Network Interface	N/A	EtherNet/IP Modbus-TCP	EtherNet/IP Modbus-TCP Profibus

† Specifications vary among different model numbers

Innovation, Not Limitation

Device Level Ring (DLR)

The SMD2XE2 is the first integrated stepper motor/controller with a built-in Ethernet switch. The embedded switch provides a network connection for additional axes of motion without increasing the nodes on your existing ethernet switch. DLR topology provides a fault tolerant connection that can detect a break in the network and redirect the network traffic maintaining communication and system uptime.

SynchroStep™ Technology

AMCI's Synchro**Step** technology enables coordinated motion control between the SMD2XX and Allen-Bradley motion axes (servo, VFD, etc). The SMD2XX can be synchronized and geared to a master Virtual axis within the PLC, filling a gap that currently exists in the industry for small, inexpensive synchronized motion solution offerings. The SMD Series' unique approach to PLC-integration simplifies configuration, programming, and coordinated motion.

Product Specifications

General:

Input Voltage: 24 to 48 Vdc
Motor Current: 3.4 A/phase
Overtemp Protection
Auxiliary Power (M12 version)

Communication:

Ethernet* or Serial

EtherNet/IP Modbus PROFINET

Programmable Inputs:

Inputs: RJ45 = 3, M12 = 2
Functions: home limit, over travel limit, capture input, manual jog stop, E-stop, registration, index move

Input Specifications:
- Off state voltage: 0 to 1.5 Vdc
- On state voltage: 3.3 to 27 Vdc
- Input requires max 20mA of current to operate

SMD2XX M12 version shown

Motion:

Steps per Revolution: Programmable between 200 and 32,767 steps

Options:

- Encoder: Incremental or absolute multi-turn*
- Connector: M12*
- Protection: IP50 or IP67*
- Device Level Ring (DLR)†
- Embedded Switch†

Move Commands:

- Absolute Move
- Relative Move
- Hold Move
- Resume Move
- Immediate Stop
- Homing
- Jogging
- Blend Moves
- Reset Errors
- Preset Position
- Preset Encoder Position
- Registration Move

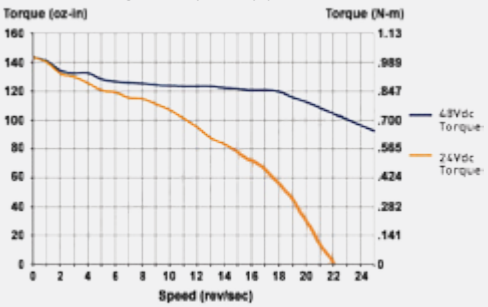
Accessories:

Gearboxes

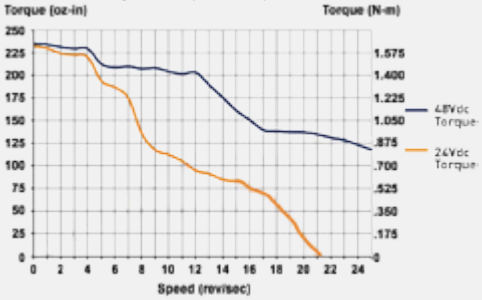
Cord Sets

Torque Curves:

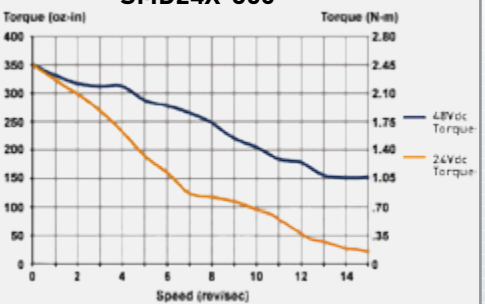
SMD23X-130



SMD23X-240



SMD24X-350



* Option only available with SMD2XE, SMD2XE2, and SMD2XP versions
† Option only available with SMD2XE2

SMD Series Integrated Motion

Delivering a Complete Solution

Gearboxes & Cord Sets

AMCI's selection of gearboxes, connectors, and approved cord sets simplify the ordering process and guarantee 100% compatibility.

Available Accessories:

- Gearboxes
- Cord sets
- Connectors

AMCI's SMD Series integrated motors offer a wide variety of options for exceptional performance across a range of applications. Options include NEMA size 23 or NEMA size 24 packages, IP67 rating, DLR, SynchroStep technology, encoders, gearboxes, and compatible cord sets. Use the ordering guide below to specify the right SMD Series solution for your application. AMCI Sales representatives are available to answer any questions regarding the SMD Series performance, features, and ordering options.

Ordering Information

SMD2 ☐ ☐ - ☐ ☐ ☐ ☐ - ☐ ☐ ☐ ☐

Size | Network | Holding Torque | Encoder | Optional Connectors | IP67

Part Number Character	SMD Series Integrated Stepper Motor Package
Frame Size	**3** = NEMA size 23 **4** = NEMA size 24
Network*	**E** = EtherNet/IP and Modbus-TCP **E2** = EtherNet/IP and Modbus-TCP w/Embedded Switch (M12 connectors option required) **P** = Profibus (M12 connectors option required) *blank for no network*
Holding Torque	**130** = 130 oz-in torque rating (NEMA 23 only) **240** = 240 oz-in torque rating (NEMA 23 only) **350** = 350 oz-in torque rating (NEMA 24 only)*
Encoder*	**E** = Incremental encoder **A** = Absolute multi-turn encoder *blank for no encoder*
Optional Connectors	**M12** = M12 connectors* *blank for standard RJ45*
IP67 Rating	**P** = IP67 rating (M12 connectors option required)

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