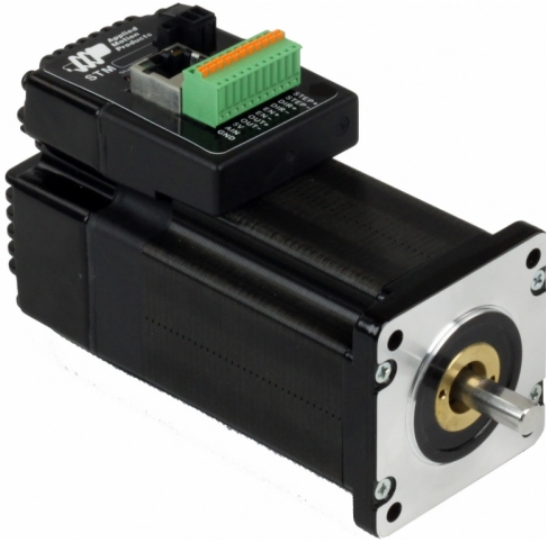


STM24Q-3EN

NEMA 24 Integrated Drive+Motor w/ Ethernet

1pc. - 501.00
50pc. - 375.75



Product Features

- *Sophisticated current control*
- *Anti-resonance*
- *Torque ripple smoothing*
- *Microstep emulation*
- *NEMA 24 frame size*
- *Q programming control mode for stand-alone operation*
- *Capable of all "S" control modes*
- *Fast 10/100 Ethernet for programming and communications*
- *UDP & TCP support*



Description

The STM24Q-3EN integrated stepper is a drive+motor unit, fusing a NEMA 24 step motor and a sophisticated 6.0 A/phase (peak-of-sine) stepper drive into a single device. Power to the drive, located at the rear of the motor, must be supplied by an external DC supply. See Related and Recommended Products below for compatible 24 and 48 volt DC [power supplies](#).

The STM24Q-3EN integrated stepper can operate in all of the same control modes as the S option, plus the ability to run a Q program stored in non-volatile memory. Q programs are created using Applied Motion's [Q Programmer™](#) software, which provides powerful commands for motion, I/O, conditional processing, multi-tasking, math functions, and more. The STM24Q is setup and configured using Applied Motion's [ST Configurator™](#) software.

Each STM24Q integrated stepper comes with 3 digital inputs, 1 digital output, and 1 analog input. The digital inputs accept signals of 5-24 VDC and can be used for connecting pulse & direction signals, end-of-travel limit switches, jog switches, quadrature encoder signals, PLC outputs, sensors, or many other signal types. The digital output can be connected to PLC inputs, counters, lights, relays, or other devices. The analog input accepts 0-5 VDC signals and can be used for velocity and position control.

The STM24Q-3EN comes with an Ethernet port for configuration, programming and communications. The Ethernet port is fast 10/100 Mbit, and the drive supports both TCP and UDP communication protocols.

All STM24Q models are CE approved and RoHS compliant.

Please note that a VL series gearhead purchased for this motor will require a special mounting adaptor and 2 weeks lead time. Please contact customer service for the price of this adaptor.

Specifications

Part Number:	STM24Q-3EN
Supply Voltage:	12-70 VDC
Supply Voltage Type:	DC
Control Modes:	Streaming Commands Analog Positioning Encoder Following Q Programming
Communication Ports:	Ethernet
Encoder Feedback:	No
Step Resolution:	Full Half Microstepping Microstep Emulation
Idle Current Reduction:	0-90%
Setup Method:	Software setup
Digital Inputs:	3
Digital Outputs:	1
Analog Inputs:	1 single-ended
Circuit Protection:	Short circuit Over-voltage Under-voltage Over-temp
Status LEDs:	1 red, 1 green
Frame Size:	NEMA 24
Holding Torque:	340 oz-in
Step Angle:	1.8 deg
Rotor Inertia:	1.27E-02 oz-in-sec ²
Length:	4.94 inches
Weight:	56 oz
Operating Temperature Range:	0 to 85 °C
Ambient Temperature Range:	0 to 40 °C
Ambient Humidity:	90% max, non-condensing
Insulation Class:	Class B (130 °C)

Downloads

Speed-Torque Curves:

 [STM24_speed-torque.pdf](#)

Manuals:

 [STM24 Hardware Manual_920-0044E.pdf](#)

 [STM23_24_Ethernet_Quicksetup_920-0058B.pdf](#)

 [Host Command Reference Rev I.pdf](#)

Datasheet:

<http://s3.amazonaws.com/applied-motion-pdf/STM24Q-3EN.pdf>

2D Drawing:

 [STM24X-3X_2D.pdf](#)

 [STM24_3D_Model-Simple.pdf](#)

3D Drawing:

 [STM24_3D_model.igs](#)

Application Notes:

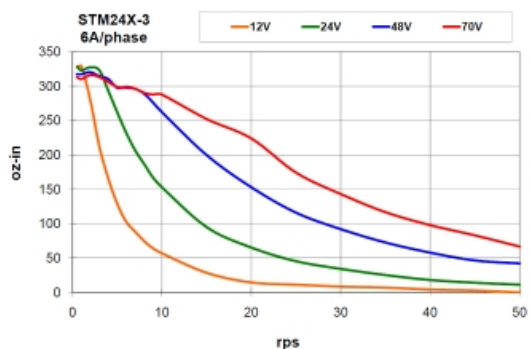
 [APPN0021_5V-Keepalive-Circuit.pdf](#)

 [APPN0020-Maple-Systems-with-Ethernet-Drive.zip](#)

 [APPN0019_Analog-positioning-using-Q-program.zip](#)

Torque Curves

Note: all torque curves were measured at 20,000 steps/rev.



Software

Software:

[SCL Utility](#)

[ST Configurator™](#)

Sample Code:

 [C_sharp_UDP_example.zip](#)

 [VB6_UDP_example.zip](#)

 [VB6_TCP_example.zip](#)

STM24Q-3EN Part No. STM24Q-3EN	
1pc.	\$501.00
25pc.	\$430.86
50pc.	\$375.75
100pc.	Contact us for 100+ piece pricing.

Products in the Series *STM24 Integrated Steppers*

Part Number	Frame Size	Supply Voltage	Control Modes	Holding Torque	Communication Ports	Encoder Feedback	1pc./50pc.
STM24IP-3EE	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	340	Ethernet, EtherNet/IP	Yes	\$626.00 / \$469.50
STM24IP-3EN	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	340	Ethernet, EtherNet/IP	No	\$551.00 / \$413.25
STM24Q-3EE	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	340	Ethernet	Yes	\$576.00 / \$432.00
STM24Q-3EN	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	340	Ethernet	No	\$501.00 / \$375.75
STM24QF-3AE	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	340	RS-232	Yes	\$564.00 / \$423.00
STM24QF-3AN	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	340	RS-232	No	\$489.00 / \$366.75
STM24QF-3RE	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	340	RS-485	Yes	\$572.00 / \$429.00
STM24QF-3RN	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	340	RS-485	No	\$497.00 / \$372.75
STM24S-3EE	NEMA 24	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	340	Ethernet	Yes	\$486.00 / \$364.50
STM24S-3EN	NEMA 24	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	340	Ethernet	No	\$411.00 / \$308.25
STM24SF-3AE	NEMA 24	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	340	RS-232	Yes	\$474.00 / \$355.50
STM24SF-3AN	NEMA 24	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	340	RS-232	No	\$399.00 / \$299.25
STM24SF-3RE	NEMA 24	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	340	RS-485	Yes	\$482.00 / \$361.50
STM24SF-3RN	NEMA 24	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	340	RS-485	No	\$407.00 / \$305.25

Products in the Series *STM23 Integrated Steppers*

Part Number	Frame Size	Supply Voltage	Control Modes	Holding Torque	Communication Ports	Encoder Feedback	1pc./50pc.
STM23C-3CE	NEMA 23	12-70 VDC	CANopen	210	RS-232, CANopen	Yes	\$535.00 / \$401.25
STM23C-3CN	NEMA 23	12-70 VDC	CANopen	210	RS-232, CANopen	No	\$460.00 / \$345.00
STM23IP-2EE	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	125	Ethernet, EtherNet/IP	Yes	\$525.00 / \$393.75
STM23IP-2EN	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	125	Ethernet, EtherNet/IP	No	\$450.00 / \$337.50
STM23IP-3EE	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	210	Ethernet, EtherNet/IP	Yes	\$535.00 / \$401.25
STM23IP-3EN	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	210	Ethernet, EtherNet/IP	No	\$460.00 / \$345.00
STM23Q-2AE	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, SiNet Hub Compatible, Modbus	125	RS-232	Yes	\$440.00 / \$330.00
STM23Q-2AN	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, SiNet Hub Compatible, Modbus	125	RS-232	No	\$365.00 / \$273.75
STM23Q-2EE	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	125	Ethernet	Yes	\$452.00 / \$339.00
STM23Q-2EN	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	125	Ethernet	No	\$377.00 / \$282.75
STM23Q-2RE	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	125	RS-485	Yes	\$447.00 / \$335.25
STM23Q-2RN	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	125	RS-485	No	\$372.00 / \$279.00
STM23Q-3AE	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, SiNet Hub Compatible, Modbus	210	RS-232	Yes	\$456.00 / \$342.00
STM23Q-3AN	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, SiNet Hub Compatible, Modbus	210	RS-232	No	\$381.00 / \$285.75
STM23Q-3EE	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	210	Ethernet	Yes	\$468.00 / \$351.00
STM23Q-3EN	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	210	Ethernet	No	\$393.00 / \$294.75
STM23Q-3RE	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	210	RS-485	Yes	\$463.00 / \$347.25
STM23Q-3RN	NEMA 23	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	210	RS-485	No	\$388.00 / \$291.00
STM23R-2ND	NEMA 23	12-70 VDC	Step & Direction	125	NA	No	\$172.00 / \$172.00
STM23R-2NE	NEMA 23	12-70 VDC	Step & Direction	125	NA	Yes	\$219.00 / \$219.00
STM23R-2NN	NEMA 23	12-70 VDC	Step & Direction	125	NA	No	\$172.00 / \$172.00
STM23R-3ND	NEMA 23	12-70 VDC	Step & Direction	210	NA	No	\$189.00 / \$189.00
STM23R-3NE	NEMA 23	12-70 VDC	Step & Direction	210	NA	Yes	\$230.00 / \$230.00
STM23R-3NN	NEMA 23	12-70 VDC	Step & Direction	210	NA	No	\$189.00 / \$189.00
STM23S-2AE	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands, SiNet Hub Compatible	125	RS-232	Yes	\$350.00 / \$262.50
STM23S-2AN	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands, SiNet Hub	125	RS-232	No	\$275.00 /

STM23S-2RN	NEMA 23	12-70 VDC	Streaming Commands, SiNet Hub Compatible	125	RS-485	No	\$206.25
STM23S-2EE	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	125	Ethernet	Yes	\$362.00 / \$271.50
STM23S-2EN	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	125	Ethernet	No	\$287.00 / \$215.25
STM23S-2RE	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	125	RS-485	Yes	\$357.00 / \$267.75
STM23S-2RN	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	125	RS-485	No	\$282.00 / \$211.50
STM23S-3AE	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands, SiNet Hub Compatible	210	RS-232	Yes	\$366.00 / \$274.50
STM23S-3AN	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands, SiNet Hub Compatible	210	RS-232	No	\$291.00 / \$218.25
STM23S-3EE	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	210	Ethernet	Yes	\$378.00 / \$283.50
STM23S-3EN	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	210	Ethernet	No	\$303.00 / \$227.25
STM23S-3RE	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	210	RS-485	Yes	\$373.00 / \$279.75
STM23S-3RN	NEMA 23	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	210	RS-485	No	\$298.00 / \$223.50
STM24IP-3EE	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	340	Ethernet, EtherNet/IP	Yes	\$626.00 / \$469.50
STM24IP-3EN	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	340	Ethernet, EtherNet/IP	No	\$551.00 / \$413.25
STM24Q-3EE	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	340	Ethernet	Yes	\$576.00 / \$432.00
STM24Q-3EN	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	340	Ethernet	No	\$501.00 / \$375.75
STM24S-3EE	NEMA 24	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	340	Ethernet	Yes	\$486.00 / \$364.50
STM24S-3EN	NEMA 24	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	340	Ethernet	No	\$411.00 / \$308.25