



**Applied
Motion
Products**

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Product Datasheet

www.Applied-Motion.com

SWM24S-3EE

IP65 Rated NEMA 24 Integrated Drive+Motor

1pc. - 659.00
50pc. - 494.25



Product Features

- Rated IP65 for wet and dusty environments
- M12 connectors
- Sophisticated current control
- Anti-resonance
- Torque ripple smoothing
- Microstep emulation
- NEMA 23 frame size
- Step & direction, CW/CCW pulse, and A/B quadrature pulse control modes
- Velocity (oscillator) control mode
- Streaming serial commands (SCL) control mode
- Fast 10/100 Ethernet for programming and communications
- UDP & TCP support
- Built-in incremental encoder



Description

The SWM24S-3EE 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 IP65 rated 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 SWM24S-3EE integrated stepper can operate in the following control modes: step (pulse) & direction, velocity (oscillator), and streaming serial commands (SCL). The SWM24S is setup and configured using Applied Motion's ST Configurator™ software.

An integral 1000-line (4000 count/rev) incremental encoder is housed inside the same enclosure as the drive electronics, providing protection from dust and debris. The integration of the encoder means the SWM24S can perform special functions not available otherwise. Stall Detection notifies the system as soon as the required torque is too great for the motor, which results in a loss of synchronization between the rotor and stator, also known as stalling. Stall Prevention actually prevents stalling of the step motor by dynamically adjusting motor speed to maintain synchronization of the rotor to the stator under all conditions. This unique feature allows step motors to operate in a much broader range of applications than previously available to step motors, such as torque-control applications. The Stall Prevention feature also performs static position maintenance, which maintains the position of the motor shaft when at rest.

Each SWM24S 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 SWM24S-3EE comes with an Ethernet port for configuration and communications. The Ethernet port is fast 10/100 Mbit, and the drive supports both TCP and UDP communication protocols.

All SWM24S 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

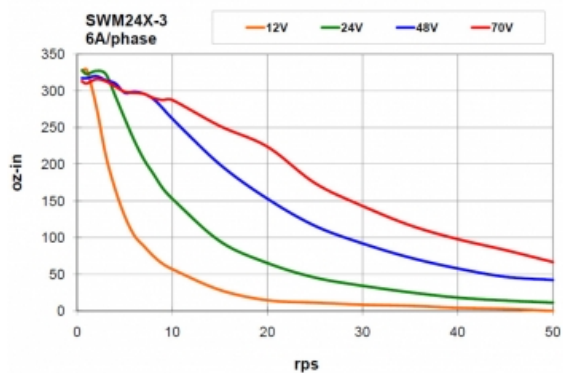
Part Number:	SWM24S-3EE
Supply Voltage:	12-70 VDC
Supply Voltage Type:	DC
Control Modes:	Step & Direction Analog Torque / Velocity Velocity (Oscillator) Streaming Commands
Communication Ports:	Ethernet
Encoder Feedback:	Yes
Step Resolution:	Full Half Microstepping Microstep Emulation
Idle Current Reduction:	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:	5.03 inches
Weight:	56 oz
Operating Temperature Range:	-20 to 50 °C
Ambient Temperature Range:	0 to 40 °C
Ambient Humidity:	90%
Insulation Class:	Class B (130 °C)
Maximum Radial Load:	NA lbs
Maximum Thrust Load:	NA lbs

Shaft Run Out:	0.0012 inch T.I.R. max
Radial Play:	0.0008 inch max w/ 1.1lb load
End Play:	0.003 inch max w/ 1.1lb load
Perpendicularity:	0.004 inches inch
Concentricity:	0.002 inches inch

Downloads

Speed-Torque Curves:	 SWM24-3 torque curve.pdf
Manuals:	SWM24 Hardware Manual_920-0068B.pdf SWM24_Ethernet_QuickSetup_920-0070B.pdf
Datasheet:	http://s3.amazonaws.com/applied-motion-pdf/SWM24S-3EE.pdf
2D Drawing:	SWM24_Simple_3Dpdf.pdf SWM24x-3Ex_RevC.pdf
3D Drawing:	 SWM24_Simple_10-31-13.igs

Torque Curves



Software

Software: [DSP Firmware Downloader](#)
[SCL Utility](#)
[ST Configurator™](#)

SWM24S-3EE Part No. SWM24S-3EE	
1pc.	\$659.00
25pc.	\$566.74
50pc.	\$494.25
100pc.	Contact us for 100+ piece pricing.

Products in the Series *SWM24 Integrated Steppers*

Part Number	Frame Size	Supply Voltage	Control Modes	Holding Torque	Communication Ports	Encoder Feedback	1pc./50pc.
SWM24IP-3EE	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming, EtherNet/IP	340	Ethernet	Yes	\$857.00 / \$642.75
SWM24Q-3EE	NEMA 24	12-70 VDC	Streaming Commands, Analog Positioning, Encoder Following, Q Programming	340	Ethernet	Yes	\$794.00 / \$595.50
SWM24QF-3AE	NEMA 24	12-70 VDC	Step & Direction, Analog Torque / Velocity, Velocity (Oscillator), Streaming Commands, Analog Positioning, Encoder Following, Q Programming, Modbus	340	RS-232	Yes	\$772.00 / \$579.00
SWM24S-3EE	NEMA 24	12-70 VDC	Step & Direction, Analog Torque / Velocity, Velocity (Oscillator), Streaming Commands	340	Ethernet	Yes	\$659.00 / \$494.25
SWM24SF-3AE	NEMA 24	12-70 VDC	Step & Direction, Velocity (Oscillator), Streaming Commands	340	RS-232	Yes	\$637.00 / \$477.75