

SWM24IP-3EE

IP65 Rated NEMA 24 Integrated Drive+Motor

1pc. - \$857.00
50pc. - \$642.75



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
- Q programming control mode for stand-alone operation
- Capable of all "S" control modes
- Fast 10/100 Ethernet for programming and communications (UDP & TCP)
- EtherNet/IP industrial networking built in
- Built-in incremental encoder



Description

The SWM24IP-3EE integrated stepper is a drive+motor unit, fusing a NEMA 23 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 SWM24IP-3EE integrated stepper incorporates EtherNet/IP network communications, the widely used industrial protocol for manufacturing automation applications. With EtherNet/IP users can control, configure and query the drive using an open, standards-based, industrial Ethernet connection at speeds up to 100 MBits/sec. All SWM24IP units run the same control modes as SWM24Q units, with the addition that all drive+motor features can be accessed over EtherNet/IP, including more than 100 commands and 130 registers for controlling motion, I/O, configuration, polling, math, register manipulation, and Q programming. Setup and configuration of the SWM24IP is done using Applied Motion's ST Configurator™ software, while Q programs are created using the Q Programmer™ 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 SWM24IP 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 SWM24IP 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 SWM24IP-3EE comes with a fast 10/100 MBit Ethernet port for programming and EtherNet/IP communications. The same port also supports TCP and UDP protocols for sending commands from Applied Motion's proprietary serial command language (SCL).

All SWM24IP 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	SWM24IP-3EE
Supply Voltage	12-70 VDC
Supply Voltage Type	DC
Control Modes	<ul style="list-style-type: none">• Streaming Commands• Analog Positioning• Encoder Following• Q Programming• EtherNet/IP
Communication Ports	<ul style="list-style-type: none">• Ethernet
Encoder Feedback	Yes
Step Resolution	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none"> • 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	-30 to 70 °C
Ambient Humidity	99%
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

Software

Software Downloads

- [DSP Firmware Downloader](#)
- [Q Programmer™](#)
- [SCL Utility](#)
- [ST Configurator™](#)

Sample Code

There are no sample code documents at this time.

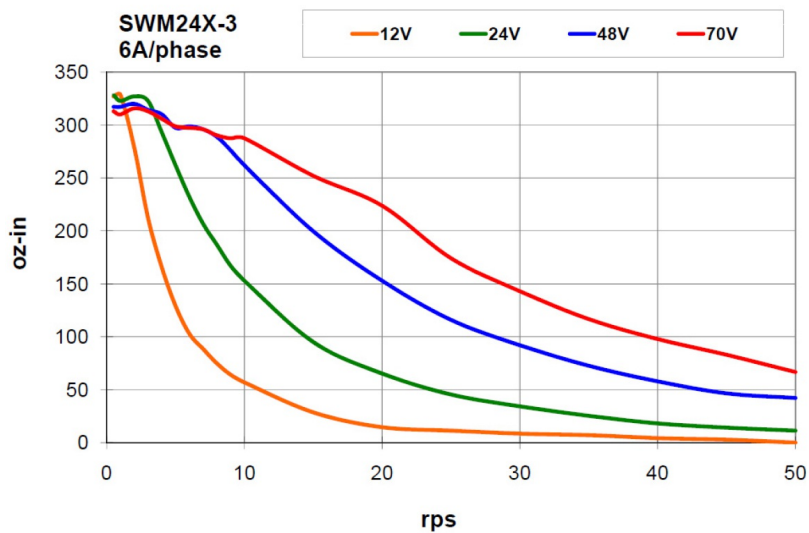
Downloads

Manuals	SWM24 Ethernet QuickSetupGuide_920-0070A.pdf SWM24 Hardware Manual_920-0068B.pdf
Datasheet	SWM24-IP.eds
2D Drawing	SWM24 Simple 3Dpdf.pdf SWM24x-3Ex_RevC.pdf
3D Drawing	SWM24 Simple 10-31-13.igs
Speed-Torque Curves	SWM24-3 torque curve.pdf
Agency Approvals	There are no related agency approval documents at this time.
Application Notes	There are currently no Application Notes available for this product.

Pricing

SWM24IP-3EE Part No. SWM24IP-3EE	
1pc.	\$857.00
25pc.	\$737.02
50pc.	\$642.75
100pc.	Contact us for 100+ piece pricing.

Torque Curves



Products in the Series *SWM24 Integrated Steppers*

Part Number	Frame Size	Supply Voltage	Control Modes	Holding Torque (oz-in)	Communication Ports	Encoder Feedback	1pc./50pc.
<u>SWM24IP-3EE</u>	NEMA 24	12-70 VDC	Streaming Commands Analog Positioning Encoder Following Q Programming EtherNet/IP	340	Ethernet	Yes	\$857.00 / \$642.75
<u>SWM24Q-3EE</u>	NEMA 24	12-70 VDC	Streaming Commands Analog Positioning Encoder Following Q Programming	340	Ethernet	Yes	\$857.00 / \$642.75
<u>SWM24QF-3AE</u>	NEMA 24	12-70 VDC	Step & Direction Analog Torque / Velocity Velocity (Oscillator) Streaming Commands Analog Positioning Encoder Following Q Programming	340	RS-232	Yes	\$790.00 / \$592.50
<u>SWM24S-3EE</u>	NEMA 24	12-70 VDC	Step & Direction Analog Torque / Velocity Velocity (Oscillator) Streaming Commands	340	Ethernet	Yes	\$782.00 / \$586.50
<u>SWM24SF-3AE</u>	NEMA 24	12-70 VDC	Step & Direction Velocity (Oscillator) Streaming Commands	340	RS-232	Yes	\$715.00 / \$536.25