

X-NMS-E Series Datasheet

- NEMA 17 and 23 stepper motors with built-in controllers and encoders
- Up to 3000 rpm speed and 1.8 N-m torque
- Daisy-chains data and power with X-series products
- Home sensor and magnet included, optional away sensor
- Custom versions available

X-NMS-E Series Overview

These NEMA size 17 and 23 stepper motors have built-in controllers and encoders for stall detection and recovery. A detachable home sensor HS02 and magnet are included. An additional HS02L150 Hall effect sensor can be purchased to function as an away sensor. These motors are standalone units requiring only a standard 24 V or 48 V power supply.

An indexed knob provides convenient manual control for versatile operation even without a computer. The motors connect to the USB 2.0 or RS-232 port of any computer and can be daisy-chained with any other Zaber products. Convenient locking, 4-pin, M8 connectors on the unit allow for secure connection between units. The chain also shares power, so multiple X-Series products can use a single power supply.

For more information visit: <https://www.zaber.com/products/stepper-motors/X-NMS-E>

X-NMS-E Series Part Numbering

X-NMS-E Series Drawings

X-NMS-E Series Specifications

Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.028125°	490.866 µrad
Built-in Controller	Yes	
Accuracy (unidirectional)	0.25°	4.362500 mrad
Repeatability	< 0.1°	< 1.745 mrad
Maximum Speed	18000°/s	3000 rpm
Minimum Speed	0.017172°/s	299.703 µrad/s
Speed Resolution	0.017172°/s	299.703 µrad/s
Encoder Type	Rotary quadrature encoder	
Communication Interface	RS-232	
Communication Protocol	Zaber ASCII (Default), Zaber Binary	
Power Supply	24-48 VDC	
Power Plug	2-pin Screw Terminal	
Motor Steps Per Rev	200	
Motor Type	Stepper (2 phase)	
Default Resolution	1/64 of a step	
Data Cable Connection	Locking 4-pin M8	
LED Indicators	Yes	
Operating Temperature Range	0 to 50 °C	
Vacuum Compatible	No	
RoHS Compliant	Yes	
CE Compliant	Yes	

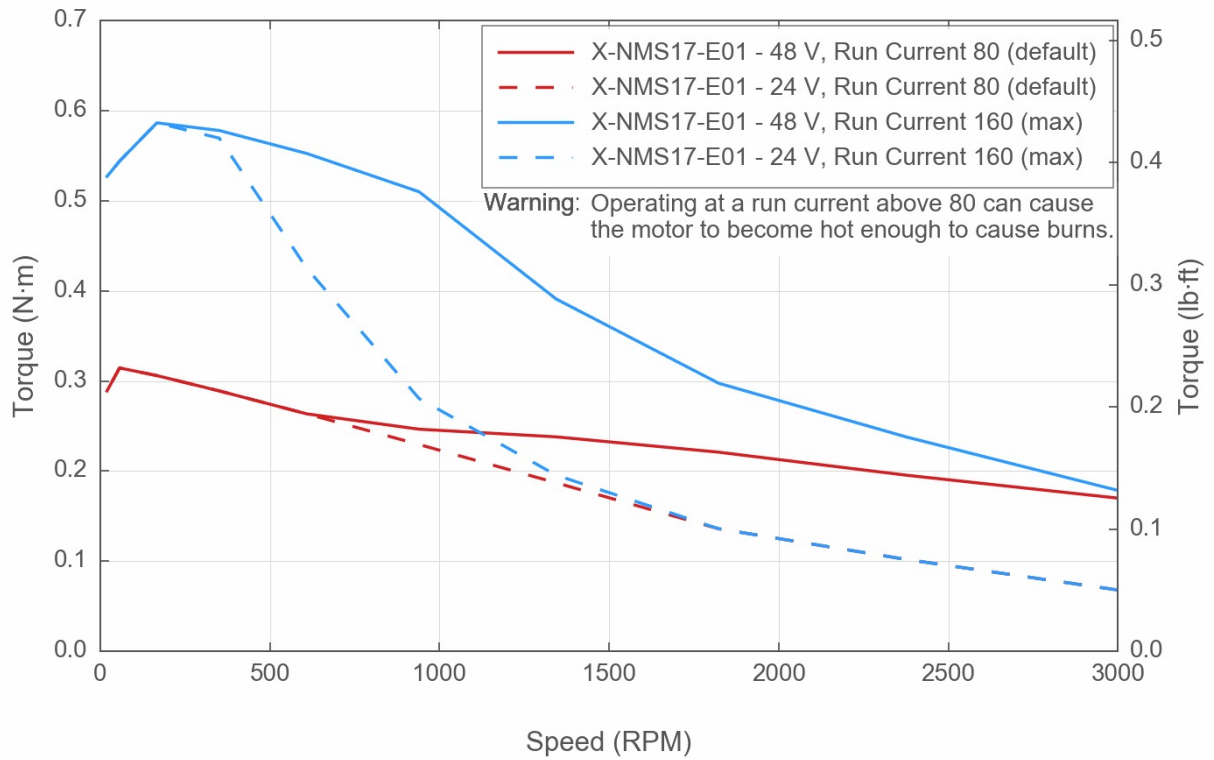
Part Number	Encoder Resolution	Maximum Torque	Maximum Current Draw	Motor Rated Current
X-NMS17-E01	500 CPR (2000 states/rev)	58 N-cm (82.1 oz-in)	1900 mA	2300 mA/phase
X-NMS23-E08	400 CPR (1600 states/rev)	180 N-cm (254.9 oz-in)	3500 mA	4200 mA/phase

Part Number	Motor Frame Size	Mounting Interface	Weight
X-NMS17-E01	NEMA 17	M3 threaded holes	0.58 kg (1.279 lb)

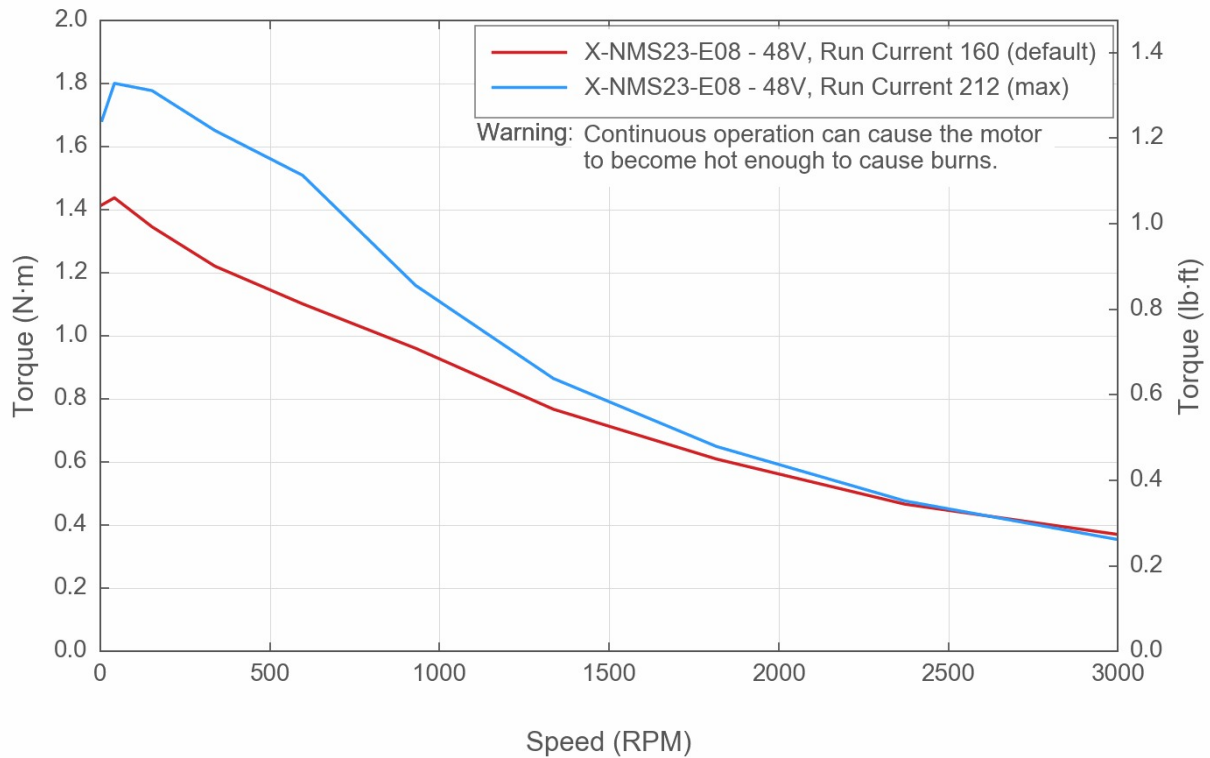
Part Number	Motor Frame Size	Mounting Interface	Weight
X-NMS23-E08	NEMA 23	4.5 mm thru holes	1.3 kg (2.866 lb)

X-NMS-E Series Charts

Torque Speed Performance



Torque Speed Performance



Contact

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