

X-NMS23-E08 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
- Optional integrated power-off brake
- Custom versions available

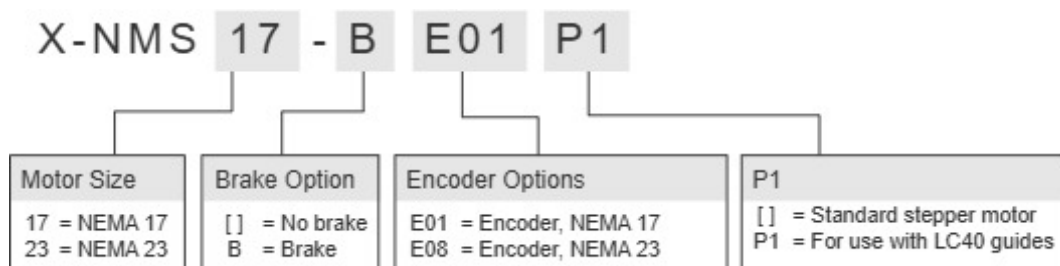
X-NMS-E Series Overview

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. An optional power-off brake is available on NEMA 23 sized steppers to secure the payload across power cycles. 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 & Options



X-NMS23-E08 Drawings

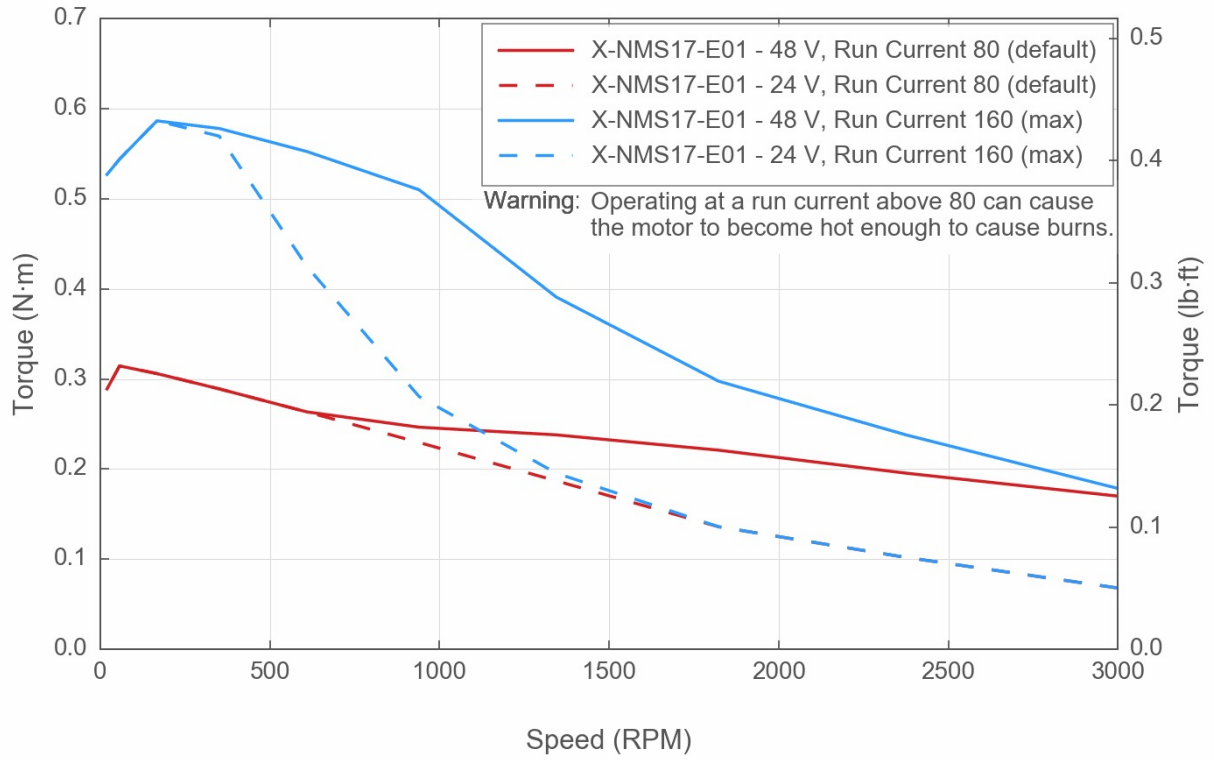
- [X-NMS23-E.png \(Drawing for the X-NMS23-E\)](#)

X-NMS23-E08 Specifications

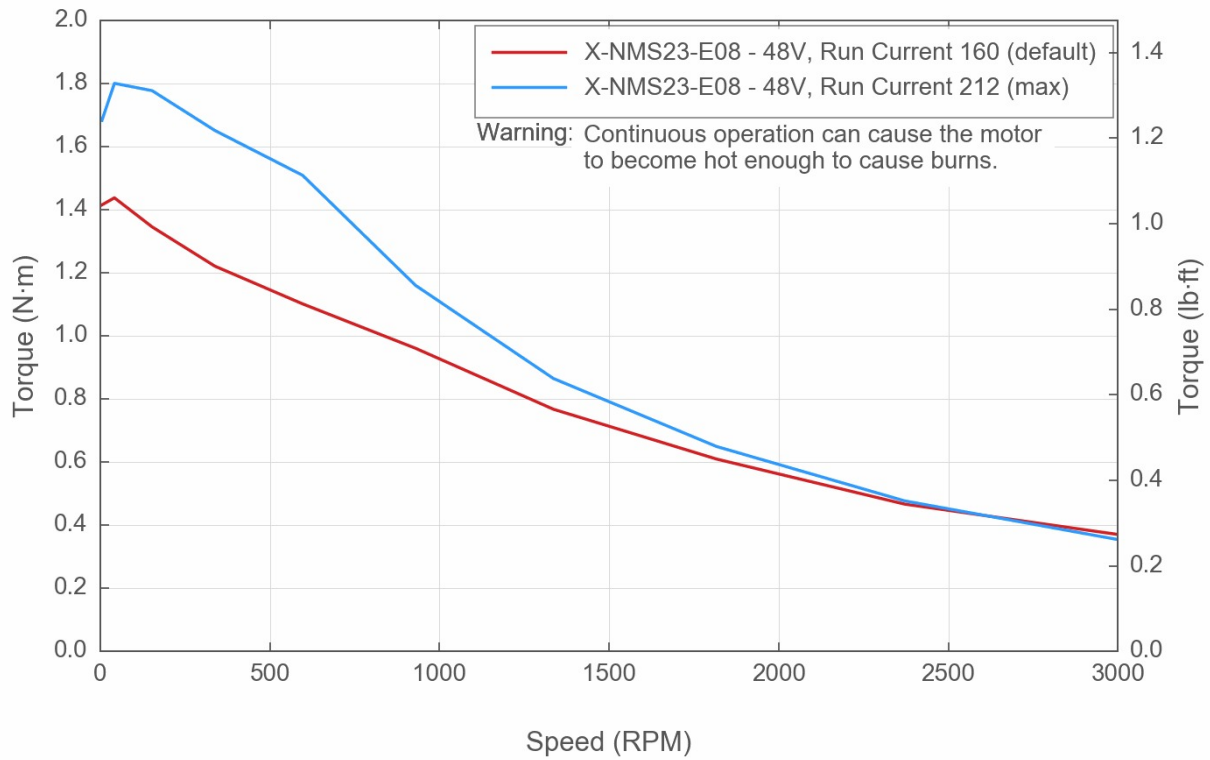
Microstep Size (Default Resolution)	0.028125° (490.866 μrad)
Built-in Controller	Yes
Accuracy (unidirectional)	0.25° (4.362500 mrad)
Repeatability	< 0.1° (< 1.745 mrad)
Maximum Speed	18000°/s (3000 rpm)
Minimum Speed	0.017172°/s (299.703 μrad/s)
Speed Resolution	0.017172°/s (299.703 μrad/s)
Encoder Resolution	400 CPR (1600 states/rev)
Encoder Type	Rotary quadrature encoder
Communication Interface	RS-232
Communication Protocol	Zaber ASCII (Default), Zaber Binary
Data Cable Connection	Locking 4-pin M8
Maximum Torque	180 N-cm (254.9 oz-in)
Power Supply	24-48 VDC
Power Plug	2-pin Screw Terminal
Maximum Current Draw	3500 mA
Motor Steps Per Rev	200
Motor Type	Stepper (2 phase)
Motor Rated Current	3000 mA/phase
Default Resolution	1/64 of a step
Motor Frame Size	NEMA 23
LED Indicators	Yes
Mounting Interface	4.5 mm thru holes
Operating Temperature Range	0 to 50 °C
CE Compliant	Yes
Vacuum Compatible	No
Weight	1.3 kg (2.866 lb)

X-NMS-E Series Charts

Torque Speed Performance



Torque Speed Performance



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