

## X-RSW60A-E03 Datasheet



- Speed up to 75 rpm and torque up to 2.25 N-m
- Two lens holders allow for use as a polarizer mount
- Worm gear driven for continuous rotation
- Built-in controller; daisy-chains with other Zaber products
- Encoder position feedback with slip/stall detection and automatic recovery
- Multiple X-Series products in a daisy-chain can share a single power supply
- Custom versions available

### X-RSW-E Series Overview

Zaber's X-RSW-E Series products are computer controlled motorized rotary stages with integrated controllers and motor encoders. They are stand-alone units requiring only a standard 24-48 V power supply.

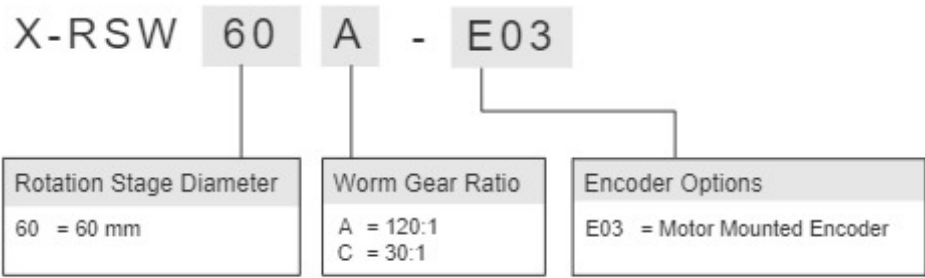
Built-in motor encoders allow for closed-loop operation and slip/stall recovery features. An indexed knob provides smooth manual control at variable speeds in both directions for versatile operation even without a computer. Press and hold to switch between velocity mode and distance mode, turn to move the stage, and press to stop.

The stages connect to the USB 2.0 or RS-232 port of any computer and can be chained with several

units per chain. They can also be chained with any other Zaber products. Convenient locking, 4-pin, M8 connectors on the unit allow for easy and secure connection between products. 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/rotary-stages/X-RSW-E>

### X-RSW-E Series Part Numbering



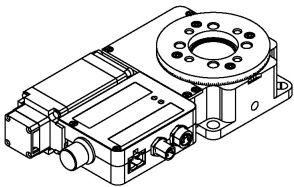
## X-RSW60A-E03 Bundle Options

*This device may be purchased stand-alone or bundled with one of the following accessory kits:*

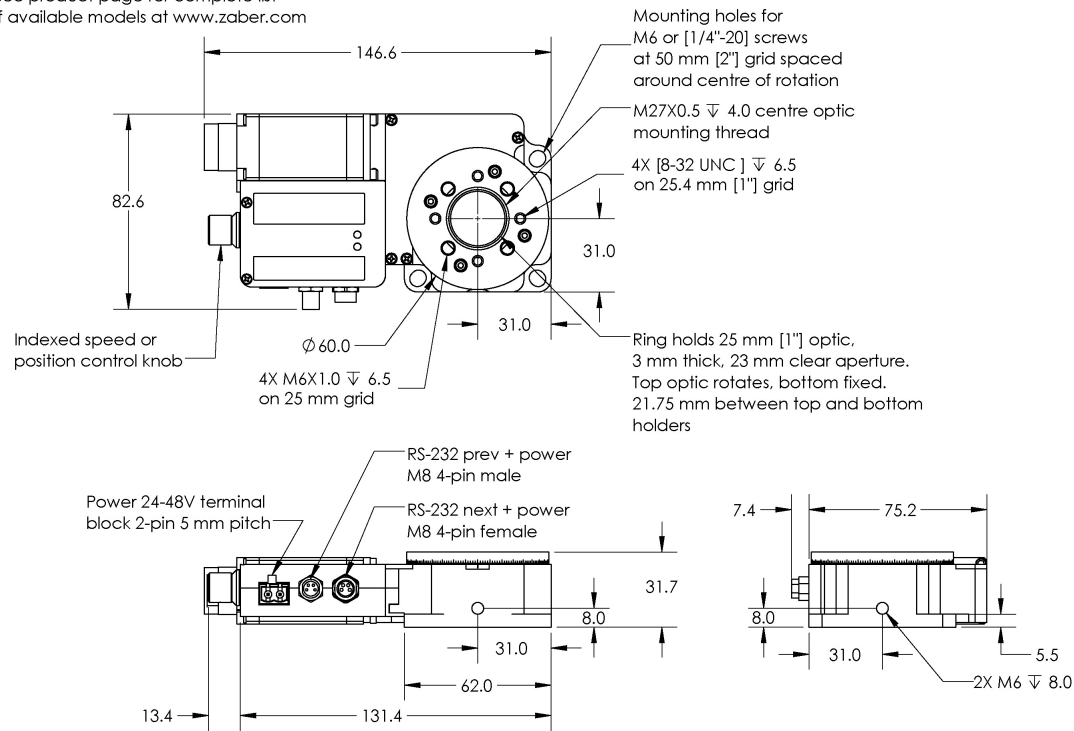
Products	Description
X-RSW60A-E03	Motorized rotary stage, integrated controller and motor encoder, 360 degree rotation, 60 mm stage top, high torque
with KX14A accessory kit Power supply: North America, 48 V. Powers multiple X-Series devices	<ul style="list-style-type: none"><li>• 1 x PS14S-48V37: Power Supply, 48 V 3.75 A, Compatible with X-Series Products</li><li>• 1 x X-DC02: Data Cable, 2 ft (0.6 m), for Use with all X-Series Products</li><li>• 1 x X-USBDC: USB to Serial Converter Cable with M8 Female Plug for X-Series Products</li></ul>
with KX13A accessory kit Power supply: North America, 48 V. Powers one axis	<ul style="list-style-type: none"><li>• 1 x PS13S-48V12: Power Supply, 48 V 1.25 A, Compatible with X-Series Products</li><li>• 1 x X-DC02: Data Cable, 2 ft (0.6 m), for Use with all X-Series Products</li><li>• 1 x X-USBDC: USB to Serial Converter Cable with M8 Female Plug for X-Series Products</li></ul>
with PTB2 accessory Power Supply Not Included	<ul style="list-style-type: none"><li>• 1 x PTB2: Power Terminal Block, 2 Pin, 5 mm Pitch, for Use with X-Series Devices with Custom Power Supply</li></ul>

X-RSW60A-E03 Drawings

**ZABER**  
X-RSW-E Motorized Rotary Stage  
dimensions in mm



\*See product page for complete list  
of available models at [www.zaber.com](http://www.zaber.com)



DWG 1102 R02

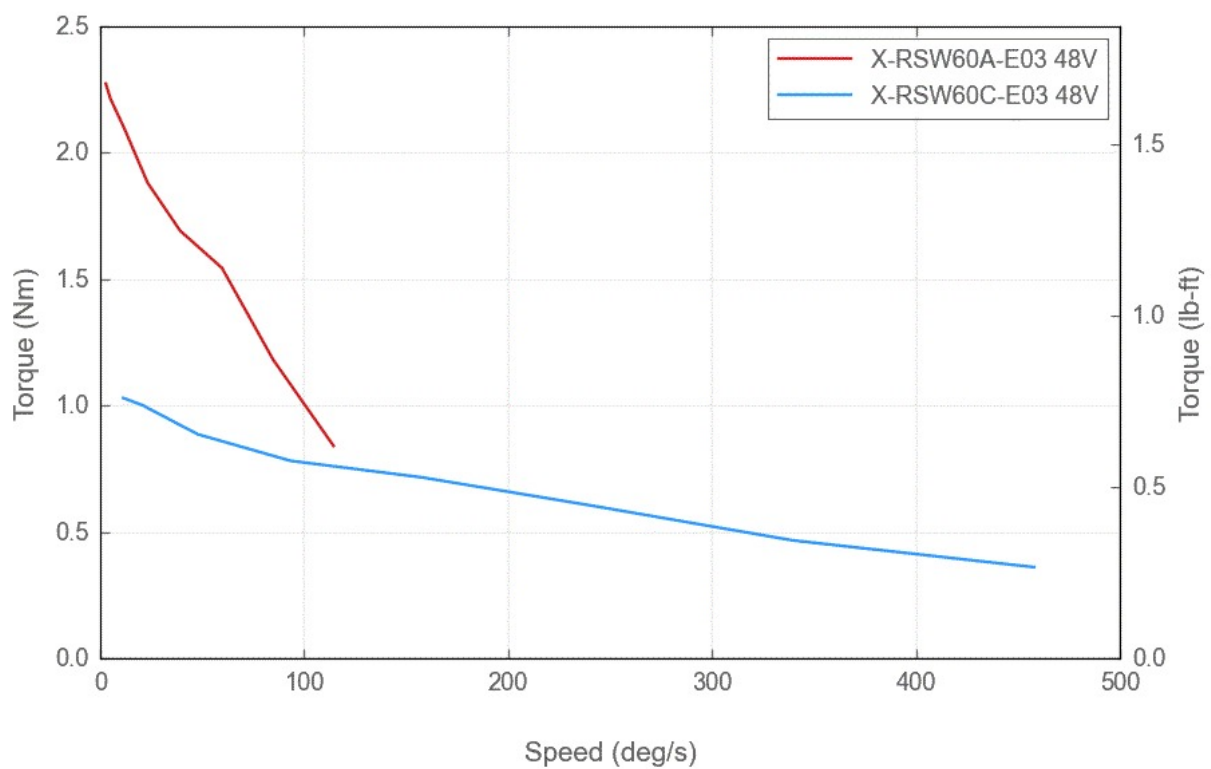
## X-RSW60A-E03 Specifications

Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.000234375°	4.091 µrad
Built-in Controller	Yes	
Range	360°	
Accuracy (unidirectional)	0.08°	1.396000 mrad
Repeatability	< 0.02°	< 0.349 mrad
Backlash	< 0.04°	< 0.698 mrad
Maximum Speed	115°/s	19 rpm
Minimum Speed	0.000143°/s	2.496 µrad/s
Speed Resolution	0.000143°/s	2.496 µrad/s
Encoder Resolution	200 CPR	800 states/rev
Encoder Type	Rotary quadrature encoder	
Communication Interface	RS-232	
Communication Protocol	Zaber ASCII (Default), Zaber Binary	
Maximum Continuous Torque	225 N-cm	318.6 oz-in
Maximum Centered Load	200 N	44.9 lb
Maximum Cantilever Load	410 N-cm	580.6 oz-in
Stage Top Dimension	60 mm	2.362"
Radial Error Motion	+/- 4 µm	+/- 0.000157"
Axial Error Motion	< 4 µm	< 0.000157"
Tilt Error Motion	+/- 0.0033°	+/- 57.60 µrad
Bearing Plane Offset	16.4 mm	0.646"
Maximum Current Draw	950 mA	
Power Supply	24-48 VDC	
Power Plug	2-pin Screw Terminal	
Angular Motion Per Motor Rev	3°	
Motor Type	Stepper (2 phase)	
Motor Rated Current	1500 mA/phase	
Inductance	1 mH/phase	
Default Resolution	1/64 of a step	
Data Cable Connection	Locking 4-pin M8	

Specification	Value	Alternate Unit
Mechanical Drive System	Precision Worm Gear	
Limit or Home Sensing	Magnetic home sensor	
Manual Control	Yes	
Operating Temperature Range	0-50 °C	
Vacuum Compatible	No	
RoHS Compliant	Yes	
CE Compliant	Yes	
Weight	0.67 kg	1.477 lb

## X-RSW-E Series Charts

**Torque Speed Performance**



## Contact

Email: [contact@zaber.com](mailto:contact@zaber.com)

Phone (toll free Canada/USA): 1-888-276-8033

Phone (direct): 1-604-569-3780

Fax: 1-604-648-8033

Zaber Technologies Inc.

#2 - 605 West Kent Ave. N.

Vancouver, British Columbia

Canada, V6P 6T7

<https://www.zaber.com>