

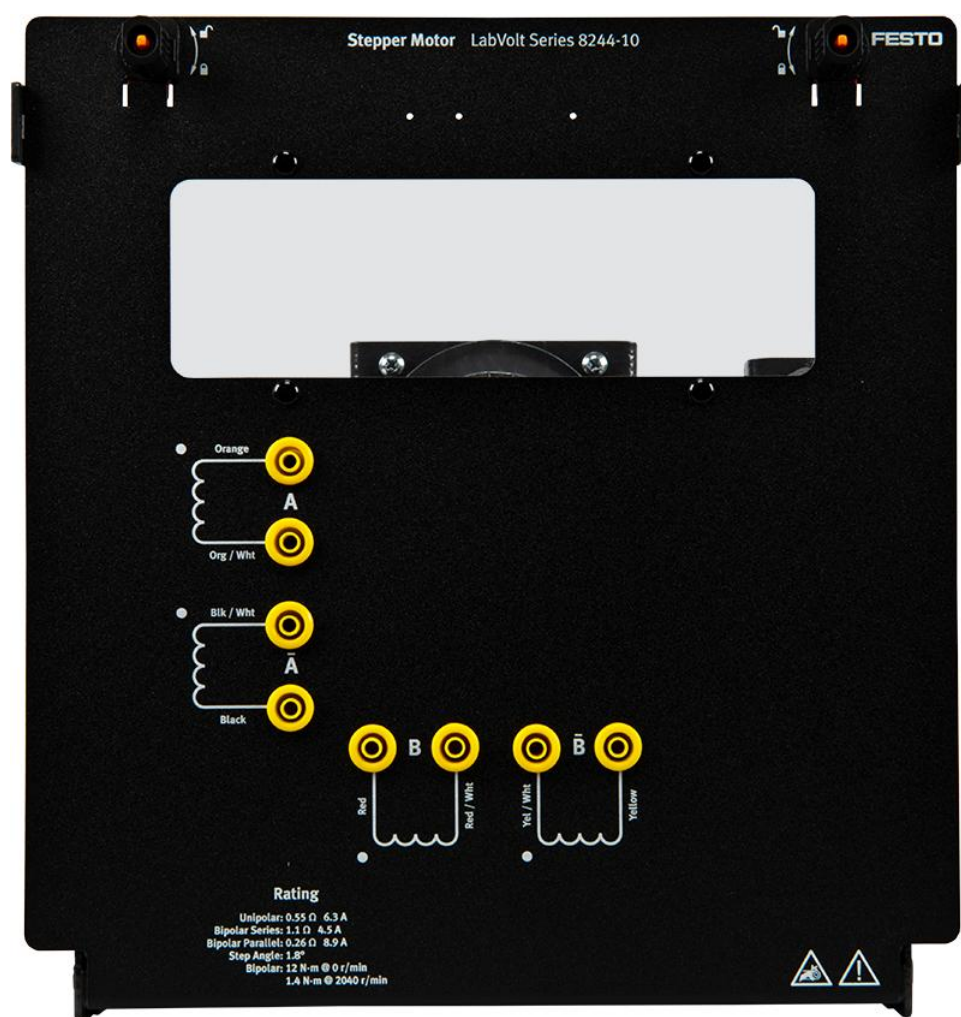
# Stepper Motor

## 8150979 (8244-10)

# FESTO

LabVolt Series

Datasheet



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## General Description

The Stepper Motor, Model 8244-1, is an optional Lab-Volt Electromechanical System (EMS) model designed for the study of stepper motor control. This machine uses industrial-grade components and is mounted in a standard-size EMS module. It consists of an 8-lead stepper motor that can be connected either in series or in parallel, depending on the user configuration. It also has high torque capacity and is specifically designed to work in combination with the Microstepping Drive, Model 9018-1.

The module is constructed of heavy gauge steel and is equipped with a metal faceplate including a plastic see-through window. The faceplate can be lowered for access to the machinery and, when closed, is secured by two quick-lock fasteners. All motor leads are terminated on the faceplate by 4-mm safety jacks and are identified by schematic symbols. A geared pulley has been fitted to mechanically couple the motor with another EMS machine through the use of a non-slip timing belt (Model 8942). This flexible belt has molded teeth that mesh with the geared pulley. Tension for the timing belt is provided by the idler tensioning ball bearings mounted on the machine.

## Specifications

Parameter	Value
<b>Leads</b>	
	8
<b>Step Angle</b>	
	1.8 degrees
<b>Rotor Inertia</b>	
	0.00449 kg-cm-s <sup>2</sup> (0.0623 oz-in-s <sup>2</sup> )
<b>Holding Torque</b>	
Unipolar	9.2 N-m (1302 oz-in)
Bipolar	12.0 N-m (1699 oz-in)
<b>Nominal Torque</b>	
	1.4 N-m (198 oz-in)
<b>Bipolar Series Configuration</b>	
Current	4.5 A per phase
Resistance	1.1 $\Omega$ per phase
Inductance	12 mH per phase
<b>Bipolar Parallel Configuration</b>	
Current	8.9 A per phase
Resistance	0.26 $\Omega$ per phase
Inductance	3 mH per phase
<b>Unipolar Configuration</b>	
Current	6.3 A per phase
Resistance	0.55 $\Omega$ per phase
Inductance	3 mH per phase
<b>Physical Characteristics</b>	
Dimensions (H x W x D)	203 x 230 x 187 mm (8 x 9 x 7.4 in)
Net Weight	TBE

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