Stepper Phidget

Get moving with this powerful Bipolar Stepper Phidget. With a maximum power supply of 30V, it can provide up to 4A of current to each stepper coil. The result is that you can control the position, velocity and acceleration of one large bipolar stepper using a port on your **VINT Hub** (See the "Compatible Products" tab for a list of hubs). Steppers are especially popular in applications where accurate positioning is important.

Safety and Protection

The Stepper Phidget comes with a number of safety features, since motors have a reputation of damaging unprotected circuits with current spikes when a motor stalls or changes direction under heavy load. There's a fuse socket with a 5A automotive fuse to protect your Phidget in just such an occasion, and the power terminals are polarity protected in case the power supply gets wired up backwards. The VINT port on this Phidget is isolated from the power circuit, so you don't have to worry about damaging your hub or computer if something goes wrong. Ensure that this Phidget is in a well-ventilated area if you plan on running it close to maximum specifications.

Power Saving Options

For power-conscious users, we also allow for separate control over the current limit and the holding current limit. If you know your motor will be stationary for long periods of time, but still needs a small amount of holding torque to maintain its position, you can set the holding current appropriately without interfering with the running current limit.

Warning

Make sure the power supply is unplugged before attaching or removing wires from the terminal blocks. Failure to do so could cause permanent damage to the Phidget.

Related Videos

Product Specifications

Board Properties

Controlled By	VINT

Controller Properties

Motor Type	Bipolar Stepper
Number of Motor Ports	1
Motor Position Resolution	$\frac{1}{16}$ Step (40-Bit Signed)
Position Max	?± 1E+15 1/16 steps
Stepper Velocity Resolution	1 1/16 steps/sec
Stepper Velocity Max	115000 1/16 steps/sec
Stepper Acceleration Resolution	1 1/16 steps/sec?²
Stepper Acceleration Min	2 1/16 steps/sec?²
Stepper Acceleration Max	1E+07 1/16 steps/sec?²
Sampling Interval Min	100 ms/sample
Sampling Interval Max	60 s/sample

Electrical Properties

Available Current per Coil Max	4 A
Supply Voltage Min	10 V DC
Supply Voltage Max	30 V DC
Current Consumption Min	50 mA
Current Consumption Max	7 A
Current Consumption Min (VINT Port)	500 ?$\frac{1}{4}$A
Current Consumption Max (VINT Port)	1 mA
Quiescent Power Consumption Max	* 200 mW

Physical Properties

Recommended Wire Size	16 — 26 AWG
Operating Temperature Min	-20 ?°C
Operating Temperature Max	85 ?°C

* Power consumption varies based on supply power. See the technical section of the User Guide for details.