

# 8A Stepper Phidget



Get moving with this powerful Bipolar Stepper Phidget. With a maximum power supply of 30V, it can provide up to 8A 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 Connection & Compatibility 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       | 1 $\square$ 16 Step (40-Bit Signed) |
| Position Max                    | $\pm$ 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 <sup>2</sup>       |
| Stepper Acceleration Min        | 2 1/16 steps/sec <sup>2</sup>       |
| Stepper Acceleration Max        | 1E+07 1/16 steps/sec <sup>2</sup>   |
| Sampling Interval Min           | 100 ms/sample                       |
| Sampling Interval Max           | 60 s/sample                         |

### Electrical Properties

|                                     |             |
|-------------------------------------|-------------|
| Available Current per Coil Max      | 8 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 $\mu$ A |
| Current Consumption Max (VINT Port) | 1 mA        |

|                                 |          |
|---------------------------------|----------|
| Quiescent Power Consumption Max | * 200 mW |
|---------------------------------|----------|

**Physical Properties**

|                           |             |
|---------------------------|-------------|
| Recommended Wire Size     | 10 – 12 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.