

This looks correct, although 1/10th max speed would be 9.82in/min.

Alternatively, you may measure the speed of the motor directly from the drive.

This could be done by measuring the voltage of Pin1-15 relative to signal ground.

This voltage can be used in the first equation below. This just requires that you have the resolution of your motor in lines/rev.

The scaling factor for the AB15A100 is 22kHz/V, the value used in the equation is 22000 Hz/V.

Velocity Monitor Output This pin provides an analog voltage output that is proportional to the actual motor speed. The scaling factor for each individual drive can be found on the drive datasheet.

- For a drive in Encoder Velocity Mode, substitute the voltage value read at the velocity monitor pin, V_{monitor} into the below equation to determine the motor RPM:

$$\text{Motor Velocity [RPM]} = \frac{V_{\text{monitor}} \cdot \text{Scaling Factor} \cdot 60}{\text{Number of encoder lines}}$$

- For a drive in Hall Velocity Mode, substitute the voltage value read at the velocity monitor pin, V_{monitor} into the below equation to determine the motor RPM:

$$\text{Motor Velocity [RPM]} = \frac{V_{\text{monitor}} \cdot \text{Scaling Factor} \cdot 120}{\text{Number of motor poles}}$$

You can use this measurement while commanding 1VDC to tune to 135rpm.

To find the appropriate voltage to read based off your resolution, you may use the following equation.

$$V_{\text{monitor}} = (135\text{RPM} \cdot \text{resolution}) / (\text{Scaling Factor} \cdot 60)$$