

Coda Pump

Pinout

Pin 1 +12V Enable

Pin 2 Speed/Frequency Reference

Pin 3 Speed Control Command

Pin 4 Main GND

Pin 5 +12V Main

Connector

Kostal 09408621

Pin 32140734133 18awg

Wire Seal 10800507250 1.1-2.1mm insulation OD

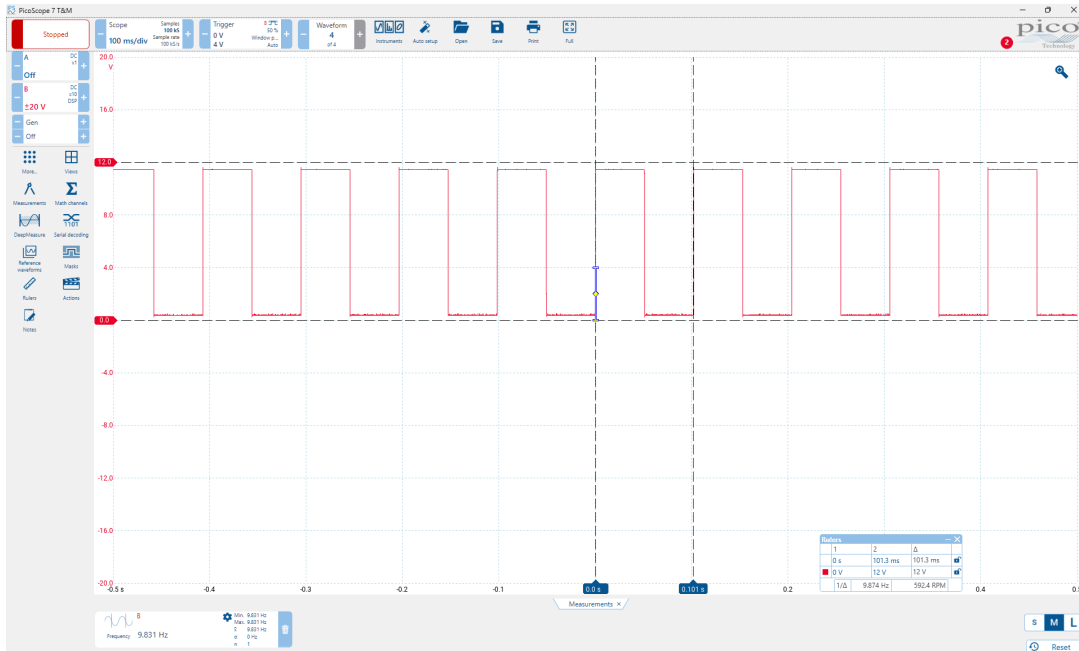
Pin 1 +12V Enable

Pull this pin to +12V to turn on the pump. Without a speed reference on pin 3 the pump will run at maximum speed

Pin 2 Speed/Frequency Reference

This channel works by pulling a high impedance voltage source low depending on the speed of the pump. Maximum voltage on this pin is 12V with a recommended supply impedance of 1k ohm or greater.

When the pump is turned on by applying +12V to the Pin 1 enable and the speed reference command is for the pump to stop, this channel will output a 50% duty cycle square wave with a max voltage equal to the supply voltage on Pin 2 from the ECU. See Figure 1



When the pump is at minimum speed the output is a square wave with a 50% duty cycle at a frequency of 80 Hz with a maximum amplitude equal to the supply voltage on pin 2 from the ECU. See figure 2.

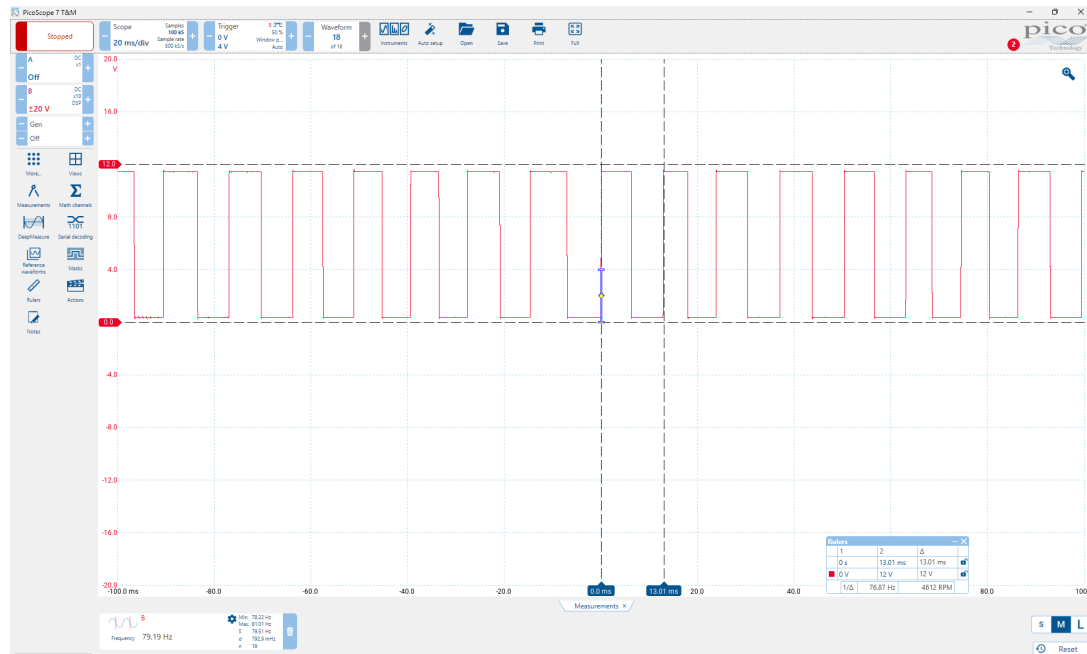


Figure 2: Minimum pump speed feedback reference

When the pump is at maximum speed the output is a square wave with a 50% duty cycle at a frequency of 700 Hz with a maximum amplitude equal to the supply voltage on pin 2 from the ECU. See figure 3.

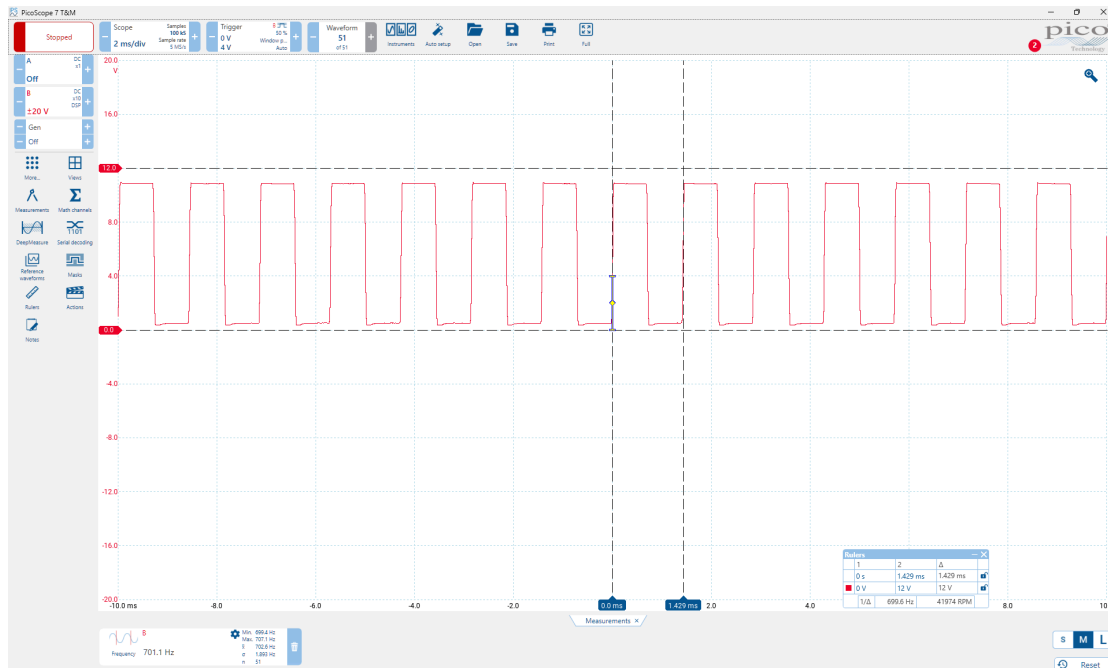


Figure 3: Maximum Pump speed feedback reference signal

Pin 3 Speed Control

This pin takes a 5Hz-1.25kHz duty cycle pwm with a 0V low and greater than a 7V amplitude to change the pump speed. Preferential signal levels are 200Hz with a 12V Peak-Peak duty cycle signal with a 0V low.

A low % duty cycle will command the pump to slow down and a higher % duty cycle will command the pump to speed up. The pump below 10% will shut off. The pump will then output a signal with a 50% duty cycle at 10Hz as a signal to the ECU that the pump is awake but not running. See Figure 1.

Pin 4 Main Ground

Main power ground for the pump

Pin 5 +12V Power

This is the main power supply for the pump