

# Frequency Input Module

## (RLVBFIM03)



Racelogic's frequency input module (RLVBFIM03) is a 4-channel frequency capture and pulse counter unit. It enables frequency-based signals in the range of 1 Hz to 20 kHz to be recorded or logged by a VBOX.

The input circuit for each channel can accept a wide signal amplitude range from TTL output sensors up to the higher voltages created by inductive sensors.

This means that direct connection to ABS wheel speed sensors, RPM sensors or fuel flow sensors is possible.



The RLVBFIM03 can be configured through software to process the input frequency or pulse data to provide logged data in real units. By configuration of each channel the incoming frequency or pulse train can be easily configured into any of the following data formats:

- Frequency (Hz)
- RPM
- Speed (km/h or mph)
- Pulse count
- Fuel Used (l or Gal)
- Fuel Flow rate (l/hr or Gal/hr)
- Fuel Consumption (l/100 km or mpg)

## Features

- Frequency input range 1 Hz to 20 KHz
- Pulse counting mode
- Input channels can accept direct connection to inductive sensors such as ABS or Crankshaft sensor
- Internal scale and offset to provide SI units from sensors
- Modes for automatic calculation of RPM or wheel speed
- BNC connection for signal input

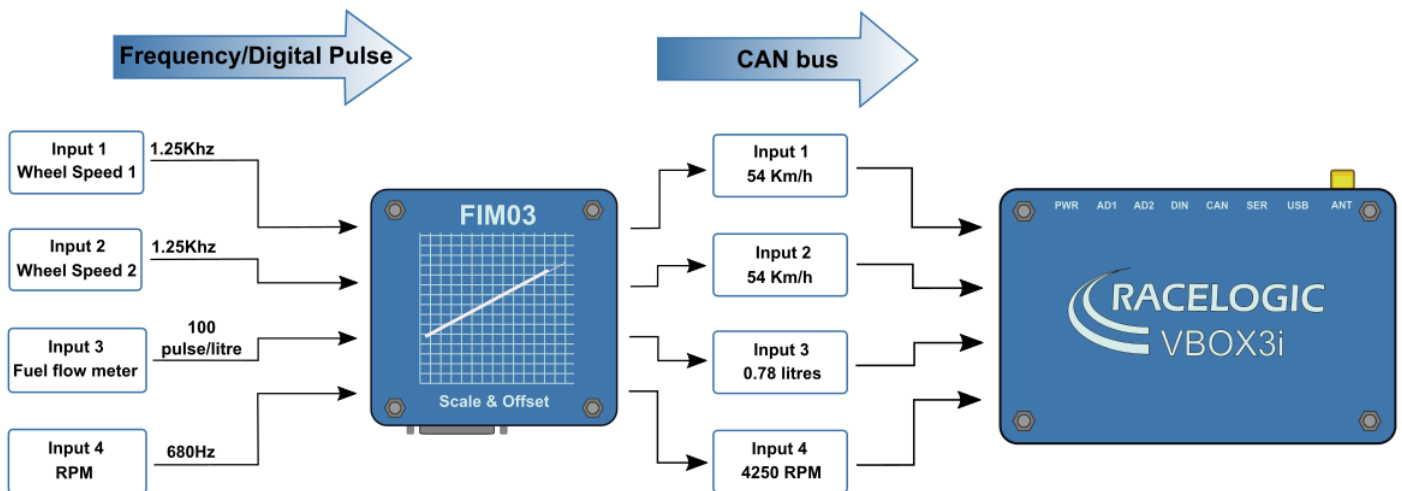
# Frequency Input Module (RLVBFIM03)



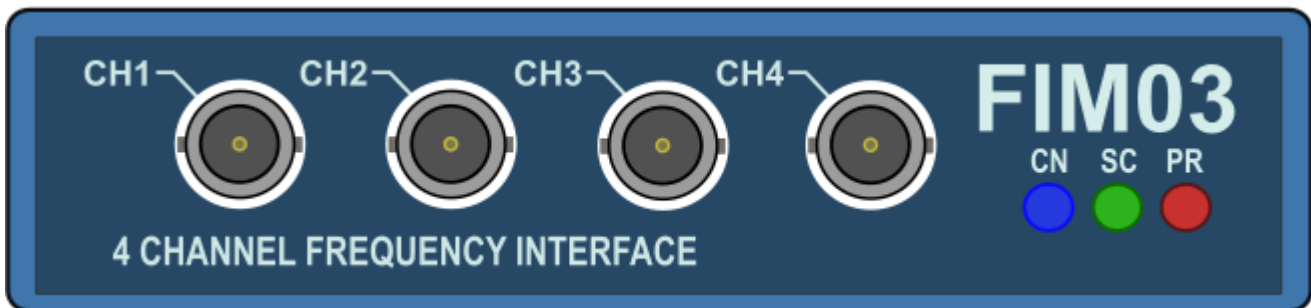
## Applications

- ABS Brake stops
- Tire traction testing
- Aqua plane testing
- Fuel Flow/Consumption
- General Vehicle evaluation
- Engine monitoring (RPM)

The VBOX Setup software allows FIM03 to be configured for use with Racelogic VBOX or stand-alone mode for use with third party data loggers.



## Connector Assignment



BNC Connections for Channels 1 to 4

Connection	Function
Centre Pin	Signal Input
Outer shield	Signal Ground

# Frequency Input Module

(RLVBFIM03)



## Specification

Input voltage (max. range)	-50 V to +50 V
Minimum signal amplitude	Approx. 1 V pk-pk
Input frequency range	1 Hz to 20 kHz
Timer	24 Bit
Timer resolution	67 ns
Max pulse count before reset	1 000 000 pulses
Data output to VBOX	<ul style="list-style-type: none"><li>• Frequency (Hz)</li><li>• Wheel speed (km/h or mph)</li><li>• Engine / Wheel (RPM)</li><li>• Pulse count</li><li>• Fuel Used (l or Gal)</li><li>• Fuel Flow rate (l/hr or Gal/hr)</li><li>• Fuel Consumption (l/100 km or mpg)</li><li>• User defined scale and offset for sensor calibration</li></ul>
Signal Input Connection	4 x BNC Connector
VBOX Connection	2 x Lemo socket for connection to VBOX CAN Bus
Operating Voltage	6 – 26 V DC
Current at 12 V	2.5 W

## Module Dimensions

