

How to Connect Ultrasonic to RedLion CUB5R000 Rev 1



Programming notes. Hold SEL (Left BUtton) to start programming. Note: Press SEL many times to quit when done. Hold SEL to exit sub menus that allow selecting numbers for Scaling. Nice [video](#) showing 2 button User Interface.

Example for connecting a RedLion CUB 5 R000 to a Clamp On Ultrasonic configured as an example for a 1000 GPM Ultrasonic Flow Meter scaled to output 1000 Hz at 1000 GPM.

Scale Factor Math:

SF= ((1000 Gal/min)/(60 sec/min))/(1000 Pulses/sec)

SF= 0.1667 Gal/Pulse

YouTube [Video](#) from RedLion

How to make settings [Video](#)

Scaling with 2 DP:

=0.1667 X 100 = 1.6666 final Scaling in Module 1

Counter Scale A Factor

Online CUB Manual [Link](#) Purchase Link [here](#)

All switches are Down for Current Sink Mode

Ultrasonic Configuration:

Menu 69: High FO Flow Rate 1000 g/m (To set the output scaling for 1000 Hz at 1000 g/m)

Menu 67: Fo Frequency Range 0-1000 Hz

Menu 78: 24. Flow Rate Pulse (To direct the pulse on the OCT terminals at terminals 28 & 29.

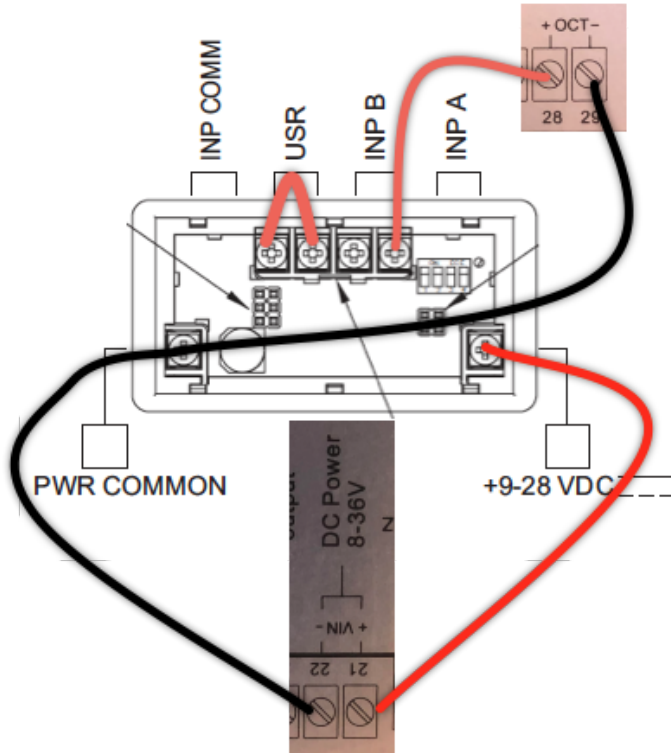
Remember to use Menu 26 to SAVE values.

Theory from 50,000 Feet:

We will use the Ultrasonic Flow Meter's ability to output a frequency proportional to flow on a Current Sinking Open Collector transistor output connection and will use the Internal 7.8 K Ohm pullup resistor in the RedLion to pull up the signal. The RedLion will be configured to disable the rate and programming buttons leaving only the RESET, RST, button to allow the user to reset the total for the purpose of recording the total gallons delivered. Menu 9 in the Ultrasonic Meter may be used to monitor the TOTAL flow totalizer as well.. Menu 38 may be used to TEST the totalizer as pressing ENT allows the totalizer to be reset so BOTH totalizers may be reset for the purpose of testing.

Note: You may use Menu 11 to instruct the Ultrasonic Flow Meter to SIMULATE operation and then use Menu 9 on the Ultrasonic Meter to monitor the total flow to confirm settings. You MUST return the value in Menu 11 to the proper value as the meter will not allow you to use Menu 26 to Solidify Settings (save settings to Non RAM)

Wiring Diagram:



Note the small graphics show the actual connections and the larger graphic of the Ultrasonic Flow Meter gives the overall location of the connections.

Jumpering USR prevents totalizer reset.

User Manual QR Code for Smart Phones

