



10350 STATE HWY 30 College Station, TX 77845

(979) 776-7200

RL-QUADGAS & RL-DUALGAS Operation Manual

IMPORTANT SAFETY WARNING

Failure to follow all safety and operational instructions may result in instrument damage, serious injury or death.

WARNING: DO NOT OPEN OR EXPOSE TO SOLVENTS WHEN EXPLOSIVE ATMOSPHERE IS PRESENT.

ATTENTION: NE OUVREZ PAS OU EXPOSEZ Á SOLVANTS POUR LE PRESENCE D'ATMOSPHERE EXPLOSIVE.

SAFETY MESSAGE

It is important to follow all instructions in this manual. This device is to be installed by a trained professional who is familiar with Redline Safety products.

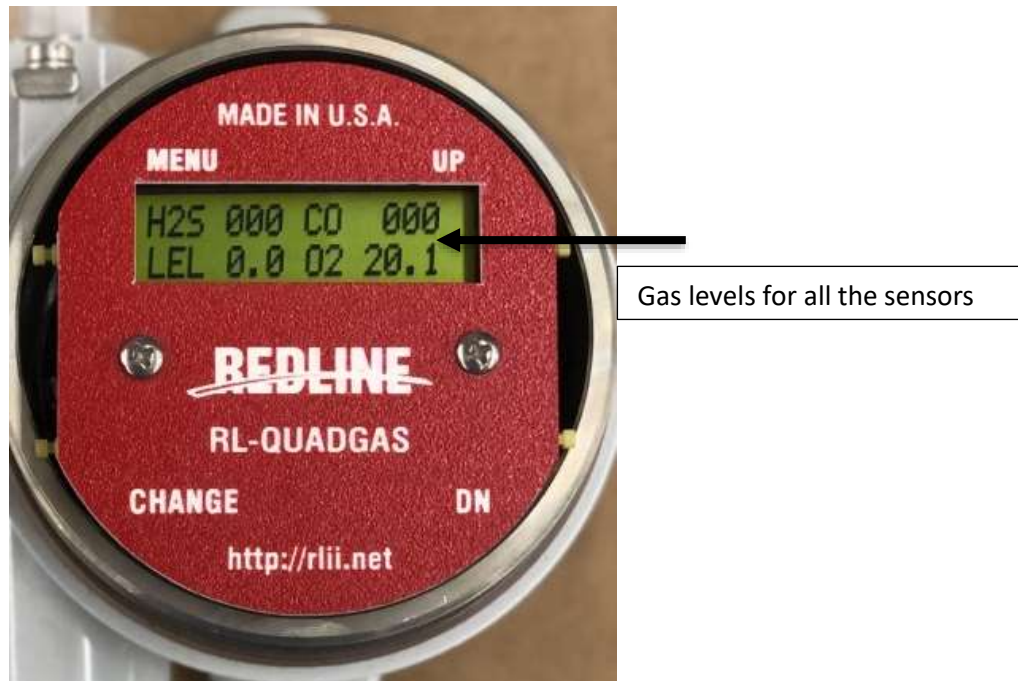
- Read and understand all instructions before installation or use of this equipment.
- Keep cover tight when circuits alive.
- Test instrument regularly to ensure proper operation.
- After installation provide a copy of manual to authorized personnel



Power Consumption

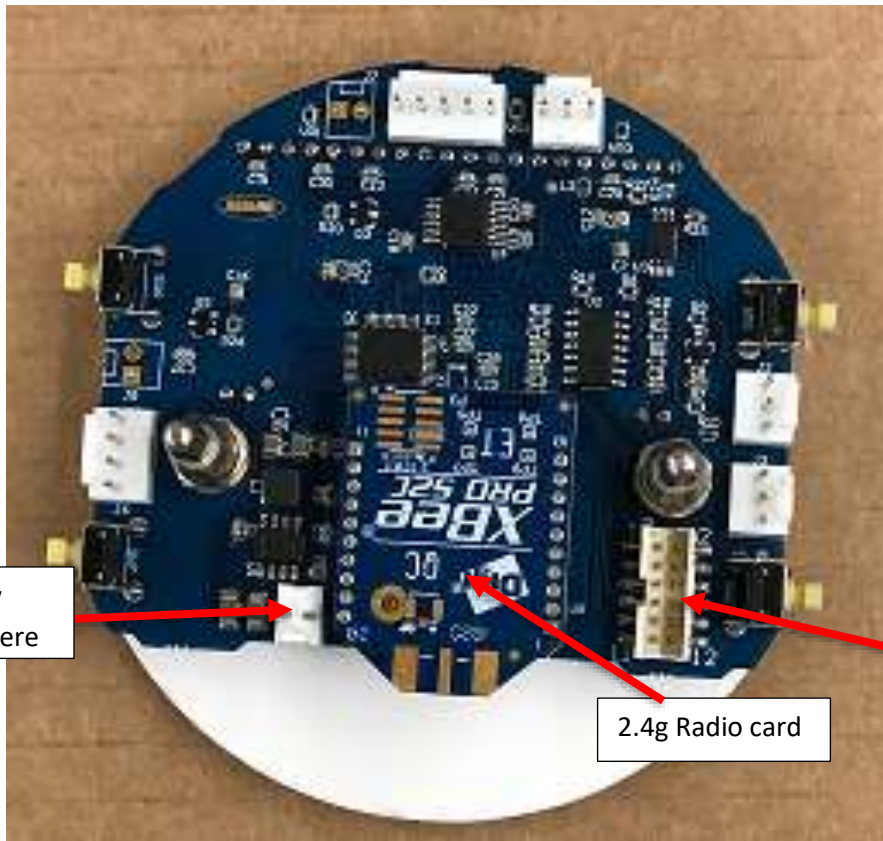
9 vdc (6AA batteries)

Basic Operation



When the unit is powered it will begin its startup process, during the process the unit will first display the software revision then will display the units address before going into normal operation mode. There are 7 main modes to the RL DualGas sensor which can be accessed by using the **Menu** button or magnetic reed switch; the reed switch acts as a button with the Redline magnet. When the magnet is placed close to the reed it engages the reed switch like a button, when the magnet is taken away it disengages. Move the magnet toward the reed and away from the reed repeatedly to change digits. The **Change** button allows you to edit settings within the different modes, when the setting flashes you can edit it using the **up** or **down** buttons. Each sensor has a different address number that you can assign to communicate with the **Redline Monitor**.

Inputs



Power. Battery pack plugs in here

2.4g Radio card

Ribbon cable connector for Sensor housing

MODES

1. Normal Operating Mode

In normal operating mode the RL-QuadGas/DualGas sensor unit detects the H₂S, CO, LEL and Oxygen gas level. During normal operating mode; If the gas level is greater than or equal to the background setting, the unit will send a message to the **Redline Monitor** every 5 seconds; if less than the background setting, the unit will send a message every 5 minutes. When the RL-QuadGas/DualGas is in normal operating mode the unit will display 0's for all the gases except Oxygen. Below is an example (when using this a DualGas sensor there wont be anything showing where CO and O₂ are listed below)



2. Battery Voltage

To access the battery voltage, press the menu button once or use the magnetic reed switch and the unit will display the voltage.



3. Sensor Selection

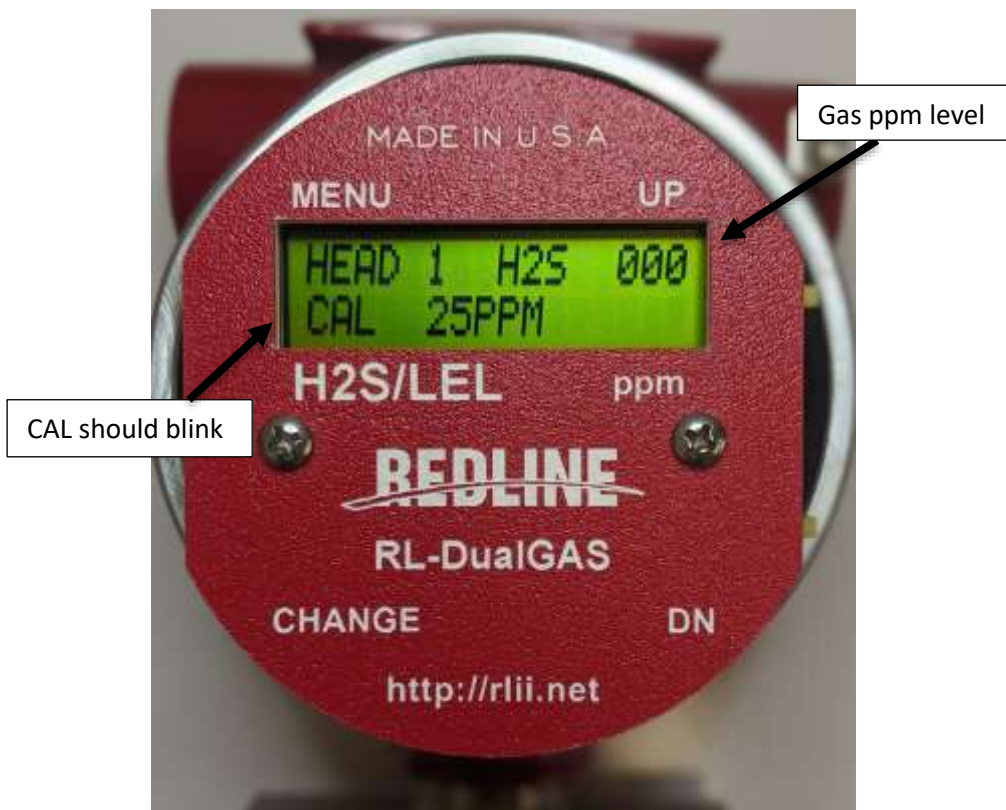
To access sensor selection mode, press the **Menu** twice. In the sensor selection mode, there are four sensor types you can select through H2S, CO, LEL and Oxygen. The first one should always be H2S, Second CO, Third LEL and fourth Oxygen. If you are using this as a RL-DualGas you will need to turn the 2nd(CO) off by hitting the change button ("CO" should be blinking) then using up or down till it reads "off" instead of "CO" Do the same for Oxygen.



4. Calibration

For calibration mode you must be in the sensor Selection mode on the sensor you want to calibrate. To access sensor selection mode for H2S, press the **Menu** twice. In the sensor selection mode, Press the **Change** button once until H2S blinks on the display then press the **Menu** button twice until you see CAL blinking on the display.

At this time, you can apply the calibration gas. When calibration gas is applied the unit will display the gas level on the top right, keep gas applied until gas tops out then press the **Up** button once to calibrate. The unit will Auto calibrate the H2S gas to 25 ppm. To exit calibration, press the **Change** button once and then press the **UP** button once to exit back to normal operating mode. (this is the same process with every Gas type)



5. Background level

To adjust the Background level, you must be in the sensor Selection mode on the sensor you want to calibrate. To access sensor Selection mode for H2S, press the **Menu button** twice. In the sensor selection mode, Press the **Change** button once then the **Menu** button three times until background shows on the display and the level number blinks. Then press the **up** or **down button** to adjust the background level. Default background level is set at 8. (this is the same process with every gas type)



6. Zeroing

To Zero out your sensor you must be in the sensor selection mode on the sensor you want to calibrate. To access sensor selection mode for H2S, press the **Menu button** twice. In the sensor selection mode, press the **Change** button once then the **Menu** once until the unit displays the word Zero and it is blinking. Then press the up button once while zero is blinking.

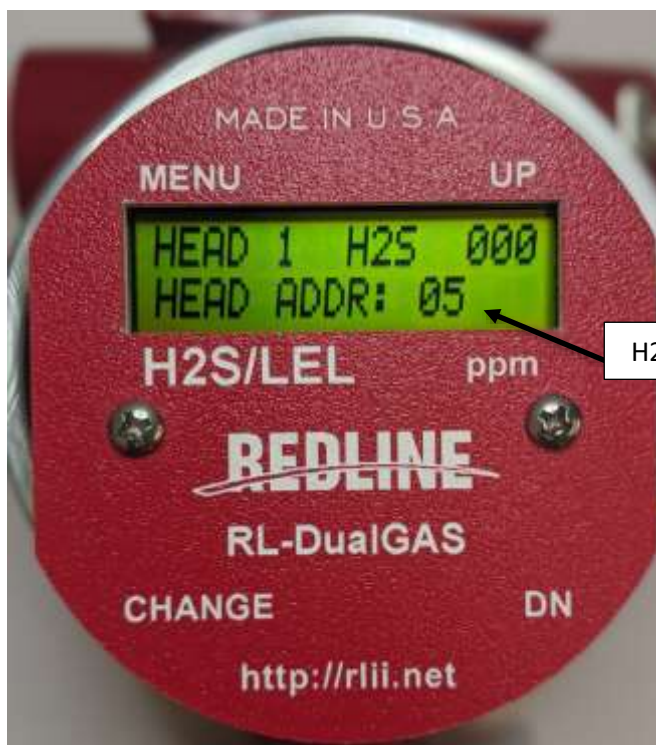




"Zero" should blink

7. Addressing

To set the address for H2S, you must be in the sensor selection mode on the sensor you want to assign an address. To access sensor selection mode for H2S, press the **Menu** twice. In the sensor assignment mode, Press the **Change** button once until H2S blinks on the display then press the **Menu** button four times until you see Head ADDR blinking on the display. The use the **up** or **down** button to change the address to the desired digit.



H2S head address number

11. Service Access mode

Service access mode allows you to reset the sensor head to software defaults, H2S, CO, LEL and Oxygen alarm counts, Total alarms counts, Total hours the sensor head has been in service, Total Hours on the battery, and the ability to Restore Mipex LEL defaults.

To access the service mode, press the **up** and **down** buttons at the same time. To exit this mode, press the **up** button once.

While in the service access mode press the **menu** button once to access the restore defaults. Use the **up** button to restore all default settings.

To access the H2S alarm count while in the service access mode press the **menu** button twice.

To access the CO alarm count while in the service access mode press the **menu** button three times.

To access the LEL alarm count while in service access mode press the **menu** button four times

To access the Total alarm count while in the service access mode press the **menu** button five times.

To access the Total hours in service on the battery press **menu** button six times.

To access the hours on the battery, press the **menu** button seven time.

To exit any menu mode, press the **up** button.

INSTALLATION

Important- before you install the **RL-QuadGas/DualGas** sensor head make sure you have read the basic operations to ensure proper understanding of the product. Also check battery voltage to ensure **RL-QuadGas/DualGas** will function properly.

When installing the **RL-QuadGas/DualGas** sensor head make sure to calibrate the sensor head. Put the Head into “cal” mode. When calibration gas is applied, the unit will display the reading. Use the Up button to adjust the reading to match the value of the calibration gas.

The **RL-QuadGas/DualGas** sensor head may be mounted 18 to 24 inches above the ground with the sensor housings pointed down towards the ground. For best signal strength position the glass window in line of sight of the **Redline Monitor**, also make sure there are no metal/nonmetal obstructions so signal will not be blocked.

MAINTENANCE

Redline Instruments recommends you check battery voltage every 90 days and Calibration of the head every 30 days. **For Troubleshooting assistance call the Redline office at (979)776-7200.**