TECHNICAL SPECIFICATIONS:

Detection Method:	Tunable Diode Laser Absorption Spectroscopy (TDLAS)
Measurement Range:	0 to 99,999 ppm-m
Sensitivity:	5 ppm-m at distances from 0 to 50 ft (15 m) 10 ppm-m or better at distances 50 to 100 ft (15 to 30 m)
Intrinsic Safety:	Class 1 Division 1 Group D, T4 in accordance with UL 913 & CSA C22.2 No 157, MetLab Listing #E112840
Detection Distance:	100 ft (30 m) nominal. Actual distance may vary due to background type and conditions.
Beam Size:	Conical in shape with a 22” diameter at 100 ft (56 cm at 30 m)
Detection Alarms Modes:	Digital Methane Detection (DMD): Audible tone relative to concentration when detection threshold exceeded Adjustable Detection Alarm Level from 0 to 255 ppm-m Pure Tone: Continuous audio tone relative to concentration Adjustable Volume: 8 Levels
System Fault Warning:	Unique audible tone and indication on the display
Self Test & Calibration:	Built-in Self Test and Calibration function verifies operation and adjusts laser wavelength for maximum sensitivity. Test gas cell integrated within carrying case.
Compliance:	EMC (EN61000-6-2, EN6100-6-4)
Laser Eye Safety: (CDRH, ANSI and IEC)	IR Laser: Class I Green Spotter Laser: Class IIIa; **Do not stare into beam or view directly with optical instruments**
Communications:	RS232 and Bluetooth Standard
Display:	Large, easy to read backlit LCD (.75” Numeric)
Operating Temperature:	0° to + 122° F (-17° to 50° C)
Humidity:	5 to 95% RH, non-condensing
Enclosure:	IP54 (Water splash and Dust resistant)
Instrument Weight:	10 lbs (Transceiver 3 lbs, Controller 7 lbs); (4.5 kg; 1.3 kg , 3.2 kg)
Carry Case:	14 lbs; 34” x 9 ½” x 14” (6.4 kg; 86 cm x 24 cm x 36 cm)
Battery:	Internal, rechargeable, Li ion battery pack, 11.1 Vdc
Battery Run Time:	8 hours at 32° F without backlight on, minimum
Battery Charging:	External, in-line, 110-240 Vac, 50 / 60 hertz, international, 19 Vdc power supply
Charge Time, Maximum:	8 hours
Charging Indicator:	Integrated into controller panel
Shoulder Strap:	Single over the shoulder padded strap with Ergonomic dual strap and belt system

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RMLD-IS®

Remote Methane Leak Detector

R&D 100

Award Winner

Recognized as one of the 100 most technologically significant products introduced to the marketplace.

RMLD-IS®
Remote Methane Leak Detector

Faster...Safer...Reliable...Efficient

Revolutionary Technology

The portable, reliable Remote Methane Leak Detector (RMLD-IS®) changed the way methane surveys are conducted.

Instead of having to walk the entire length of the service line to check for methane leaks…the RMLD-IS quickly and efficiently detects leaks up to one hundred feet away allowing remote detection of hard-to-reach areas and difficult terrains. Remote detection allows the user to safely survey difficult to reach areas, such as busy roadways, yards with large dogs, locked gates, compressor stations, offshore platforms and other hard to access places.

For utilities and their employees, this time-saving method represents the potential for significant productivity gains, reduced operations and maintenance costs, and a safer survey.

Tunable Diode Laser Absorption Spectroscopy

Available gas detectors that deploy technologies such as flame ionization must be positioned within the leak plume to detect the presence of methane. The RMLD-IS does not have to be within the gas plume because it uses laser technology known as Tunable Diode Laser Absorption Spectroscopy. When the laser passes through a gas plume, the methane absorbs a portion of the light, which the RMLD-IS then detects. This quantum leap in technology makes it possible to detect methane leaks along the sight line without always having to walk the full length of the service line.

Components

The RMLD-IS consists of two interactive components; a transceiver subsystem and a signal processing/user interface controller. The transceiver has two lasers; an infrared laser beam that is non-visible and is continuously on while the unit is turned on. The green spotter laser is similar to those used for presentation pointers and is turned on by the operator depressing the trigger button.

How Does It Work?

When the infrared laser beam is transmitted from the launch port some of the laser light is reflected by a normal background such as brick, concrete, grass, etc., to the detector. This reflected light is collected and converted to an electrical signal that carries the information needed to deduce the relative methane concentration. This signal is processed so that methane concentrations can be reported in parts per million meter or ppm-m. The laser has a nominal distance of up to 100 feet and is selective to methane only. It will not false alarm on other hydrocarbons.

RMLD-IS Intrinsically Safe

With its intrinsically safe rating the RMLD-IS opens a new realm of survey applications such as:

- Offshore Platforms
- Plant and Industrial Inspections
- Compressor Stations
- Production Facilities
  - gas gathering, drilling sites etc.
- LNG Ship Inspections
- First Responders for Leak Investigation
- First Responders to Odor Complaints
- Gas Processing Plant Inspections