

Parts per million accuracy

Certified for ground monitoring

Senses hydrocarbon liquids in ground water

Senses hydrocarbon vapors in soil surrounding  
underground tanks

## The L&J Engineering MCG 8160 Liquid/Hydrocarbon Sensor, MCG 8165 Hydrocarbon Sensor, MCG 8170 Hydrocarbon Vapor Sensor

The MCG 8160, MCG 8165 and MCG 8170 are a powerful trio of leak sensors. These three probes can function together as part of a complete leak detection system by sensing for leaks in existing tanks and testing for hydrocarbon liquids in ground water, as well as hydrocarbon vapors in the soil surrounding underground tanks. All three sensors feature L&J's exclusive 4-wire data highway, and can be used to communicate with L&J monitoring computers, such as the MCG 8100, for comprehensive remote tank monitoring.

### The MCG 8160 Liquid/Hydrocarbon Sensor

The first of these probes, the MCG 8160, uses two separate sensors to detect the presence of a liquid, and identify whether that liquid is water or a hydrocarbon. The MCG 8160's ability to make this distinction can help pinpoint whether the inner or outer wall of a dual-containment system has been breached. The probe can also be installed in dry monitoring wells, where it's often used in conjunction with L&J's top-rated vapor sensor- the MCG 8170.

### The MCG 8165 Hydrocarbon Sensor

The MCG 8165 is used primarily in wet wells. It is made up of a float and flexible self bailing cable assemblies. The float keeps the sensing elements of the probe submerged at the very top of ground water. This is where hydrocarbons from a leak will show up first. Optionally, the MCG 8170 vapor sensor can be installed into the MCG 8165 which is a configuration that gives the probe unique hydrocarbon liquid and vapor sensing capabilities.

### The MCG 8170 Hydrocarbon Vapor Sensor

The MCG 8170 is a solid state vapor absorption device constructed of a special porous material that is extremely sensitive to hydrocarbons. When properly installed (in a dry monitoring well, for example), the MCG 8170 selectively and accurately senses hydrocarbon vapors leaching into the soil or ground water from leaking petroleum products. And, unlike many vapor sensors, the MCG 8170 is reusable and never has to be reset.

## Applications

Liquid sensing in wet or dry areas, such as tanks or wells

Vapor sensing in wet or dry areas, such as tanks, wells, or adjacent soil

Monitoring of annular space in dual wall tanks

Used in conjunction with the MCG 8100 Tank Monitoring System

### SPECIFICATIONS

The MCG 8160, 8165 and 8170 sensors offer rugged construction for years of reliable, trouble-free performance. The probes ship ready to install and come equipped with the following standard features:

#### MCG 8160

Easy Installation into the annular space of dual wall tanks, or in external monitoring wells where ground water is present

15 feet of field wiring

Product/water identification capabilities

**Operating Principle:** Resistance & Thermal Conduction  
**Communication:** Intrinsically safe power supplied by L&J  
4-Wire Data Highway  
**Temperature Range:** -40°C to 50°C  
**Trip Point:** Immediate Upon Contact  
**Enclosure Size:** 1.65" Diameter x 2.75" Height  
**Min. Annular Space:** Fits 1-1/2" Vertical Annulas  
**Approvals:** UL Listed

#### MCG 8165

Easy Installation into a variety of tank types

8 feet of field wiring

Product/Water identification capabilities

A monitor that is adjustable to a 10' depth

**Operating Principle:** Solid State Vapor Absorption  
**Communication:** Intrinsically Safe Power Supplied by L&J  
4-Wire Data Highway  
**Temperature Range:** -40°C to 50°C  
**Trip Point:** Approx. 7500 PPM@ 25°C  
(factory adjustable)  
**Well Capability:** 4" min  
**Approvals:** UL Listed

#### MCG 8170

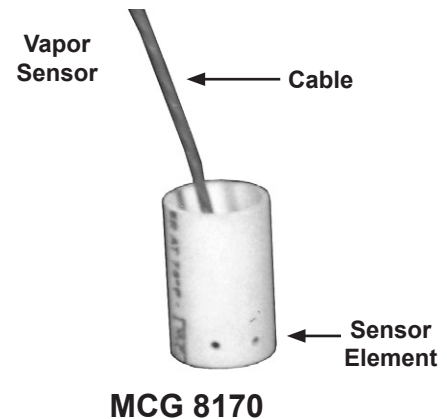
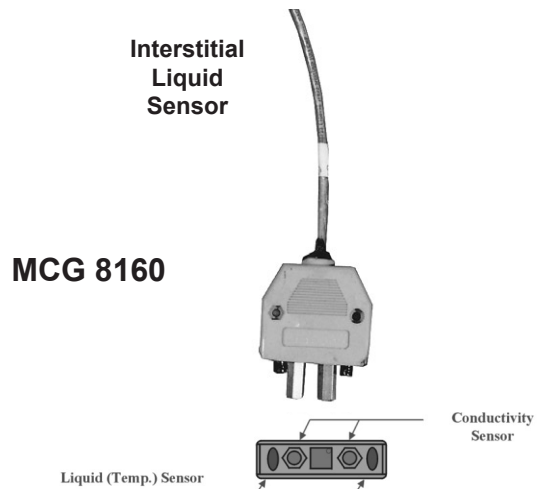
Easy Installation into external monitoring wells

8 feet of field wiring

Reusable after detection

**Operating Principle:** Solid State Vapor Absorption  
**Communication:** Intrinsically Safe Power Supplied by L&J  
4-Wire Data Highway  
**Temperature Range:** -40°C to 50°C  
**Trip Point:** Approx. 7500 PPM@ 25°C  
(factory adjustable)  
**Enclosure Size:** 1-5/16" Diameter. x 2" Height  
**Well Capability:** Standard  
**Approvals:** UL Listed

*All designs subject to change. Certified dimensions  
and specifications available upon request.*



### INFORMATION REQUIRED TO ORDER:

**MCG 81XX**

Call your L&J Representative or Customer  
Service for more specific ordering information

**MCG 8160M - INTERSTITIAL LIQUID SENSOR**

Standalone Unit, Includes shared interface

**MCG 8160MA - INTERSTITIAL LIQUID SENSOR**

Attached to Level Probe, Includes shared interface

**MCG 8165MA2 - FLOATING LIQUID SENSOR**

Liquid Sensor for 2" Opening

**MCG 8165MA4 - FLOATING LIQUID SENSOR**

Liquid Sensor for 4" Opening

**MCG 8165MC2 - FLOATING LIQUID / VAPOR SENSOR**

Liquid/Vapor Sensor for 2" Opening

**MCG 8165MC4 - FLOATING LIQUID / VAPOR SENSOR**

Liquid/Vapor Sensor for 4" Opening

**MCG 8165MB2 - FLOATING LIQUID / VAPOR SENSOR**

Liquid/Vapor Sensor for 2" Opening, PPM Super Smart

**MCG 8165MB4 - FLOATING LIQUID / VAPOR SENSOR**

Liquid/Vapor Sensor for 4" Opening, PPM Super Smart

**MCG 8170M - VAPOR SENSOR**

Standard

**MCG 8170MB - VAPOR SENSOR**

PPM Super Smart

**NOTE:** For direct digital, omit the "M" in the option number.