



Integrated Open Path Gas Detection

*Unmatched Reliability with the Eclipse Model
OPECL Open Path Gas Detection System*



DET-TRONICS

Keeping Safety in Sight

Fast and reliable combustible gas leak detection can mean the difference between an averted close-call or a catastrophic gas explosion. The historical challenge is where to place gas detectors to ensure early detection.

Open-path infrared gas detection systems are used to enhance hydrocarbon leak detection capability and time to response. Unfortunately, this has meant putting up with difficult system installation requirements, complex alignment procedures, and limited system options. Until now!

Det-Tronics is pleased to announce a new open path solution

Our new Open Path Eclipse (OPECL) system delivers best-in-class infrared gas detection, and solves the limitations of previous-generation open path detection products.

Key user benefits of the OPECL include:

- A monitored path of 60 meters (nearly two hundred feet!)
- Easy installation, alignment, and startup.
- Outstanding sensitivity and responsiveness.
- HART communication, enabling detailed diagnostic information using a handheld HART field communicator or a HART-based control system.

The OPECL uses xenon flashlamp technology to guarantee accurate detection and strong performance even in harsh environments. Another OPECL exclusive is the hot stand-by flashlamp, providing automatic switchover in the event of a problem. Unscheduled maintenance problems are virtually eliminated. Heated optics ensure reliability in cold and wet weather conditions, and system outputs include an isolated analog 4-20mA signal, HART communication, onboard alarm & fault relays, and RS-485 Modbus communication.

The OPECL system is built entirely of 316-equivalent stainless steel, and is designed to withstand the demanding environments found in global onshore and offshore petrochemical facilities. Please contact Det-Tronics for a product demonstration.



*Handheld
HART Field
Communicator*



*Open Path gas detection systems
deliver the best protection available.*

How Best-in-Class Quality Works For You

FEATURES	BENEFITS
Xenon flashlamp technology with on-board, hot stand-by xenon flashlamp	Back-up flashlamp with automatic switchover function increases system availability and reduces unscheduled maintenance costs
No interconnecting cabling required	Simplified & easy electrical installation
Rock-Solid Mounting Hardware	Simplified & easy mechanical installation with no accidental misalignment problems due to bumping
Laser-assisted alignment	Easiest system alignment & startup in the Industry
HART Communication Protocol www.hartcomm.org	Use existing Handheld HART Communicator already onsite. The only Open Path system available on the market with approved HART system compatibility
On-board, intrinsically-safe HART port	HART signal interrogation in the field without area de-classification. Intrinsically-safe approved HART port extension cables are available for remote location HART communication
Selectable Heated Optics operation	Heated optics can be selected "on" to prevent module icing and condensation in outdoor settings, or selected "off" for reduced power consumption in indoor settings
Optional Alarm Output Relay board	On-board alarm and fault relay contact outputs
On-board Tri-color LED	Easy visual indication of status & alarms
RS-485 Modbus Communication	Easy PLC/SCADA system interface
Isolated 4-20 ma signal output	Supports dedicated field device power supply isolation
Auto Zero Compensation	Delivers exceptional signal stability
On-board magnetic switch	Easy calibration and reset function option



Frequently Asked Questions

Why use Open Path Gas Detectors?

Open path gas detectors complement your existing point-type gas detectors by providing wider detection coverage, perimeter monitoring capability, high reliability and low cost of ownership.

How is the OPECL different from the other open path IR gas detection systems?

The OPECL delivers excellent sensitivity to a dangerous hydrocarbon gas leak and is the most robust open path system on the market. It is the only system available that provides a hot-standby xenon flashlamp with an automatic switchover function. In addition, no other system provides an on-board, intrinsically-safe HART communication port and Tri-color status LED.

How should the OPECL system modules be mounted?

The recommended mounting system uses nominal 4-inch diameter steel mounting poles, or our flat-surface mounting adapter

What is the maximum separation distance between modules?

Standard separation distance is between 20 meters (66 feet) and 60 meters (198 feet). Other range options are available.

What type of signals are provided by the OPECL?

The standard signal output is an analog 4-20ma signal that is proportional to 0-5 LEL-meters hydrocarbon gas concentration. Signal levels below 4ma indicate system diagnostic information. The HART communication signal provides unparalleled test, service and diagnostic functionality. The optional relay output board is installed within the OPECL receiver compartment and provides Form C (NO/NC) low alarm, high alarm, and fault relay contact outputs. The alarm thresholds are programmable using the HART or RS-485 Modbus communications.

Is the OPECL system easy to install, align, and start-up?

The OPECL is the easiest system to commission in the industry. First, ensure the system module mounting posts are solid and not prone to vibration, and that the modules are installed at the same elevation. Using the laser alignment tool and target, align one module such that the laser "dot" strikes the opposing target dead-center. Reverse laser and target locations and repeat the alignment process on the opposing module. Tighten all alignment fasteners. Turn the system on and look for the green tri-color LED status indicating normal system operation.

How do I calibrate the OPECL?

No calibration is required. The system is factory-calibrated and is inherently stable with no tendency to drift. It is possible to reset the clean air (zero) level signal output, either using the magnetic zero switch or through HART or Modbus communications.

Call or e-mail your Detector Electronics sales representative today for more information on how the Open Path Eclipse OPECL system will enhance safety in your application.

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