

## *Infrared Transmitter Detector*

- Resistant to poisons and corrosion
- SIL2 Capability  
(according to EN 50402/ EN61508)
- MTBF of 28 years  
(according to INERIS CGR 7448)
- Non-intrusive calibration
- Fail-safe technology

**OLDHAM**  
**OLCT IR**



### Certifications:



**ATEX**





## Let's protect your personnel together

ATEX production certified, Industrial Scientific has provided entire gas measurement systems, from sensors to control units, for more than 50 years.

Our equipment meets the latest requirements of the European standards series EN 61779, which evaluates the performance of gas detectors and control units (response time, accuracy, resistance to poisons, alarm activation, etc.).

Trust us to help you choose a solution that complies to the ATEX 94/9/EC directive for safety equipment.

## Proven Leading-Edge Technology

### Reliability

- The OLCT IR is a highly reliable infrared gas detector. SIL2 capable according to the standard EN 50402, the OLCT IR has a probability of failure on demand (PFD) of 0.0016.
- Mean Time Between Failure (MTBF) is 28 years.

### Efficiency

- Based on the infrared absorption principle, the OLCT IR offers significant advantages when compared to catalytic detectors. Its dual source, four-beam technology further improves the unit's performance over other infrared detectors.

### IR Technology:

- Quick response time
- Operates in oxygen-deficient atmospheres
- Fail safe

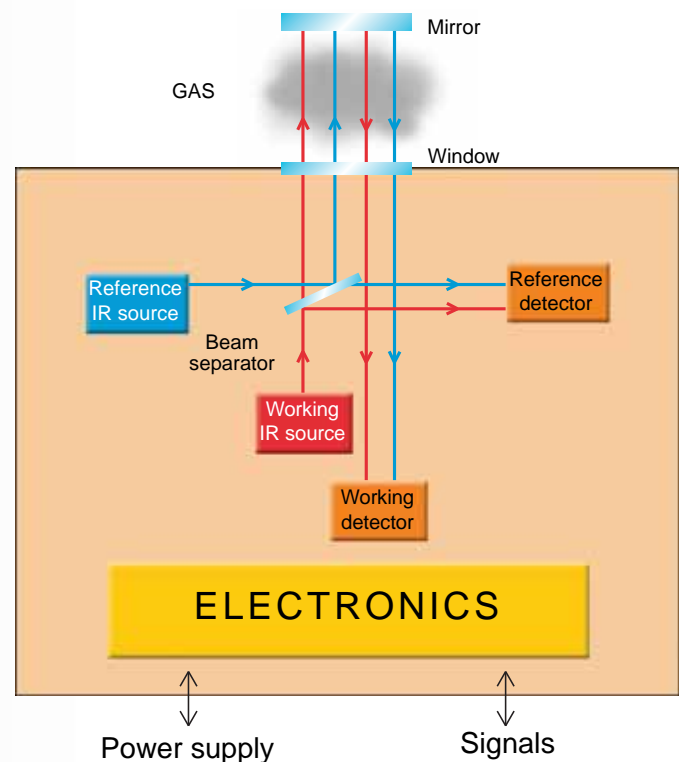
### Measure without contact:

- No alteration of optical elements
- Minimal maintenance
- Resistant to poisons

### Double sources / 4 beams:

- Compensation for dirty optics
- No long term drift caused by source and optical detector aging

## Operating principle



### Accurate technology

- Optical detectors continuously measure the intensity of infrared light sources. The intensity is maximal in the absence of gas, so any decrease in intensity will indicate that gas is present.

### Non intrusive calibration

- The OLCT IR is fitted with a non-intrusive system allowing a single operator to calibrate the transmitter without opening the housing. This allows the detector to be calibrated in an explosive area in compliance with safety rules.

### Reliable, maintenance-free detection

- The mirror and window are heated to prevent misting or icing of the optics and allow operation in harsh weather conditions.
- No sensitivity loss in case of high gas concentrations
- MTBF of 28 years
- Used in conjunction with the OLCT 60 or the OLCT 80, the OLCT IR is also available with display and internal relays.



OLCT IR combined with an OLCT 60




### Accessories

- Magnetic key for maintenance
- Weatherproofing
- Mounting bracket
- Gas intake pipe
- Calibration cup
- Mosquito guard

*The OLCT IR is an ideal detector for harsh applications such as refinery, onshore and offshore installations, LPG filling stations, compressor stations ...*



<b>Detection principle:</b>	• Optics: infrared absorption
<b>Detected gases:</b>	• Hydrocarbons • Methane, propane/butane as standard • Others on request including CO <sub>2</sub>
<b>Range:</b>	• 0-100% LEL CH <sub>4</sub> , C <sub>3</sub> H <sub>8</sub> , C <sub>4</sub> H <sub>10</sub> • 0-100% of volume CH <sub>4</sub> • 0-3% of volume CO <sub>2</sub>
<b>Housing:</b>	• 316L Stainless Steel
<b>Ingress protection:</b>	• IP66 / IP67, DIN 40050
<b>Sensitivity:</b>	• 1% LEL
<b>Accuracy:</b>	• +/-3% LEL CH <sub>4</sub> or +/- 5% of the value • +/-2% LEL HC or +/- 3% of the value
<b>Response time:</b>	• T90 < 8 sec.
<b>Self test:</b>	• Continuous
<b>Calibration:</b>	• In factory or locally
<b>Humidity range:</b>	• 0 to 99% (without condensation)
<b>Output signal:</b>	• 4-20 mA
<b>Max load resistance:</b>	• 300 Ω
<b>Trouble signals:</b>	• Line fault (0 mA) • Optics fault (0.5 mA) • Other fault (1 mA) • Calibration mode (2 mA) • Scale over range (23 mA)
<b>Power supply:</b>	• 15 to 30 VDC at detector terminal
<b>Average consumption:</b>	• 2.5 W
<b>Connection:</b>	• 3 active wires, shielded cable

<b>Maximum resistance per conductor of detector/central unit cable:</b>	• 8 Ω (250 m in 1.5 mm <sup>2</sup> ) under 21 VCC
<b>Type of cable inlet:</b>	• M20, Cable gland not supplied
<b>Operating temperature:</b>	• -25°C to 55°C
<b>Storage temperature:</b>	• -40°C to 55°C
<b>Weight and dimensions:</b>	• 212 x 105 x 120 mm; 1.6 kg
<b>EC Electromagnetic compatibility:</b>	• Complies with EN50270
<b>Certifications :</b>	 <ul style="list-style-type: none"> <li>• Ineris 03ATEX0141X</li> <li>• Ex d e ia IIC T4- II 2GD</li> <li>• Ex tD A21 IP66 T135°C</li> <li>• T. amb: -50°C to + 65°C</li> </ul>
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<b>Performance :</b>	• INERIS 03ATEX0141X • EN 61779-1, -4
<b>SIL capability :</b>	 <ul style="list-style-type: none"> <li>• INERIS 03ATEX0141X/02</li> <li>• SIL capability 2</li> <li>• EN 50402/EN 61508</li> </ul>

