

CO₂

H₂S

Cl₂

NH₃

O₃

CO

CH₄

SO₂

HCN

NO₂

Detective+

Transportable Multi-Gas Area Monitor



Detective+

Detective+ is based on the highly successful Triple Plus+ multi-gas monitor. For use in utility, oil and gas applications. Singly or linked together, Detective+ gives a loud and clear alarm providing effecting warning of gas hazards. The rugged, water and impact resistant design and clear display make Detective+ the ideal choice for your transportable gas detection needs.

- Loud & bright alarms
- Rugged & reliable
- Wide sensor options including infra-red
- Built-in pump option
- Robust tripod design
- Raised sensor apertures

Versatile & user friendly

- Infra-red sensors available:
 - allows sampling of highly flammable gas levels and CO₂
 - unaffected by poisoning
- Built-in pump option provides fast response and extra sensor protection
- Display provides clear information, allows identification of gas hazard
- Easy tracking of multiple hazards
- Up to 60 hour battery operation
- Wide range of toxic gas sensors

Uniquely rugged, tripod design

- Sensors are fully protected, even if overturned
- Raised sensor apertures to prevent water ingress
- Simple and quick to set up
- Folding or fixed leg options provide easy storage and transportation

Loud & clear alarms

- Wailing omni-direction siren, 104 dBA at 1 metre
- High intensity red LED clusters for visual alarm
- All linked Detective+ units indicate an alarm sensed by any one unit
- Units sensing alarm flash faster
- Audible and visible confidence blip
- Time weighted average alarms for 8 hours and 15 minutes

Detective+

Specification

| | |
|------------|---|
| Weight | 7.5kg (19lb) |
| Dimensions | 640h x 455w x 455d (mm) 25.2h x 17.9w x 17.9d (inches) |

Typical measuring ranges and alarm settings (up to four gas measurement channels)*

| | Standard Range | Typical Alarm Levels |
|--|----------------|----------------------|
| Flammable gas | 0-100% LEL | 20% LEL |
| Oxygen | 0-25% | 10% & 23% |
| Hydrogen sulphide | 0-50ppm | 10ppm |
| Carbon monoxide ^{xx} (H ₂ compensated) | 0-500ppm | 35ppm |
| Sulphur dioxide | 0-10ppm | 2ppm |
| Chlorine ⁺ | 0-5ppm | 0.5ppm |
| Nitrogen dioxide ⁺ | 0-10ppm | 2ppm |
| Phosphine ⁺ | 0-5ppm | 0.5ppm |
| Ammonia | 0-50ppm | 25ppm |
| Ammonia | 0-1000ppm | n/a |
| Hydrogen (non-flammable levels) | 0-2000ppm | n/a |
| Hydrogen cyanide | 0-25ppm | 10ppm |
| Hydrogen chloride ^{+/xx} | 0-10ppm | 5ppm |
| Chlorine dioxide ⁺ | 0-1ppm | 0.1ppm |
| Hydrogen fluoride ⁺ | 0-10ppm | 1ppm |
| Ethylene oxide ^{xx} | 0-10ppm | 5ppm |
| Volatile organic ^{xx/+} | 0-100ppm | n/a |

Infrared Sensors

Infrared sensors for flammable gas can be supplied as a single range, 0-100% LEL, utilising a single display channel, or as a dual range, 0-100% LEL/0-100% volume, which then occupies two display channels.

CO₂ sensors are supplied as 0-5% volume. Only one IR sensor can be fitted, and IR sensors can only be used in combination with oxygen and toxic sensors.

| | Standard Range | Typical Alarm |
|--|----------------|---------------|
| Flammable gas | 0-100% LEL | 20% LEL |
| Flammable gas | 0-100% v/v | None |
| Available for methane, propane, butane or ethylene | | |
| CO ₂ | 0-5% v/v | 0-5/1.5% v/v |

Typical response times Methane 20s, Oxygen 10s, typical toxic gas 20s, IR 30s

Expected Sensor life Flammable 5 years, Toxic 3 years, Oxygen 2 year minimum, IR >5 years

Audible alarms Wailing, omni-direction siren, 104 dBA @ 1 metre

* Required ranges and alarms may vary by country and application and these can be configured as required

^{xx} One biased sensor per Detective+

⁺ Reactive gas, care required during sampling, contact Crowcon for details.

| | |
|-----------------------------|---|
| Visible alarms | Three large, top-mounted red LED clusters and single red LED on control panel. In alarm mode LED clusters flash in quick succession. LED clusters of linked Detectives repeating the alarm, flash more slowly than LED lights on those Detectives sensing the hazard. Slow flashing green LED indicates normal working Rapid flashing green LED indicates low battery |
| Display | High contrast LCD with back light. Values and units for up to 4 gases displayed simultaneously at current, TWA or peak levels, low battery, real time and elapsed time calibration and configuration data also displayed |
| Battery | Standard 6V, 7.2Ah, sealed lead acid battery pack Optional 6V, 12Ah high capacity pack |
| Battery life | Up to 36 hours assuming flammable/CO ₂ sensor fitted with 7.2Ah battery. Up to 60 hours with optional 12Ah battery pack. |
| Operating Temperature Range | -20°C to +50°C (-4°F to 122°F) Toxic and Oxygen sensors are not rated for continuous operation at high temperatures. Consult Crowcon if operating temperatures are likely to exceed 40°C (104°F) for extended periods |
| Humidity | 0-95% RH non condensing |
| Approvals | Europe: ATEX II 2G EEx ib d IIC T4 International: IECEx EEx ib d IIC T4 |
| Standards | EN50014, EN50018, EN50020, EN50104, EN45544, IEC60079-0/-1 IEC60079-11 |
| Ingress Protection | IP65 |
| EMC | EN 50270, FCC CFR47 Part 15 |
| PC Interface | Via RS232 lead. Portables PC software can be used to set alarms, clock, datalogging interval and password. Portables PC also manages datalogging, giving graphical display of instrument log file and allows file export to spreadsheet |
| Calibration | Quick calibration using internal menu command, Portables PC or the Crowcon CheckBox IMH management system |
| Accessories | Baffle plate Interconnecting leads RS232 Communication lead |
| Sampling | Internal electric sampling pump option Manual aspiration |
| Linked Detectives | Up to 12 units can be linked to provide perimeter or area monitoring |

A HALMA COMPANY



Ex-Ox-Tox Gasdetectie
Westerdreef 5V
2152 CS Nieuw-Vennep
Telefoon: 0252 620885
E-mail: info@exotox.nl
Website: www.exotox.nl

CROWCON
Gas Detection You Can Trust