



Portable Monitors

For flammable hydrocarbons or carbon dioxide, oxygen and toxic gases

Triple Plus + IR

Incorporating the latest infrared detection technology Triple Plus + IR extends the capability of the established Triple Plus range for detection of carbon dioxide as a toxic gas, or for the measurement of hydrocarbons in inert backgrounds at both % volume and % LEL levels for tank purging and inert atmosphere monitoring. The infrared hydrocarbon sensor is equally suitable for detection of hydrocarbons in air for confined space entry and other safety applications.

Infrared hydrocarbon sensor

- Volume % measurement for purging applications
- % LEL measurement in air or inert background
- Single or dual range measurement
- Calibration for methane, propane, butane, pentane or ethylene
- No poisoning effects
- No sensor burnout at high concentration
- Fail safe
- Long sensor lifetime – reduced cost of maintenance

Infrared CO₂ sensor

- Range 0 - 2%
- Alarms at 0.5% and 1.5%

Convenient and easy to Use

- Large four channel simultaneous display
- Loud and clear alarms
- Visual and audible confidence indication
- Low battery alarm
- Rugged and reliable

Flexible

- Available for diffusion, manual aspirator or pumped sampling
- Interchangeable sensors
- Comprehensive Datalogging with user and site names
- Simple Windows™ software interface to PC

Triple Plus + IR

Specification

Weight	900 g (2 lb)																																	
Dimensions	118 h x 167 w x 73 d mm (4.65 x 6.6 x 2.9 inches)																																	
Ranges and alarms	Up to three levels of alarm are available per channel. Flammable Gas can be supplied as a single range, 0-100% LEL, or as a dual range, 0-100% LEL/0-100% volume, which then occupies two channels. CO ₂ is supplied as 0-2%. Only one IR sensor can be fitted. Triple Plus + IR can have up to four channels.																																	
	<table border="1"> <thead> <tr> <th></th> <th>Range</th> <th>Alarm</th> </tr> </thead> <tbody> <tr> <td>Flammable Gas</td> <td>0-100%</td> <td>20% LEL</td> </tr> <tr> <td>Flammable Gas</td> <td>0-100% volume</td> <td>No alarm</td> </tr> </tbody> </table> <p>Flammable Gas calibrations are available for methane, propane, butane or ethylene.</p> <table border="1"> <thead> <tr> <th></th> <th>Range</th> <th>Alarm</th> </tr> </thead> <tbody> <tr> <td>CO₂</td> <td>0-2%</td> <td>0.5/1.5%</td> </tr> <tr> <td>Oxygen</td> <td>0-25%</td> <td>19%/23.5%</td> </tr> <tr> <td>Hydrogen sulphide</td> <td>0-50ppm</td> <td>5ppm</td> </tr> <tr> <td>Carbon Monoxide</td> <td>0-500ppm</td> <td>30ppm</td> </tr> <tr> <td>Sulphur dioxide</td> <td>0-10ppm</td> <td>2ppm</td> </tr> <tr> <td>Chlorine</td> <td>0-5ppm</td> <td>0.5ppm</td> </tr> <tr> <td>Ammonia</td> <td>0-50ppm</td> <td>25ppm</td> </tr> </tbody> </table> <p>For a full list of other toxic gas sensors consult Crowcon.</p>		Range	Alarm	Flammable Gas	0-100%	20% LEL	Flammable Gas	0-100% volume	No alarm		Range	Alarm	CO ₂	0-2%	0.5/1.5%	Oxygen	0-25%	19%/23.5%	Hydrogen sulphide	0-50ppm	5ppm	Carbon Monoxide	0-500ppm	30ppm	Sulphur dioxide	0-10ppm	2ppm	Chlorine	0-5ppm	0.5ppm	Ammonia	0-50ppm	25ppm
	Range	Alarm																																
Flammable Gas	0-100%	20% LEL																																
Flammable Gas	0-100% volume	No alarm																																
	Range	Alarm																																
CO ₂	0-2%	0.5/1.5%																																
Oxygen	0-25%	19%/23.5%																																
Hydrogen sulphide	0-50ppm	5ppm																																
Carbon Monoxide	0-500ppm	30ppm																																
Sulphur dioxide	0-10ppm	2ppm																																
Chlorine	0-5ppm	0.5ppm																																
Ammonia	0-50ppm	25ppm																																
Typical response times	IR 20 s, Oxygen 10 s, Typical Toxic Gas 20 s.																																	
Expected sensor life	IR 5 years, Toxic 3 years, Oxygen 2 years.																																	
Audible alarms	Piercing, rapid intermittent, piezo-electric tone, 85 dBA at 1 m. Confidence blip (selectable). Distinctive double blip for low battery.																																	
Visible alarms	Ultra bright flashing red LED in gas hazard. Slow flashing green LED indicates instrument is working. Distinctive double flash of green LED indicates low battery.																																	
Display	2 lines of 24 characters, dot matrix high contrast LCD with back light operating for 30 minutes. Values and units for up to 4 gases displayed simultaneously at current, TWA or peak levels. Low battery, pump failure, real time and elapsed time, calibration and configuration data also displayed.																																	
Datalogging	Adjustable sample rate, 100 hours @ 1 minute sample rate (maximum 6000 data points per channel), logging of events, user and site.																																	
Battery	Sealed lead acid 1.2 Ah, interchangeable rechargeable battery pack.																																	

Battery life	Standard instrument 10 hours. Pumped instrument 8-10 hours.
Battery charging	Dual rate 'drop in' charger for instrument. Dual rate charger/PC interface for instrument and battery pack.
Electric pump	Optional internal pump with on/off button.
Operating temp. range	-20°C to +50°C (-4°F to 122°F).
Humidity	0 – 95% RH non condensing.
Approval codes	Europe ATEX (Ex) I M2: EEX Ib d I ATEX (Ex) II 2G: EEx ib d
IIC T4	USA and Canada Class 1 Division 1, Groups A, B, C, D
Standards	Europe EN50014, EN50020, 94/9/EC USA and Canada UL 913, CSA 22.2
Ingress protection	IP65
RF radiation	EN50081-2, EN50270
RF immunity	EN50082-2, EN50270
PC Interface	PC access is achieved through an RS232 serial link by locating the instrument in the charger/PC interface. Portables PC software is then used to adjust or set: all alarms, levels of alarm (3 for all channels, oxygen 2 descending 1 ascending), clock, password, time zones, user and site. Data log management software gives the user a choice of direct graphical display or a datafile compatible with all leading spreadsheets.
Autocalibrator	Triple Plus + IR can be routinely calibrated quickly and simply using Checkbox IMH, by using Portables PC or the on-board menu system.
Accessories	Carry case and belt Baffle plate (to protect sensors) Earpiece Aspirator Manual bulb and 2 m hose, both non-absorbent and hydrocarbon resistant, 1 m probe, water trap and extra hose available

Charger Options



Accessories



A HALMA COMPANY

PO1014 Issue 7 06/09

UK Office
Crowcon Detection Instruments Ltd
2 Blacklands Way
Abingdon Business Park
Abingdon
Oxfordshire OX14 1DY
United Kingdom
Tel: +44 (0) 1235 557700
Fax: +44 (0) 1235 557749
Email: crowcon@crowcon.com
Web Site: www.crowcon.com

USA Office
Crowcon Detection Instruments Ltd
21 Kenton Lands Road
Erlanger
Kentucky 41018-1845
USA
Tel: +1 513 831 3877 or
1-800-5-CROWCON
Fax: +1 513 831 4263
Email: salesusa@crowcon.com
Web Site: www.crowcon.com

Rotterdam Office
Crowcon Detection Instruments Ltd
Vlambloem 129
3068JG, Rotterdam
Netherlands
Tel: +31 10 421 1232
Fax: +31 10 421 0542
Email: eu@crowcon.com
Web Site: www.crowcon.com

Singapore Office
Crowcon Detection Instruments Ltd
Block 194 Pandan Loop
#06-20 Pantech Industrial Complex
Singapore 128383
Tel: +65 6745 2936
Fax: +65 6745 0467
Email: sales@crowcon.com.sg
Web Site: www.crowcon.com