



## 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 CO<sub>2</sub> 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

<b>Weight</b>	900 g (2 lb)																																	
<b>Dimensions</b>	118 h x 167 w x 73 d mm (4.65 x 6.6 x 2.9 inches)																																	
<b>Ranges and alarms</b>	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 <sub>2</sub> is supplied as 0-2%. Only one IR sensor can be fitted. Triple Plus + IR can have up to four channels.																																	
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<b>Typical response times</b>	IR 20 s, Oxygen 10 s, Typical Toxic Gas 20 s.																																	
<b>Expected sensor life</b>	IR 5 years, Toxic 3 years, Oxygen 2 years.																																	
<b>Audible alarms</b>	Piercing, rapid intermittent, piezo-electric tone, 85 dBA at 1 m. Confidence blip (selectable). Distinctive double blip for low battery.																																	
<b>Visible alarms</b>	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.																																	
<b>Display</b>	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.																																	
<b>Datalogging</b>	Adjustable sample rate, 100 hours @ 1 minute sample rate (maximum 6000 data points per channel), logging of events, user and site.																																	
<b>Battery</b>	Sealed lead acid 1.2 Ah, interchangeable rechargeable battery pack.																																	
<b>Battery life</b>	Standard instrument 12 hours. Pumped instrument 8-10 hours.																																	

<b>Battery charging</b>	Dual rate 'drop in' charger for instrument. Dual rate charger/PC interface for instrument and battery pack.
<b>Electric pump</b>	Optional internal pump with on/off button.
<b>Operating temp. range</b>	-20°C to +50°C (-4°F to 122°F).
<b>Humidity</b>	0 – 95% RH non condensing.
<b>Approval codes</b>	Europe ATEX (Ex) I M2: EEx Ib d I USA and Canada ATEX (Ex) II 2G: EEx ib d IIC T4 Class 1 Division 1, Groups A, B, C, D
<b>Standards</b>	Europe EN50014, EN50020, 94/9/EC USA and Canada UL 913, CSA 22.2
<b>Ingress protection</b>	IP65
<b>RF radiation</b>	EN50081-2, EN50270
<b>RF immunity</b>	EN50082-2, EN50270
<b>PC Interface</b>	PC access is achieved through an RS232 serial link by locating the instrument in the charger/PC interface. The Windows™ compatible 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.
<b>Autocalibrator</b>	Triple Plus + IR can be routinely calibrated quickly and simply using Autocalibrator. The internal pump of Autocalibrator handles up to five gases. A PC interface provides easy access with optional datalogging for proof of calibration.
<b>Accessories</b>	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

