



# ORION<sup>plus</sup>

[ The hand-held five gas detector  
for the toughest requirements ]



# ORION<sup>plus</sup>

[ In your hand ]

With an increased choice of toxic sensors this compact and innovative 5 gas detector sets new standards.



■ Detection of Oxygen, Toxics and Combustibles

■ InfraRed sensor for detecting Carbon Dioxide

■ Very large easy to read graphic display for quick data viewing

■ Robust, easy to grip design

■ Simple one hand operation

■ Clear and intuitive to use

## ORION<sup>plus</sup>

The innovative and highly versatile 1 to 5 sensor gas detector can be used both as a personal monitor and for pre-entry checks.

Audible and visual alarms make ORION<sup>plus</sup> the perfect partner in hazardous environments.

### Uses:

- Municipal works
- Sewer cleaning
- Sewerage
- Chemical Industry
- Utilities
- Civil and tunnel engineering
- Fire Brigade
- Breweries



### [ Display ]

The largest fully graphic LCD of its kind with high level contrast and bright, homogenous background lighting. Easy to read text size; all data at a single glance. Clear text for alarm: 2 or 4 alarm levels per channel. High, low, STEL and TWA alarm, maximum work place concentration and short term data.

### [ Data logging ]

Data logging standard. All data can be accessed via the ORION<sup>plus</sup> display or MSA link software on your computer.

### [ Link Software ]

Presents data as tables or graphs on your computer.

### [ Design ]

A durable, carbon filled nylon case. Extremely robust for even the toughest requirements. RFI and corrosive gas resistant.



### [ Power supply ]

Either rechargeable NiMH battery pack or disposable alkaline battery pack. Can also be changed in hazardous areas. Battery life  $\geq 11$  hours.

### [ Pump ]

Built in, continuous running pump with electrical "Perma-Check" function. For remote sampling of the environment a multi filter system protects the pump and sensors from dust and water.

### [ Warranty ]

Detector: 5 years.  
Sensors: up to 2 years.  
NiMH battery pack: 2 years.

### [ Accessories ]

Extensive accessory range – protective case, battery charger, sampling probe, shock protection boot.

### [ Sensors ]

**Combustible:** MSA patented 20 L catalytic sensor, Silicon resistant. Measuring range: 0...100% LEL.

**Oxygen and Toxics:** electrochemical sensors of proven MSA quality.

**CO<sub>2</sub> and combustible:** newly developed InfraRed sensor; patent applied for temperature and humidity compensation.

### [ Calibration ]

Standard calibration of the LEL sensor: Methane, Propane or Pentane.



## [ORION<sup>plus</sup> Specifications]

Gas	Range	Resolution	Humidity	15–90% RH non condensing short periods 5–95% RH non condensing
<b>20 mm Sensors</b>			<b>Ingress protection</b>	IP 54 minimum
Combustible	0–100% LEL	1% LEL	<b>Warranty</b>	When used appropriately: Sensors: up to 2 years NiMH battery pack: 2 years Case and electronics: 5 years
Oxygen	0–25% Vol	0.1% Vol	<b>Certification</b>	EN 50014/EN 50018/EN 50019/EN 50020 EN 61779/EN 50104/EN 50270/EN 50271 EN 45544 II 2G EEx ia de IIC T4/T3 –20 °C to +40 °C/+50 °C 0736/No. 213.014 NiMH T4 –20 °C to +40 °C Alkaline Duracell T4: –20 °C to +50 °C Alkaline Varta T3: –20 °C to +50 °C
Carbon Monoxide	0–999 ppm	1 ppm		
Hydrogen Sulfide	0–200 ppm	1 ppm		
Chlorine	0–10 ppm	0.1 ppm		
Ammonia	0–100 ppm	1 ppm		
Sulphur Dioxide	0–20 ppm	0.1 ppm		
Nitric Dioxide	0–20 ppm	0.1 ppm		
Chlorine Dioxide	0–1 ppm	0.02 ppm		
Hydrogen Cyanide	20 ppm	0.2 ppm		
Phosphine	0–5 ppm	< 0.05 ppm		
Ozone	0–1 ppm	0.02 ppm		
Phosgene	0–1 ppm	0.02 ppm		
<b>InfraRed Sensors</b>				
Methane	0–25% Vol	0.1% Vol		
Methane	0–100% Vol	1% Vol		
Propane	0–100% LEL	1% LEL		
Propane	0–25% Vol	0.1% Vol		
Propane	0–100% Vol	1% Vol		
Butane	0–100% LEL	1% LEL		
Butane	0–25% Vol	0.1% Vol		
Butane	0–100% Vol	1% Vol		
Carbon Dioxide	0–5% Vol	0.01% Vol		
Carbon Dioxide	0–10% Vol	0.01% Vol		
Carbon Dioxide	0–50% Vol	0.1% Vol		
Weight	410 g [incl. battery pack]			
Dimensions	165 x 92 x 66 mm [L x B x D]			
Alarm	Two extra bright LEDs, visible from a 320° angle and a loud audible alarm			
Display	High contrast, large display. Separate display for battery life and additional information			
Battery type	Rechargeable NiMH or disposable Alkaline battery pack Can be replaced in hazardous area			
Battery life	NiMH	11 hours		
	Alkaline batteries	9 hours		
Charging	≤ 3 hours using MSA fast charger input [100–250 VAC]			
Operating range	–20 °C to +50 °C			
<b>Ordering Information</b>				
10046094	ORION <sup>plus</sup> P, Ex/Ox/CO/H <sub>2</sub> S/CO <sub>2</sub> , NiMH*			
10046095	ORION <sup>plus</sup> P, Ex/Ox/CO/CO <sub>2</sub> , NiMH*			
10046096	ORION <sup>plus</sup> P, Ex/Ox/H <sub>2</sub> S/CO <sub>2</sub> , NiMH*			
	*including rubber boot & shoulder strap. Charger not included			
<b>Accessories</b>				
10022036	ORION® protective rubber boot, black			
10025665	ORION® protective rubber boot, red			
10020485	ORION® case, leather			
474555	Carrying belt			
10034276	Vehicle charger			
10021925	Sampling line, 1.5 m, PTFE conductive			
10021926	Sampling line, 3 m, PTFE conductive			
10021927	Sampling line, 5 m, PTFE conductive			
D6071039	Floating probe			
D6203723	Sampling probe, flexible 30 cm			
10041970	ORION® NiMH charger, complete			
10031091	NiMH battery pack			
10031092	Alkaline battery pack			





Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

**Keison Products,**

**P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.**

**Tel: +44 (0)1245 600560**

**Fax: +44 (0)1245 600030**

**Email: [sales@keison.co.uk](mailto:sales@keison.co.uk)**

Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.