



# ORION<sup>plus</sup>

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



**MSA**

# 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
<b>20 mm Sensors</b>		
Combustible	0–100% LEL	1% LEL
Oxygen	0–25% Vol	0.1% Vol
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	

Humidity	15–90% RH non condensing short periods 5–95% RH non condensing
Ingress protection	IP 54 minimum
Warranty	When used appropriately: Sensors: up to 2 years NiMH battery pack: 2 years Case and electronics: 5 years
Certification	EN 50014/EN 50018/EN 50019/EN 50020 EN 61779/EN 50104/EN 50270/EN 50271 EN 45544 ⚡ II 2G EEx ia d e 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

## Ordering Information

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

## Accessories

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)330 088 0560**

**Fax: +44 (0)1245 808399**

**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.