

This cover must be in place for pumped operation. Readings from remote sampling will not be accurate. Before use, with instrument operating, block end of probe or line (50 feet max). The instrument must provide a pump. Failure to follow instructions can result in serious personal injury or death.

# ORION® plus IR Detector

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Methane	0.05	Vol%
Oxygen	20.9	Vol%
CO2	0.07	Vol%
CO	0	PPM
H2S	0.0	PPM



**MSA** ORION® plus

**MSA**  
The Safety Company



Advanced and highly flexible portable 1-5 gas instrument for detecting the presence of over 20 gases. Useful in many applications as a personal monitor for pre-entry checks. Standard items include data-logging, a built-in sampling pump and an easy-grip, durable case.

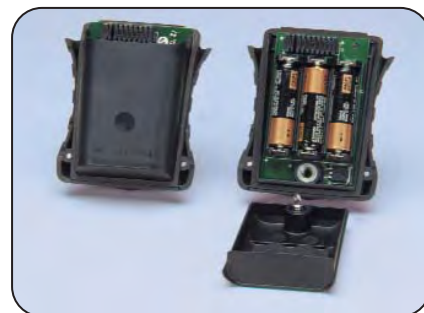
- ➔ Large, fully-graphic back-lit display
- ➔ Data-logging standard using ORIONLINK® software
- ➔ Carbon-filled nylon case protects against RFI and corrosive gases
- ➔ Long-life battery with three-hour recharge
- ➔ Built-in pump with electrical PermaCheck™ function standard
- ➔ Two-year warranty on case, sensors, electronics and mechanical components

#### Compact. Durable. Ingenious.

Versatile *and* rugged, the updated ORION<sup>plus</sup> IR Detector offers five gases with infrared and a wide range of sensor options. Our newly developed array of IR sensors will detect CO<sub>2</sub> or hydrocarbons in LEL range or up to 100% by volume. MSA's 20L catalytic combustion sensors are "best in class" silicon-resistant and will reliably detect up to 100% LEL. Available toxic sensors include ammonia, chlorine and many other choices. Simply choose your IR sensor, add two toxic sensors and finish your unit with an oxygen and an LEL sensor.

#### Applications

- Oil, gas, and petrochemical
- Inerted confined spaces
- Agriculture and construction
- Fire service
- Utilities and telecommunications
- Municipal works and waste water
- Civil and tunnel engineering
- Breweries and wineries
- Submarine and cargo shipping



#### Options

- NiMH battery pack or disposable alkaline batteries allow for double-shift run time
- IR sensor options include carbon dioxide, methane, butane, and propane
- Toxic gas sensor options include ammonia, chlorine, phosphine, ozone, phosgene, and hydrogen cyanide

## Accessories

- Protective cases
- Replaceable and rechargeable batteries
- Sampling lines and probes
- Shock protection boots

Standard Sensors (1 each)	Range	Resolution
Combustible Gas	0 - 100% LEL	1 % LEL
Oxygen	0 - 25% Vol	0.1 Vol%
Toxic Gas Sensors (Max. 2)		
Carbon Monoxide	0 - 999 ppm	1 ppm
Hydrogen Sulfide	0 - 200 ppm	1 ppm
Chlorine	0 - 20 ppm	0.1 ppm
Ammonia	0 - 100 ppm	1 ppm
Sulfur Dioxide	0 - 20 ppm	0.1 ppm
Nitric Dioxide	0 - 20 ppm	0.1 ppm
Chlorine Dioxide	0 - 1 ppm	0.02 ppm
Phosphine	0 - 5 ppm	0.05 ppm
Ozone	0 - 1 ppm	0.02 ppm
Phosgene	0 - 1 ppm	0.02 ppm
Hydrogen Cyanide	0 - 50 ppm	1 ppm
Infrared Sensors (Max. 1)		
Carbon Dioxide, CO2	0 - 10 Vol%	0.01/0.5 Vol%
Carbon Dioxide, CO2	0 - 50 % Vol	5 Vol%
Butane, HC	0 - 25 Vol%	0.1 Vol%
Methane, CH4	0 - 100 Vol%	1 Vol%
Propane, C3H8	0 - 100% LEL	1 % LEL
Propane, C3H8	0 - 100 Vol%	1 Vol%

<b>Size</b>	6.500" x 3.610" x 2.600"
<b>Weight</b>	1 lb
<b>Display</b>	Full graphic
<b>Battery</b>	NiMH or (alkaline for US only)
<b>Case</b>	High strength non-corrosive plastic
<b>Battery life</b>	11 hrs with IR sensor
<b>Charging</b>	3 hours with MSA fast charger
<b>Operating range</b>	-20° C to +50° C
<b>Datalog</b>	200 hours @ 1 minute intervals
<b>Humidity</b>	15-90% RH non-condensing Short periods of 5-95% RH non-condensing
<b>Ingress Protection</b>	IP54 minimum
<b>Warranty</b>	2 years on case, electronics & IR sensors, CO, LEL, O2, H2S, HCN, Cl2, SO2 sensors 1 year on NH3, NO2, PH3 sensors 6 months on ClO2, COCl2, O3 sensors



## Ordering Information

All kits are standard-equipped with data-log and internal pump, and contain a rechargeable battery pack, charger, protective rubber boot, PTFE sampling probe with 5ft line and JetEye Software (P/N 655505, necessary to read data).

P/N	Description
10074944	O2, LEL, CO and NH3
10074943	O2, LEL, CO and Cl2
10074949	O2, LEL, H2S and NH3
10074946	O2, LEL, H2S and Cl2
10074951	O2, LEL, PH3 and NH3
10074950	O2, LEL, H2S and SO2
10074945	O2, LEL, CO and SO2
Infrared Versions	
10074947	IR CO2 (0-10% Vol), LEL, O2,, CO, H2S
10074941	IR CH4 (0-100%Vol), LEL, O2, CO, H2S
10074942	IR HC butane (0-25%Vol), LEL, O2, CO, H2S

For additional customized versions, IR sensors and calibration gases, use MSA's ATO ordering sheet or contact MSA customer service at 1-800-MSA-2222.

**Note:** This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



ID 0816-68-MC / Aug 2006  
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