

ALTAIR[®] 4X

IT'S WHAT'S INSIDE THAT COUNTS

ALTAIR 4X Multi-Gas Detector
with MSA XCell Sensor Technology



MSA
The Safety Company

PERFORMANCE BEYOND WHAT YOU SEE

OUR VISION OF SAFETY. Workers who face potentially dangerous situations deserve the best protection available. At MSA, we work tirelessly to build smarter, better gas detection instruments that people across the world can rely on. To that end, we're proud to introduce the most advanced technology available in any portable gas detector on the market: **the ALTAIR 4X Multi-Gas Detector with XCell Sensor Technology.**

Built on Durability

The ALTAIR 4X Multi-Gas Detector for LEL, CO, H₂S and O₂ is as tough and functional as it looks. A rugged housing IP 67 (dust and water proof) provides unsurpassed durability, including the ability to withstand a 6 m drop onto concrete. And with large, glove-friendly buttons and a high-contrast display, the ALTAIR 4X Multi-Gas Detector is easy to operate in any work environment, even low-light conditions.

Powered by Performance

Toughness and durability aren't the whole story. The real strength of the ALTAIR 4X Multi-Gas Detector comes from new sensor technology. MSA XCell Sensors are designed for an average life of more than four years, double the industry average, and are engineered using MSA's proprietary application-specific integrated circuit (ASIC) design. By miniaturizing the sensors' controlling electronics and placing them inside the sensor itself, MSA XCell Sensors offer superior stability under extreme environmental conditions, accuracy and repeatability.

MSA XCell Sensors are a breakthrough in chemical and mechanical sensor design, enabling faster response and calibration times. With less time spent on calibration and bump tests, you save calibration gas, maintenance costs and, in turn, save money. But most importantly, in your industry, saving seconds on response time can also mean saving lives.

Count on the ALTAIR[®] 4X

Exclusive safety features like MotionAlert and InstantAlert make the ALTAIR 4X Multi-Gas Detector ideal for applications like confined space entry. The MotionAlert sensor activates when a user becomes disabled and motionless, quickly alerting others to the disabled user's location. And with a simple push of a button, the InstantAlert feature enables users to manually alert others to potentially hazardous situations.

The detector comes with a full three-year warranty, an entire year longer than the industry average, so you can depend on the ALTAIR 4X Multi-Gas Detector to withstand the wear and tear that other portable gas detectors can't.

XCell

SENSORS

MSA XCell
Combustible Sensor

MSA XCell
CO/H₂S Sensor

MSA XCell
Oxygen Sensor



Adding micro-electronics inside the sensors provides more control and higher performance than previous generations



MSA XCell Sensors are a breakthrough in chemical and mechanical sensor design, enabling faster response and calibration times

THE MSA COMMITMENT FROM THE LATEST IN SENSOR TECHNOLOGY TO INSTRUMENT DESIGN AND MANUFACTURING, MSA HAS THE CAPABILITIES AND KNOWLEDGE TO SUPPORT YOUR PORTABLE GAS DETECTION CHALLENGES.

MSA XCell Technology:

Save Time, Save Money, Save Lives

Building on years of sensor design experience, MSA is revolutionizing sensor technology with breakthroughs in design that improve performance.

- Sensor response and clear times under 15 seconds
- Bump test under 15 seconds
- Span calibration time under 60 seconds
- Greater signal stability and repeatability under changing or extreme environmental conditions
- Two-tox CO/H₂S sensor with virtually no cross-channel interference
- The digital output of the sensors makes them much less susceptible to RF interference

With reliable, extended-life XCell Sensors, there's no need to replace sensors after two years.

- Typical life greater than four years
- Laser-welded sensor housings eliminate opportunities for leaks
- Proprietary operating mode of the combustible sensor helps it stand up to poisons over the life of the sensor
- End-of-sensor-life indicator gives advanced warning to user, eliminating service outages

Technology That's Tough

Life-Saving Performance

- Large buttons and a bright display enable quick and easy operation even while wearing gloves
- If a user becomes disabled due to unforeseen hazards, the MotionAlert sensor will activate after 30 seconds
- The InstantAlert feature enables users to manually alert others of a dangerous situation with the push of a button
- Compatible with GALAXY Test System and ALTAIR 4 QuickCheck Station
- MSA Link Software-ready
- Global approvals for worldwide acceptance

Lasting Durability

- Full three-year warranty supports the entire detector, including the sensors and battery
- Withstands extreme impacts with rugged polycarbonate housing
- Passes 6 m drop test
- The IP 67-rated ALTAIR 4X is both dust tight and water tight

Applications/Markets

- Oil, gas and petrochemical
- Pharmaceutical
- Chemical
- Confined spaces
- Fire service
- Utilities and telecommunications
- Municipal works, waste water
- Mining



New glow-in-the-dark housing for mining or confined spaces applications

MSA Link Software-ready

Rugged stainless steel clip

MotionAlert sensor signals "man down"

Ultra-bright LEDs on top and bottom

InstantAlert feature allows users to manually alert others to a dangerous situation

MSA XCell Sensors with protected sensor inlet

95+ dB alarm

Large buttons for easy operation

24-hour battery run time

End-of-sensor-life warning

Easy bump-check mode with 24-hour checkmark indicator

Large, high-contrast liquid crystal display

Durable, rubberized housing for secure grip



■ MSA-exclusive feature

Technical Specifications

Gas	Range	Resolution
LEL	0–100%	1%
O ₂	0–30% vol	0.1% vol
CO	0–1999 ppm	1 ppm
H ₂ S	0–200 ppm	1 ppm

Drop test	6 m
Housing	Rugged rubberized armor
Weight	222 g
Dimensions (H x W x D)	112 x 76 x 35 mm
Audible alarm	>95 dB at 30 cm
Visual alarm	4 ultra-bright LEDs on top and bottom
Vibrating alarm	Standard
MotionAlert & InstantAlert	Standard
Display	High-contrast LCD
Backlight	Adjustable time-out
Battery	Rechargeable li-polymer
Run time	24 hour @ room temperature
Charging time	< 4 hrs
Operating temperature range	–20 °C to +50 °C
Short period operation	–40 °C to +60 °C
Humidity	15–90% RH non-condensing
Ingress protection	IP67
Data log	Standard, 50 hours minimum
Event log	Standard 500 events
Standard warranty	3 years
Extended warranty	Optional 1 year

Approvals

U.S./Canada:

CSA Class I, Div. 1, Groups A, B, C & D
 T_{amb} = –40 °C to +54 °C
 CAN/CSA C22.2 152; ISA 12.13.01-2000
 ETL Class II, Div. 1, Groups E, F & G
 Class III, Div. 1 T_{amb} = –40 °C to +54 °C; T4

ATEX: II 1G Ex ia IIC T4, –40 °C to +60 °C, IP 67
 (Zone 0 with no combustible sensor installed)

II 2G Ex ia d IIC T4, –40 °C to +60 °C, IP 67
 (Zone 1 with combustible sensor installed)

IEC: Ex ia IIC T4, –40 °C to +60 °C
 (Zone 0 with no combustible sensor installed)
 Ex ia d IIC T4, –40 °C to +60 °C
 (Zone 1 with combustible sensor installed)

Australia/New Zealand:

Ex ia s IIC T4, –40 °C to +60 °C, IP 67 (Zone 0)

ALTAIR 4X with quick-start card, data logging, charger, calibration cap and tubing

U.S./CAN	ATEX	ANZ	Configuration	Housing Color
10107602	10110453	10110447	LEL, O ₂ , CO, H ₂ S	Charcoal
10107603	10110456	10110450	LEL, O ₂ , CO, H ₂ S	Phosphorescent
10110443	10110454	10110448	LEL, O ₂ , CO	Charcoal
10110445	10110457	10110451	LEL, O ₂ , CO	Phosphorescent
10110444	10110455	10110449	LEL, O ₂	Charcoal
10110446	10110458	10110452	LEL, O ₂	Phosphorescent

ALTAIR 4X can be configured for your individual requirements. Some of the popular configurations are listed above.

Calibration Gas

10048280	Gas can (34 l) 1.45% CH ₄ , 15% O ₂ , 60 ppm CO, 20 ppm H ₂ S
10045035	Gas can (58 l) 1.45% CH ₄ , 15% O ₂ , 60 ppm CO, 20 ppm H ₂ S

Replacement Sensors

10106722	XCell Ex combustible sensor
10106729	XCell O ₂ sensor
10106725	XCell CO/H ₂ S two-tox sensor
10106724	XCell CO sensor
10106723	XCell H ₂ S sensor

ALTAIR 4 QuickCheck Station

The ALTAIR 4 QuickCheck Station performs bump and function tests in less than one minute, significantly trimming daily required preparation time for large ALTAIR 4X Multi-Gas Detector fleets. Keeps costs down with less up-front hardware expense and calibration gas.

North America	Europe	Australia	
10101551	10101556	10101561	30% tolerance range
10075893			Regulator
10101085			Cylinder holder assembly
10049410			Vehicle charger

GALAXY Kits

10090001	Standard system, charger & cylinder holder
10089966	Smart system (with memory card), charger & cylinder holder

Accessories

10055576	Universal pump probe (U.S./CAN)
10047594	Universal pump probe (ANZ/IEC)
10047596	Universal pump probe (ATEX)
10092936	Global power supply
10086638	European power supply
10088099	MSA Link Software CD-ROM
10082834	JetEye IR Adapter with USB connector
10095774	Vehicle charger

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Subject to change without notice ID 08-538.2 GB/00/C/05.10/HA

